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Appendix A –Progress in Implementing Specific NERC Actions from the Three-Year ERO Performance Assessment

Appendix B – A Summary of Canadian Provincial Adoption of Reliability Standards Framework

Appendix C –Event Categories and Levels of Analysis (As documented in the ERO Event Analysis Process Manual, October 25, 2010)

Appendix D –Chapter 9 – Scenario Assessment of the NERC Reliability Assessment Guidebook

**Index to NERC Responses to Directives and Other Actions from
September 16, 2010 FERC Order on Three-Year ERO Performance Assessment**

P No.	Directive	Page
62	Directs NERC to submit an informational filing six months from the date of this order updating the Commission on NERC’s progress in prioritizing and implementing the various action items.	2
76	Directs NERC to consider the following practices for use during the Standards development process as possible means to accomplish these objectives: (1) posting proposed regional Reliability Standards for comment from the continent-wide pool of interested stakeholders for consideration, while allowing the regional open processes to make final determinations to be submitted to NERC; (2) providing for comments from NERC technical staff on proposed regional Reliability Standards; and (3) including regional Reliability Standards in other NERC review processes that it uses for continent-wide Reliability Standards. We further direct NERC to discuss its considerations regarding these suggestions in the informational filing due six months from the date of this order.	9
85	Renews the directive that NERC submit quarterly reports on standards development for additional three years, with additional detail of required analysis.	12
126	Directs NERC to continue its oversight of Regional Entity audits with NERC staff that are technically proficient.	25
127	Directs NERC and Regional Entities to have their staff, and Commission staff where applicable, discuss the appropriate role of observers during their pre-audit meetings or conferences.	26
169	Directs NERC to establish criteria it will use to select a subset of events, which should focus on those with the highest impact to reliability, to provide important “lessons learned” and submit the criteria in the informational report.	45
170	Directs NERC to work with the Regional Entities to ensure that they provide to Commission staff sufficient and timely information on each event. NERC must report on steps it will take to implement this directive in the informational report.	46
171	Directs NERC to develop communication protocols between NERC, the Commission and the Regional Entities for use during events and report on its progress in the informational filing.	46
178	NERC shall report on the steps it has taken to clarify the interface between event analyses and compliance activities, including CVIs, in response to the Commission’s guidance in the informational filing.	48

178	Directs NERC to include, in its informational filing due six months after the issuance of this order, the procedures to be used within its Operations and Engineering function relating to the communication and exchange of event analysis and investigative information, and procedures under which the Operations and Engineering function will communicate event analysis and investigative information to the compliance staff of NERC or a Regional Entity.	48
180	Directs NERC to continue developing scenario analysis in the long-term reliability assessments using the criteria noted above. We require NERC to update its reliability assessment protocols to establish a requirement for an annual scenario analysis and to file this update in the informational filing.	51
183	Directs NERC to develop a plan to address capacity and energy in its reliability assessment methodology and a timeline for executing the plan, and submit the plan and timeline as part of the 2011 Long-Term Reliability Assessment and file its preliminary plan and timeline in the informational filing.	52
185	Directs NERC to consider establishing permanent data bases that could be automatically populated with: (i) new transmission projects data from the Regional Entities, (ii) generation interconnection queue data, and (iii) other data relevant for reliability assessment. We require NERC to discuss the feasibility of this improvement, and to the extent databases covering this information already exist, discuss how to better utilize or integrate that information into the Reliability Assessments in the informational filing.	54
195	Directs NERC to include a report in the informational filing detailing the feasibility of establishing a NERC-led Strategic Planning initiative utilizing multiple year budgets.	55
217	Directs NERC to report, in the informational filing, on the timeline and plan for development of a non-public central compliance data hub, including details regarding how it will operate, what information it will contain, and whether it will supplant existing processes for providing non-public data to the Commission.	56
220	Direct NERC to explain in the informational filing how it would implement risk-based approaches to compliance activities and at the same time complete its currently-required audit cycles.	59

P No.	Other Actions	Page
12	The Commission will hold a second Commissioner-led technical conference to discuss reliability monitoring, enforcement, and compliance issues in November 2010. The Commission will work with NERC and Canadian regulators develop an agenda for this conference.	5
13	The Commission will hold a Commissioner-led conference in either January or February of 2011 and will work with NERC and Canadian regulators on identifying a date and appropriate topics for discussion.	5
57	NERC should continue to seek recognition in Canada and Mexico, as appropriate and keep the Commission informed about the status of those efforts.	5
138	Agrees that NERC should develop performance metrics that help to ensure consistent implementation of the compliance enforcement process across the regions.	32
152	Encourages NERC to intensify its efforts to provide additional oversight and guidelines to assist registered entities in accurately determining that an asset is critical to the Bulk-Power System. (critical cyber asset identification)	39
219	Provides that if NERC still wants to pursue a “warning ticket” mechanism, it must explain how the mechanism would work without running afoul of the concerns raised. NERC is free to provide that explanation in the informational filing or, if it chooses to take additional time to develop the mechanism, in a later filing.	36

I. INTRODUCTION

The North American Electric Reliability Corporation (“NERC”) submits this Notice of Filing of Informational Filing as required by the Federal Energy Regulatory Commission’s (“FERC”) Order issued September 16, 2010 concerning NERC’s “Three-Year Electric Reliability Organization Performance Assessment Report” (“Assessment”).¹

A. Three-Year ERO Performance Assessment

NERC submitted the Assessment on December 17, 2009. The Assessment consisted of the following documents:

- Three-Year Electric Reliability Organization Performance Assessment Report Overview (“Assessment Overview”)
- Appendix A – List of Specific NERC Actions in Response to Stakeholder and Regional Entity Comments and Recommendations
- Attachment 1– (I) Discussion of How NERC Meets the Certification Criteria of 18 C.F.R. §39.3(b); and (II) NERC Program Areas Statement of Activities and Achievements; with Appendix A – Analysis of Duration of Standards Development Projects, January 2002 – May 2009, and Appendix B – Analysis of Standards Ballot Results, July 2006 – May 2009
- Attachment 2 – Stakeholder and Regional Entity Comments and Recommendations, and NERC’s Discussion of the Comments and Recommendations and Specific NERC Actions
- Attachment 3 – NERC Evaluation of Regional Entities

¹ *North American Electric Reliability Corporation, Order on the Electric Reliability Organization’s Three-Year Performance Assessment*, 132 FERC ¶ 61,217 (2010) (“September 16, 2010 Order”).

- Attachment 4 – Joint Regional Entity Self-Assessment and Regional Entity Statements of Activities and Achievements
- Attachment 5 – Stakeholder Survey Results

The Assessment demonstrated how NERC is successfully carrying out its responsibilities as the Electric Reliability Organization (“ERO”) to develop and enforce mandatory reliability standards and to promote and maintain the reliable operation of the North American bulk power system. The Assessment also provided NERC’s evaluation of the effectiveness of the Regional Entities, and discussed comments and recommendations received from interested entities concerning the performance of NERC and the Regional Entities. In Appendix A, the Assessment identified actions that NERC and the Regional Entities are taking or plan to take to improve NERC’s and the Regional Entities’ operations to continue to enhance the reliable operation of the bulk power system.

B. FERC Acceptance of NERC Filing and Request for Informational Filing

In its September 16, 2010 Order, P 54, FERC found that NERC continued to satisfy the criteria in Federal Power Act Section 215 and FERC’s regulations for certification as the ERO and that each of the Regional Entities continues to meet the relevant statutory and regulatory criteria. In addition, the September 16, 2010 Order contained a number of specific directives and other actions that NERC was to address in an informational filing to be submitted within six months.² Finally, in the September 16, 2010 Order, FERC provided additional guidance in a number of other areas; in this informational filing, NERC is commenting on or providing current information concerning its activities with respect to a number of the areas of additional guidance.

² September 16, 2010 Order at P 62.

C. Organization of NERC's Response to FERC Discussion of Opportunities for Improvement in Each Program Area

1. Specific Directives, Other Actions, and Additional Guidance

NERC's response to each specific directive or other action in the September 16, 2010 Order is identified as "*NERC Response to Commission's Directive – P XX*" or "*NERC Response to Commission's Other Action – P YY*" in the applicable sections of this informational filing. NERC's comments on certain of the other FERC conclusions and guidance that appear in the September 16, 2010 order are also included as supplemental informational responses.

2. Progress in Implementing Specific NERC Actions Identified in the Assessment Related to Each Area of Discussion

Attachment 2 of the Assessment included summaries of stakeholder and Regional Entity comments and recommendations that were received concerning each NERC program area, NERC's discussion of and responses to these comments and recommendations, and specific actions NERC is taking or plans to take in light of the comments and recommendations. The specific NERC actions were also listed in Appendix A to the Assessment Overview (without the accompanying discussion of the stakeholder and Regional Entity comments and recommendations). The specific NERC actions covered the following program areas and activities:

- A. Reliability Standards Development
- B. Organization Registration and Certification
- C. Compliance Monitoring and Enforcement
- D. Event Analysis and Information Exchange
- E. Reliability Assessment
- F. Performance Analysis and Metrics

- G. Critical Infrastructure Protection
- H. Situation Awareness
- I. Training, Education, and Personnel Certification
- J. Finance and Controls
- K. Stakeholder Communications and Public Relations

NERC and the Regional Entities worked diligently and cooperatively to develop revisions to the Regional Delegation Agreements and to the NERC Rules of Procedure to address these issues. NERC filed the proposed revised Delegation Agreements on June 21, 2010.

Progress in implementing the specific NERC actions identified in each of the above areas is described in **Appendix A** to this filing – “Progress in Implementing Specific NERC Actions Identified in the Three-Year ERO Performance Assessment.”

NERC filed this Informational Filing with FERC on March 16, 2011, and is filing a notice of this Informational Filing with the other applicable governmental authorities in Canada.

II. NOTICES AND COMMUNICATIONS

Notices and communications with respect to this filing may be addressed to:

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III. DISCUSSION

A. Response to FERC Discussion of Opportunities for Improvement in Each Program Area

In its September 16, 2010 Order, P 12, FERC stated:

“The Commission believes that the July 6 Conference provided a useful, high level discussion of topics that concern NERC, the industry, and regulators in North America and we intend to continue that dialogue. In noticing the July 6 Conference, the Commission stated that it intends to convene a second Commissioner-led technical conference to discuss reliability monitoring, enforcement, and compliance issues.”

Further, in P 13, FERC stated:

“Going forward, NERC’s proposal to hold periodic technical conferences offers a constructive opportunity for NERC, industry, and regulators to discuss policy issues in an open and inclusive forum. NERC and commenters have identified a number of high-level policy issues relating to Reliability Standards development and modification. The Commission believes that a public dialogue on these high-level policy and priority issues will help clarify expectations for the NERC Reliability Standards development process. Accordingly, the Commission will also hold a Commissioner-led conference in January or February of 2011, and will work with NERC and international regulators on identifying a date and developing a specific agenda. Once an agenda is set, the Commission will issue a notice of this further conference.”

NERC Response to FERC’s Other Actions – PP 12 and 13

NERC participated in the November 2010 and February 2011 high-level technical conferences along with a number of other stakeholders. NERC believes those conferences were extremely beneficial in continuing the high-level dialogue that needs to occur among FERC Commissioners and NERC and stakeholder executives. NERC encourages FERC to continue with such conferences on at least an annual basis, to evaluate the current state of reliability of the bulk power system and bring needed focus to high-level policy and priority issues. Because the bulk power system spans the international border with Canada, it is important that Canadian stakeholders and policy-makers also be included in those technical conferences.

In its September 16, 2010 Order, P 57, FERC stated:

“the Commission generally is satisfied with other features of NERC’s Rules of Procedure, including rules that provide fair and impartial procedures for enforcing Reliability Standards and rules that provide for broad participation, notice and opportunities for comment in developing Reliability Standards. NERC should continue to seek recognition in Canada and Mexico, as appropriate and keep the Commission informed about the status of those efforts.”

NERC Response to FERC’s Other Action – P 57

In connection with and following the 3-Year Assessment, NERC and the Regional Entities conducted an extensive review of the NERC Rules of Procedure. Revisions to the Rules of Procedure were filed June 21, 2010. These revisions included, among other things, revisions to Section 400 concerning Compliance Monitoring and Enforcement and to Appendix 4A, *Sanction Guidelines* and Appendix 4C, *Compliance Monitoring and Enforcement Program*. Also subsequent to filing the Assessment, NERC filed and obtained approval for two sets of revisions to Appendix 3A to the Rules of Procedure, *Standard Processes Manual* (formerly *Reliability Standards Development Procedure*).³ Finally, also during 2010, NERC filed and obtained FERC approval for amendments to Section 500, Organization Registration and Certification, and Appendix 5A, *Organization Registration and Certification Manual*, of the Rules of Procedure.⁴ Therefore, subsequent to filing the Assessment, NERC has developed, submitted and obtained FERC approval for revisions to the Rules of Procedure pertaining to

³ NERC filed one set of revisions to Appendix 3A for approval on November 23, 2009 (*Petition of the North American Electric Reliability Corporation for Approval of Amendments to its Rules of Procedure – Amendments to the Reliability Standards Development Procedure*; these revisions were approved by the Commission in a letter Order issued February 5, 2010. NERC filed the second set of revisions to Appendix 3A on June 10, 2010 (*Petition of the North American Electric Reliability Corporation for Approval of the Reliability Standard Processes Manual Incorporating Proposed Revisions to the Reliability Standards Development Process*, filed June 10, 2010 in Docket RR10-12-000 available at: http://www.nerc.com/files/Final_Standards_Process_Manual_Filing.pdf); these revisions were approved by the Commission in an Order issued September 3, 2009 (*North American Electric Reliability Corporation, Order Approving Petition and Directing Compliance Filing*, 132 FERC ¶ 61, 200 (2010) (“September 3, 2010 Order”); available at: http://www.nerc.com/files/Order_Approving_Directing_ComplianceFiling_932010.pdf).

⁴ *Petition of the North American Electric Reliability Corporation for Approval of Amendments to Rules of Procedure Regarding Compliance and Certification Committee Program and for Approval of Amended Compliance and Certification Committee Charter*, filed March 15, 2010, in Docket No. RR10-8-000; approved by Letter Order issued June 10, 2010.

NERC's two most significant statutory activities — reliability standards development and monitoring and enforcement of compliance with reliability standards by registered entities.

Further, on December 23, 2010, NERC made its compliance filing⁵ proposing certain further changes to Section 300 of its Rules of Procedure with respect to developing or revising standards in response to FERC directives, as directed by FERC's March 18, 2010 Order and September 16, 2010 Order on NERC's and other entities' rehearing requests.⁶ That filing remains pending at FERC.

NERC has a policy of periodically reviewing and updating its Rules of Procedure. NERC expects to complete a project on reviewing the Rules of Procedure during 2011. NERC will be soliciting input from stakeholders and will follow the public posting process described in Article XI, section 2 of the NERC Bylaws and Section 1402 of the Rules of Procedure for making any needed changes.

In addition, NERC noted to FERC in its March 16, 2011 Informational Filing that NERC continues to seek recognition in Canada and Mexico, as appropriate. Attached to this informational filing as **Appendix B** is a report on the status, as of February 10, 2011, of NERC's efforts to gain recognition and the implementation of a system of enforceable reliability standards in each Canadian jurisdiction that includes portions of the bulk power system.

⁵ *Compliance Filing in Response to March 18, 2010 Order Directing Revisions to Standards Development Procedure*, filed December 23, 2010 in Docket No. RR09-6-000, available at http://www.nerc.com/files/FinalFiledCompFiling_on_Stds_Process_20101223.pdf.

⁶ *North American Electric Reliability Corporation, Order Directing NERC to Propose Modification of Electric Reliability Organization Rules of Procedure*, 130 FERC ¶ 61,203 (2010); available at: http://www.nerc.com/files/Order_Directing_Modification_ERO_ROP_31510.pdf; *North American Electric Reliability Corporation, Order Denying Rehearing, Denying Clarification, Denying Reconsideration, and Denying Request for a Stay*, 132 FERC ¶ 61,218 (2010); available at: [http://www.nerc.com/files/OrderDenyingRehearing-and-Stay_StandardsProcess_20100916%20\(2\).pdf](http://www.nerc.com/files/OrderDenyingRehearing-and-Stay_StandardsProcess_20100916%20(2).pdf).

1. Development of Reliability Standards

In its September 16, 2010 Order, P 67, FERC commended NERC on its efforts and progress in moving the industry from a voluntary to a mandatory Reliability Standards environment, and encouraged NERC to continue its efforts to improve its process for developing high quality Reliability Standards. FERC identified several areas of improvement that it directed NERC to pursue in its efforts to fulfill its statutory responsibility to develop Reliability Standards to improve and protect Bulk-Power System reliability, which are described and discussed in more detail below.

a. Quality of Proposed Reliability Standards

In its September 16, 2010 Order, P 74, FERC stated:

“We remain concerned about the ability of the NERC Reliability Standards Development Process to develop high quality Reliability Standards that not only protect, but improve, the reliable operation of the Bulk-Power System. The development of such high quality Reliability Standards is absolutely essential to meeting these goals, providing a clear roadmap for industry to comply with reliability requirements and allowing NERC, the Commission and international regulators to monitor this compliance. In order to accomplish this goal, we have urged NERC to take certain measures, including hiring staff with the technical capability to independently advise the NERC Board of Trustees regarding the substantive content of proposed Reliability Standards.”

In P 75, FERC stated:

“We share EEI’s concerns that ambiguities should be minimized in Reliability Standards to the extent possible. The 95 Commission-approved Reliability Standards contain over 700 requirements and may not clearly account for every variation of compliance scenario. NERC should continue to work to address concerns regarding the clarity of Reliability Standards, and several NERC action items will address this concern. In particular, NERC compliance with the outstanding directives of prior Commission orders, such as Order No. 693, will improve the clarity of Reliability Standards.”

In P 76, FERC stated:

“We encourage NERC, as the entity ultimately responsible for the quality of regional Reliability Standards, to exercise strong oversight to ensure that all regional Reliability Standards developed are necessary and justified. NERC’s goal and practice in guiding

and communicating with the Regional Entities and stakeholders should be uniformity of Reliability Standards, as uniformity encourages best practices and enhances reliability. NERC also should lead the Regional Entities in their development efforts to ensure consistency and quality in regional Reliability Standards. We direct NERC to consider the following practices for use during the Standards development process as possible means to accomplish these objectives: (1) posting proposed regional Reliability Standards for comment from the continent-wide pool of interested stakeholders for consideration, while allowing the regional open processes to make final determinations to be submitted to NERC; (2) providing for comments from NERC technical staff on proposed regional Reliability Standards; and (3) including regional Reliability Standards in other NERC review processes that it uses for continent-wide Reliability Standards.”

NERC Response to FERC’s Directive – P 76

NERC agrees with the several practices suggested by FERC in P 76 for use during the development of regional Reliability Standards. To this end, the ERO Executive Management Group (“ERO/EMG”) has established a Regional Standards Group (“RSG”) to provide process and policy recommendations in the execution of the Regional Delegation Agreements and the NERC Rules of Procedure, specifically as they pertain to the development of regional standards. The overarching objective of the RSG is to coordinate the development of regional and continent-wide standards to support and continually enhance reliability across North America. A primary initiative of the RSG is to create and sustain viable standards development coordination processes to obtain consistency and uniformity, where appropriate, across the ERO enterprise (NERC, the Regional Entities, and stakeholders), while ensuring efficient and effective use of resources in executing the statutory responsibilities of the ERO as the reliability standards development authority.

Among the key objectives of the RSG is to provide a forum for disseminating the most recent applicable governmental authority and ERO information such as training, guidelines, directives and mandates to effectively and efficiently disseminate information regarding regional

reliability standards. As such, the RSG will consider the practices identified by FERC in P 76 for use in the Regional Entities' standards development processes.

NERC agrees with FERC's suggestion to post proposed regional reliability standards for comment by the continent-wide pool of interested stakeholders, while allowing final determinations to be made through the Regional Entities' respective standards development processes. The NERC Rules of Procedure allow NERC to publicly notice and post for comment proposed regional reliability standards concurrent with similar steps in the Regional Entity's reliability standards development process (Sections 312.3, Procedure for Developing an Interconnection-wide Regional Standard and 312.4, Procedure for Developing Non-Interconnection-Wide Regional Reliability Standards.) NERC and the Regions will post the proposed regional reliability standard during the development steps of the standard and then will conduct a subsequent second posting of the proposed regional standard on the NERC website once all the steps specified by the Regional Entity's standards development process are completed. The second posting on the NERC site will focus on collecting industry feedback to determine if the proposed regional reliability standard has been developed in accordance with all applicable procedural requirements.

NERC also agrees with FERC's suggestion that NERC should provide NERC technical comments on proposed regional reliability standards. NERC may submit technical comments during the development steps of a regional reliability standard, when appropriate. These technical comments will be given consideration as required by the Regional Entities' reliability standard development processes. NERC added a staff person in February 2011 to support this activity.

Finally, NERC agrees with FERC's suggestion that reviews of the regional reliability standards should be performed in a process similar to reviews of continent-wide standards. The Regional Entities, in collaboration with NERC, will conduct quality reviews of proposed regional reliability standards during the development steps of the standards. Regional Entities will also perform informal reviews as the regional standards are proceeding through the development process with the goal of improving quality. This was done on a limited basis in 2010; more will be done in 2011 as a result of the availability of the additional NERC staff resource noted above.

Overall, NERC has modified its standard development processes to improve the quality of the standards it develops. The specific portion of the *Standard Processes Manual* (Appendix 3A to the Rules of Procedure) dealing with standards quality is found on pages 15-16 of the *Manual*.⁷ This new addition to the process was approved by FERC in its September 3, 2010 Order. The specific provisions for conducting quality reviews, as stated in the manual, are:

“The standards staff shall coordinate a quality review of the “final draft” of the standard, implementation plan, VRFs and VSLs to assess whether the documents are within the scope of the associated SAR, whether the standard is clear and enforceable as written, and whether the standard meets the criteria specified in NERC's Benchmarks for Excellent Standards and criteria for governmental approval of standards, VRFs and VSLs. This review shall be completed within 30 days of receipt of the final version of the documents from the drafting team. The detailed results of this review shall be provided to the drafting team and the Standards Committee with a recommendation on whether the documents are ready for formal posting and balloting. [Footnote omitted.]

“If the Standards Committee agrees that the proposed standard, implementation plan, VRFs or VSLs pass this review, the Standards Committee shall authorize posting the proposed standard, implementation plan, VRFs and VSLs for a formal comment period, ballot (for the standard and implementation plan), and non-binding poll (for VRFs and VSLs) as soon as the work flow will accommodate.

⁷ Rules of Procedure, Appendix 3A, available at: http://www.nerc.com/files/Appendix_3A_Standard_Processes_Manual_20100903.pdf.

“If the Standards Committee finds that any of the documents do not meet the specified criteria, the Standards Committee shall remand the documents to the drafting team for additional work.

“If the standard is outside the scope of the associated SAR, the drafting team shall be directed to either revise the standard so that it is within the approved scope, or submit a request to expand the scope of the approved SAR. If the standard is not clear and enforceable as written, or if the standard or its VRFs or VSLs do not meet the specified criteria, the standard shall be returned to the drafting team with specific identification of any requirement that is deemed to be unclear or unenforceable as written.”

In addition, the *Standard Processes Manual*, at page 9, identifies the role of the NERC Standards staff in the standards development process to include the following responsibilities:

“The standards staff works to ensure the integrity of the standard processes and consistency of quality and completeness of the reliability standards. . . . When presenting standards-related documents to the NERC Board of Trustees for adoption or approval, the standards staff shall report the results of the associated stakeholder ballot, including identification of unresolved stakeholder objections and an assessment of the document’s practicability and enforceability.”

Further, the process for developing Interpretations, set forth in the *Standard Processes Manual*, includes coordination of a quality review by the NERC standards staff to assess whether the Interpretation is clear and provides the requested clarity without expanding on any requirement:

“The standards staff shall coordinate a quality review of the interpretation to assess whether the interpretation is clear and provides the requested clarity without expanding on any requirement. The detailed results of this review shall be provided to the drafting team and the Standards Committee with a recommendation on whether the documents are ready for formal posting and balloting and if the Standards Committee agrees that the proposed interpretation passes this review, the Standards Committee shall authorize posting the proposed interpretation.”⁸

b. Time Required to Develop Reliability Standards

In its September 16, 2010 Order, P 85, FERC stated:

“While we are encouraged by NERC’s efforts to revisit its Standards Development Process, we believe that it is important that the Commission continue to monitor the effectiveness of the Reliability Standards Development Process and, therefore, renew the

⁸ *Standard Processes Manual* at 27 (footnote omitted).

directive that NERC submit quarterly reports for an additional three years from the date of this order. In addition to the contents described in the January 2007 order, the quarterly reports must include separate analyses of: (i) the time required to complete projects (i.e., excluding urgent action projects); (ii) the time required to complete projects initiated in response to NERC's urgent action process (including whether or not a permanent fix was implemented within the sunset period); and (iii) the time required to complete projects in response to Commission directives. The analysis should include data on the time required for each stage of the process. For example, the analysis should document the time required to move a proposed Reliability Standard from a Standards Authorization Request to the NERC Board, and then to the Commission. Accordingly, the Commission directs NERC to continue to file quarterly reports as required by the January 18, 2007 Order within 30 days of the end of each quarterly period, beginning with the fourth quarter of 2010, through and including the fourth quarter of 2013."

NERC Response to FERC's Directive – P 85

The *NERC Analysis of NERC Standard Process Results Fourth Quarter 2010 in Docket Nos. RR06-1-000, RR09-7-000*,⁹ as filed on March 4, 2011 and with FERC on January 31, 2011, responds to FERC's directive in P 85. The filing includes a summary analysis for all of the information identified in P 85, for the time period since NERC was certified as the ERO by FERC in 2006.

For the purpose of developing meaningful analyses in response to this directive, the January 31, 2011 report groups standards projects into the following categories:

- Projects to Develop New Standards or Definitions
- Projects to Revise Existing Standards or Definitions
- Expedited Projects
- Projects to Develop Interpretations of Existing Standards

NERC believes that grouping projects in these categories will provide FERC a more refined view of the standards process and will allow NERC and its stakeholders to pinpoint additional efficiencies that can be incorporated.

⁹ http://www.nerc.com/files/Final_2010-Q4_Ballot_Results_Filing_20110131.pdf.

Beginning with the report on NERC's first quarter 2011 standards process results, additional information will be provided on NERC's responsiveness to FERC standards directives. NERC will continue to file these quarterly reports, including the expanded information, through and including the fourth quarter of 2013.

c. NERC Staff's Technical Capability

In its September 16, 2010 Order, P 89, FERC noted that NERC reported it had dedicated 14.5 full-time equivalent employees ("FTEs") to the Reliability Standards Development Process in 2009, as well as additional consultant resources. FERC also noted that NERC reported in the Assessment that it had 28 active Reliability Standards development projects and eight interpretations underway as of the time of that filing. FERC observed that:

"Based on this work load, the Commission will continue to monitor whether the current staffing level is adequate to perform the substantive role intended by NERC in the Performance Assessment or by the Commission in previous budget orders."

While there is no specific directive in the September 16, 2010 order on this issue, NERC notes that in its 2011 Business Plan and Budget NERC has budgeted 20.08 FTEs for the Reliability Standards Program, which is an increase of 2.58 FTEs from the 2010 Budget, and reflects the addition of three new staff members during 2011.¹⁰ At the time of this informational filing, the number of Standards-related employees (including three dedicated employees from the Legal and Regulatory department) stands at 24. NERC is currently conducting a further evaluation of Standards Program area resource requirements in connection with the preparation of its 2012 business plan and budget and at this time anticipates proposing further additions to the Standards Program area staff. These standards specialists are expected to focus on quality assurance, technical writing, information processing, and regulatory interface responsibilities.

¹⁰ The indicated increase of 2.58 FTE reflects the fact that the three new staff members will not be added as of January 1, 2011, but rather are projected to be added at various points during the year.

These resource additions should enable the Reliability Standards program to provide more timely delivery of high priority standards through more targeted development processes; and better overall project management through enhanced training of both stakeholder participants on drafting teams and NERC staff.

d. Prioritization of Reliability Standards Development and Results-Based Standards

Prioritization of Reliability Standards Development

In its September 16, 2010 Order, P 105, FERC stated:

“We believe that improved prioritization of the Reliability Standards development process will alleviate some of the burdens discussed by NRECA and APPA, while allowing their members to continue to participate in the Reliability Standard development process and without jeopardizing the quality of Reliability Standards. We also agree with NERC that it should develop a list of all outstanding Commission Reliability Standards directives and a process for prioritizing them. This process must balance the Commission’s directives and associated guidance, industry inputs, and feedback on reliability performance from the event analysis, reliability assessment, and compliance programs. We expect that this process will aid in identifying projects of the highest importance to the reliability of the Bulk-Power System and allow NERC to work effectively with industry to strike the proper balance in maintaining optimum industry participation in the Reliability Standards development process.”

While there is no specific directive in the September 16, 2010 Order on this issue, NERC has placed significant attention on the prioritization of reliability standards development activities.

NERC will continue to use its annual Reliability Standards Development Plan to prioritize and guide reliability standards development activities. In response to a November 2010 directive from the NERC Board of Trustees, the NERC Standards Committee and NERC staff worked together to develop a Standards Development Project Prioritization Tool. The Prioritization Tool prioritizes standards development projects based, in part, on risks and policy issues of each project that are then quantified and ranked. This ranking will help to identify

higher priority projects in order for NERC staff and the Standards Committee to appropriately utilize NERC staff and industry resources in the development of reliability standards.

The use of the Prioritization Tool was endorsed by the NERC Board at its February 17, 2011 meeting, and was used to develop a revised, final version of the 2011-2013 Reliability Standards Development Plan which was approved by ballot of the Standards Committee and approved by the NERC Board on March 10, 2011.¹¹ Use of the Prioritization Tool in developing the 2011-2013 Plan resulted in fewer active standards projects; however, these projects are those that will provide the most “reliability benefit” for the invested resources. The presentations and discussions at the February 8, 2011 FERC technical conference, which focused on how current reliability issues and standards development initiatives can be ranked and selected to ensure that the key reliability issues are addressed earliest, were also used as inputs to the prioritization process in developing the final 2011-2013 Plan. The final 2011-2013 Plan includes projects divided into three priority categories: (1) High Priority Projects (12 projects), (2) Projects Continuing and Expected to Complete Shortly (4 projects), and (3) Additional Projects to be Initiated in Order of Priority (19 projects).¹² The projects in the third priority category will be moved up in the priority list as each of the projects in the first two categories move to the final balloting stage and receive Board and regulatory approval, thereby freeing up NERC staff and industry resources to work on these projects.

NERC staff and the Standards Committee expect that in the future, prioritization of standards development projects and use of the Prioritization Tool will be more dynamic, thereby

¹¹ The final approved 2011-2013 Reliability Standards Development Plan is available at: http://www.nerc.com/files/2011-2013_RS-Development-Plan_Revised_Rev_00_2011-03-2-BOT_approved_0310201_rev7.pdf.

¹² 2011-2013 Reliability Standards Development Plan at 3-4.

allowing continual management of project development based on reliability risks to the bulk power system.

Specifically with respect to regulatory directives impacting standards development, NERC has identified over 800 specific FERC-directed actions from several orders and included them in an issues database where they will be prioritized and integrated into the respective work plans of various standards development projects. The prioritization process for reliability standards development is intended to strike a balance between regulatory directives, industry input, and feedback on reliability performance from the NERC Event Analysis, Reliability Assessment, and Compliance programs.

Results-Based Standards

In its September 16, 2010 Order, P 106, FERC stated:

“Now that NERC has obtained some experience with developing and enforcing mandatory Reliability Standards, it is appropriate for it to assess whether the number and quality of the Reliability Standards are causing users, owners and operators of the Bulk-Power System to achieve national reliability goals effectively and efficiently. While NERC has not asked for approval of this [Results-Based Standards] initiative at this time, the Commission will offer some preliminary guidance as NERC begins to develop Reliability Standards that will serve as a “proof of concept” for this initiative. We stress that ultimately, the determination as to whether a revised Reliability Standard is consistent with FPA section 215 and Order No. 672 will be made based on the merits of the Reliability Standards as they are submitted for approval.”

The Commission provided the following guidance regarding results-based standards:

P 107 – “Revised Reliability Standards should incorporate the Commission’s directives from prior orders, such as Order Nos. 693 and 706 and other orders that address the substantive performance goals of the Bulk-Power System. These directives focus on the areas most critical to the Bulk-Power System and any revisions should ensure that these directives are met.”

P 108 – “We understand that the results-based standards initiative will strive to minimize administrative requirements, such as documentation, within the Reliability Standards and to convert such requirements to guidelines or compliance measures. The Commission will carefully examine any proposals to eliminate requirements to ensure that any such changes neither lessen the degree of reliability ensured by an existing approved

Reliability Standard nor undermine enforceability. While it may be appropriate to move certain administrative requirements from a Reliability Standard to guidelines, others are necessary to measure compliance and should remain as mandatory elements of the Reliability Standard. Thus, NERC must clearly demonstrate that any proposed elimination of a requirement does not diminish the reliability and enforceability of the existing Reliability Standard. Most importantly, NERC and the Regional Entities cannot rely solely on post-event measurements of compliance.”

P 109 – “We understand that the proposed results-based standard format may include expanded background sections, expanded descriptions of a Reliability Standard’s purpose, and/or explanations about the intent of individual Requirements. This information may provide useful context but it should not contradict or seek to supersede or interpret the requirements within a Reliability Standard. The requirements within the Reliability Standard should govern, and the application of the Standard should be clear without reference to the background or purpose sections.”

P 110 – “Commenters suggest that the results-based standards initiative should strive to eliminate duplicative requirements by either retiring or converting them into guidelines with lower level requirements. However, a requirement cannot be retired without its associated reliability benefit being addressed fully in another requirement or Standard. We caution that the body of Reliability Standards approved by the Commission is designed to work collectively rather than as individual Reliability Standards so some overlap is necessary and some Reliability Standard objectives therefore will not be complete without other complementary requirements or Standards.”

P 111 – “In Order No. 672, the Commission stated that there “should be a clear criterion or measure of whether an entity is in compliance” with a Reliability Standard. To this end, revised standards should include objective language rather than subjective modifiers such as, but not limited to, “sufficient” or “adequate” or “reasonable business judgment.” Similarly, Reliability Standards should not include language requiring NERC or a Regional Entity to assess whether a registered entity intended to violate a Standard, nor whether a registered entity failed to perform due to, for example, negligence or human error.”

P 112 – “Revised Reliability Standards should not reduce Bulk-Power System reliability from that which would be required by the existing approved Standards. For example, if an existing Reliability Standard or requirement requires an entity to meet a specific reliability objective, a revised Standard or requirement should not reduce or eliminate that reliability objective unless it includes a requirement(s) that compels equivalent or greater Bulk-Power System reliability. The Commission will consider each proposed Reliability Standard under this initiative on a case-by-case basis.”

NERC welcomes FERC’s guidance regarding the NERC initiative to transition to

Results-Based Standards. The following excerpts from NERC’s *Reliability Standards*

*Development Plan: 2011 – 2013*¹³ describe how NERC is implementing FERC guidance in PP 107-112 quoted above:

“To improve the overall quality of its Reliability Standards, NERC has introduced “results-based” principles into the standards development process. These principles require the standard drafting teams to achieve a portfolio of performance, risk, and competency-based requirements within the set of NERC reliability standards that support an effective defense-in-depth strategy for ensuring the reliability of the bulk power system. This concept enhances development of an integrated set of standards that build on the core entity competencies verified during NERC’s entity certification processes.

“The term “results-based” is sometimes confused with the term “performance-based” when combined with the terms “standards” and “requirements.” Performance-based standards can have the connotation of measuring only ultimate performance – no oil spills, no mine disasters, no plane crashes, etc. The problem with a purely performance-based approach is that if the system fails, the consequences are unacceptable. NERC is not implementing performance-based standards that focus only on ultimate outcomes for the main body of its standards. NERC is implementing a portfolio of result-based requirements, each of which indentifies a clear and measurable expected outcome, such as: a) a stated level of reliability performance, b) a reduction in a specified reliability risk, or c) a necessary competency. The set of NERC’s reliability standards works collectively in support of NERC’s reliability principles to prevent instability, uncontrolled separation and cascading. To achieve any one of NERC’s reliability principles a ‘defense in depth’ strategy is being employed such that there is a network of requirements spanning several standards that involve a mix of performance-based, risk-based, and competency-based requirements that in combination achieve NERC’s reliability principles.”¹⁴

* * * * *

“Results-based standards should not be associated with lax rules for industry. NERC is developing a strong portfolio of interdependent and overlapping requirements that work with the entity certification processes and address performance, risk mitigation, and competency. NERC is applying a defense in depth strategy that has proven successful in managing risks in many other industries including nuclear, aerospace, and other critical sectors.”¹⁵

¹³ Reliability Standards Development Plan: 2011–2-13, as approved by the NERC Board March 10, 2011, available at: http://www.nerc.com/files/2011-2013_RS-Development-Plan_Revised_Rev_00_2011-03-2-BOT_approved_0310201_rev7.pdf.

¹⁴ 2011-2013 Reliability Standards Development Plan at 10.

¹⁵ 2011-2013 Reliability Standards Development Plan at 11.

The 2011-2013 Reliability Standards Development Plan includes 22 projects that will fully implement the results-based concepts.¹⁶ An additional nine projects are identified that will reach completion without fully implementing the results-based concepts and format, since the full implementation of results-based principles would be too disruptive to the timely completion of these projects. However, the drafting teams associated with these projects are expected to incorporate results-based concepts if the opportunity arises in the course of the project.¹⁷

The NERC *Results-based Reliability Standards Transition Plan* is available at: http://www.nerc.com/docs/standards/sar/RBS_Transition_Plan_2010July26_Final.pdf.

2. Compliance Monitoring and Enforcement

In its September 16, 2010 Order, P 113, FERC expressed its general support for NERC's suggestions for program enhancements the Regional Entities should make to improve their processing of alleged violations and mitigation plans, and discussed several of the compliance monitoring and enforcement matters raised by NERC, including (a) audit practices; (b) penalty determinations; (c) delegation agreements; and (d) NERC's no-action letter proposal.

a. Audit Practices

i. Uniformity

In its September 16, 2010 Order, P 118, FERC stated:

“[it] strongly supports NERC's efforts to address the uniformity concerns raised by commenters and encourages NERC to continue making improvements in consistency, particularly in the areas of compliance, reporting efficiency, and improved data gathering. With respect to comments regarding audit techniques and practices, we note that while it is understandable that compliance auditors sometimes seek additional information during compliance audits, compliance auditors should prepare prior to on-site visits by reviewing fully information prepared by registered entities in response to pre-audit

¹⁶ 2011-2013 Reliability Standards Development Plan at 12-13.

¹⁷ 2011-2013 Reliability Standards Development Plan at 12.

requests for information. Compliance auditors should consider the time and effort registered entities need to provide supplemental information when formulating on-site information requests and should identify the specific Standard requirements for which additional compliance information is sought. We suggest that NERC and Regional Entities consider providing ongoing training for their compliance auditors on effective auditing techniques. We expect that NERC's establishment of a Regional Operations Group that focuses on auditors will rapidly improve audit consistency and performance.”

NERC acknowledges and agrees that both uniformity and consistency are important aspects in the Compliance Monitoring and Enforcement Program. This is especially true in the areas of program management, process and procedure refinement, and in audit practices. The importance of NERC and Regional Entity compliance auditors reviewing in detail all information submitted as part of the pre-audit process was a point of emphasis in an ERO auditor workshop/seminar held on February 22-23, 2011. Other significant factors that auditors take into account are the risk and performance of the individual entity, an area that may not necessarily be consistent or uniform but that is critical to a reliability-based compliance program. NERC and the Regional Entities are improving auditor training and developing a continuing education component. ERO auditor workshops will continue to be conducted to provide updates and information to auditors from all the Regions. This is perhaps the most significant activity being undertaken to enhance consistency in auditing.

Various compliance products are also intended to improve consistency in the compliance program for both the ERO and the industry, including Compliance Analysis Reports (“CANs”),¹⁸ Compliance Application Notices (“CARs”),¹⁹ Case Notes,²⁰ and Compliance Bulletins.²¹

¹⁸ Compliance Analysis Reports are available at: <http://www.nerc.com/page.php?cid=3|329>.

¹⁹ Compliance Application Notices are available at: <http://www.nerc.com/page.php?cid=3|22|354>.

²⁰ Case Notes are available at: <http://www.nerc.com/page.php?cid=3|22|371>.

²¹ Compliance Bulletins are available at: <http://www.nerc.com/page.php?cid=3|22>.

In response to the September 16, 2010 Order, NERC Compliance has increased the effort to provide CANS to industry. Prior to the Order, NERC had posted five CANS to the NERC website. As of February 1, 2011 an additional three CANS have been posted as final and there are twelve CANS in process, five of which have been posted for industry comment along with a draft of the CAN process.

The CANS address specific inquires and offer more targeted information on how NERC and the Regional Entities are applying particular Reliability Standards in determining if a registered entity has demonstrated compliance. Subjects for these CANS are proposed by various sources (NERC staff, Regional Entity staff, FERC, and registered entities), and upcoming CANS are tracked on a list that is posted with the CANS and updated quarterly. CANS do not and cannot change or modify a Reliability Standard; they are designed to convey compliance guidance drawn from the ERO's various activities. The CAN is applicable to the compliance application of a standard for violations that occur prior to FERC providing differing direction through an order approving a revision of or an interpretation to the standard, or providing guidance on its application.

The CAN process is not a consensus building tool and is not intended to mirror the standards development process, but it provides an opportunity to build consistency in compliance application across NERC and the Regions. To confirm that the compliance applications are consistent with FERC orders and across the ERO, and that there are no issues that would preclude a registered entity from demonstrating compliance, the CAN process provides a comment period for all interested parties – NERC, Regional Entities, industry and FERC staff. The time period for comments has intentionally been restricted to a short period,²² as the intent

²² Industry comment period is typically a two-week period. Industry contacts included on the NERC distribution list are notified via email when a CAN is posted for comment.

of the CAN process is to provide transparency on issues raised by industry in as expedited a timeframe as possible.

The CANs and other NERC compliance communication products can be found on the NERC website and include:

- § **CARs:** CARs provide an in-depth, historical review and analysis of the most violated reliability standards, including standard revision history, violations by requirement, violations by Region, dates of violations, and violation discovery methods. CARs also provide detailed information about common causes for violations of standards as well as advice for registered entities to avoid violations in the future.
- § **Case Notes:** Case Notes offer summaries of notable Notices of Penalty (“NOPs”) and mitigation plans to provide the industry a quick summary of actions that have made their way through the enforcement process. Case Notes are particularly useful in describing aspects of NOPs involving violations of reliability standards CIP-002 through CIP-009, where critical infrastructure security concerns prevent the same level of disclosure as in non-CIP NOPs. They are based, in whole or in part, on information contained in mitigation plans that have been accepted by Regional Entities and approved by NERC, and are designed to convey compliance guidance from NERC’s various activities. Case Notes do not establish new requirements under NERC’s Reliability Standards or modify the requirements in any existing NERC Reliability Standard.
- § **Compliance Bulletins:** Bulletins provide information for broader compliance monitoring and oversight process issues. There are two types of bulletins: Public Notice Bulletins, targeted to registered entities and Process Bulletins, targeted to Regional Entities.

CARs, CANs, Case Notes, and Bulletins, taken together with other resources readily available on NERC’s website, including the Reliability Standards Audit Worksheets²³ (discussed below), provide substantial information to registered entities as to how to achieve compliance in particular circumstances.

NERC agrees that there is more than one way to achieve compliance with the NERC Reliability Standards. However, with any given solution, there is no guarantee that a registered entity will be compliant, as there are variables affecting the effectiveness of any solution, including a registered entity’s quality of execution. Nevertheless, NERC has focused on providing transparency wherever possible and on providing information to the registered entities on requirements for, and methods of, achieving compliance.

ii. Focus Audits on Actual Performance

In its September 16, 2010 Order, P 121, FERC stated:

“The Commission agrees that the Reliability Standard Audit Worksheets should serve as no more than guidance to the auditor and the audited entity and that, for at least some Reliability Standards, there may be more than one way to demonstrate compliance. Therefore, the Commission supports NERC’s efforts and encourages NERC to continually review its Reliability Standard Audit Worksheets to improve their quality and usefulness. The Commission notes that NERC recognizes that providing the types of evidence listed in Reliability Standard Audit Worksheets is not the exclusive way for registered entities to show compliance; rather, Reliability Standard Audit Worksheets are a tool for evaluating compliance. Nevertheless, a registered entity will become subject to the CMEP process if it is unable to demonstrate compliance.”

The Reliability Standards Audit Worksheets (“RSAWs”) are a key tool used by compliance auditors in the field and are posted for registered entities to understand both what compliance auditors look for in their audits and what sorts of evidence can help establish compliance. NERC’s improvement of the quality of the RSAWs is performed on a continual basis. NERC established a process to solicit input for suggested revisions to the RSAWs from

²³ The Reliability Standards Audit Worksheets are found at: <http://www.nerc.com/page.php?cid=3|22>.

the Regional Entities through the ERO Compliance and Enforcement Management Group. The RSAW improvement process includes verification with NERC Legal Department for assessing recent FERC guidance to include in the RSAWs, as applicable.

Other compliance communications products including CANs, CARs, Case Notes and Compliance Bulletins, described in the response to P 118 of the September 16, 2010 Order, above, are also available to registered entities to aid their understanding as to how standards are being applied and what is necessary to be in, and to demonstrate, compliance. NERC has greatly increased the development and publication of these products since submitting the Assessment.

iii. Participation in Regional Entity Compliance Audits by NERC Staff and FERC Staff

In its September 16, 2010 Order, P 126, FERC stated:

“The Commission commends NERC staff’s participation in, and observation of, Regional Entity audits. In order to ensure quality audits, the Commission believes that NERC must continue to staff observation audits with well-trained and knowledgeable auditors. Just as an auditor must have technical proficiency to conduct an audit rigorously, NERC staff, exercising oversight responsibility, must have technical proficiency to determine whether an audit is conducted with appropriate rigor. Moreover, the Commission finds that active involvement in audits is crucial to NERC’s oversight of them. NERC will not have carried out its mission if an event occurs because Regional Entity or NERC auditors did not sufficiently examine content. For these reasons, the Commission directs NERC to continue its oversight of Regional Entity audits with NERC staff that are technically proficient.”

NERC Response to FERC’s Directive – P 126

NERC acknowledges the necessity of conducting its oversight of the Regional Entities with technically proficient staff that are able to assess the capability of Regional Entities to conduct audits of registered entities. NERC’s Audit Assurance and Oversight department has increased its staff numbers and industry experience level. NERC restructured its oversight process to include a participatory role during Regional Entity compliance audits on select

Reliability Standards. This restructured process enables better oversight of the evidence reviewed to assess compliance while providing oversight of the entire compliance audit process.

In addition, NERC conducted an auditor workshop February 22-23, 2011 to provide ERO auditors (NERC staff and Regional Entity staff) CMEP information, updates, and guidance on the application of the CMEP in order to enhance the consistency of auditor practices across the Regions as well as to improve the technical proficiency of those NERC staff that provide oversight of the Regional Entities' compliance monitoring activities. The format of this workshop was a mixture of presentations, expert panels, and breakout work sessions. It also provided auditors the opportunity for continuing training.

In its September 16, 2010 Order, P 127, FERC stated:

“The Commission agrees with the Regional Entities’ comments that the audit process would be well served by better defining observers’ roles and functions. In its guidance order on ERO and Regional Entity compliance audits, the Commission provided specific guidance on the roles of NERC and Regional Entity staffs during NERC-led audits. However, the Commission acknowledges that in compliance audits conducted by the Regional Entities, the observers’ roles have varied. In some instances, the Regional Entity may request that NERC or Commission staff actively participate and in other instances the Regional Entity may request less participation. However, depending upon how the audit is progressing, NERC and Commission observers may take a more active role in assuring a quality compliance audit. Therefore, the Commission directs the NERC and Regional Entities to have their staff, and Commission staff where applicable, discuss during their pre-audit meetings or conferences the appropriate role of observers.”

NERC Response to FERC’s Directive – P 127

FERC observers are always allowed and welcome. Section 403.11.4 of the NERC Rules of Procedure and section 3.1.5 of the Compliance Monitoring and Enforcement Program provide for FERC staff participation in audits. CMEP section 3.1.5.3 states that:

“... representatives of FERC and of other Applicable Governmental Authorities may participate either as observers or as audit team members so long as the Registered Entity is subject to the Applicable Governmental Authority’s reliability jurisdiction. ...”

Further, section 3.1.5.4 of the CMEP, Registered Entity Objections to Compliance Audit Team, as filed with FERC for approval on February 18, 2011, states: “Nothing in Section 3.1 shall be read . . . to limit the participation of FERC Staff in a Compliance Audit of a Registered Entity, or involving a portion of the Bulk Power System, over which FERC has jurisdiction.” (Section 3.1 is the section of the CMEP setting forth the processes for conducting compliance audits.) Therefore, FERC staff participating as observers in a compliance audit will not be precluded from timely, complete and unfettered access to compliance evidence in the same manner in which it is provided by the registered entity to the Regional Entity.

However, during the compliance audit, FERC staff observers are not members of the compliance audit team; it is the understanding of NERC that FERC staff observers are present to assess the performance of the Regional Entity in performing the compliance audit of the registered entity and the performance of NERC in its oversight role.

FERC staff participates in compliance audits as observers to review the processes, methods and techniques the audit teams use to verify compliance with Reliability Standards being covered in the audits. Accordingly, FERC staff observers require access to the evidence concerning the underlying compliance activity to assess the adequacy of the audit testing and the sufficiency of the technical rigor employed, as well as to provide feedback regarding audit processes, procedures, and techniques – but not to provide input or assistance in making determinations of compliance and non-compliance in the audit.

All evidence presented to the Regional Entity during the site visit will be made available to FERC staff observers on an equal basis (*e.g.*, sufficient numbers of paper copies or flash drives containing the evidence will be requested and obtained from the registered entity and presented to FERC staff observers for review at the same time and in the same form as presented

to the Regional Entity). Evidence provided to the Regional Entity in advance of the site visit will concurrently be provided to FERC staff observers by processes established by the Regional Entity. Evidence provided to the Regional Entity in advance of the site visit will concurrently be provided to FERC staff observers by processes established by the Regional Entity.

FERC staff observers have the ability, at any point during an audit, to discuss with the Regional Entity issues arising during the audit (*e.g.*, the need for additional evidence to support a finding of compliance or a possible need for the Regional Entity auditors to modify their approach or mode of questioning). However, the discussion of issues and recommendations for additional evidence should be within the scope of the audit. The audit team will be responsible for establishing procedures, during the pre-audit conference call, to allow for such questions. For instance, if the Regional Entity prefers that FERC staff observers do not directly ask questions of the registered entity, one method may be for FERC staff to ask for a break in the proceedings to discuss the matter with the Regional Entity staff in private.

NERC is implementing the following process parameters to facilitate the understanding of the roles and responsibilities of observers at Regional Entity audits of a registered entity for compliance with the NERC Reliability Standards.

- At pre audit meetings, either by conference call or in person, the Regional audit team leader will first identify the audit team members and any observers from NERC, FERC, other Applicable Governmental Authorities, and other Regional Entities.
- At the start of the audit, the lead FERC staff observer should provide a short introduction to the audit team and the registered entity being audited. This statement will make clear that the Regional Entity is conducting the audit and that the FERC staff observers are assessing the Regional Entity's performance. It will also be noted that FERC staff

observers will raise any concerns they have through the Regional Entity audit team lead, not to the staff of the registered entity being audited.

- All observers are expected to abide by the Requirements for Compliance Audit Team Members as stated in CMEP section 3.1.5.2 (effective January 1, 2011) in order to ensure due process, uniformity and predictability for the registered entity.
- The audit team lead will ensure that the number of observers is manageable and will not create a burden either on the Regional Entity audit team or the registered entity. [Section 3.1.5.3 of the revised CMEP effective January 1, 2011.]
- If the Regional Entity prefers to perform its audit by breaking into several teams, FERC staff observers may, at their discretion, stay with a particular team or move between teams to sample the procedure.
- Observers may make suggestions or recommend questions concerning their area of expertise to the audit team lead. The audit team lead will establish in the pre-audit meeting the process for observers to make suggestions or pose questions to be asked of the registered entity by the audit team.
- To be able to make a true assessment of Regional Entity and NERC staff performance during the audits, FERC staff observers should participate in all phases of the audit. For example, some Regional Entities undertake substantive review of evidence during the pre-audit phase, and FERC staff observers need to participate in this phase in order to get a true picture of the quality of evidence adduced.

At the completion of the audit, FERC staff observers will be requested to provide their comments in writing for the audit team. This is especially important for technical issues and will allow for a timely resolution where there is a difference of opinion. FERC staff observers bring

great technical and industry experience and NERC and the Regional Entities value their input. The input, however, must be provided in a timely manner and in writing to minimize misunderstanding and confusion.

To the extent that FERC staff observers identify process improvements (e.g., the need for additional inspections, site visits, etc.) in the course of participating in compliance audits, it would be helpful for FERC staff to provide a formal mechanism for providing that feedback. In some cases, FERC staff has conducted a debrief call with the audit team and NERC staff. NERC respectfully requests that such a debrief call or other formal feedback activity should occur for every audit observation by FERC staff and that this be conducted within two weeks following the completion of the on-site portion of the audit. Written comments and issues should be provided by FERC staff to facilitate the discussion and process improvements of the Regional Entity and NERC. Further, a written observation report would facilitate any resource decisions by ERO management to implement such process improvements and to ensure that improvements are shared and implemented consistently across Regional Entities.

b. Penalty Determinations

In its September 16, 2010 Order, P 133, FERC stated:

“We agree with NERC that there always will be some tension between the transparency of specific NERC Sanction Guidelines and flexibility to negotiate penalties in specific cases. The Commission believes that NERC and the Regional Entities must retain flexibility in determining the specific penalties appropriate for individual cases, particularly in the context of achieving settlements. Penalties also should not be so rigid or predictable that a registered entity would feel comfortable in calculating a penalty as the cost of doing business. Registered entities should understand the seriousness of violating a Reliability Standard. We believe that the NERC Sanction Guidelines currently in place generally allow NERC and the Regional Entities to balance these priorities. However, if in the future NERC believes that amended NERC Sanction Guidelines would better serve compliance and enforcement goals to provide more transparency and predictability in penalty determinations, it may file such a proposal for our approval.”

FERC continued, in P 134 of its order, stating:

“Self-reporting also is an important part of the compliance process. Self-reporting allows registered entities to identify potential violations and pro-actively report those potential violations. The self-reporting process could save resources and may be used as a means to expedite corrective action if, and even before, the Regional Entity confirms that a violation occurred. For these reasons, the Commission agrees that NERC should continue to encourage, and develop incentives for, registered entities to self-report potential violations to the Regional Entities. It is entirely appropriate for NERC and Regional Entities to provide this incentive by decreasing penalties when effective self-reports have occurred consistent with our Policy Statement on Compliance. The Commission also notes that the speed with which NERC and the Regional Entities process a self-report does not always reflect the level of encouragement for the practice. A self-reported violation may contain complicated facts that require NERC or the Regional Entity to spend considerable time reviewing the circumstances surrounding the violation as well as the mitigation plan to correct it.”

NERC recognizes the need to balance enforcement discretion, application of the sanctions guidelines in a fair manner to the specific facts of every case, consistency of penalty determinations and transparency of decision making, and is constantly reevaluating the notices of penalty (NOPs) along these dimensions. In May 2010, NERC rolled out new templates for NOPs largely in an effort to streamline the enforcement effort needed to process violations based on the magnitude and risk of each violation. In addition to achieving beneficial efficiencies in the enforcement process, one of these templates, the disposition document, should aid substantially in clarifying the penalty determination. The disposition document standardizes across various tiers of NOPs the presentation of every factor that would be taken into consideration in the penalty determination, including factors like the violation risk factors/ violation severity levels, the actual and potential risk to the bulk power system, the registered entity’s violation history, the presence or absence of an internal compliance program and other mitigating and aggravating factors.

Additionally, NERC and Regional Entity enforcement staffs will undertake a further review this year of both the structure of the NOPs and the *Sanction Guidelines*. This is an effort

to provide greater clarity as to which of the many factors regularly considered in an enforcement action are weighed more heavily in the penalty assessment.

c. Delegation Agreements

In its September 16, 2010 Order, P 138, FERC stated:

“The Commission commends NERC and the Regional Entities on their efforts to resolve delegation issues. We agree that NERC should develop performance metrics that help to ensure consistent implementation of the compliance enforcement process across the regions. Further, the Commission supports development of a more rigorous decision-making process for the consistent and timely resolution of matters by NERC and the Regional Entities.”

NERC Responses to FERC’s Other Action – P 138

The revised Delegation Agreements that were filed on June 21, 2011 establish processes for the collaborative development by NERC and the Regional Entities of performance goals, measures and other parameters, and performance reports for the Regional Entities’ performance of their delegated functions and other activities, which NERC will use to evaluate the Regional Entity’s performance and to identify areas in which performance improvements are needed. These provisions are found in Section 8(a) of the revised Delegation Agreements.

NERC and the Regional Entities are collaboratively focusing their reliability metrics efforts on the development of a comprehensive and interrelated suite of metrics that will support a strong culture of bulk power system reliability performance excellence as well as effective, consistent, transparent, and efficient organizational performance by NERC and Regional Entities. All of these metrics will be aligned with and in support of ERO Enterprise goals and objectives to allow the ERO to measure its success relative to them.

With respect to FERC’s comment on performance metrics to ensure consistent implementation of the compliance enforcement program across the Regions, NERC is working in collaboration with the Regional Entities to develop metrics that will measure the effectiveness

of all the programs that are the responsibility of the ERO Enterprise, including the functions delegated to Regional Entities, in terms of improved transparency, consistency, quality and timeliness across all program areas. The initial metrics that have been proposed include the following (some of which relate to program areas other than or in addition to Compliance Monitoring and Enforcement):

- **Efficiency Metrics** — ERO and Regional Entity program area costs in relation to output; timely submission of data for reliability assessments; timely completion and issuance of audit reports, violation notices, mitigation plan acceptance, and settlements; timely completion of regional standards development; etc.
- **Transparency Metrics** — transparency of financial information; transparency in sharing event analysis findings; sharing of lessons learned and best practices; number of webinars and workshops to share information on standards, compliance, and lessons learned; availability of current information on Regional Entity and NERC standards development activities; etc.
- **Consistency Metrics** — Use of common goals and assumptions where appropriate; consistency in financial reporting; comparison of Regional Entity training course evaluations; consistency in Regional Entity event classification and reporting; uniformity in Regional Entity reliability assessment formats; meeting the common attributes for Regional Entity standards development programs; etc.
- **Effectiveness/Quality Metrics** — Review of year-end financial results comparing forecast versus actual resource demands and budgetary expenditures; results of reliability assessment data checks and validation; reduction in Violation Risk Index trends;

reduction in number of inaccurate self certifications; percentage of ballots submitted from each ballot pool segment; etc.

NERC expects to present to its Member Representatives Committee and Board of Trustees at the May 2011 meetings a specific set of Regional Delegation Agreement metrics for consideration for approval.

Section 8 of the revised Delegation Agreements, effective January 1, 2011, establishes other collaborative processes for decision-making and adoption of process revisions and improvements by NERC and the Regional Entities. Further, in April 2010, NERC and the Regional Entities formed the ERO Executive Management Group (“ERO/EMG”), whose purpose is to provide strategic policy guidance in the execution of the Regional Entity delegation agreements and the NERC Rules of Procedure, consistent with maintaining and enhancing reliability across North America for the benefit of all bulk power system users, owners and operators. The ERO/EMG comprises the chief executive officer, or equivalent, of each of the eight Regional Entities and NERC. The NERC President acts as Chair and a Regional Entity president, elected by the eight Regional Entities, as Vice Chair. The Chair has assigned one of NERC’s senior vice presidents to serve as the ERO/EMG Secretary. The ERO/EMG seeks the greatest amount of consistency and uniformity across the ERO Enterprise, while ensuring efficient and effective use of resources in executing the statutory responsibilities of the ERO. The ERO/EMG has created several subgroups to facilitate coordination and cooperation among and between Regional Entities and NERC in the areas of reliability assessment, regional standards, compliance and enforcement, training and education, information technology, and communications.

d. No-Action Letter Proposal

In the September 16, 2010 Order, PP 141-44, FERC indicated that it would permit NERC to submit rules changes to effectuate a “no action letter” process, but FERC imposed several restrictions on such a process. First, FERC indicated that any no action letter process at NERC should include the same conditions applicable under FERC’s own no action letter process:

“(1) [It] would determine whether a specific set of facts that a requestor provides regarding an actual (i.e., not hypothetical) situation would be in compliance with the Reliability Standards; (2) does not address past behavior, i.e., is not applicable retroactively; and (3) is not binding on the Commission. Similarly, no-action letters, while addressing the views of NERC staff as to whether enforcement action would be taken, should not be binding on NERC.”²⁴

Further, FERC indicated that the no action letter would only be issued by NERC and not the Regional Entities.²⁵

FERC’s requirement that no action letters “should not be binding on NERC” severely limits the usefulness of the no-action letter concept from the registered entity’s perspective. As a result, NERC has decided to reconsider its original proposal to establish a no action letter process, and instead to pursue other approaches to providing additional guidance to registered entities. In the past several months, NERC has undertaken a concerted effort to publish guidance for the industry in many forms, including Compliance Analysis Reports, Compliance Application Notices, Case Notes, and Compliance Bulletins, as described above. These

²⁴ September 16, 2010 Order at P 141.

²⁵ The Commission also identified several questions that would need to be resolved in establishing the no action letter process:

(1) the relationship between the no-action letter process and the current process by which registered entities may submit to NERC requests for formal Standards interpretations, which then must be submitted for Commission review and approval before they become effective; (2) how no-action letter requests and determinations would be publicized so as to provide guidance to all the Regional Entities and registered entities; (3) the process to be used in the event of a conflict between a no-action letter and the Commission’s interpretation of a requirement; and (4) whether NERC would have adequate resources to implement a no-action letter process without sacrificing the resources needed for the optimum performance of its current duties.

September 16, 2010 Order at ¶ 144.

publications address many of the needs of registered entities that led to the original concept of the no action letter process. Nevertheless, as these processes mature, NERC would still continue to entertain the no action letter process or other processes if specific needs are not met.

e. Administrative Citation Process

In the September 16, 2010 Order, P 218, FERC stated:

“One method that NERC and Regional Entities advocate to process enforcement matters more efficiently is to streamline procedures for handling less serious alleged violations. To this end, as we have stated previously, the Commission encourages NERC and the Regional Entities to develop flexible approaches to align the record and format of notices of penalty to the relative significance of violations, such as *pro forma* settlements and proposals for “parking ticket” or “speeding ticket” approaches that could minimize the administrative burden of performing each step in the Compliance Monitoring and Enforcement process for every violation. For example, minor alleged violations subject to a “parking ticket” approach could be aggregated and reported to the Commission quarterly, rather than through individual notices of penalty. We agree with NERC that Regional Entities should seek to “bundle” multiple alleged violations into a single settlement when that can be done; in fact, we have declined to review further a number of notices of penalty that incorporate such settlements. We concur that, as Regional Entities urge, NERC and Regional Entities should consider development of “baseline” penalties for particular types of less serious violations. We likewise encourage NERC and Regional Entities to address and submit for our consideration appropriate procedures and penalties for resolving purely documentation-related violations, i.e., instances in which a registered entity cannot provide data or documents showing its compliance with a particular requirement but can provide some other assurance of its performance or that it otherwise is fulfilling completely the reliability objective of the requirement. Documentation is not the goal in and of itself. However, documentation is necessary to establish a reasonably auditable demonstration of compliance and may reinforce focus on attaining the performance required by a Reliability Standard.”

In the September 16, 2010 Order, P 219, FERC stated:

“At this time, we cannot accept the proposed development of a “warning ticket” that would not require a Regional Entity and a registered entity to state their conclusions about whether a violation has occurred. As we stated in the Omnibus Notice of Penalty Order, the Commission expects an increasing level of compliance with the Reliability Standards as registered entities gain more experience with mandatory Reliability Standards. This expectation emphasizes an important consideration for penalty determinations: a registered entity’s compliance history. We are concerned that an improperly designed “warning ticket” mechanism may allow a registered entity to receive a warning for practices that violate a Reliability Standard requirement, thereby resulting in an insufficient recognition of a registered entity’s compliance history in a subsequent

penalty matter. If NERC still wants to pursue a “warning ticket” mechanism, it must explain how the mechanism would work without running afoul of the concerns raised above. NERC is free to provide that explanation in the informational filing or, if it chooses to take additional time to develop the mechanism, in a later filing.”

NERC Response to FERC’s Other Action – PP 218-219

Since Spring 2010, NERC has been working to implement a program that establishes categories of NOPs and streamlines those NOPs in which risk to the bulk power system is minimal or moderate. To date, this streamlining has substantially increased efficiency with NERC now submitting NOPs covering more than three times the number of violations each month on average compared to 2009.

One specific new program discussed by Mr. Cauley at the November 2010 technical conference is the administrative citation process. The number of new alleged violations coming into the system continues to increase due in part to the implementation of the relatively new CIP reliability standards. The administrative citation process will enable NERC and the Regional Entities to address that wave of new violations by submitting a single streamlined NOP covering numerous minimal-risk violations. Rather than requiring each violation to go through the several levels of process and documentation (notices, mitigation plans, settlement agreements) that are specified in the NERC CMEP, the administrative citation program will enable NERC and the Regional Entities to process fully these types of violations using a spreadsheet identifying each violation, explaining why such violation is of minimal risk to bulk power system reliability, and describing how the violation was mitigated.²⁶ While NERC and other organizations participating

²⁶ NERC has concluded that the administrative citation process should operate as a Notice of Penalty to be filed formally with and accepted by FERC. Repeat violations can qualify for the administrative citation process provided that they pose only minimal risk to the bulk power system, and the administrative citation process will be open to violations that registered entities “neither admit nor deny,” in addition to admitted violations. Consistent with FERC’s support at the November 2010 technical conference and its admonition in the September 16, 2010 Order, violations processed as administrative citations will be disposed of formally and will become a part of the registered entity’s compliance history. September 16, 2010 Order at P 219 (“As we stated in the Omnibus Notice of Penalty Order, the Commission expects an increasing level of compliance with the Reliability Standards as registered entities gain more experience with mandatory Reliability Standards. This expectation

in the technical conference will continue to pursue the approach of allowing the ERO to exercise enforcement discretion not to process truly minor violations at all,²⁷ NERC is encouraged by FERC's support of the administrative citation process, both at the technical conference and in its March 3, 2011 Order. That support, and in particular the trust going forward of FERC in the ability of NERC and the Regional Entities to effectively implement the administrative citation process, will be critical to ensuring that the program actually achieves the efficiencies that all parties are seeking to achieve.

NERC made its first administrative citation NOP filing on January 31, 2011. That filing contained 41 violations of 11 standards by 19 registered entities, and was accepted by FERC with no further review.²⁸

In its March 3, 2011 Order FERC stated in PP 1 and 7:

P 1 ". . . [W]e encourage NERC to continue the use of the abbreviated Administrative Citation format in appropriate circumstances."

P 7 "Based upon this filing, we believe that NERC's Administrative Citation Notice format will be a successful tool in improving efficiency of NERC's enforcement process, thereby reducing the time and resources expended by the Regional Entities, NERC, and Commission staff while still achieving transparency and consistency in penalty determinations for violations that are appropriate for this format. We also commend NERC for promptly following through with its intent to institute the Administrative Citation process."

NERC made its second administrative citation NOP filing on February 28, 2011.

emphasizes an important consideration for penalty determinations: a registered entity's compliance history. We are concerned that an improperly designed "warning ticket" mechanism may allow a registered entity to receive a warning for practices that violate a Reliability Standard requirement, thereby resulting in an insufficient recognition of a registered entity's compliance history in a subsequent penalty matter.")

²⁷ This would be consistent FERC's own approach to enforcement. See *Compliance with Statutes, Regulations, and Orders*, "Policy Statement on Compliance," 125 FERC ¶ 61,058 (2008) P 22 n. 27 (citations in the original) ("We also note that in many instances violations reported to the Commission are closed without sanctions. These usually involve inadvertent violations or violations that resulted from errors or misunderstandings of regulatory requirements, and which were not serious. Such resolutions normally are not made public. During the first two years of enforcement activity since passage of the Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (2005), approximately 70 percent of staff investigations were terminated without any penalty, including many instances where a violation occurred. *Staff Report on Enforcement*, *supra* note 15, at 22.").

²⁸ *North American Electric Reliability Corporation*, 134 FERC ¶ 61,157 (2011) ("March 3, 2011 Order").

As all staffs and the industry gain familiarity with the process, it is expected that NERC will be submitting an average of about 100 violations each month through the administrative citation process, which would represent an increase in the rate of processing notices of violations by the NERC Board of Trustees Compliance Committee of 100% to 150%.

3. Critical Infrastructure Protection

In its September 16, 2010 Order, P 151, FERC stated:

“NERC also should examine the Department of Homeland Security Catalog of Control System Security, which currently is being examined by the NIST-led Smart Grid Interoperability Panel – Cyber Security Working Group for security requirements that may be applicable to the various smart grid applications. The Catalog incorporates much of the NIST Federal Information Security Management Act framework and expands on it.”

NERC is currently developing a program with the Department of Energy and the National Institute of Standards and Technology (“NIST”) to establish an electric industry risk analysis process and security guidelines that would integrate CIP standards and smart grid security guidelines.

In its September 16, 2010 Order, P 152, FERC stated:

“[W]e remind NERC that the Commission directed it in Order No. 706, when approving Reliability Standard CIP-002-1, which pertains to critical cyber asset identification, to provide structure and sufficient oversight and guidelines to allow registered entities to determine accurately that an asset is critical to the Bulk-Power System. We encourage NERC to intensify its efforts to provide additional oversight and guidelines to assist registered entities in accurately determining that an asset is critical to the Bulk-Power System.”

NERC Response to FERC’s Other Action – P 152

NERC has developed and successfully balloted Reliability Standard CIP-002-4,²⁹ which requires the identification and documentation of the Critical Cyber Assets associated with the Critical Assets that support the reliable operation of the Bulk Electric System. This standard,

²⁹ Reliability Standard CIP-002-4 available at: <http://www.nerc.com/files/CIP-002-4.pdf>.

which was approved by the NERC Board of Trustees on January 24, 2011 and was filed with FERC for approval on February 10, 2011,³⁰ represents a shift away from self determination towards a uniform approach to identifying and categorizing the bulk electric system (“BES”) cyber systems that support the functions critical to the reliable operation of the BES. Notably, Standard CIP-002-4 provides specific criteria for identifying Critical Assets within the text of the standard; previous versions of CIP-002 did not contain specific criteria for identifying Critical Assets. This new standard is responsive to FERC’s directive in Order No. 706 to provide structure and sufficient oversight and guidelines to allow registered entities to determine accurately that an asset is critical to the Bulk-Power System.

In its September 16, 2010 Order, P 153, FERC stated:

“NERC should ensure that there is quality, uniformity and consistency amongst the Regional Entities when conducting compliance audits and spot checks relating to CIP Reliability Standards. We also support NERC’s action items pertaining to educating NERC auditors regarding critical infrastructure protection. CIP audits must be led and staffed by qualified audit team members. To maintain the essential knowledge and skills to conduct cyber security audits, NERC should consider the worthiness of an ongoing “accreditation” of qualified auditor candidates through continued education.”

NERC understands the importance of developing the expertise and consistency of the ERO CIP auditors. To this end, NERC developed a workshop focusing on the auditing skills and information that was held on February 22-23, 2011 and was accessed by the vast majority of ERO CIP auditors. NERC is expanding this training program through additional workshops in 2011 and accelerating the development of a professional cadre of CIP auditors.

In its September 16, 2010 Order, P 154, FERC stated:

“While we support efforts to provide greater guidance on CIP implementation, we are concerned whether “fast track” interpretations will provide the consistency, clarity and transparency for meaningful assistance to entities that must comply with the CIP Standards. If NERC develops this proposal, NERC should submit it to the Commission

³⁰ *Petition of the North American Electric Reliability Corporation for Approval of Critical Infrastructure Protection (CIP) Reliability Standards Version 4*, filed February 10, 2011 in Docket No. RM06-22-000.

for review, possibly in the form of a petition for approval of modifications to NERC's Rules of Procedures, which currently provide procedures for interpretation of Reliability Standards."

Interpretations are intended to provide additional clarity about the intent of one or more requirements of a standard, but not to provide guidance or assistance to registered entities on how to comply with the requirements of a standard, including the CIP standards. Therefore, CIP-related compliance and application issues and questions are being addressed through the Compliance Application Notice process (described earlier in this Informational Filing in the response to P 118 of the September 16, 2010 Order) rather than through the interpretation process. The CAN process is able to provide timely compliance guidance to support registered entity compliance program refinement with regard to all standards, including the CIP standards. Issues raised and addressed through the CAN process regarding CIP standards are also being shared with the Cyber Security Order 706 standards drafting team so these issues can be resolved in the further revisions to the CIP standards that are now in process.

4. Compliance Registry

In its September 16, 2010 Order, P 162, FERC stated:

"While NERC indicates that it will consider whether to raise the thresholds set forth in the Registry Criteria, NERC also observes that the registration process is working well and will treat this item as a low priority. NERC has the discretion to consider this matter; however, the Commission has adopted the registry criteria and any proposed revisions to the thresholds must be submitted to the Commission for approval. While we understand that a change in the thresholds for registration could help relieve the burden on small and medium-sized entities, that consideration alone is not sufficient justification for a modification to the Registry Criteria. Rather, any such filing must justify the need for the revisions from a reliability point of view and analyze the impact of the proposed revisions to the threshold criteria on Bulk-Power System reliability."

NERC agrees that the current registration process is working well. NERC also is reviewing the registration requirements and process in the context of ongoing work with regards to the definition of the Bulk Electric System and the Ad Hoc Generator Owner/Transmission

Owner Report. Refining the alignment of entities, functions, standards and requirements is a strategic goal for the ERO.

Subsequent to filing the Assessment, NERC filed and obtained FERC approval for revisions to Section 500, Organization Registration and Certification, and Appendix 5A, *Organization and Certification Manual*, of the Rules of Procedure, as referenced earlier in this Informational Filing in response to P 57 of the September 16, 2010 Order.

FERC Order No. 743, issued on November 18, 2010 directed NERC to utilize the Standard Development Process to revise the definition of Bulk Electric System within 12 months of the effective date of the Order (60 days after publication in the Federal Register).³¹ Key items from Order No. 743 require that NERC:

- Ensure the definition encompasses all facilities necessary for operating an interconnected electric transmission network
- Eliminate the regional discretion in the current definition
- Maintain a bright-line threshold that includes all facilities operated at or above 100 kV
- Exempt defined radial facilities
- Establish an exemption process for excluding facilities that are not necessary for operating the interconnected transmission network

NERC anticipates that responding to Order No. 743 will necessitate the completion of two initiatives:

- Drafting of the definition of BES for the NERC Glossary
- Drafting of the exemption process

³¹ *Revisions to Electric Reliability Organization Definition of Bulk Electric System*, 133 FERC ¶ 61,150 (2010).

An ad hoc group representing several NERC Regions was already working on a Standard Authorization Request (“SAR”) to propose a revision to the definition of Bulk Electric System when Order No. 743 was issued. In response to Order No. 743, the team revised its SAR to reflect the contents of the Order and submitted it for Standards Committee consideration.

NERC posted the draft SAR for public comment from December 17, 2010 to January 21, 2011, and NERC staff provided a set of detailed comments. The ad hoc team has been addressing the majority of the comments received. With regard to the NERC staff comments, the ad hoc team felt they were too technical and have elected to provide them to the drafting team for their consideration as they develop the definition.

The Standards Committee approved the formation of a drafting team for this project on January 13, 2011. The team leadership has met with NERC staff to discuss the scope of the project. Currently, some questions remain as to where the responsibility lies for the creation of any criteria used in the exemption process. NERC staff believes that its stakeholders, working with NERC staff, should develop the criteria as a modification to the Rules of Procedure. Others have suggested that stakeholders should develop the criteria using the Standards Process. Further discussion of this issue is required.

5. Situation Awareness, Event Analysis, Reliability Assessment and Performance Metrics

a. Situation Awareness

In its September 16, 2010 Order, P 166, FERC stated:

“While stakeholders expressed concerns to NERC about the SAFNR project, we have no specific information to support their arguments against the project, and thus find no basis to require NERC to alter its plans on situational awareness.”

NERC is finalizing contractual arrangements with the vendor selected to develop and implement the SAFNR Version 2 system in accordance with NERC’s request for proposals

issued in September, 2010. NERC, through its SAFNR Project Team, and specifically the SAFNR design team, developed a comprehensive request for proposal outlining the requirements and expectations for the application. Members of the team included representatives from NERC, several Regional Entities, U.S. Reliability Coordinators, and FERC who contributed to the development of the requirements document. These requirements satisfy NERC's objective to maintain situation awareness as contemplated by Section 1001 of its Rules of Procedure and FERC's interest to achieve common display formats and increased data trending capability, both considered significant enhancements over existing Version 1 SAFNR capabilities. The request for proposal was issued to 21 potential vendors, from which 9 proposals were offered. The design team re-engaged to evaluate the proposals against the RFP requirements and offered a recommendation to NERC. NERC is currently involved in completing contract negotiations with the targeted vendor. A critical path item to the project's success is the support of the Reliability Coordinators for providing data on behalf of the entities within its footprint. NERC staff is actively engaged with the Reliability Coordinator members of the SAFNR project team as well as with the Reliability Coordinator Working Group to identify and address the issues to accomplish the expected outcomes. While the product of a competitive process, the 2011 final SAFNR contract costs are nevertheless in excess of NERC's 2011 SAFNR budget and NERC is discussing with FERC staff various options to fund these added costs. The initial phase of SAFNR Version 2 project was originally projected to be implemented in June, 2011 with final implementation by the end of 2011. Assuming the contract is finalized and funding issues resolved by mid March, NERC expects the initial phase implementation to be completed by mid-Summer 2011 and final implementation in the first quarter 2012.

b. Event Analysis

i. Improvements to Event Analysis

In its September 16, 2010 Order, P 169, FERC stated:

“The Commission agrees that NERC cannot timely and effectively analyze every event that occurs and, therefore, must select a subset of events to analyze fully. Some may be too minor; others may be similar to previous events, making study potentially of little benefit. Accordingly, the Commission directs NERC to establish criteria it will use to select this subset of events, which should focus on those with the highest impact to reliability, to provide important “lessons learned” and to submit this criteria in the informational report directed in this order.”

NERC Response to FERC’s Directive – P 169

NERC has established criteria for prioritizing events by risk and significance for the purpose of reporting and determining the level of analysis needed for each category. The threshold criteria are grouped within five separate categories (Category 1 - Category 5) with the significance and risk of the event increasing as the category increases. The level and timeliness of reporting is also outlined for each level of category. The “Event Categories and Levels of Analysis” category criteria are documented in the ERO Event Analysis Process Manual (field trial version approved October 25, 2010)³² and are attached as **Appendix C**.

An initial field trial of the revised event analysis program, including categorization of events based on significance, began on October 25, 2010. This initial field trial concluded on January 25, 2011. During this phase, NERC captured substantial data and process improvement opportunities. Since January 25, 2011 changes have been underway to the revised process document to address these inputs. Currently, NERC expects to issue a second revision to the process document by early April 2011 and initiate a second phase field trial shortly thereafter. Upon conclusion of the second phase field trial NERC plans to initiate changes to the NERC

³² ERO Event Analysis Process Manual (field trial version approved October 25, 2010) available at: http://www.nerc.com/docs/eawg/Event_Analysis_Process_Field_test_DRAFT_102510-Clean.pdf.

Rules of Procedure, as required, to reflect the new event analysis program. Those Rules of Procedure changes are targeted for submittal to the NERC Board of Trustees during the November 2011 meeting.

In P 170, FERC stated:

“In addition, the Commission’s staff needs timely access to detailed event information. Absent such information, the Commission’s identification of any needed improvements in the Reliability Standards could be delayed significantly. The Commission directs NERC to work with the Regional Entities to ensure that they provide to Commission staff, in accordance with the Reliability Standards and upon request, sufficient and timely information on each event, such as a sequence of events, one-line diagrams, and other reports at the time and in the condition it is received by NERC. NERC must report on steps it will take to implement this directive in the informational report following the issuance of this order.”

In P 171, FERC stated:

“The Commission also directs NERC to develop communication protocols between NERC, the Commission and the Regional Entities for use during events. These protocols will help avoid possible delays and miscommunications involved in establishing ad hoc procedures on a case-by-case basis. These protocols shall, at a minimum, establish: (i) contact person(s), (ii) phone and e-mail addresses, (iii) a communication hierarchy, (iv) minimum information that will be made available, and (v) a communication time line to ensure that relevant information is provided to NERC and the Commission in a timely manner. NERC shall provide a written protocol that shall be followed for sharing of the detailed event information. We direct NERC to report on its progress in this regard in the six-month informational filing.”

NERC Response to FERC’s Directive – PP 170-171

NERC agrees with FERC’s directive to develop clear communication protocols between NERC, FERC and the Regional Entities for use during events. NERC has established a communications list that includes the primary and secondary contact names, telephone numbers and e-mail addresses for NERC and for each Regional Entity for use during system events. In addition, NERC has assembled similar information for each Reliability Coordinator in the United States. Likewise, NERC has identified the primary and secondary contact names, telephone numbers and e-mail addresses for representatives from FERC, the Department of Energy, and the

Department of Homeland Security. NERC has created this listing in hierarchical fashion identifying in priority order the preferred contacts within each organization.

NERC is in the process of developing a written protocol for sharing of event information that will be incorporated into an amended set of Rules of Procedure by the end of 2011. Until then, NERC will develop and employ an interim protocol that will be completed by April 1, 2011 that outlines the minimum information expected and the time expectations for conveyance of that information. The protocol will be based on the event categories currently utilized in NERC's events analysis process and will detail the thresholds when direct voice communication and conference calls will be utilized in lieu of sharing of event information electronically. At minimum, NERC plans to provide event information for all events that are classified as Category 1 or higher.

NERC intends to implement these protocols during the course of events to determine the nature of the impacts experienced, the current state of Bulk Electric System reliability, the projected impacts on reliability, the length of time the conditions are expected to be experienced, and to the extent known at the time, the precipitating or contributing sources of the event. These protocols will be employed while an event is active and will not cover the after-the-fact event analysis phase as to the specific circumstances, causes, and lessons learned of the event.

ii. Timing of and Interaction between Event Analysis and Compliance Violation Investigations

In its September 16, 2010 Order, P 174, FERC stated:

“To address the stakeholders’ concerns, the Commission offers the following guidance to NERC. If a CVI is initiated, an event analysis and the CVI (and/or a Commission staff-conducted investigation under 18 C.F.R. Part 1b) should be done concurrently, to save both time and resources. Because both processes rely on accurate data which may be lost if not immediately secured, it is imperative that each entity involved be required to retain all relevant data and, to the extent necessary, both an event analysis and a CVI begin as soon as possible.”

Further, in P 175, FERC stated:

“While the facts and circumstances in both an event analysis and a CVI often are the same, the focus of each inquiry is different. A CVI addresses whether Reliability Standards have been violated, while an event analysis addresses how an event occurred so as to prevent its recurrence. As such, the results of an event analysis should not be employed in lieu of a CVI or used to prejudge possible issues relating to compliance during an event. Industry participants are allowed to participate in event analysis but not in CVIs, where they may lack objectivity. The same applies to interim guidance that NERC proposes to provide before an event analysis is concluded, i.e., the guidance itself cannot assess possible violations of Reliability Standards. Similarly, the ERO or Regional Entity cannot delegate its authority to the registered entity to perform a preliminary event analysis as the basis for deciding whether or not to pursue a CVI. ERO or Regional Entity staff must be actively involved in the event analysis in order to produce an unbiased analysis and framing of the potential compliance issues surrounding the event.”

In P 176, FERC stated:

“In order to create more efficiency in the event analysis and CVI processes, all event analysis materials obtained by the event analysis team, including requests for information and responses, should be sent, at the same time as issued or collected, to the compliance staff in each applicable Regional Entity and to NERC compliance staff. These materials, insofar as they relate to a U.S. registered entity, also should be available to Commission staff upon request. In this manner, personnel conducting a CVI can access the data and information obtained during an event analysis so as to minimize duplicative requests. At the same time, the personnel conducting an event analysis can proceed with their analysis without being aware of the activities of any CVI team, protecting the confidentiality of those processes. Because the applicable Regional Entity would receive all event analysis material regardless of whether a CVI was occurring, event analysis personnel would not necessarily be aware of an ongoing CVI.”

In P 177, FERC stated:

“Further, any communication between an event analysis team and a corresponding CVI team generally should be one-way only: from the event analysis team to the CVI team. This one-way information sharing will avoid the possibility that industry volunteers could receive and possibly disclose confidential compliance information. An exception to this practice would be appropriate only for factual information collected by a CVI team that bears on an important industry advisory that the event analysis team would make (or recommend that NERC make) as part of an initial event analysis determination.”

Finally, in its September 16, 2010 Order, P 178, FERC directed that:

“NERC shall report on the steps it has taken to clarify the interface between event analyses and compliance activities, including CVIs, in response to the Commission’s

guidance in the informational filing due six months after the issuance of this order. The Commission also takes notice of a reorganization of NERC's staff, effective February 1, 2010, under which "Operations and Engineering is responsible for event analysis and investigation...." NERC has not submitted in this proceeding an explanation of how this change will affect its procedures for event analysis and compliance functions. Accordingly, we direct NERC to include, in its informational filing due six months after the issuance of this order, the procedures to be used within its Operations and Engineering function relating to the communication and exchange of event analysis and investigative information, and procedures under which the Operations and Engineering function will communicate event analysis and investigative information to the compliance staff of NERC or a Regional Entity, consistent with the Commission's guidance provided above. Because the NERC staff investigators will now have added event analysis to their duties, this informational filing also should address whether current staffing levels are sufficient for the increased workload. To the extent they are not, NERC should include any necessary adjustments to its budget request to allow for the proper staffing size and mix."

NERC Response to FERC's Directive – P 178

Draft revisions to the events analysis process currently under consideration contemplate both Regional Entities and registered entities taking a more direct role in analysis of lower significance events. This would provide some resource benefit to NERC as the role of NERC staff would shift towards analysis of more significant but less frequent events and, towards performing quality reviews and training to Regional Entity and registered entity staff to support continuous improvement of those activities and products. Phase 2 of a field trial is due to commence March 31, 2011 which should inform NERC regarding Regional Entity and registered entities' engagement and capability in these revised roles. NERC and the Regional Entities will take into account any needed changes in resources, including staffing, based on those results in formulating their 2012 business plans and budgets.

NERC has clarified the interface between event analysis and compliance enforcement activities in its new Event Analysis Process Manual – Field Test Draft, October 25, 2010.³³

NERC has organized its new Event Analysis process in four stages of analysis. When an event

³³ ERO Event Analysis Process Manual (field trial version approved October 25, 2010) available at: http://www.nerc.com/docs/eawg/Event_Analysis_Process_Field_test_DRAFT_102510-Clean.pdf.

occurs, Stage One of the process is initiated to analyze and determine “what happened” during the event. Stage Two consists of analysis to determine “how it happened.” Stage Three consists of a compliance evaluation to determine if any NERC Reliability Standards have been violated during the event. Stage Four would be the enforcement stage if it is necessary to process any findings of possible violations. It is important to note that Stage Three is not in series to the first two stages, but actually runs in parallel as the information is gathered and analyzed.

NERC has also developed a reference document entitled “Cause Analysis Methods for NERC and the Regional Entities.” Version 1 is currently posted on the NERC web site at: <http://www.nerc.com/files/Cause-Analysis-Methods-Version1-2-Oct10.pdf>. This document is designed to provide a ready reference of the methods and tools routinely used in the investigation, analysis, and determination of causal factors which lead to identification of root causes and causal factors that drive events on the Bulk Electric System. The document also provides guidance for analyzing problems with processes, human performance, and equipment failure, and recommends the sequence for documenting and collecting data to identify causal and contributing factors when an event occurs. This document is the foundation for the development of a “Cause Analysis Methods” training class that was developed and designed to provide an introduction to the fundamentals of Cause Analysis Methodology. This course will provide individuals from registered entities, Regional Entities, and NERC with an understanding of the methodology and tools used in a systematic approach for identifying systemic issues through problem solving techniques. All topics are addressed with reference to engineering techniques or mathematical analysis.

The training course is currently under review for final approval by the Director of Event Analysis and Investigations, the NERC Chief Reliability Officer, and the NERC Legal

Department before it is officially rolled out. In the future, NERC plans to develop and conduct webinars on cause analysis and its methodology for industry stakeholders interested in further developing their event analysis programs.

c. Reliability Assessment

i. Assessment Reports

In its September 16, 2010 Order, P 180, FERC stated:

“Scenario Assessments are a critical tool for addressing reliability considerations arising from various emerging issues, including faster renewable resource integration. In light of the lengthy time needed to develop most reliability standards, this “look ahead” can help ensure that any new or modified standards that may be needed are developed and implemented timely. Therefore, we direct NERC to continue developing scenario analysis in the long-term reliability assessments using the criteria noted above. We require NERC to update its reliability assessment protocols to establish a requirement for an annual scenario analysis and to file this update in the informational filing due six months from the date of this order.”

NERC Response to FERC’s Directive – P 180

Scenario assessments provide detailed quantitative and qualitative analyses that “stress” the Reference Case (Long-Term Reliability Assessment (“LTRA”) Forecast) and provide a sensitivity analysis of potential outcomes. Scenario assessments have now been included in NERC’s reliability assessment process, as described in Chapter 9 of the NERC *Reliability Assessment Guidebook – Version 2.1*,³⁴ and will be included in all future LTRA reports.

As stated in Chapter 9 of the Guidebook — *Scenario Assessment*:

“To implement Emerging Issues and Scenario analysis into the reliability assessment, the NERC Planning Committee adopted a process in December 2007 that includes identification of emerging issues, based on input from its subcommittees, for possible regional and NERC-wide evaluation. Transmission and resource (including internal demand) emerging issues will be proposed for Planning Committee consideration, and if

³⁴ *Reliability Assessment Guidebook – Version 2.1* available at: <http://www.nerc.com/files/Reliability%20Assessment%20Guidebook%20v2.1.pdf>.

an issue is selected for a scenario assessment, this scenario would be provided for Regional Entity reliability assessment as part of the data requests.”³⁵

For 2011, the Long-Term Reliability Assessment will include an extreme demand and capacity shortfall scenario assessment. Further, NERC will continue to develop Special Assessments that are developed through the Emerging Issues process currently established in the Long-Term Reliability Assessment process.

The latest version of the Guidebook, Version 2.1 dated March 3, 2010, will be revised to make more explicit the requirement for an annual scenario analysis to be included in all future LTRA reports.

ii. Assessment Process Improvement

In its September 16, 2010 Order, P 182, FERC stated:

“The Commission supports NERC’s implementation of its Reliability Assessment Improvement Plan. We recognize that the reliability assessment process has been significantly enhanced during the past three years, providing more: (i) transparency regarding process, methodology, assessments and information used; (ii) consistency of input information; and (iii) granularity. Consequently, the assessments have become more comprehensive and systematic. We support NERC’s effort to further improve the assessment processes, and especially to increase NERC’s independence in evaluating: (i) data received from industry; (ii) assumptions; and (iii) reliability assessment approaches.”

Further, in P 183, FERC stated:

“The Commission understands that the current reliability assessment methodology that applies Reserve Margin index relies upon evaluating whether the total generating system capacity is sufficient to supply the system annual peak load. NERC has stated that “[c]oupled with probabilistic analysis, calculated planning Reserve Margins have been an industry standard used by planners for decades as a relative indication of adequacy.” This approach is acceptable for systems that mainly have thermal base-load generation (coal, nuclear, and gas). However, as NERC has noted, it may not be adequate for systems that contain significant levels of variable, non-dispatchable resources such as wind, solar, and run-of-river hydro plants. With high levels of variable resources, the Reserve Margin Index may provide a false indication in that there may be system reliability issues before the index identifies such problems. We direct NERC to develop a plan to address capacity and energy in its reliability assessment methodology and a timeline for executing the plan, and submit the plan and timeline as part of the 2011

³⁵ Chapter 9 of the Reliability Assessment Guidebook is included as Appendix D to this filing.

Long-Term Reliability Assessment. We require NERC to file its preliminary plan and timeline in an informational filing six months from the date of this order.”

NERC Response to FERC’s Directive – P 183

NERC strives to provide continuous improvement of reliability assessments and welcomes FERC’s suggestions for further improvement. With respect to FERC’s specific directive, NERC will implement probabilistic assessments in the Long-Term Reliability Assessment in 2012 with a trial phase based on voluntary participation occurring in 2011. Through the Generation and Transmission Reliability Planning Models Task Force (“GTRPMTF”), a common set of probabilistic reliability indices and probabilistic-based work products will be used to supplement NERC’s LTRA. In its 2010 report, the GTRPMTF developed specific methods and metrics to provide a common set of probabilistic reliability indices and recommend probabilistic-based work products that could be used to supplement the NERC’s long-term reliability assessments.³⁶ By supplementing the traditional capacity and peak-hour planning assessment, incorporation of these analysis results (i.e., loss of load hours and expected unforced energy) a NERC independent assessment can be performed on an energy basis.

A detailed plan will be included in the 2011 LTRA. In summary, the plan includes the following milestone dates:

- Request for participation in voluntary trial period (March 2011)
- Draft methods due to NERC (May 2011)
- Results of 2011 study (October 2011)
- Trial view complete (March 2012)

³⁶ G&T RPM Task Force Final Report on Methodology and Metrics Available at: http://www.nerc.com/docs/pc/gtrpmtf/GTRPMTF_Meth_& Metrics_Report_final_w_PC_approvals_revisions_12.08.10.pdf.

- 2011 trial results to be included in 2012 LTRA (October 2012)
- Request for full participation (March 2012)
- 2012 results to be included in 2013 LTRA (October 2013)

Additionally, appropriate modifications will be made to NERC's *Reliability Assessment Guidebook* to reflect these changes in the reliability assessment process.

iii. Assessment Data Collection and Validation

In its September 16, 2010 Order, P 185, FERC stated:

“The Commission supports NERC’s actions with respect to data collection and validation. Also, we direct NERC to consider establishing permanent data bases that could be automatically populated with: (i) new transmission projects data from the Regional Entities, (ii) generation interconnection queue data, and (iii) other data relevant for reliability assessment. We require NERC to discuss the feasibility of this improvement, and to the extent databases covering this information already exist, discuss how to better utilize or integrate that information into the Reliability Assessments in the informational filing required six months after the issuance of this order.”

NERC Response to FERC’s Directive – P 185

In 2009 NERC began a review of its internal data collection and validation processes to fortify its current data analysis system and to improve data validation. NERC agrees with FERC’s directive of establishing permanent databases which support NERC Reliability Assessments. Specifically, NERC will evaluate new transmission projects data from the Regional Entities, generation interconnection queue data from transmission providers, and other data relevant for reliability assessment that is submitted to the Energy Information Administration (EIA Form-411) for its feasibility for this purpose. NERC will also establish a web application to support the collection, validation, and distribution of these assessment data.

6. Business Planning and Budgeting, Accounting and Financial Reporting and Assessment Processes

In its September 16, 2010 Order, P 194, FERC stated:

“Noting that NERC already engages in strategic planning out to five years, the Commission believes that joint strategic planning by NERC and the Regional Entities, under ERO oversight, may enhance the operations of the entire reliability apparatus and may decrease the tensions associated with the current NERC and Regional Entity budget process. While it may be difficult to establish precise numbers over multiple years, strategic planning coupled with a multiple year budget would put the Commission and stakeholders on notice regarding what to expect.”

Further, in P 195, FERC stated:

“A joint strategic planning initiative also would address another major Commission concern, which is adequate monitoring of the Regional Entities’ expenditures. The Commission notes that in NERC’s compliance filing to the 2010 Business Plan and Budget, NERC acknowledged that it did not work with Regional Entities to roll up the actual number of compliance violation investigations for their 2010 estimate but rather relied on its own internal estimates to project the reasonableness of Regional Entity expenditures. In Order No. 672, the Commission found that the ERO must review and approve the Regional Entities budget expenditures, explaining that the ERO “must have oversight to ensure that Regional Entities are adequately funded to accomplish their delegated functions.” Thus, NERC is responsible for thoroughly investigating each Regional Entity budget and, where necessary, must suggest changes rather than presuming that the budget is reasonable. NERC must determine, at a minimum, whether each Regional Entity’s proposed budget is adequate to carry out the functions delegated to it. A joint NERC and Regional Entity strategic plan would assist NERC in this task because NERC would have greater access to the Regional Entities’ strategic plans and greater access to the actual planning numbers that the Regional Entities use to formulate their individual budgets. Accordingly, the Commission directs NERC to include in the six-month informational filing a report detailing the feasibility of establishing a NERC-led Strategic Planning initiative utilizing multiple year budgets.”

NERC Response to FERC’s Directive – P 195

In its 2011 Business Plan and Budget, NERC provided a preliminary projection of anticipated resource requirements and expenditures for calendar years 2011-2013. Unlike in past years where the projections primary reflected escalations in overheads and operating costs, these projections included assumptions on additional increases in staffing levels during 2012, as well as costs associated with NERC’s headquarters relocation and the expanded facilities and operating expense associated with a growing operation. NERC will continue to refine and update its projections for 2012 and 2013, as well as develop a projection for 2014, as part of its 2012

Business Plan and Budget filing. These projections will reflect collaborative discussions with and input from the eight Regional Entities regarding goals, objectives and resource requirements for the ERO enterprise over this period. Each of the Regional Entities has also been requested to develop its own resources projections and budget forecasts for the 2012-2014 period, which NERC will incorporate into an overall ERO projection for this same period.

NERC has also conducted strategic planning sessions with internal NERC management, NERC management plus Regional Entity presidents and senior management, and NERC management with NERC board members to identify the key elements of an ERO Enterprise Strategic Action Plan to take the ERO Enterprise from where it is today to full realization of the ERO vision by end of 2015. The outcomes of those sessions have been fashioned into draft Strategic Goals and Objectives for 2011 – 2015³⁷ as part of a NERC-Regional Entity collaborative strategic planning initiative, which were discussed at the February 16, 2011 NERC Member Representatives Committee meeting and February 17, 2011 NERC Board of Trustees meeting.

B. Evaluation of Regional Entities

1. Compliance Monitoring and Enforcement

a. Issues Concerning all Regional Entities

In its September 16, 2010 Order, P 217, FERC stated:

“We also agree that development of reasonable metrics for assessment of the Regional Entities’ performance of their compliance functions will increase efficiency of the enforcement process, provide incentives for effective, timely handling of Regional Entity caseloads, and furnish important data for the next Performance Assessment. To advance the goal of obtaining integrated compliance information that would populate these metrics and increase the efficiency of the compliance process, we support NERC and the Regional Entities’ development of a non-public central compliance data hub. Information from this data hub could be made public on a coordinated basis to notify registered entities of aggregated compliance information, lessons learned, evidence that would

³⁷ http://www.nerc.com/docs/bot/agenda_items/7-ERO%20Strategic%20Direction%202011-2015%202-2-11.pdf.

support compliance with particular requirements and information about notices of penalty concerning specific types of violations, as NERC suggests. We direct NERC to report, in the informational filing due six months after the issuance of this order on the timeline and plan for development of this data hub, including details regarding how it will operate, what information it will contain, and whether it will supplant existing processes for providing non-public data to the Commission.”

NERC Response to FERC’s Directive – P 217

NERC initiated a multi-phase project in 2008 to design and build a system for the collection, management, and exchange of compliance-related information between NERC and the Regional Compliance Enforcement Authorities, as described in the *Compliance Monitoring and Enforcement Program*, Appendix 4C of NERC’s Rules of Procedures. NERC described the initial concept, timeline, and funding for this project at pages 12-14 of its December 11, 2009 *Compliance Filing In Response to October 15, 2009 Order on 2010 Business Plans and Budgets*.³⁸ The resulting system, which continues to evolve, is called Compliance Reporting, Analysis, and Tracking System (“CRATS”). The web-enabled, custom-developed software interfaces with complementary compliance tools used at the Regions via custom-built web services.

The design of CRATS is modular so that new features and functions can be added as necessary. Figure 1 describes the planned or existing CRATS modules.

The foundational components of CRATS are Registration and Standards. Both modules were placed into production early in 2009. The Technical Feasibility Exception (“TFE”) module was placed into service in June 2010. The Compliance Violations module, which replaces the spreadsheet-based reporting method, is in the final testing phases with the Regions and will be placed into production use later this year. Similarly, work on the Mitigation Plans module and Enforcement module is underway. Both are expected to be in production later this year. Work

³⁸ Compliance Filing of the North American Electric Reliability Corporation in Response to October 15, 2009 Order on 2010 Business Plans and Budgets available at: <http://www.nerc.com/files/NERCBudgetOrderCompFilDec2009.pdf>.

has not yet commenced on the Remedial Action Directives (“RAD”) module or the Investigations module.

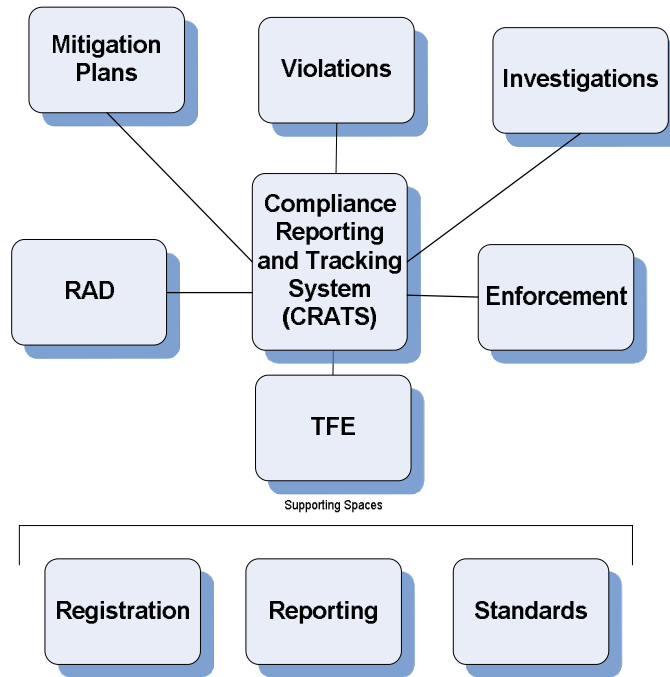


Figure 1

Access to CRATS is limited to authorized NERC staff. Reports, generated from data contained in CRATS, are provided to NERC Executive Management, NERC’s Board of Trustees, and FERC.

Today, NERC provides certain non-public compliance information to FERC in a variety of ways. While no changes to the type and amount of information are planned, NERC does plan to change the way that information is provided to FERC. NERC will develop and operate a non-public portal where information available to FERC will be published. Authorized FERC staff will have access to the portal through secured means over the Internet. Publishing information from CRATS to the portal will be automated.

The infrastructure and architecture design work to support the portal is in progress. Together with FERC, NERC will identify key navigational elements of the portal and define the access approval and administration procedures. The portal is expected to be in production by year end.

Additionally, NERC and the Regions have formed an IT Steering Group for the purposes of examining the suite of tools and technologies used within the ERO and recommending areas for improvement. The technology interfaces between NERC and FERC will be included in this examination. Results of the study are expected in late summer 2011, from which action plans and timelines will be developed. The IT Steering Group will prepare recommendations and project plans, budgets, and timetables for executive management consideration.

In its September 16, 2010 Order, P 220, FERC stated:

“We agree that NERC and Regional Entities should consider using risk-based approaches to maximize the effectiveness and timeliness of CMEP activities such as compliance audits and spot checks. We remain concerned whether use of risk-based approaches is consistent with NERC’s commitment to perform compliance audits of all registered entities on either a three-year or six-year cycle. We direct NERC to explain in the informational filing required by this order how it would implement risk-based approaches to compliance activities and at the same time complete its currently-required audit cycles.”

NERC Response to FERC’s Directive – P 220

NERC and the Regional Entities will continue to audit reliability coordinators, balancing authorities and transmission operators on three year cycles and all other registered entities on six year cycles for their respective registered functions. Risk-based methodologies in support of appropriately scoping audits are conducted first with an analysis of critical standards to be actively monitored and then by a risk and performance assessment of individual registered entities. The goal is to provide the requisite auditing and oversight of compliance to the reliability standards by focusing resources on registered entities that may need additional

oversight while maintaining visibility of all registered entities. Regional Entities are tasked with building appropriate audit scopes based on the NERC Annual Compliance Monitoring and Enforcement Program Implementation Plan and actively monitored standards list, an assessment of critical standards in the respective region or interconnection, and a registered entity's historical record.

Respectfully submitted,

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APPENDIX A

Progress in Implementing Specific NERC Actions from the Three-Year ERO Performance Assessment

**Progress in Implementing Specific NERC Actions
from the Three-Year ERO Performance Assessment
March 16, 2011**

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.

NERC has placed significant attention on the prioritization of reliability standards development activities.

NERC will continue to use its annual Reliability Standards Development Plan to prioritize and guide reliability standards development activities. In response to a November 2010 directive from the NERC Board of Trustees, the NERC Standards Committee and NERC staff worked together to develop a Standards Development Project Prioritization Tool. The Prioritization Tool prioritizes standards development projects based, in part, on risks and policy issues of each project that are then quantified and ranked. This ranking will help to identify higher priority projects in order for NERC staff and the Standards Committee to appropriately utilize NERC staff and industry resources in the development of reliability standards.

The use of the Prioritization Tool was endorsed by the NERC Board at its February 17, 2011 meeting, and was used to develop a revised, final version of the 2011-2013 Reliability Standards Development Plan which was approved by ballot of the Standards Committee and approved by the NERC Board on March 10, 2011.¹ Use of the Prioritization Tool in developing the 2011-2013 Plan resulted in fewer active standards projects; however, these projects are those that will provide the most “reliability benefit” for the invested resources. The presentations and discussions at the February 8, 2011 FERC technical conference, which focused on how current reliability issues and standards development initiatives can be ranked and selected to ensure that the key reliability issues are addressed earliest, were also used as inputs to the prioritization process in developing the final 2011-2013 Plan. The final 2011-2013 Plan includes projects divided into three priority categories: (1) High Priority Projects (12 projects), (2) Projects Continuing and Expected to Complete Shortly (4 projects), and (3) Additional Projects to be Initiated in Order of Priority (19 projects).² The projects in the third priority category will be moved up in the priority list as each of the projects in the first two categories move to the final balloting stage and receive Board and regulatory approval, thereby freeing up NERC staff and industry resources to work on these projects.

¹ The final approved 2011-2013 Reliability Standards Development Plan is available at: http://www.nerc.com/files/2011-2013_RS-Development-Plan_Revised_Rev_00_2011-03-2-BOT_approved_0310201_rev7.pdf.

² 2011-2013 Reliability Standards Development Plan at 14-15.

NERC staff and the Standards Committee expect that in the future, prioritization of standards development projects and use of the Prioritization Tool will be more dynamic, thereby allowing continual management of project development based on reliability risks to the bulk power system.

- 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.

NERC revises its Reliability Standards Development Plan (Plan) on an annual basis, and industry comments and suggestions for improving the Plan are a vital part of the process employed by NERC to revise the Plan. Each year NERC seeks industry suggestions and comments relative to, but not limited to:

- perceived gaps in the set of NERC reliability standards and recommendations for eliminating the perceived gaps;
- priorities (as implied by the timing of the projects) of the projects included in the work plan and recommendations for adjusting the timing of individual projects; and
- identification of potential future projects for addressing changes in or development of new reliability standards.

In addition, as part of the annual project for revising the Plan, NERC standards staff also:

- seeks input from the NERC program managers and NERC Executive leadership in the areas of compliance monitoring and enforcement, reliability assessment, performance analysis, and event analysis; and
- conducts a Reliability Standards Development Plan webinar to discuss and gather input on the future Plan.

These steps were taken in the development of the 2010-2012 Plan and in the development of the 2011-2013 Plan, and will continue to be used in the development of future Plans.

- 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.

This activity has been integrated into the standards project management program. The administrative changes are captured in the issues database for tracking and inclusion in subsequent standards development projects. The potential administrative changes as captured in the database are considered in the development of each new Reliability Standards Development

Plan as part of determining which standards projects are included in the Plan. If a project is selected for inclusion in the Plan, the issues database is then the source of work elements for the project work 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.

This is an on-going effort. A special seminar on the topic of results-based standards design was conducted for a subset of Commission staff on April 5, 2010, and a second seminar is being planned for 2011. The results-based reliability standards program has been developed and presented to the industry in a webinar on October 20, 2010 and through nine drafting team specific training events for currently active standards drafting teams. The result-based methodology is being transitioned in accordance with the *Results-based Reliability Standards Transition Plan*,³ which has been approved by the Standards Committee.

- 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.

NERC has developed a program to identify and track the resolution of Commission directives. Currently there are 53 Commission Orders from which standards directives have been gleaned, including over 800 specific directed actions. The directives have been prioritized and the prioritization of directives is explicitly included on pages 13-15 of the 2011-2013 Reliability Standards Development Plan to be filed with the Commission in March 2011. All directives have been included in the issues database where they will be integrated into the respective work plans of the related standards drafting activities.

As stated in the 2011-2013 Reliability Standards Development Plan:

“NERC has developed specific initiatives related to compliance monitoring and enforcement, reliability assessment and performance analysis, and event analysis to identify possible “high impact” reliability standard development projects that may have significant impact on the reliability of the bulk power system.”⁴

“NERC’s technical committees, subcommittees, working groups, and task forces provide technical research and analysis used to justify the development of new standards and provide guidance, when requested by the Standards Committee, in overseeing field tests or collection and analysis of data. The technical committees, subcommittees, working groups, and task forces provide feedback to drafting teams during both informal and formal comment periods. The technical committees, subcommittees, working groups, and task forces share their observations regarding the need for new or modified standards

³ Available at: http://www.nerc.com/files/dics/standards/sar/RBS_Transition_Plan_2010-07-06_Final.pdf.

⁴ 2011-2013 Reliability Standards Development Plan at 8.

or requirements with the standards staff for use in identifying the need for new standards projects for the three-year *Reliability Standards Development Plan*.⁵

See also item A.1.a above.

- 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.

NERC is developing for initial publication in 2011 an annual report on reliability performance, which will be used along with other factors to prioritize recommendations for Standards activities. NERC's Standards Committee will use this report along with inputs from Event Analysis and Investigations and Compliance Operations to guide, reprioritize, and coordinate standards development projects to ensure that standard enhancements required to address adverse industry trends will have the greatest possible improvement on the reliability of the bulk power system.

In addition to the System Protection Initiative and efforts to address critical infrastructure issues, NERC also has underway broad-based initiatives in the areas of frequency response and system modeling, which will likely lead to a number of standards development projects.

This is an on-going effort of the NERC Standards Development Program.

- 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.]

NERC did not conduct a technical conference on this subject in 2010, principally because of emerging efforts to transition to results-based standards and to reflect risk-based principles in NERC's standards development priorities. As part of these efforts, NERC is planning a re-evaluation of the current definition of Adequate Level of Reliability ("ALR") and plans further discussion of the process for developing a recommendation on ALR at the May 2011 NERC Member Representatives Committee meeting.

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.

⁵ 2011-2013 Reliability Standards Development Plan at 9.

NERC's *Standard Processes Manual* (Appendix 3A to the Rules of Procedure), most recently approved by the Commission on September 3, 2010 and effective the same date, now permits some SARs that are limited to addressing regulatory directives, or revisions to standards that have had some vetting in the industry, to be posted only for informal comment periods, with no requirement to provide a formal response to the comments received, as described on page 13 of the *Manual*.

Additionally, as the result of amendments submitted and approved since the 3-Year ERO Performance Assessment Report was filed with the Commission, the current NERC *Standard Processes Manual* contains additional provisions for expediting standards development when necessary due to specific time constraints (such as to meet a time-constrained regulatory directive) or to meet an urgent reliability issue. See the Section "Expedited Standards Development Process," page 33 of the *Standard Processes Manual*.

- 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.

As the result of amendments submitted and approved since the 3-Year ERO Performance Assessment Report was filed with the Commission, the current NERC *Standard Processes Manual* (Appendix 3A to the Rules of Procedure), most recently approved by the Commission on September 3, 2010 and effective the same date, contains this provision. See Section "Standard Authorization Request" on page 12 of the *Standard Processes Manual*. This section states:

"Each SAR that proposes a "new" standard, should be accompanied with a technical justification that includes, as a minimum, a discussion of the reliability-related impact of not developing the new standard, and a technical foundation document (e.g., research paper), when needed, to guide the development of the standard."

- 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.

While not explicitly provided for in NERC's *Standard Processes Manual*, NERC does accept for consideration from requestors draft reliability standards, or draft revisions to existing reliability standards, in conjunction with a standards authorization request. An example of this was the request from the Generator Owners/Transmission Owners Task Force regarding *Transmission Requirements at the Transmission Interface*, Project 2010-07.

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.]

As the result of amendments submitted and approved since the 3-Year ERO Performance Assessment Report was filed with the Commission, the current NERC *Standard Processes Manual* (Appendix 3A to the Rules of Procedure), most recently approved by the Commission on September 3, 2010 and effective the same date, contains this provision. See the Section “Solicit Informal Feedback” on page 15 of the *Standard Processes Manual*:

“Drafting teams may use a variety of methods to collect stakeholder feedback on preliminary drafts of its documents, including the use of informal comment periods, webinars, industry meetings, workshops, or other mechanisms. Informal comment periods, if used, shall have a minimum duration of 30 days. Information gathered from informal comment forms shall be publicly posted and, while drafting teams are not required to provide a written response to each individual comment received, drafting teams must post a summary response that identifies how it used comments submitted by stakeholders. The intent is to gather stakeholder feedback on a ‘working document’ before the document reaches the point where it is considered the ‘final draft’”.

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]

NERC has added an element on this point to the training program for standard drafting teams.

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.]

As the result of amendments submitted and approved since the 3-Year ERO Performance Assessment Report was filed with the Commission, the current NERC *Standard Processes Manual* (Appendix 3A to the Rules of Procedure), most recently approved by the Commission on September 3, 2010 and effective the same date, contains provisions pertaining to successive ballots where the proposed standard has changed substantively from the prior ballot. See the Section “Successive Ballots (Standard has Changed Substantively from Prior Ballot)” on page 19 of the *Standard Processes Manual*:

“If a stakeholder or a balloter proposes a significant revision to the standard during the formal comment period or concurrent initial ballot that will improve the quality, clarity, or enforceability of that standard then the drafting team shall make such revisions and post the revised standard for another public comment period and ballot. If the previous ballot achieved a quorum and sufficient affirmative ballots for approval, the comment period shall be 30 days and the new ballot may focus on the entire standard and its implementation plan or may focus only on the element(s) that were changed following the previous ballot.

“The drafting team shall address comments submitted during successive ballot periods (comments submitted from stakeholders during the open formal comment period and comments submitted with negative ballots) in the same manner as for the initial ballot. Once the drafting team has a draft standard that has been through a “successive ballot” and the team believes that no additional significant modifications are needed, the standard shall be posted for a Recirculation Ballot.”

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.

As the result of amendments submitted and approved since the 3-Year ERO Performance Assessment Report was filed with the Commission, the current NERC *Standard Processes Manual* (Appendix 3A to the Rules of Procedure), most recently approved by the Commission on September 3, 2010, now provides for appointment of only a single drafting team. The drafting team may be appointed to assist in refining the SAR and then continue to work on drafting the standard, or the drafting team may not be appointed until after the SAR has been developed. See the Sections “Standards Authorization Request,” “SAR Posting” and “Form Drafting Team” at pages 12-14 of the *Standard Processes Manual*.

- 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.]

The Standards Committee supported a review of NERC’s standard development process against the requirements for ANSI accreditation as a standards developer during the fall of 2009. The review was conducted with the assistance of ANSI’s staff and was concluded in September, 2009. This review resulted in several changes to the standard development process that were posted for comment, balloted and then submitted to the Commission in the *Standard Processes Manual* (Appendix 3A to the Rules of Procedure) that was approved by the Commission on September 3, 2010 and effective the same date.

In the current *Standard Processes Manual*, the Section on “Expedited Standards Development Process” at page 33 gives the Standards Committee, under specified conditions, the authority to approve any of the following actions to expedite development of a new or modified standard: (1)

shorten the 45-day formal comment period, (2) shorten the 30-day period for forming the ballot pool, (3) allow significant modifications following the initial ballot without the need for another formal comment period provided the modifications are highlighted before conducting any successive ballot, and (4) shorten any of the 10-day ballot windows. If a new or modified standard is developed, approved by its ballot pool, and subsequently adopted by the NERC Board through the expedited process, one of the following three actions must then occur:

- If the standard is to be made permanent without additional substantive changes, then a SAR and a proposed standard shall be submitted to the standards staff immediately after the ballot. The project shall be added to the list of approved projects and shall proceed through the regular standard development process, including balloting by stakeholders, without any intentional delay.
- If the standard is to be substantively revised or replaced by a new standard, then a project for the new or revised standard shall be added to the list of projects to be added to the Reliability Standards Development Plan. The project shall be initiated as soon as practical after the ballot and the project shall proceed through the regular standard development process, including balloting by stakeholders, as soon as practical but within two years of the date the standard was approved by stakeholders using the expedited process.
- The standard shall be withdrawn through a ballot of stakeholders within two years of the date the standard was approved by stakeholders using the expedited process.

Taking one of the three actions subsequent to adoption of the standard through the expedited process is necessary because abbreviating the final formal comment period or a ballot window, as is allowed under the expedited process, violates the ANSI accreditation requirements. The three subsequent actions that may be taken to fully process the expedited standard are intended to demonstrate NERC's commitment to meet the ANSI accreditation requirements.

Additionally, NERC submitted revisions to the *Reliability Standards Development Procedure* (before it was retitled *Standard Processes Manual*), to remove the development and approval of Violation Risk Factors and Violation Severity Levels from the ANSI-based standards development process, and establish a parallel process resulting in adoption of VRFs and VSLs through NERC Board approval without the inclusion of these elements in the stakeholder ballot process required for ANSI accreditation. This change to the process recognized that VRFs and VSLs are not components of a standard requiring approval through the full ANSI process, but rather are compliance elements that can be adopted through a separate process.⁶

- 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.

⁶ NERC submitted these revisions for approval on November 23, 2009 (*Petition of the North American Electric Reliability Corporation for Approval of Amendments to its Rules of Procedure – Amendments to the Reliability Standards Development Procedure*), and they were approved by the Commission in a letter Order issued February 5, 2010 in Docket No. RR10-04-000.

[Changes to Section 300 of the NERC ROP and/or Appendix 3A — Reliability Standards Development Procedure may be necessary or desirable.]

This action has not been comprehensively addressed in the current Rules of Procedure and *Standard Processes Manual*. However, the “Expedited Standards Development Process” in the current *Standard Processes Manual* effective September 3, 2010, allows for certain steps in the standards development process to be shortened or eliminated under specific time constraints (such as to meet a time-constrained regulatory directive, which may involve a single topic or area of modification of a standard) or to meet an urgent reliability issue. See item A.2.a.ii above.

- 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.

NERC completed this review and, as a result, incorporated several changes in the proposed revisions to the *Standard Processes Manual* that were submitted to the Commission on June 10, 2010 and were approved by the Commission on September 3, 2010. See item A.2.a.ii above.

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]

NERC has made this a standard practice for new standard drafting teams.

- ii. Provide training for NERC staff coordinators in team-building, facilitation, and consensus-building skills — by October 1, 2009.

NERC has added team-building, facilitation, and consensus-building skills and techniques to its training program for NERC staff coordinators.

- 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.

NERC has enhanced the training for drafting team chairs and vice-chairs in its kickoff training sessions, to include elements on how to convey 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.

As the result of amendments submitted and approved since the 3-Year ERO Performance Assessment Report was filed with the Commission, the current NERC *Standard Processes Manual* (Appendix 3A to the Rules of Procedure), most recently approved by the Commission on September 3, 2010 and effective the same date, contains provisions for technical experts and technical writers to be appointed to, or assigned to work with, drafting teams. The NERC standards staff supports the work of the drafting teams. See the Section “Drafting Teams” on page 9 of the *Standard Processes Manual*. In addition, an attorney from the NERC Legal Department will be assigned to assist the drafting team as necessary.

- 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.

As the result of amendments submitted and approved since the 3-Year ERO Performance Assessment Report was filed with the Commission, the current NERC *Standard Processes Manual* (Appendix 3A to the Rules of Procedure), most recently approved by the Commission on September 3, 2010 and effective the same date, provides for technical writers to provide assistance to drafting teams. See Section “Drafting Teams” on page 9 of the *Standard Processes Manual*.

- 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.

NERC staff has reached an understanding with the Standards Committee that allows the NERC staff coordinator, with prior permission of the drafting team chair, to provide a straw man draft standard in advance of the first 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]

NERC continues to work closely with industry trade groups on these outreach efforts, most notably through the quarterly ERO update and consistency discussions with the trade associations and industry forums, which address standards development issues as well as compliance issues. This effort has increased and is being given greater attention since the 3-Year Assessment Report was filed.

- b. Develop increased project communications to enable all stakeholders to understand the changes to reliability standards and the expectations therein for registered entities.
[Ongoing]

The Communications and Planning Subcommittee of the NERC Standards Committee provides information about standards to end-users. The subcommittee networks with regional committees, the NERC Operating and Planning Committees, industry technical committees and stakeholders to identify issues and communicate information relative to standards and the standards process. The subcommittee also takes an active role in planning standards conferences and provides input to the annual three-year Reliability Standards Development Plan.

This subcommittee, which was initially formed in 2008, has greatly increased its activities in the last year.

In addition, drafting teams have increased their use of Webinars to keep stakeholders informed on technical issues relative to proposed standards.

- 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]

This is an on-going objective of the standards program, and has led to a significant fraction of drafting team activities being conducted by conference calls and Web-based meetings.

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.

The Roles and Responsibilities document has not been modified. However, the following statement has been added to the *Standard Processes Manual*, as approved by the Commission and effective September 3, 2010, in Section "Standards Staff" on page 9:

"When presenting standards-related documents to the NERC Board of Trustees for adoption or approval, the standards staff shall report the results of the associated stakeholder ballot, including identification of unresolved stakeholder objections and an assessment of the document's practicality and enforceability."

Additionally, it is NERC staff's practice to provide technical comments in major standards development comment opportunities. These comments become part of the overall standards development record, which can be considered by industry, the ballot pool and the NERC Board in making their decisions as to whether to vote for adoption/approval of the standard.

- 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]

This topic has been added to, and is now a regular part of, the drafting team training program.

- 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.

NERC staff conducts regular meetings with FERC Standards staff during which recently-issued Notices of Proposed Rulemakings on proposed new or revised standards, among other topics, are discussed.

- 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.

NERC has established a regular communication process consisting of quarterly meetings and additional ad hoc meetings with the major industry trade organizations during which feedback is solicited. Additionally, if the timing permits, feedback is solicited during the MRC meetings. In several cases, NERC has sent specific notices to industry asking for comments on whether NERC should request rehearing of a FERC order.

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.

NERC completed Version 5 revisions to the Functional Model and associated technical document,⁷ and both documents were approved by the NERC board in May 2010. The 2011–2013 Reliability Standards Development Plan includes a project (Project 2010–08: Functional Model Glossary Revisions) to align the definitions of various functional entities between the Functional Model, the NERC Glossary of Terms, and the NERC Statement of Compliance Registration Criteria.

In addition, drafting teams are required, in determining the applicability of each standard and the requirements within a standard, to follow the definitions provided in the NERC Glossary of Terms Used in Reliability Standards and also to be guided by the Functional Model.

⁷ Version 5 of the Functional Model and associated technical document available at: <http://www.nerc.com/page.php?cid=2|247|108>.

- 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.

The Standards Authorization Request (SAR) and proposed redline changes to existing standards developed by the Ad Hoc Group were posted for comment in early 2010. The drafting team posted its consideration of the comments submitted and made conforming changes to the SAR based on stakeholder comment. This project (Standards Project 2010-07 – Generator Requirements at the Transmission Interface) is included in the Reliability Standards Development Plan for 2011–2013 as a “High Priority Project,” and is under active development.

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.

As stated in the NERC *Standard Processes Manual*, as approved by the Commission and effective September 3, 2010, in the Section “Compliance Enforcement Program” at page 10:

“The compliance enforcement program shall provide feedback to drafting teams during the standards development process to ensure the compliance enforcement program can be practically implemented for the standards under development.

“The compliance enforcement program may conduct field tests or data collection related to compliance elements of proposed standards and may provide assistance with field tests or data collection when requested. The compliance enforcement program shares its observations regarding the need for new or modified requirements with the standards staff for use in identifying the need for new standards projects.”

In addition, the section “Elements of a Reliability Standard” on page 6 of the current *Standard Processes Manual*, effective September 3, 2010, defines the specifications for compliance measures and evidence retention:

Measure: Provides identification of the evidence or types of evidence needed to demonstrate compliance with the associated requirement. Each requirement shall have at least one measure. Each measure shall clearly refer to the requirement(s) to which it applies.

Evidence Retention: Identification, for each requirement in the standard, of the entity that is responsible for retaining evidence to demonstrate compliance, and the duration for retention of that evidence.

Further, the compliance expectations of standards are conveyed to stakeholders through RSAWs, compliance workshops, webinars, Compliance Application Notices, Compliance Application Reports, Compliance Bulletins, and other compliance communications products. The Compliance and Standards Programs work together to ensure that these compliance communications products are fully consistent with the compliance elements of standards.

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.

The conduct of webcasts, webinars, workshops and other forms of communication are a continuing part of NERC's efforts to keep stakeholders informed of standards development and to obtain feedback on proposed concepts.

- 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.

This activity has not been completed and may have to await the redesign of NERC's website. NERC is monitoring blogs created by others on the topic of reliability compliance.

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.

The *Reliability Standards Development Plan: 2011–2013 — Regional Reliability Standards Development Projects*⁸ contains an overview for each of the currently opened or planned Regional Reliability Standards development projects, including fill-in-the-blank standards. Each project overview includes the project number, title, list of affected reliability standards, and hyperlinks to associated portions of the NERC standards web pages along with a brief description of the project.

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.

This is an ongoing effort. The registration criteria are identified in section 500 of the NERC Rules of Procedure (RoP) with specifics in the NERC Statement of Compliance Registry Criteria, Appendix 5B to the RoP, now at Version 5.⁹ The Commission's recent order on the

⁸ *Reliability Standards Development Plan: 2011–2013 — Regional Reliability Standards Development Projects* is available at: http://www.nerc.com/files/2011-2013_Regional_Projects_Overview_rev3.pdf

definition of the Bulk Electric System¹⁰ will have a significant impact on the registration criteria and should result in substantial simplification consistent with the bright-line test adopted in the Commission Order. The Order also requires NERC to develop an exemption or exclusion procedure for entities that otherwise meet the bright-line test. This project requires coordination with NERC technical staff (Compliance and Standards), the Certification & Registration Working Group of the Organization Registration and Certification Subcommittee of the Compliance and Certification Committee, Planning and Operating Committees, and industry stakeholders, and must be completed within one year following the Commission's order.

- 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.

See response in B.1.a above.

- c. Request comments on the existing criteria from the Regional Entities through the Registration Working Group (RWG).

See response in B.1.a above.

- d. Review data from registered entities surveys currently being administered by the RWG with NERC oversight for criteria application issues.

Issues raised by stakeholders are routinely discussed for resolution by the ERO Compliance and Enforcement Group and at the NERC Compliance and Certification Committee's Organization Registration and Certification Subcommittee meetings. NERC's quarterly updates to the trade associations and industry forums provide another venue to address industry concerns in the area of registration and certification. The current BES definition project, in response to FERC Order No. 743, will also directly influence registry criteria – see item B.1.a above.

- 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.

At the ERO Certification & Registration Working Group meetings, specific complex registration issues are discussed case-by-case. These case-by-case issues are discussed against the existing procedures and criteria to ensure consistency of application. Under the revised and approved Delegation Agreements (Section 7b), effective January 1, 2011, NERC now has primary responsibility for entity registration and maintaining the registry, with the Regions providing input and information to support NERC's efforts. (See also Section 2.0 of the *Compliance Monitoring and Enforcement Program*, Appendix 4C of the RoP.)

⁹ The SCRC is available at: http://www.nerc.com/files/Statement_Compliance_Registry_Criteria-V5-0.pdf.

¹⁰ *Revision to Electric Reliability Organization Definition of Bulk Electric System*, Order No. 743, 133 FERC ¶ 61,150 (2010).

- 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.

See response in B.1.e, above. Additionally, each Region verifies every registration application to ensure no undue overlaps or gaps prior to submittal to NERC for posting on the NERC 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.

Part of the event analysis and investigation scope and process is to review registration issues, as it helps with an understanding of the functions of the entity(s) involved in an event and what standards are applicable to them if and when a compliance evaluation is conducted. Making recommendations to Regional Entities to add entities to the Compliance Registry is part of this process.

2. Allow registration by requirement.

- a. NERC will continue to promote the use of JRO agreements.

NERC has promoted the use of Joint Registration Organization (JRO), as well as the new Coordinated Functional Registration (CFR) process. Rules related to CFR have been added to the NERC Rules of Procedure at Section 508, and approved by the Commission.

- b. NERC will attempt to identify other solutions short of “registration by requirement” that will address the concerns expressed by stakeholders.

In addition to the JRO and CFR, NERC has provided guidance on the use of other duly executed legal agreements to refine reliability responsibility, reducing both gaps and redundancies. A public bulletin to this effect was posted in April 2010 — NERC Compliance Public Bulletin #2010-004 *Guidance for Entities that Delegate Reliability Tasks to a Third Party Entity*.¹¹

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.

¹¹ <http://www.nerc.com/files/2010-004%20v1%200.pdf>.

NERC conducts regular meetings with the Regional Entities to review organization registration issues and processes. Under the revised Delegation Agreements, effective January 1, 2011, NERC now has primary responsibility for registration determinations. Also see response in B.1.e.

- b. Complete the project for updating registered entity information [by late summer 2009].

NERC has placed into operation a module within its Compliance Reporting, Analysis, and Tracking System (CRATS) that is linked to the Regional Entities and provides for data transfer to NERC to update the compliance registry.

- c. Complete the specific NERC actions listed in Organization Registration Issue #1.

See responses to Actions in B.1 above, Organization Registration and Certification.

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).

The processes and procedures for the MRRE pilot program have been completed and the pilot program is underway. The program comprises three parts: application review and assignment of a registered entity to a lead Regional Entity; the transition phase; and then an evaluation phase for a select number of Regional Entities from which the program and process can be refined for greater industry participation.

- b. Amend the delegation agreements and ERO Rules of Procedure as necessary to include or accommodate such processes and procedures.

The revised Delegation Agreement and the amended RoP, both as effective January 1, 2011, contain provisions that allow for a Regional Entity to perform compliance monitoring and enforcement activities with respect to a registered entity located in another region, thereby laying the foundation for the MRRE process. Section 4(c) of the Delegation Agreements now provides: "Nothing in this Agreement shall prohibit [REGIONAL ENTITY] from entering into an arrangement between one or more other Regional Entities to perform compliance monitoring and enforcement activities outside of its region, on behalf of NERC and/or other Regional Entities, for Registered Entities that have registered functions monitored by more than one Regional Entity, subject to approval by NERC."

Detailed amendments to the RoP have not been developed and proposed for adoption, but may not be necessary. The complexity of the MRRE process and transfer of data, information and authorities require significant implementation plans. The pilot program described in B.4.a above was initiated to determine the various issues associated with the MRRE program prior to full scale implementation. At present, it is expected that the MRRE process procedure will be the

governing document and that neither the Regional Delegation Agreements nor the RoP will require changes in this area.

5. *Improve joint registration procedures.*

- a. NERC will continue, in conjunction with the Regional Entities, to review the joint registration process for possible improvement.

NERC and the Regional Entity staffs have worked closely to refine the joint registration process over the past two years and the process is working efficiently.

- b. NERC will revise presentations used at Regional Entity conferences and workshops to include more detailed information on JRO registration process and procedures.

A separate presentation focused solely on registration options, including JRO, CFR and use of other duly executed legal agreements, has been drafted by NERC and the Regional Entities. This presentation has been presented to the Certification & Registration Working Group and will later be presented to the industry via webinar.

- 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.

Each issue is handled case-by-case where a matrix approach is recommended for input to a JRO/CFR agreement. Texas RE has posted this template on its website and will present this model at a future Certification & Registration Working Group meeting for use and consistency.¹² Additionally, throughout the refinement of the JRO and CFR processes, the NERC Legal Department has been involved.

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.

NERC had contemplated addressing this item through the proposed “no-action letter” process. However, as described in the discussion of the No Action Letter proposal in response to P 219 of Commission’s September 16, 2010 Order in the main text, NERC has not pursued development of the No-Action Letter process. However, as discussed in response to P 118 of the September 16, 2010 Order in the main text, NERC has developed Compliance Application Notices,

¹² TRE template available at: <http://www.texasre.org/registration/jro/cfr/Pages/Default.aspx>.

Compliance Analysis Reports and Case Notes, and other compliance communications products to address this item.

- 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.

Compliance Application Notices, Compliance Analysis Reports and Case Notes, *inter alia*, address this issue. (See discussion in response to P 118 of the Commission's September 16, 2010 Order in the main text.) To make registered entities aware of these compliance communications products, NERC has been conducting webinars and workshops for registered entities, and discussing their use at meetings with industry trade organizations.

- c. Promote more assistance by others, including third-party providers and industry trade associations. Consider partnering with industry trade associations where appropriate.

In 2009, NERC initiated quarterly updates to the trade associations on compliance issues; these updates have been expanded to include the North American Generator Forum, North American Transmission Forum and the Independent System Operator / Regional Transmission Operator Council. This quarterly update provides a venue for the ERO to update the industry on compliance issues and to engage in discussion on a wide range of reliability issues. Of significance are the ongoing discussions of consistency within the compliance monitoring and enforcement program across the Regions.

- 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.

In 2010, NERC staff participated in 82% of the Regional Entity workshops, and conducted a joint NERC Standards and Compliance Workshop for industry representatives. In 2011, NERC staff will continue to support Regional Entity workshops, has planned to conduct two joint standards and compliance workshops, two compliance workshops, and webinars to facilitate industry education and understanding of compliance.

- e. Get more compliance cases processed through the system as one mean of providing guidance on what is leading to violations.

Through streamlining of enforcement and standardized templates, including creation of a Disposition Document, NERC has increased its ability to process violations, and is now processing 3 to 4 times the number of violations each month as compared to 2009. NERC began use of these templates and Disposition Document in 2010.

In 2011, NERC is implementing the Administrative Citation Process, which will further increase the number of violations that can be processed to completion per month. The Commission accepted the first administrative citation NOP filing in its order of March 3, 2011. NERC

submitted a second filing February 28, 2011. (See discussion of Administrative Citation Process in response to PP 218-219 of the Commission's September 16, 2010 Order in the main text.)

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.

See item C.1.e above.

- b. Establish a more extensive training program for Regional Entity compliance personnel.

NERC has planned for two ERO auditor workshops in 2011. The first of these workshops was conducted in February 2011, with 88% of the Regional Entity auditors in attendance. Periodic classes are also conducted for investigative personnel in the Regions. Regional Entity audit staffs responsible for auditing compliance with both Order No. 693 standards and CIP standards attended the February 2011 workshop.

- 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.

NERC and the Regional Entities have developed pro forma settlement templates that are available for use for Notices of Penalty, Abbreviated Notices of Penalty, Deficiency Notices of Penalty and Administrative Citation Process Notices of Penalty. See also responses to items C.1.e above and C.4.a below.

- d. Continue to identify and implement improvements to the management plan for the compliance enforcement program, including the delegated functions.

See item C.1.e. above.

- 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.

NERC and the Regional Entities have adopted and implemented this item as an informal process.

- 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.

NERC and the Regional Entities continuously review the necessary level of enforcement resources through the annual business plan and budget process. Both NERC and the Regional Entities have significantly increased the staffing of their Compliance Programs from 2009 to the present. For example, the NERC 2009 Business Plan and Budget provided for staffing of 31 FTEs in the Compliance Monitoring and Enforcement Program, while the 2011 Business Plan and Budget provides for staffing of 47 FTEs in this program, a 51% increase. The 2009 Business Plans and Budgets of the eight Regional Entities provided for, in the aggregate, staffing of 122.75 for their Compliance Monitoring and Enforcement Programs, while the 2011 Business Plans and Budgets of the eight Regional Entities provided for, in the aggregate, staffing of 224.35 FTEs for their Compliance Monitoring and Enforcement Programs, an increase of 82% over 2009.¹³

- g. Continue development of a common, centralized platform for collection and maintenance of compliance information by NERC and the Regional Entities.

The Compliance Violations module of the Compliance Reporting, Analysis, and Tracking System (“CRATS”), which replaces the spreadsheet-based reporting method that has been used by NERC and the Regions, is in the final testing phases with the Regions and will be placed into production use later this year. Similarly, work on the Mitigation Plans module and Enforcement module is underway. Both are expected to be in production later this year. Work has not yet commenced on the Remedial Action Directives (RAD) module or the Investigations module. See the discussion in response to P 217 of the Commission’s September 16, 2010 Order in the main text.

- 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.

See items C.1.e and C.2.e above. Improving NERC and Regional Entity compliance processes in order to eliminate duplication and overlap and streamline and shorten those processes is a subject of continuing attention by NERC and the Regional Entities.

- i. Amend the delegation agreements and ERO Rules of Procedure as necessary to implement or accommodate the proposed actions.

Extensive amendments to the Delegation Agreements and the Rules of Procedure, including Appendix 4C, were developed, proposed and approved in 2010, and became effective January 1, 2011. Further Rules of Procedure revisions are being considered in 2011.

The amendments to the Section 5.0 of the CMEP, effective January 1, 2011, including in particular the establishment of the defined stages and process steps of the enforcement process for Possible Violations, Alleged Violations and Confirmed Violations, are intended to help expedite the processing of violations by establishing a common set of stages and processes to be followed by all the Regional Entities and NERC.

¹³ NERC and some of the Regional Entities also budgeted for contractor resources for their Compliance Monitoring and Enforcement Programs which may not have been included in their budgeted FTE numbers, in one or both of these years.

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.

The amended CMEP, Appendix 4C to the RoP, Section 6.5, provides for a 30-day review period limit for the reviews by the Regional Entity and by NERC of proposed mitigation plans, with provision for extending the limit under certain circumstances. All approved mitigation plans, other than mitigation plans related to CIP violations or filed non-publically, are posted on the NERC website as part of the filed NOPs.

In 2011, NERC is working with Regional Entities to identify what changes are needed in the CMEP with respect to mitigation plan processing. In addition, NERC will track the average life of mitigation plans – from discovery to verification of completion – as part of ERO performance goals.

- b. Develop templates and/or lists of “pre-approved” appropriate mitigation steps for particular types of violations.

NERC has posted information on all approved mitigation plans, other than mitigation plans related to CIP violations or filed non-publicly, on the NERC website to provide guidance on what is expected in mitigation plans. However, NERC has not developed templates or lists of “pre-approved” mitigation steps. Further, NERC is posting Case Notes to provide summary information regarding mitigation activities that have been accepted by Regional Entities and approved by NERC with respect to certain violations, especially with respect to CIP reliability standards. In 2011, NERC is working with Regional Entities to identify what changes are needed in the *Compliance Monitoring and Enforcement Program* with respect to mitigation plan processing, and will continue to consider developing templates as discussed above.

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.

A pro forma settlement approach has been developed as well as newer more streamlined processes for addressing minor violations. Since May 2010, NERC has applied the pro forma settlement approach to three tiers of NOPs (Full, Abbreviated, and Deficiency) based on the level of risk presented by each violation. In early 2011, NERC made its first Administrative Citation Process Notice of Penalty filing. See the response to PP 218-219 of the Commission’s September 16, 2010 Order in the main text. In 2011, NERC is working with the Regional Entities to explore improvements in the *Sanction Guidelines*, including provisions for developing penalties for minor or administrative violations.

- b. At such time as a significant sample of enforcement actions have been completed, evaluate such actions overall for the impact on self-reporting.

NERC is regularly exploring ways to communicate the impact of self reporting on penalties. The NOP templates and disposition documents developed as part of the overall compliance enforcement streamlining process are now structured to report in a more standardized manner whether particular violations were self-reported and whether credit was given for self reporting in the penalty determinations. In 2011, NERC is working with the Regional Entities to explore revisions in the *Sanction Guidelines* including revisions relating to the assessment of penalties for self-reported violations.

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.

RSAWs are reviewed continuously for improvements and updated as appropriate. Further refinements and the addition of more information in the RSAWs to facilitate compliance are planned in 2011. The RSAWs will be prioritized for review and revision. See also the response to P 121 of the Commission's September 16, 2010 Order in the main text.

- 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.

NERC and Regional Entity staff periodically review audit processes and feedback from registered entities, the trade associations and forums to ensure registered entities are provided all due process and adequate opportunity to explain and demonstrate compliance with applicable standards.

NERC and the Regional Entities are participating in auditor training workshops to improve the efficiency and effectiveness of audits.

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.

NERC has planned for two ERO auditor workshops in 2011, the first of which was conducted in February 2011, with 88% of the Regional Entity auditors in attendance. See also item C.2.b above.

- 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.

NERC and Regional Entity staff periodically review audit report templates and are initiating another review to address this and other transparency issues, as well as to make the audit report templates more useful as guidance to registered entities.

- c. Continue to monitor the Regional Entities' implementation of their compliance programs, including audits, through the NERC Regional Operations Group.

NERC continues to participate on Regional Entity audits. In addition, NERC initiated in late 2010 the Key Reliability Standard Spot Check Program as a focused effort to improve consistency across regions in auditing. This program focuses on an in-depth review of the auditing of a key reliability standard such as PRC-005 - Transmission and Generation Protection System Maintenance and Testing across all eight regions within a specified period of time to judge consistency. The initial results of the PRC-005 spot check have been provided to the NERC Board of Trustees Compliance Committee at its open meeting on February 16, 2011. Action items for the program include improved auditor training, compliance guidance and improved compliance analysis.

- 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.

The regional delegation agreements and associated sections of the Rules of Procedure, including Appendix 4C, the CMEP, were extensively amended in 2010 and approved by FERC, to be effective January 1, 2011, to improve many areas of ERO compliance operations and processes. Among the changes were:

- New Section 6(d) of the RDA sets forth specifically the grounds on which NERC may reject or disapprove a Regional Entity's disposition of a Possible Violation, Alleged Violation or Confirmed Violation.
- New Section 8 of the RDA establishes procedures for developing performance objectives and measures, and directives, guidance and directions to one or more Regional Entities. These procedures can be used to monitor and improve consistency and to introduce new or modified processes to improve consistency and improve the speed at which violations are processed.
- The extensive revisions to Sections 1.1 (Definitions), 3.0, 5.0, 6.0, and 8.0 of the CMEP effective January 1, 2011 were based on, among other things, review of the then-current practices and processes being used by NERC and the Regional Entities and are intended to establish a consistent set of compliance monitoring and enforcement procedures that all of the Regions, and NERC, can and will follow.

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.

NERC conducted an analysis of violations, events analyses, investigations, and other compliance activities and reliability issues to develop a risk-based 2011 Annual CMEP Implementation Plan and Actively Monitored Standards List. NERC will work with the Regional Entities to continue to apply risk-based principles and criteria to more effectively focus compliance audits 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.

Regional Entities have been given the flexibility to audit registered entities over the course of the audit period and are not bound solely to large, comprehensive audits conducted only every three or six years. Regional Entities have also been encouraged to utilize a more continuous compliance monitoring program via use of periodic data submittals, spot checks and self certifications.

- 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.

NERC has gathered feedback from registered entities via post audit feedback forms and information provided by trade associations and forums. NERC uses this information to improve consistency and develop products to provide guidance to the industry to facilitate compliance.

- 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.

This has been an ongoing priority. Regional Entities have increased the amount of time, prior to commencement of the on-site audit, that the audit notification letters are sent to the registered entities. Whereas the CMEP, Appendix 4C to the Rules of Procedure, requires the pre-audit notification letter be issued to the registered entity 2 months before that start of a regularly scheduled on-site compliance audit [Section 3.1.1], all Regional Entities now provide the letter (which includes the pre-audit questionnaire and the RSAWs to be completed by the registered entity) at least 90 days out and one Regional Entity provides a letter 120 days from the audit. This provides the entity with more time to complete the questionnaire and RSAWs, since they must be returned 30 days prior to the start of the on-site audit. In addition to providing more preparation time, most Regional Entities conduct a call with the registered entity after the letter is

received by the registered entity to answer questions and provide additional guidance on audit preparation. These actions, along with an appropriately scoped audit after a risk based analysis, are designed to focus auditing on the critical reliability standards and not create an undue administrative burden on the entities.

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

- a. Work with Regional Entities to update the CIP RSAWs.

NERC is working with the Regional Entities to update the CIP RSAWs. RSAWs are reviewed continuously and updated as appropriate. Further refinements and the addition of more information in the RSAWs to facilitate compliance are planned in 2011. The RSAWs will be prioritized for review and revision.

- 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.

RSAWs are reviewed continuously for improvements and updated as appropriate. Further refinements and the addition of more information in the RSAWs to facilitate compliance are planned in 2011. The RSAWs will be prioritized for review and revision. See also the response to P 121 of the Commission's September 16, 2010 Order in the main text.

- c. Formalize the RSAW development and maintenance process in the NERC ROP and delegation agreements.

This topic was not addressed in the revised delegation agreements and Rules of Procedure that became effective January 1, 2011. However, NERC is in the process of developing additional Rules of Procedure revisions and this topic is being considered.

9. *Compliance violation investigations take too long.*

- a. Continue to review compliance violation investigation processes, procedures, and training for streamlining and improvement.

The new ERO Event Analysis Process¹⁴ incorporates a more streamlined approach to validating and opening compliance investigations. The processes and procedures have been reviewed and streamlined for efficiency. Further refinements are expected in the June – July 2011 timeframe as improvement opportunities are addressed following a second phase field trial. Of significance is a move to ensure that the method and scope of the associated compliance activity is appropriate based on the significance of the event.

- 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.]

¹⁴ The Event Analysis Process document is available at: <http://www.nerc.com/page.php?cid=5|365>

The new ERO Event Analysis Process incorporates a more streamlined approach to coordinating event analysis and compliance investigations. The revised process puts in place criteria for reporting and categorizing various system events as the base in determining the appropriate level of events analysis and compliance review. These revisions should provide for more predictable, efficient, and timely responses to system events.

- c. Disseminate preliminary lessons learned from CVIs to the industry as soon as practicable.

The new ERO Event Analysis Process incorporates a more streamlined approach to coordinating event analysis and compliance investigations including the dissemination of lessons learned in a timely manner. Target timelines have been established for generation of lessons learned from discrete events, and a substantial number of candidate lessons have been identified to date. Importantly, the process will include a periodic trend analysis feature for cross-cutting issues such that significant issues that show up as underlying causes in multiple events or something with generic implications can be identified and disseminated quickly.

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.

In 2011, NERC is working with the Regional Entities on possible improvements in the *Sanction Guidelines*.

- 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.

NERC and the Regional Entities have adopted and implemented this item as an informal process.

11. Improve system for submitting compliance information.

- a. Complete the development and implementation of the new database entry and query system.

See item C.2.g above and the response to P 217 of the Commission's September 16, 2010 Order.

- b. Complete implementation of common report forms within the Regional Entities and common input specifications.

See response to P 217 of the Commission's September 16, 2010 Order.

- c. Amend the delegation agreements as appropriate to accommodate and support the proposed changes regarding common report forms and common input specifications.

The revised Delegation Agreements that were developed and approved in 2010, effective January 1, 2011, do not specifically address this action. During 2011, NERC and the Regional Entities will be conducting a further review of the Rules of Procedure to identify improvements to compliance processes and procedures. NERC expects to submit additional proposed changes to the Rules of Procedure to the NERC Board by the end of 2011, and thereafter to the Commission for approval.

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.

This action has not been addressed on a standard-by-standard basis. However, amended Section 3.1.4.2 of the *Compliance Monitoring and Enforcement Program*, effective January 1, 2011, specifies that the Regional Entity must establish, and advise the registered entity, of the historical coverage period for each compliance audit, and that the registered entity will be required to demonstrate compliance with the standards reviewed in the audit, for the entire coverage period. Amended Section 3.1.4.2 also states: "However, if a Reliability Standard specifies a document retention period that does not cover the entire [coverage period], the Registered Entity will not be found in noncompliance solely on the basis of the lack of specific information that has rightfully not been retained based on the retention period specified in the Reliability Standard. However, in such cases, the Compliance Enforcement Authority will require the Registered Entity to demonstrate compliance through other means,"

- 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."

This bulletin is currently under revision and once vetted and approved will be made publically available. Regional Entities will be encouraged to address the provisions in this Bulletin in their respective compliance seminars and workshops, and NERC will address them in the NERC Joint Standards and Compliance Workshops this year as well.

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.

Section 1500 of the Rules of Procedure governs treatment of confidential information including CEII. There are various file transfer protocol (ftp) processes in place to communicate information to audit teams. Audit team members are required to execute confidentiality agreements.

- b. Continue evaluation of a secure portal at NERC for receiving critical energy infrastructure information from registered entities.

NERC uses ftp processes for CIP NOPs with Regional Entities for CEII coming from registered entities, as well as for CEII being submitted in connection with audit reports, TFE requests, etc.

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.

Provisions to support the use of interim reports for longer detailed event analysis are proposed for inclusion in Version 2 of the ERO Event Analysis Process, which is expected by early April 2011.

- b. Revise the event analysis process to issue alerts as they are developed during the course of the analyses as circumstances warrant.

The ERO Event Analysis Process includes provisions to disseminate lessons learned and alerts in a timely fashion. NERC will add language to support development of Alerts during the course of event analysis for a timely delivery in version 2 of the document, which is expected by early April 2011.

- c. Complete hiring to fill open budgeted positions.

Event Analysis & Investigations (“EA&I”) filled the positions that were open at the time the 3-Year ERO Assessment Report was filed (July 2009). NERC now has 2 open positions in EA&I, for which NERC is actively interviewing. NERC has a job offer under development for the last candidate interviewed.

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

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

The ERO Event Analysis Process document, which was developed in 2010 and is now in the second phase of field trial, includes new threshold criteria for event analysis.¹⁵

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.

¹⁵ <http://www.nerc.com/page.php?cid=5|365>.

The ERO Event Analysis Process supports industry involvement in the event analysis process. Standing committees have resources that can be added to EA teams. Industry advisory panels can be used as well. The recommendation to make greater use of contractors was based on the organization and staffing of NERC's Event Analysis function as of 2008-2009. With the reorganization of and re-structuring of the Compliance and EA&I functions and staff additions that occurred in 2010, NERC believes that the potential need to use contractor resources in event analyses in order to expedite completion of the analyses, is greatly reduced.

- b. Include a budget item in the 2010 budget for root-cause analysis training of NERC and Regional Entity event analysis staff.

The newly developed cause analysis training class is schedule to be delivered in the second quarter of 2011, which is provided for in the 2011 Business Plan and Budget. The goal is to deliver a pilot class and 3-4 classes for the Regions.

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.

The basis for Alerts is now described in the background information section of the Alerts, and addresses 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.

Alerts now contain additional detail, where warranted, subject to confidentiality or critical infrastructure protection limitations.

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.

The ERO Event Analysis Process document provides more clarity regarding the interface between Event Analysis and Compliance actions. (See also response to P 178 of the Commission's September 16, 2010 Order in the main text.)

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.

NERC has expanded its efforts to review all data and information used in its reliability assessments with the Regional Entities and technical committees to validate assumptions, data, and conclusions.

- b. NERC will avoid taking policy advocacy positions in its reliability assessments.

NERC continues to avoid taking policy advocacy positions in its reliability assessments, and focuses its reliability assessments on technical evaluation of reliability issues and trends.

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.

NERC has organized its LTRAs and seasonal assessments to show aggregated interconnection results.

- 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.

NERC has expanded its review processes to ensure sufficient opportunity for its technical committees and industry stakeholders to provide comments and feedback on its reliability assessments, and is considering extending the publication date of its LTRA reports to promote greater stakeholder participation.

- c. Engage NERC’s Reliability Metrics Working Group, to vet, validate, and improve the metrics used in reliability assessment reports.

The Reliability Metrics Working Group, which was initially formed in 2009, provides subject matter expert input to and support of NERC’s development of reliability risk indices and key reliability metrics.

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.

State/provincial mandated capacity requirements appear in the Reliability Assessment Guidebook, Version 2.1¹⁶ and are reflected in the NERC Reference Margin Level through its definition: “Each Region/subregion may have its own specific margin level based on load, generation, and transmission characteristics as well as regulatory requirements.”

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.

NERC addresses issues beyond ten years in its special reliability assessments, such as the July 2010 special report *Reliability Impacts of Climate Change Initiatives*.¹⁷ NERC is also working with EPRI on long-term projections for reliability assessments beyond the current ten-year assessment horizon. These enhancements to the reliability assessment process were discussed and developed in conjunction with the Planning Committee and Reliability Assessment Subcommittee.

- 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.

The task force is scheduled to complete its work in 2nd Quarter 2012.

- c. Other matters requiring a longer view will be reviewed on a case-by-case basis.

NERC will address these issues through its special assessments. For example in 2011, NERC is developing a gas dependency and vulnerability special assessment, which may cover a time horizon beyond the ten year period.

¹⁶ Reliability Assessment Guidebook, Version 2.1, available at: <http://www.nerc.com/files/Reliability%20Assessment%20Guidebook%20v2.1.pdf>

¹⁷ Available at: http://www.nerc.com/files/RICCI_2010.pdf.

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.

The recently-formed ERO Reliability Assessment and Performance Analysis Group has as part of its charter the coordination of data and information collection, including data and information from Regional stakeholder working groups.

- b. Coordinate with EIA and FERC to minimize or eliminate duplicative reporting and data collection requirements.

NERC's Data Coordination Working Group coordinates with EIA and FERC to improve data collection efforts, eliminate duplication, and improve consistency of definitions. This group now reports to the Data Coordination Subcommittee of the Planning Committee, which subcommittee was formed in September 2009.

- 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.

The Data Coordination Subcommittee was formed in September 2009.

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.

NERC has expanded its use of Webinars and workshops for all of its long-term and special reliability assessments.

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

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

Scenario assessments have now been included in NERC's reliability assessment process, as described in Chapter 9 of the NERC *Reliability Assessment Guidebook – Version 2.1*, and will be included in all future LTRA reports. (See also the response to P 180 of the Commission's September 16, 2010 Order in the main text.)

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.

Processes for data collection are being enhanced and automated. Results will be a new centralized reporting system, expected to be in place 4th quarter 2011.

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.

Currently, 18 approved ALR metrics exist. NERC's Reliability Metrics Working Group ("RMWG") has developed an evaluation criteria and ensured only those proposals that are directly tied to top reliability issues are considered.

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

All current and future metrics are vetted through this 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.

The Reliability Metrics Working Group continues to solicit additional metrics proposals and has developed a metrics template to initiate the vetting process.

- 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.

The RMWG has established an annual review process to ensure each approved metric still provides the value it was expected to provide. In the event that the RMWG concludes that a metric is no longer useful, the metric will be withdrawn and posted as a considered but not advanced metric, or a metric may be modified if there are shortcomings in its ability to convey an aspect of the Adequate Level of Reliability.

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.

The 2010 Annual Report on Bulk Power System Reliability Metrics was published June 2010.¹⁸ A follow-up metrics Webinar was conducted in September 2010. In addition, quarterly updates are integrated into an interactive metric trending display on the NERC website.¹⁹

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.

NERC developed a workshop held on February 22-23, 2011 that focused on the auditing skills and information that was accessed by the vast majority of ERO CIP auditors. NERC is expanding this training program through additional workshops in 2011 and accelerating the development of a professional cadre of CIP auditors. (See also response to P 153 of Commission’s September 16, 2010 order.)

- 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.

NERC will continue to grow the training and education of CIP Standards for industry.

- 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.

See item G.1.a above.

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

¹⁸ http://www.nerc.com/docs/pc/rmwg/RMWG_AnnualReport6.1.pdf.

¹⁹ <http://www.nerc.com/page.php?cid=4|331>.

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.

In September 2009, the Critical Infrastructure Protection Committee (“CIPC”) approved the final version of the guideline document on identifying Critical Assets, and submitted it to the Standards Committee as a reference document associated with the CIP Standards. The Standards Committee accepted the document on November 11, 2009. The Critical Asset Identification Guideline is applicable to CIP standards Version 1, 2, and 3.

In April of 2010, an Urgent Action standards development was initiated to address the remote access and VPN issues raised in the March 31, 2010 joint product bulletin issued by NERC, DOE and DHS. That Urgent Action process is underway, having been through an initial comment period, and a combined comment and ballot. Responses to those comments are in the process of being finalized, and are currently being reviewed by the Standards Department for Quality Review. Once that review process is complete, the standard will be submitted for a successive ballot.

In June 2010, the CIPC approved the final version of the guideline on identifying Critical Cyber Assets, and submitted it to the Standards Committee as a reference document associated with the CIP Standards. The Standards Committee accepted the document on August 12, 2010. The Critical Cyber Asset Identification Guideline is applicable to CIP Standards Version 1, 2, 3, and 4.

Two updates to the “Phase I” standards have been completed through the standards development process to NERC Board approval. One update deals with responding to the two time-sensitive directives in the Commission’s Order approving the Version 2 (Phase I) CIP standards. Version 3 was approved by the NERC Board on December 16, 2009, approved by the Commission on March 31, 2010, and became effective on November 1, 2010. The second update deals with removing the “risk-based assessment methodology” from CIP-002, and replacing it with “bright line criteria” in an attempt to provide consistent criteria for the determination of Critical Assets (CIP-002 Version 4). CIP-002 Version 4 addresses the need for greater guidance in developing risk-based methodologies for identifying Critical Assets, by specifying the specific criteria for

Critical Asset identification in the standard. CIP-002 Version 4 was approved by the NERC Board on January 24, 2011 and filed with the Commission for approval on February 10, 2011.

The Drafting Team is currently engaged in the process of responding to all remaining FERC directives from Order 706, and will have a set of standards posted for comment prior to the end of 2011, with anticipated approval and filing with FERC in the first half of 2012.

- 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.

See item G.2.a. above.

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.

The TFE procedure has been finalized, approved by the NERC board and approved by FERC as amendments to the NERC Rules of Procedure (Appendix 4D) and became effective in early 2010. The current (revised) version of Appendix 4D was effective as of October 1, 2010. Additional revisions are pending before the Commission for approval.

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.

CIP-related compliance and application issues and questions are being addressed through the Compliance Application Notice (CAN) process rather than through the interpretation process.

The CAN process is able to provide much more timely compliance guidance to support registered entity compliance program refinement with regard to all standards, including the CIP standards, than is the formal interpretations process. (See also response to P 154 of the Commission's September 16, 2010 Order in the main text.)

- 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.

NERC is currently addressing CIP standards-related questions by way of its Compliance Application Notices (CANs), Compliance Application Reports (CARs), and various other public issuances. For example, CANs are currently under development for a number of CIP standards-related questions and issues. NERC is continuing to consider other forms of assistance 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.

The NSANS program is currently in operation. Improvements to the system are being evaluated for implementation.

- b. Continue to develop the Hydra group and functionality and its use on emerging cyber security assessments.

The Hydra group continues to evolve and grow. Hydra was very successful in developing the recent "Night Dragon" cybersecurity alert. It will continue to evolve and will be augmented by specific external subject matter experts as necessary.

- c. Utilize the personnel targeting features of the NSANS to eliminate the burden applied to the compliance point of contact.

Improvements to the NSANS are in process to eliminate the burden on registered entity compliance contacts.

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.

NERC is finalizing contractual arrangements with the vendor selected to develop and implement the SAFNR Version 2 system in accordance with NERC's request for proposals issued in September 2010. Assuming the contract is finalized and related funding issues are resolved by mid-March 2011, NERC expects initial phase implementation to be completed by mid-Summer 2011 and final implementation in the first quarter 2012. (See also the response to P 166 of the Commission's September 16, 2010 Order in the main text.)

- b. NERC will continue to support and improve its ability to efficiently and effectively develop and manage existing and future reliability tools.

NERC is planning to transition away from maintaining reliability tools, such as the Interchange Distribution Calculator, System Data Exchange, etc., for the industry and to have the industry provide and support those tools directly. NERC's philosophy is to incubate new tools but not operate them in their developed state, preferring their value to be recognized and supported by stakeholders who use those tools.

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

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

NERC is working with the Regions, trade organizations, and a select subset of industry participants to develop a comprehensive communications plan for major events. This plan has to be integrated into an overall NERC Significant Event Response Plan that contains NERC and the Regions' cohesive response strategy. NERC anticipates significant development activity in 2011 with completion expected in 2012.

NERC has completed a review of the current ES-ISAC and identified areas for improvement. The review resulted in the Critical Infrastructure Department developing a proposal for refreshing the ES-ISAC as a partially self-funded and effectively functioning information sharing and analysis platform. Key tenets for the refresh program that will be implemented later in 2011 include:

- Bi-directional information sharing with Department of Homeland Security, Department of Defense and the FBI;
- Integration of security monitoring data;
- Deployment of a more vibrant communications portal to securely distribute declassified threat data as well as integrate analysis and response advisories; and
- Enhancing entity, government and vendor planning and response coordination to improve the resiliency of the bulk power system.

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.

The NERC Personnel Certification Governance Committee (PCGC) issued a white paper for industry comment on this concept, which included additional testing requirements, simulation testing, and specific number of years experience to qualify for the advanced credential. Industry comments indicated no benefit to creating an advanced credential that would be offered on a voluntary basis. As a result the NERC Operating Committee recommended that the project be stopped. This was reported to the NERC Board of Trustees and no further work on this concept is expected at this time.

- b. The PCGC will consider including more qualifying activities in the requirements used to maintain a credential.

PCGC is working on broadening the renewal process so that certified system operators will be required to take a certain number of task (job)-related courses as part of their renewal requirements. It is expected that the PCGC will issue a whitepaper in third quarter 2011 to solicit industry comments. If the proposals are adopted, implementation of additional requirements would not be until 2012. This will also require some modifications to the System Operator Certification and Continuing Education database (SOCCED).

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.

NERC has made a total of 13 significant database builds to increase the functionalities of SOCCED. The changes include making the “man-machine” interface easier for all users, adding demographics to the system operators' accounts, adding additional functionalities for CE providers, and increasing the reporting and auditing functionalities for NERC administrators. NERC will continue to make additional planned improvements through at least 2014.

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.

NERC budgeted for the suggested resource in its 2010 budget, but the resource was not added in 2010. A Technical Training Specialist is being added in 2011 to assist in this objective. A new Training Manager is also being hired in 2011 to replace an employee who is leaving.

- b. Research a platform on which to establish an “open source” system for providing information to the industry.

NERC plans to assign resources in 2011 to research the open source platform.

- 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.

NERC and the Regional Entities have established an ERO Training and Education Group. One expected activity of this group is to establish meaningful educational topics that will most benefit the industry. The first meeting of the group is planned for early 2011.

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.

A white paper on this topic was released for comment. Initial reaction to the white paper from providers was generally positive, but providers indicated the need for some incentive to participate, particularly with regard to compliance audits. NERC will develop a more specific business case and survey market interest for this proposal for further consideration in 2011.

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.

NERC, in collaboration with the Regional Entities, has developed draft Strategic Goals for the Electric Reliability Organization through 2015, which were reviewed with the NERC Member Representatives Committee and Board of Trustees on February 16-17, 2011. NERC is working with the Regional Entities on the underlying assumptions for the 2012 Business Plan and Budget, consistent with these long-term Strategic Goals. Other improvements since 2009 include development of common budget assumptions among NERC and the Regional Entities, and continuing development and use of consistent, standardized terms and definitions.

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.

NERC included a number of additional graphs and tables of this type in its 2010 and 2011 Business Plans and Budgets to summarize information contained in the body of the documents. NERC anticipates providing additional summary information in connection with the 2012 Business Plan and Budget filing.

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.

Starting with the 2012 Business Plan and Budget, NERC will include summary level information with respect to 2012-2014 projected resource requirements to meet the Strategic Goals noted in item 1.a and their associated objectives. (See also the response to P 195 of the Commission's September 16, 2010 Order in the main text.)

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

NERC continues to respond to FERC questions on business plan and budget submittals, as requested.

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.

NERC has reviewed the rationale for continued use of NEL as the sole basis for allocating costs and reaffirmed its appropriateness and validity, as noted in the 2010 and 2011 Business Plans and Budgets.

- b. Consider in developing the basis for cost allocation to Canadian entities those costs associated with FERC-specific requirements.

Cost allocations to Canadian entities, including allocation of costs associated with FERC-specific requirements, are evaluated and discussed with representatives of the various Canadian entities each year in connection with ERO annual Business Plan and Budget preparation and filing. These allocations take into account, among other things, the nature and extent of the compliance monitoring and enforcement activities and other reliability-related activities performed in individual provinces by NERC and by governmental or other entities within those provinces. As

submitted and approved in the 2011 Business Plan and Budget, specific allocation agreements of this type are in place for Ontario, Quebec, Alberta and New Brunswick.

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.

NERC has reviewed the current mechanisms for collecting NEL data and confirmed that the current mechanisms used in each Regional Entity are efficient and cost effective.

7. *Amend the budget templates.*

NERC, working in collaboration with the Regional Entities, has amended its budget templates.

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.

NERC works with the Regional Entities to establish common goals, objectives, and assumptions for the NERC and Regional Entity annual business plans and budgets. A set of common assumptions was developed, used for and provided in the 2010 and 2011 Business Plans and Budgets.

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

The schedule for the preparation of the annual business plan and budget process is posted annually, with minor improvements each year as deemed necessary. Extensive changes to the timing of the budget process are not possible in light of the requirement to file the approved business plans and budgets with the Commission for approval by on or about August 22 of each year, as required by the Commission's regulations [18 C.F.R. section 39.4(b).]

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.

NERC is working with Regional Entities to develop Strategic Goals for 2012-2014, to be reflected in the 2012 Business Plans and Budgets. This effort will be repeated each year as part of the business planning and budgeting process, going forward. (See also the response to P 195 of the Commission's September 16, 2010 Order in the main text.)

11. Share best practices and tools.

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

NERC has incorporated into the annual business planning and budgeting process discussions with the Regional Entity Budget Group on sharing best practices and tools. This is an ongoing activity.

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

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

The concept of “shared reserve” among Regional Entities and NERC has been discussed but no consensus could be reached regarding the benefits of such an approach compared to each entity using cash reserves, lines of credit, and the budget amendment process to provide funding for significant unanticipated costs in any given year.

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.

Standard definitions and procedures have been adopted and have been used in the Business Plans and Budgets, beginning in the 2009 Business Plans and Budgets, with refinements in subsequent years.

Provisions in the amended Regional Delegation Agreements effective January 1, 2011 directed to standardization of the business planning and budgeting processes and presentation and financial results among the Regional Entities, are Sections 9(a), (d), (g) and (j), and Sections 2 and 5 of Exhibit E.

- b. Consider revisions to the delegation agreements to address this issue as appropriate.

Substantial revisions were made to the delegation agreements that were approved and became effective on January 1, 2011, regarding budgeting, accounting and finance matters. (See item J.13.a above.) No further changes to the delegation agreements are required at this time on the topic of common definitions and procedures relating to indirect costs.

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.

Common templates have been developed and are used by NERC and the Regional Entities for budget preparation. Beyond the use of common templates, there has been no further development of a uniform budgeting “tool.”

15. Adopt uniform budget metrics.

- a. Continue efforts in the 2010 budget cycle.

NERC and the Regions will continue to provide budget metrics in their annual Business Plans and Budgets. The budget metrics are reviewed in connection with each annual budgeting cycle to assess whether previously-used metrics should be eliminated or modified and whether new metrics should be developed and added.

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

Generally Accepted Accounting Principles are utilized by NERC and each of the Regional Entities in both the annual Business Plans and Budgets and in the annual reports 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.

NERC collects web site usage statistics, which track data such as frequently visited pages, referring sites, user location, downloads, and much more. This information is combined with survey information to help assess the usefulness of the website and identify the need for improvements and enhancements.

- b. NERC will implement improvements to the Website based on these results.

NERC’s IT department and NERC’s external affairs division are in the process of hiring a website coordinator and together will work to implement improvements to the website identified through the methods described in item K.1.a above.

- 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.”

This action has been implemented.

- 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.”

The effective dates for mandatory enforcement appear on the NERC website at: http://www.nerc.com/filez/standards/Mandatory_Effective_Dates.html. The NERC web page displaying NERC Board-approved standards prominently refers the reader to the “Mandatory Effective Dates” link for a list of those standards that have been approved and are mandatory and effective in the United States and the various Canadian provinces, including the effective dates.

- e. Provide better access to frequently used information, including where to find information about balloting.

A number of improvements have been made to the NERC Standards website to make information about standards and standards balloting easier to locate. For example, the “Standards Under Development” page of the NERC website²⁰ has been modified to serve as a comprehensive resource for stakeholders to locate information about all active standards projects and ballots. For stakeholders seeking to participate in the Registered Ballot Body (RBB), the automated communications about denials of such requests have been clarified and revisions to the criteria for participation in each RBB Segment have been drafted and posted for stakeholder comment through April 15, 2011.

NERC also separated the “Standards Under Development” web page so that it is easier to distinguish Interpretations from other projects to develop new/revised standards, and we began to assign different project numbers for Interpretations to better distinguish them from standards development projects.

Further improvements are under consideration, including software changes designed to enhance the efficiency of receiving and responding to stakeholder comments on standards projects.

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.

NERC Communications works regularly with industry associations to ensure NERC messages are being widely disseminated and will continue to seek industry association input on ways to improve outreach to non-traditional and smaller entities. NERC’s many webinars, workshops, and presentations also aid in reaching non-traditional and smaller entities.

- b. NERC will work to implement specific suggestions received as a result of these discussions.

²⁰ Reliability Standards Under Development available at: http://www.nerc.com/filez/standards/Reliability_Standards_Under_Development.html

Most associations have their own publications for their membership and are excellent resources for communication. NERC's efforts to share information with the associations, doing interviews for their publications, etc., facilitate the dissemination of information to smaller and/or non-traditional entities. NERC has done multiple interviews for both APPA and NRECA publications on various topics, including a Q&A by NERC President and CEO Gerry Cauley, NERC's long-term reliability assessment, fly wheel technology and wind generation.

Appendix B

A Summary of Canadian Provincial Adoption of Reliability Standards Framework

A Summary of Canadian Provincial Adoption of Reliability Standards Framework

This document was prepared by the North American Electric Reliability Corporation (NERC) in consultation with the various Canadian and Provincial jurisdictions based on NERC's understanding of the corresponding regulatory and standards framework. These materials are prepared for informational purposes only without warranty of any kind. Please contact Ric Cameron [rcamero_@sympatico.ca] if you identify any issues with the information contained herein.

Revision History

Doc Number	Description	Created by	Revised by	Issued Date
LEG-CA-GOV v1	Conformed 12-22-2010 working version of document to NERC Template and issued document internally	Ric Cameron	Davis Smith	02-10-2011

Alberta:

The Alberta Transmission Regulation (Reg 288/2009 as amended) outlines the framework for Reliability Standards in Alberta. The North American Electric Reliability Corporation (NERC) Reliability Standards apply in Alberta to the extent they are adopted by the Alberta Electric System Operator (AESO) in accordance with the Alberta Transmission Regulation. The process requires the AESO to consult with market participants likely to be affected by the Reliability Standards, and make a recommendation to the Alberta Utilities Commission (Alberta Commission) to accept or reject them. The Alberta Commission must follow the recommendation of the AESO unless an interested person satisfies it, the recommendation is technically deficient, or not in the public interest.

The Minister of Energy signed a Ministerial Order on December 28, 2007 recognizing the NERC as the Electric Reliability Organization (ERO).

The Electricity Statutes Amendment Act 2009 brought Reliability Standards formally under the enforcement authorities of the Alberta Commission and the Market Surveillance Administrator (MSA). Specified penalties for violations of Reliability Standards were adopted by the Alberta Commission, effective November 2010.

The AESO established the AESO Reliability Committee (ARC) to serve as a forum for users, owners and operators of the transmission system in Alberta and to provide advice to the AESO respecting Reliability Standards, criteria, procedures, rules and processes regarding maintenance, security and reliability matters. The ARC working groups review NERC Reliability Standards for applicability in Alberta and determine the appropriate Alberta entities that need to comply with those Reliability Standards. Alberta does not use the NERC Functional Model classification, as a model was developed for Alberta market participants. Applicable Reliability Standards are reviewed through the AESO Rules Process and the AESO submits Reliability Standards to the Alberta Commission for approval or rejection. Currently, sixty-nine (69) NERC Reliability Standards have been approved or rejected, with some amendments to reflect the physical characteristics of the Alberta system or to ensure there are no conflicts with its market requirements. Some Reliability Standards have also been rejected as not being applicable to market participants in Alberta. The AESO has also established a compliance monitoring program which provides for the monitoring of market participants with applicable Alberta Reliability Standards.

The AESO Reliability Standards Work Plan (Work Plan) was revised in October 2010, based on stakeholder consultation that identified concerns with the pace and volume of Reliability Standards development and subsequent timelines for implementation being difficult to meet. The revised Work Plan reflects a risk-based prioritization approach.

Alberta entities, including the AESO, are not included on the NERC Compliance Registry. However, the AESO participates with NERC; the AESO negotiated a

Membership and Coordinating Operating Agreement (Agreement) with the Western Electricity Coordinating Council (WECC). This Agreement outlines processes and practices for the business relationship, including AESO's continued participation as a member of the WECC and the role of the WECC in monitoring the AESO with regard to Alberta-approved Reliability Standards. The WECC Board of Directors approved the Agreement in April 2008 and the Alberta Commission issued an Order in August 2008 that approved the Agreement as filed. The Agreement was executed by both parties in September 2008. An Amendment to the Agreement was executed in April 2010.

In addition, the WECC and the MSA entered into a Service Level Agreement in April 2010 which establishes a compliance monitoring program for the WECC to monitor the AESO for activities related to Alberta Reliability Standards applicable to the AESO.

A Memorandum of Understanding among the AESO, WECC and NERC was concluded in July 2010. It affirms the collective commitment to work to enhance reliability, within the Alberta structure of authorities, and outlines respective roles.

British Columbia:

The 2007 provincial Energy Plan committed British Columbia (BC) to “ensure that the province remains consistent with North American transmission reliability standards.”

With the implementation of the Utilities Commission Amendment Act (the Act) in May 2009, BC has the legal framework to make reliability standards mandatory and enforceable. The Act gives the BC Utilities Commission (BCUC) a clear authority (exclusive jurisdiction) for the adoption of Reliability Standards in BC. This is based on its determination as to “whether a reliability standard is in the public interest and should be adopted in BC.”

The Act defines “standard-making body” and recognizes NERC and WECC as such. It also provides for the possibility of a “prescribed standard-making body” that can be recognized through regulation.

Under the Act the British Columbia Transmission Corporation (BCTC – recently reintegrated into BC Hydro under the British Columbia Clean Energy Act 2010) must review each Reliability Standard established by a Reliability Standard-making body and report to the BCUC on the impacts and implications of the Reliability Standard on BC. Its review is to consider any possible adverse impacts of adoption of the Reliability Standard on the reliability of electric transmission in BC, the suitability of the Reliability Standard for the Province and the potential cost of adoption of the Reliability Standard and any matter ordered by the BCUC or prescribed by Minister’s regulation.

On receipt of a report the BCUC must make it available to the public in a reasonable manner and for a reasonable period of time and consider any comments it receives in

response. After this period of public notice the BCUC must adopt the Reliability Standard if it considers it necessary to maintain or achieve consistency in BC with other jurisdictions that have adopted the Reliability Standard, unless after a hearing it determines the Reliability Standard is not in the public interest. There is an authority for the BCUC to rescind an adopted Reliability Standard or adopt one previously rejected if after a hearing this is determined to be in the public interest. At this time there is no specific remand provision in the Act.

Standards are mandatory for “prescribed” owners, operators, and direct users of the bulk power system, generators and distributors, *etc.* as established by Ministerial regulation.

The process now is for BC Hydro to launch its review of a Reliability Standard once the NERC Reliability Standards adoption process is complete. In effect this means once the Reliability Standard has been approved and made mandatory in the United States. This would avoid problems of having to potentially rescind a Reliability Standard if it is subsequently remanded in the NERC process.

In June 2009, the BCUC approved 103 NERC and WECC Reliability Standards for application in BC. Under the BCUC order, subject entities were given until December 31, 2009 to submit a “mitigation plan” detailing where they are currently in compliance, or how they intend to come into compliance. Some changes have been made or contemplated in the dates on which the latter two requirements are to be met, based on stakeholder approaches to the BCUC. The NERC Functional Model and NERC Glossary of Terms Used in Reliability Standards were also adopted.

In late February 2010 BCTC (now BC Hydro) filed the Mandatory Reliability Standards (MRS) Assessment Report 2. This report covers 1 new and 22 revised Reliability Standards being presented to the BCUC for consideration with a recommendation for adoption. The MRS Assessment Report has been recently approved by the BCUC and the new and revised Reliability Standards adopted, but the NERC Functional Model has been rescinded.

The Act gives the BCUC authority to make orders providing for the administration of adopted Reliability Standards. WECC has been established as Administrator for the Compliance Monitoring and Enforcement Program (CMEP) as approved by the BCUC. This gives WECC a role in functional registration of BC registered entities and in monitoring compliance with mandatory Reliability Standards, but not in enforcement. In its initial Reliability Standards filing with the BCUC, BCTC noted that “the legislation does not contemplate an ongoing role for NERC in the enforcement of reliability standards adopted by the Commission.” A sanction power that involves possible filing of charges is contained in S.106 of the Act covering Offences and Penalties. A legislative amendment is being considered that would improve the BCUC’s compliance and enforcement powers by giving it the ability to levy a broader range of administrative penalties for non-compliance.

On November 25, 2010, BCUC approved its Implementation Plan for purposes of the monitoring of compliance with adopted British Columbia Reliability Standards.

BC does not have a Memorandum of Understanding (MOU) with NERC, nor is one actively contemplated. The Province considers membership in WECC to be a cornerstone of its reliability regime. BC Hydro is a member of both WECC and NERC and BCUC maintains a close working relationship with WECC and NERC.

Manitoba:

Manitoba Hydro is currently required to comply with NERC Reliability Standards through its membership in the Midwest Reliability Organization (MRO) and its membership in NERC, subject to exceptions based on provincial law. Pursuant to the requirements of *The Manitoba Hydro Act*, in 2004 Manitoba Hydro's membership in the MRO, and its obligation to adopt Reliability Standards, was approved by the Province of Manitoba through an Order in Council subject to the exception that MRO and/or NERC Reliability Standards are not binding on Manitoba Hydro to the extent suspended, disallowed or remanded by the Lieutenant Governor in Council. Currently all NERC/MRO Reliability Standards apply to Manitoba Hydro. Reliability Standards are effective either on a specific date, or on a date subject to regulatory approvals (which for Manitoba Hydro is the NERC Board Approval Date). In Manitoba, the effective date and the enforcement dates are the same.

Effective June 1, 2008, an agreement is in place between Manitoba Hydro, NERC and MRO until such time as a new legislative regime may be enacted. It provides for a comprehensive compliance monitoring and enforcement regime within which the Public Utilities Board (PUB) will be responsible for determining violations of Reliability Standards and imposing sanctions, upon recommendation by MRO and/or NERC. This currently requires the MRO and Manitoba Hydro to jointly ask the Government of Manitoba to convene a review by PUB under existing legislation. The Government has passed an Order in Council to provide the PUB with this authority. This agreement is being revised to reflect the new legislation in the Province.

On June 11, 2009, the Manitoba Hydro Amendment and Public Utilities Board Amendment Act (Electricity Reliability) was passed by the Legislature and received Royal Assent. It has yet to be proclaimed into law, which will be delayed until necessary regulations are prepared. The legislation sets the basis for adoption of mandatory and enforceable Reliability Standards in Manitoba (roles for the Lieutenant Governor in Council as well as the PUB), and provides the legal backstop for the arrangements in the NERC/MRO/Manitoba Hydro Agreement when the required regulations are brought forward by the government. For example, it is regulation that will set the process for adopting Reliability Standards. It also provides definitions for "reliability standard," "standards body" and "compliance body," the latter of which can be designated by regulation. The legislation gives the PUB authority to make determinations of non-compliance and to impose sanctions as well as a possible role in how fees related to the

costs of the reliability regime are allocated in the Province. It is expected the regulations will be brought forward in the spring of 2011.

National Energy Board:

The National Energy Board (NEB) has statutory responsibility for authorizing the construction and operation of international power lines (IPL) and designated inter-provincial power lines and approving electric exports across the international border, as provided in the National Energy Board Act and the National Energy Board Electricity Regulations. The NEB has certain authority under its current legislative framework to take enforcement measures in the case of non-compliance to the conditions of a permit or a certificate that was issued for an IPL, but the NEB does not have authority to levy any financial penalty. The NEB currently has no formal authority to approve NERC Reliability Standards with regard to the applicable IPLs, nor does it have the authority to remand such Reliability Standards back to NERC.

The NEB and NERC entered into an MOU in 2006. That MOU recognizes NERC as the ERO and commits the signatories to work together to promote a reliable bulk electric system and to provide information relating to the development and approval of and compliance with Reliability Standards.

The NEB is currently pursuing the implementation of mandatory Reliability Standards on IPLs through its regulation-making authorities.

New Brunswick:

The Electricity Act in New Brunswick established the New Brunswick System Operator (NBSO) on October 1, 2004. NBSO is responsible to direct the operation of the transmission grid, to maintain the adequacy and reliability of the integrated electricity system, to undertake and coordinate power system planning, and to facilitate the operation of a competitive electricity market. The Electricity Act also empowered the Public Utilities Board, which has since been replaced by the Energy and Utilities Board (EUB), as the licensing authority, financial regulator of the Transmission Tariff, and monitoring authority of the electricity sector.

NERC Reliability Standards are currently adopted in the wholesale rules that are developed and administered by the NBSO by means of a market rule obligation imposed on various market participants to comply with all applicable Reliability Standards. Compliance with the market rules (and thus with NERC Reliability Standards) is a condition of license of each market participant and of NBSO. NERC Reliability Standards therefore currently have effect in New Brunswick under the market rules, subject to the provisions of the market rules and of applicable legislation.

While NERC Reliability Standards are mandatory and enforceable in New Brunswick, such Reliability Standards are only relatively recently subject to formal approval by

NBSO for application in New Brunswick. The process of establishing a mechanism for Reliability Standards approval, enforcement and possible remand through the market rules is contained in New Brunswick Market Procedure 08. The referenced procedure provides that when a NERC Reliability Standard is approved by NERC Board of Trustees, or a Northeast Power Coordinating Council, Inc. (NPCC) Criterion is approved by the NPCC Board of Directors, the NBSO will initiate the adoption process for New Brunswick. The NBSO will review the content and implementation plan for a Reliability Standard and develop a schedule to adopt the Reliability Standard as an amendment to this Market Procedure. The NBSO will post the proposed Reliability Standard, implementation plan and adoption date on the NBSO Website for a thirty (30) day review period before the Reliability Standard comes into effect unless the NBSO deems the amendment to be urgent and files with the EUB to adopt the Reliability Standard in less than thirty (30) days. During the review period interested parties may seek additional information or clarification from the NBSO on the proposed amendments or may apply to the EUB for a formal review of the proposed Reliability Standard.

An application made to the EUB for a formal review of a Reliability Standard does not stay the coming into effect of the Reliability Standard on the adoption date unless otherwise directed by the EUB. The EUB has authority under the Electricity Act to revoke the adoption of a Reliability Standard and remand it back to the NBSO for further consideration.

NERC has MOUs with New Brunswick (Province and NBSO) that detail the roles and responsibilities of the parties including recognizing NERC as a “standards authority” under the Electricity Act in New Brunswick.

In terms of assuring compliance with NERC Reliability Standards NBSO will be the sole New Brunswick entity accountable to NERC for compliance with NERC Reliability Standards by it or by market participants and will be subject to NERC’s Standards processes and compliance monitoring and enforcement processes, which will be monitored by the NPCC. It will however register, monitor and assess and enforce compliance of market participants in New Brunswick. NBSO has the authority to impose financial penalties for non-compliance with the market rules, in accordance with the provisions of the market rules. The EUB also has the authority to impose administrative penalties for violation of license conditions in accordance with and subject to the limitations in the Electricity Act in New Brunswick.

NERC or NPCC may not make findings of or impose sanctions for compliance violations but could make recommendations to the EUB that has this authority, including possibly a recommendation for financial penalties. Public disclosure of information relating to Registered Entity violations will be restricted to Confirmed Violations. The NBSO will publicly post the name of the responsible registered entity and the report for the Confirmed Violation.

Nova Scotia:

The Nova Scotia Utility and Review Board (NSUARB) exercises general supervision over all electric utilities operating as public utilities within the Province of Nova Scotia, pursuant to the Nova Scotia Public Utilities Act. In terms of reliability, electric utilities are required to provide service that is safe and adequate and in compliance with the NSUARB approved rates and regulations.

The NSUARB and NERC concluded an MOU in December 2006. Pursuant to the MOU, NERC commits to filing proposed Reliability Standards with the NSUARB and will immediately notify the NSUARB if any other jurisdiction remands a proposed Reliability Standard. The MOU provides that the NSUARB may adopt a proposed Reliability Standard or may remand a proposed Reliability Standard. The MOU further provides that, once a Reliability Standard is approved by the NSUARB, compliance will be mandatory in Nova Scotia. The MOU recognizes that NERC will conduct compliance activities related to Reliability Standards and will provide compliance information and advice to the NSUARB, which is responsible for determining if any violation has occurred and what if any remedial measures or penalties should be imposed.

In addition, Nova Scotia Power, Inc. (NSPI) is a member of NPCC. Pursuant to the Bylaws of NPCC, NSPI is bound by NERC's Reliability Standards. An agreement between NERC, NPCC, NSUARB and NSPI that outlines the responsibilities of each in Reliability Standards in the Province has been signed.

NERC has provided a list of Reliability Standards currently in effect to the NSUARB. The NSUARB has posted for public comment its proposal that Reliability Standards be adopted and made mandatory for subject registered entities (currently only NSPI). While a final process for Reliability Standards consideration and approval has not been established it is expected this will happen in mid 2011.

Ontario:

The Electricity Act, 1998 (Ontario) established the Independent Electricity System Operator (IESO). The IESO is responsible for managing Ontario's bulk electric system and operating the wholesale electricity market. A 2004 amendment to the Electricity Act also established the Ontario Power Authority, which is responsible for ensuring an adequate, long-term supply of electricity in Ontario.

NERC Reliability Standards are referenced generically in the wholesale market rules that are developed and administered by the IESO by means of a market rule obligation imposed on various market participants to comply with all applicable Reliability Standards. Compliance with the market rules (and thus with NERC Reliability Standards) is a condition of license from the Ontario Energy Board (Board) for each market participant and the IESO. NERC Reliability Standards therefore currently have

effect in Ontario under the market rules, subject to the provisions of the market rules and of applicable legislation.

On May 14, 2008, Schedule G of the Budget Measures and Interim Appropriation Act, 2008 (Bill 44), which amends the Electricity Act, 1998 became law in Ontario. Bill 44 provides a process whereby the Board can initiate a review, remand, and revoke the application of NERC Reliability Standards in Ontario. Only standards approved by the NERC Board of Trustees on or after May 14, 2008 are subject to provisions of the new law.

Pursuant to the Act the IESO must post notice within seven (7) days after notice is provided by NERC of a new or amended NERC Reliability Standard. This starts the Reliability Standards review timelines provided in the Electricity Act (or future regulations). Any person may apply to the Board for a review of a newly approved NERC Reliability Standard within twenty-one (21) days after posting by the IESO. On its own motion the Board may also initiate a review of the Reliability Standard, within the same twenty-one (21) days, or later if a longer time period is provided by regulation.

The Board may initiate a review of the standard within 120 days as permitted by regulation. If the Board finds upon completion of its review, that the Reliability Standard is inconsistent with the purposes of the Electricity Act or unjustly discriminates against or in favour of a market participant or class of market participants, the Board shall make an order cancelling the operation of the NERC Reliability Standard in Ontario and sending it back to NERC for further consideration. The Board may also make the same order if it is necessary to do so in order to coordinate with other jurisdictions in North America that implement NERC Reliability Standards. Unless a NERC Reliability Standard is otherwise ordered stayed or remanded by the Board the Reliability Standard will come into effect upon its effective date through the authority of the IESO's Market rules as mandatory and enforceable in Ontario. Initiation of a review of a Reliability Standard by the Board does not stay its operation pending completion of the review unless the Board orders otherwise.

Under the new legislation, the IESO has the right to appeal to the Board an order, finding, or remedial action made or taken by NERC. The Board may make an order revoking or amending such NERC actions or may make any other order, finding, or decision or take any other remedial action that NERC could have made or taken. The IESO must first complete the NERC compliance appeals process.

In terms of assuring compliance with NERC Reliability Standards, the IESO has the authority to impose financial penalties for non-compliance with the market rules, in accordance with the provisions of the market rules. The Board also has the authority to impose administrative penalties for violation of license conditions in accordance with and subject to the limitations in and under the Ontario Energy Board Act, 1998 (Ontario). The IESO is the sole Ontario entity accountable to NERC for compliance with NERC

Reliability Standards by it or by market participants and is subject to NERC's Reliability Standards CMEP processes up to but not including financial penalties.

The provincial government recognized NERC as the ERO on November 28, 2006. Further, the IESO, NPCC and NERC entered into a MOU, documenting the obligations of the parties respecting the Ontario reliability framework. This MOU complements an earlier MOU between the Board and NERC. The 2006 MOU between the IESO and NERC was updated early in 2010 to reflect the recent changes to the Electricity Act, 1998. Specifically, the legislation has affected the application, notification, and compliance aspects pertaining to NERC Reliability Standards in Ontario. As Ontario's energy regulator, the Board will oversee NERC's activities, and the IESO will remain accountable for Ontario's compliance with NERC and NPCC Reliability Standards and criteria.

Ontario passed a Green Energy Act in Spring 2009. There are amendments to many existing statutes, including the Electricity Act 1998. Sections on reliability are impacted with the Electricity Act being amended to provide an authority for the IESO to make rules "establishing and enforcing standards and criteria relating to the reliability of electricity service or the IESO-controlled grid, including standards and criteria relating to electricity supply generated from sources connected to a distribution system that alone or in aggregate could impact the reliability of electricity service or the IESO-controlled grid" and allowing direction to be provided market participants in order to maintain reliability. This will have to operate in the process for establishing market rules that now exists.

Québec:

On December 13, 2006, the Québec Government adopted legislation "An Act Respecting the Implementation of the Québec Energy Strategy and Amending Various Legislative Provisions" (Bill 52) which gave the Régie de l'énergie du Québec (the Régie) jurisdiction regarding mandatory Reliability Standards in the Province of Québec. The Régie is responsible for ensuring that electric power transmission in Québec is carried out according to the Reliability Standards that it adopts. Bill 52 allows the Régie, with Government approval, to enter into an agreement with a body that proves it has the expertise to establish or monitor the application of electric power transmission Reliability Standards in order to:

1. develop electric power transmission Reliability Standards for Québec;
2. carry out inspections or investigations as part of plans to monitor compliance with the Reliability Standards; and/or
3. provide the Régie with opinions or recommendations.

This agreement must also set out the method of establishing remuneration and the terms of payment for achieving its objects. A first agreement was concluded between the Régie, NERC and NPCC in May 2009. It covers all aspects of the Québec reliability regime except for the CMEP which will be the subject of a second agreement.

A consultation was launched in July 2009 with the posting of the “Québec Rules of Procedure for Compliance Services (QROP)” and the “Québec Compliance and Monitoring Enforcement Program (QCMEP).” The two documents describe the role of NERC working with the NPCC in the CMEP within Québec and allow assurance that similar enforcement programs are undertaken across all regions in North America and that Québec registered entities receive comparable treatment. As of December 2010, comments received during the consultation process from a number of interveners have led to a new version of these documents which have to be finalized.

In May 2010, Québec passed legislation to provide the Régie with clear authority for mandatory electric Reliability Standards and to give the formal authority for their enforcement. This amendment was to provide the Régie with the authority to order measures to be taken at once when non-compliance with a Reliability Standard is seriously compromising the reliability of the electric power transmission system.

In August 2007, the Régie designated the CME (Direction – Contrôle des mouvements d'énergie (System Control unit, now Direction Contrôle et Exploitation du réseau (CER)) of Hydro-Québec TransÉnergie) as the Reliability Coordinator (RC) for Québec.

Per legislation, the RC for Québec must:

1. Carry out any duties devolved to it under a Reliability Standard adopted by the Régie and issue operating directives;
2. File with the Régie the Reliability Standards proposed by a recognized reliability body with which the Régie has entered into an agreement and any variant or other Reliability Standard that the RC considers necessary;
3. File an evaluation of the relevance and impact of the Reliability Standards filed;
4. Submit to the Régie, for approval, a Register identifying the registered entities that are subject to the Reliability Standards adopted by the Régie.

The Régie has jurisdiction to adopt Reliability Standards that the RC considers essential to ensure Québec control area reliability. The Reliability Standards that the RC files with the Régie are NERC Reliability Standards and only apply to the registered entities in the Register of registered entities subject to NERC Reliability Standards.

With respect to the adoption of Reliability Standards, the Régie may request the RC to modify a Reliability Standard filed or submit a new one, on the conditions it sets, adopt Reliability Standards and set the date of their coming into force. The RC must submit to the Régie guidelines describing criteria to be taken into account in determining sanctions for non-compliance with Reliability Standards. Based on recommendations from NERC and NPCC, the Régie is responsible for determining if the registered entity has failed to comply with a Reliability Standard, and impose, if appropriate, a sanction that may not exceed \$500,000CAN a day.

On June 2, 2009, the CME, now CER, filed an application seeking the adoption of ninety-five (95) Reliability Standards applicable in Québec. No Reliability Standards specific to Québec were filed. A public hearing was held on October 7 and October 14, 2010.

The final CER filing is seeking:

1. The adoption of 95 Reliability Standards and corresponding risk factors applicable in Québec;
2. The approval of a Registry of Entities;
3. The approval of a Registry of Facilities;
4. The approval of a Glossary of Terms;
5. The taking act of the Reliability Standards Application Matrix; and
6. The approval of Sanctions Guidelines in a later phase (Spring 2011).

The Reliability Standards filed in English are rigorously identical to NERC's Reliability Standards. The French version is therefore a translation of NERC's Reliability Standards.

Upcoming actions for 2011 are:

- A decision by the Régie on the first five items of CER filing listed above;
- Finalization of the QCMEP and QROP documents;
- Conclusion of a second agreement on the CMEP; and
- Hearings and approval of Sanction Guidelines.

Saskatchewan:

Prior to 2004, SaskPower generally followed accepted industry practice. In 2004, following the 2003 eastern seaboard blackout, SaskPower committed itself formally to adopt NERC Reliability Standards. SaskPower joined MRO, and has been approved as a NERC certified control area, and achieved NERC approval as the Saskatchewan RC.

While reliability legislation remains a possibility, given the lack of a quasi-judicial regulator and the small size of the Saskatchewan jurisdiction, the current approach is to utilize the current Power Corporation Act's unambiguous Authorities to set and enforce Reliability Standards for the electric system. To accomplish this, a distinct reliability "Oversight Authority" and compliance program not linked with operations has been established within SaskPower to manage the Province's reliability framework.

A MOU (and respective processes) – developed by MRO, SaskPower, and NERC was concluded in March 2009. The MOU recognizes NERC and MRO as Saskatchewan's EROs and to the degree practicable will utilize NERC and MRO almost in an audit role. Saskatchewan retains all formal authorities. No penalties are imagined at this point, however, as the program is extended to entities within Saskatchewan the potential use of methods of enforcement will be considered.

The Saskatchewan oversight authority has been established, with very specific authorities within a managed system framework, to enforce compliance and drive mitigation plans within the Province. The Saskatchewan oversight authority, in all cases, will make formal findings, approve and where required order appropriate mitigation plans, and manage the remand, set aside, and variance procedures. The Oversight Authority may utilize MRO, NERC, or other resources to complete certain of these reviews. The Oversight Authority is expected to be involved at the front end and throughout the entire compliance procedure. It is understood that NERC and MRO intend to conduct monitoring activities, including compliance audits in Saskatchewan with respect to the state of Reliability Standards in the Province of Saskatchewan.

A determination is being made as to which Reliability Standards will be referenced as applicable to Saskatchewan, and for which ones it will be establishing a review, or will undertake to remand, set aside or initiate some variance/modification. Any Reliability Standard that has been approved by the NERC Board of Trustees but remains unimplemented (through the Federal Energy Regulatory Commission (FERC) or other jurisdiction either remanding them or some other form of non implementation) will be reviewed in a formal fashion before they become applicable.

Typically, NERC Board of Trustees approved Reliability Standards shall be viewed as being automatically adopted in Saskatchewan, unless: (1) a particular Reliability Standard has been remanded by any jurisdiction (in which case the Reliability Standard will not be applicable); or (2) as result of a Saskatchewan Authority review initiated within 120 days of receiving notice of NERC's adoption of a Reliability Standard (requested in writing by any entity within Saskatchewan, or upon the initiative of the Saskatchewan Authority), a Reliability Standard may be remanded back to NERC or set aside by the Saskatchewan Authority (thus also not being applicable) or a variance has been duly requested by SaskPower through the NERC rules and therefore, the Reliability Standard is set aside for Saskatchewan or a defined geography within Saskatchewan, or; the Saskatchewan Authority chooses to set aside a Reliability Standard for other reasons at any time.

Once implemented, the full-managed system established will include the three functions:

1. Oversight (including the remand, set aside, and finding authorities);
2. Reliability Standards development (including the coordination of assessment, communication, internal education and, development of mitigation plans), and;
3. Compliance and enforcement (the management of an internal and external bulk power system auditing, empowered to make the Saskatchewan formal findings of compliance and non compliance (either of its own volition or through external recommendations, *i.e.* NERC/MRO) and to order and enforce mitigation plans to be implemented.).

The creation of these functions represents (and is considered equivalent to) a full regulatory framework by the Province.

APPENDIX C

**Event Categories and Levels of Analysis
(As documented in the ERO Event Analysis Process Manual,
October 25, 2010)**

Event Categories and Levels of Analysis

The purpose of this document is to identify events that may require further analysis. Each event is categorized to help the Regional Entities (REs) and registered entity(s) impacted determine the appropriate level of analysis or review.

Event Analysis Levels

Impacted registered entity(ies), the associated RE and when appropriate, NERC, will collaboratively determine the appropriate level of any event analysis that should be conducted. The following provides a summary of the various reports that are expected per the EAWG process:

- **Event Report** — prepared by impacted entities, sent to NERC and the affected RE. The event report is a generic term and the actual notification may come from a variety of sources such as, but not limited to EOP-004, OE-417, and/or ES-ISAC report.
- **Event Analysis Report** — A report detailing what happened and why. Prepared by either the impacted entity or the impacted entity in coordination with the event analysis team as defined in the EA process.

The following will be used to determine the level of analysis to be conducted:

- **Category 1** — event report. (Normally there is no follow-up anticipated for category 1 reports unless requested by the RE).
- **Category 2 and 3** — An event report and an event analysis report prepared by the registered entity and follow-up as directed by the RE.
- **Category 4 and 5** — An event report and an event analysis report developed by an event analysis team led by the RE or NERC.

Operating Reliability Event Categories

Operating reliability events are those events that are deemed to have significantly impacted the reliable operation of interconnected system. These events are divided into five (5) categories that account for their different system impact and help determine the level of analysis that is warranted¹. The lists below are intended to provide examples as to the types of events that fall into each category. For events not covered below, the impacted entity, in conjunction with the RE, will determine the categorization.

Category 1: An event resulting in one or more of the following:

- a. The loss of a bulk power transmission component(s) in response to a single-phase line-to-ground fault with delayed clearing² (stuck breaker or protection system failure). (Refer to Table I. Transmission System Standards — Normal and Emergency Conditions of the TPL standards categories C6 through C9).

¹ The highest category that characterizes an event shall be used.

²Delayed clearing of a fault is due to failure of a circuit breaker or of any protection system component such as a relay or current transformer, and not because of an intentional design delay.

- b. Loss of three or more bulk power system (BPS) elements (i.e. generators, transmission lines, and buses).
- c. Frequency below the Low Frequency Trigger Limit (FTL) or above the High FTL for more than 15 minutes.³
- d. Intended and controlled system separation by the proper operation of a Special Protection System Scheme (SPS) / Remedial Action Scheme (RAS) in Alberta from the Western Interconnection, New Brunswick or Florida from the Eastern Interconnection.
- e. Failure, degradation or misoperation of SPS/RAS.
- f. Unintended loss of an entire dc converter station
- g. System wide voltage reduction of 3 percent or more
- h. Public appeal to reduce the use of electricity for purposes of maintaining the continuity of the BPS
- i. Fuel supply emergencies that could impact BPS adequacy or reliability
- j. Unintended system separation resulting in an island of up to 1,000 MW.

Category 2: An event resulting in one or more of the following:

- a. Loss of all BPS control center voice or data functionality for 30 minutes or more.
- b. Unplanned evacuation from BPS control center facility
- c. Voltage excursions equal to or greater than ± 10 percent lasting more than five (5) minutes
- d. The loss of an entire generation station of five (5) or more generators (aggregate generation of 500 MW or higher).
- e. Loss of off-site power (LOOP) to a nuclear generating station.
- f. Load shedding resulting in a loss of load of 100 MW or greater as a result of:
 - 1. Manual load shedding;
 - 2. Underfrequency load shedding; or
 - 3. Undervoltage load shedding.
- g. Unintended system separation resulting in an island of 1,001 MW to 4,999 MW.
- h. Equipment failures or SPS/RAS actions which result in the loss of firm system demands for more than 15 minutes, as described below:
 - 1. Entities with a previous year recorded peak demand of more than 3,000 MW are required to report all such losses of firm demands totaling more than 300 MW.
 - 2. All other entities are required to report all such losses of firm demands totaling more than 200 MW or 50 percent of the total customers being supplied immediately prior to the incident, whichever is less.
- i. An Interconnection Reliability Operating Limit (IROL) violation as defined in reliability standard TOP-007.

³ In case of an FTL exceedence, the reporting of the event occurs automatically through the NERC ACE and Frequency Monitoring System. Analysis of these events will normally be conducted by the NERC Operating Committee's Resources Subcommittee.

Category 3: An event resulting in one or more of the following:

- a. The loss of load or generation (excluding SPS/RAS, UFLS, or UVLS actuation) of 2,000 MW or more in the Eastern Interconnection or Western Interconnection, or 1,000 MW or more in the ERCOT or Québec Interconnections.
- b. Unintended system separation resulting in an island of 5,000 MW to 10,000 MW.
- c. Unintended system separation resulting in an island of Alberta from the Western Interconnection, New Brunswick, or Florida from the Eastern Interconnection.

Category 4: An event resulting in one or more of the following:

- a. The loss of load or generation from 5,001 MW to 9,999 MW (excluding SPS/RAS as noted in Category 2, UFLS, or UVLS actuation).
- b. Unintended system separation resulting in an island of more than 10,000 MW (with the exception of Alberta, New Brunswick, and Florida as described in category 3C above).

Category 5: An event resulting in one or more of the following:

- a. The loss of load of 10,000 MW or more.
- b. The loss of generation of 10,000 MW or more.

APPENDIX D

Chapter 9 – Scenario Assessment of the NERC Reliability Assessment Guidebook

Chapter 9—Scenario Assessment

Background

Each year, NERC's staff and its technical committees prepare a 10-year *Long-Term Reliability Assessment* (LTRA). This preparation includes data concentrated on Summer and Winter peak internal demand and associated demand and supply capacity, along with separately written Regional self-assessments. These assessments form the basis for the *NERC Reference Case*, for which detailed analysis and discussion follows. The *Reference Case* generally is based on the assumption that policy/regulations will be constant throughout the studied timeframe and a variety of economic growth, weather patterns and system equipment behaves at expected, usually based on historic performance trends.

Scenario analysis can indicate the relative sensitivity of the *Reference Case* to changes in pre-specified conditions and may provide some insight into risks to Regional reliability. Based on feedback from FERC and industry, a deeper understanding is desired regarding the potential reliability implications of a focused spectrum of *Reference Case* sensitivities. Development of a small set of scenarios for comparison to the *Reference Case* is an extremely valuable way to better understand the robustness of the *Reference Case* and to study potential impacts of scenarios on reliability.

To implement Emerging Issues and Scenario analysis into the reliability assessment, the NERC Planning Committee adopted a process in December 2007 that includes identification of emerging issues, based on input from its subcommittees, for possible Regional and NERC-wide evaluation. Transmission and resource (including internal demand) emerging issues will be proposed for Planning Committee consideration, and if an issue is selected for a scenario assessment, this scenario would be provided for Regional Entity reliability assessment as part of the data requests. Based on input from the industry, analysis could include both adequacy and security issues which are affected by issues such as:

- Substantial Non-dispatchable Resources Penetration
- High level of Demand Response Penetration⁴⁵
- Weather uncertainty evaluation
- Gas deliverability and supply
- Capacity planning indicators that are separate from energy planning indicators
- Nuclear scenarios, e.g. what if large nuclear units do not come on-line?
- Transformation from summer to winter peaking in some Regions

PC selected scenarios should be summarized by the Regional Entities as part of their submitted Regional assessments. Full reports could be provided to NERC⁴⁶ as

⁴⁵ This activity has been taken up by the (Demand-Side Management Task Force), under the direction of the Resource Issues Subcommittee.

⁴⁶ Confidential Information will be handled by NERC staff, following Section 1500 of NERC's Rules 7 Procedures (http://www.nerc.com/files/NERC_Rules_of_Procedure_EFFECTIVE_20081219.pdf)

supporting documentation for Regional and *Long-Term Reliability Assessments* when they become available. Figure 9 shows the recommended flowchart for this process (as approved by the PC in December 2007).

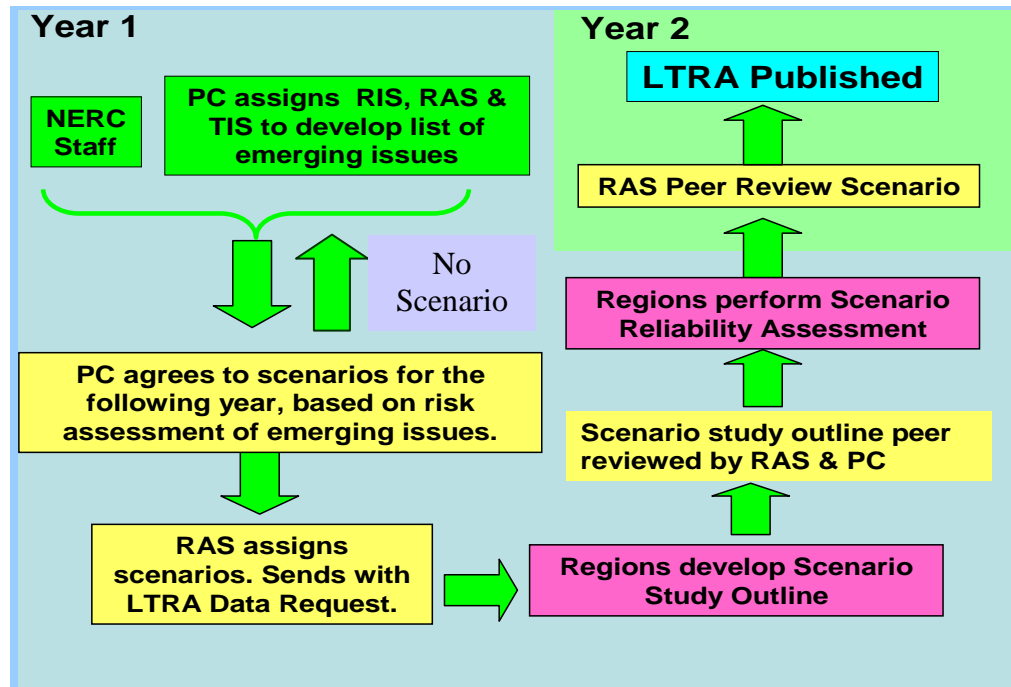


Figure 9: Emerging Issues and Scenario Analysis

Guidelines for Submittal

For consistent submittal, a template for scenario submittal was developed by the Reliability Assessment Subcommittee. The risk assessment process the PC will follow was also outlined in this template, and discussed next.

Emerging Issue Template

Background

Each year, the 10-year *Long-Term Reliability Assessment* (LTRA) forms a basis for the NERC *Reference Case*. The *Reference Case* is generally based on the assumption that policy/regulations will be constant throughout the studied timeframe and a variety of economic trends, weather patterns and system equipment behaves as expected, usually based on historic performance trends.

Emerging issue analysis supports the development of scenarios, analysis of which can indicate the sensitivity of the *Reference Case* to changes in pre-specified conditions and provide insight into risks to Regional reliability. Development of a small set of scenarios for comparison to the *Reference Case* is a valuable way to better understand the robustness of the *Reference Case* and to study potential impacts of scenarios on reliability.

In support of this effort, NERC's Planning Committee (PC) has charged the Transmission Issues Subcommittee (TIS), Resource Issues Subcommittee (RIS) and Reliability Assessment Subcommittee (RAS) each to submit 3 to 5 high priority plausible emerging issues that could impact the bulk power system reliability over the next 10 years.

The PC will then prioritize the resulting emerging issues using a risk assessment matrix (Attachment I) and, based on the results and PC member judgments, they may select potential scenario(s) for study in the future. For each emerging issue, it is important to understand the impact on bulk power system reliability and influence on planning, operations and resources plans.

Emerging Issue Qualification

To qualify for consideration in this process, candidate emerging issues must meet the following criteria:

- Subcommittees should have a high degree of confidence that the emerging issue to be evaluated would affect the reliability of the bulk power system for more than a single year in the LTRA time period (10 year assessment window)
- The effects of the emerging issue on reliability are projected to be seen in the Region no sooner than 3 years out, to allow sufficient time for analysis
- The effects of the emerging issue should represent a potentially significant impact to the bulk power system reliability across at least a Regional footprint, and should not be a local/subregional reliability issue more effectively assessed by the affected Transmission Planners/Planning Authorities.

Template for Emerging Issue Submittal

For each candidate emerging issues, submitted provide:

Emerging Issue #X: Title of Emerging Issue here.

Emerging Issue	Item	Specifics
Horizon	Number of years	
Background	What is the change from the <i>Reference Case</i> ?	
	What changes during the 10-year horizon?	
	What is the impact to Regional reliability?	
Assessment Factors ⁴⁷	Resource Adequacy Considerations [Yes/No]?	
	Transmission Adequacy Considerations [Yes/No]?	
	Resource Siting Impacts [Yes/No]?	
	Operations Impacts [Yes/No]?	
Potential Study Scenarios (optional)	Describe assumptions	
	Provide guidance on future studies	

The information in this table should be of sufficient detail to allow the PC to conduct its risk assessment & ranking exercise. The optional Potential Study Scenarios section, if completed, can assist the RAS in understanding how the emerging issue could impact bulk system reliability. Additional information will be collected by RAS for those emerging issues that are selected and approved by the PC for consideration in the LTRA assessment cycle.

An example can be found in Attachment II, in this section.

⁴⁷ If “Yes” explain how this item could be affected

Attachment I Risk Assessment of Emerging Issues

Reliability Impact Ranking:

The following question IS DESIGNED TO GATHER information on your view of each of the emerging issues below along with your RANKING of the LIKELIHOOD and how SEVERE the impact would be on bulk power system reliability.

INDIVIDUAL RESPONSES WILL BE KEPT CONFIDENTIAL.

What do you believe is the LIKELIHOOD of occurrence and how SEVERE the impact would be on bulk power system reliability for each of the following?

Please indicate H (High), M (Medium), or L (Low).

Issue	Likelihood						Consequence					
	1-5 Years			6-10 Years			1-5 Years			6-10 years		
	H	M	L	H	M	L	H	M	L	H	M	L
Emerging Issue #1												
Emerging Issue #2												
Emerging Issue #3												
Etc....												

Ranking – User Identified

User Identified Issue	Likelihood						Consequence					
	1-5 Years			6-10 Years			1-5 Years			6-10 years		
	H	M	L	H	M	L	H	M	L	H	M	L
Emerging Issue #1												
Emerging Issue #2												
Emerging Issue #3												
Etc....												

Attachment II

Example Emerging Issue Submittal

Emerging Issue #X: Accelerated integration of renewable capacity

Emerging Issue	Item	Specifics
Horizon	Number of years	10 years
Background	What is the change from the <i>Reference Case</i>?	Significant penetration of renewable and demand response resources (up to 15 % of all energy)
	What changes during the horizon?	Ramp to 15% energy should not be instantaneous, but at a rate that can be integrated while sustaining bulk power system reliability. Renewable and demand response resources in place at the end of 10 years.
	What is the impact to Regional reliability?	Weather patterns of the Region/subregion, the variety of renewable sources installed the existing generation mix, and the bulk power system transfer capability with neighboring areas all influence amount of penetration of variable resources. Another consideration is the availability of ancillary services and system re-dispatch needed to support reliable operation.
Assessment Factors ⁴⁸	Resource Adequacy Considerations [Yes/No]?	Yes. Significant changes in capacity mix: both in fuel and type. Incorporating both renewable and demand response will require new planning and operational strategies.
	Transmission Adequacy Considerations [Yes/No]?	Yes. Significant increase in transmission requirements may be required to support the delivery of the renewable resources.
	Resource Siting Impacts [Yes/No]?	Yes. Wind is not a portable fuel and must be sited where it is prominent.
	Operations Impacts [Yes/No]?	Yes. Managing the variability of the generating resources and demand response will require more flexibility in the power system. The changes in the bulk power system flows from both the variable generation and demand response implementation must be better understood.
Potential Study Scenarios (optional)	Describe assumptions	Accommodate a minimum of an additional 15% of total energy from new renewable sources, with no more than 5% made up from energy efficiency. The base year for energy is 2008
	Provide guidance on future studies	Substantial change in on-peak (demand response and variable/traditional capacity) and off-peak a (variable generation) capacity mix could influence reliability, as planning approaches need more study. Namely, what are the appropriate tests to perform to ensure bulk power system reliability? Further, transmission requirements may significantly change.

⁴⁸ If “Yes” explain how this item could be affected