

July 21, 2014

**VIA ELECTRONIC FILING**

Ms. Kimberly D. Bose, Secretary  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

**Re: North American Electric Reliability Corporation  
Five-Year Electric Reliability Organization Performance Assessment Report  
Submitted in Accordance with 18 C.F.R. § 39.3(c)**

Dear Ms. Bose:

The North American Electric Reliability Corporation (NERC) respectfully submits its Five-Year Electric Reliability Organization (ERO) Performance Assessment Report in accordance with the requirements of the Commission's regulations at 18 C.F.R. § 39.3(c).

The filing consists of this transmittal letter and the following documents:

- **Overview of NERC Activities and Accomplishments in the Five-Year Period**
- **Attachment 1:** Discussion of How NERC Meets the ERO Certification Criteria of 18 C.F.R. §39.3(b)
- **Attachment 2:** Joint Regional Entity Self-Assessment
- **Attachment 3:** NERC Assessment of Regional Entity Delegated Functions
- **Attachment 4:** NERC Consideration of Industry Feedback
- **Attachment 5:** Status of Areas for Improvement Identified in the Order on the Three-Year ERO Performance Assessment
- **Attachment 6:** NERC's Plan and Initiatives for Improving Coordinated Operations Across the ERO Enterprise

These documents are transmitted in two PDF files.

Please place the following persons on the Commission's official service list on behalf of NERC with respect to this submittal and the proceeding that we understand the Commission will open pursuant to 18 C.F.R. § 39.3(c) to consider this report:

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Please contact the undersigned if you have any questions concerning this filing.

Respectfully submitted,

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Attorney for the North American Electric  
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**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

**NORTH AMERICAN ELECTRIC )  
RELIABILITY CORPORATION )      Docket No. RR14-\_\_-000**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

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

**SUBMITTED IN ACCORDANCE WITH 18 C.F.R. §39.3(c)**

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July 21, 2014

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**FEDERAL ENERGY REGULATORY COMMISSION  
DOCKET NO. RR14-\_\_\_\_**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

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

**OVERVIEW OF NERC ACTIVITIES AND ACCOMPLISHMENTS  
IN THE FIVE-YEAR PERIOD**

**SUBMITTED IN ACCORDANCE WITH 18 C.F.R. §39.3(c)**

**JULY 21, 2014**

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**Attachment 2:** Joint Regional Entity Self-Assessment

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**Attachment 6:** NERC's Plan and Initiatives for Improving Coordinated Operations Across the ERO Enterprise

## I. INTRODUCTION

### A. Contents of Five-Year ERO Performance Assessment

The North American Electric Reliability Corporation (NERC) is submitting this *Five-Year Electric Reliability Organization (ERO) Performance Assessment Report* in accordance with the Commission's regulations at 18 C.F.R. §39.3(c). NERC was certified by the Commission as the ERO, pursuant to §215(c) of the Federal Power Act (FPA), by Commission order issued July 20, 2006.<sup>1</sup> The Commission's regulations at 18 C.F.R. Part 39 require the ERO to submit an assessment of its performance three years from the date of certification and every five years thereafter.<sup>2</sup> On July 20, 2009, NERC filed its initial, Three-Year ERO Performance Assessment Report with the Commission. On September 16, 2010, the Commission issued an order accepting the three-year performance assessment of NERC and the Regional Entities and found that they continue to satisfy the statutory and regulatory criteria for certification.<sup>3</sup> NERC now submits this *Five-Year ERO Performance Assessment Report* in accordance with the Commission's regulations.

In this *Five-Year ERO Performance Assessment Report*, NERC describes its activities and accomplishments during the assessment period<sup>4</sup> in carrying out its statutory and regulatory responsibilities as the ERO, with a particular focus on the latter part of the assessment period and on NERC's current and planned initiatives. As required by 18 C.F.R. §39.3(c)(1), this report: (i) describes how NERC continues to meet the certification criteria of 18 C.F.R. §39.3(b); (ii)

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<sup>1</sup> *Order Certifying the North American Electric Reliability Corporation as the Electric Reliability Organization and Ordering Compliance Filing*, 116 FERC ¶ 61,062 (2006).

<sup>2</sup> 18 C.F.R. §39.3(c).

<sup>3</sup> *Order on the Electric Reliability Organization's Three-Year Performance Assessment*, 132 FERC ¶ 61,217 (2010).

<sup>4</sup> NERC defines the assessment period as January 1, 2009 through May 31, 2014.

evaluates of the effectiveness of each Regional Entity in carrying out its delegated functions;<sup>5</sup> and (iii) addresses stakeholder comments on NERC's performance that were collected in the preparation of this report. As noted, this report identifies actions that NERC and the Regional Entities are currently taking and plan to take to continue to improve their operations to enhance the reliable operation of the bulk power system (BPS). Unlike the three-year performance assessment report, NERC has not presented a program area-by-program area discussion of activities because NERC's annual business plan and budgets (and those of the Regional Entities) provide the Commission with an annual, detailed look at NERC's and each Regional Entity's current and planned activities by program area. Instead, this *Five-Year ERO Performance Assessment Report* highlights activities and accomplishments in support of the ERO Enterprise<sup>6</sup> Strategic Plan (Strategic Plan) initiatives applicable to this assessment period. These initiatives include: (i) Reliability Standards reform (both as to the number and content of Reliability Standards and the processes for developing them); (ii) the Reliability Assurance Initiative (RAI) which involves identifying risks to reliability and reformulating the compliance monitoring and enforcement processes to have a risk-based focus; and (iii) the revision of the bulk electric system (BES) definition.

In this *Five-Year ERO Performance Assessment Report*, NERC also demonstrates how the ERO is improving the performance of, and mitigating risks to, the BPS as related to avoidable outages. As detailed in NERC's *State of Reliability 2014* report, the number of BPS transmission-related events resulting in loss of firm load, other than events caused by factors

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<sup>5</sup> The eight Regional Entities are: (i) Florida Reliability Coordinating Council, Inc.; (ii) Midwest Reliability Organization; (iii) Northeast Power Coordinating Council, Inc.; (iv) ReliabilityFirst Corporation; (v) SERC Reliability Corporation; (vi) Southwest Power Pool Regional Entity; (vii) Texas Reliability Entity, Inc.; and (viii) Western Electricity Coordinating Council (WECC).

<sup>6</sup> NERC uses the term "ERO Enterprise" to encompass both NERC and the eight Regional Entities.

external to the transmission system's actual performance (i.e., weather-initiated events), decreased from an average of ten per year over a ten year period (2002 through 2011) to seven in 2013. The daily severity risk index value (SRI), a metric created by NERC that measures risk impact or "stress" from events resulting in the loss of transmission, generation, and load, has been stable from 2008 to 2013. Including weather-initiated events, 2013 had no high-stress days, which is within the range of zero to seven days experienced during 2008 through 2013. The availability of the bulk transmission system, as measured by the SRI and other metrics, continues to remain high with no statistically significant change from 2008 to 2013.<sup>7</sup>

Despite the progress made to date in improving the reliability of the BPS and reducing the risks to reliability, opportunities remain for enhancements to ensure that the BPS remains reliable. NERC describes these opportunities, and its initiatives designed to pursue them, in this *Five-Year ERO Performance Assessment Report*. Additionally, in this assessment report, NERC evaluates the effectiveness of each Regional Entity in performing its delegated functions, drawing from NERC's ongoing oversight activities, the Regional Entities' self-assessments, and feedback solicited from industry through an industry survey and posting the Regional Entity self-assessments for stakeholder comment.

Finally, NERC describes how its compliance monitoring and enforcement efforts have matured into a robust program providing industry with greater certainty on actions, outcomes, and reliability consequences. The actions taken by the ERO to identify, correct, and prevent violations of NERC's Reliability Standards have promoted the reliability of the BPS. For example, the adoption, modification, and rigorous enforcement of NERC's transmission vegetation management Reliability Standard (FAC-003), which became mandatory and

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<sup>7</sup> NERC's *State of Reliability 2014* report is available at:  
[http://www.nerc.com/pa/RAPA/PA/Performance%20Analysis%20DL/2014\\_SOR\\_Final.pdf](http://www.nerc.com/pa/RAPA/PA/Performance%20Analysis%20DL/2014_SOR_Final.pdf).

enforceable in 2007, has dramatically reduced the number of outages caused by vegetation growing into high voltage lines. From 2004 through 2008, there were 58 reported outages. By contrast, from 2009 through 2013, only six instances were reported.<sup>8</sup>

## **B. Industry Engagement**

The electric industry has made tremendous strides towards improving reliability since the August 2003 Northeast blackout, which left 50 million customers without power. Enactment of §215 of the FPA, NERC's certification as the ERO, and the adoption of mandatory and enforceable Reliability Standards renewed the industry's focus on reliability. This focus, which includes proactive steps by the ERO to identify and address risks and avoid preventable events, has had a demonstrable and positive impact on reliability.

In passing the Energy Policy Act of 2005, which included the enactment of §215, Congress recognized the importance of an international ERO across North America to ensure the reliability of the BPS. As the ERO, NERC plays a unique role in facilitating industry engagement to create effective approaches for reliability initiatives. For example, industry participation in Reliability Standards development from start to finish is critical. Industry stakeholders participate in Reliability Standards development with increasing frequency since changes to the *Standard Processes Manual* (SPM) became effective June 26, 2013.<sup>9</sup> Stakeholders participate directly by joining standard drafting teams or participating as observers; attending and discussing Reliability Standards at webinars, committee meetings or technical conferences with standard drafting team members and NERC staff; communicating technical opinions directly to standard drafting teams or NERC staff; and commenting and voting on

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<sup>8</sup> NERC's quarterly *Vegetation-Related Transmission Outage Reports* are available at: <http://www.nerc.com/pa/comp/CE/Pages/vegetation-management-reports.aspx>.

<sup>9</sup> The SPM is Appendix 3A to the NERC Rules of Procedure (NERC ROP) and is available at: [http://www.nerc.com/pa/Stand/Documents/Appendix\\_3A\\_StandardsProcessesManual.pdf](http://www.nerc.com/pa/Stand/Documents/Appendix_3A_StandardsProcessesManual.pdf).

proposed Reliability Standards. As of May 2014, 858 stakeholder representatives had registered their eligibility to vote on proposed Reliability Standards as members of the Registered Ballot Body, and in 2013 alone NERC hosted 43 Reliability Standard industry webinars attended by an average of 360 participants. During the last six months of 2013, standard drafting teams and five-year review teams made up of 195 industry volunteers participated in 60 team meetings to advance standard development activities.<sup>10</sup>

Industry engagement is also a critical component of NERC's strategic initiatives, such as RAI. Through RAI, NERC and the Regional Entities are adopting a risk-based approach to compliance monitoring and enforcement activities.<sup>11</sup> NERC and the Regional Entities are spearheading RAI, with substantial input from industry representatives on important RAI projects. For example, the ERO Enterprise is examining information flow requirements for registered entity self-reporting and is developing criteria to evaluate the various approaches to reliability risk assessments and internal controls review and testing. Similarly, industry played an important role in the development and implementation of NERC's Find, Fix, Track and Report (FFT) process, an enforcement mechanism that differentiates and processes noncompliance occurrences according to their significance to the reliability of the BPS.

Preparation of this *Five-Year ERO Performance Assessment Report* has benefited from considerable input from industry. On October 31, 2013, NERC distributed a 36-question online survey soliciting numerical ratings and free-form responses from registered entities regarding the performance of NERC and the Regional Entities in carrying out their responsibilities. On March 3, 2014, NERC posted a draft statement of its activities and accomplishments, as well as drafts of

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<sup>10</sup> As described later in this *Overview of NERC Activities and Accomplishments in the Five-Year Period*, five-year review teams are engaged in the five-year reviews of those Reliability Standards that have been adopted by the American National Standards Institute (ANSI) as national standards, in accordance with §13.0 of the SPM.

<sup>11</sup> NERC expects to submit an informational filing in 2014 fully describing RAI.

the Regional Entities' self-assessments, on NERC's website for industry comment. On June 17, 2014, NERC posted a complete draft of the *Five-Year ERO Performance Assessment Report* on its website for stakeholder comment. A compilation of the responses to the survey questions and of the comments received on the March 3, 2014 and June 17, 2014 postings, are included as **Attachment 4** to this report.<sup>12</sup>

This *Five-Year ERO Performance Assessment Report* includes the following attachments:

**Attachment 1:** Discussion of How NERC Meets the ERO Certification Criteria of 18 C.F.R. §39.3(b)

**Attachment 2:** Joint Regional Entity Self-Assessment<sup>13</sup>

**Attachment 3:** NERC Assessment of the Regional Entities' Delegated Functions

**Attachment 4:** NERC Consideration of Industry Feedback

**Attachment 5:** Status of Areas for Improvement Identified in the Order on the Three-Year ERO Performance Assessment

**Attachment 6:** NERC's Plan and Initiatives for Improving Coordinated Operations Across the ERO Enterprise

NERC requests that the Commission accept this filing as satisfying NERC's obligation under 18 C.F.R. §39.3(c) to file a performance assessment every five years after the three-year anniversary of its certification as the ERO. Pursuant to 18 C.F.R. §39.3(c), the Commission will initiate a proceeding, with opportunity for public comment, on NERC's *Five-Year ERO Performance Assessment Report*. At the conclusion of the proceeding, the Commission will either issue an order finding that NERC and the Regional Entities meet the statutory and regulatory criteria, or direct them to come into or improve their compliance with

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<sup>12</sup> Issues raised by stakeholders, and the responses of NERC and the Regional Entities, are addressed in this report. Industry responses to the survey were discussed at the February 28, 2014 NERC Member Representatives Committee (MRC) meeting, and industry responses to the survey and comments received on the March 3, 2014 posting were discussed at the May 6, 2014 NERC Board of Trustees (NERC Board) meeting.

<sup>13</sup> **Attachment 2** contains both an overall self-assessment of the Regional Entities' collective performance during the assessment period, and individual discussions of how each Regional Entity satisfied the applicable statutory and regulatory criteria including those specified in the Commission's regulations at 18 C.F.R. §39.8.

the requirements of Part 39. Because considerable opportunity has been provided for stakeholder input through the industry survey and the posting of drafts of this report, NERC suggests that the Commission initiate its proceeding by setting a comment period of no more than 45 days on the filed report. Conducting the Commission's proceeding pursuant to §39.3(c) in an expeditious manner will allow NERC and the Regional Entities both to receive timely feedback from commenters and the Commission and to move forward and devote time and resources to the various initiatives outlined in the report. NERC will use the contents of this *Five-Year ERO Performance Assessment Report* and the results of the proceeding to guide the continuing implementation and evolution of its programs in the years ahead.

## **II. NERC ACTIVITIES AND ACCOMPLISHMENTS**

This section describes activities and initiatives that NERC has completed during the assessment period, has in progress, or plans to commence in the near future, to enhance the reliability of the BPS and to increase the effectiveness and efficiency of the operations of the ERO Enterprise. NERC focuses this discussion on the following five areas: (i) development of clear, reasonable and technically sound Reliability Standards; (ii) registration of entities with functional responsibilities for the reliability of the BPS; (iii) monitoring and enforcing compliance with Reliability Standards; (iv) identification, prioritization and dissemination of information on risks to the reliability of the BPS; and (v) collecting and sharing information on cybersecurity and threats to the cyber and physical security of the BPS.

### **A. The ERO Is Transitioning NERC Reliability Standards to a Steady-State**

Since the three-year performance assessment, NERC has made great strides in transforming Reliability Standards to a steady-state, which NERC defines as a stable set of clear, concise, high-quality, and technically sound Reliability Standards. Steady-state Reliability Standards are results-based and include requirements that promote reliability. They are

sustainable (stable), necessary for accountability, and sufficient to maintain the reliability of the BPS. After a set of steady-state Reliability Standards is fully developed, it is expected that Reliability Standards will only need to be amended in response to changes in risks, technology, practices, and similar changes. In support of this objective, during the assessment period, NERC focused on addressing FERC directives and conducting periodic reviews of Reliability Standards. NERC expects to complete the development of a set of steady-state Reliability Standards in 2015.

NERC's efforts to arrive at steady-state Reliability Standards would not have been possible without strong participation from industry stakeholders, FERC staff, the NERC Standards Committee (SC), and other NERC committees and working groups, including the Reliability Issues Steering Committee (RISC) and the Standards Process Improvement Group (SPIG), the NERC Board, and the NERC MRC. Arriving at a set of steady-state Reliability Standards required changes in NERC's Reliability Standards development process. The SPIG identified needed changes to the process. These changes were implemented through amendments to the SPM that became effective on June 26, 2013, upon Commission approval.<sup>14</sup>

The currently effective *Reliability Standards Development Plan 2014-2016* (RSDP), approved by the NERC Board in November 2013, endorses the objective of arriving at steady-state Reliability Standards.<sup>15</sup> It specifically defines "steady-state" as a stable set of clear, concise, high quality, and technically sound Reliability Standards that are results-based and that exclude requirements that do little to promote reliability. The 2014-2016 RSDP prioritizes future Reliability Standards projects as high, medium, low or pending technical committee input based

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<sup>14</sup> *Order Approving Revisions to Electric Reliability Organization's Standard Processes Manual*, 143 FERC ¶ 61,273 (2013).

<sup>15</sup> *Reliability Standards Development Plan 2014-2016* is available at: <http://www.nerc.com/pa/Stand/Pages/ReliabilityStandardsDevelopmentPlan.aspx>.

on a series of inputs, which include the Standards Independent Expert Review Panel's (IERP or Panel) content and quality assessments (discussed later in this document). Prioritization considerations were influenced by: (i) RISC category rankings (also described later in this document); (ii) outstanding regulatory directives; (iii) regulatory deadlines; (iv) Paragraph 81 retirement candidates (also described below); (v) content and quality assessments by the IERP (also described below); and (vi) additional considerations such as fill-in-the-blank status and five-year review assessment commitments.

During the assessment period, NERC launched several initiatives to improve Reliability Standards, including: (i) the results-based Reliability Standards initiative; (ii) the Paragraph 81 project; (iii) the reorganization of the Reliability Standards department; and (iv) the establishment of the IERP. Each of these initiatives built upon the prior initiative, resulting in a comprehensive set of criteria by which to evaluate whether a Reliability Standard has reached its steady-state.

Since the three-year performance assessment, NERC initiated the results-based concept for developing the content of Reliability Standards. Each requirement of a results-based Reliability Standard identifies a measurable outcome such as: (i) a stated level of reliability performance; (ii) a reduction in a specified reliability risk (prevention); or (iii) a necessary competency. In 2011, NERC began training standard drafting teams to write results-based Reliability Standards. In 2013, the Commission approved the first Reliability Standard that resulted from that effort, FAC-003-2 – Transmission Vegetation Management.<sup>16</sup> NERC is in the process of converting major families of Reliability Standards into results-based Reliability

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<sup>16</sup> *Revisions to Reliability Standard for Transmission Vegetation Management*, 142 FERC ¶ 61,208 (2013).

Standards.<sup>17</sup> These Reliability Standards include those dealing with long-term planning, reliability coordination, and real-time operations.<sup>18</sup>

In 2012, in response to FERC's invitation to NERC in a March 15, 2012 Order, NERC and industry conducted the Paragraph 81 project, which identified and retired requirements from Reliability Standards that did little to support reliability.<sup>19</sup> The criteria developed to scrutinize existing requirements in Reliability Standards in response to the Commission's Paragraph 81 invitation continue to be used by standard drafting teams to evaluate the need for proposed requirements in new Reliability Standards development projects.<sup>20</sup>

In further support of the development of steady-state Reliability Standards, NERC reorganized its Standards department in 2013 to focus resources on addressing FERC directives, conducting periodic reviews of Reliability Standards, and completing ongoing Reliability Standards development projects. NERC also conducted a parallel effort to identify future work necessary to transform the Reliability Standards to steady-state, by establishing the IERP to evaluate the content and quality of every requirement in the NERC Reliability Standards. The Panel established its own criteria, which included those developed in the Paragraph 81 project, to

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<sup>17</sup> The terms "families of standards" refers to groupings of Reliability Standards that address a common subject matter area, e.g., Emergency Preparedness and Operations (EOP), Personnel Performance, Training and Qualifications (PER), and Protection and Controls (PRC).

<sup>18</sup> NERC revised the Transmission Planning (TPL) Reliability Standards and a single consolidated Reliability Standard approved by FERC; revisions to the Transmission Operations (TOP), Interconnection Reliability Operations and Coordination (IRO), Modeling (MOD), and Voltage and Reactive (VAR) standards are pending FERC approval.

<sup>19</sup> "Paragraph 81" refers to P 81 of the Commission's March 15, 2012 Order on NERC's FFT process, in which the Commission invited NERC (as well as the Regional Entities and other stakeholders) to identify specific standards requirements that could be revised or removed because they provide little protection for BPS reliability or are redundant. *Order Accepting with Conditions the Electric Reliability Organization's Petition Requesting Approval of New Enforcement Mechanisms and Requiring Compliance Filing*, 138 FERC ¶ 61,193 (2012) (March 2012 FFT Order), at P 81. See §II.A.3 below for a more detailed description of the Paragraph 81 initiative.

<sup>20</sup> The Paragraph 81 criteria are outlined in the Phase I *Paragraph 81 Project Technical White Paper* available at: [http://www.nerc.com/pa/Stand/Project%20201302%20Paragraph%2081%20RF/P81\\_Phase\\_I\\_technical\\_white\\_paper\\_FINAL.pdf](http://www.nerc.com/pa/Stand/Project%20201302%20Paragraph%2081%20RF/P81_Phase_I_technical_white_paper_FINAL.pdf).

determine whether a requirement was steady-state or needed further revisions. The Panel's recommendations set the course for arriving at high quality, results-based Reliability Standards with sustainable requirements. NERC is preparing training materials for standard drafting teams to highlight the use of the Panel's methods for content and quality assessments of Reliability Standards.

NERC has also been diligent in assessing the need for Reliability Standards that address reliability gaps. Sections II.A.8.a through e below discuss five important areas of Reliability Standards development focusing on reliability risk: (i) the Critical Infrastructure Protection (CIP) Version 5 Reliability Standards; (ii) vegetation management (formerly a top ten cause of outage events); (iii) protection system maintenance and testing; (iv) geomagnetic disturbances (GMD) (a high-impact, low-frequency risk to the BPS which does not readily manifest in reliability performance data, but nonetheless represents a significant risk to the BPS); and (v) the physical security Reliability Standard.

A more recent initiative to assist with the achievement of steady-state Reliability Standards is the development of a template for enhanced periodic reviews of Reliability Standards that have not yet been revised through other Reliability Standards development projects. NERC is working with industry stakeholders to develop the necessary criteria for determining which Reliability Standards will be subject to these enhanced periodic reviews as well as whether the Reliability Standards have reached their steady-state. NERC expects the criteria to include those from the results-based Reliability Standards initiative, the Paragraph 81 project and the IERP. Upon reaching a consensus with industry on the criteria for evaluating whether a requirement is steady-state, and after completing the projects identified in the ERO's 2014-2016 RSDP and the ERO's 2015-2017 RSDP, NERC will apply the criteria to the

Reliability Standards through enhanced periodic reviews beginning in 2015.<sup>21</sup>

## **1. Completing Commission Directives**

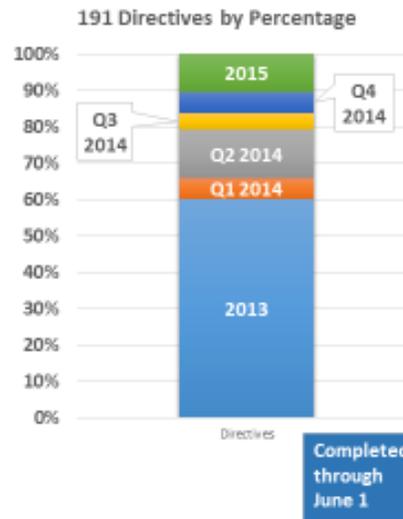
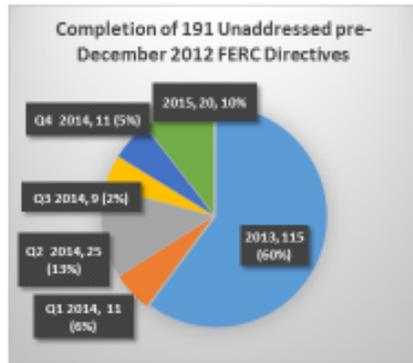
During this assessment period, NERC made significant progress in reducing the number of Commission directives involving Reliability Standards. Addressing these directives is a priority to facilitate the transformation to steady-state.<sup>22</sup> The status of NERC's efforts in addressing Reliability Standards-related directives is reported on a quarterly basis to the NERC Standards Oversight and Technology Committee (SOTC). At the February 2014 SOTC meeting, NERC reported that 128 directives had been addressed by year-end 2013, with 107 directives remaining to be addressed. NERC continues to report the status of completion at every SOTC meeting and anticipates that 90% of FERC directives issued to date will be resolved during the first half of 2015.

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<sup>21</sup> The 2014-2016 RSDP identified 18 Reliability Standard development projects completed in 2013 or scheduled to be completed by the first quarter of 2014. It also identified 13 projects that were to be completed thereafter.

On June 20, 2014, the draft 2015-2017 RSDP was posted for industry comment. Currently, it identifies 27 projects that have been completed or are in progress, many of which were newly introduced in 2014. Eight of these 27 projects have been approved by the Registered Ballot Body, approved by the NERC Board, and filed with FERC for approval, and 12 are anticipated to be completed in 2014. The draft 2015-2017 RSDP identifies the remaining seven projects that will extend into 2015, with completion anticipated in the first half of the year. Additionally, four new projects for 2015 are identified. Completion of these projects will position NERC to begin enhanced periodic reviews in late 2015.

<sup>22</sup> Directives may be addressed by: (i) completing the directive as assigned; (ii) addressing the reliability concern of the directive in an equally effective and efficient manner; or (iii) providing persuasive reasoning as to why the directive is no longer necessary.



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RELIABILITY | ACCOUNTABILITY

FERC has been instrumental in reducing the number of outstanding directives, as well. On November 21, 2013, in its order addressing the Paragraph 81 project, the Commission withdrew 41 directives, 24 of which were related to Reliability Standards, effective January 21, 2014.<sup>23</sup> The Commission identified Reliability Standards-related directives for withdrawal based on the following three guidelines:

- (1) Whether the reliability concern underlying the outstanding directive has been addressed in some manner, rendering the directive stale;
- (2) Whether the outstanding directive provides general guidance for Reliability Standards development rather than a specific directive; and
- (3) Whether the outstanding directive is redundant with another directive.

<sup>23</sup> *Electric Reliability Organization Proposal to Retire Requirements in Reliability Standards*, 145 FERC ¶ 61,147 (2013).

FERC staff participation on standard drafting teams has also been instrumental in addressing Reliability Standards directives. Increased participation by FERC staff allows their concerns to be raised early in the Reliability Standard development process and for issues to be vetted with industry. This open dialogue translates into fewer directives in FERC orders.

## **2. The Standards Independent Experts Review Panel**

To set the foundation for a steady-state body of Reliability Standards, NERC established the IERP to evaluate the existing families of Reliability Standards and requirements. The Panel consisted of five independent industry experts and a sixth participant from FERC staff. Their areas of experience and competence included power systems engineering, relaying, transmission system planning, transmission and power system operations (including control center operations and dispatching, generation operations, transmission operations, and maintenance). The independent consultants brought executive leadership, experience from all three U.S. interconnections, experience with investor-owned utilities and public power as well as with vertically integrated and regional transmission organizations/independent system operator (RTO/ISO) market environments and small entities. The Panel also had experience working with Canadian provinces and Mexico. The Commission participant offered thorough knowledge of previous FERC orders and an understanding of the contributions of the requirements of various Reliability Standards to BPS reliability.

Due to the ongoing evolution of NERC's Reliability Standards, the Panel addressed requirements from two groups of Reliability Standards: (i) Reliability Standards that were, or would become, enforceable in 2013 (Enforceable in 2013 Standards); and (ii) Reliability Standards that will be enforceable in the future (Future Enforceable Standards). The Future Enforceable Standards and requirements included both Enforceable in 2013 Reliability Standards and those that, at the time of the Panel's report, had been approved by the NERC Board or by the

FERC and were currently pending enforceability.<sup>24</sup> Requirements pending replacement by approved Reliability Standards were not included in this group.

The Panel issued its report in June 2013 and presented the report to the NERC Board in August 2013. In the report, the Panel outlined a vision for how to transform the NERC Reliability Standards to steady-state. The Panel made seven short-term recommendations, three longer-term recommendations and seven additional recommendations.<sup>25</sup> The Panel's main recommendation was to retire 147 existing requirements of Reliability Standards, address seven areas (high-level gaps) not currently addressed by the Reliability Standards, and complete Reliability Standards development projects to address gaps within individual requirements. The Panel also made recommendations regarding compliance monitoring, prioritization for addressing the identified gaps, using risk to determine whether a future Reliability Standard is needed, and use of the Panel's identified criteria to determine quality and content as future Reliability Standards are developed. Finally, the Panel recommended a new construct to further consolidate Reliability Standards and required actions.

In evaluating whether a requirement should be retired, the Panel assessed whether each requirement: (i) did not support a reliability principle; (ii) met the Paragraph 81 criteria for retirement; or (iii) was better suited as a guideline rather than as a part of a Reliability Standard. For the requirements that the Panel did not recommend for retirement, the Panel applied content and quality criteria to examine whether they were steady-state or needed additional work. Specifically, the Panel examined the following content criteria: (i) whether the content of the

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<sup>24</sup> The June 2013 report, *Standards Independent Experts Review Project – An Independent Review by Industry Experts*, is available at: [http://www.nerc.com/pa/Stand/Standards%20Development%20Plan%20Library/Standards\\_Independent\\_Experts\\_Review\\_Project\\_Report.pdf](http://www.nerc.com/pa/Stand/Standards%20Development%20Plan%20Library/Standards_Independent_Experts_Review_Project_Report.pdf).

<sup>25</sup> *Id.*, p. 16-17.

requirement is technically correct, including identifying who does what and when; (ii) whether the requirement identifies the correct functional entities; and (iii) whether there are appropriate actions for which there should be accountability included or there is a gap. Additionally, the Panel examined the following quality criteria:

- (1) Whether the requirement should stand alone or be consolidated with other Reliability Standards;
- (2) Whether the requirement was drafted as a results-based standard;
- (3) Whether a requirement is technologically neutral;
- (4) Whether the requirement aligns with the purpose of the Reliability Standard;
- (5) Whether the requirement is a higher solution than the lowest common denominator;
- (6) Whether the requirement is measureable;
- (7) Whether the requirement has a technical basis in engineering and operations;
- (8) Whether the requirement is complete and self-contained;
- (9) Whether the language is clear and does not contain ambiguous or outdated terms;
- (10) Whether the requirement can be practically implemented; and
- (11) Whether the requirement uses consistent terminology.

The Panel evaluated whether these remaining requirements addressed a risk to reliability by examining: (i) the ranking developed by the NERC RISC; (ii) the violation risk factor (VRF) for each requirement; and (iii) the Panel members' professional judgment.

These recommendations have been pivotal in NERC's evaluations of the Reliability Standards by standard drafting team subject matter experts (SME). Furthermore, the Panel's recommendations have been used to inform standard drafting teams and NERC's annual RSDPs, including the current, 2014-2016 RSDP. The potential reliability gaps identified by the IERP have been evaluated by the RISC and are assigned in some cases to active drafting projects. The

IERP recommendations that apply to Reliability Standards that are not part of active drafting projects are assigned to teams that conduct periodic reviews of Reliability Standards in the future for consideration.<sup>26</sup>

### **3. Implementation of the Paragraph 81 Project**

The Paragraph 81 project was a separate project, carried out during the assessment period, in which requirements were recommended for retirement. This project stemmed from paragraph 81 of the Commission's March 15, 2012 FFT Order, in which the Commission invited NERC (and other interested entities) to propose specific Reliability Standards or requirements for revision or retirement if they did not provide meaningful benefit to BPS reliability. In response, NERC began the Paragraph 81 project to identify and retire Reliability Standards requirements that have little or no effect on reliability. As discussed above, the project established a set of criteria for evaluating whether a requirement should be considered for retirement.<sup>27</sup>

This initiative is reducing and simplifying the set of Reliability Standards with which registered entities must comply and which the ERO must monitor and enforce. This reduction in the body of requirements enables both the ERO and registered entities to redirect resources to matters posing greater risks to the reliability of the BPS and to ensure that the costs of reliability are proportionate to the benefits.

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<sup>26</sup> These future periodic reviews are required by §13 of the SPM.

<sup>27</sup> For a detailed discussion of criteria used to determine if a Reliability Standard requirement should be retired, *see Paragraph 81 Project Technical White Paper* (December 20, 2012), available at: [http://www.nerc.com/pa/Stand/Project%20201302%20Paragraph%2081%20RF/P81\\_Phase\\_I\\_technical\\_white\\_paper\\_FINAL.pdf](http://www.nerc.com/pa/Stand/Project%20201302%20Paragraph%2081%20RF/P81_Phase_I_technical_white_paper_FINAL.pdf).

In February 2013, NERC filed a petition with FERC to retire 34 requirements or sub-requirements within 19 Reliability Standards.<sup>28</sup> In its June 20, 2013 notice of proposed rulemaking (NOPR), the Commission indicated agreement that the requirements proposed for retirement either: (i) provided little protection for BPS reliability; or (ii) were redundant with other aspects of Reliability Standards. In addition, in the NOPR, the Commission proposed to withdraw several outstanding Commission directives relating to Reliability Standards.<sup>29</sup> On November 21, 2013, the Commission issued an order approving, as proposed in the NOPR, the retirement of 34 requirements and sub-requirements within 19 Reliability Standards, and withdrawing the identified directives effective January 21, 2014 (the Retirement Effective Date).<sup>30</sup> As noted above, the retirement of these requirements is enabling both the ERO and registered entities to redirect resources to matters posing greater risks to the reliability of the BPS and to ensure that the costs of reliability are proportionate to the benefits.

In the period leading up to the Retirement Effective Date, Regional Entities did not actively monitor compliance with the 34 retired requirements, nor did they process any new or existing possible violations of these retired requirements. Regional Entities also documented removal of any of the 34 retired requirements from Compliance Audit scopes in the final Compliance Audit reports for those audits. Within 30 days of the Retirement Effective Date, Regional Entities dismissed existing possible violations of the requirements being retired and issued dismissal letters to the registered entities.

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<sup>28</sup> *Petition of the North American Electric Reliability Corporation for Approval of Retirement of Requirements in Reliability Standards*, Docket No. RM13-8-000 (Feb. 28, 2013).

<sup>29</sup> *Electric Reliability Organization Proposal to Retire Requirements in Reliability Standards*, Notice of Proposed Rulemaking, 143 FERC ¶ 61,251 (2013).

<sup>30</sup> *Electric Reliability Organization Proposal to Retire Requirements in Reliability Standards*, 145 FERC ¶ 61,147 (2013).

In addition to the 34 requirements that the Commission approved for retirement, stakeholders submitted an additional 217 requirements for consideration for retirement. NERC is examining whether to retire these requirements through individual Reliability Standards development projects. Progress on this retirement effort is reported to the SOTC on a quarterly basis. As of the February 2014 SOTC meeting, 179 out of 281 recommendations had been addressed, 79 were under consideration in either a current project or in a periodic review, and 23 had not yet been assigned to a project.

#### **4. Development of Compliance Assessment Tools Concurrently with Reliability Standards Development**

Over time, one of the key improvement opportunities identified for NERC Reliability Standards has been to strengthen the connection between standard drafting teams and the compliance program, in order to clarify the expectations of Reliability Standard requirements. Two efforts at clarifying Reliability Standard requirements, but which ultimately illustrated the need for greater involvement of the Compliance department in the Reliability Standards development process, were the Compliance Application Notice (CAN) initiative and the Reliability Standard Audit Worksheets (RSAWs). CANs were notices drafted to respond to questions regarding how to assess compliance with specific Reliability Standards. CANs were posted on the NERC website to provide transparency to industry; however, since they were drafted well after the Reliability Standard was developed, the compliance assessment positions articulated in the CANs often varied from industry's perspective of the intent of the Reliability Standard or requirement. Similarly, prior to 2013, NERC developed RSAWs after regulatory approval of a Reliability Standard.

The CAN process demonstrated the need for concurrent development and dialogue between standard drafting teams and NERC Compliance Operations staff. As a result, in 2013,

NERC began incorporating the development of compliance assessment information into the Reliability Standards development process. After June 2013, informal development project teams began posting documents during standards development titled “compliance input.” These documents provided questions from industry and answers developed by Compliance staff regarding how to assess compliance for specific requirements, or phrases in the requirements. This basic tool opened the door for conversation between the standard drafting teams and Compliance staff. It also allowed for conversation regarding the wording of requirements and the effect of that wording on how compliance would be assessed.

NERC then created an inter-departmental team to examine the development of RSAWs, which resulted in an internal policy on the development of RSAWs concurrent with Reliability Standards development projects. The policy included the following provisions:

- (1) Coordinating input between standard drafting teams and NERC Compliance staff;
- (2) Posting a draft RSAW during the formal comment period and prior to the ballot period for a Reliability Standard, allowing stakeholders to provide comments or to raise concerns at that time;<sup>31</sup> and
- (3) Continuing to involve Regional Entity Compliance staffs in drafting RSAWs to strengthen compliance consensus throughout the ERO and capture additional subject matter expertise.

Today, RSAWs are written concurrently with new Reliability Standard development projects. They provide information regarding compliance assessment and testing. Reliability Standards staff leads coordination between the Standards and Compliance departments. Each Reliability Standards project is assigned dedicated staff support led by Compliance staff. Additionally, NERC Compliance staff are coordinating with Regional Entity Compliance staffs. This increased and ongoing coordination will help ensure that standard drafting teams, NERC

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<sup>31</sup> The RSAWs themselves are not subject to the ballot.

and Regional Entity Compliance staffs and RSAWs are aligned as to the intent of Reliability Standards. By creating a uniform understanding of compliance expectations for each Reliability Standard early in the development process, the need for interpretations or other forms of subsequent compliance guidance should be reduced.

NERC Compliance staff will continue to supply standard drafting teams with compliance and enforcement information, statistics, and perspectives to help develop Reliability Standards that provide an increased reliability benefit and clarify compliance risks. Compliance staff will continue collaborating with industry and Reliability Standards staff early in the Reliability Standards development process in order to understand the intent of Reliability Standards under development and provide feedback on the proposed language of Reliability Standards. Finally, as described in greater detail in §II.C.2 and 4 below, NERC is working to provide training to auditors and industry on how to assess compliance with a new or revised Reliability Standard. This training is provided following FERC approval of a Reliability Standard, but well before its effective date.

## **5. Review of Regional Reliability Standards**

A Regional Entity can propose adoption of a regional Reliability Standard to implement requirements that are more stringent than the continent-wide requirement, and/or to address a reliability concern that is unique to that Regional Entity and not addressed in a continent-wide Reliability Standard.<sup>32</sup> Today, a regional Reliability Standard requirement may be developed as a separate regional Reliability Standard or as an addendum to a continent-wide Reliability Standard. NERC is considering, based on the recommendations from the Panel, commissioning a team to evaluate regional Reliability Standards to identify candidates for retirement,

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<sup>32</sup> **Attachment 3**, NERC Assessment of the Regional Entities' Delegated Functions, contains a discussion of each Regional Entity's regional Reliability Standards development activity during the assessment period.

consolidation with continent-wide Reliability Standards, or incorporation as variances within continent-wide Reliability Standards. The regional Reliability Standards that are not identified as candidates for retirement or consolidation should align with continent-wide Reliability Standards.

## **6. Improvements in the Reliability Standards Development Process**

Transforming NERC Reliability Standards to a steady-state required changes to how NERC identified and resolved issues through the Reliability Standards development process. Implementing these changes was possible due to strong participation from industry stakeholders, the NERC SC and other NERC committees and workgroups, specifically the RISC, the SPIG, and the NERC technical committees, as well as FERC staff. The NERC Board and the NERC MRC also provided strong support to implement the changes.

### **a. Revisions to the *Standard Processes Manual* and Related Improvements**

NERC's Reliability Standards development process is defined in the SPM, Appendix 3A to the NERC ROP. The SPM governs all NERC activities related to the development, approval, revision, reaffirmation, and withdrawal of Reliability Standards, interpretations, VRFs, violation severity levels (VSLs), definitions, variances, and reference documents developed to support Reliability Standards. It also addresses the respective roles of the NERC SC, standard drafting teams, and Registered Ballot Body members in the stakeholder process. Upon FERC's approval of revisions to the SPM in June 2013, NERC, the NERC SC, and stakeholders began implementing the approved changes into the Reliability Standards development process.

The revisions to the SPM were initiated in February 2012, when the NERC Board, in consultation with the NERC MRC, formed the SPIG.<sup>33</sup> The NERC Board tasked the SPIG with achieving the following objectives: (i) provide clarity on the reliability objectives, technical parameters, scope and relative priority of Reliability Standards; (ii) review the Reliability Standard drafting process to ensure that Reliability Standards contain specific technical content; and (iii) assess Reliability Standards project management.

After gathering input from stakeholders, the SPIG made five recommendations to modify the way NERC develops Reliability Standards.<sup>34</sup> Based on these recommendations, NERC worked with stakeholders to develop revisions to the SPM. In these revisions, NERC:

- (1) Revised the composition of standard drafting teams to ensure that they are appropriately equipped to meet reliability objectives, namely by adding legal and compliance experts;
- (2) Incorporated references to compliance assessment tool development, such as RSAWs, cooperatively and in parallel with Reliability Standard drafting;
- (3) Streamlined commenting and balloting provisions as follows:
  - (a) Allowing summary responses to comments;
  - (b) Eliminating the obligation to respond in writing at every stage of the comment process; and
  - (c) Eliminating negative votes without comments in the calculation of consensus.
- (4) Incorporated the following provisions:
  - (a) Quality review conducted in parallel with Reliability Standards development;
  - (b) Guidance for the appropriate role and scope of interpretations, to be consistent with guidance from the NERC Board; and

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<sup>33</sup> The SPIG is composed of the MRC chair and vice chair, other MRC members, two members of the NERC Board, the NERC chief executive officer (CEO), and the NERC SC chair.

<sup>34</sup> The SPIG's *Recommendations to Improve the NERC Standards Development Process* report is available on the NERC website at:  
[http://www.nerc.com/pa/Stand/Standards%20Processes%20Manual%20revisions%20SPIG%20Recommendations/Standards\\_Process\\_Input\\_Group\\_04.24.12\\_ver\\_8\\_FINAL.pdf](http://www.nerc.com/pa/Stand/Standards%20Processes%20Manual%20revisions%20SPIG%20Recommendations/Standards_Process_Input_Group_04.24.12_ver_8_FINAL.pdf).

- (c) A waiver provision to allow for modifications to the Reliability Standards development process for good cause, with five days' notice and reporting of the exercise of a waiver to the NERC SOTC.
- (5) Reduced the requirement for periodic reviews to be consistent with ANSI minimum requirements.

These improvements provide a balanced flexibility to the process, enabling NERC and industry to address pressing reliability issues on accelerated timeframes if necessary. Further, with the changes, the Reliability Standards development process continues to meet ANSI requirements. The Commission approved the proposed revisions on June 26, 2013, agreeing that these changes enable greater flexibility and efficiency.<sup>35</sup> Reliability Standards development projects initiated and completed after FERC's approval of the SPM changes have shown both significant increases in efficiency and improvements in the quality of the product.

In addition to the revisions to the SPM, NERC has implemented additional enhancements to the Reliability Standards development process. In conjunction with implementing changes to the SPM, in 2013, NERC spearheaded an "informal development" effort, which uses informal groups composed of industry subject matter experts to conduct early outreach to industry stakeholders prior to initiating formal development of new or revised Reliability Standards. This early outreach encourages stakeholder conversations to obtain inputs on the proposed Reliability Standards development project. This approach is positively affecting how standard drafting teams are conducting their work. The periodic reviews conducted in 2013 followed this same approach, acting as a tool for gathering stakeholder input. Recommendations from each periodic review team are then implemented through subsequently-formed standard drafting teams.

The most significant improvement from the changes to the Reliability Standards development process has been in the amount of time required to develop a quality Reliability

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<sup>35</sup> *Order Approving Revisions to Electric Reliability Organization's Standard Processes Manual*, 143 FERC ¶ 61,273 (2013), at P 18.

Standard. As reported in the *Analysis of NERC Standards Process Results, Fourth Quarter 2013* filing,<sup>36</sup> the baselines for the amounts of time to revise an existing Reliability Standard and to develop a new Reliability Standard were approximately 27 months and 40 months, respectively. The amount of time to produce each of the Reliability Standard development projects that began formal development under the revised SPM was dramatically reduced.<sup>37</sup> Approximately six projects completed formal development, from posting the standard authorization request to being adopted by the NERC Board, in less than seven months.<sup>38</sup> Two other projects completed formal development in ten months.<sup>39</sup>

The changes to the standard development process have provided benefits in terms of standard drafting team management and staffing. The reduced time needed to develop a Reliability Standard combined with the fact that standard drafting team meetings are held closer together in time provide registered entities and other participants with increased flexibility in staffing standard drafting teams. As a result, standard drafting team members are able to stay more focused on the Reliability Standard development project.

The speed and efficiency of the process, particularly at the standard drafting team stage, have also benefited from the following process improvements:

- Smaller standard drafting teams with appropriate expertise have increased the ability to conduct activities and respond to stakeholders in a more-timely and effective manner;

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<sup>36</sup> Available at:

[http://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/Analysis\\_of\\_NERC\\_Standards\\_Process\\_Results\\_Q4\\_FINAL.pdf](http://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/Analysis_of_NERC_Standards_Process_Results_Q4_FINAL.pdf).

<sup>37</sup> The projects were: (i) 2010-01 – Training (PER); (ii) 2010-03 – Modeling Data (MOD B); (iii) 2010-04 – Demand Data (MOD C); (iv) 2012-05 – ATC Revisions (MOD A); and (v) 2013-04 – Voltage and Reactive Control (VAR).

<sup>38</sup> The six projects were: (i) GMD Phase 1; (ii) INT; (iii) Physical Security (CIP-014); (iv) MOD A; (v) MOD B; and (vi) PER projects; one of the two Reliability Standards in the VAR project (VAR-001) also met this benchmark.

<sup>39</sup> The two other projects were: (i) the remaining Reliability Standard in the VAR project (VAR-002); and (ii) the MOD C project.

- Open communication and concurrent development of compliance assessment tools have addressed compliance questions and allowed for clarification of compliance intentions during Reliability Standards development;
- Summary responses to comments has allowed standard drafting teams to consider stakeholder inputs, modify the draft Reliability Standard in response to those inputs, and repost it for industry review more quickly (as short as 1.5 weeks); summary responses are more concise while still addressing the issues, and provide visibility into the concerns in an easily digestible format;
- Not considering negative votes without comments in the calculation of consensus encourages entities to provide constructive comments, providing better insight into the issues for the standard drafting teams;
- Coordinating quality review in parallel with standard development has eliminated an additional step (that previously could require 4 to 6 weeks) from the process and improved focus on quality at an earlier stage; and
- Granting the NERC SC authority to waive provisions in the SPM for good cause gives the SC the ability to respond to urgent reliability issues. A recent example, discussed in §II.A.8.e below, is the development of Reliability Standard CIP-014-1 – Physical Security, in less than 90 days.

Another improvement resulting from the SPM revisions, which is also associated with increased outreach and communication, is the partnership created between NERC staff, standard drafting teams, and the NERC SC. Additionally, FERC staff has been providing early input regarding their perspectives during the standards development process, thereby giving standard drafting teams the opportunity to weigh those inputs early in the process. Based on experience to date, NERC anticipates that this open dialogue will result in FERC orders with either no directives or a significantly reduced number of directives.

The NERC SC, under the NERC Board's direction, also developed a strategic plan and work plan, as well as a revised charter, all of which were approved by the NERC Board on February 6, 2014.<sup>40</sup> These actions were designed to increase the NERC SC's effectiveness, efficiency, and ability to deliver high quality Reliability Standards. The *Standards Committee*

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<sup>40</sup> The *Standards Committee Strategic Work Plan 2014-2016*, *Standards Committee Strategic Plan*, and amended *Standards Committee Charter* are available at: <http://www.nerc.com/comm/SC/Pages/default.aspx>.

*Strategic Plan* is a five-year plan that sets the vision and mission for the NERC SC, describes the guiding principles for the NERC SC, and sets the foundation for refocusing the activities of the NERC SC. The *Standards Committee Strategic Work Plan* is the tactical implementation of the *Standards Committee Strategic Plan*. The revised *Standards Committee Charter* clarifies the NERC SC's role in the development of steady-state Reliability Standards that provide for the reliability of the BPS, and ensures that the NERC SC develops a multi-year strategic vision that describes the goals and direction for the development of Reliability Standards consistent with the strategic and business plans of NERC.

Additionally, the NERC SC created a new subcommittee, the Process Management and Oversight Subcommittee (PMOS), that acts as an industry and standard drafting team partner. This subcommittee assigns a representative to each standard drafting team for the purpose of oversight. The oversight includes such actions as assisting the standard drafting team in understanding any stakeholder concerns, reaching out to stakeholders if they do not understand the actions being taken by the standard drafting team, being partners in reviewing the Reliability Standards for quality, and assisting with advice on a range of topics from direction to posting schedules. The PMOS has assisted standard drafting teams in avoiding or overcoming hurdles during the process.

The revisions made to the SPM and other changes made to the Reliability Standards development process, including strengthened partnerships among standard drafting teams, the NERC SC, and NERC staff, are showing great promise as improvements to the process, in terms of improving efficiency, speed and quality. These improvements have allowed the ERO to make significant progress towards achieving a body of steady-state Reliability Standards. The 2015-2107 RSDP will reflect that most, if not all, FERC directives and recommendations for

retirement (both from the Paragraph 81 project and the IERP review) will be addressed in 2015, and it will provide an opportunity for a strategic review of the Reliability Standards.

**b. Formation and Work of the Reliability Issues Steering Committee**

In response to the SPIG's recommendations, the NERC Board formed the NERC RISC in August 2012 to establish a collaborative effort at the industry leadership level to set priorities on issues of importance to the BPS. The RISC is composed of industry executives and thought leaders, including representatives from the NERC Operating, Planning, Standards, Critical Infrastructure Protection, and Compliance and Certification Committees. The RISC is an advisory committee that reports directly to the NERC Board, focusing on triaging and providing front-end, high-level leadership and accountability for issues of strategic importance to BPS reliability. The RISC assists the NERC Board, NERC technical committees, NERC staff, regulators, Regional Entities, and industry stakeholders in establishing a common understanding of the scope, priority, and goals for the development of solutions to address these issues. In doing so, the RISC provides a framework for steering, developing, formalizing, and organizing recommendations to help NERC and the industry effectively focus their resources on the critical means to improve the reliability of the BPS. In some cases, that includes recommending reliability solutions other than the development of new or revised Reliability Standards and offering high-level stakeholder leadership engagement and input on issues that enter the Reliability Standards process. In other cases, the development of a new Reliability Standard or modification of an existing Reliability Standard may be the best way to address a particular issue.

The NERC SC works closely with the RISC and the NERC technical committees, creating an alignment of focus on specific issues. The chairs of the technical committees and NERC SC are members of the RISC, which strengthens the needed coordination.

The RISC is developing a triage process to address other reliability issues that are brought to the NERC SC, whether through a standards authorization request or another mechanism. This process will include a review by the RISC to determine whether the issue is a risk to the reliability of the BPS and, if so, the priority of investing ERO and stakeholder resources to resolve the issue. This review will aid in focusing resources on the resolution of the most important issues.

The RISC also provides input into prioritizing Reliability Standards development activities by providing input to the RSDP in two ways: first, by considering whether the projects identified in the RSDP address areas of risk for the BPS; and second, by developing a priority rank for each of the projects.

In considering whether each of the projects addresses an area of risk for the BPS, the NERC RISC considers whether there are outstanding FERC directives or any recommendations for retirement, either from the Paragraph 81 project or the IERP, that could be addressed by the project.

In reviewing the priority of each project, the RISC provides a mechanism for addressing any scheduling conflicts between projects through the development process.<sup>41</sup> In its initial analysis, the RISC identified four high-priority focus areas for Reliability Standards: (i) cyber attacks; (ii) workforce capability and human error; (iii) protection systems; and (iv) monitoring and situational awareness. The RISC presented these priorities to the NERC Board in February 2013. In response, the NERC Board directed the RISC to conduct further analysis of the issues identified as high and medium priority. The NERC Board also directed that the RISC's input be integrated into the overall ERO planning process. NERC staff is implementing process steps to

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<sup>41</sup> RISC reviewed and provided input on the use of RISC's rankings in project prioritization.

meet this objective. Subsequently, the RISC issued an updated report in August 2013 identifying a fifth area of focus: adaptation and planning for change.<sup>42</sup>

In addition to the activities described above, in November 2012, the RISC participated in a NERC-sponsored conference in which reliability topics were discussed with technical experts. The conference, conducted as a series of panel discussions, highlighted several existing and emerging reliability risks and created an opportunity for informed dialogue about technical topics. A second conference, the Reliability Leadership Summit, was held in October 2013, with key industry decision-makers gathering to discuss reliability priorities and industry trends.<sup>43</sup>

Efforts to review the risk areas identified by the RISC and to develop appropriate risk management strategies are ongoing. Integrating these priorities into the annual business plan and budget process will be a cornerstone of NERC's annual planning process going forward. To effect this change in planning, NERC has developed the Reliability Risk Management (RRM) process, a multi-year strategy development method that uses industry expertise through the RISC and other standing committees to develop actionable, measureable efforts to manage reliability risk. The RRM process is discussed in detail below in §II.D.1.

### **c. Realignment of Resources in the Reliability Standards Program**

NERC is constantly assessing the alignment of resources to be responsive to the changes necessary to move the NERC Reliability Standards to a steady-state. In 2013, NERC realigned resources in its Reliability Standards department by creating multiple small teams of Reliability Standards developers and one team focused on information management. This realignment focused resources on the production of Reliability Standards rather than on executing and

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<sup>42</sup> *ERO Priorities – RISC Updates and Recommendations* is available at: [http://www.nerc.com/comm/RISC/Related%20Files%20DL/RISC\\_Priority\\_Recommendations-Jul\\_26\\_2013.pdf](http://www.nerc.com/comm/RISC/Related%20Files%20DL/RISC_Priority_Recommendations-Jul_26_2013.pdf).

<sup>43</sup> NERC intends for this summit meeting to be an annual event; the next Reliability Leadership Summit is scheduled for September 2014.

monitoring the development process, thereby increasing the throughput to complete outstanding projects and resolve outstanding directives. In 2013, each of the three “developer” teams was assigned one of the following high-level goals:

- (1) Resolving directives;
- (2) Conducting the required five-year reviews for current Reliability Standards;<sup>44</sup> or
- (3) Overseeing emerging issue projects and the completion of remaining open projects.

The small developer teams closely coordinate with one another to ensure a balance in workload and to create an expertise in each of the major work areas.

Additionally, NERC has improved the composition of standard drafting teams by enhancing the selection process to identify, for each project, the necessary technical, writing, and project management expertise to form a balanced team that will foster improved effectiveness and enhanced efficiency. Standard drafting teams also now receive increased NERC staff support, including dedicated legal support, for each project. Each standard development project is staffed by a lead standard developer, and many projects have a second supporting standard developer. Standard developers provide project management and facilitation experience as well as additional skills, including technical writing, legal skills, and outreach/consensus-building skills, to the standard drafting team, which contributes to the development of high-quality Reliability Standards. With this enhanced staffing, standard drafting teams are better able to reach milestones and build consensus among industry stakeholders in advance of balloting. Further, NERC now provides facilitation training to all newly appointed standard drafting team leaders. Finally, NERC has developed a Standards Development Process Participant Conduct

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<sup>44</sup> Section 13.0 of the revised SPM now requires periodic reviews every five years for those Reliability Standards that have been adopted by ANSI as an American national standard, and every ten years for all other Reliability Standards.

Policy to ensure that the Reliability Standards development process is conducted in a professional and constructive environment.

**d. Developing and Implementing Procedures for the Cost-Effective Analysis Process**

NERC has developed the Cost-Effective Analysis Process (CEAP) in response to requests by registered entities and regulators to incorporate consideration of costs more directly into Reliability Standard development activity.<sup>45</sup> The CEAP affords stakeholders an opportunity to share projected cost information regarding implementation of draft Reliability Standards and provides the opportunity to offer alternatives that would be equally, or more, efficient at achieving the reliability objective of the draft Reliability Standard while also taking into consideration implementation costs. CEAP has been used for a limited number of new and revised Reliability Standards projects, with limited success. NERC continues to explore options for improving both the process and the quality of the resulting information.

The current CEAP process provides for a two-phase process for identifying projected implementation costs. The first phase of the CEAP, identified as the Cost Impact Analysis, is conducted during the standard authorization request stage of Reliability Standard development. It provides an opportunity to identify approximate implementation costs associated with a proposed Reliability Standard prior to its development. Information related to the mission and forecasted implementation costs of the proposed Reliability Standard is collected from the industry during the initial standard authorization request comment period. The information collected is shared with the NERC SC and the standard drafting team, and is posted on the NERC website.

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<sup>45</sup> This was an issue raised in response to the five-year performance assessment survey.

The second phase of the CEAP, identified as the cost effective analysis, typically comes after the draft Reliability Standard is developed by the standard drafting team and is ready for the first combined formal comment period and ballot. During this phase, NERC again solicits industry to provide forecasted implementation costs of the proposed requirements and to propose alternative methods to achieve the proposed Reliability Standard's reliability objective more efficiently. Any alternative proposals provided by industry during this phase should contain sufficient technical justification, and if possible, cost comparison data for consideration.

## **7. Improved Stakeholder Access to Reliability Standards Information**

All Reliability Standards are available to stakeholders through NERC's public website, including: (i) Reliability Standards that are currently enforceable in specific jurisdictions (i.e., in the U.S. and Canadian provinces); (ii) Reliability Standards pending regulatory approval; (iii) Reliability Standards approved by the NERC Board and pending regulatory filing; and (iv) Reliability Standards no longer subject to enforcement. In 2012, NERC launched an improved interface to allow stakeholders to filter the complete set of Reliability Standards so that they could identify which Reliability Standards are applicable to their respective registered functions. Work is ongoing to improve the completeness and timeliness of this information for non-U.S. jurisdictions (i.e., Canadian provinces or Mexico).

Additionally, beginning in 2013, interested entities can track current Reliability Standards development projects in a publicly posted spreadsheet, the *Project Tracking Spreadsheet*.<sup>46</sup> NERC updates this spreadsheet monthly. The spreadsheet also provides a link to the projects page, the deliverables, the number of Paragraph 81 requirements, the number of regulatory directives or guidance, the PMOS liaison assigned to the project, the NERC standards developer,

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<sup>46</sup> NERC regularly updates the *Project Tracking Spreadsheet: 2014 Project Work Plan* and the link to the file is located on the left side of NERC's Standards webpage available at: <http://www.nerc.com/pa/Stand/Pages/Default.aspx>.

and a month-by-month timeline. Also in 2013, NERC began posting the *Projected Standards Posting Schedule*, which provides the industry with an outlook of near term postings.

## **8. Specific Reliability Standards Projects**

### **a. Critical Infrastructure Protection Version 5 Reliability Standards**

On November 22, 2013, the Commission issued Order No. 791 approving the Critical Infrastructure Protection Version 5 (CIP Version 5) Reliability Standards.<sup>47</sup> The CIP Version 5 Reliability Standards provide a cybersecurity framework for the categorization and protection of BES cyber systems to support the reliable operation of the grid. NERC worked with industry to ensure that the CIP Version 5 Reliability Standards address the differing roles of each registered entity in the operation of the BES, the criticality and vulnerability of the BES cyber systems needed to support BES reliability, and the risks to which the BES cyber systems are exposed. In Order No. 791, the Commission found that CIP Version 5 is an improvement over the currently approved CIP Reliability Standards. The Commission also determined that categorizing BES cyber systems based on their impact on the reliable operation of the BES (Low, Medium, or High), with all BES cyber systems categorized as at least Low Impact, offers more comprehensive protection of the BES.<sup>48</sup> The Commission directed NERC to address several new directives, some of which must be addressed within a year. To meet these directives, NERC has established a standard drafting team and set an aggressive schedule to address all the Commission's concerns, consistent with the timeline set by the Commission.

In Order No. 791, the Commission also approved NERC's proposal to bypass CIP Version 4 and move directly to implement CIP Version 5. Recognizing that registered entities

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<sup>47</sup> *Version 5 Critical Infrastructure Protection Reliability Standards*, Order No. 791, 145 FERC ¶ 61,160 (2013).

<sup>48</sup> In Order No. 791, the Commission directed NERC to develop modifications to address specified concerns with the CIP Version 5 standards, including: (i) the "identify, assess, and correct" language; (ii) protections for Low Impact BES Cyber Systems; (iii) the risks posed by transient devices; and (iv) the protection of communication networks.

are in various stages of implementation of CIP Versions 3 and 4, NERC tackled the need for flexibility as well as the need to identify and address the associated transition challenges for industry. In October 2013, NERC launched the CIP Version 5 Transition Implementation Study (CIP Version 5 Study) to collect and to evaluate relevant data from select responsible entities regarding their experience in implementing CIP Version 5 requirements. Through this study, NERC is identifying successful implementation methods and challenges that the industry faces in transitioning to CIP Version 5. On October 11, 2013, NERC submitted an informational filing to the Commission that described how the CIP Version 5 Study would assist responsible entities in making the transition to CIP Version 5.<sup>49</sup> As part of the CIP Version 5 Study, NERC selected a group of six responsible entities, based on factors including willingness to participate, past performance under the CIP Reliability Standards, and expected relevance to the CIP Version 5 Study's goals. NERC is sharing the experience and information obtained through the CIP Version 5 Study with industry throughout the study period. NERC will also prepare a final report that synthesizes the study participants' experiences in applying CIP Version 5. The report will focus on the effectiveness of meeting the CIP Version 5 requirements and the methods employed during implementation. The report will also focus on the following:

- (1) Methods, approaches, and policies that were effective in implementing the technical controls of CIP Version 5;
- (2) Tools, policies, and training that were effective in aligning employees' skills and cooperation with the responsible entity's mission and the CIP Version 5 Reliability Standards;
- (3) Hurdles encountered by the participating responsible entities and the relevant outcomes; and
- (4) Requirements and concepts of CIP Version 5 that the responsible entities had difficulty implementing and why.

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<sup>49</sup> *Informational Filing of the North American Electric Reliability Corporation Regarding the CIP Version 5 Reliability Standards Implementation Study*, Docket No. RM13-5-000 (Oct. 11, 2013).

## **b. Transmission Vegetation Management**

During the assessment period, the Commission approved two new versions of the FAC-003 Reliability Standard. In Order No. 777,<sup>50</sup> the Commission approved NERC's proposed FAC-003-2, a Reliability Standard that requires responsible entities to minimize encroachments from vegetation located adjacent to transmission rights-of-way and within a transmission owner's control. Historically, vegetation-related outages have been a recurring contributor to blackouts. In fact, inadequate vegetation management practices causing tree contact was one of the initiating causes of the 2003 Northeast blackout. Industry compliance with FAC-003-2, together with a continued industry focus on best practices for vegetation management, enhances the reliability of the BPS.

FAC-003-2 is the first results-based Reliability Standard approved by the Commission, and contains several improvements over FAC-003-1. For example, while FAC-003-2 continues to apply to overhead transmission lines operated at or above 200 kV, it additionally applies to any lower voltage overhead transmission line that is either an element of an interconnection reliability operating limit or a major WECC transfer path. Another improvement is that FAC-003-2 makes explicit a transmission owner's obligation to prevent an encroachment into the minimum vegetation clearance distance for a line subject to this standard, regardless of whether that encroachment results in a sustained outage or fault. FAC-003-2 also requires transmission owners, for the first time, to annually inspect all transmission lines subject to the Reliability Standard and complete 100 percent of their annual vegetation management work plan.

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<sup>50</sup> *Revisions to Reliability Standard for Transmission Vegetation Management*, Order No. 777, 142 FERC ¶ 61,208 (2013) (Order No. 777).

On September 19, 2013, the Commission approved FAC-003-3,<sup>51</sup> which extends FAC-003-2 vegetation management requirements to certain generator interconnection facilities to address a reliability gap that existed when the requirements only applied to transmission owners. Certain generator owners with overhead lines, particularly those with generator interconnection facilities longer than one mile and which run through areas that may be densely populated with trees and other plants, are now also required to perform vegetation management of those lines. For purposes of this Reliability Standard, these lines are treated as transmission lines.

NERC is conducting additional research relating to vegetation management issues in response to Commission directives in Order No. 777. The Commission directed NERC to conduct or contract testing to develop empirical data regarding the flashover distances between conductors and vegetation.<sup>52</sup> To carry out this project, NERC is contracting support to conduct the necessary research and testing that will provide empirical evidence to statistically validate the calculation of the minimum vegetation clearance distances (MVCD), as specified in Reliability Standard FAC-003-3. Significant industry support for the application of the Gallet Equation, which uses the gap factor to calculate MVCD, was a key factor in achieving approval for this NERC Reliability Standard. A final report summarizing this research will be filed with the Commission in June 2015 and will advise the Commission about the issues encountered and how best to address them.

### **c. Protection System Maintenance and Testing**

NERC has identified protection systems, and in particular reduction of protection system misoperations, as a top reliability priority. Likewise, the RISC has named protection systems as one of four high priority areas to be addressed in Reliability Standards. In particular, properly

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<sup>51</sup> *Generator Requirements at the Transmission Interface*, 144 FERC ¶ 61,221 (2013).

<sup>52</sup> Order No. 777 at P 59.

maintaining protection systems supports the ERO's goal of reducing protection systems misoperations. By reducing misoperations, maintenance and testing of protection systems helps provide reliable system performance when responding to abnormal system conditions.

In 2007, NERC initiated Project 2007-17 – Protection System Maintenance and Testing – to consolidate four currently enforceable Reliability Standards<sup>53</sup> that pertain to various aspects of maintenance and testing of protection and control systems into a single Reliability Standard, PRC-005-2. This project also seeks to address: (i) certain Commission directives from Order No. 693 related to these four Reliability Standards;<sup>54</sup> and (ii) fundamental issues identified by the NERC System Protection and Control Task Force (SPCTF) in its assessment of these four Reliability Standards.

On December 19, 2013, the Commission approved Reliability Standard PRC-005-2,<sup>55</sup> Protection System Maintenance, which establishes requirements for a time-based maintenance program, where all relevant devices are maintained according to prescribed maximum

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<sup>53</sup> The four Reliability Standards at issue were PRC-005-1, PRC-008-0, PRC-011-0, and PRC-017-0. *See NERC SPCTF Assessment of Standards: PRC-005-1 — Transmission and Generation Protection System Maintenance and Testing, PRC-008-0 — Underfrequency Load Shedding Equipment Maintenance Programs, PRC-011-0 — UVLS System Maintenance and Testing, PRC-017-0 — Special Protection System Maintenance and Testing*, Mar. 8, 2007 (SPCTF Assessment), available at: [http://www.nerc.com/docs/standards/sar/PRC-005-008-011-017\\_Report\\_Approved\\_by\\_PC.pdf](http://www.nerc.com/docs/standards/sar/PRC-005-008-011-017_Report_Approved_by_PC.pdf).

A supplement to the SPCTF Assessment was also considered. *See NERC SPCTF Supplemental Assessment Addressing FERC Order 693 Relative to PRC-005-1 — Transmission and Generation Protection System Maintenance and Testing, PRC-008-0 — Underfrequency Load Shedding Equipment Maintenance Programs, PRC-011-0 — UVLS System Maintenance and Testing, PRC-017-0 — Special Protection System Maintenance and Testing*, May 17, 2007, available at: [http://www.nerc.com/docs/pc/spctf/Supplemental\\_Report\\_on\\_PRC-005-008-011-017\\_Approved\\_by\\_PC\\_2.pdf](http://www.nerc.com/docs/pc/spctf/Supplemental_Report_on_PRC-005-008-011-017_Approved_by_PC_2.pdf).

<sup>54</sup> The Commission approved Reliability Standard PRC-005-1 in Order No. 693 and directed NERC “to develop a modification ... through the Reliability Standards development process that includes a requirement that maintenance and testing of a protection system must be carried out within a maximum allowable interval that is appropriate to the type of the protection system and its impact on the reliability of the Bulk-Power System.” The Commission also directed NERC to consider suggestions made by commenters to “combine PRC-005, PRC-008, PRC-011, and PRC-017 into a single Reliability Standard.” Order No. 693 at P 1475.

<sup>55</sup> On March 30, 2011, NERC submitted a petition for Commission approval of a proposed modification to the definition of “Protection System” to close a reliability gap created by an omission in the prior definition. The Commission approved the modified definition, which is used in PRC-005-2. *See North American Electric Reliability Corporation*, 138 FERC ¶ 61,095 (2012).

intervals.<sup>56</sup> It also establishes requirements for a condition-based maintenance program, where the hands-on maintenance intervals are adjusted to reflect the known and reported condition of the relevant devices. For a performance-based maintenance program, the hands-on maintenance intervals are adjusted to reflect the historical performance of the relevant devices. PRC-005-2 also provides a comprehensive set of requirements that define a strong protection systems maintenance program. It also includes detailed tables of minimum maintenance activities and maximum maintenance intervals for all five component types addressed within the NERC definition of protection system. Functional entities that monitor the actual condition of their protection system components are further empowered to utilize monitoring to improve the efficiency and effectiveness of their protection systems maintenance program. With the benefit of extensive protection system performance data, these entities will improve the efficiency and effectiveness of their programs.

This Reliability Standard will go into effect on April 1, 2015, and implementation will continue over a twelve-year phased-in period, which includes milestones for implementation during the implementation timeframes. In furtherance of the important issues surrounding the maintenance and testing of protection systems, the System Protection and Control Subcommittee (SPCS) issued a report that suggested improving commissioning practices through: (i) analysis of protection system misoperations; (ii) sharing of lessons learned; and (iii) development of an industry reference document on protection system commissioning practices.<sup>57</sup>

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<sup>56</sup> *Protection System Maintenance Reliability Standard*, 145 FERC ¶ 61,253 (2013)

<sup>57</sup> See the Planning Committee-approved final report, *SPCS Response to Standards Committee Request for Research*, (Mar. 5, 2013), available at: [http://www.nerc.com/docs/pc/spctf/SPCS%20Commissioning%20Testing%20Response\\_Final.pdf](http://www.nerc.com/docs/pc/spctf/SPCS%20Commissioning%20Testing%20Response_Final.pdf).

#### **d. Geomagnetic Disturbances**

As high-impact, low-frequency (HILF) events, severe GMDs pose a unique threat to BPS reliability. NERC is committed to working with stakeholders and the Commission to mitigate the risks posed by such events. The science concerning GMDs is still maturing and there is significant disagreement in the scientific and manufacturing communities about the most likely effects of a GMD event on the BPS, but NERC recognizes the potential for GMDs to adversely affect the BPS. Occurrences such as the 1989 event in Hydro-Québec demonstrate that severe solar storms have potential to cause loss of reactive power support, voltage instability, relay misoperations, and possibly equipment loss of life or damage to the BPS.

Through the efforts of the Geomagnetic Disturbance Task Force (GMDTF), NERC released the *2012 Special Reliability Assessment Interim Report: Effects of Geomagnetic Disturbances on the Bulk Power System* in February 2012.<sup>58</sup> The GMDTF identified four recommendations for industry in the report:

- (1) Improve tools for industry planners to develop geomagnetic mitigation strategies;
- (2) Improve tools for system operators to manage geomagnetic impacts;
- (3) Develop education and information exchanges between researchers and industry;  
and
- (4) Review the need for enhanced NERC Reliability Standards.

With implementation of these recommendations well underway, the Commission issued Order No. 779 concerning Reliability Standards for GMDs on May 16, 2013.<sup>59</sup> In Order No. 779, the Commission directed NERC to submit for approval proposed Reliability Standards that address the impact of GMD on the reliable operation of the BPS, in two stages. In the first stage,

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<sup>58</sup> Available at: <http://www.nerc.com/pa/stand/pages/geomagnetic-disturbance-resource.aspx>.

<sup>59</sup> *Reliability Standards for Geomagnetic Disturbances*, Order No. 779, 143 FERC ¶ 61,147 (2013).

NERC was directed to develop one or more Reliability Standards that require owners and operators of the BPS to implement operational procedures to mitigate the effects of GMDs consistent with the reliable operation of the BPS. On November 14, 2013, well within the six-month time frame directed by the Commission, NERC submitted a petition requesting Commission approval of the first GMD Reliability Standard.<sup>60</sup> The proposed standard, EOP-010-1, requires entities to develop tailored operating plans, processes, and procedures.

In the second stage, NERC was directed to submit one or more Reliability Standards that require owners and operators of the BPS to conduct initial and on-going assessments of the potential impact of benchmark GMD events on BPS equipment and the BPS as a whole. NERC and the standard drafting team assigned to develop GMD Reliability Standards have completed development of a technically justified benchmark GMD event during the first half of 2014 in preparation for completion of Reliability Standard development in late 2014.

The following efforts resulting from implementation activities have been important in supporting development of technically sound Reliability Standards, as ordered by the Commission:

- (1) Development of operating procedure templates for transmission operators that reflect best practices and consensus among technical experts;
- (2) Improved ground conductivity models that represent the geological regions of North America and a published guidance for modeling geomagnetically-induced current; and
- (3) Initiation of a transformer modeling and testing project to validate models used to assess the effects of geomagnetically-induced current on transformers.

NERC is continuing efforts to expand the technical foundation for understanding the potential impact of GMD by supporting the work of the GMDTF and collaborative research with

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<sup>60</sup> *Petition of the North American Electric Reliability Corporation for Approval of Proposed Reliability Standard EOP-010-1 – Geomagnetic Disturbance Operations*, Docket No. RM14-1-000 (Nov. 14, 2013).

the Electric Power Research Institute, U.S. Geological Survey, Natural Resources Canada, and other public and private research organizations. The GMDTF and the Electric Power Research Institute are giving focused attention toward improving the suite of publicly available and technically valid tools, guidelines, and transformer models to evaluate potential impacts of GMD. The results of this work will support registered entities in conducting vulnerability assessments as required by the second stage Reliability Standards being developed in response to Order No. 779.

**e. Physical Security Reliability Standard**

On March 7, 2014, FERC issued an order directing NERC to submit for approval, within 90 days of the order, one or more Reliability Standards to address physical security risks and vulnerabilities of critical facilities on the BPS. FERC's order focused on critical facilities, directing steps to evaluate physical security threats and implement security plans that continues NERC's ongoing physical security efforts. In the order, FERC stated, among other things, that the proposed Reliability Standard(s) should require entities to take at least the following three steps:

- (1) Perform a risk assessment to identify facilities that, if damaged or rendered inoperable, could result in instability, uncontrolled separation, or cascading failures on the BPS;
- (2) Evaluate the potential threats and vulnerabilities to those identified facilities; and
- (3) Develop and implement a security plan designed to protect against physical attacks to those identified facilities based on the assessment of the potential threats and vulnerabilities to their physical security.

The Commission's order also specified that the Reliability Standard should require procedures for a third party to verify the list of identified facilities and add or remove facilities from the list, procedures for a third party to review the evaluation of threats and vulnerabilities and the

physical security plan, and that the three steps listed above be periodically re-evaluated and revised.

In response to the order, NERC staff and the NERC SC worked together to develop an action plan for meeting the June 5, 2014 deadline. The NERC SC approved several waivers to facilitate meeting the required timelines and formed the eleven member standard drafting team on March 21, 2014. Also on March 21, 2014, the NERC SC approved waivers to support drafting activities to meet the June 5, 2014 deadline. Additionally, on March 21, 2014, the NERC SC also accepted the Project 2014-04 standard authorization request for a seven calendar-day informal comment period posting, pursuant to the NERC SC-approved waiver. On April 1, 2014, NERC staff convened a technical conference to focus stakeholder discussion on developing a draft of a Physical Security Reliability Standard, with the intent of assisting the standard drafting team to quickly develop and post a Reliability Standard for comment and ballot. The conference provided a forum for industry input on the concepts in the draft Reliability Standard, to include criteria for determining applicable entities, identification of critical facilities, evaluation of potential threats and vulnerabilities, development and implementation of physical security plans, and the proposed standard's implementation plan. NERC Compliance staff also provided an overview of the RSAW approach.

The Physical Security standard drafting team developed the proposed Reliability Standard, CIP-014-1 through the Reliability Standards development process. The Reliability Standard was posted under a NERC SC-approved waiver for a 15-day concurrent comment and initial ballot period from April 10, 2014 through April 24, 2014. The initial ballot achieved a quorum of 88.60 percent and an industry approval of 82.07 percent. The final ballot was posted, under an SC-approved waiver, for a 5-day period from May 1, 2014 through May 5, 2014 and

achieved a quorum of 92.53 percent and an industry approval of 85.61 percent. The NERC Board adopted the standard on May 13, 2014, and it was filed with FERC by NERC on May 23, 2014.

**B. The ERO Is Implementing Processes to Register Entities Commensurate with Risk to the Bulk Power System**

The starting point for the ERO's program for monitoring and enforcing compliance with Commission-approved Reliability Standards is its processes for comprehensively identifying and registering owners, operators and users of the BPS that are responsible for performing reliability-related functions in accordance with the approved Reliability Standards. This section discusses major enhancements to the registration process initiated during the assessment period.

**1. Improved Registration Processes, Information Systems, and Methods Across Regional Entities**

NERC's organization registration process identifies entities that are responsible for compliance with the Commission-approved Reliability Standards. Entities that are registered are included on the NERC Compliance Registry (NCR) and are responsible for compliance with all applicable Reliability Standards. Pursuant to Section 500 of the NERC ROP and the terms of the approved Regional Entity delegation agreements (RDAs), the Regional Entities are responsible to provide timely and accurate information to NERC relating to registrations to enable NERC to maintain a NCR that is accurate and up-to-date.<sup>61</sup> To further consistency and increase transparency in registrations across the Regional Entities, as well as to address the problem of obtaining timely updates of registration information from entities, NERC developed a Common Registration Form (CRF) which registered entities use to provide the Regional Entities with real-

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<sup>61</sup> The amended and restated RDAs, effective January 1, 2011, included revisions to the provisions concerning the Regional Entities' responsibilities in the registration process. In addition, revisions to the registration criteria and registration processes were effectuated through amendments to NERC ROP Section 500, Appendix 5A, *Organization Registration and Certification Manual*, and Appendix 5B, *Statement of Compliance Registry Criteria*, during the assessment period.

time updates of the information recorded in the NCR pertaining to ownership, operations, contact information, asset lists and other information that may affect registration status. A corollary benefit of the CRF is that it serves as a check for the Regional Entities to ensure that owners, users, and operators of the BPS are appropriately registered. NERC is also undertaking an effort to map all the inter-relationships between registered entities on the NCR, to ensure that all owners, users and operators of the BPS are registered in the NCR.

In January 2014, NERC launched the Risk-based Registration Assessment Initiative to enhance the compliance registration and certification program to be more efficient and better aligned with reliability benefit. Through this initiative, NERC will register entities and assign appropriate Reliability Standard requirements commensurate with the need to mitigate the risk that each entity poses to the BES, by scaling registration criteria based on their contributions to reliability. NERC will also develop tools that will enhance registered entities' understanding of the relevant Reliability Standards and requirements that apply to them. Scoping compliance responsibilities according to BPS reliability risks equates to better use of resources at both the registered entity level in the implementation of compliance programs, and at the Regional Entity level in their overall compliance monitoring efforts.

## **2. BES Definition**

During the assessment period, NERC revised the definition of the BES in the NERC *Glossary of Terms Used in Reliability Standards*, in response to Commission directives in Order Nos. 743 and 743-A.<sup>62</sup> The objective of the revisions is to ensure consistent inclusion or exclusion of entities and elements that are subject to Reliability Standard requirements. With the strong support and participation of industry representatives and the Regional Entities, NERC

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<sup>62</sup> *Revision to Electric Reliability Organization Definition of Bulk Electric System*, Order No. 743, 133 FERC ¶ 61,150 (2010), *order on reh'g*, Order No. 743-A, 134 FERC ¶ 61,210 (2011).

delivered a technically grounded and legally supportable foundation for identifying the elements and facilities that comprise the BES.

In Phase 1 of this process, NERC proposed to eliminate regional discretion and establish a bright-line threshold that includes in the BES all facilities operated at or above 100 kV. The Commission accepted the revised definition in Order No. 773.<sup>63</sup> NERC also identified specific categories of facilities and configurations as inclusions and exclusions to the BES definition. These inclusions and exclusions are set forth in the revised BES definition. The process for requesting an inclusion or exclusion in or from the BES, is set forth in Appendix 5C, *Procedure for Requesting and Receiving an Exception from the Definition of the Bulk Electric System*, of NERC's ROP, which FERC has also approved.<sup>64</sup> Appendix 5C establishes an exception process to bring elements within, or remove elements from, the BES definition on a case-by-case basis.

In Phase 2 of the BES definition process, NERC addressed additional regulatory directives from Order Nos. 773 and 773-A, as well as industry comments received during Phase 1. As part of Phase 2, and with industry input, NERC proposed substantive changes to Inclusion I4 (dispersed power producing resources), Exclusion E1 (radial systems), Exclusion E3 (local networks), and Exclusion E4 (reactive power devices). The Commission approved the additional proposed revisions to the BES definition in an order issued March 20, 2014.<sup>65</sup>

The Commission-approved revised BES definition enables NERC and the Regional Entities to identify assets that are material to the reliability of the interconnected transmission

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<sup>63</sup> *Revisions to Electric Reliability Organization Definition of Bulk Electric System and Rules of Procedure*, Order No. 773, 141 FERC ¶ 61,236 (2012); *order on reh'g*, Order No. 773-A, 143 FERC ¶ 61,053 (2013), *order on reh'g and clarification*, 144 FERC ¶ 61,174 (2013).

<sup>64</sup> Available at: [http://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/Appendix\\_5C\\_ProcForReqAndRecExFromAppOfNERCDefBES\\_20140701.pdf](http://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/Appendix_5C_ProcForReqAndRecExFromAppOfNERCDefBES_20140701.pdf).

<sup>65</sup> *North American Electric Reliability Corporation, Order Approving Revised Definition*, 146 FERC ¶ 61,199 (2014).

network. By using a set of continent-wide, “bright line” criteria that eliminates regional discretion, the revised definition effectively ensures that the users, owners and operators of BES assets are identified and registered on a consistent basis in order to comply with applicable Reliability Standards. The revised BES definition provides improved clarity for industry by identifying specific categories of facilities and configurations as inclusions and exclusions to the BES. Additionally, the case-by-case exception process to add elements to, and to remove elements from, the BES provides transparency and uniformity to the determinations of what constitutes the BES.

To implement the revised BES definition, which became effective on July 1, 2014, NERC developed a web-based, ERO Enterprise-wide application, the BESnet Enterprise Application Tool (BESnet tool), to provide a consistent platform for registered entities to submit self-determined notifications and to submit exception requests for inclusions in or exclusions from the BES. Once a registered entity applies the BES definition to a specific element within its system, it must notify its applicable Regional Entity of any newly identified system elements that are inclusions or exclusions (i.e., system elements with changed BES classifications under the revised BES definition). Inclusion and exception decisions on the self-determined notifications are made by the Regional Entity through the BESnet tool in order to support uniform reviews and evaluations by the Regional Entity and NERC. If a Regional Entity receives notification of a self-determined exclusion, then it must evaluate whether that registered entity can stop its compliance obligations for that excluded system element. If a Regional Entity receives notification of a self-determined inclusion, then the Regional Entity must evaluate whether that registered entity should take steps to bring that system element into compliance with applicable Reliability Standard requirements within a fixed implementation period. NERC

will also use the BESnet tool to manage associated support materials and records related to technical reviews by the Regional Entities and NERC.

NERC is finalizing implementation materials that will guide the consistent evaluation of inclusions, exclusions and self-notifications of BES elements across the ERO Enterprise. NERC has created a single portal location to provide a central site to obtain useful materials to support registered entities' review of their BES elements. Additionally, the BES exception process was identified by NERC and the Regional Entity Management Group as having sufficient similarities in business processes and function across the ERO to be deemed an ERO Enterprise application, which will be used by both NERC and the Regional Entities to eliminate disparate applications across the ERO. NERC is also developing a Reliability Standard reference document to explain the intended application of the BES definition to yield consistent results. Development of additional reference documents to promote further consistency across the ERO Enterprise includes:<sup>66</sup>

- (1) *BES Definition Reference Document*, which addresses how to apply the BES definition using several examples;
- (2) *BES Definition Implementation Guidance*, which shows how the Regional Entities and NERC will review self-determined notifications and includes a high-level summary of notification requirements; and
- (3) *BES Exception Request Evaluation Guideline*, which demonstrates how the Regional Entities and NERC will evaluate exception requests, and provides a high-level summary of the exception request evidentiary requirements.

During the first two quarters of 2014, NERC held communications and training sessions for Regional Entities, registered entities, and NERC staff to address, among other things: (i) evidentiary requirements for BES determinations; (ii) review and appeal mechanisms; and (iii) Reliability Standards applicability. These sessions included workshops and webinars.

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<sup>66</sup> See the Bulk Electric System (BES) Definition, Notification, and Exception Process Page at: <http://www.nerc.com/pa/rapa/pages/bes.aspx>.

**C. The ERO Monitors and Enforces Compliance with Reliability Standards in an Efficient and Transparent Manner Using Enforcement Processes that Match the Risk and Importance of Possible Violations to BPS Reliability**

A key, strategic transformation that NERC, in collaboration with the Regional Entities and stakeholders, embarked upon during the assessment period is the construction of a risk-based model for compliance monitoring and enforcement. This risk-based approach enables NERC to focus ERO and industry resource investment on the most important issues to BPS reliability. In this section of the assessment report, NERC highlights initiatives to improve the Compliance Monitoring and Enforcement Program (CMEP) during the assessment period, including the FFT program. The FFT program and its subsequent enhancements began to implement this risk-based approach. The FFT program enables the ERO Enterprise to achieve major efficiencies in enforcement. Through the use of FFT, the ERO resolves noncompliances that pose a lesser risk to BPS reliability more efficiently, recognizing that efficient disposition of such issues allows the ERO Enterprise and industry to devote its emphasis and resources to more important reliability matters. Further, through careful planning and coordination and collaboration between NERC and the Regional Entities, NERC has achieved major enforcement efficiencies. These efforts have also resulted in a drastically reduced NERC caseload; for the past two years, NERC and the Regional Entities have worked to eliminate all items in the caseload which are older than 24 months. In 2012, that effort resulted in a reduction of those items by 80%. In 2013, the ERO Enterprise reduced those items by 93%. By the end of 2013, only 65 violations in inventory were older than 24 months. Additionally, taking advantage of the FFT process, which provides incentives for self-reporting, registered entities continue to aggressively self-identify, self-report and mitigate reliability issues.

Building upon the success of FFT through the RAI, NERC and the Regional Entities created additional incentives to discourage poor performance and encourage positive behaviors

that contribute to higher accountability and improved reliability performance. RAI processes that promote more effective reliability risk mitigation by encouraging development and enhancement of internal management controls and corrective action programs at registered entities began to be implemented in 2013.<sup>67</sup>

### **1. Compliance Enforcement Initiative and Find, Fix, Track and Report**

Recognizing the need and the importance of ensuring that reliability risks are addressed properly through a scaled approach, NERC devised the FFT initiative in 2011 as a risk control strategy that differentiates and addresses compliance issues according to their significance to the reliability of the BPS. FFT emphasizes proportionality and enforcement discretion. The FFT process enables NERC to report lesser-risk possible violations of Reliability Standards through a streamlined process that results in the posting of a minimal record associated with the noncompliance on NERC's website.<sup>68</sup> The FFT initiative illustrates that NERC continually reevaluates, redirects and rebalances its CMEP implementation efforts.

NERC developed FFT in conjunction with the Regional Entities. The development of the process benefited from collaboration with representatives of registered entities through a series of focus groups. During these focus group sessions, participants indicated that registered entities typically allocated time and resources equally among violations, regardless of the risk to reliability posed by each violation. Implementation of the FFT initiative was the first step towards addressing this mis-allocation of resources.

Since the launch of FFT in 2011, NERC has implemented additional enhancements to the process. Specifically, NERC expanded FFT treatment to: (i) a limited pool of possible moderate

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<sup>67</sup> As noted previously, NERC will submit a separate informational filing to the Commission describing these processes.

<sup>68</sup> In contrast, NERC submits violations that pose a greater risk to reliability or do not otherwise meet the FFT criteria to the Commission in a spreadsheet Notice of Penalty (SNOP) or full Notice of Penalty (NOP) format.

risk violations; and (ii) some unmitigated possible violations so long as mitigation occurs within 90 days from the date the FFT item is filed or posted. To streamline processing of FFT items, NERC now posts FFTs collected by the Regional Entities on its website at the end of each month without prior review of such items. This replaces the prior procedure in which NERC submitted monthly informational filings to the Commission describing FFT items. While the Regional Entities post FFT items on a monthly basis, NERC maintains its enforcement oversight by reviewing a representative sample of FFTs during the 60-day window following the Regional Entities' monthly postings and by conducting an annual spot check of FFTs.

The FFT program has been highly successful in promoting a risk-based approach to resolving noncompliance. All Regional Entities utilize FFT to resolve a large number of minimal risk issues. Further, through its monthly reviews and annual spot checks, NERC verifies that the parameters for identifying minimal risk issues are consistently applied throughout the ERO Enterprise.

## **2. Reliability Assurance Initiative**

In November 2012, NERC management proposed RAI as a multi-year effort to identify and implement changes to enhance the effectiveness of the ERO Enterprise's compliance and enforcement functions. RAI will help NERC foster consistency and efficiency in its compliance monitoring and enforcement processes. NERC expects RAI to improve BPS reliability by refocusing efforts on serious and substantial reliability risks and promoting the development and enhancement of the internal controls that mitigate those risks. Increased consistency in the ERO Enterprise's compliance and enforcement efforts yields a level of predictability for registered entities to understand how Reliability Standards are applied and enforced and to model positive behaviors.

To foster dialogue and seek industry feedback on the various aspects of RAI, NERC hosted a series of workshops in 2013 that addressed defining internal controls, conducting risk assessment, launching pilot programs, enhancing the FFT process, and improving self-reporting.

**a. RAI Improvements to Compliance Monitoring Processes**

The core concept of risk-based compliance monitoring is intended to guide Regional Entities in allocating resources for compliance monitoring activities and methods based on a registered entity's potential impact on the BPS. Compliance-related activities under the RAI program will help achieve a risk-based approach for compliance monitoring by evaluating current compliance monitoring practices, identifying improvements, and addressing the consistent application of audit techniques and the use of uniform tools to carry out compliance monitoring activities.

In 2013, NERC and the Regional Entities began to develop and implement tools that will define techniques and methods to perform compliance monitoring in a consistent manner across the ERO Enterprise. The Regional Entities began using the first of these tools, the *Compliance Auditor Checklist*, in August 2013. In December 2013, NERC and the Regional Entities completed the first draft of a companion document for the *Compliance Auditor Checklist*, specifically, the *Compliance Auditor Handbook*, as found in the *ERO Enterprise Compliance Auditor Manual* (Auditor Manual). NERC disseminated the Auditor Manual and provided initial training to Regional Entity auditors during the first quarter of 2014. In the second quarter of 2014, the Regional Entities began to use the Auditor Manual and its related processes and procedures on a select number of audits. Throughout 2014, NERC and the Regional Entities will revise and expand the Auditor Manual to address additional audit topics, reflect additional processes developed through RAI activities, and include lessons learned.

A second key RAI compliance activity, the Prototypes and Pilot program, focuses on the development and implementation of a formalized approach to risk assessments and testing of management controls. NERC and the Regional Entities initiated the first phase of the Prototypes and Pilot program during 2013. This phase explored different approaches to applying risk-based auditing concepts (e.g., audit scoping, reliability risk assessments, and management controls review and testing). For 2014 and beyond, a team consisting of NERC, Regional Entity, and industry representatives as well as an independent audit consultant will evaluate the findings and determine the best audit approach to implement throughout the ERO enterprise.

NERC and the Regional Entities are also developing and implementing activities that will address the transition to CIP Version 5 and redesign the tools and information available for compliance monitoring. In addition, and as discussed in further detail below, NERC and the Regional Entities have consolidated the annual CMEP Implementation Plans with the goal of implementing certain risk-based compliance enhancements.

#### **b. RAI Improvements to Compliance Enforcement Processes**

The enforcement aspect of the RAI builds on the success of FFT to develop incentives for registered entities to distinguish between poor performance and positive behaviors that contribute to higher accountability and improved reliability performance. The RAI calls for NERC to do the following by 2016: (i) exercise discretion to focus resources on the most serious and substantial risks to the reliability of the BPS; and (ii) empower registered entities to self-identify, mitigate and record noncompliance subject to NERC and Regional Entity oversight.

Similar to the RAI compliance monitoring effort, the enforcement element of RAI seeks to align the ERO's enforcement processing activities with levels of risk to the reliability of the BPS. Achieving this alignment will promote efficiencies for both the ERO Enterprise and

registered entities by eliminating undue regulatory burdens, streamlining documentation and filing requirements, and substantially improving the processing of noncompliance and related mitigating activities.

In 2013, NERC began implementing a series of activities in connection with RAI. These activities consisted of both short-term and long-term solutions to address registered entity concerns and improve enforcement processes. For example, in 2013, NERC and the Regional Entities developed the *ERO Self-Report User Guide*. This document explains the type and quality of information that a registered entity should submit with a self-report in order to allow for a prompt evaluation of noncompliance, and, if appropriate, a prompt disposition of the noncompliance if it poses a minimal risk to the reliability of the BPS. A companion *ERO Mitigation Plan Guide* document was also developed. NERC posted the draft guides in January 2014 for public review and comment. The final user guides are now available on the RAI page on the NERC website.<sup>69</sup>

Second, NERC and the Regional Entities began two pilot programs to test RAI enforcement concepts. The first pilot, the Aggregation of Minimal Risk Issues program, tests selected registered entities' ability to proactively self-address, identify, and mitigate minimal risk issues. The second pilot is testing the application of enforcement discretion; the purpose of this pilot is to identify minimal risk issues that would be recorded and mitigated without triggering an enforcement action. These pilot programs began a six-month testing cycle in October 2013. NERC and the Regional Entities are gradually expanding the programs to include additional registered entities.

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<sup>69</sup> Available at: <http://www.nerc.com/pa/comp/Pages/Reliability-Assurance-Initiative.aspx>.

In addition, as of January 2014, all Registered Entities implemented the triage process. Under this process, all Regional Entities will review instances of noncompliance and make an initial determination as to whether an issue will proceed through enforcement or whether additional information is needed.

Going forward, NERC will continue to implement and evaluate these enforcement concepts. These processes will be further discussed in an informational filing on the RAI that NERC will submit to the Commission in 2014.

### **3. Development of a Consolidated CMEP Implementation Plan**

NERC and the Regional Entities no longer create nine separate CMEP Implementation Plans, but rather have consolidated these documents into a single integrated CMEP Implementation Plan for the ERO Enterprise. The consolidated CMEP Implementation Plan uses a streamlined format that eliminates redundant information, improves the transparency of CMEP activities, and promotes consistency among the Regional Entities' Implementation Plans.

During the implementation year, NERC or a Regional Entity (with NERC approval) may update the Implementation Plan to change the *Actively Monitored List of Reliability Standards*, compliance monitoring processes, Regional Entity processes, or to provide updates. When updates occur, NERC will post a revised Implementation Plan to its website and issue a compliance communication. A Regional Entity may also update its Implementation Plan, with NERC approval. NERC is responsible for updating the ERO CMEP Implementation Plan to reflect any Regional Entity's changes and for posting the updated plan to its website and issuing compliance communications.

Following each implementation year, the Regional Entities will complete a CMEP Implementation survey due in January of the following implementation year (e.g., the 2014

CMEP Implementation Plan survey is due in January 2015). This survey will provide Regional Entity-specific information on compliance monitoring, outreach, enforcement, CMEP program effectiveness, and other regional activities. NERC will use this information to monitor Regional Entity CMEP implementation and to plan for the following implementation year.

**4. Improvements in Processing of Compliance and Enforcement Items by NERC and the Regional Entities**

**a. NERC and the Regional Entities Have Improved the Speed and Efficiency of Processing Enforcement Items**

During the assessment period, NERC and the Regional Entities have continued to hold industry accountable for violations that create serious risk to the BPS, and to implement improvements to ensure that enforcement actions are timely and transparent to industry. As discussed in further detail in the “Enforcement” section of the NERC Assessment of Regional Entity Delegated Functions (**Attachment 3**), by the end of 2013, NERC had reduced the number of active violations older than 24 months (excluding those held by appeal, a regulator, or a court)<sup>70</sup> so that only 65 such active violations remained. There has been consistent progress since 2012 in achieving the goal of processing all violations within 24 months following discovery.

By working to reduce the number of aging violations while improving the processing speed for newer violations, NERC and the Regional Entities reduced the average age of violations in the ERO caseload by six percent in 2013, from 11.86 months in 2012 to 11.2 months.

NERC’s successes in improving the efficiency of violation processing can be attributed to several factors, including the implementation and use of streamlined enforcement processing

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<sup>70</sup> “Held by appeal, a regulator or a court” (or “on hold”) refers to violations that are not currently being processed by NERC or the Regional Entities as a result of a court or administrative proceeding that will impact the resolution of the violation.

mechanisms, such as FFT and the SNOP. The use of streamlined enforcement processing mechanisms has allowed NERC to increase substantially the number of violations filed in a given year, reducing the caseload and in turn, improving processing times.

In 2009 and 2010, NERC filed NOPs with the Commission for a combined total of 1,540 violations. In 2011, after implementing the use of streamlined enforcement processing mechanisms, NERC filed a total of 1,697 violations – more than the two previous years combined. In 2012, NERC filed a total of 1,767 violations. In 2013, NERC filed a total of 1,862 violations. NERC processed approximately 43 percent of the violations filed in 2013 using the FFT mechanism.

In addition to the use of streamlined enforcement mechanisms, NERC has dedicated substantial resources to improving its enforcement processing activities and performance. In fact, during the period covered by this *Five-Year ERO Performance Assessment Report*, NERC has more than doubled the size of its enforcement processing staff, going from four full time equivalent personnel (FTEs) in 2010 to nine FTEs as of January 1, 2014.

Lastly, NERC has taken several steps to enhance collaboration and consistency across the entire ERO Enterprise. NERC enforcement processing has assigned staff to work closely with each Regional Entity to enhance the relationships with each Regional Entity and to develop greater knowledge and expertise concerning each Regional Entity and identify areas for collaboration and process enhancement. In addition, NERC is continuing to provide training to the Regional Entities with the goal of increasing the consistency of enforcement processes and documents. Through collaboration with the Regional Entities, NERC expects to build on its past successes and continue to work toward reducing aging caseload, reducing enforcement processing times, and ensuring consistency in enforcement processes and procedures.

NERC and the Regional Entities have continued to work collaboratively to develop and implement a set of metrics to measure the efficiency with which enforcement items are processed. Development of these performance items was an area for improvement identified in the Commission's order on NERC's Three-Year ERO Performance Assessment.<sup>71</sup> A set of final metrics has been agreed upon and a set of common parameters was developed to ensure that metrics measurements by NERC and the Regional Entities remain consistent. To that end, in the third quarter of 2013, NERC and the Regional Entities developed a set of business rules to ensure integrity and alignment across NERC and Regional Entity data. Ensuring the integrity of this data is important for analyzing trends and calculating processing metrics.

The four metrics developed to monitor the performance of NERC and the Regional Entities in processing enforcement items are:

- (1) Caseload Index – computes the number of months it would take to clear the violations in a Compliance Enforcement Authority's (CEA, i.e., NERC or a Regional Entity) inventory based on the CEA's average monthly processing rate for the preceding twelve month period;
- (2) Violations in Inventory – reports the number of violations in the CEA's caseload;
- (3) Violation Aging – reports, by Regional Entity, the number of violations discovered in each year beginning with 2007 that have not been filed with the Commission or otherwise resolved;<sup>72</sup> and
- (4) Mitigation Activity Aging – identifies the status of mitigation activity based upon age of violations.

NERC will continue to analyze and evaluate violation processing data. The purpose of analyzing violations and violation processing information is to identify trends and emerging risks. This analysis will provide NERC with insight into the effectiveness of NERC's and the

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<sup>71</sup> *Order on the Electric Reliability Organization's Three-Year Performance Assessment*, 132 FERC ¶ 61,217 (2010) at PP 138 and 217.

<sup>72</sup> NERC also monitors Violation Aging by Disposition Method. This includes the average turnaround time for each disposition method for violations discovered within a specified time horizon (i.e., discovery to date filed with NERC, date filed with NERC to date filed with the Commission, and discovery to date filed with the Commission).

Regional Entities' processes and programs. The analysis informs the development of enforcement policies and processes and offers feedback for other departments such as Standards.

NERC's departments collaborate to leverage analytics as a risk management and resource allocation tool. As an example of this effort, NERC is closely monitoring the status of mitigation activity completion, regardless of whether or not the violation is on hold. NERC aims to work with the Regional Entities to reduce the amount of time from discovery of a violation to completion of the mitigating activity, thereby reducing the ongoing risk that these violations may pose to reliability.

#### **b. Oversight of Regional Entity Processes and Actions**

NERC is continuously evaluating and improving its methods of overseeing the Regional Entities' implementation of CMEP processes and procedures. During the assessment period, NERC adopted a more methodical approach to evaluating Regional Entity performance with respect to enforcement activities. NERC has also enhanced its approach to evaluating Regional Entity compliance activities. These oversight activities ensure that the Regional Entities are meeting their obligations under the NERC ROP and the RDAs. These oversight activities also promote transparency and consistency, and drive the identification and implementation of best practices across the ERO Enterprise.

For additional information regarding NERC's oversight of Regional Entity enforcement program and processes, see the "Enforcement" section of the NERC Assessment of Regional Entity Delegated Functions, **Attachment 3** to this *Five-Year ERO Performance Assessment Report*.

#### **c. Developing Common Compliance Auditor Qualifications Across the ERO Enterprise**

NERC and the Regional Entities are developing common ERO auditor qualification

requirements and auditor job descriptions that will be consistently used across the ERO Enterprise. Establishing common ERO auditor qualifications is an initiative specified in the 2013-2016 ERO Strategic Plan.<sup>73</sup> NERC and the Regional Entities will establish key attributes and skill sets that audit team members should possess to ensure the audit team composition includes competencies needed to complete an effective audit. Establishing common ERO job descriptions promotes a consistent approach in attracting and retaining the necessary talent for auditor positions. Common auditor qualification criteria, training, and audit approach help promote high-quality audits and consistency in CMEP implementation activities across the ERO Enterprise.

**d. Enhancing the Training Program for Auditors so that Processes and Procedures Developed in the RAI are Implemented Consistently Across the ERO Enterprise**

As part of its Regional Entity Assurance and Oversight function, NERC is responsible for supporting the development of qualified and trained compliance operations and auditing staffs at both NERC and the Regional Entities. In addition to the development of a common set of auditor qualifications, described in the immediately preceding subsection, NERC ensures the proper qualifications of personnel for auditing and other essential compliance roles through training. As noted above, NERC and the Regional Entities collaborated to create the *Compliance Auditor Checklist* and *Compliance Auditor Handbook*, as found in the Auditor Manual.<sup>74</sup> These documents will be reviewed and revised to incorporate lessons learned from the RAI pilots. NERC will train auditors to ensure that Regional Entities are consistently applying the

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<sup>73</sup> The *Electric Reliability Organization Enterprise Strategic Plan 2013-2016* is available at: <http://www.nerc.com/gov/bot/FINANCE/Documents/ERO%20Enterprise%20Strategic%20Plan%202013-2016%20FINAL%2005%2009%2013.pdf>

<sup>74</sup> Available at: [http://www.nerc.com/pa/comp/ERO%20Enterprise%20Compliance%20Auditor%20Manual%20DL/ERO\\_Enterprise\\_Compliance\\_Auditor\\_Manual\\_version\\_1.pdf](http://www.nerc.com/pa/comp/ERO%20Enterprise%20Compliance%20Auditor%20Manual%20DL/ERO_Enterprise_Compliance_Auditor_Manual_version_1.pdf).

procedures and methodologies of these documents. Auditor training will also incorporate relevant changes related to enforcement processing, including changes to the self-reporting process and enhancements to the FFT process. Setting clear expectations for registered entities regarding audit practices and procedures should also allow registered entities to increase the efficiency and effectiveness of their pre-audit preparation.

**D. Identification, Prioritization, and Dissemination of Information on Risks to the BPS**

NERC is an expert resource for industry on reliability risks and information because it is uniquely positioned to assess potential impacts to reliability and raise awareness of threats to reliability. NERC draws upon a plethora of resources, discussed below, to make its assessments, including the RISC priorities, robust databases of information on transmission, generator and demand-response availability, the annual NERC *State of Reliability* report, and other assessments and reports, as well as internal core analyses of events. In its risk-informed approach, NERC uses performance analysis, solid technical foundation, sophisticated statistical analyses, and integrated validation with actual system events to enhance BPS reliability. As described in §II.D.1 below, at the direction of its Board of Trustees, NERC has developed and is implementing a specific RRM process to create and execute plans for managing reliability risks.

As an example of risk identification, NERC's *2013 Long-Term Reliability Assessment* (LTRA) identified significant emerging reliability issues that industry will face over the next decade.<sup>75</sup> These challenges stem from, among other things, a changing resource mix comprised of significant increases in variable energy resources to meet renewable portfolio standards, increased reliance on natural gas-fired generation and demand-side management primarily driven by economics, and the retirement of nearly 10% of North America's generation capacity.

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<sup>75</sup> Available at: [http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/2013\\_LTRA\\_FINAL.pdf](http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/2013_LTRA_FINAL.pdf).

Another resource for identifying and prioritizing risks is NERC's Event Analysis process. This process, which is described in greater detail in §II.D.3 below, establishes a systematic approach to capturing details about all BPS events, from minor Category 1 Events that typically do not have a significant impact on electricity users, to Category 4 and 5 Events that result in widespread customer outages.

Collectively, these resources provide an independent and complete picture of risks to reliability and key BPS reliability indicators such as resource adequacy, peak demand, energy forecasts and transmission developments. These efforts and well-developed resources are critical to how NERC approaches reliability, learns from events on the BPS, and prioritizes resources.

NERC draws upon these resources to inform industry and policymakers about trends and challenges to reliability. One example is the work of the NERC Integration of Variable Generation Task Force (IVGTF), which developed several recommendations that support the reliability considerations for accommodating large amounts of variable generation.<sup>76</sup> These recommendations guided the California Independent System Operator (CAISO) in finding solutions to how it will ensure reliability given the significant development of variable energy resources in that region of the country. Another example is the *Accommodating an Increased Dependence on Natural Gas for Electric Power* report that examined the different risks, arising out of the interdependence of the BPS and the natural gas delivery system, which can affect reliability.<sup>77</sup> Recommendations from this report are being used by WECC, the CAISO, and the Midcontinent Independent System Operator, among others, to identify approaches to minimize vulnerabilities due to electric system-gas system interdependence.

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<sup>76</sup> Information about the IVGTF is available at: [http://www.nerc.com/comm/PC/Pages/Integration-of-Variable-Generation-Task-Force-\(IVGTF\)-2013.aspx](http://www.nerc.com/comm/PC/Pages/Integration-of-Variable-Generation-Task-Force-(IVGTF)-2013.aspx).

<sup>77</sup> Available at: [http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC\\_PhaseII\\_FINAL.pdf](http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_PhaseII_FINAL.pdf)

## 1. Establishing a Structured Reliability Risk Management Process

In response to direction from the NERC Board in February 2013, NERC has developed a RRM process to create and execute plans for managing reliability risk and to integrate these plans with the business planning and budgeting process. The RRM process leverages: (i) the business acumen of the RISC; (ii) the technical knowledge of the NERC Operating Committee, Planning Committee, and CIP Committee (CIPC); (iii) the diverse set of tools that can be employed by the ERO to manage risk; and (iv) the open and transparent nature of the ERO. The RRM process is comprised of the following stages:

- (1) Strategic Planning: In this phase, the RISC works to collection information and to identify broad areas of reliability risk to be recommended to the NERC Board for further analysis and study.
- (2) Analysis: In this phase, members of the RISC work with the technical committees they represent to identify specific risks within the broad areas accepted by the NERC Board. This phase includes problem definition, gap analysis, and selection of measurement approaches.
- (3) Solution Design: In this phase, members of the RISC develop potential solutions to the problems identified in the previous stage. NERC uses this information to develop the *ERO Top Priority Reliability Risks* for the upcoming business planning and budget cycle.
- (4) Business Planning and Budgeting: In this phase, NERC staff and the Regional Entities work together to include in the annual business plans and budgets descriptions of the reliability risks that are to be addressed in the coming year and the resources needed to support those efforts.
- (5) Preparation: In this phase, ERO staff, stakeholders, and third parties<sup>78</sup> discuss the plans identified in the latest business plan and budget. At this stage, NERC's committees have an opportunity to align their work plans with the business plan and budget.
- (6) Execution: In this phase, stakeholders, staff, and third parties execute the detailed plans developed in the prior phase.

Specific documentation or other aids to assist in the implementation of the RRM

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<sup>78</sup> "Third parties" in this context might refer to industry manufactures and service vendors, who might be asked to work on a specific problem, tool or application.

process,<sup>79</sup> document templates, and detailed instructions and training are being developed to support the execution of this process. NERC intends that the RRM process will become an integral part of ERO operations.

NERC will continue the work of the RISC to develop risk profiles (including HILF issues) for the ERO. These profiles of the BPS will inform how the ERO prioritizes and ranks reliability risks. For high priority risks, NERC will develop project plans and business case assessments outlining initiatives to address those risks.

## **2. ERO Top Priority Reliability Risks for 2014-2017**

As described immediately above, the RRM process includes the identification of the *ERO Top Priority Reliability Risks* for each upcoming business planning and budget cycle. The development of the list of top ten high priority reliability risks is intended to focus the efforts of the ERO Enterprise program areas, including training and education, Reliability Standards development, and compliance. NERC developed a set of the ten top priority reliability risks to be focused on in the development of the *ERO Enterprise Strategic Plan 2014-2017*. The development of this list started with a reliability gap analysis that the RISC presented to the NERC Board in August 2013. NERC staff then undertook further review and analysis to identify any additional reliability risk areas of strategic importance for the ERO. Next, qualitative estimates of probability, consequence, and current level of risk management were prepared for each of the identified reliability risks within the chosen areas. NERC used this information to identify ten top priority reliability risks requiring increased attention or additional activity. Following this analysis, recommendations were developed based on previous committee discussions; industry dialogue at the Reliability Leadership Summit; and past work products such

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<sup>79</sup> This documentation and other aids may include worksheets, diagrams, task descriptions, and similar items.

as the LTRA, the *State of Reliability* report, and various special reports and assessments. The ten high priority reliability risks are:

- (1) Changing Resource Mix: As the generation and load on the power system changes (e.g., integrated variable resources, increased dependence on natural gas, increased demand-side management, new technologies deployed), the system is being brought into states that are significantly different than those considered when the system was designed and planned, exposing new vulnerabilities not previously considered. Fundamental operating characteristics and behaviors are no longer a certainty.
- (2) Resource Planning: Plant retirements (largely due to implemented environmental regulations; increased uncertainty in future resources due to other potential environmental regulations; and lower natural gas prices, which significantly affect power plant economics) are leading to cases where resources may be inadequate to ensure firm demand is served at all times. As the system continues to change, some regional assessments identify concerns with insufficient reserve margins as early as 2014 and 2015 in the ERCOT and Midcontinent ISOs.
- (3) Protection System Reliability: A fault accompanied by a failure of any protection system component could in some cases result in instability, violation of applicable thermal or voltage ratings, unplanned or uncontrolled loss of demand or curtailment of firm transfers, or cascading outages.
- (4) Uncoordinated Protection Systems: A lack of protection system coordination has the potential to increase the size and magnitude of events due to unnecessary trips. Uncoordinated protection systems were identified as contributing to the September 8, 2011, and August 14, 2003 events.
- (5) Extreme Physical Events: While the probability of extreme physical events (such as physical attack, GMD, or severe weather) that lead to extensive damage is low, the potential consequences are significant enough that risk avoidance (reducing the probability) is insufficient as a sole risk management strategy.<sup>80</sup>
- (6) Availability of Real-Time Tools and Monitoring: Not having the right tools and monitoring available to manage reliability in real time is a latent problem waiting for the right combination of events to exploit it.
- (7) Protection System Misoperations: NERC's 2012 and 2013 *State of Reliability* reports identified protection system misoperations as a significant threat to BPS reliability.
- (8) Cold Weather Preparedness: Lack of generator preparedness for cold weather extremes may result in forced outages, de-ratings, and failures to start.

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<sup>80</sup> Additional strategies may incorporate factors like improving resiliency and reducing restoration times.

Insufficient availability of intra-regional generation and limits on import transfer capability may result in insufficient generation to serve forecasted load, resulting in load shedding.

- (9) Right-of-Way Clearances: Transmission owners and applicable generation owners may have established incorrect ratings based on design documents, rather than on the actual facilities built. Managing to stay within system operating limits and interconnection reliability operating limits that are based on incorrect ratings may be inadequate to prevent equipment damage and/or instability, cascading outages, or separation. Ensuring clear right-of-ways can reduce adverse impacts to reliability even when SOLs and IROLs are based on incorrect ratings.
- (10) 345-kV Breaker Failures: NERC has identified a potential trend of 345 kV SF6 puffer type breakers failing. Circuit breaker failures, in conjunction with another fault, may lead to more BES facilities removed from service than required to clear the original fault.

### **3. NERC Event Analysis Process and How it is Used to Identify Risks to the BPS and Disseminate Lessons Learned**

NERC has developed a voluntary Event Analysis process that delivers quality, timely and actionable lessons learned to registered entities. Development of the Event Analysis process was led by the Event Analysis Subcommittee (EAS), a cross-functional group of industry experts.<sup>81</sup>

The Event Analysis process begins with a registered entity making an initial assessment of an occurrence and determining if the occurrence falls within one of five qualifying event categories.<sup>82</sup> The event category is determined by weighing the level of significance of a qualifying event and its impact on the interconnected BPS. After a qualifying event occurs, the applicable Regional Entity holds a planning meeting with all involved parties, including other registered entities. If a qualifying event is categorized as Category 3 or higher, the registered entity will prepare an Event Analysis Report (EAR), in which the registered entity describes the

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<sup>81</sup> The EAS is a subcommittee of the NERC Operating Committee.

<sup>82</sup> A description of each event category is included in the *Electric Reliability Organization Event Analysis Process – Version 2* report, available at: <http://www.nerc.com/pa/rm/ea/Pages/EA-Program.aspx>.

sequence of events and identifies causal factors and appropriate corrective actions. The registered entity then submits the EAR to the applicable Regional Entity(ies) for review, and then to NERC. The registered entity, in collaboration with the ERO, drafts the proposed lessons learned from the event and submits them to the applicable Regional Entity. Once the event analysis is complete, NERC shares any lessons learned with industry by publishing them as soon as practical. NERC staff analyzes EARs to identify reliability risks, trends, and potential gaps in Reliability Standards, compliance, and other programs. NERC also reviews the EARs to assign descriptive cause codes, which assist in identifying trends and corrective actions that will prevent recurrence of similar events.

Since initial implementation of the Event Analysis process in 2010, there have been more than 388 qualified events reported to the ERO and more than 77 lessons learned produced, including 14 published in 2013.

			
Event Category	Count (Total)	Count (2013)	Comments
CAT 1	256	91	
CAT 2	114	33	
CAT 3	14	6	
CAT 4	3	0	SW Winter Weather (2011) SW Blackout (2011) Derecho (2012)
CAT 5	1	0	Hurricane Sandy (2012)
<b>Total CAT 1-5 Events</b>	<b>388</b>	<b>130</b>	
<b>Non-Qualified Occurrences reported</b>	<b>1711</b>	<b>338</b>	

**RELIABILITY | ACCOUNTABILITY**

Participation in the voluntary Event Analysis process does not relieve registered entities of their obligation to comply with NERC Reliability Standards. While performing the steps of the Event Analysis process, the registered entity is encouraged to continue performing critical self-assessments of compliance with Reliability Standards in connection with the event and to conduct compliance self-assessments for review by applicable Regional Entities. If a registered entity discovers a possible violation in the process of analyzing an event, it is encouraged to self-report that possible violation to the applicable Regional Entity.

NERC is continuously improving how it defines, catalogs and trends the causes of system events. NERC assesses every event submitted through the voluntary Event Analysis process to identify and share possible risks to reliability with industry. Further, the cause code assignment allows for greater historical trending and predictive analysis.

NERC provides Regional Entity and registered entity staff with cause analysis training. As of December 2013, 164 personnel from all eight Regional Entities and over 600 people from 115 different registered entities have received more than 4,000 hours of cause analysis training, with 432 hours of continuing education hours awarded to 54 NERC-certified system operators in connection with this training. NERC is adding a training and education component to the Event Analysis process to increase the relevance and impact of lessons learned for the Regional Entities, industry, and other stakeholders. Through the Event Analysis process, NERC continues to establish the appropriate balance of data reporting for analysis and use by industry.

NERC continues to work with the Regional Entities to obtain from and review with registered entities information regarding qualifying events and disturbances. The primary goal of this process is to identify reliability risks through robust data gathering, validation, rigorous analysis, and rapid dissemination to industry of information on identified risks and remediation

options. NERC is working collaboratively with the Regional Entities to prioritize analytical efforts based on the Event Analysis process categories. Determining root and contributing causes for each event allows for trend and risk identification. NERC plans to further facilitate event analysis by merging its event-driven databases and defining the relationships between various system cause codes. This analysis of system events will inform NERC of gaps in Reliability Standards, compliance monitoring and enforcement effectiveness, registration, and risk controls effectiveness.

Additionally, NERC is collaborating with the North American Transmission Forum and the North American Generator Forum to further enhance the Event Analysis process and lessons learned dissemination in identifying risks to the BPS. Further, NERC plans to improve the timeliness of the availability of and access to final event reports by creating a secure portal that will be accessible by industry to obtain these reports.

#### **4. Reports on Reliability**

In May 2012, NERC released its first *State of Reliability* report assessing grid reliability based on performance trends identified through data and analysis of system disturbance events. The report presented NERC's integrated view of ongoing BPS reliability and performance trends. It assessed 18 reliability performance metrics that measure whether an adequate level of reliability exists in North America. The report also included an analysis from the frequency response initiative, the 2011 demand response availability assessment, event analysis trends, and post-seasonal assessments. The initial *State of Reliability* report included the following key findings:

- (1) Reliability of the BPS remains adequate with little change in trends between 2008 and 2011;
- (2) Frequency response is stable with no deterioration;

- (3) Protection system misoperations are a significant reliability issue;
- (4) Equipment failure warrants further analysis; and
- (5) Resource mix changes necessitate new metrics.

Subsequently, *State of Reliability* reports have been issued for 2013 and 2014.<sup>83</sup> Going forward, NERC will continue to prepare its annual *State of Reliability* report and the associated reliability metrics.

As noted earlier, for many years NERC has prepared and issued an annual 10-year LTRA Report for the North American BPS. The LTRA provides an independent view of the reliability of the BPS and identifies trends, emerging issues, and potential concerns. Recent LTRAs have focused on a variety of emerging issues expected to impact BPS reliability. Most notably, a rapidly changing resource mix with substantial retirements of coal-fired and nuclear capacity, paralleled by a growing reliance on natural gas-fired generation that has created fuel transportation concerns in certain areas. Ongoing unit retirements are also contributing to diminishing reserve margins that fall below reference reserve margin levels during the 10-year outlook. Finally, continued penetration of variable resources and a growing dependence on demand-side management programs create uncertainties for system planners and operators. Each LTRA report also provides high-level recommendations for each emerging issue and tracks ongoing industry progress.

In addition to the annual LTRA, NERC issues two seasonal (i.e., summer and winter) assessment reports each year in which it identifies, assesses, and reports on the industry's preparations to manage potential seasonal issues such as significant generation or transmission

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<sup>83</sup> NERC's *State of Reliability 2014* report is available at:  
[http://www.nerc.com/pa/RAPA/PA/Performance%20Analysis%20DL/2014\\_SOR\\_Final.pdf](http://www.nerc.com/pa/RAPA/PA/Performance%20Analysis%20DL/2014_SOR_Final.pdf).

constraints or potential fuel-related impacts. NERC also issues other, special reports from time to time that focus on current or emerging technical or other reliability concerns, such as changing resource mix (increasing amounts of variable generation and potential retirements of fossil-fueled generation), misoperations, HILF event concerns, and smart grid considerations.

NERC has implemented several enhancements to the LTRA processes and reports in response to areas for improvement identified in the three-year ERO performance assessment. NERC has revised its reliability assessment guidelines to establish a requirement for an annual scenario analysis.<sup>84</sup> Scenario analyses are typically included in separate special assessments prepared by the Reliability Assessment program, including the following reports that NERC issued during the assessment period:

- *Reliability Impacts of Climate Change Initiatives: Technology Assessment and Scenario Development* (2010);
- *Special Reliability Scenario Assessment: Potential Reliability Impacts of Swift Demand Growth After a Long-Term Recession* (2010);
- *Special Reliability Scenario Assessment: Resource Adequacy Impacts of Potential U.S. Environmental Regulations* (2010);
- *Potential Impacts of Future Environmental Regulations* (2011); and
- *Special Reliability Assessment: Accommodating an Increased Dependence on Natural Gas for Electric Power* (2013).

## **5. Bulk Power System Awareness Department**

Previously a functional responsibility of the Electricity Sector Information Sharing and Analysis Center (ES-ISAC),<sup>85</sup> NERC created the Bulk Power System Awareness department

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<sup>84</sup> See *Order on the Electric Reliability Organization's Three-Year Performance Assessment*, 132 FERC ¶ 61,217 (2010), at P 180.

<sup>85</sup> The activities of ES-ISAC are described in §II.E.2 below.

(BPSA) in 2012 to improve NERC's capability to monitor BPS conditions, significant events, and emerging risks to reliability across the 15 reliability coordinator regions in North America.

BPSA develops and disseminates timely, accurate and complete information regarding the status of the BPS from a near-term operational reliability perspective, complementary to RAPA's seasonal and long-term assessments and ES-ISAC's cyber and physical security perspective. BPSA shares this continuous assessment across NERC, the eight Regional Entities and FERC staff through a number of channels, including a *System Awareness Daily Report* that highlights current day potential risks to wide-area reliability, significant operational and security occurrences for the previous day, and high-level information on forecasted loads and reserves.

During major system disturbances, BPSA facilitates information sharing and a common operational picture of BPS status with a broader audience of industry and governmental agencies. BPSA provides ES-ISAC operational reliability information in support of its government and cross-sector coordination activities, and hosts periodic update conference calls for technically oriented government agencies including FERC, the Department of Energy, the Nuclear Regulatory Commission, the Department of Homeland Security, and the Federal Emergency Management Agency.

BPSA administers the NERC Alerts program, which is used to disseminate important reliability and security information to industry, pursuant to §810 of the NERC ROP. Additionally, BPSA actively participates in the Event Analysis Process described in §II.D.3 above, by identifying qualifying events and other items of interest for further trending and analysis.

**E. The ERO Facilitates Information Sharing on Cybersecurity and Cyber and Physical Threats to the BPS among Industry, Regional Entities, and Government**

Section 215(a) of the FPA and the Commission’s regulations at 18 C.F.R. §39.1 define “reliable operation” of the BPS as “operating the elements of the Bulk-Power System within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a Cybersecurity Incident, or unanticipated failure of system elements.” The FPA and the regulations define “Cybersecurity Incident” as “a malicious act or suspicious event that disrupts, or was an attempt to disrupt, the operation of those programmatic electronic devices and communications networks including hardware, software and data that are essential to the Reliable Operation of the Bulk-Power System.” As the Commission is fully aware, identifying, assessing, and preventing threats and risks to both the physical security and the cybersecurity of the BPS, while always matters of concern, have attained increasing significance in the last three to four years.

Two of NERC’s principal programs focused on these areas are the Critical Infrastructure department (CID) and the ES-ISAC. The CID supports efforts to develop and administer critical infrastructure standards, conducts security and reliability outreach visits, provides training and exercise opportunities, and coordinates between industry and governmental entities on CIP matters. The CID accomplishes these activities through active CIP standards drafting team participation, and programs such as the Sufficiency Review Program (SRP),<sup>86</sup> the annual Grid Security Conference (GridSecCon), and the biennial Grid Security Exercise (GridEx). The CID also leverages public-private partnerships to examine CIP policy issues, and it provides staff-

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<sup>86</sup> In 2014, CID renamed the SRP to “Security Readiness Program” to reflect the program’s focus.

level support to NERC's CIPC, an industry-led committee comprised of industry experts in the areas of cybersecurity, physical security, and operational security. The ES-ISAC monitors the physical security and cybersecurity of the electricity sub-sector, gathers information on threats to the physical security and cybersecurity of the sub-sector, and actively disseminates information on such threats and means to avoid or mitigate them to users, owners, and operators of the BPS as well as to applicable government entities and other stakeholders.

Both programs focus significant attention on public-private partnerships, which are critical to effective information sharing. CID and the ES-ISAC work closely with NERC entities, industry trade associations, national and international government departments and agencies, and other sectors to share information, discuss sector priorities, and respond to legislative and executive branch requests. Recent partnership activity includes sector responses to Executive Order (EO) 13636, *Improving Critical Infrastructure Cybersecurity*, and Presidential Policy Directive (PPD) 21, *Critical Infrastructure Security and Resilience*. This work included coordinating with government and across sectors to develop a voluntary cybersecurity framework, based on existing standards, guidelines, and practices, for reducing cyber risks to critical infrastructure. In addition, NERC worked closely with government and industry to rewrite the *National Infrastructure Protection Plan*, which outlines how government and private sector participants in the critical infrastructure community work together to manage risks and achieve security and resilience outcomes.

This section of this *Five-Year ERO Performance Assessment Report* describes NERC's activities in these areas during the assessment period, with an emphasis on activities during the latter part of the period. Included in this section are descriptions of CID programs, such as the

CIPC, the SRP, the GridSecCon, and the GridEx, as well as ES-ISAC activities, including the Cyber Risk Preparedness Assessment (CRPA) program.

## **1. Critical Infrastructure Department Activities**

### **a. Critical Infrastructure Protection Committee**

NERC's CIPC focuses on advancing the physical and cybersecurity of the critical electricity infrastructure of North America. The committee consists of both NERC-appointed regional representatives and technical subject matter experts. The CIPC coordinates NERC's security initiatives and serves as an expert advisory panel to the NERC Board, to the ES-ISAC, and to NERC standing committees, in the areas of cybersecurity and physical security. During quarterly CIPC meetings, CIPC members receive security training and participate in briefings regarding the latest security issues. To address issues related to cybersecurity and physical security, the CIPC establishes working groups or task forces comprised of subject matter experts who review and examine specific issues and develop reports and recommendations.

In 2012, the CIPC reorganized and expanded to allow it to produce more deliverables. This reorganization established new subcommittees and created new task forces and working groups to address emerging issues and initiative requests from the NERC CEO and NERC Board. The reorganization included forming task forces to address cybersecurity-related subjects identified in the 2010 *High-Impact, Low-Frequency Event Risk to the North American Bulk Power System* report.<sup>87</sup> One CIPC task force, the Cyber Attack Task Force, considered the impact of a coordinated cyber-attack on the BPS and developed flexible options for detecting, operating, and recovering from such an attack. A key component of the resulting Cyber Attack

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<sup>87</sup> Available at: [http://www.nerc.com/pa/ci/resources/documents/hilf\\_report.pdf](http://www.nerc.com/pa/ci/resources/documents/hilf_report.pdf).

Task Force report was the development and use of an attack tree tool that provides key insight into the attack surface of the interconnected BPS of North America.

Following NERC Board approval of the Cyber Attack Task Force report, the CIPC established a High-Impact, Low-Frequency Implementation Task Force to review the recommendations in this and other related reports, and to determine which recommendations the CIPC should address. The High-Impact, Low-Frequency Implementation Task Force determined that the CIPC should continue its analysis of cyber attack trees and analyze issues relating to information sharing, security clearances, security metrics, and physical security guidelines. The CIPC established task forces for all of these issue areas, and most groups have completed their reviews and issued recommendations.

#### **b. Security Readiness Program**

NERC conducts SRP visits, which consist of visits to registered entities to focus on the sufficiency of industry implementation of the CIP Standards. An SRP visit both examines CIP Version 3 compliance in a retrospective review and helps registered entities address transitioning from CIP Version 3 to CIP Version 5 in a prospective view. While compliance with CIP Version 3 and its risk-based assessment methodology remains mandatory until March 31, 2016, many registered entities are concerned about how to transition their compliance and security efforts to Version 5 to meet the April 1, 2016, compliance deadline. Registered entities are exploring how to best manage the transition process to CIP Version 5 while remaining compliant with CIP Version 3. NERC invites Regional Entity representatives to participate in SRP discussions; however, no content from those discussions may be used during a subsequent audit or compliance action unless that content reveals an imminent threat to the BES. NERC staff,

Regional Entity representatives, and outside consultants sign non-disclosure agreements to ensure strict confidentiality of all discussions and materials.

### **c. Grid Security Conferences**

In 2011, NERC hosted the first GridSecCon focusing on physical security and cybersecurity issues facing the electricity sub-sector. NERC has continued to hold these conferences annually to achieve the following objectives:

- Build on NERC's mission to ensure the reliability of the North American BPS through education and training;
- Discuss and provide solutions to emerging industrial control system security issues;
- Deliver expert analysis on social engineering and phishing attacks;
- Focus strategically on public-private partnerships; and
- Provide an update on ES-ISAC activities and issue a call for increased industry participation and communication.

Over 300 industry and government stakeholders attended the most recent GridSecCon in October 2013. More than 20 speakers led discussions focused on industry being transformational, strategic, and tactical in its approach to securing systems. Participants were asked to consider different information sharing techniques; determine if their organizations are resilient through self-assessments; test response activities through exercises; work to ensure that security is built into operations; and enhance the workforce by recruiting, training, and retaining individuals who can address these and other issues. Additionally, almost 200 stakeholders attended credentialed training sessions in cybersecurity and physical security.

#### **d. Grid Security Exercises**

In 2011, NERC hosted the first GridEx, which focused on analyzing industry's response to a physical and cybersecurity scenario. NERC now holds a biennial distributed play exercise and executive tabletop discussion to achieve the following:

- Exercise the current readiness of the electricity industry to respond to a security incident, incorporating lessons learned;
- Review existing command, control, and communication plans and tools for NERC and its stakeholders;
- Identify potential improvements in cybersecurity and physical security plans, programs, and responder skills; and
- Explore senior leadership policy decisions and triggers in response to a coordinated cyber and physical event of national significance with long-term grid reliability issues.

Over 200 organizations participated in GridEx II, which took place November 13, 2014 through November 14, 2013. During the exercise, participants identified five key lessons learned:

- Information sharing has increased;
- NERC has improved ES-ISAC and BPSA coordination functions;
- Simultaneous cyber and physical attacks pose significant challenges;
- Industry continues to refine and enhance its all-hazard incidence response plans and protocols; and
- Industry and government information-sharing stakeholders can better inform incident response through coordination and consolidation of content.

GridEx II included an executive tabletop exercise involving about 30 participants, including electricity industry executives representing a broad cross-section of the industry and senior officials from the federal government. Participants considered a severe cyber and physical

attack scenario of national and international significance, and discussed the policy-level challenges that would need to be addressed by industry and government.

#### **e. Electricity Sub-sector Coordinating Council**

NERC established the Electricity Sub-sector Coordinating Council (ESCC) in 1998 at the request of the Department of Energy to foster and facilitate the coordination of sector-wide, policy-related activities and initiatives designed to improve the reliability and resilience of the Electricity Sub-sector, including physical and cyber infrastructure. In 2010, NERC restructured the ESCC to consist of industry senior executives with NERC's CEO as the ESCC chair. The ESCC provided advice to the NERC Board on policy-level matters related to critical infrastructure, developed a Critical Infrastructure Strategic Roadmap, and provided oversight on several NERC and industry initiatives to address HILF events and other critical infrastructure risks to the BPS.

In August 2013, the NERC Board approved a new ESCC charter, which amended, superseded, and terminated the existing charter. The new charter provides for a total of 30 CEO-level representatives, including members of the ESCC Steering Committee. NERC's CEO continues to serve on the ESCC and its Steering Committee. The transition formally recognized the significant increased CEO interest and participation on cybersecurity issues, focused industry association activities through an existing channel recognized by government agencies, and provided a unified industry framework upon which to build in response to President-issued orders and directives, such as EO-13636 and PPD-21.

## **2. ES-ISAC Tools and Activities**

### **a. ES-ISAC Portal**

The ES-ISAC has seen a tremendous leap in its user base since its inception in 1998, with

more reporting from organizations and more information sharing between members of industry. The ES-ISAC portal, which became functional in April 2012, is the industry's first and often primary interface with the ES-ISAC. The portal is continuously updated with technical and trend reports, watch lists, advanced sector information sharing tools, and other relevant resources. The portal receives "Indicators of Compromise" from various sources, including U.S. government departments and agencies, and NERC distributes this information to electricity sector entities. The portal allows the ES-ISAC to reach thousands of users and hundreds of organizations across industry to discuss and exchange security-related information. The ES-ISAC is concentrating its efforts on increasing the user base of this important portal. The success of this effort relies on the value of information available on the portal as well as the timeliness with which information reaches users. To achieve this goal, the ES-ISAC is enhancing portal capabilities to improve the ease of use and to improve analytic collaboration across the sub-sector.

Current capabilities of the portal include publishing alerts and other informational products, exchanging threat indicator information, and providing self-service access to portal users. Upgrades underway will increase flexibility to support additional functionality and capacity using a cloud-based, secure platform solution. The improved portal will facilitate direct data exchange with other ISACs and government partners. The portal will also support ES-ISAC analysts in their information analysis functions and tie the ES-ISAC analysts together with their counterparts in other sectors and in national laboratories. Finally, the portal will add private social media information sharing tools, automated access to enhanced cybersecurity information flows, and predictive analytics.

#### **b. Analytics**

The ES-ISAC has also improved its analytic capabilities by building out its operations

room to include data feeds from multiple sources, such as NERC's situation awareness monitoring tool, and procuring services that deliver cyber awareness information. As a result, the ES-ISAC is uniquely positioned to enhance grid and sector-level resilience by quickly evaluating and addressing potential cybersecurity impacts to BPS operations.

### **c. Industry and Government Coordination**

The ES-ISAC was initiated to gather information from industry participants about security-related events, disturbances, and off-normal occurrences in the electricity sub-sector. The ES-ISAC shares that information with industry as a whole and with government partners. In turn, government entities provide information regarding risks, threats, and warnings to the ES-ISAC. The ES-ISAC adds analytic value to shared information and coordinates with other sectors. It is also responsible for developing industry and government products, including the NERC crisis action plan and the U.S. Department of Homeland Security incident response analysis. In addition, the ES-ISAC co-hosts annual cleared briefings to industry to ensure the electricity sub-sector maintains awareness of new and ongoing threats to the BPS.

Most recently, the ES-ISAC collaborated with the Department of Homeland Security, the Department of Energy, and the Federal Bureau of Investigation to host a series of briefings focused on tactics and tools of emerging cyber threat actors. In addition, in the wake of the April 16, 2013 Metcalf substation incident in California, the ES-ISAC worked with these agencies and other organizations and governmental partners to raise awareness of physical attack threats, to increase local, regional and federal security partnerships, and to support mitigation efforts. These briefings continued through the first quarter of 2014.

### **d. Cyber Risk Preparedness Assessments**

The ES-ISAC conducts CRPAs to assess the cybersecurity capabilities of registered

entities through facilitated tabletop exercises. Conducting these assessments allows the ES-ISAC staff to gain a better understanding of industry capabilities, identify key sector level areas for improvement, and share best practices across industry. Through CRPA exercises, participants gain an improved understanding of their cybersecurity programs and capabilities. These exercises also help participants identify areas for improvement and enhance their abilities to respond to and recover from cybersecurity events. The CRPA also educates participants through defined deliverables and best practices. During 2013, the ES-ISAC incorporated elements of the Electricity Sub-sector Cybersecurity Capability Maturity Model program into the CRPA. Additionally, the ES-ISAC has developed a CRPA kit for entities to use in developing and running their own CRPAs. The kit allows more entities to leverage the CRPA methodology to enhance their preparedness. In February 2013, ES-ISAC staff hosted initial training and education sessions on the kit to accelerate adoption of the methodology across the sector and move the program towards self-sustainment within industry.

### **III. NERC CONTINUES TO MEET THE §39.3(b) CRITERIA**

An explicit requirement for the five-year ERO performance assessment is that it include an explanation of how the ERO satisfies the requirements of 18 C.F.R. §39.3(b). Section 39.3(b) sets forth the requirements for certification as the ERO, which specify that the entity:

- (1) Has the ability to develop and enforce, subject to 18 C.F.R. §39.7, Reliability Standards that provide for an adequate level of reliability of the BPS;<sup>88</sup> and
- (2) Has established rules that:
  - (a) Assure its independence from users, owners and operators of the BPS while assuring fair stakeholder representation in the selection of its directors and balanced decisionmaking in any ERO committee or subordinate organizational structure;

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<sup>88</sup> 18 C.F.R. §39.7 sets forth the Commission's regulations concerning the enforcement of Reliability Standards by the ERO, including provisions pertaining to the imposition of penalties for violations of Reliability Standards.

- (b) Allocate equitably reasonable dues, fees, and charges among end users for all activities under Part 39;
- (c) Provide fair and impartial procedures for enforcement of Reliability Standards through the imposition of penalties in accordance with 18 C.F.R. §39.7, including limitations on activities, functions, operations, or other appropriate sanctions or penalties;
- (d) Provide reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing Reliability Standards and otherwise exercising its duties; and
- (e) Provide appropriate steps to gain recognition in Canada and Mexico.

**Attachment 1** to this *Five-Year ERO Performance Assessment Report* shows in detail that NERC continues to satisfy the requirements of §39.3(b).

With respect to the requirements of §39.3(b)(1), NERC continues to have the ability to develop and enforce, subject to 18 C.F.R. §39.7, Reliability Standards that provide for an adequate level of reliability of the BPS. This requirement encompasses two distinct functions of the ERO: (i) the ability to develop reliability Standards that provide for an adequate level of reliability of the BPS, and (ii) the ability to enforce those Reliability Standards. NERC develops Reliability Standards pursuant to §300 of its ROP and its SPM, Appendix 3A to the ROP. These documents have been revised since NERC was certified as the ERO, including during the current assessment period, and the current versions of §300 and Appendix 3A have been approved by the Commission as ERO Rules. Further, NERC's SPM has been accredited by the ANSI as meeting ANSI's essential requirements for standards development. Moreover, as shown in detail in **Attachment 1**, NERC's Reliability Standards development process contains the essential attributes of the standards development process as set forth in prior Commission orders. As noted, during this assessment period, NERC has made improvements to its SPM, which the Commission has approved.

Further, NERC systematically manages the development of new Reliability Standards

and revisions to standards, in areas of highest need and importance, through its rolling three-year RSDP. The RSDP is revised annually and identifies and prioritizes Reliability Standards development projects in the immediate three-year time horizon, taking into account, among other information, perceived gaps in the Reliability Standards, proposals for closing those gaps, and timing priorities for standards development projects.

NERC enforces compliance with approved Reliability Standards through its CMEP, which is embodied in §400 and Appendix 4C of the ROP; its Organization Registration and Certification Program, which is embodied in §500 and Appendices 5A and 5B of the ROP; and its *Sanction Guidelines*, Appendix 4B of the ROP (all of the foregoing have been approved by the Commission as ERO Rules), as well as through its RDAs with the Regional Entities, which have also been approved by the Commission. Through the organization registration provisions of its ROP, NERC and the Regional Entities identify the users, owners, and operators of the BPS that are obligated to comply with Commission-approved Reliability Standards.

Monitoring and enforcement of compliance with Reliability Standards is conducted primarily by the eight Regional Entities pursuant to §401.4 of the ROP and the RDAs, subject to NERC oversight. Provisions of the ROP describe in detail the required attributes of Regional Entity compliance programs, including compliance program structure, resources and design. The controlling document for NERC's compliance monitoring and enforcement activities is the *Compliance Monitoring and Enforcement Program*, Appendix 4C to the ROP. Appendix 4C specifies compliance monitoring methods to be used and the detailed process steps for each method. Additionally, Appendix 4C specifies the process steps to be followed when a potential violation of a Reliability Standard by a registered entity is identified; as well as the actions required of the registered entity if it is found to be in violation of a Reliability Standard. The

*Sanction Guidelines*, which were significantly revised during this assessment period, specify the factors to be taken into account by the ERO in determining the financial penalty to be assessed for a violation of a Reliability Standard.

Pursuant to the RDAs, each Regional Entity has either adopted the NERC CMEP or a modified version of the CMEP as its compliance monitoring and enforcement program. Compliance monitoring and enforcement activities are further guided by the annual NERC and Regional Entity CMEP Implementation Plans (as described earlier, now combined into a single annual CMEP Implementation Plan document).

As detailed in **Attachment 1**, over this assessment period, NERC and the Regional Entities have continued to increase the resources devoted to compliance monitoring and enforcement activities. In their approved business plans and budgets for 2009, NERC and the Regional Entities provided for, collectively, 158.25 FTE staff and approximately \$32.5 million of direct expenditures in their CMEPs. In their business plans and budgets for 2014, NERC and the Regional Entities provided for, collectively, 303.40 FTE staff and approximately \$57.1 million of direct expenditures in their CMEPs.

With respect to the requirements of §39.3(b)(2)(i), NERC continues to have in place rules that assure its independence from users, owners, and operators of the BPS while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any ERO committee or subordinate organizational structure. This criterion encompasses three distinct considerations: (i) independence of NERC from users, owners and operators of the BPS; (ii) fair stakeholder representation in the selection of NERC's directors (i.e., its trustees); and (iii) provision for balanced decision-making in any NERC committee or organizational structure.

As described in detail in **Attachment 1**, provisions of NERC's Commission-approved Bylaws,<sup>89</sup> along with several NERC policy documents<sup>90</sup> assures NERC's independence from users, owners, and operators of the BPS. Provisions of the NERC Bylaws also assure fair stakeholder representation in the selection of NERC's trustees. Finally, provisions of the NERC Bylaws and of §1300 of the ROP specify requirements for selection of members for and voting procedures on, NERC committees and sub-groups, that provide for balanced decision-making.

With respect to the requirements of §39.3(b)(2)(ii), NERC's Bylaws and §1102 of its ROP provide for equitable allocation of reasonable dues, fees and charges among end users for all of the ERO's statutory activities. Section 1102 provides for the assessments to recover NERC's approved funding requirements to be allocated among countries, regions, and load-serving entities in the North American BPS based on Net Energy for Load (NEL), except where direct assignment of costs to a specific country or region(s) is appropriate. The NEL-based allocation of the annual assessments to cover NERC's and the Regional Entities' annual funding requirements is provided to the Commission for approval in NERC's annual business plan and budget filing.

With respect to the requirements of §39.3(b)(2)(iii), NERC's rules also continue to provide fair and impartial procedures for enforcement of Reliability Standards through the imposition of penalties in accordance with 18 C.F.R. §39.7. These rules and procedures include §400 of the ROP; Appendix 4B, *Sanction Guidelines*, of the ROP; and Appendix 4C, the *Compliance Monitoring and Enforcement Program*, of the ROP, which includes the Hearing

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<sup>89</sup> NERC's Bylaws are considered "ERO Rules." 18 C.F.R. §39.1.

<sup>90</sup> NERC's *Governance Guidelines* is available at: <http://www.nerc.com/gov/Annual%20Reports/Governance%20Guidelines%20-%20Approved%202.6.14.pdf>; NERC's *Employee Code of Conduct* is available at: <http://www.nerc.com/gov/Annual%20Reports/Employee-Code-of-Conduct.pdf>; and NERC's *Policy on Reporting Complaints Regarding Accounting and Code of Conduct Matters*, is available at: [http://www.nerc.com/gov/Annual%20Reports/Whistleblower\\_Policy\\_Final-May%202014.pdf](http://www.nerc.com/gov/Annual%20Reports/Whistleblower_Policy_Final-May%202014.pdf).

Procedures to be followed by Regional Entity Hearing Bodies in presiding over and ruling on disputes raised by a registered entity with respect to a Regional Entity's proposed finding of a violation or the proposed amount of penalty for a violation. All of these provisions have been approved by the Commission as ERO Rules. All of these provisions have been extensively revised, and the revisions approved by the Commission, during this assessment period. **Attachment 1** to this report describes in detail NERC's rules and procedures for the determination and imposition of penalties for violations of Reliability Standards and how they comply with the requirements of §215(e)(6) of the FPA and §39.3(b)(2)(iii) and §39.7 of the Commission's regulations.

With respect to the requirements of §39.3(b)(2)(iv), NERC continues to maintain rules that provide reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing Reliability Standards and otherwise exercising its duties. NERC's Bylaws require that Reliability Standards be developed through an open, transparent, and public process that provides for reasonable notice and opportunity for public comment, due process, and balancing of interests; and that participation in the Reliability Standards development process shall not be limited to NERC members but rather shall be open to all persons and entities with an interest in the reliable operation of the BPS. As noted in the discussion of the first §39.3(b)(1) criterion, above, NERC's Reliability Standards development process is embodied in §300 and Appendix 3A of the ROP. The ROP specify "Essential Principles for the Development of Reliability Standards," which include openness, transparency, consensus-building, fair balance of interest, due process, and timeliness. With respect to balance of interests, the ROP provide for balloting on proposed Reliability Standards to be conducted on the basis of a broad set of ten industry segments, which collectively encompass persons and

entities with an interest in the reliable operation of the BPS. The detailed process steps for developing and approving new or revised Reliability Standards, set forth in the NERC SPM, is based on the procedures of the ANSI and other standards-setting organizations in the U.S. and Canada.

In addition to its rules and procedures for the development of Reliability Standards, NERC's rules provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in the exercise of NERC's other duties, including in the appointment and election of trustees, meetings of trustees, approving amendments to the Bylaws and amendments to the ROP, selection of members for and the conduct of business by committees and subgroups, development and approval of annual business plans and budgets, and the conduct of compliance monitoring and enforcement activities.

Finally, with respect to the requirements of §39.3(b)(2)(v), NERC continues to engage in substantial efforts to gain and maintain recognition as the ERO in Canada and Mexico. One of NERC's corporate purposes, as set forth in its Certificate of Incorporation, is "to act as the electric reliability organization for the United States as certified by the Federal Energy Regulatory Commission and for Canada and Mexico as recognized by applicable government and regulatory authorities in Canada and Mexico, all pursuant to law." In Canada, where by its Constitution the regulation of electricity is primarily within the jurisdiction of each province rather than the national government, NERC's activities to obtain and maintain recognition are conducted on a province-by-province basis. **Attachment 1** details NERC's efforts and accomplishments in the provinces of Alberta, British Columbia, Manitoba, New Brunswick, Nova Scotia, Ontario, Québec, and Saskatchewan, as well as at the National Energy Board. Depending on the particular circumstances of each province, NERC has gained recognition

through statutes or other provisions of provincial law, or through a memorandum of understanding with appropriate entities in the province. As described in **Attachment 1**, NERC's efforts in each province fall into three areas: recognition of NERC Reliability Standards; provisions for sharing of information on issues related to compliance with NERC Reliability Standards; and monitoring and enforcement of compliance with Reliability Standards.

With respect to Mexico, the Comisión Federal de Electricidad (CFE), through the Centro Nacional de Control de Energia (CENACE), and the Area de Control Baja California (ACBC), have entered into a membership and operating agreement (MOA) with WECC. The MOA provides for WECC to assist CENACE and ACBC in monitoring compliance by Designated Entities (the Mexican equivalent of U.S. registered entities) with Mexico Reliability Standards for Baja California, Mexico. CENACE has approved ten Mexico Reliability Standards. Pursuant to the MOA, WECC monitors compliance with Mexico Reliability Standards, but does not have enforcement or registration (designation) authority for CFE. WECC provides compliance monitoring, reviews proposed and completed mitigation plans, and provides assessment recommendations with respect to alleged violations.

In summary, and as shown in detail in **Attachment 1** to this *Five-Year ERO Performance Assessment Report*, the Commission should find that NERC continues to satisfy the requirements of 18 C.F.R. §39.3(b).

#### **IV. REGIONAL ENTITY PERFORMANCE AND EFFECTIVENESS CONTINUES TO IMPROVE**

**Attachment 3** provides NERC's evaluation of the performance of the Regional Entities in carrying out their delegated authorities and responsibilities during the assessment period.

The Commission's regulation specifying the required contents of the ERO's periodic performance assessment reports states that the performance assessment must include, among

other subjects, the ERO's evaluation of the effectiveness of each Regional Entity and recommendations by the ERO for improvement of the Regional Entity's performance of delegated functions.<sup>91</sup> In its September 16, 2010 Order on NERC's *Three-Year ERO Performance Assessment Report*, the Commission stated that future assessments should include, among other things, separate sections addressing each Regional Entity's satisfaction of statutory and regulatory criteria.<sup>92</sup>

In this five-year performance assessment, NERC organized its evaluation of the Regional Entities' performance based on their principal delegated authorities and responsibilities under the RDAs and the NERC ROP. These segments also correspond to the programmatic organization structures generally followed by NERC and the Regional Entities:

- Regional Reliability Standards Development (**Attachment 3**, §I)
- Compliance Monitoring and Enforcement (**Attachment 3**, §II)
  - Organization Registration and Certification (**Attachment 3**, §II.A)
  - Compliance Monitoring<sup>93</sup> (**Attachment 3**, §II.B)
  - Compliance Investigations (**Attachment 3**, §II.C)
  - Compliance Enforcement (**Attachment 3**, §II.D)
- Reliability Assessments (**Attachment 3**, §III)
- Reliability Risk Management (Situation Awareness and Event Analysis) (**Attachment 3**, §IV)
- Business Planning and Budgeting, Finance and Accounting (**Attachment 3**, §V).

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<sup>91</sup> 18 C.F.R. §39.3(c)(1)(iii).

<sup>92</sup> *North American Electric Reliability Corporation, Order on the Electric Reliability Organization's Three-Year Performance Assessment*, 132 FERC ¶ 61,217 (2010), at P 36.

<sup>93</sup> The evaluation of the Regional Entities' performance in Compliance Monitoring includes evaluation of their efforts in providing training, education, and outreach to registered entities and other industry stakeholders on compliance-related matters.

To evaluate the Regional Entities' performance during the assessment period, NERC believed it to be important to use assessment criteria that were well-known to the Regional Entities and that were established at the beginning of, or early in, the assessment period. Accordingly, NERC has generally used the Regional Entities' obligations and responsibilities under the RDAs and the NERC ROP as the basis for evaluating the Regional Entities' performance or as the source for more specific assessment criteria. Although, during the assessment period, the RDAs were significantly revised through a collaborative process among NERC and the Regional Entities, with the revised RDAs going into effect on January 1, 2011 (i.e., approximately 18 months into the assessment period), the Regional Entities' fundamental delegated authorities and responsibilities under the RDAs were not changed in the revised RDAs.

Further, in evaluating the Regional Entities' performance during the assessment period, NERC placed greater emphasis on each Regional Entity's performance during the latter half of the assessment period rather than earlier in the assessment period. Although the assessment is intended to cover the entire five-year period, NERC views the success of a Regional Entity in improving its programs over the course of the period – particularly where improvements have been implemented in response to specific comments, criticisms or recommendations from NERC, the Commission, or the Regional Entity's stakeholders – as especially important to the evaluation. The quality of a Regional Entity's programs and performance as of the end of the assessment period is much more important to the objectives of this review than is a historical review of the Regional Entity's programs and performance at the start of, or in the early portion of, the assessment period. Further, a Regional Entity's willingness to cooperate in implementing new ERO Enterprise initiatives and improvements intended to improve the reliability of the BPS and increase consistency and efficiency across the ERO Enterprise is particularly important to

the evaluation. This focus on improvements, responses to comments and recommendations, and the state of the Regional Entities' programs and performance as of the end of the assessment period, is consistent with the emphasis in the Commission's applicable regulation on comments and recommendations from stakeholders for improvements and the Regional Entity's responses to such comments and recommendations.

In this evaluation of the Regional Entities' performance in the various program areas, NERC has also provided a significant amount of description of NERC's oversight activities of the Regional Entities. NERC's oversight of the Regional Entities' programs and activities provides important context for the performance assessment because, for almost all of the Regional Entities' delegated authorities and responsibilities, NERC's oversight is frequent, and in some areas, virtually continuous. NERC's oversight activities are a significant component of the informational and observational basis for NERC's evaluation of the Regional Entities' performance. Moreover, although this *Five-Year ERO Performance Assessment Report* is appropriately required by the Commission's regulations, it is NERC's ongoing oversight of the Regional Entities' activities that gives NERC both an up-to-date basis for evaluation, and a continuous platform to evaluate the need for and make recommendations for improvements, both in the performance of discrete tasks by individual Regional Entities and on a programmatic, ERO Enterprise-wide basis.

#### **V. NERC HAS SURVEYED STAKEHOLDERS FOR COMMENTS AND SUGGESTIONS FOR IMPROVEMENTS**

One of the components of the ERO's periodic assessment reports as specified in 18 C.F.R. §39.3(c) is that the assessment include "[r]ecommendations by Regional Entities, users, owners, and operators of the Bulk-Power System, and other interested parties for improvement of the ERO's operations, activities, oversight and procedures, and the ERO's response to such

recommendations.”<sup>94</sup> NERC has addressed this component by soliciting comments and recommendations through (i) a stakeholder survey conducted for purposes of the five-year ERO performance assessment, and (ii) posting drafts of the five-year performance assessment report for stakeholder comment.

The stakeholder survey was initiated on October 31, 2013, near the end of the five-year assessment period, when NERC distributed an online survey seeking stakeholder responses. The survey contained 36 specific questions on topics relating to (i) Reliability Standards development; (ii) compliance monitoring; (iii) compliance enforcement; (iv) organization registration and certification; (v) reliability assessment; (vi) performance analysis and metrics; (vii) training, education and personnel certification; (viii) event analysis; (ix) critical infrastructure protection; (x) shareholder communications, public relations and information technology; (xi) business plan and budget; and (xii) independence and stakeholder input. Stakeholders were invited to respond to the questions using a numerical scoring system and, more importantly, to provide free-form narrative comments on the topics covered by the survey. A total of 326 registered entity responses were received. The respondents were located in all Regional Entities, ranging from a low of 23 responses to a high of 97 responses from respondents located within particular Regional Entities. **Attachment 4** provides the text of the questions that were asked in the survey and also provides summary data on the numbers and distribution of respondents.

With respect to posting drafts of the five-year performance assessment for stakeholder comment, on March 3, 2014, NERC posted a draft statement of its activities and accomplishments during the five-year assessment period, as well as drafts of the Regional

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<sup>94</sup> 18 C.F.R. §39.3(c)(1)(ii).

Entities' self-assessments, on the NERC website for stakeholder comment. Subsequently, on June 17, 2014, NERC posted a draft of the *Five-Year ERO Performance Assessment Report* and attachments on its website for stakeholder comment.<sup>95</sup>

**Attachment 4** to this *Five-Year ERO Performance Assessment Report* provides the content specified by 18 C.F.R. §39.3(c)(1)(ii). As noted above, **Attachment 4** provides the questions included in the stakeholder survey, reports the average scores from the responses, and provides summary information on the number and distribution of respondents.<sup>96</sup> More importantly, **Attachment 4** provides the significant narrative comments and recommendations submitted by stakeholders and NERC's responses to those comments. To focus on the key issues, questions and recommendations posed or raised by commenters, and for simplicity, NERC has attempted to summarize the comments and to combine them where appropriate, in order to report the gist of the comments and recommendations. The comments are organized in **Attachment 4** in table format by subject matter area: Reliability Standards; Compliance Operations; Enforcement; Registration and Certification; Reliability Assessment & Performance Analysis Metrics; Training, Education and Personnel Certification; Event Analysis; Critical Infrastructure Protection; Stakeholder Communications, Public Relations and IT; and Business Plan and Budget. A separate table, organized into the same topical sections, provides a summary of key stakeholder comments of the Regional Entities. For each stakeholder comment reported in one of the two tables, NERC has provided in the table, opposite the comment, (i) where applicable, the section or sections of the *Overview of NERC Activities and Accomplishments in*

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<sup>95</sup> The June 17, 2014 posted draft of **Attachment 4** was incomplete, since completion of that attachment required receipt of the stakeholder comments in response to the posting of the draft report and the preparation of responses to the comments for inclusion in the attachment.

<sup>96</sup> Some of the questions by their nature, pertained only to NERC, while others of the questions pertained to both NERC and the Regional Entities. Average scores are reported for NERC or for NERC and the individual Regional Entities as applicable to the particular survey questions.

*the Five-Year Period* or of an attachment to this report in which the subject matter of the comment is addressed, and (ii) for most of the comments, a brief narrative response to the comment as well. NERC submits that the tables provided in **Attachment 4** show that NERC has responded to and addressed, or is in the process of responding to and addressing, the key stakeholder comments and recommendations provided in connection with the development of this *Five-Year ERO Performance Assessment Report*.

**VI. NERC HAS MADE SUBSTANTIAL PROGRESS IN COMPLETING ACTIONS ON ITEMS IN THE COMMISSION'S ORDER ON THE *THREE-YEAR ERO PERFORMANCE ASSESSMENT REPORT***

NERC's *Three-Year ERO Performance Assessment Report*, filed on July 20, 2009, identified and listed a number of actions to be taken in response to comments received from stakeholders as part of the three-year assessment process.<sup>97</sup> Additionally, the Commission's Order on the three-year ERO performance assessment, issued on September 16, 2010, identified a number of areas for improvement.<sup>98</sup> NERC was directed to submit an informational report to the Commission within six months addressing the directives, concerns and requests for information and/or feasibility reports discussed in the Order. NERC filed the Informational Report on March 16, 2011.<sup>99</sup> NERC was able to report either completion or significant progress with respect to many of the items listed in the Commission's Order.

As part of this *Five-Year ERO Performance Assessment Report*, NERC is providing a further report on its progress in addressing the directives, concerns and requests for information

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<sup>97</sup> These actions were listed in Appendix A to **Attachment 1** of the *Three-Year ERO Performance Assessment Report*.

<sup>98</sup> *Order on the Electric Reliability Organization's Three-Year Performance Assessment*, 132 FERC ¶ 61,217 (2010). Appendix A to that Order provided an "Index of Directives" in the Order.

<sup>99</sup> *Informational Filing of the North American Electric Reliability Corporation in Response to the Federal Energy Regulatory Commission's September 16, 2010 Order*, filed March 16, 2011 in Docket Nos. RR09-7-000 and AD10-14-000.

and/or feasibility reports discussed in the Commission's Order on the three-year ERO performance assessment that were not discussed in the March 2011 informational filing. This information is provided in a chart format in **Attachment 5** to this report. As noted in the chart provided as **Attachment 5**, NERC's actions in connection with a number of the items are also discussed in the body of this five-year assessment report.

## **VII. NERC HAS A VISION AND PLAN FOR IMPROVING COORDINATED OPERATIONS ACROSS THE ERO ENTERPRISE TO REACH THE END STATE OF A HIGHLY EFFECTIVE AND EFFICIENT ERO ENTERPRISE**

As described above and in the Attachments to this report, since being certified as the ERO in 2006 and, in particular, during this five-year assessment period, NERC has made substantial progress and recorded significant accomplishments in structuring the ERO Enterprise organization and improving the reliability of the BPS. Despite the achievements to date, the nine-entity structure of the ERO Enterprise, NERC and the eight Regional Entities, is not without certain challenges and risks. Going forward, NERC needs and intends to focus attention on the actions necessary to reach an end-state of a fully-integrated ERO Enterprise that can exercise effective and well-coordinated reliability oversight that mitigates reliability risks to the BPS. Achieving the end-state of a fully integrated ERO Enterprise entails creating greater clarity about the allocation of roles and responsibilities between NERC and the Regional Entities, achieving improved coordination of goals, and establishing more uniform work processes, tools and performance across the ERO Enterprise.

NERC has a vision and plan for achieving this end state of a fully integrated, highly effective and efficient ERO Enterprise. This vision and plan are described in detail in **Attachment 6** to this report.

Reaching this end state necessitates adherence to certain fundamental principles. The ERO Enterprise must:

- Apply technical expertise that is focused on risks to the BPS and important reliability outcomes;
- Achieve results and methods across the ERO Enterprise that are predictable, consistent and timely;
- Share common goals, objectives and measures of success;
- Build relationships that are founded on candor and mutual trust, openness and cooperation;
- Apply collaborative decision-making;
- Ensure efficiencies while minimizing duplication and any activities not affecting reliability outcomes; and
- Avoid undue burden, discrimination, or capriciousness for affected regulated entities.

As detailed in **Attachment 6**, NERC's plan for achieving excellence in the oversight and execution of its statutory functions and in the mitigation of BPS reliability risks requires actions in five areas relating to the relationships and allocations of responsibilities between and among NERC and the Regional Entities:

(1) Clarifying roles and responsibilities. A clear understanding of the roles and responsibilities of NERC and the Regional Entities is required, as well as a clear set of expectations in the execution of the activities performed across the ERO Enterprise. This in turn will necessitate ERO Enterprise program oversight that includes the following essential oversight elements to be provided by NERC in consultation with the Regional Entities:

- An overall program design indicating the program purpose and goals, and design of controls to manage risks;
- Documentation of common methods, practices and procedures to be applied in the program, and performance expectations for each;
- Statements of necessary qualifications of key positions within the Regional Entities for conducting certain statutory activities, and identification of any standards for critical positions;

- Training of NERC and Regional Entity staff for select positions in the conduct of delegated functions;
- A documented and transparent set of process controls and measures to assure delegated responsibilities are properly completed, and to assess the effectiveness of the delegated activities in managing BPS and ERO Enterprise risk; and
- Periodic reporting of results and feedback to Regional Entities on trends and providing opportunities to enhance consistency and effectiveness of results.

To improve the delegation process, it will be important that NERC and the Regional Entities work together to update and refine the RDAs, due for renewal as of January 1, 2016, to provide a clearer division of responsibilities, both related to the division of performance of statutory functions and oversight of those functions, and to provide effective mechanisms to resolve routine differences.

(2) Coordinating strategic planning. NERC and the Regional Entities have collaboratively made significant progress in developing a shared, rolling three-year strategic plan for the ERO Enterprise. However, adoption of the ERO Enterprise goals and objectives into business plans at all of the Regional Entities has varied. In May 2014, the NERC Board approved the 2014 performance metrics. These performance metrics will be used to assess the overall effectiveness of the ERO Enterprise in addressing risk to the BPS, achieving reliability results, assuring Reliability Standards and compliance effectiveness and improving risk mitigation and program execution. They include four overarching metrics focused on overall effectiveness in addressing BPS risks and improving reliability. They also include a number of supporting measures that assess the effectiveness of the key operational elements of the ERO Enterprise. The intent is to report the results of these metrics on an ERO Enterprise-wide basis, and also as applicable, distinguish results for NERC and individual Regional Entities.<sup>100</sup>

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<sup>100</sup> See <http://www.nerc.com/gov/Annual%20Reports/ERO%20Enterprise%20Strategic%20Plan%202014-2017%20and%20Performance%20Metrics.pdf>.

(3) Coordinating operational decision-making. The ERO Enterprise model depends on successful delegation of activities, but also requires coordination of operational decisions that arise in the execution of these activities. To date, coordination of policy and directional decisions has been achieved through: (i) coordination meetings between NERC and Regional Entity CEOs, which have become more routinized in recent years and include an agreed-upon protocol for reaching consensus decisions; and (ii) the activities of approximately two dozen working groups collaborating across various functional areas of the ERO Enterprise. The preferred approach going forward is to proactively establish a more collaborative model and recognize that Regional Entity staffs for most functions typically have valuable first-hand experience in implementing the activities on the front lines with registered entities. However, success depends on collaboration that results in timely and effective decisions that all entities in the enterprise agree to implement, and the avoidance of unilateral decision-making that steers portions of the ERO Enterprise into alternative methods and practices for delegated functions.

(4) Achieving consistency. Achieving consistency of methods, practices, procedures and tools has been a challenge throughout the history of the ERO Enterprise. At the outset, given a lack of common processes and procedures from NERC, Regional Entities developed their own methods, practices, procedures and tools. While there has been significant progress made, through the leadership and working groups referred to in the preceding paragraph, in addressing substantive differences, there remain significant variations in methods, practices, procedures and tools across NERC and the eight Regional Entities. Today, the biggest challenge in addressing consistency is gaining common agreement on processes and procedures with the backdrop of years of institutionalized differences among NERC and the Regional Entities.

The ultimate success of the ERO Enterprise depends on there being one compliance

program, one enforcement program, one event analysis program, and so forth. Registered entities will have greater confidence and trust in the ERO Enterprise if they believe regulatory oversight is not subject to arbitrary variations and possible discrimination from one region to the next. Outcomes will be more predictable and consistent if each statutory function is conducted in a unified fashion across the ERO Enterprise. Outcomes will also be more readily measurable to demonstrate the reliability impacts and benefits of the ERO Enterprise programs. In the long term, after the transition from legacy approaches, there will be significant efficiencies.

This transition requires the development of a core set of common methods, practices, procedures, and tools, which NERC is principally responsible to produce, working in collaboration with the Regional Entities. Consistency does not necessarily require identical internal procedures at each Regional Entity, and some flexibility must be maintained to allow for progress through innovation. However, consistency does mean that the approach, methods and practices are the same across the ERO Enterprise and that outcomes produced from application of the local and regional expertise and judgment of the Regional Entity staffs are fair, reasonable and without bias. In other words, the goal is consistent methods, practices, procedures and tools that deliver fair and reasonable outcomes. The move to greater consistency must occur under the close scrutiny of the ERO Executive Management Group, with accountability for progress to the NERC and Regional Entity boards, and all entities must be prepared to adopt changes to drive to more consistent methods, practices, procedures and tools.

(5) Coordinating external and cross-ERO Enterprise communications. Communications are important to the effectiveness of the ERO Enterprise. Communications can help set expectations for registered entities and stakeholders and demonstrate a common and consistent approach for regulators and the public. To facilitate effective communications across the ERO

Enterprise, in May 2013 the NERC Board initiated a practice of meeting twice yearly as a group with all the chairs and vice-chairs of the Regional Entities, with a portion of these meetings conducted with the NERC and Regional Entity CEOs also present. Additionally, a NERC-Regional Entity communications working group has been active for several years, coordinating consistent messaging across the ERO Enterprise. Further, NERC and the Regional Entities have coordinated outreach to FERC Commissioners and staff and to Canadian governments. However, although efforts to coordinate key messages and direction have been successful, areas for improvement remain. Thus, going forward, this area requires further attention to arrive at a desired end-state for the ERO Enterprise.

To reach the desired end-state for the ERO Enterprise in the five areas described above, NERC intends to focus on the following eleven action items:

- (1) NERC includes in its review of Regional Entity business plans adequacy of resources and alignment of the plans for achieving delegated function objectives and outcomes described in the three-year plan.
- (2) NERC, in collaboration with the Regional Entities:
  - (a) Develops a comprehensive overarching design and set of controls, reporting requirements, and feedback mechanisms for each delegated statutory function, including the essential oversight elements listed above;
  - (b) Re-evaluates its organizational structure and leadership qualifications necessary to provide effective design and oversight of statutory activities;
  - (c) Identifies functional qualifications for select delegated activities, such as auditors and investigators;
  - (d) Adopts risk-based approaches to monitoring performance of delegated functions and providing effective feedback and coaching to continuously improve overall ERO Enterprise performance; and
  - (e) Re-evaluates the ERO working group structure to enhance effectiveness.
- (3) Regional Entities:
  - (a) Work in a coordinated fashion to support NERC in the development of comprehensive functional program designs and controls;

- (b) Adapt existing regional programs for delegated functions to conform with emerging program designs provided by NERC; and
  - (c) Ensure Regional Entity staffs meet qualification and training requirements.
- (4) NERC and the Regional Entities develop and maintain a joint three-year strategic plan for the ERO Enterprise describing the goals and deliverables for statutory functions and this plan should guide the development of each Regional Entity's annual business plans. Additional goals and deliverables that are complimentary or supplemental to the strategic plan may be developed at the Regional Entity level.
  - (5) NERC and the Regional Entities transparently report results, based on a common set of performance measures focused on BPS reliability outcomes and effectiveness of the statutory programs. These measures are considered in the performance management program at each entity.
  - (6) ERO Enterprise senior leadership continues maturing the collaborative decision-making process and setting the direction and policy for the enterprise as well as driving this collaboration throughout the ERO Enterprise organizations.
  - (7) All nine ERO entities abide by the joint enterprise decisions of the ERO Enterprise senior leadership, and the NERC CEO should make final determinations if consensus is not otherwise achievable for an action that is required.
  - (8) With NERC leading, the ERO Enterprise develops a core set of methods, practices, procedures, and tools to support unified implementation of the major statutory functions of NERC. In doing so, the ERO Enterprise commits to put the best talent available throughout the collective organizations to achieve this goal.
  - (9) The ERO Enterprise senior leadership develops ERO Enterprise Information Technology applications, where appropriate, to support common processes, to enhance the efficiency and effectiveness of Regional Entities' practices, to increase the consistency of the interface with registered entities, and to facilitate NERC's oversight function.
  - (10) All parties of the ERO Enterprise, including leadership and staffs, convey shared and consistent messages from the enterprise perspective and communicate together to minimize messages emphasizing self-importance or uniqueness.
  - (11) NERC and Regional Entities continue the joint board coordination to ensure oversight and accountability of all elements of the enterprise and should continue to refine and expand coordinated outreach to government entities in the U.S. and Canada, stakeholders, and media.

## **VIII. CONCLUSION**

As detailed in this *Five-Year ERO Performance Report* and its Attachments, NERC has reached an important level of development in identifying, understanding and addressing reliability risks to the BPS. NERC has implemented targeted initiatives that benefit the electric industry and its customers through improved BPS reliability. These initiatives also allow NERC to measure and be accountable for the effectiveness and value of the investments made by the industry to enhance and maintain reliability. NERC's approach allows it to target results around specific issues that benefit the industry and its customers through improved BPS reliability. Further, NERC's programs are continuing to evolve, thereby sharpening its focus on reliability and accountability through risk-based processes.

**FEDERAL ENERGY REGULATORY COMMISSION  
DOCKET NO. RR14-\_\_\_\_**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

**ATTACHMENT 1**

**TO**

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

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

**JULY 21, 2014**

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A.	Criterion 1 - The ERO has the ability to develop and enforce, pursuant to 18 C.F.R. §39.7, Reliability Standards that provide for an adequate level of reliability of the BPS.	1
B.	Criterion 2 - The ERO has established rules that assure its independence of users, owners and operators of the BPS while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any ERO committees and subordinate organizational structure.	17
C.	Criterion 3 - The ERO has established rules that allocate equitably reasonably equitable dues, fees and charges among end users for all statutory activities.	23
D.	Criterion 4 - The ERO has established rules that provide fair and impartial procedures for enforcement of Reliability Standards through the imposition of penalties in accordance with 18 C.F.R. §39.7, including limitations on activities, operations, or other appropriate sanctions or penalties.	24
E.	Criterion 5 - The ERO has established rules that provide reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing Reliability Standards, and otherwise exercising its duties.	28
F.	Criterion 6 - The ERO has established rules that provide appropriate steps to gain recognition in Canada and Mexico.	34

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

**A. Criterion 1 - The ERO has the ability to develop and enforce, pursuant to 18 C.F.R. §39.7, Reliability Standards that provide for an adequate level of reliability of the BPS.**

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

**Development of Reliability Standards**

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

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

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

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<sup>1</sup> Sections 304 and 308.1 of the ROP specify that "NERC shall develop Reliability Standards in accordance with the NERC *Standard Processes Manual*, which is incorporated into these Rules of Procedure as Appendix 3A." The current version of the SPM is version 3 which became effective June 26, 2013.

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

<sup>3</sup> *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006), at PP 258, 262, 325, 327; *Order Certifying North American Electric Reliability Corporation as the Electric Reliability Organization and Ordering Compliance Filing*, 116 FERC ¶ 61,062 (*ERO Certification Order*), at PP 239, 241.

technically excellent Reliability Standards to be developed by NERC.<sup>4</sup> These essential attributes include:<sup>5</sup>

1. **Applicability** — Each Reliability Standard shall clearly identify the functional classes of entities responsible for complying with the Reliability Standards, with any specific additions or exceptions noted.<sup>6</sup>
2. **Reliability Objectives** — Each Reliability Standard must have a clear statement of purpose that describes how the Reliability Standard contributes to the reliability of the BPS. Section 302.2 of the ROP lists the general objectives for the BPS that provide a foundation for determining the specific objective(s) of each Reliability Standard:<sup>7</sup>
  - 2.1. **Reliability Planning and Operating Performance** — Bulk Power Systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions.
  - 2.2. **Frequency and Voltage Performance** — The frequency and voltage of Bulk Power Systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
  - 2.3. **Reliability Information** — Information necessary for the planning and operation of reliable Bulk Power Systems shall be made available to those entities responsible for planning and operating Bulk Power Systems.
  - 2.4. **Emergency Preparation** — Plans for emergency operation and system restoration of Bulk Power Systems shall be developed, coordinated, maintained, and implemented.

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<sup>4</sup> In the *ERO Certification Order*, the Commission recognized that NERC’s proposed ROP provided that the characteristics for technical excellence of a Reliability Standard must be met for a proposed Reliability Standard to be approved. *ERO Certification Order* at P 235.

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

<sup>6</sup> The functional classes of entities, or reliability functions, have been developed through NERC’s functional model of the BPS, and are defined in its: (i) *Glossary of Terms Used in NERC Reliability Standards*, and (ii) *Statement of Compliance Registry Criteria* which is incorporated into the ROP as Appendix 5B. Currently, the functional classes of entities are: Balancing Authorities (BAs), Distribution Providers, Generator Operators (GOPs), Generator Owners (GOs), Interchange Authorities, Load-Serving Entities, Planning Authorities, Purchasing-Selling Entities, Reliability Coordinators (RCs), Resource Planners, Reserve Sharing Groups, Transmission Operators (TOPs), Transmission Owners (TOs), Transmission Planners, and Transmission Service Providers.

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

- 2.5. **Communications and Control** — Facilities for communication, monitoring, and control shall be provided, used, and maintained for the reliability of Bulk Power Systems.
- 2.6. **Personnel** — Personnel responsible for planning and operating Bulk Power Systems shall be trained and qualified, and shall have responsibility and authority to implement actions.
- 2.7. **Wide-Area View** — The reliability of Bulk Power Systems shall be assessed, monitored, and maintained on a Wide-Area basis.
- 2.8. **Security** — Bulk Power Systems shall be protected from malicious physical or cyber attacks.
3. **Performance Requirement or Outcome** — Each Reliability Standard shall state one or more performance Requirements, which if achieved by the applicable entities, will provide for a reliable BPS, consistent with good utility practices and the public interest. Each Requirement is not a “lowest common denominator” compromise, but instead shall achieve an objective that is the best approach for BPS reliability, taking account of the costs and benefits of implementing the proposal.
4. **Measurability** — Each performance Requirement shall be stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by the Requirement. Each performance Requirement shall have one or more associated measures used to objectively evaluate compliance with the Requirement. If performance can be practically measured quantitatively, metrics shall be provided to determine satisfactory performance.
5. **Technical Basis in Engineering and Operations** — Each Reliability Standard shall be based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that field.
6. **Completeness** — Reliability Standards shall be complete and self-contained. The Reliability Standards shall not depend on external information to determine the required level of performance.
7. **Consequences for Noncompliance** — In combination with guidelines for penalties and sanctions and other ERO and Regional Entity compliance documents, the consequences of violating a Reliability Standard are clearly presented to the entities responsible for complying with the Reliability Standards.
8. **Clear Language** — Each Reliability Standard shall be stated using clear and unambiguous language. Responsible entities, using reasonable judgment and in keeping with good utility practices, are able to arrive at a consistent interpretation of required performance.

9. **Practicality** — Each Reliability Standard shall establish Requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter.
10. **Consistent Terminology** — To the extent possible, Reliability Standards shall use a set of standard terms and definitions that are approved through the NERC Reliability Standards development process.<sup>8</sup>

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

The NERC SPM also specifies the performance elements of a Reliability Standard.<sup>10</sup> The requirement that each Reliability Standard contain these elements applies a systematic discipline in the development and revision of standards, in order to produce standards that are measurable, enforceable, and consistent. The SPM allows for a clear statement of the purpose, requirements, measures, and compliance elements associated with each standard. The performance elements of a Reliability Standard, as specified in the SPM §2.5, are as follows:

- **Title:** A brief, descriptive phrase identifying the topic of the Reliability Standard.
- **Number:** A unique identification number assigned in accordance with a published classification system to facilitate tracking and reference to the Reliability Standards.
- **Purpose:** The reliability outcome achieved through compliance with the Requirements of the Reliability Standard.
- **Applicability:** Identified which entities are assigned reliability requirements. The specific Functional Entities and Facilities to which the Reliability Standard applies.
- **Effective Dates:** Identification of the date or pre-conditions determining when each Requirement becomes effective in each jurisdiction.
- **Requirement:** An explicit statement that identifies the Functional Entity responsible, the action or outcome that must be achieved, any conditions achieving

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

<sup>9</sup> *ERO Certification Order* at PP 239, 241.

<sup>10</sup> SPM at pp. 6-9.

the action or outcome, and the reliability-related benefit of the action or outcome. Each Requirement shall be a statement for which compliance is mandatory.

- Compliance Elements: Elements to aid in the administration of ERO compliance monitoring and enforcement responsibilities.
- Measure: Provides identification of the evidence or types of evidence that may demonstrate compliance with the associated requirement.
- Violation Risk Factors and Violation Severity Levels: Violation risk factors (VRFs) and violation severity levels (VSLs) are used as factors when determining the size of a penalty or sanction associated with the violation of a requirement in an approved Reliability Standard. Each requirement in each Reliability Standard has an associated VRF and a set of VSLs. VRFs and VSLs are developed by the drafting team, working with NERC staff, at the same time as the associated Reliability Standard, but are not part of the Reliability Standard. The Board of Trustees is responsible for approving VRFs and VSLs.
  - Violation Risk Factors: VRFs identify the potential reliability significance of noncompliance with each requirement. Each requirement is assigned a VRF in accordance with the last approved set of VRF criteria.
  - Violation Severity Levels: VSLs define the degree to which compliance with a requirement was not achieved. Each requirement shall have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs. Each requirement is assigned one or more VSLs in accordance with the latest approved set of VSL criteria.
- Version History: The version history is provided for informational purposes and lists information regarding prior versions of Reliability Standards.
- Variance: A Requirement (to be applied in the place of the continent-wide Requirement) that is applicable to a specific geographic area or to a specific set of registered entities.
- Compliance Enforcement Authority: The entity that is responsible for assessing performance or outcomes to determine if an entity is compliant with the associated Reliability Standard. The Compliance Enforcement Authority [(CEA)] will be NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.
- Application Guidelines: Guidelines to support the implementation of the associated Reliability Standard.

- Procedures: Procedures to support implementation of the associated Reliability Standard.

The NERC SPM sets forth the detailed process steps for the development and approval of a new Reliability Standard or a revision to an existing standard; the SPM also sets forth the detailed roles of the different persons and groups in in the process.<sup>11</sup> Under the ROP and the SPM, the key groups involved in development of a proposed new Reliability Standard or revision to an existing standard are: (i) the NERC Standards Committee; (ii) the standards authorization request (SAR) drafting team; (iii) the standard drafting team; and (iv) the Registered Ballot Body (RBB).

The Standards Committee is an elected body comprised of two members from each segment of the RBB.<sup>12</sup> The Standards Committee, with the assistance and facilitation of the professional staff of the NERC Reliability Standards development program, oversees the overall standards development process. The Standards Committee ensures that standard development teams have the technical resources and capabilities required to develop technically sound standards that will gain industry support. Among other things, the Standards Committee determines whether SARs submitted by interested persons and entities should be pursued for development, and it appoints members to SAR drafting teams and standard drafting teams.<sup>13</sup> A SAR drafting team is a team of technical experts that, among other responsibilities, assists in refining a SAR and considers and responds to comments.<sup>14</sup> The standard drafting team is a team of technical experts that develops the details of the proposed new or revised Reliability Standard, analyzes results of field tests of the standard (if applicable), and considers and responds to comments.<sup>15</sup> The RBB, which is open to any person or entity and is organized by industry segments, votes on the adoption or rejection of proposed Reliability Standards or revisions to existing standards.<sup>16</sup>

The SPM also specifies roles in the standards development process for the NERC Reliability Standards staff, which is led by the director of standards.<sup>17</sup> Staff provides support to the Standards Committee in managing the Reliability Standards processes and in supporting the work of all drafting teams. More specifically, staff is responsible for ensuring that development

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<sup>11</sup> The ROP also provides for an expedited standards development process in the event an applicable governmental authority directs the development of a Reliability Standard within a certain timeframe. This process is described in §309.3 of the ROP.

<sup>12</sup> The segment organization of the RBB is set forth in detail in the *Registered Ballot Body Criteria*, Appendix 3D to the ROP.

<sup>13</sup> See SPM at §§3.4 and 3.6.

<sup>14</sup> See SPM at §4.2.

<sup>15</sup> SPM at §4.3.

<sup>16</sup> ROP §305; SPM at §§3.2 and 4.7-4.15 (pp. 10, 20-24). Following successful balloting by the ballot pool, a proposed standard is submitted to the NERC Board of Trustees for approval, and if approved by the Board, is filed with the Commission for approval in accordance with §215(d) of the FPA and 18 C.F.R. §39.5. NERC Bylaws, Article IX, §1; ROP §§308.2, 308.3, and 309; and SPM at §§4.0 and 4.16.

<sup>17</sup> SPM at §3.5; see also ROP §307.

and revision of standards is in accordance with the SPM, works to ensure the integrity of the Reliability Standards development process and the consistency of quality and completeness of NERC Reliability Standards, and facilitates all steps in the standards development process.

The NERC standards development process relies on the legal and technical expertise provided by the industry experts comprising the SAR drafting teams and standard drafting teams, the technical and administrative assistance provided by the NERC standards process managers and the NERC standards process staff, and the overall oversight and direction of the Standards Committee. Thus, the NERC standards development process ensures that the essential attributes of technically excellent Reliability Standards, including the accomplishment of one of the eight general reliability objectives specified in §§302.2.1 through 302.2.8 of the ROP, are represented in each Reliability Standard that is developed or revised through the process and submitted to the NERC Board of Trustees and, ultimately, to the Commission for approval.

As demonstrated by the table below, NERC has invested significant resources to support its Reliability Standards program. Since 2009, NERC has increased its budgeted resources (direct expenses) for the Reliability Standards program by approximately 143.10% percent from 2009 to 2014:<sup>18</sup>

<u>Year</u>	<u>Amount</u>	<u>Increase over 2009</u>
2009:	\$3,599,454	N/A
2010:	\$4,189,050	116.38%
2011:	\$4,863,139	135.11%
2012:	\$5,307,943	147.47%
2013:	\$5,134,738	142.65%
2014:	\$5,150,854	143.10%

Leveraging its resources and standards development process, NERC has developed and submitted to the Commission a total of 293 continent-wide Reliability Standards that, as of December 1, 2013, have been approved by the Commission pursuant to §215(d) of the Federal Power Act (FPA) and 18 C.F.R. §39.5 to be mandatory and enforceable. NERC has also approved and submitted to the Commission, and the Commission has approved, a total of 23 regional Reliability Standards as of December 1, 2013. NERC's success to date in developing Reliability Standards that the Commission subsequently approved as mandatory and enforceable

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<sup>18</sup> See *December 2008 Budget Compliance Filing* Attachment 1 at 1; *NERC 2010 Business Plan and Budget* at 36 and Attachment 2 at 15; *NERC 2011 Business Plan and Budget* at 35 and Attachment 2 at 27; *NERC 2012 Business Plan and Budget* at 37 and Attachment 2 at 26; *NERC 2013 Business Plan and Budget* at 42 and Attachment 2 at 34; *NERC 2014 Business Plan and Budget* at 43 and Attachment 2 at 29. The amounts cited are direct expenses only and do not include NERC indirect expenses (General and Administrative, Information Technology, Legal and Regulatory, Human Resources, and Finance and Accounting) allocated to the Reliability Standards Program Area.

demonstrates that NERC has, and has exercised, the ability to develop Reliability Standards that provide for an adequate level of reliability of the BPS.

Further, the continent-wide Reliability Standards that have been developed by NERC and approved by the Commission cover the full range of reliability objectives specified in §302 of the NERC ROP:

- Resource and Demand Balancing (25 approved standards)
- Communications (3 approved standards)
- Critical Infrastructure Protection (55 approved standards)
- Emergency Preparedness and Operations (21 approved standards)
- Facilities Design, Connections and Maintenance (21 approved standards)
- Interchange Scheduling and Coordination (18 approved standards)
- Interconnection Reliability Operations and Coordination (29 approved standards)
- Modeling, Data, and Analysis (33 approved standards)
- Nuclear (2 approved standards)
- Personnel Performance, Training and Qualifications (9 approved standards)
- Protection and Control (29 approved standards)
- Transmission Operations (21 approved standards)
- Transmission Planning (15 approved standards)
- Voltage and Reactive Power (12 approved standards)

In accordance with the template and performance elements specified in the SPM, each approved Reliability Standard contains the following clearly-identified sections and subsections: (i) Applicability — stating the title of the standard, its identification number, its purpose, the reliability functional entities to which it is applicable, and its effective date; (ii) Requirements; (iii) Measures; (iv) Compliance — stating the entity responsible for monitoring compliance; the compliance monitoring period and reset timeframe; data retention requirements for the registered entities; and the levels of noncompliance for specified types of violations of the standard; and (v) Regional Differences, if any.

The inclusion of these elements helps to ensure that Reliability Standards clearly state who is responsible for compliance with a Reliability Standard, the Requirements for which compliance is required, and how compliance may be measured by the CEA.

NERC systematically manages the development of new standards and revisions to standards, in areas of highest need and importance, through its rolling three-year *Reliability Standards Development Plan*. The *Reliability Standards Development Plan* identifies and prioritizes the Reliability Standards development projects in the immediate three-year time horizon. The three-year *Reliability Standards Development Plan* is revised annually, based on input from NERC staff, the standard drafting teams, the NERC technical committees and subgroups, other industry participants, and government authorities. The annual *Reliability Standards Development Plan* revision considers: (i) perceived gaps in NERC's Reliability Standards and proposals for closing those gaps; (ii) timing priorities of the projects in the *Reliability Standards Development Plan* and recommendations for adjusting the timing of individual projects; and (iii) potential new projects for development of new standards or revisions to existing standards. The three-year rolling *Reliability Standards Development Plan*, as revised each year, is submitted to the NERC Board of Trustees for approval and then filed with the Commission for information. The *Reliability Standards Development Plan 2014-2016* was approved by the NERC Board of Trustees on November 7, 2013 and continues the approach set forth in the *Reliability Standards Development Plan 2013-2015*; namely, to facilitate the transformation of NERC Reliability Standards to "steady-state," a set of standards that are stable, clear, concise, high-quality, results-based, and technically sound, while emphasizing addressing outstanding regulatory directives and the retirement of Reliability Standards that do little to promote reliability.<sup>19</sup>

### **Enforcement of Reliability Standards**

NERC's program for monitoring and enforcing compliance with Commission-approved Reliability Standards is implemented through its *Compliance Monitoring and Enforcement Program* (CMEP) (§400 and Appendix 4C to the ROP), its Organization Registration and Certification Programs (§500 to the ROP), its *Sanction Guidelines* (Appendix 4B to the ROP), and its delegation agreements with the eight Regional Entities.<sup>20</sup>

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

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<sup>19</sup> The *Reliability Standards Development Plan 2014-2016*, along with previous versions of the plan, are available at: <http://www.nerc.com/pa/Stand/Pages/ReliabilityStandardsDevelopmentPlan.aspx>.

<sup>20</sup> The delegation agreements were originally approved by the Commission in an order issued April 19, 2007 (*Order Accepting ERO Compliance Filing, Accepting ERO/Regional Entity Delegation Agreements, and Accepting Regional Entity 2007 Business Plans*, 119 FERC ¶ 61,060 (2007)), subject to various compliance requirements, which have been addressed in subsequent compliance filings and Commission orders. The currently-effective delegation agreements will expire on December 31, 2015.

capability to conduct investigations of potential violations of Reliability Standards and to conduct such investigations in a confidential manner. It also requires the Regional Entity to maintain a program of proactive enforcement audits, including procedures for spot checks of self-reported compliance and periodic audits of all registered entities.

Through the NERC Organization Registration and Certification Programs, NERC and the Regional Entities have identified users, owners, and operators of the BPS that are obligated to comply with Commission-approved NERC Reliability Standards.<sup>21</sup> Section 500 of the NERC ROP governs the registration of users, owners, and operators of the BPS as responsible for compliance with the requirements of Reliability Standards that are applicable to the reliability function for which the entity is registered. The purpose of the NERC Compliance Registry, established pursuant to §501 of the ROP, is to clearly identify those entities that are responsible for compliance with Reliability Standards. The NERC Compliance Registry identifies the reliability functions to be performed by each organization responsible for meeting the requirements of Reliability Standards. Organizations listed in the NERC Compliance Registry are responsible for knowing the contents of, and complying with, Reliability Standards applicable to the reliability function(s) for which the entity is registered.<sup>22</sup> The criteria upon which users, owners and operators of the BPS will be registered for one or more reliability functions are specified in §501 of the ROP and in NERC's FERC-approved *Statement of Compliance Registry Criteria* (Appendix 5B to the ROP). The purpose of the *Organization Registration and Certification Manual* (Appendix 5A) is twofold: (i) to define the process utilized in the Organization Registration Program by identifying which functional entities must register as owners, operators, and users of the BPS for compliance with Reliability Standards; and (ii) to define the process utilized in the Organization Certification Program for certifying the following entities: RC, BA, and TOP.

Typically, a user, owner or operator of the BPS is identified, in the first instance, for placement on the NERC Compliance Registry by the Regional Entity in whose territory the user, owner or operator is located. Upon the entity being notified by NERC that it is being placed on the NERC Compliance Registry, the entity may challenge its inclusion on the NERC Compliance Registry by filing a written objection with NERC.<sup>23</sup> Challenges to inclusion on the NERC Compliance Registry are heard and decided by the NERC Board of Trustees Compliance Committee (BOTCC). If the entity is not satisfied with the decision of the BOTCC, the entity may appeal the registration determination to the Commission.<sup>24</sup> NERC may remove a registered entity from the NERC Compliance Registry for one or more of the reliability functions for which the

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<sup>21</sup> Section 215(b)(2) of the FPA requires all users, owners and operators of the BPS to comply with Reliability Standards approved by the Commission. Similarly, the Commission's regulations at 18 C.F.R. §39.2 and §40.2 require all users, owners, and operators of the BPS to comply with applicable Reliability Standards and applicable rules of the ERO and Regional Entities approved by the Commission.

<sup>22</sup> ROP §501. The current categories of reliability functional entities are listed in ROP Appendix 5B, *Statement of Compliance Registry Criteria*. See also *supra* n. 6.

<sup>23</sup> A user, owner, or operator of the BPS may be listed on the NERC Compliance Registry for several reliability functions. A registered entity may challenge its listing for one or more of the reliability functions for which it has been registered while accepting its listing for other reliability function(s).

<sup>24</sup> The registration, challenge, and appeal process described in this paragraph is set forth in §501.1.3 of the ROP.

entity is listed, based on changed circumstances. As of December 31, 2013, there were 1,920 organizations listed on the NERC Compliance Registry, registered for 4,794 reliability functions.

Monitoring and enforcement of compliance with Reliability Standards is conducted primarily by the eight NERC Regional Entities, pursuant to §401.4 of the NERC ROP and the delegation agreements between NERC and the Regional Entities. Each Regional Entity is responsible for compliance monitoring and enforcement activities within its regional footprint.<sup>25</sup> The ROP provide for NERC to take responsibility for CMEP activities where a Regional Entity is unable to perform those functions, as well as to be responsible for overseeing the CMEP activities of the Regional Entities.<sup>26</sup> Section 403 of the ROP describes in detail the required attributes of Regional Entity compliance programs, covering compliance program structure, compliance program resources, and compliance program design. Section 403 emphasizes the requirement that the Regional Entity's governance of its compliance program, and its compliance program staff, be independent.<sup>27</sup> Each Regional Entity must develop a Regional Entity Compliance Enforcement Implementation Plan that identifies the Reliability Standards to be actively monitored by the Regional Entity (both those required by NERC and any additional Reliability Standards the Regional Entity proposes to monitor), and how the identified Reliability Standards will be monitored, evaluated, reported, sanctioned, and appealed.<sup>28</sup> These plans must be developed on an annual basis and submitted to NERC for approval. In its annual Implementation Plan, each Regional Entity must also report to NERC how the Regional Entity carried out its delegated compliance enforcement authority in the previous year, the effectiveness of its CMEP, and changes expected to correct any identified deficiencies.<sup>29</sup>

NERC is required to conduct an audit, at least once every five years, to evaluate how each Regional Entity implements the NERC CMEP.<sup>30</sup> The evaluation is based on the ROP including the NERC CMEP, the delegation agreement with the Regional Entity, the approved Regional Entity annual CMEP Implementation Plans, the required CMEP attributes, and the CMEP procedures. NERC must provide its evaluations to the Commission and other appropriate ERO

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<sup>25</sup> ROP §401.4.

<sup>26</sup> ROP §§401.5, 402, and 404. The Commission has also approved the practice of one Regional Entity entering into an agreement with another Regional Entity to administer the compliance processes in the NERC CMEP with respect to the Regional Entities' registered functions. *See, e.g., Order Conditionally Accepting Compliance Monitoring and Enforcement Program Agreements and Revised Delegation Agreements, and Ordering Compliance Filing*, 132 FERC ¶ 61,024 (2010).

<sup>27</sup> ROP §§403.1 and 403.6.

<sup>28</sup> ROP §§402.1.1.1 and 403.16.

<sup>29</sup> ROP §403.16.

<sup>30</sup> ROP §402.1.1.3.

governmental authorities to demonstrate the effectiveness of each Regional Entity in compliance monitoring and enforcement.<sup>31</sup>

NERC has also conducted spot checks of different aspects of the Regional Entities' implementation of the CMEPs in 2013 and 2014. In 2013, NERC conducted a spot check of Regional Entity dismissal procedures. NERC also conducted a spot check of Regional Entity processes and procedures relating to settlement agreements and notices of confirmed violation. In 2014, NERC plans to conduct a spot check of Regional Entity processes regarding mitigation plans. These spot checks are in addition to NERC's ongoing spot check of issues filed pursuant to NERC's Find, Fix, Track and Report (FFT) program.

The controlling document for NERC's compliance monitoring and enforcement activities is the NERC CMEP, Appendix 4C to the ROP. Pursuant to Exhibit D to its delegation agreement with NERC, each Regional Entity has either adopted the NERC CMEP or a modified version of the CMEP; in the latter case, the modified CMEP, or an enumeration of any deviations in the Regional Entity's CMEP from the uniform CMEP, is included in Exhibit D to the Regional Entity's delegation agreement. All CMEPs have been approved by the Commission.<sup>32</sup>

The NERC CMEP (as well as each of the modified Regional Entity CMEPs) provides for seven compliance monitoring methods: (i) audits of registered entities for compliance with Reliability Standards;<sup>33</sup> (ii) self-certifications by registered entities of their compliance with standards;<sup>34</sup> (iii) spot checks of registered entities' compliance with Reliability Standards;<sup>35</sup> (iv) compliance investigations (CIs), which may be conducted and led by the Regional Entity or by NERC;<sup>36</sup> (v) self-reports by registered entities of violations of Reliability Standards;<sup>37</sup> (vi) periodic

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<sup>31</sup> ROP §402.1.3. The audit procedure for NERC's audits of the Regional Entity CMEPs is contained in *Audit of Regional Entity Compliance Programs*, Appendix 4A to the ROP.

<sup>32</sup> The Commission initially approved the NERC CMEP and modified CMEPs adopted by certain Regional Entities in their respective delegation agreements, subject to various compliance requirements, in its Order issued April 19, 2007. *Order Accepting ERO Compliance Filing, Accepting ERO/Regional Entity Delegation Agreements, and Accepting Regional Entity 2007 Business Plans*, 119 FERC ¶ 61,060 (2007). Subsequent Commission orders have approved modifications to the NERC CMEP and Regional Entity CMEPs (both modifications in response to Commission directives and modifications initiated by NERC and/or Regional Entities). *See, e.g., Order Conditionally Approving Revised Pro Forma Delegation Agreement, Revised Delegation Agreements with Regional Entities, Amendments to Rules of Procedure and Certain Regional Entity Bylaws*, 133 FERC ¶ 61,061 (2010); *Order Conditionally Accepting Compliance Monitoring and Enforcement Program Agreements and Revised Delegation Agreements, and Ordering Compliance Filings*, 132 FERC ¶ 61,024 (2010); *Order Conditionally Approving Revisions to North American Electric Reliability Corporation Rules of Procedure*, 141 FERC ¶ 61,241 (2012).

<sup>33</sup> CMEP §3.1.

<sup>34</sup> CMEP §3.2.

<sup>35</sup> CMEP §3.3.

<sup>36</sup> CMEP §3.4.

<sup>37</sup> CMEP §3.5.

data submittals by registered entities as requested by the CEA,<sup>38</sup> and (vii) investigation of complaints.<sup>39</sup> The NERC CMEP sets forth detailed process steps for each of the seven compliance monitoring methods, including requirements for the results of the processes to be reported by the Regional Entity to NERC and ultimately to the Commission. The NERC CMEP provides for due process for a registered entity by including provisions that address avoidance of conflicts of interest,<sup>40</sup> preservation of confidentiality,<sup>41</sup> provision of notice, and opportunities to respond.<sup>42</sup>

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

The NERC CMEP also specifies the processes to be followed when an alleged violation of a Reliability Standard by a registered entity is identified,<sup>43</sup> including notification to the registered entity of an alleged violation and the required contents of the notice;<sup>44</sup> the registered entity's response to the notification of alleged violation;<sup>45</sup> the opportunity for the registered entity to obtain a hearing on the alleged violation and/or proposed penalty or sanction before the CEA hearing

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<sup>38</sup> CMEP §3.6. The CEA is the entity (either NERC or the Regional Entity, as applicable) responsible for monitoring and enforcing the registered entity's compliance with Reliability Standards. CMEP §1.1.7.

<sup>39</sup> CMEP §3.7.

<sup>40</sup> For example, the registered entity is notified in advance of a compliance audit as to the members of the audit team (who are required to be free of conflicts of interest) and their backgrounds and is given the opportunity to object to individual members of the audit team on grounds of a conflict of interest or other circumstance that could interfere with the team member's impartial performance of his or her duties. *See* CMEP §3.1.5. Similar notice and opportunity to object is provided with respect to spot checking teams (*id.* at §3.3.1) and CI teams (*id.* at §3.4.1). In addition, §6 of the NERC-Regional Entity delegation agreements requires the Regional Entity to maintain a conflict of interest policy that assures the integrity of its compliance enforcement program and the independence of the compliance program staff from those subject to enforcement actions.

<sup>41</sup> CMEP §§2.0 and 9.3. In addition, §6 of the NERC-Regional Entity delegation agreements specifies that each violation or alleged violation of a Reliability Standard shall be treated as nonpublic until the matter is filed with the Commission as a notice of penalty or resolved by an admission that the owner, operator, or user of the BPS violated a Reliability Standard or by a settlement or other negotiated disposition.

<sup>42</sup> For example, the CEA must notify the registered entity in advance of a compliance audit as to the Reliability Standards to be covered by the audit, and must provide a pre-audit questionnaire to the registered entity at least two months before commencement of the audit. NERC uniform CMEP §3.1.1. At the conclusion of the audit, the compliance audit team is required to provide a draft audit report to the registered entity for comment. *Id.* §3.1.6. Similarly, in the spot check and periodic data submittal processes, the CEA is required to provide its draft assessment of compliance to the registered entity for comment. *Id.* §3.3.1 and §3.6.1.

<sup>43</sup> CMEP §5.0.

<sup>44</sup> CMEP §§5.1 and 5.3.

<sup>45</sup> CMEP §5.4.

body;<sup>46</sup> the process the registered entity may engage in to negotiate a settlement with the CEA;<sup>47</sup> the registered entity's right to appeal a hearing body decision to NERC;<sup>48</sup> and the process for reporting a penalty or sanction to the Commission for confirmation.<sup>49</sup>

The NERC CMEP requires that a registered entity found to be in violation of a Reliability Standard must file a mitigation plan with the CEA to correct the violation, or a description of how the violation has been mitigated.<sup>50</sup> The NERC CMEP describes the required contents of the registered entity's proposed mitigation plan;<sup>51</sup> the processes for submittal of the proposed mitigation plan by the Regional Entity<sup>52</sup> and for review and acceptance or rejection of the proposed mitigation plan by the Regional Entity and review and approval or disapproval by NERC (and, in the latter event, modification of the mitigation plan by the registered entity);<sup>53</sup> the timetable for completion of an accepted mitigation plan;<sup>54</sup> and the process for completion and confirmation by the CEA of implementation of the registered entity's mitigation plan.<sup>55</sup> Key components required by the NERC CMEP to be in any mitigation plan are the registered entity's action plans to correct the violation(s) and to prevent recurrence.<sup>56</sup>

Additionally, the NERC CMEP provides the procedure for the CEA to issue a remedial action directive to a registered entity.<sup>57</sup> A remedial action directive may be issued, when immediately necessary to protect the reliability of the BPS from an imminent threat, to a registered entity the CEA believes is committing or has committed a violation of a Reliability Standard. The remedial action directive may include, but is not limited to, specifying operating or planning

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<sup>46</sup> CMEP §5.5 and Attachment 2, *Hearing Procedures*. The *Hearing Procedures* set forth the detailed procedures for the hearing to be conducted before the CEA hearing body should a registered entity dispute a notice of alleged violation, proposed penalty or sanction, proposed mitigation plan, or a remedial action directive.

<sup>47</sup> CMEP §5.6.

<sup>48</sup> CMEP §5.7. The NERC appeal process is addressed in §§408 and 409 of the ROP.

<sup>49</sup> CMEP §5.9.

<sup>50</sup> CMEP §6.1.

<sup>51</sup> CMEP §6.2.

<sup>52</sup> CMEP §6.4.

<sup>53</sup> CMEP §6.5.

<sup>54</sup> CMEP §6.3.

<sup>55</sup> CMEP §6.6.

<sup>56</sup> CMEP §6.2.

<sup>57</sup> CMEP §7.0. A remedial action directive is “[a]n action (other than a [p]enalty or sanction) required by a Compliance Enforcement Authority that (1) is to bring a [r]egistered [e]ntity into compliance with a Reliability Standard or to avoid a Reliability Standard violation, and (2) is immediately necessary to protect the reliability of the Bulk Power System from an imminent or actual threat.” CMEP §1.1.27.

criteria, limits or limitations; requiring specific system studies; defining operating practices or guidelines; requiring confirmation of data, practices or procedures through inspection, testing or other methods; requiring specific training for personnel; requiring development of specific operating plans; directing a registered entity to develop and comply with a plan to remediate a violation; imposing increased auditing or additional training requirements; and requiring the registered entity to cease an activity that may constitute a violation of a Reliability Standard.<sup>58</sup>

As a key component of the enforcement of compliance with mandatory Reliability Standards, a violation of a standard can result in the imposition of a financial penalty or other penalty or sanction on the registered entity. NERC has established, and is applying, rules and procedures for determining the amount of financial penalties, or other penalties or sanctions, to be imposed on registered entities for violations of Reliability Standards. These rules and procedures are embodied in the NERC *Sanction Guidelines*, Appendix 4B to the ROP. The *Sanction Guidelines* must be followed by the Regional Entities in the implementation of their CMEPs.<sup>59</sup> Penalties and sanctions must bear a reasonable relation to the seriousness of the violation and take into consideration timely remedial efforts by the registered entity.<sup>60</sup> NERC's rules and procedures for determining appropriate penalties and sanctions for violations of Reliability Standards are discussed in greater detail under criterion 4.<sup>61</sup>

In order to carry out their responsibilities to monitor and enforce compliance with Reliability Standards, NERC and the Regional Entities, over the period from 2009 to date, have developed substantial professional staffs for, and are devoting substantial resources to, their CMEP and Organization Registration Programs. The following table shows the direct expenses and the numbers of full-time equivalent (FTE) staff budgeted by NERC and each Regional Entity in 2009 and in 2014.<sup>62</sup>

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<sup>58</sup> CMEP §7.0.

<sup>59</sup> ROP §§403.14 and 407.

<sup>60</sup> ROP §401.7.

<sup>61</sup> The ERO has established rules that provide fair and impartial procedures for enforcement of Reliability Standards through the imposition of penalties in accordance with 18 C.F.R. §39.7, including limitations on activities, operations, or other appropriate sanctions or penalties.

<sup>62</sup> See NERC 2009 Business Plan and Budget; December 2008 Budget Compliance Filing; NERC 2014 Business Plan and Budget. The amounts cited are direct expenses only and do not include NERC indirect expenses (General and Administrative, Information Technology, Legal and Regulatory, Human Resources, and Finance and Accounting) allocated to the Compliance Monitoring and Enforcement and Organization Registration and Certification Program Area.

Regional Entity	2009 Budgeted FTEs	2009 Budgeted Direct Expense (\$)
NERC	35.50	7,358,536
FRCC	9.10	1,991,643
MRO	10.00	2,071,510
NPCC	9.00	2,095,204
ReliabilityFirst	23.00	5,099,328
SERC	21.50	4,805,617
SPP RE	6.00	1,283,653
Texas RE	14.15	1,628,935
WECC	30.00	6,165,303
<b>Totals</b>	<b>158.25</b>	<b>32,499,729</b>

Regional Entity	2014 Budgeted FTEs	2014 Budgeted Direct Expense (\$)
NERC	41.28	7,902,272
FRCC	19.26	4,281,909
MRO	21.26	3,864,192
NPCC	16.00	5,080,485
ReliabilityFirst	43.00	9,788,246
SERC	42.50	7,389,556
SPP RE	22.10	4,258,217
Texas RE	40.00	5,991,654
WECC	58.00	8,592,053
<b>Totals</b>	<b>303.40</b>	<b>57,148,584</b>

As demonstrated in the tables above, the number of budgeted FTEs increased approximately 191.72% across NERC and the Regional Entities from 2009 to 2014, while the budgeted direct expense increased by nearly 175.84%.

In addition to their compliance program staffs, NERC and a number of the Regional Entities have also made use of consultants and contractors to assist in compliance audits, CIs, and other compliance monitoring and enforcement activities, and to provide subject matter expertise as needed to supplement the expertise of their staffs.

As explained in the *Joint Regional Entity Self-Assessment*, included in **Attachment 2** of this *Five-Year ERO Performance Report*, the Regional Entities describe how they execute their delegated function of enforcing Reliability Standards. Also in **Attachment 2**, the Regional Entities describe their compliance monitoring activities during the 2009 through 2013 assessment period.

NERC has participated in some Regional Entity compliance audits and will continue to do so as an observer to observe the performance of audits by the Regional Entities and to help ensure

consistent implementation and application of the CMEP and consistent application of the requirements of standards across the Regional Entities.

The foregoing discussion amply demonstrates that NERC has developed and is implementing the ability to develop and enforce Reliability Standards that provide for an adequate level of reliability of the BPS.

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

This criterion encompasses three distinct considerations: (i) independence of NERC from users, owners and operators of the BPS; (ii) fair stakeholder representation in the selection of NERC's directors (trustees); and (iii) provision for balanced decision-making in any NERC committee or subordinate organizational structure.

**Independence of Users, Owners, and Operators of the BPS**

NERC's Bylaws provide that NERC's business and affairs shall be managed by a Board of Trustees.<sup>63</sup> The Bylaws provide that the Board of Trustees shall consist of ten independent trustees plus the President of NERC.<sup>64</sup> The Bylaws define "independent trustee" as follows:

An independent trustee is a person (i) who is not an officer or employee of the Corporation [i.e., NERC], a member or an officer, director, or employee of a member of the Corporation, or an officer, director, or employee of any entity that would reasonably be perceived as having a direct financial interest in the outcome of board decisions and (ii) who does not have any other relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a trustee. Provided, that upon initial election to the board, an independent trustee shall within ten (10) days terminate any employee, officer, or director position that conflicts with this subparagraph and shall within sixty (60) days terminate any financial interest or other relationship that conflicts with this subparagraph, and prior to such termination shall not participate in discussion of or voting on any matter involving the entity of which the trustee is an employee, officer or director or in which the trustee has the financial interest or other relationship giving rise to the conflict.<sup>65</sup>

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<sup>63</sup> NERC Bylaws Article III, §1.

<sup>64</sup> NERC Bylaws Article III, §1. On October 14, 2009, the Commission approved in a letter order, in Docket No. RR09-8-000, new §§1a and 1b that allows the Board of Trustees to exercise the authority to increase the number of trustees from eleven to twelve, and decrease from twelve to eleven, respectively.

<sup>65</sup> NERC Bylaws Article III, §3a. The last sentence of §3a, providing for brief time periods for a newly-elected trustee to terminate any employment, officer or director position or financial interest or other relationship that would prevent

In the *ERO Certification Order*, the Commission found that the NERC Bylaws definition of “independent trustee” was sufficient to provide for independence from users, owners and operators of the BPS, subject to one clarification.<sup>66</sup>

Thus, a NERC trustee cannot be an officer, director, or employee of a member of NERC nor of any other entity that would be perceived as having a direct financial interest in the outcome of board decisions, and may not have any other relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a trustee. The “responsibilities of a trustee” include, among other things, voting on: (i) board approval of proposed Reliability Standards;<sup>67</sup> (ii) board approval of the NERC ROP and amendments to the ROP;<sup>68</sup> and (iii) board approval of NERC and Regional Entity budgets.<sup>69</sup> Committees of the NERC Board, such as the BOTCC, are responsible for decisions such as hearing and deciding challenges by a user, owner or operator of the BPS to placement of the entity on the NERC Compliance Registry,<sup>70</sup> hearing and deciding appeals from a Regional Entity hearing body decision on a registered entity’s challenge to a notice of alleged violation of a Reliability Standard and/or proposed penalty or sanction,<sup>71</sup> and approving the imposition of penalties or other sanctions for violations of Reliability Standards on registered entities, including by settlements.

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

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the trustee from being independent, is a 2008 amendment to the Bylaws that was approved by the Commission by a letter order issued October 7, 2008 in Docket No. RR08-5-000.

<sup>66</sup> *ERO Certification Order*, 116 FERC ¶61,062 at P 42. The clarification is that the definition prohibits an independent trustee from having a relationship that would interfere with his or her exercise of independent judgment in carrying out the responsibilities of a trustee, regardless of whether he or she is an officer, director, or employee of an entity with an interest in the outcome of NERC Board of Trustees decisions. NERC confirmed this clarification in a compliance filing dated September 18, 2006, and made a modification, consistent with the clarification, to the definition of “independent trustee” in its Bylaws. *Compliance Filing of the North American Electric Reliability Council and the North American Electric Reliability Corporation Addressing Governance Issues and Request for Expedited Treatment*, Docket No. RR06-1, filed September 18, 2006 (*NERC ERO Governance Compliance Filing*) at 3-4.

<sup>67</sup> NERC Bylaws Article IX, §1; ROP §308.2.

<sup>68</sup> NERC Bylaws Article XI, §2; ROP §1402.

<sup>69</sup> NERC Bylaws Article XIII, §§2, 3, 4, and 5; ROP §1101. Each of the matters just listed, upon being approved by the NERC Board of Trustees, must then be submitted to the Commission for approval or confirmation. Sections 215(d) and (f) of the FPA and 18 C.F.R. §§39.4(b), (c), and (d), and 39.5.

<sup>70</sup> ROP §501.1.3.

<sup>71</sup> ROP §409.

NERC.” NERC’s *Process for Reviewing Conflicts of Interest* outlines how potential conflicts of interest of the independent trustees, officers and employees are evaluated beginning in December of each calendar year.<sup>72</sup> The *NERC Employee Code of Conduct* mandates an “employee’s faithful pursuit of the interests of NERC rather than his or her own financial or other interests of another person or organization.” Finally, NERC’s *Policy on Reporting Complaints Regarding Accounting and Code of Conduct Matters* prohibits retaliation against any NERC employee who lodges a code of conduct complaint about fraud, unethical business conduct, questionable accounting, problems with internal accounting controls, financial reporting or auditing, violations of NERC’s codes of conduct for trustees and employees, or violations of law occurring within NERC.

### **Fair Stakeholder Representation in the Selection of NERC’s Trustees**

NERC’s Bylaws provide for fair stakeholder representation in the selection of NERC’s trustees. Candidates for election as a trustee are selected by a nominating committee. The nominating committee is appointed annually (or more frequently if needed in the event of a special election to fill a board vacancy) by the board. The nominating committee is to consist of those independent trustees whose terms do not expire during the current year and such number of other persons with such qualifications as the board shall specify, including at least three members of the NERC Member Representatives Committee (MRC).<sup>73</sup> The procedures to be followed by the nominating committee must include a means of permitting members of NERC to recommend to the nominating committee candidates for consideration as nominees for independent trustees.<sup>74</sup> NERC’s Bylaws specify that the nominating committee “shall also endeavor to nominate candidates for election to the board consistent with the objectives that the board as an entity reflects expertise in the areas of technical electric operations and reliability, legal, market, financial, and regulatory matters, and familiarity with regional system operations issues; and reflects geographic diversity.”<sup>75</sup>

NERC’s Bylaws provide that the independent trustees shall be elected by the NERC MRC, from nominees proposed by the nominating committee. To be elected an independent trustee, a nominee must receive the affirmative vote of two-thirds of the members of the MRC.<sup>76</sup> The MRC

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<sup>72</sup> On February 6, 2014, the NERC Board of Trustees approved *Governance Guidelines*, which consolidated NERC’s (i) *Conflict of Interest and Business Ethics Policy for Trustees, Officers and Employees* and (ii) *Process for Reviewing Conflicts of Interest* into a single cohesive document.

<sup>73</sup> NERC Bylaws Article III, §5.

<sup>74</sup> NERC Bylaws Article III, §5.

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

<sup>76</sup> NERC Bylaws Article III, §6. The NERC Bylaws also require that the number of trustees from Canada shall not be less than the percentage of the net energy for load (NEL) of Canada to the total NEL of the United States and Canada, times eleven (or twelve if the number of trustees has been increased to twelve pursuant to NERC Bylaws Article III, §1a), rounded up to the nearest whole number, with the management trustee (i.e., the president of NERC) counted as a trustee from Canada if he or she is a Canadian citizen. NERC Bylaws Article III, §2a. In the *ERO Certification Order*, the Commission approved this provision as “adequately provid[ing] for an international ERO,” stating that “appropriate country representation helps to ensure that the ERO is truly international in addressing Bulk-

is comprised of representatives from the various sectors of the NERC membership.<sup>77</sup> As specified by Article II, §4 of the NERC Bylaws, the sectors of the NERC membership are: (i) investor-owned utilities; (ii) state/municipal utilities; (iii) cooperative utilities; (iv) federal or provincial utilities/federal power marketing administrations; (v) transmission-dependent utilities; (vi) merchant electricity generators; (vii) electricity marketers; (viii) large end-use electricity customers; (ix) small end-use electricity customers; (x) independent system operators/regional transmission organizations; (xi) regional entities; and (xii) government representatives.<sup>78</sup> The composition of the MRC, as specified in Article VIII, §2 of the NERC Bylaws, is as follows:

- (1) Two representatives from each sector except the government representative sector and the regional entity sector;
- (2) Two voting representatives from the regional entity sector, with the remaining members of that sector being non-voting members of the MRC;<sup>79</sup>
- (3) The chairman and vice chairman of the MRC;<sup>80</sup>
- (4) Any additional Canadian representatives as are selected pursuant to Article VIII, §4 of the Bylaws;<sup>81</sup> and

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Power System reliability and considering the concerns of stakeholders in each of the three countries.” *ERO Certification Order* at P 47.

<sup>77</sup> Membership in NERC is voluntary and is open to any person or entity that has an interest in the reliable operation of the North American BPS, registers as a member, and complies with the other conditions and obligations of membership specified in the NERC Bylaws (which do not include payment of any membership or initiation dues or fees). NERC Bylaws Article II, §1. In the *ERO Certification Order*, the Commission stated the availability of membership to any person or entity with an interest in the reliable operation of the North American BPS created an open membership structure that is consistent with the statutory requirement that the ERO establish rules that assure fair stakeholder representation. *ERO Certification Order* at P 54. Each member is assigned to one of the 12 membership sectors of NERC. NERC Bylaws Article II, §4.

<sup>78</sup> Article II, §4a of the NERC Bylaws specifies the types of persons or organizations that would be included in each of the membership sectors.

<sup>79</sup> The representation of Regional Entities in the MRC reflects changes made by NERC to the originally-proposed composition of the MRC in response to concerns expressed by the Commission in P 75 of the *ERO Certification Order*. See *NERC ERO Governance Compliance Filing* at 6-9. The Commission accepted these changes in an Order issued October 30, 2006. The Commission also accepted the overall structure and composition of the MRC in that Order. *North American Electric Reliability Corporation, Order on Petitions for Rehearing and Clarification; Order on Compliance Filing*, 117 FERC ¶ 61,126 (2006), at PP 30 and 44.

<sup>80</sup> The chairman and vice chairman of the MRC are selected annually by majority vote of the members of the MRC, and may not be from the same membership sector. Upon being selected as chairman and vice chairman, these individuals cease to be representatives of the MRC sectors to which they were originally elected, and are thereafter responsible to act in the best interests of the members of NERC as a whole. NERC Bylaws Article VIII, §5.

<sup>81</sup> Article VIII, §4 of the Bylaws contains provisions for the election of additional Canadian members to the MRC as and when necessary to ensure that the percentage of Canadian members on the MRC is approximately equal to the percentage the NEL of Canada is of the total NEL of the United States and Canada. See page 24 below for the definition of NEL.

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

The MRC is therefore comprised of 26 voting members when at full complement (or more if the election of additional Canadian members has been necessary in accordance with Article VIII, §4 of the Bylaws). The members of the MRC from each sector are nominated from, and elected by, the NERC members in that sector pursuant to the processes specified in Article VIII, §3 of the NERC Bylaws, which generally call for election of the two candidates from each sector receiving the highest numbers of votes in the sector. The members of the MRC are elected annually (or between annual elections if needed to fill a vacancy).<sup>82</sup>

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

### **Balanced Decision-Making in any NERC Committee or Subordinate Organizational Structure**

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

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

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<sup>82</sup> NERC Bylaws Article VIII, §3.

Procedure of the Corporation or otherwise determined by the board. (Emphasis added.)<sup>83</sup>

Section 1300 of the NERC ROP provides additional criteria for the creation and appointment of NERC standing committees. In creating a standing committee, the NERC Board of Trustees must approve the charter of the committee and assign specific authority to each committee necessary to conduct business within its charter.<sup>84</sup> Each committee shall have a defined membership composition that is explained in its charter. The specified committee membership composition can provide for balanced decision-making (i) by providing for representatives from each sector of the NERC membership, or (ii) where sector-based membership will not bring together the necessary diversity of opinions, technical knowledge and experience in a particular subject area, by bringing together a wide diversity of opinions from industry experts with outstanding technical knowledge and experience in a particular subject area.<sup>85</sup> Committee membership shall also provide the opportunity for an equitable number of members from the United States and Canada, based approximately on proportionate NEL.<sup>86</sup>

The NERC ROP require that committee members shall be selected in a manner that is open, inclusive, and fair.<sup>87</sup> Unless otherwise stated in the NERC ROP or approved by the NERC Board of Trustees, all committee member appointments are to be approved by the board, and committee officers are to be appointed by the Chairman of the Board.<sup>88</sup>

Further, the NERC ROP require that all NERC committees and other subgroups (except for those organized on other than a sector basis because sector representation will not bring together the necessary diversity of opinions, technical knowledge, and experience in a particular subject area) must ensure that no two stakeholder sectors are able to control the vote on any matter,

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<sup>83</sup> NERC Bylaws Article VII, §1. “Committees specified by these Bylaws” include the MRC and the Nominating Committee for the NERC Board of Trustees (discussed above under “fair stakeholder representation in the selection of NERC’s trustees”), and the Personnel Certification Governance Committee (PGCC) provided for in Article XII of the Bylaws. The purpose of the PGCC is to provide oversight to the policies and processes used to implement and maintain the integrity and independence of the NERC System Operator Certification Program. NERC Bylaws Article XII, §1. The members of the PGCC are appointed by the Board from candidates nominated by a nominating task force; nominations and appointments are to take into account the need to include representatives of all geographic regions of North America on the PGCC. *Id.*, Article XII, §2. In addition to the aforementioned committees, NERC standing committees include the Standards Committee, Compliance and Certification Committee, Critical Infrastructure Protection Committee, Operating Committee, Planning Committee, and the Reliability Issues Steering Committee.

<sup>84</sup> ROP §1301.

<sup>85</sup> ROP §1302.

<sup>86</sup> ROP §1302.

<sup>87</sup> ROP §1303.

<sup>88</sup> ROP §1303.

and no single sector is able to defeat a matter.<sup>89</sup> Any committees and subgroups organized on other than a membership-sector basis must be reported to the NERC Board of Trustees and the MRC, along with the reason for constituting the committee or subgroup in the manner chosen. The ROP provide that for any committee or subgroup organized on other than a membership-sector basis, a reasonable opportunity for additional participation (as members or observers) shall be provided for sectors not represented on the committee or subgroup (subject to any reasonable restrictions as may be necessary to accomplish the mission of the committee or subgroup).<sup>90</sup> Additionally, a reasonable opportunity must be provided for membership from sectors desiring to participate in any committees and subgroups pertaining to development of, interpretation of, or compliance with Reliability Standards.<sup>91</sup>

The NERC ROP provide that NERC standing committees may appoint subgroups using the same principles as specified in §1302 of the ROP (summarized in the immediately preceding paragraph).<sup>92</sup>

The provisions of §§1301 and 1302 of the NERC ROP regarding committee composition reflect revisions to these provisions that were approved or directed by the Commission in its October 30, 2006 order on the *NERC ERO Governance Compliance Filing*.<sup>93</sup>

The requirement for balanced decision-making is also applicable to the Reliability Standards development process, and is discussed below under criterion 5, “The ERO has established rules that provide reasonable notice and opportunity for public comment, due process, openness and balance of interests in developing Reliability Standards, and otherwise exercising its duties.”

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

NERC’s Bylaws require that the funding mechanism used to recover its net annual budget requirement (i.e., net of fees and other revenues received by NERC from users and purchasers of NERC products and services, and net of prior-period funding surplus or deficiency) “shall consist of such assessments as determined by the [NERC] board that result in an equitable allocation of the Corporation’s funding requirement among end users of the North American electric utility system as established in the Corporation’s Rules of Procedure.”<sup>94</sup> Section 1102 of the NERC ROP,

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<sup>89</sup> ROP §1302.

<sup>90</sup> ROP §1302.

<sup>91</sup> ROP §1302.

<sup>92</sup> ROP §1305.

<sup>93</sup> See *North American Electric Reliability Corporation, Order on Petitions for Rehearing and Clarification; Order on Compliance Filing*, 117 FERC ¶ 61,126 (2006), at PP 75-87.

<sup>94</sup> NERC Bylaws Article XIII, §3. NERC charges users/purchasers of some of its products and services directly for the products and services, at prices that cover some or all of the cost of providing the product or service. Examples include charges to purchasers of data sets from the Generating Availability Data System, charges to candidates for

“NERC Funding and Cost Allocation,” prescribes the allocation methods to be used to recover NERC’s funding requirements among regions of the United States and among countries in the North American BPS. Section 1102 specifies that NEL shall be used to allocate funding requirements among interconnections and Regional Entities except in those instances in which direct assignment of costs to a particular interconnection, Regional Entity, or group of entities is appropriate; however, in the case of direct assignment, NEL must be used to allocate the directly-assigned costs within the interconnection, Regional Entity, or group of entities:

- (1) In order that NERC’s costs shall be fairly allocated among Interconnections and among Regional Entities, the NERC funding mechanism for all statutory functions shall be based on NEL.
- (2) NERC’s costs shall be allocated so that all load (or, in the case of costs for an Interconnection or Regional Entity, all load within that Interconnection or Regional Entity) bears an equitable share of such costs based on NEL.
- (3) Costs shall be equitably allocated between countries or Regional Entities thereof for which NERC has been designated or recognized as the Electric Reliability Organization.
- (4) Costs incurred to accomplish the statutory functions for one Interconnection, Regional Entity, or group of entities will be directly assigned to that Interconnection, Regional Entity, or group of entities provided that such costs are allocated equitably to end-users based on NEL.

The NERC ROP define NEL as:

[N]et generation of an electric system plus energy received from others less energy delivered to others through interchange. It includes system losses but excludes energy required for the storage of energy at energy storage facilities.<sup>95</sup>

In business plan and budget filings with the Commission, actual assessments for Canadian and Mexican entities vary after taking into account polices regarding the allocation of certain compliance and enforcement costs.

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

NERC has established rules that provide fair and impartial procedures for monitoring and enforcement of compliance with Reliability Standards. These rules and procedures are embodied

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certification as NERC-certified operators for examinations and for renewal of credentials, and charges to continuing education providers for certification of their education programs.

<sup>95</sup> ROP Appendix 2.

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

In addition, Attachment 2, *Hearing Procedures*, to the uniform CMEP contains detailed due process procedures for the conduct of hearings before the CEA hearing body, when requested by the registered entity, concerning a disputed notice of alleged violation and/or proposed penalty or sanction, disputed mitigation plan provisions, or disputed remedial action directive. The *Hearing Procedures*, which were initially approved by the Commission in two orders, subject to various specific compliance requirements,<sup>96</sup> are based on, and in most respects are quite similar to, the Commission's Rules of Practice and Procedure<sup>97</sup> and to the rules of practice and procedure used by many state public utility commissions.

In 2013, the Regional Entity representatives to the ERO Legal Group developed *Hearing Body Manual – Guidance for Conducting Hearings at the Regional Entities* (Hearing Body Manual) to provide practical guidance to hearing body members at the eight Regional Entities regarding the hearing process. The Hearing Body Manual outlines the specific duties of the hearing officer and the hearing body and discusses the standard of review that should govern the hearing body's consideration of the hearing officer's decisions throughout the hearing process. The particulars of the hearing process, including the roles of the hearing officer and the hearing body, are set forth in Attachment 2 to the CMEP. To the extent that there is a conflict between the Hearing Body Manual and the CMEP, the CMEP, as applicable, prevails.

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

Section 215(e)(6) of the FPA, and §39.7(g) of the Commission's regulations,<sup>98</sup> requires that any penalty imposed for violation of a Reliability Standard shall (a) bear a reasonable relation to the seriousness of the violation; and (b) take into consideration the efforts of the user, owner or

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<sup>96</sup> *Order Addressing Revised Delegation Agreements*, 122 FERC ¶61,245 (2008); *Order Accepting Compliance Filings, Subject to Conditions*, 125 FERC ¶61,330 (2008).

<sup>97</sup> 18 C.F.R. Part 385.

<sup>98</sup> 18 C.F.R. §39.7(g).

operator to remedy the violation in a timely manner.<sup>99</sup> This fundamental requirement is embodied in §401.7 of the NERC ROP and in §3.8 of the NERC *Sanction Guidelines*, Appendix 4B to the ROP. Section 39.7(c) of the Commission's regulations<sup>100</sup> requires that NERC or a Regional Entity may, after notice and opportunity for hearing, impose a penalty on a user, owner or operator of the BPS for a violation of a Reliability Standard if NERC files a notice of penalty and record of the proceedings with the Commission and serves a copy on the user, owner or operator. The notice of penalty must contain: (i) the name of the entity on whom the penalty is imposed; (ii) identification of each Reliability Standard violated; (iii) findings of fact with respect to any act or practice resulting in violation of the standard; (iv) a description of the penalty imposed; (v) the record of the proceeding; and (vi) any other matters NERC or the Regional Entity may find relevant.<sup>101</sup> The penalty may not take effect earlier than the 31st day after NERC files the notice of penalty and record of proceeding with the Commission,<sup>102</sup> and it is subject to review by the Commission on its own motion or on application of the user, owner or operator.<sup>103</sup> Section 5.9 of the NERC CMEP provides for the filing of a notice of penalty with the Commission, and for a 30-day period to run before the penalty becomes effective, in accordance with 18 C.F.R. §39.7(d) through (e).<sup>104</sup>

Section 39.7(g) of the Commission's regulations<sup>105</sup> requires the ERO to submit for Commission approval penalty guidelines that set forth a range of penalties for violations of Reliability Standards, and specifies that a penalty imposed by the ERO or a Regional Entity must be within the range set forth in the penalty guidelines. The NERC *Sanction Guidelines* comprise the penalty guidelines established by NERC, which the Commission has approved pursuant to §39.7(g).

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<sup>99</sup> 18 C.F.R. §39.7(g)(1) also specifies that a penalty may be monetary or non-monetary, and may include, but is not limited to, a limitation on an activity, function, operation, or other appropriate sanction, including being added to a reliability watch list composed of major violators that is established by the ERO, a Regional Entity or the Commission.

<sup>100</sup> 18 C.F.R. §39.7(c).

<sup>101</sup> 18 C.F.R. §39.7(d).

<sup>102</sup> 18 C.F.R. §39.7(e).

<sup>103</sup> 18 C.F.R. §39.7(e).

<sup>104</sup> Certain instances of noncompliance with the Reliability Standards may be resolved outside of the notice of penalty process set forth in the NERC CMEP. Beginning in September 2011, NERC began tracking certain lesser-risk remediated possible violations in the FFT program. Following the Commission's *Order Accepting with Conditions the Electric Reliability Organization's Petition Requesting Approval of New Enforcement Mechanisms and Requiring Compliance Filing*, 138 FERC ¶ 61,193 (2012), the Commission considered all FFT matters closed sixty days after the FFT informational filing was submitted to the Commission unless the Commission sought to review a specific matter. In June 2013, the Commission approved expanding the scope of the FFT Program to include a limited pool of moderate risk issues (in addition to the minimal risk issues already permitted under the program), as well as issues with ongoing mitigation activities, provided the mitigation would be completed within 90 days. In addition, the Commission approved the practice of publicly posting FFT matters on a common website in lieu of a monthly informational filing to the Commission. The Commission indicated that it would consider an FFT matter closed 60 days following the public posting. *Order on Compliance Filing*, 143 FERC ¶ 61,253 (2013).

<sup>105</sup> 18 C.F.R. §39.7(g)(2).

Under the *Sanction Guidelines*, penalties are to be commensurate to the reliability impact of the violation and to those levied for similar violations, while still reflecting unique facts and circumstances related to the violation or the violator. NERC is charged with ensuring “acceptable similarity” in penalties for comparable violations.<sup>106</sup>

Significantly, however, the *Sanction Guidelines* also state, “Any provisions within a settlement regarding Penalties or sanctions can supersede any corresponding Penalties or sanctions that would otherwise be determined pursuant to these Sanction Guidelines.”<sup>107</sup> As such, the negotiation of settlements and determination of penalties involve compromise and the weighing of multiple considerations to arrive at a penalty agreeable to the Regional Entity and the registered entity. Even with this available flexibility, NERC still evaluates the facts and circumstances of every violation that is part of a settlement to ensure that the penalty for that violation, and for the group of violations in the settlement, is within a range of reasonableness that displays consistency.

When evaluating every violation, NERC starts with a base penalty amount that is provided by the VRF/VSL matrix. If the registered entity has a previous violation of a same or similar Reliability Standard Requirement, then the penalty may be aggravated.<sup>108</sup> NERC next considers the violation time horizon for the violation, with multipliers applied to the penalty based on the effect on operations. The highest multiplier applies to real-time operations, while long-term planning is on the opposite end of the spectrum. The registered entity’s ability to impact reliability determines the next multiplier, with small facilities or entities having their penalty reduced by a significant amount. A multiplier can be applied based on the condition of the BPS at the time of the violation, with aggravation for a violation occurring during stressed conditions.<sup>109</sup> Among the mitigating factors in penalty determination are the quality of the registered entity’s internal compliance program, the degree of the registered entity’s cooperation in resolution of the violation, and whether the registered entity self-reported the violation.<sup>110</sup>

NERC will aggregate the results of the violation-by-violation analysis for comparison with the penalty included in the settlement submitted by the Regional Entity. NERC also evaluates how the penalty for the violations in the instant settlement compares to penalties for similar violations included in settlements that have already been approved by NERC and subject to review by the Commission. The evaluation of settlements provides an evolving store of knowledge to use when considering new settlements submitted to NERC. In the end, if the penalty included in the settlement falls within a range of reasonableness for penalties associated with violations involving similar reliability risks, similar entities, and similar facts and circumstances, then the penalty is deemed consistent enough for approval by NERC.

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<sup>106</sup> *Sanction Guidelines* §1.

<sup>107</sup> *Sanction Guidelines* §2.1.

<sup>108</sup> *Sanction Guidelines* §§3.1 and 3.2.

<sup>109</sup> *Sanction Guidelines* §2.7; *see also* §3.2.

<sup>110</sup> *Sanction Guidelines* §3.3.

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

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

The Corporation shall develop Reliability Standards pursuant to procedures and processes that shall be specified in the Rules of Procedure of the Corporation. The Rules of Procedure shall provide for the development of Reliability Standards through an open, transparent, and public process that provides for reasonable notice and opportunity for public comment, due process, and balancing of interests and is designed to result in Reliability Standards that are technically sound. Participation in the process for developing Reliability Standards shall not be limited to members of the Corporation but rather shall be open to all persons and entities with an interest in the reliable operation of the BPS.<sup>111</sup>

NERC's process for developing and modifying Reliability Standards, which the Commission accepted as meeting the criteria for certifying NERC as the ERO pursuant to §215 of the FPA and §39.3(b) of the Commission's regulations,<sup>112</sup> is embodied in §300 of the NERC ROP and the SPM, Appendix 3A to the ROP. Section 304 of the ROP states that NERC shall develop Reliability Standards in accordance with the NERC SPM. The SPM sets forth the detailed process steps for development and approval of a new Reliability Standards or revision to a Reliability Standard.

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

1. **Openness** — Participation shall be open to all persons who are directly and materially affected by the reliability of the North American BPS. There shall be no undue financial barriers to participation. Participation shall not be conditional upon membership in NERC or any other organization, and shall not be unreasonably restricted on the basis of technical qualifications or other such requirements.
2. **Transparency** — The process shall be transparent to the public.

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<sup>111</sup> NERC Bylaws Article IX, §2.

<sup>112</sup> *ERO Certification Order*, 116 FERC ¶61,062, at PP 239, 241, 250.

3. **Consensus-building** — The process shall build and document consensus for each standard, both with regard to the need and justification for the Reliability Standard and the content of the Reliability Standard.
4. **Fair Balance of Interests** — The process shall fairly balance interests of all stakeholders and shall not be dominated by any two segments as defined in Appendix 3D, *Development of the Registered Ballot Body*, of these Rules of Procedure, and no single segment, individual or organization shall be able to defeat a matter.
5. **Due Process** — Development of Reliability Standards shall provide reasonable notice and opportunity for any Person with a direct and material interest to express views on a proposed Reliability Standard and the basis for those views, and to have that position considered in the development of the Reliability Standards.
6. **Timeliness** — Development of Reliability Standards shall be timely and responsive to new and changing priorities for reliability of the BPS.

Section 305 of the NERC ROP specifies that “NERC Reliability Standards shall be approved by a Registered Ballot Body prior to submittal to the [NERC] Board and then to [a]pplicable [g]overnmental [a]uthorities for their approval,” and that “[a]ny person or entity may join the Registered Ballot Body to vote on Reliability Standards.” The RBB is organized on an industry segment basis, and persons or organizations joining the RBB must select membership in the appropriate segment (subject to periodic review by NERC).<sup>113</sup> The RBB segments and the criteria for membership in each segment are set forth as follows:<sup>114</sup>

- Segment 1: Transmission Owners
- Segment 2: Regional Transmission Organizations and Independent System Operators
- Segment 3: Load-Serving Entities
- Segment 4: Transmission Dependent Utilities
- Segment 5: Electric Generators

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<sup>113</sup> ROP §305.

<sup>114</sup> ROP Appendix 3D at 2-3. The segments of the RBB are different from the NERC membership segments established by Article II, §4 of the NERC Bylaws (discussed above under criterion 2). The Commission approved the use of segments for the RBB that are different from the NERC membership segments. *North American Electric Reliability Corporation, Order on Petitions for Rehearing and Clarification, Order on Compliance Filing*, 117 FERC ¶ 61,126 (2006), at P 30.

- Segment 6: Electricity Brokers, Aggregators, and Marketers
- Segment 7: Large Electricity End Users
- Segment 8: Small Electricity Users
- Segment 9: Federal, State, and Provincial Regulatory or other Government Entities
- Segment 10: Regional Entities

Section 306 of the ROP provides for the standards development process to be overseen by a Standards Committee, which is an elected body comprised of two members of each segment of the RBB and two officers elected to represent the interests of the industry as a whole.<sup>115</sup> The Standards Committee is to ensure stakeholder interests are fairly represented in the Reliability Standards development process. Section 308.2 of the ROP specifies that proposed Reliability Standards or revisions to Reliability Standards shall be submitted to the NERC Board of Trustees for approval after being approved by the RBB pool voting on the standard.

The NERC SPM sets out the detailed steps in the process for developing and approving Reliability Standards or revisions to Reliability Standards. The process is based on the procedures of the ANSI and other standards-setting organizations in the United States and Canada.<sup>116</sup> The standards development process is intended to develop consensus on both the need for and content of a proposed standard.<sup>117</sup> As detailed in the SPM, the process includes the following key elements:

- Nomination of a proposed standard, revision to a standard, or withdrawal of a standard, using a SAR, which may entail appointing a SAR drafting team.<sup>118</sup>
- Public posting of the SAR to allow interested persons and entities to review and comment on the need for the proposed standard and the expected outcomes and impacts from implementing it, and to identify if there is stakeholder consensus on the need, scope and applicability of the standard proposed by the SAR.<sup>119</sup>

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<sup>115</sup> Election of the members of the Standards Committee is governed by the *Procedures for Election of Members of the Standards Committee*, Appendix 3B to the ROP.

<sup>116</sup> SPM §§1.4, 10.0, 13.0, and 16.0. ANSI accredited NERC's Reliability Standards development process in 2003.

<sup>117</sup> SPM §§1.4, 3.8, 3.10, and 4.0.

<sup>118</sup> SPM §§4.0, 4.2, and 4.3.

<sup>119</sup> SPM §§4.0, 4.1, and 4.2.

- Review of the public comments in response to the SAR and prioritization of proposed standards, leading to authorization to develop standards for which there is a stakeholder consensus-based need.<sup>120</sup>
- Appointment of a standard drafting team to draft the new or revised standard. The appointed standard drafting team is to have the expertise, competencies and diversity of views needed to develop the standard. The appointment process includes a public solicitation for nominees.<sup>121</sup>
- Drafting the new or revised standard. The standard will be drafted by the standard drafting team with the assistance and administrative support of the NERC standards process manager (a NERC professional staff member), who will review the draft standard for consistency of quality and completeness and to ensure the standard is within the scope and purpose identified in the SAR.<sup>122</sup>
- Public posting of the draft standard to allow interested parties to review and comment on it, to receive specific comments from interested parties on the text of the standard, to assess stakeholder consensus on the draft standard, and to determine if the draft standard should be modified to increase consensus.<sup>123</sup>
- Field testing (if any) of the draft standard and its measures.<sup>124</sup>
- Analysis of public comments and field test results (if any) by the standard drafting team, giving consideration to the written views and objections of all participants, to determine if there is consensus the proposed standard should go to ballot, or requires further work.<sup>125</sup>
- Balloting of the standard by the industry stakeholder ballot pool formed from the RBB for purposes of balloting the new or revised standard.<sup>126</sup> (The voting process is described below.)

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<sup>120</sup> SPM §§4.0, 4.1, 4.2, and 4.3.

<sup>121</sup> SPM §§4.0, 4.3, and 4.4.

<sup>122</sup> SPM §§4.0 and 4.4.

<sup>123</sup> SPM §§4.0, 4.5, and 4.7.

<sup>124</sup> SPM §§4.0 and 6.0.

<sup>125</sup> SPM §§4.0, 4.5, 4.6, 4.7, 4.12, and 6.0.

<sup>126</sup> SPM §§4.0, 4.7, 4.8, and 4.9.

- Re-balloting of the standard to consider specific comments by those submitting negative votes with comments.<sup>127</sup>
- Vote by the NERC Board of Trustees to approve or reject the standard that has been approved by the ballot pool. The NERC Board of Trustees may adopt or reject a Reliability Standard that has been approved by the ballot pool, but may not modify the standard; however, if the NERC Board of Trustees chooses not to adopt a proposed standard, the board shall provide its reasons.<sup>128</sup>
- Submission of the RBB-approved and board-approved Reliability Standard to the Commission and other applicable governmental authorities for approval.<sup>129</sup>

As provided in the SPM, voting on a proposed Reliability Standard or revision to a standard is done by the RBB ballot pool formed for that standard, and is tallied on a weighted segment basis. At least 30 days prior to the start of a ballot, the NERC standards process manager issues a notice to the entities in the RBB advising them of the upcoming ballot on the new or revised standard, so that entities may elect to join the ballot pool for balloting the standard. Any member of the RBB may join (or leave) the ballot pool for the standard until the ballot period begins.<sup>130</sup> The balloting is conducted electronically with voting allowed during a specified ballot period, typically 10 days.<sup>131</sup> Approval of a proposed standard or revision to a standard requires both (i) a quorum, which is established by at least 75 percent of the members of the ballot pool submitting a response with an affirmative vote, a negative vote, or an abstention,<sup>132</sup> and (ii) affirmative votes by a two-thirds majority of the weighted segment votes.<sup>133</sup> The calculation of the weighted segment voting results is described in detail in the SPM.<sup>134</sup>

The foregoing demonstrates that NERC's rules provide reasonable notice and opportunity for public comment, due process, openness, and balance of interests in the development of

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<sup>127</sup> SPM §§4.0, 4.13, and 4.14. Voters on the first ballot are allowed to submit comments with affirmative ballots and reasons for their votes with negative ballots (although inclusion of a statement of reasons with a negative ballot is not required).

<sup>128</sup> SPM §§4.0, 4.15, and 4.16.

<sup>129</sup> SPM §§4.0, 4.16, and 4.17.

<sup>130</sup> SPM §4.8.

<sup>131</sup> SPM §§4.0 and 4.9.

<sup>132</sup> SPM §4.10.

<sup>133</sup> SPM §§4.10 and 4.11. For this purpose the number of votes cast is the sum of the affirmative and negative votes cast by the ballot pool, excluding abstentions, non-responses and negative votes without comments.

<sup>134</sup> SPM §§4.10 and 4.11.

Reliability Standards. In finding that NERC met the statutory and regulatory criteria to be certified as the ERO, the Commission found NERC's Reliability Standards development process met the ERO certification requirement that the ERO candidate have rules providing for reasonable notice and opportunity for public comment, due process, openness, and balancing of interests in developing Reliability Standards.<sup>135</sup>

Other NERC rules provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in the exercise of NERC's duties other than developing Reliability Standards. As discussed under criterion 2 above, NERC's Bylaws provide for its trustees to be elected by the MRC, which (again per the NERC Bylaws) is comprised of representatives of the sectors of the NERC membership as defined in the Bylaws. The Bylaws also provide that amendments to the Bylaws must be adopted by majority vote of both the Board of Trustees and the MRC, conducted after at least 10 days and no more than 60 days' notice of the vote on the proposed amendment. Additionally, the NERC membership may adopt new Bylaws, or alter, amend, or repeal amendments adopted by vote of the board and the MRC, by vote of two-thirds of the sectors voting on the alteration, amendment, repeal or adoption.<sup>136</sup>

The Bylaws further provide that revisions to the NERC ROP may be proposed by: (i) any 50 members of NERC, which must include members from at least three membership sectors; (ii) the MRC; (iii) a committee of NERC to whose function and purpose the ROP to be amended pertains; or (iv) an officer of NERC. A proposed revision to the NERC ROP must be posted on the NERC website for public comment for a minimum of 45 days prior to the NERC Board of Trustees vote on the proposed revision.<sup>137</sup>

The NERC Bylaws require that notice of meetings of the NERC Board of Trustees and of the MRC, and notice of calls for action without a meeting by the board or the MRC, along with all non-confidential materials to be considered by the board or MRC at a meeting or in an action without a meeting, shall be posted on the NERC website at least 24 hours prior to the meeting or within 24 hours after the call for action without a meeting.<sup>138</sup> The ROP provide that notice of meetings of NERC committees, and all non-confidential materials relating to the meeting, shall be posted on the NERC website at approximately the same time(s) the notice and materials are provided to the committee members.<sup>139</sup> Additionally, the Bylaws require that, except for discussions of certain specified non-public topics, meetings of the NERC Board of Trustees and of the MRC shall be open to the public (subject to reasonable space limitations).<sup>140</sup> Similarly, the

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<sup>135</sup> *ERO Certification Order* at P 250.

<sup>136</sup> NERC Bylaws Article XIV, §1.

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

<sup>138</sup> NERC Bylaws Article V, §§4 and 6; Article VIII, §§10 and 12.

<sup>139</sup> ROP §1304.1.

<sup>140</sup> NERC Bylaws Article V, §4; Article VIII, §10.

NERC ROP require that, except for discussions of certain specified non-public topics, meetings of NERC standing committees shall be open to the public (subject to reasonable space limitations).<sup>141</sup>

With respect to the preparation of NERC's annual business plan and budget, the NERC Bylaws provide that NERC shall post a draft business plan and budget for comment by the NERC membership, the MRC, and the NERC standing committees for at least 30 days prior to the board meeting at which the annual business plan, budget and funding requirement is to be approved for submission to the Commission. The Board shall also consult with the members of the MRC on the proposed business plan and budget before it is adopted.<sup>142</sup> Should a supplemental or modified budget or assessment be considered for adoption during the course of the year, the Bylaws require that the procedures for posting, receipt of comments, and consultation with the MRC shall be followed to the extent possible in the board's judgment in light of the exigency of the circumstances necessitating preparation and approval of the supplemental or modified budget, funding and assessment.<sup>143</sup>

With respect to compliance monitoring and enforcement, as discussed above under criteria 1 and 4, the NERC CMEP and Regional Entity CMEPs, the NERC *Hearing Procedures* (Attachment 2 to the CMEP), and the NERC *Sanction Guidelines*, provide for reasonable notice to and due process for users, owners, and operators of the BPS in the conduct of compliance monitoring and enforcement activities of NERC and the Regional Entities. These activities include the implementation of the compliance monitoring processes, the conduct of hearings on disputed notices of alleged violations, proposed penalties, disputed mitigation plan components and disputed remedial action directives, and the imposition of penalties and sanctions for violations of Reliability Standards.

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

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

As stated in its Certificate of Incorporation, one of the corporate purposes of NERC is "to act as the electric reliability organization for the United States as certified by the Federal Energy Regulatory Commission and for Canada and Mexico as recognized by applicable government and regulatory authorities in such countries, all pursuant to law." The efforts of NERC to seek recognition in Canada and Mexico are described below.

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<sup>141</sup> ROP §1304.1.

<sup>142</sup> NERC Bylaws Article XIII, §4; *see also* ROP §1103.1.

<sup>143</sup> NERC Bylaws Article XIII, §5.

## Canada

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

## Alberta

### *Reliability Standards*

The Alberta Electric System Operator (AESO) is the independent system operator, a statutory corporation pursuant to Alberta’s *Electric Utilities Act, 2003* (EUA).<sup>144</sup> AESO’s statutory mandate requires that it direct the operation of the Alberta interconnected electric system, plan for the future of the transmission system, and operate the wholesale electricity market in the province.

Pursuant to the Alberta *Transmission Regulation* (made pursuant to the EUA),<sup>145</sup> Alberta Reliability Standards include reliability standards<sup>146</sup> enacted by WECC, NERC, or any similar entity that is recognized by the AESO, to the extent that these reliability standards are adopted by the AESO in accordance with the *Transmission Regulation*. The AESO also has the authority under the *Transmission Regulation* to adopt other reliability standards subject to certain process requirements.

In order for a reliability standard to be adopted in Alberta, the *Transmission Regulation* requires that the AESO consult with those market participants that it considers likely to be directly affected by one or more reliability standards and make a recommendation to the Alberta Utilities Commission to approve or reject the reliability standards being considered for approval. The Alberta Utilities Commission must follow the AESO’s recommendation unless an interested person satisfies the Alberta Utilities Commission that the recommendation of the AESO is either “technically deficient” or “not in the public interest.” When the AESO considers NERC Reliability Standards for adoption in Alberta, the AESO is required to determine whether the NERC

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<sup>144</sup> Alberta’s EUA is available at: <http://www.qp.alberta.ca/documents/Acts/E05P1.pdf>.

<sup>145</sup> Alberta’s *Transmission Regulation* is available at: [http://www.qp.alberta.ca/documents/Regs/2007\\_086.pdf](http://www.qp.alberta.ca/documents/Regs/2007_086.pdf).

<sup>146</sup> In this context, where not capitalized, the phrase “reliability standards” refers to standards relating to reliability generally, whether or not they were developed or approved by NERC.

Reliability Standards can be applied in Alberta, including whether approval would be appropriate for the Alberta electric energy market framework.<sup>147</sup>

The AESO's *Alberta Reliability Standards Program Work Plan* is intended to help manage and track the adoption of NERC Reliability Standards in Alberta. It was last revised in June 2014, and it reflects a risk-based prioritization approach.<sup>148</sup> The Alberta Reliability Standards, as approved, bear the same identifiers as the original NERC Reliability Standards (COM, BAL, FAC, etc.), but have an "AB" added to the name.<sup>149</sup>

An Alberta Reliability Standard may incorporate modifications from the original NERC Reliability Standard to recognize the physical characteristics of the Alberta system or for other reasons.<sup>150</sup>

When presented to the Alberta Utilities Commission by the AESO for approval, a proposed Alberta Reliability Standard will contain an explanation for any proposed modifications, which are not intended to change the intent or substance of the NERC Reliability Standards. Where there have been changes from a NERC Reliability Standard to an Alberta Reliability standard, it is noted in a quarterly update report that is provided to WECC and to NERC.

Effective January 1, 2014, the AESO assumed all responsibilities related to the functions of a Reliability Coordinator, effective January 1, 2014. The AESO has indicated that it remains an active member and supporter of the WECC (the former Reliability Coordinator for the AESO), and it looks forward to a strong working relationship with the proposed independent WECC RC, Peak Reliability. Additional Alberta Reliability Standards will be adopted, and this work is underway.

### *Data Sharing*

Under §8.4 of the WECC/AESO membership and operating agreement (MOA), if WECC determines that the AESO is not in compliance with an Alberta Reliability Standard, WECC must promptly refer the matter to the Market Surveillance Administrator (MSA). Pursuant to the

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<sup>147</sup> Alberta has developed an Alberta Functional Model that integrates with the Alberta regulatory and market framework. The Alberta Functional Model defines entity types that perform functions that impact the reliability of the transmission system. Functional entity types are used to identify if an Alberta Reliability Standard is applicable to that functional type.

<sup>148</sup> The *Alberta Reliability Standards Program Work Plan* can be found at: <http://www.aeso.ca/rulesprocedures/25052.html>. Alberta Reliability Standards currently in effect and their effective dates are listed on the AESO website at: <http://www.aeso.ca/rulesprocedures/17006.html>. A number of NERC Reliability Standards have been rejected as not being applicable to entities in Alberta. These are listed at: <http://www.aeso.ca/rulesprocedures/16426.html>.

<sup>149</sup> An example of a current Alberta Reliability Standard is BAL-001-AB-0a, Real Power Balancing Control Performance.

<sup>150</sup> See Project Charter for Alberta Reliability Standards Implementation at p.1, available at: [http://www.aeso.ca/downloads/ARS\\_Project\\_Charter\\_2011-12-05\\_final.pdf](http://www.aeso.ca/downloads/ARS_Project_Charter_2011-12-05_final.pdf).

WECC/MSA services agreement, WECC, on behalf of the MSA, will monitor AESO's compliance with Alberta Reliability Standards and report its findings to the MSA.

Sections 2.13, 6.1, and 6.5 of the WECC/MSA services agreement address WECC's ability to report possible violations<sup>151</sup> to NERC. Under §2.13, NERC and FERC are not allowed to participate in or observe WECC's actions taken according to the WECC/MSA services agreement, without the express approval of the MSA. Section 6.1 establishes that all records pertaining to WECC's services will be considered confidential and should be treated as strictly confidential at all times.<sup>152</sup>

Based on its agreement with the MSA, WECC is prohibited from disclosing information related to the AESO's compliance with Alberta Reliability Standards without the permission of the MSA. However, as noted in the NERC/WECC/AESO memorandum of understanding (MOU),<sup>153</sup> disclosing information related to confirmed contraventions would occur as such information is made public by the Alberta Utilities Commission. In addition, as there is value to the North American electric industry of receiving information on lessons learned from such contraventions, the AESO will work with NERC and WECC to provide information on lessons learned as made public by the Commission.

### *Compliance*

The NERC/WECC/AESO MOU commits the AESO to appropriate compliance monitoring and enforcement "in a manner determined in Alberta." With regard to entities (other than the AESO) that are subject to Alberta Reliability Standards, the AESO carries out its mandate to monitor compliance according to a compliance monitoring plan. Matters of noncompliance with an Alberta Reliability Standard must be referred by the AESO to the MSA for consideration and possible action.

The Alberta Utilities Commission adopted specified penalties for contraventions of Alberta Reliability Standards effective November 2010. If warranted, the MSA is empowered by §52 of the *Alberta Utilities Commission Act* to issue a notice of specified penalty for contravention of an Alberta Reliability Standard. Specified penalties are defined in AUC Rule 027 and range from \$500 to \$25,000, depending upon the severity of the contravention and the applicable Alberta

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<sup>151</sup> The terms "possible violation," "confirmed violation," and "violation" are not defined in Alberta. Rather, Alberta uses the terms "suspected contravention" and "contravention."

<sup>152</sup> Section 6.5 is even more explicit with respect to WECC's authority to share information with NERC and mandates the following:

WECC further acknowledges that this Agreement clearly stipulates that in no event will Confidential Records received or generated by WECC in respect of the Services or this Agreement be disclosed or made available to persons outside WECC, including to any representative of FERC, NERC or any other person, without the express written approval of the MSA.

<sup>153</sup> MOU between NERC, WECC, and AESO, effective July 15, 2010, at p. 7, available at: [http://www.nerc.com/files/NERC-WECC-AESO\\_MOU\\_Executed%20Version\\_071510.pdf](http://www.nerc.com/files/NERC-WECC-AESO_MOU_Executed%20Version_071510.pdf).

Reliability Standard.<sup>154</sup> Specified penalties can be appealed to the Alberta Utilities Commission. Alternatively, the MSA can pursue an administrative penalty before the Alberta Utilities Commission. The maximum administrative penalty amount is \$1 million per day on which a contravention occurs or continues.

## British Columbia

### *Reliability Standards*

The British Columbia Utilities Commission (BCUC) is an independent, quasi-judicial regulatory agency that operates under and administers the *Utilities Commission Act*.<sup>155</sup> The BCUC adopts or rejects reliability standards in British Columbia and is responsible for the administration of the Mandatory Reliability Standards Program. The British Columbia Hydro and Power Authority (BC Hydro), a provincial crown corporation, is a regulated integrated utility and transmission provider that acts as a balancing authority and applicant for Reliability Standards to the BCUC.

To provide the necessary information required for determinations and in accordance with the *Utilities Commission Act*, BC Hydro submits a *Mandatory Reliability Standard Assessment Report* to the BCUC assessing the new and revised reliability standards adopted in the United States by FERC within the annual assessment period (December 1 to November 30). The assessment report is developed in consultation with Registered Entities in the Mandatory Reliability Standards Program. Further, in consultation with stakeholders regarding the estimated time required for the entities to implement and come into compliance with the reliability standards, BC Hydro suggests effective dates for each of the Reliability Standards assessed. After a public comment process, the BCUC reviews BC Hydro's analysis and then may either approve or reject Reliability Standards. The BCUC does not have authority to alter or amend a standard. To date no standards have been rejected, although the provincial process can lead to delays before a FERC-approved Reliability Standard is adopted.

In Order G-171-10, issued on November 25, 2010, the BCUC approved an annual Implementation Plan created by WECC for 2011 that includes "a list of minimum [R]eliability [S]tandards to be actively monitored, methods to be used for monitoring, an Audit Plan, Self-Certification Program and Schedule, Periodic Information Submittal requirements and Exception Reporting process."<sup>156</sup> The BCUC has also issued orders approving annual Implementation Plans for subsequent years.<sup>157</sup>

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<sup>154</sup> The specified penalties for contravention of Alberta Reliability Standards are available at: <http://www.auc.ab.ca/rule-development/rule-027-specified-penalties-for-reliability-standards/Pages/default.aspx>.

<sup>155</sup> The *Utilities Commission Act* is available at: [http://www.bclaws.ca/Recon/document/ID/freeside/00\\_96473\\_01](http://www.bclaws.ca/Recon/document/ID/freeside/00_96473_01).

<sup>156</sup> Order No. G-171-10, issued by the BCUC, at p. 1, available at: [http://www.bcuc.com/Documents/Orders/2010/DOC\\_26511\\_G-171-10\\_MRS-2011-Implementation-Plan.pdf](http://www.bcuc.com/Documents/Orders/2010/DOC_26511_G-171-10_MRS-2011-Implementation-Plan.pdf).

<sup>157</sup> See, e.g., Order No. R-39-13, available at: [http://www.bcuc.com/Documents/Orders/2013/DOC\\_38047\\_R-39-13\\_BC-Reliability\\_2014-Implementation-Plan.pdf](http://www.bcuc.com/Documents/Orders/2013/DOC_38047_R-39-13_BC-Reliability_2014-Implementation-Plan.pdf) (approving the Implementation Plan for the 2014 calendar year).

The standards in effect in British Columbia are generally listed in an attachment to the most recent order approving new or amended standards. NERC Reliability Standards and WECC regional Reliability Standards effective in British Columbia are also listed on the WECC website.<sup>158</sup> British Columbia has vested the BCUC with authority to levy monetary penalties for violations.

### *Data Sharing*

WECC's relationship with the BCUC is governed by the Administration Agreement between the parties (dated October 8, 2009), the BCUC's *Rules of Procedure for Reliability Standards in British Columbia* (BCUC ROP), and BCUC's compliance monitoring program.<sup>159</sup> Under §3.2 of the Administration Agreement, WECC is required to immediately advise the BCUC and an applicable entity who has provided information to WECC if that information has been requested by NERC or a foreign government agency, unless disclosure of the request is prohibited by law. Therefore, WECC can only disclose confidential information related to possible violations if the BCUC approves the disclosure or by compulsion of law.

Under §6.3.1 of the BCUC ROP, the BCUC, in its discretion and upon request, may designate information as restricted.<sup>160</sup> If such designation is made, §3.6 of the Administration Agreement and the BCUC ROP prohibit WECC from transmitting the information outside of British Columbia. WECC can review the restricted information only at the offices of the applicable entity or at the BCUC. The applicable entity is not required to give WECC a copy of the restricted documents.

Under §3.1 of the Administration Agreement, WECC shall maintain the confidentiality of the confidential information and shall not disclose it even under conditions of confidence, except as provided in the Rules of Procedure, namely with BCUC approval. Section 3.1.1(ii) also prohibits WECC from disclosing documents or portion of documents that would potentially identify the source of the information. Finally, WECC cannot disclose any information if the BCUC directs WECC to keep it confidential.

### *Compliance*

Under a contract with the BCUC, WECC performs compliance oversight for the province, including registration, monitoring and auditing functions and activities. However, the violations, enforcement, and penalty assessment functions remain with BCUC. Until recently, the BCUC had no monetary sanctions authority. BCUC now has authority to assess fines of up to \$1 million per day. The process for imposing penalties for confirmed violations of reliability standards is under development.

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<sup>158</sup> See <http://www.wecc.biz/Standards/BCApproved%20Standards/Forms/AllItems.aspx>.

<sup>159</sup> See Attachments 1 and 2 to Order No. G-123-09, issued by the BCUC, available at: [http://www.bcuc.com/Documents/Orders/2009/DOC\\_23219\\_G-123-09\\_BCUC%20MRS.pdf](http://www.bcuc.com/Documents/Orders/2009/DOC_23219_G-123-09_BCUC%20MRS.pdf).

<sup>160</sup> See <http://www.bcuc.com/Documents/MRS/Rules-of-Procedure.pdf>.

## Manitoba

### *Reliability Standards*

The *Manitoba Hydro Act* establishes the framework for Manitoba Hydro to adopt NERC Reliability Standards by authorizing Manitoba Hydro, subject to Lieutenant Governor in Council approval, to adopt:

in whole or in part, any standards, rules, terms, conditions, guidelines or schedules, which are related to the planning, design or operation of generation or transmission facilities within an integrated regional power grid, established by [the North American Electric Reliability Council, Mid-Continent Area Power Pool or...] an industry organization, regional transmission group, regulatory body or other association or group or any other person.<sup>161</sup>

The *Manitoba Hydro Amendment and Public Utilities Board Amendment Act (Electricity Reliability)*<sup>162</sup> and its implementing regulations, which came into force on April 1, 2012, set the basis for the adoption of mandatory and enforceable NERC Reliability Standards in Manitoba. This legislation gives the Public Utilities Board of Manitoba (PUB) the authority to make determinations of noncompliance with Reliability Standards, to impose sanctions, and to remand a standard to NERC for reconsideration.

On April 1, 2012, all then-current NERC Reliability Standards became mandatory and enforceable in Manitoba. These standards are listed in Schedule 1 to the *Reliability Standards Regulation*.<sup>163</sup> The province reserved the right to adopt new or amended standards by regulation. The government is consulting with stakeholders as to the best process for considering and approving standards for application in Manitoba.

### *Compliance*

The *Compliance Monitoring and Enforcement Program Province of Manitoba*, based on the NERC CMEP, was adopted as Schedule 2 to the *Reliability Standards Regulation*. MRO and NERC, as compliance bodies, will monitor Manitoba Hydro's compliance with NERC Reliability Standards. If a compliance body alleges that a violation of standards has occurred in Manitoba, it must apply to the PUB with a recommended enforcement action for a determination on whether a standard has been violated. MRO also makes recommendations to PUB regarding the imposition

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<sup>161</sup> See *The Manitoba Hydro Act*, C.C.S.M. c.H190, s.16.3(1)(a), available at: <http://web2.gov.mb.ca/laws/statutes/ccsm/h190e.php>. The bracketed language above was stricken in *The Manitoba Hydro Amendment and Public Utilities Board Amendment Act* (dated June 11, 2009), and replaced with "an industry organization."

<sup>162</sup> Statutes of Manitoba 2009, c. 17.

<sup>163</sup> Available at: <http://web2.gov.mb.ca/laws/regs/annual/2014/098.pdf>.

of associated penalties or sanctions. The PUB will decide whether a violation of a standard has taken place and the penalty, if any, which should apply for noncompliance. The PUB can impose a penalty, with enforcement through a board order. When the PUB issues an order confirming a violation, NERC may make this fact and any attached penalties public.

NERC or MRO, in advising the PUB that they believe a violation has occurred, is also to advise on appropriate remedial actions, sanctions, or penalties.

### ***Data Sharing***

The compliance program requires timely data from registered entities to effectively monitor compliance with Reliability Standards.

All findings by PUB related to electricity reliability proceedings are made public through the issuance of orders. These orders will include the name of the registered entity, the Reliability Standard(s) and requirements(s) violated, whether the PUB agrees with MRO's findings and recommendations, and any penalties or sanctions imposed.

When the PUB issues an order confirming a violation, NERC may make this fact and any attached penalties public. The mitigation plan will not be made public until there is a confirmed violation. Similarly, final audit reports will be released to the public, but only after any alleged violations have become confirmed violations. Lastly, while compliance investigations are confidential, confirmed violations resulting from a compliance investigation will be made public.

## **New Brunswick**

### ***Reliability Standards***

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

In October 2013, New Brunswick's legislation that amends how Reliability Standards are approved, monitored, and enforced received Royal Assent and was proclaimed (i.e., became effective). The *New Brunswick Electricity Act*<sup>164</sup> led to the amalgamation of NBSO with the NB Power Group of Companies. The system operation functions performed by NBSO are now performed within the vertically integrated New Brunswick Power Corporation (NBPC). In addition to its responsibility to comply with reliability standards applicable to its function, NBPC is also responsible for making filings to the New Brunswick Energy and Utilities Board (NBEUB) to update Reliability Standards, maintain a list of BPS elements, and to make recommendations on

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<sup>164</sup> The *New Brunswick Electricity Act* is available at: <http://laws.gnb.ca/en/ShowPdf/cs/2013-c.7.pdf>.

compliance registrations. The NBSO's role in the adoption, monitoring, and enforcement of North American Reliability Standards has been transferred to the NBEUB.

The NBEUB may adopt FERC-approved NERC Reliability Standards that have been filed by NBPC. NERC Reliability Standards are filed and adopted with an accompanying NB Appendix to describe the specific application of the standard in New Brunswick. The NBEUB posts proposed Reliability Standards on its website for a 60-day review period prior to adoption. If the proposed Reliability Standard contains substantive revisions to the FERC-approved version, or if there are substantive comments received during the review period, the NBEUB may hold a hearing and may determine to approve, not approve, or remand the proposed Reliability Standard back to NBPC. A list of enforceable Reliability Standards is available on the NBEUB's website.<sup>165</sup>

### ***Data Sharing***

Confidentiality and public disclosure is governed by Part 7 of the *New Brunswick Compliance Monitoring and Enforcement Program* (NB CMEP) – Schedule A to the *Reliability Standards Regulation – Electricity Act*.<sup>166</sup> Any information that a registered entity provides to the NBEUB, NPCC, or NERC may be marked as confidential and may not be released to a third party without the written consent of the registered entity. The regulation provides for the public disclosure of finalized audit reports, confirmed violations, penalties, sanctions, and settlement agreements, including the name of the registered entity. The NBEUB is required to keep all CIP information confidential in accordance with §1500 of the NERC ROP.

Pursuant to the MOU, NERC provides information relevant to New Brunswick on issues relating to reliability, Reliability Standards, and compliance with Reliability Standards.

### ***Compliance***

The NBEUB implements a compliance monitoring system for reliability standards that is based on the requirements of the NERC compliance program. The NB program is documented as the NB CMEP – Schedule A to the *Reliability Standards Regulation – Electricity Act*. As a recognized compliance body under the regulations, NPCC assists the NBEUB with compliance monitoring activities according to a service agreement the NBEUB has executed with NPCC. The NBEUB will initiate enforcement action if it has reason to believe that a violation of a reliability standard has occurred. NBEUB requires that the entity take action to remove the risk the violation poses to the reliability of the BPS and to implement a plan that will prevent a future occurrence of the violation. Registered entities are subject to financial penalties and sanctions for violations of adopted reliability standards. A penalty matrix, provides ranges for penalties corresponding to VRFs and VSLs, is provided in the *Reliability Standards Regulation*.

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<sup>165</sup> See <http://www.nbeub.ca/index.php/en/electricity/reliability-compliance/118>.

<sup>166</sup> New Brunswick's *Reliability Standards Regulation – Electricity Act* is available at: <http://laws.gnb.ca/en/ShowPdf/cr/2013-66.pdf>.

## Nova Scotia

### *Reliability Standards*

The Nova Scotia Utility and Review Board (NSUARB) is an independent, quasi-judicial body which 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*.<sup>167</sup> Nova Scotia Power Incorporated (NSPI) is a public utility in Nova Scotia and is a member of NERC and NPCC. The Nova Scotia Department of Energy is responsible for energy and electricity policy in the province.

NERC has signed two separate MOUs with entities in Nova Scotia: one with NSUARB, and one with NSPI.<sup>168</sup>

NERC submits standards to NSUARB and NSPI for approval; each organization may approve, modify, remand or dismiss the standard as not applicable, though final approval authority rests with NSUARB. NSUARB has a quarterly review process allowing the submission, by NERC, of standards already approved by FERC. NSUARB will only process an application after FERC has approved or remanded the Reliability Standard in the United States.<sup>169</sup> NERC made an initial filing of Reliability Standards on June 30, 2010 along with the *Glossary of Terms Used in NERC Reliability Standards*. Nova Scotia approved this filing on July 20, 2011. None of the proposed standards were changed or rejected.

On September 2, 2011, NERC made its first quarterly filing to Nova Scotia that included a list of Standards approved by FERC in the period of time since the June 30, 2011 filing. This filing was approved.

In June 2012, the NSUARB proposed an expedited process for its review of NERC quarterly filings. This was approved for implementation in August 2012. With respect to the quarterly filing, NSPI and NPCC have 10 days to comment if they wish. At the end of the comment period, the NSUARB will decide if, based on any comments, a more rigorous review is required. If a more rigorous review is deemed required it will be undertaken; otherwise, the NSUARB will issue its decision. To date, all filings have been approved without additional review.

Under the MOU with NSPI, NSPI agrees to comply with NERC's Reliability Standards. NSPI also committed to review and provide recommendations on the adoption of Reliability Standards.

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<sup>167</sup> The *Nova Scotia Public Utilities Act* is available at: <http://nslegislature.ca/legc/statutes/public%20utilities.pdf>.

<sup>168</sup> The NSUARB and NERC signed an MOU on December 22, 2006, in which NERC and the NSUARB agreed to a cooperative relationship to improve the reliability of the North American BPS. On May 11, 2010, NERC, NPCC, and NSPI signed an MOU which memorializes the working relationship between the three entities to improve reliability of the grid in Nova Scotia and North America. Both MOUs are available at: <http://www.nerc.com/filingsorders/ca/pages/canadian-mous.aspx>.

<sup>169</sup> The date of the order is considered the effective date for the adopted Reliability Standards.

***Data Sharing***

The MOU states that NSPI will provide NPCC all information respecting reporting requirements in the CMEP for NERC Reliability Standards.

Under the MOU, NERC has agreed to share relevant information on issues related to reliability compliance with the NSUARB. Examples of such information include:

- (1) Compliance audits and spot checks;
- (2) Readiness evaluations;
- (3) Disturbance reports;
- (4) Reliability assessments and benchmarking information; and
- (5) Reports by regional reliability organizations, where applicable.<sup>170</sup>

There is also a data sharing requirement relevant to the Reliability Standards process. The MOU with NSUARB calls for NERC to submit all NERC Board of Trustees-approved Reliability Standards to the NSUARB. NERC also agreed to notify NSUARB immediately if a Reliability Standard has been remanded in another jurisdiction.

With respect to enforcement matters, the MOU states that the NSUARB and NERC will work together to establish a system for disclosure by NERC of violations to provide for assessment and reporting by NERC of inter-region reliability risks to or from entities outside of Nova Scotia where coordinated action is required to address those risks.

***Compliance***

Compliance is mandatory in Nova Scotia. NPCC as the regional Entity maintains the list of all market participants of the BES who must comply with approved reliability standards. NPCC provides recommendations to NSPI and may also identify organizations that may be candidates for registration and assign them to the compliance registry. The registry is based on the NERC functional model and registry criteria. The NSUARB will monitor compliance and accept compliance information and recommendations from NERC. NERC, NPCC and NSUARB may all suggest compliance violation; proceedings shall be conducted under the NSUARB's direction and control. NERC may recommend a particular penalty for any violation, but NSUARB will be responsible for determining if a violation occurred and what penalties should be imposed.

NSPI is subject to NERC's CMEP as implemented by NPCC.

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<sup>170</sup> See MOU between the NSUARB and NERC at pp. 2-3.

## Ontario

### *Reliability Standards*

The Ontario Minister of Energy is responsible for the legislation that governs the Ontario Energy Board (OEB) and the Independent Electricity System Operator (IESO) and for energy and electricity policy in the province. The IESO of Ontario is a not-for-profit corporate entity established under the *[Ontario] Electricity Act, 1998*,<sup>171</sup> and is subject to the oversight authority of the OEB. The OEB is responsible for regulating the electricity sector, and it has the legislative authority to stay or revoke the operation of a reliability standard in Ontario and refer it back to NERC or NPCC for further consideration.

On October 25, 2006, the OEB and NERC signed an MOU<sup>172</sup> setting forth the mutual understanding of each party's responsibilities with respect to reliability in the Province of Ontario. The MOU states that Ontario's legislative framework does not expressly contemplate approval of NERC Reliability Standards, By-laws or Rules of Procedure. The MOU recognizes that, under the Ontario Electricity Act, one of the IESO's objectives is to participate in the development of standards relating to the transmission system and to enforce those standards. The MOU confirms that NERC Reliability Standards are referenced generically in the Market Rules written and administered by the IESO, and they are considered in effect in Ontario upon expiration of the remand period. On November 28, 2006, the Ontario Ministry of Energy formally recognized NERC as the entity named as a "standards authority" in the *Electricity Act, 1998*. Subsequently, in 2008, the *Electricity Act, 1998* was amended, allowing for NPCC to be recognized as a standards authority.

An MOU between the IESO, NPCC, and NERC was signed on November 29, 2006 and amended on February 5, 2010. This MOU documents the roles of the parties in conformance with the Ontario reliability framework and commits the IESO to carry out a compliance enforcement program for Ontario entities. The MOU also acknowledges that the NERC Rules of Procedure have effect in Ontario, provided they do not conflict with the established reliability and compliance framework in Ontario. The amended MOU includes provisions for investigations, organization registration, and NERC certification.<sup>173</sup> The IESO is subject to NERC's CMEP processes in accordance with the MOU. Monitoring and enforcement activities, with the exception of financial sanctions, are performed by NPCC.

While there continues to be no formal approval of NERC Reliability Standards in Ontario, there is a process for a Reliability Standard to be rejected or remanded. This process provides for market participants, the IESO, or the OEB itself to initiate a review that could result in a standard

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<sup>171</sup> Ontario's *Electricity Act, 1998* is available at: [http://www.e-laws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_98e15\\_e.htm](http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_98e15_e.htm).

<sup>172</sup> Both the 2006 MOU and the 2010 MOU described in the following paragraph are available at: <http://www.nerc.com/filingsorders/ca/pages/canadian-mous.aspx>.

<sup>173</sup> In general, such NERC compliance processes do not involve direct participation by Ontario market participants.

being remanded or revoked for application in the province. Only Reliability Standards approved by the NERC Board of Trustees on or after May 14, 2008 are subject to this process.

Ontario was the first jurisdiction in North America to adopt NERC Reliability Standards as mandatory and enforceable. Until July 2011, a NERC Reliability Standard became effective on the date specified by the NERC Board of Trustees when it approved the standard. Because of the uncertainties in the timing of FERC approvals, a standard typically came into effect earlier in Ontario than in adjoining U.S. jurisdictions. An Ontario Market Rule amendment effective July 8, 2011 addressed this mismatch. Under this Market Rule,<sup>174</sup> a NERC Reliability Standard will become effective when it is declared mandatory and enforceable in the U.S., unless the OEB remands the Reliability Standard or otherwise stays its enforceability. In addition, any Reliability Standard approved by the NERC Board of Trustees under NERC Rule 321 (i.e., a standard responsive to a regulatory directive that has not been approved by the NERC RBB) must be approved by IESO before it can come into effect in Ontario.

To date, Ontario has neither remanded nor modified any NERC Reliability Standards. Information regarding Reliability Standards in Ontario can be found on the IESO's website.<sup>175</sup>

### ***Data Sharing***

Under the MOU, NERC will provide the OEB with information relevant to Ontario on issues related to compliance with NERC Reliability Standards, including reports on:

- (1) Compliance audits and spot checks;
- (2) Readiness audits;
- (3) Disturbance reports;
- (4) Reliability assessments and benchmarking information; and
- (5) Reports by regional reliability organizations, where applicable.

The MOU also calls for NERC to inform the OEB of Reliability Standards approved by NERC and submitted to appropriate regulatory authorities, and to notify the OEB of NERC Reliability Standards that are remanded to NERC in any jurisdiction outside of Ontario. The MOU states that the IESO is the only Ontario entity directly accountable to NERC for its own compliance and will be accountable to NERC for compliance by all Ontario entities with NERC Reliability Standards.

In the MOU, there is also an undertaking that, subject to confidentiality requirements, the IESO will advise NERC of the functional responsibilities of Ontario entities.

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<sup>174</sup> See *Market Rules for the Ontario Electricity Market*, ch. 5, Bulk Power System Reliability, available at: [http://ieso-public.sharepoint.com/Documents/marketRules/mr\\_marketRules.pdf](http://ieso-public.sharepoint.com/Documents/marketRules/mr_marketRules.pdf).

<sup>175</sup> See <https://www.ieso.ca/imoweb/ircp/reliabilityStandards.asp>.

### *Compliance*

The IESO is subject to NERC's CMEP, with the exception that the IESO is not subject to financial sanctions.

Compliance enforcement within Ontario, i.e., of Ontario market participants, is conducted by the IESO's Market Assessment and Compliance Division, which is "ring-fenced" from the rest of the organization. The IESO is subject to assessments of compliance with NERC Reliability Standards, including audits performed by NPCC. The MOU provides NPCC and NERC the right to draw their own conclusions with respect to a compliance investigation of Ontario entities, but with limited authority to impose financial sanctions on the IESO only.

The IESO carries out a compliance enforcement program and can issue a monetary order, finding, or remedial action with respect to a violation of a Reliability Standard in Ontario, subject to appeal to the OEB. The IESO has delegated enforcement accountability to the Market Assessment and Compliance Division, which exercises independent discretion in terms of enforcement decision-making.

The Market Assessment and Compliance Division establishes and executes procedures and programs for monitoring, investigating, and imposing sanctions, including financial penalties, against market participants and the IESO itself. The MOU acknowledges the Market Assessment and Compliance Division as the enforcement body in Ontario for Reliability Standards with full sanctioning powers as afforded under the Market Rules for breaches committed by the IESO and Ontario market participants.

In the event that a violation is confirmed under the Market Rules, the name of the responsible entity is made public. The Market Assessment and Compliance Division has the authority to levy sanctions for reliability violations. These sanctions may include financial penalties and are subject to appeal to the OEB. The Market Assessment and Compliance Division has established sanctions guidelines similar to those of NERC using severity/impact criteria. It has authority for "Extraordinary Financial Penalties" under certain circumstances to assess penalties of up to \$1 million per occurrence. The OEB can impose administrative penalties of up to \$20,000 per day.

## **Québec**

### *Reliability Standards*

The Régie de l'énergie du Québec (Régie) is an independent agency established under the *Act Respecting the Régie de L'Énergie* (Régie Act) to regulate the province's electricity and natural gas sectors. On December 8, 2006, NERC and the Régie signed an MOU that contemplated a future amendment to Québec's reliability legislation to grant the Régie the power to adopt and enforce NERC standards and allow for NERC funding and oversight in the province of Québec.<sup>176</sup>

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<sup>176</sup> NERC-Canadian MOUs are available at: <http://www.nerc.com/filingsorders/ca/pages/canadian-mous.aspx>.

The MOU noted that §73.1 of the Régie Act provides that the “electric power carrier,” or Hydro-Québec, will establish reliability standards for its electric power transmission system and submit them to the Régie for approval. According to the MOU, the standards will become mandatory after approval by the Régie.

On December 13, 2006, Québec implemented *An Act Respecting the Implementation of the Québec Energy Strategy and Amending Various Legislative Provisions*,<sup>177</sup> which grants the Régie jurisdiction over a mandatory reliability standards framework in the Province of Québec. This act formalizes the ability of the Régie to approve reliability standards after reviewing an evaluation of the relevance and impact of the proposed standards. Under the act, the Régie may request that the Reliability Coordinator modify a standard or submit a new one. Further, the Reliability Coordinator must submit guidelines to the Régie describing criteria to be taken into account in determining sanctions for noncompliance with reliability standards and identify owners or operators that will be subject to the standards approved by the Régie.

On June 2, 2009, the RC filed an application seeking the adoption of 95 NERC Reliability Standards applicable in Québec, in French and English, along with an evaluation of the relevance and impacts of standards filed with the Régie. The filing also called for the approval of Registers of Entities and of Facilities, and approval of a *Glossary of Terms Used in NERC Reliability Standards*, among other things. The entities’ and facilities’ registers, as filed for approval, also provide interpretations regarding standard applications within Québec, and among other matters, a BES definition for the Québec Interconnection that is more stringent than NPCC’s BPS definition.

In a partial decision issued on May 13, 2011, the Régie approved the content of the submitted NERC Reliability Standards.<sup>178</sup> In addition, the Régie accepted the Main Transmission System to be the system that defines the transmission and generation facilities to which Reliability Standards are applicable (TO, GO, GOP, TOP). The partial decision also called for a number of changes in how the standards and appendices are presented and for a review of the translation of the standards into French. The Régie is working to ensure the French version of the standards is as close in meaning to the English version as possible. The Régie will establish a timetable for filing of revised versions of the standards in English and French for final adoption. Accordingly, no NERC Reliability Standards have been formally adopted nor made effective in Québec.

The second agreement among NERC, the Régie, and NPCC regarding implementation of mandatory Reliability Standards in Québec has been developed, and the agreement is under consideration by the Québec provincial government. The Régie has issued a decision to adopt a second group of Reliability Standards for Québec, which brings the total number of adopted standards in Québec to 35. Following public hearings which took place in October 2013, it is expected that the Régie will issue a decision concerning a third group of standards. Hydro-Québec

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<sup>177</sup> Available at:

<http://www2.publicationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=5&file=2006C46A.PDF>.

<sup>178</sup> A list of these approved Reliability Standards is available at: [http://www.regie-energie.qc.ca/audiences/3699-09/Demande\\_3699-09/B-1\\_HQCME-2Doc1\\_3699\\_02juin09.pdf](http://www.regie-energie.qc.ca/audiences/3699-09/Demande_3699-09/B-1_HQCME-2Doc1_3699_02juin09.pdf).

TransÉnergie, the Québec RC, has initiated a consultation process on 18 NERC Reliability Standards that will be filed with the Régie once its decision on the third group of standards is issued. This filing is expected before the end of 2014. The review of the Sanction Guide proposed by Hydro-Québec TransÉnergie and the determination of Reliability Standards enforcement dates remains pending.

### ***Data Sharing***

Under the MOU, NERC has agreed to share relevant information on issues related to reliability compliance with the Régie. The MOU further states NERC will be invited to participate in compliance audits and readiness evaluations done in Québec. Under the MOU, NERC and the Régie also agreed to discuss issues relating to: (i) Reliability Standard approval and remand; (ii) penalties for noncompliance with standards; and (iii) funding. For instance, NERC has agreed to notify the Régie when a new or modified standard is approved in the U.S. or remanded by any other jurisdiction outside of Québec. Additionally, although it is recognized that NERC cannot impose financial penalties for violations of Reliability Standards in Québec, NERC has agreed to inform the Régie of any violations and of the corresponding amount of penalties associated with such a violation in the United States.

### ***Compliance***

The Régie is responsible for compliance and enforcement. If NERC or NPCC determines that an entity subject to a Reliability Standard is not in compliance with the Reliability Standard, it shall report to the Régie on its findings and may recommend the application of a sanction. Ultimately, the Régie will determine if there has been a violation and will determine any appropriate penalty.

The RC must submit guidelines to the Régie describing criteria to be taken into account in determining sanctions for noncompliance with Reliability Standards and identify owners or operators that will be subject to the standards approved by the Régie. The intent, once all agreements are in place, is that NPCC and NERC will act as the Régie's agents in developing and delivering a comprehensive CMEP, subject to the approval of the Régie. As the first limited list of mandatory standards have only recently come into effect, and as the governmental authorities have not approved the agreement covering compliance arrangements, there has been limited compliance activity under the formal Québec regime.

The agreements note that NERC cannot impose financial penalties, but should recommend to the Régie what would be an appropriate sanction for a particular violation. The RC did submit a sanctions guide to the Régie as required. However, the regulator decided to postpone considering this until the second agreement covering compliance monitoring is approved by the governmental authorities. Under the provincial regime, the Régie may impose, if appropriate, a sanction that may not exceed \$500,000 per day and set a deadline for payment.

## Saskatchewan

### *Reliability Standards*

Pursuant to *The Power Corporation Act*,<sup>179</sup> Saskatchewan Power Corporation (SaskPower) has the authority to adopt, set, and administer standards for the planning, design, or operation of transmission lines, equipment, or other facilities within the Saskatchewan integrated regional power grid, and to maintain a membership in an integrated regional power organization. NERC, MRO, and SaskPower entered into an MOU that became effective on February 3, 2009 and was amended on January 15, 2012.<sup>180</sup> The MOU reflects the intent of Saskatchewan to support common North American BPS standards and to describe the protocols to achieve such a goal. For purposes of the MOU, NERC, and MRO are recognized to be Saskatchewan's electric Reliability Standard setting bodies.

Reliability Standards approved by the NERC Board of Trustees are automatically adopted in Saskatchewan, unless one of the following two conditions applies. First, if a particular standard has been remanded by any jurisdiction, the Reliability Standard will not be applicable in Saskatchewan. Second, a Reliability Standard will not be applicable in Saskatchewan if it is remanded, set aside, or a variance has been requested. Under the MOU, once the Reliability Standard is adopted, compliance with the standard is required in Saskatchewan.

### *Data Sharing*

The MOU between MRO, SaskPower, and NERC does not have an explicit provision regarding public disclosure of violations.

### *Compliance*

Under SaskPower's legislative authority, the oversight unit within SaskPower serves as the monitoring, compliance, and enforcement authority for the province. MRO currently performs on-site compliance audits for SaskPower. While not delegating its reliability authority, SaskPower aligns its compliance program, to the degree reasonable, to the compliance and monitoring processes established by NERC and MRO.

The process includes, but is not limited to, the following three functions:

- (1) Oversight (including remand, set aside, and compliance findings);
- (2) Standards development (including the coordination of assessments, communication, and internal education); and

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<sup>179</sup> Available at: <http://www.qp.gov.sk.ca/documents/English/Statutes/Statutes/P19.pdf>.

<sup>180</sup> NERC-Canadian MOUs are available at: <http://www.nerc.com/filingsorders/ca/pages/canadian-mous.aspx>.

- (3) Compliance and enforcement (including management of an internal and external auditing function, which will give Saskatchewan the ability to make formal findings of compliance and noncompliance and to order and enforce mitigation plans to be implemented).

The oversight unit within SaskPower would make any determination of a violation. There is no provision for financial or other sanction. The oversight unit can impose a mitigation plan on a noncompliant entity.

## National Energy Board

### *Reliability Standards*

NERC and the NEB signed an MOU in 2006. The MOU recognizes NERC as the ERO. In the MOU, NERC and the NEB commit to coordinate in the promotion of a reliable North American BPS.

The NEB regulates the construction and operation of international power lines in accordance with, among other things, the *National Energy Board Act* and the *National Energy Board Electricity Regulations*.<sup>181</sup> The NEB has authority under its legislative framework to take certain enforcement measures in the case of noncompliance to the conditions of a permit or a certificate that was issued for an international power line.

While initially the NEB did not have an authority to make Reliability Standards mandatory and enforceable on international power lines, this was changed with the passage of NEB's *General Order MO-036-2012 for Electricity Reliability Standards* and five amending orders for Electricity Reliability Standards in December 2012 (NEB General Order).<sup>182</sup>

The provisions of the NEB General Order contain twelve Reliability Standards requirements that correspond to the main categories of Reliability Standards developed by NERC. The requirements are defined broadly so that they may include regional variations and can be harmonized with provincial regulatory frameworks as they relate to Reliability Standards.

In the NEB General Order, the NEB did not itself adopt any NERC Reliability Standards. Rather, the NEB General Order requires that international power line owners file with the NEB a list of Reliability Standards adopted by the provincial system to which the international power line connects. The NEB General Order requires international power line owners or permit holders to identify these Reliability Standards and to keep the NEB advised of any changes. Accordingly, there is no list of the NEB-approved Reliability Standards, nor does the NEB make determinations of effective dates. The NEB also committed to working with the provinces, utilities and other reliability authorities including NERC to avoid, to the extent possible, the generation of duplicate

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<sup>181</sup> NEB maintains a list of acts and regulations that set forth its mandate, responsibilities, and powers at: <http://www.neb-one.gc.ca/clf-nsi/rpblctn/ctsndrgltn/1stctsndrgltn-eng.html>.

<sup>182</sup> The NEB General Order is available at: <http://www.neb-one.gc.ca/clf-nsi/rpblctn/ctsndrgltn/rrgngmgnb/lctrcty/lctrcty-eng.html>.

reporting requirements. However, international power line owners are required to submit to the NEB reports of noncompliance with Reliability Standards.

### ***Data Sharing***

NERC and the NEB have committed to exchange of experience, information and data relating to the development and compliance with Reliability Standards as applicable to international power lines. The MOU commits NERC to informing and seeking input from the NEB on proposed changes to NERC's Bylaws or ROP. The MOU also commits NERC to inform the NEB when a SAR has been approved and assigned to a drafting team, and to notify NEB when a Reliability Standard is approved.

Under the MOU, NERC commits to notify the NEB at the stage of its development process where the Standards Committee approves a SAR and assigns it for development by a drafting team. The NEB agrees to inform NERC about any changes in its regulatory processes to allow formal approval of NERC Reliability Standards.

### ***Compliance***

Consistent with its approach to adopting standards, the NEB has not imposed its own additional compliance monitoring and enforcement regime. The NEB General Order requires international power line permit holders to provide the NEB with certain compliance information, based on the compliance program of the jurisdiction where the international power line is located. In 2012, legislation was passed to provide the NEB with authority to establish a system of Administrative Monetary Penalties (AMP) through regulations in order to promote compliance with the *National Energy Board Act*. The penalties can be up to \$100,000 per day for violations levied on companies. Lesser amounts can be levied on individuals. The NEB's regulations on how the AMP would be applied came into force in mid-2013.

There currently is no specific provision that violations would be made public.

## **Mexico**

### **Baja California**

#### ***Reliability Standards***

The Comisión Federal de Electricidad (CFE), through the Centro Nacional de Control de Energia (CENACE), and the Area de Control Baja California (ACBC) have entered into a MOA with WECC. The MOA provides that WECC assist CENACE and ACBC in monitoring compliance with Mexico Reliability Standards for Baja California, Mexico. CENACE has approved the following Mexico Reliability Standards:

- BAL-001-MX-0 (Real Power Balancing Control Performance)
- BAL-006-MX-0 (Inadvertent Interchange)

- CIP-001-MX-0 (Sabotage Reporting)
- INT-001-MX-0 (Interchange Information)
- INT-003-MX-0 (Interchange Transaction Implementation)
- PER-001-MX-0 (Operating Personnel Responsibility and Authority)
- PER-002-MX-0 (Operating Personnel Training)
- PER-003-MX-0 (Operating Personnel Credentials)
- VAR-002-WECC-MX-0 (Automatic Voltage Regulators (AVR))
- VAR-501-WECC-MX-0 (Power System Stabilizer (PSS))

CFE participates in the NERC Reliability Standards and WECC regional standards development process to develop standards.

### ***Compliance***

WECC uses a compliance monitoring program<sup>183</sup> to monitor and assess compliance with Mexico Reliability Standards applicable to Designated Entities,<sup>184</sup> consistent with the applicable law of Mexico and relevant agreements. If there is any conflict between the MOA and the CMP, the MOA prevails.

WECC does not have enforcement or registration/designation authority for CFE. WECC provides compliance monitoring, reviews mitigation plans and completed mitigation plans, and provides assessment recommendations with respect to alleged violations.

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<sup>183</sup> The 2014 implementation plan for Mexico Reliability Standards, together with other CFE-related documents and compliance information, is available at: [http://www.wecc.biz/compliance/Baja\\_CFE/Pages/Baja-English.aspx](http://www.wecc.biz/compliance/Baja_CFE/Pages/Baja-English.aspx).

<sup>184</sup> “Designated Entities” are the Mexican equivalent of registered entities in the United States.

**FEDERAL ENERGY REGULATORY COMMISSION  
DOCKET NO. RR14-\_\_\_\_**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

**ATTACHMENT 2**

**TO**

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

**JOINT REGIONAL ENTITY SELF-ASSESSMENT**

**JULY 21, 2014**

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Appendix A: Description of Regional Entities

Appendix B: Regional Entity Responses to Specific Concerns Raised in the Commission’s  
September 16, 2010 Order on the Three-Year ERO Performance Assessment

Appendix C: Regional Entities’ Satisfaction of Statutory and Regulatory Criteria

## INTRODUCTION

The Regional Entities are pleased to have the opportunity to submit jointly a self-assessment of their performance for 2009 through 2013, to the Federal Energy Regulatory Commission (Commission or FERC), as part of the *Five-Year Electric Reliability Organization (ERO) Performance Assessment Report* prepared by the North American Electric Reliability Corporation (NERC).<sup>1</sup> While their corporate structures may vary, the Regional Entities are uniformly committed to working together and with the ERO to ensure the reliability of the bulk power system (BPS) in the U.S., and, where applicable, in Canada and Mexico. They are likewise dedicated to create seamless implementation of the law and policies administered by the Commission and the ERO. In light of the commonality of these overarching objectives, under the leadership of the Regional Entity Management Group (REMG), the Regional Entities prepared this 2014 Joint Regional Entity Self-Assessment (JRESA), which they respectfully request that the Commission accept.

The main purpose of this self-assessment is to demonstrate that the Regional Entities continued during the assessment period to satisfy the statutory and regulatory criteria for certification as part of the ERO. In this regard, in its order accepting the ERO's Three-Year Performance Assessment, the Commission explicitly directed that future assessments of the Regional Entities include a separate section assessing each Regional Entity's satisfaction of those criteria.<sup>2</sup> This self-assessment also provides an update on issues and concerns raised in the 2009 JRESA, specifically with respect to regional Reliability Standards, organization registration and certification, the compliance monitoring and enforcement program, and additional statutory functions.<sup>3</sup>

### A. Satisfaction of Statutory and Regulatory Criteria

Section 215(e)(4) of the Federal Power Act (FPA), 16 U.S.C. §824o(e)(4), as reiterated in §39.8 of the Commission's regulations, 18 C.F.R. §39.8 (2013), provides that a Regional Entity must satisfy the following criteria to be delegated "authority for the purpose of proposing reliability standards to the ERO and enforcing reliability standards:"

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<sup>1</sup> The eight Regional Entities are: (i) Florida Reliability Coordinating Council, Inc. (FRCC); (ii) Midwest Reliability Organization (MRO); (iii) Northeast Power Coordinating Council, Inc. (NPCC); (iv) ReliabilityFirst Corporation (ReliabilityFirst or RF); (v) SERC Reliability Corporation (SERC); (vi) Southwest Power Pool Regional Entity (SPP RE) — an independent and functionally separate division of Southwest Power Pool, Inc. (SPP); (vii) Texas Reliability Entity, Inc. (Texas RE or TRE); (viii) and Western Electricity Coordinating Council (WECC). A description of each of the individual Regional Entities can be found at Appendix A.

<sup>2</sup> See *North American Electric Reliability Corporation*, Order on the Electric Reliability Organization's Three-Year Performance Assessment, 132 FERC ¶ 61,217 (2010), at P 36. The Commission also discussed specific concerns regarding each of the individual Regional Entities in the order on the three year assessment. *Id.* PP 198-244. The responses of the individual Regional Entities to those concerns can be found at Appendix B.

<sup>3</sup> The instant self-assessment will not repeat the discussion on the framework of self-regulation and delegation, found at pp. 12-18 of the 2009 JRESA, as that discussion was more appropriate for an assessment of the initiation of the reliability paradigm; however, opportunities to improve that structure are discussed *infra* pp. 6-8.

- (1) The Regional Entity is governed by an independent board, a balanced stakeholder board or a combination independent and balanced stakeholder board.
- (2) The Regional Entity meets the requirements otherwise applicable to the ERO in FPA §215(c)(1)(2), 16 U.S.C. §824o(c)(1)(2), namely that it (a) has the ability to develop and enforce reliability standards that provide for an adequate level of reliability of the bulk-power system; and (b) has established rules that (i) assure its independence of the users and owners and operators of the bulk-power system, while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any ERO committee or subordinate organization structure, (ii) allocate equitably reasonable dues, fees, and other charges among end users for all activities, (iii) provide fair and impartial procedures for enforcement of reliability standards through the imposition of penalties, (iv) provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing reliability standards and otherwise exercising its duties, and (v) provide for taking appropriate steps to gain recognition in Canada and Mexico.
- (3) The Regional Entity operates under a delegation agreement that promotes effective and efficient administration of bulk-power system reliability.

Each of the eight Regional Entities continued to satisfy the statutory and regulatory criteria during the assessment period, as demonstrated with specificity on Appendix C and summarized briefly here.

The Regional Entities met the first criterion by being governed by an independent board (SPP RE and WECC (as of January 1, 2014)), a balanced stakeholder board (FRCC and SERC), or a combination independent and balanced stakeholder board (MRO (as of January 1, 2013), NPCC, RF, TRE, and WECC (during the assessment period)).

The Regional Entities fulfilled the next requirement to develop and enforce Reliability Standards that provide an adequate level of reliability of the BPS by working closely with NERC and stakeholders in the development of continent-wide standards and in the implementation and improvement of the Compliance Monitoring and Enforcement Program (CMEP). In particular, although each Regional Entity had a regional Reliability Standards Development Procedure (RRSDP), with the exception of WECC, they developed few regional Reliability Standards during the assessment period. They preferred to support NERC's efforts to develop continent-wide standards and focus their resources primarily on monitoring compliance with, and enforcement of, the mandatory Reliability Standards. Illustratively, during the assessment period, the Regional Entities conducted 2,358 compliance audits and 1,612 compliance spot checks, and processed 4,740 self-reports. They discovered nearly 6,900 violations or possible violations of the mandatory Reliability Standards, and submitted through NERC 5,128 confirmed violations in 633 Notices of Penalty (NOPs) to the Commission. They also explored ways to approach their compliance and enforcement responsibilities with a greater emphasis on

measuring the risk of noncompliance on the reliability of the BPS. In this regard, in collaboration with NERC, they developed the Reliability Assurance Initiative (RAI).<sup>4</sup>

The Regional Entities also established rules to ensure impartiality in the conduct of their business and due process in the performance of their compliance and enforcement functions, and, where applicable, took the appropriate steps to gain recognition in and otherwise work with entities in Canada and Mexico. To start with, they followed the NERC Rules of Procedure (ROP), as approved by the Commission, and adopted additional procedures and policies for their own areas. Thus, for example, they all relied on NERC ROP *Sanction Guidelines*, Appendix 4B, CMEP, Appendix 4C, and *Hearing Procedures*, Attachment 2 to Appendix 4C to carry out their compliance, enforcement, and hearing responsibilities fairly and impartially. They augmented those rules with policies and procedures to prevent conflicts of interest in the operation of their boards of directors or trustees, the exercise of their statutory duties, and the activities of their employees and contractors. They also followed NERC's lead, again as approved by the Commission, in equitably recovering their funding from end users through a formula based on net energy for load (NEL), and developed annual business plans and budgets for Commission approval to assure that they properly and adequately accounted for those funds. As noted, while they generally forwent the development of regional Reliability Standards during the assessment period, the Regional Entities participated in the development and improvement of the NERC Reliability Standards while maintaining their RRSDPs in the event they were needed. Finally, three of the Regional Entities with international footprints—MRO, NPCC, and WECC—made appropriate arrangements with Canadian border provincial authorities and utilities to coordinate the oversight of Canadian and U.S. reliability efforts, and WECC entered into a memorandum of understanding with the Mexican energy regulator under which WECC acts as a compliance monitor for certain activities in Baja California, Mexico.

Finally, the Regional Entities satisfied the statutory and regulatory criterion for maintaining their delegated authority by operating under agreements with NERC that promoted effective and efficient administration of BPS reliability. As described by the Commission when it first approved NERC's delegation agreements with the Regional Entities (RDAs) in 2007, NERC delegated authority under those agreements to the Regional Entities to audit, investigate, and otherwise ensure that users, owners, and operators of the BPS comply with NERC's mandatory Reliability Standards, subject to ERO oversight.<sup>5</sup> The RDAs further addressed regional Reliability Standards development, registration of entities that must comply with Reliability Standards, and other services supporting NERC's functions, including reliability assessments, event analysis, and training and education. In October 2010, the Commission again approved (revised) RDAs between NERC and each of the eight Regional Entities.<sup>6</sup>

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<sup>4</sup> Regional activity and actions in regard to standards development and the CMEP, in particular RAI, are discussed later in greater detail under those headings.

<sup>5</sup> See *North American Electric Reliability Corp.*, 119 FERC ¶ 61,060, *order on reh'g*, 120 FERC ¶ 61,260 (2007).

<sup>6</sup> See *North American Electric Reliability Corporation*, 133 FERC ¶ 61,061 (2010), *order on reh'g*, 134 FERC ¶ 61,179, *order on compliance filing*, 137 FERC ¶ 61,028 (2011).

Subsequently, the Commission also approved other changes to specific regional agreements.<sup>7</sup> In brief, the Regional Entities functioned during the assessment period under RDAs with NERC that were comprehensively reviewed and ultimately approved by the Commission to promote effective and efficient administration of BPS reliability.

As a separate but related matter, each of the Regional Entities underwent at least one extensive audit by the Commission staff during the assessment period. Most of these audits evaluated the Regional Entities' budget formulation, administration, and execution, and focused on the costs and resources used to achieve program objectives in fulfilling the duties delegated to them by the ERO under FPA §215.<sup>8</sup> The final audit reports concluded that the Regional Entities had policies, procedures, and controls that facilitated their carrying out, in an effective and efficient manner, their responsibilities under their RDAs and bylaws, as well as their budget obligations. Several other audits more closely examined the structures of the regional organizations, and made recommendations in particular with respect to separation of functions.<sup>9</sup> In all of these proceedings, during the assessment period, the Regional Entities completed or were in the process of completing the corrective actions suggested by the Commission or its staff. The Regional Entities believe that the overall conclusions and recommendations in the Regional Entity audits underscore that they satisfied the statutory and regulatory criteria for maintaining the authority delegated to them by the ERO.<sup>10</sup>

## **B. Achievements**

Closely intertwined in the Regional Entities' satisfaction of the statutory and regulatory certification criteria during the assessment period were their achievements as individual organizations and as a group united by common goals. Their individual achievements are partly set forth in Appendix C, and discussed or referenced throughout this document. Their joint achievements are, by definition, likewise discussed throughout this document. These achievements in particular reflect the work and oversight of the REMG, an organization composed of the executives of the eight Regional Entities to provide strategic guidance in the execution of their RDAs, consistent with maintaining and enhancing reliability across North

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<sup>7</sup> See, e.g. *North American Electric Reliability Corporation*, Docket Nos. RR13-7-000 (Aug. 19, 2013) (TRE), RR13-5-000 (June 12, 2013) (MRO), RR12-12-000 (Oct. 24, 2012) (RF), RR12-4-000 (June 12, 2012) (FRCC), and RR12-2-000 (March 1, 2012) (WECC) (unpublished delegated letter orders).

<sup>8</sup> See delegated letter orders and final audit reports issued in *North American Electric Reliability Corporation*, Docket Nos. FA12-14-000 (May 9, 2013) (MRO), FA12-7-000 (May 9, 2013) (RF), PA12-10-000 (June 28, 2013) (NPCC), FA12-6-000 (June 11, 2013) (SERC), PA11-2-000 (October 5, 2011) (SPP RE), and PA12-9-000 (July 10, 2013) (WECC) (unpublished delegated letter orders).

<sup>9</sup> See *Florida Reliability Coordinating Council, Inc.*, 131 FERC ¶ 61,262 (2010); *Western Electricity Coordination Council*, 132 FERC ¶ 61,149 (2010); *Texas Regional Entity*, 130 FERC ¶ 61,025 (2010).

<sup>10</sup> NERC also audited the Regional Entities during the assessment period, in accordance with the Commission's direction in Order No. 672. See *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006), at P 773. Specifically, NERC developed a program to audit the Regional Entities' adherence to the NERC ROP, the CMEP, and the requirements of the Regional Delegation Agreements. See generally <http://www.nerc.com/pa/comp/Audits%20of%20Regional%20Entities%20DL/Forms/AllItems.aspx>.

America for the benefit of all BPS users, owners, and operators. The REMG aims to attain that objective by promoting information sharing, transparency, and consistency with and among the Regional Entities while assuring efficient and effective use of resources to execute their delegated functions. In addition, the REMG combines the Regional Entities' efforts with the ERO Executive Management Group (ERO EMG), which was chartered originally in April 2010, and likewise dedicated to provide guidance and direction in the execution of the RDAs.

As particularly relevant to the rest of this self-assessment, in the summer of 2012, the REMG held its first strategic retreat, and decided upon three priorities: (i) to ensure that their work, especially in the audit area, follows professional standards and as a result fosters consistency among the Regional Entities; (ii) to reserve enforcement for serious matters, rather than using enforcement for every corrective action resulting from a violation; and (iii) to scale their work towards risk to reliability and move away from a prescriptive, mechanical approach. Soon after this retreat, as discussed in greater detail below, the Regional Entities took steps to make these priorities a reality. With NERC's participation, they engaged a third-party consulting firm to perform a review of the Regional Entities' auditing practices, to identify areas to improve consistency among the Regional Entities, and to increase the rigor in the conduct of their work. Within a relatively short time, by the end of the assessment period, NERC and the Regional Entities made substantial progress on implementing the consulting firm's major recommendations to develop a standardized audit process checklist, to publish an auditor handbook, and to create an audit training program around these tools. The Regional Entities also worked closely with NERC and the registered entities to pursue the related second and third priorities of reserving enforcement for serious matters and directing their compliance and enforcement efforts to identifying risk to the BPS. In this regard, they continued to examine ways to improve the timeliness and effectiveness of their CMEP processes, including improvements in self-reporting and enhancements to the Find, Fix, Track and Report (FFT) program, and prepared analyses and initiated pilot programs to find better ways to gauge the risk that registered entities posed to reliability, and to scale their monitoring and enforcement efforts accordingly. As a result, the Regional Entities believe that a solid foundation was laid during the assessment period to advance to the next phase of the ERO Enterprise's maturation as captured conceptually in RAI.<sup>11</sup>

### **C. Improvement Opportunities**

Notwithstanding the solid foundation for the continued effective functioning of the ERO Enterprise, the Regional Entities, in tandem with NERC, are committed to exploring ways to improve their operations and their contribution to the reliability of the BPS. In this regard, they have identified certain elements essential to improved operations of the ERO Enterprise on which they plan to focus in the months ahead. Specifically, they plan to pursue: (i) clarifying and refining roles and responsibilities; (ii) coordinating strategic planning and operational decision-making; (iii) continuing to improve consistency; (iv) sharing tools and infrastructure for delegated functions; and (v) coordinating communications.

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<sup>11</sup> Toward the end of the assessment period, the reliability community began to use the expression "ERO Enterprise" to represent the combined efforts of NERC and the Regional Entities.

The undertaking to clarify and refine roles and responsibilities is especially important to the Regional Entities as it is critical to the smooth operation of the self-regulated model. At its core, the ERO Enterprise must exercise effective and well-coordinated reliability oversight that mitigates reliability risks to the BPS. Accordingly, NERC and the Regional Entities have identified objectives on which they will concentrate to clarify and refine roles and responsibilities within the ERO Enterprise. For example, NERC will consider including in its review of Regional Entity business plans adequacy of resources and alignment of the plans for achieving delegated function objectives and outcomes described in the three-year plan. For their part, the Regional Entities will work in a coordinated fashion to support NERC in the development of comprehensive functional program designs and controls; adapt existing regional programs for delegated functions to conform to emerging program designs provided by NERC; and ensure Regional Entity staffs meet qualification and training requirements.

In addition, NERC and the Regional Entities will strive to better coordinate their strategic and business planning, e.g., by developing and maintaining a joint three-year strategic plan for the ERO Enterprise describing the goals and deliverables for statutory functions, a plan that should guide the development of each Regional Entity's annual business plans. Along the same lines, NERC and Regional Entities intend to develop and transparently report results based on a common set of performance measures focused on BPS reliability outcomes and effectiveness of the statutory programs. Furthermore, they hope to better coordinate operational decision-making within the ERO Enterprise.

Lastly, at this time, NERC and the Regional Entities plan to focus on better achieving consistency, sharing tools and infrastructure for delegated functions, and coordinating external and cross-ERO Enterprise communications. Specifically, with NERC leading, the ERO Enterprise will explore developing a core set of methods, practices, procedures, and tools to support unified implementation of the major statutory functions of NERC. The Regional Entities and NERC will also examine developing ERO Enterprise IT applications, where appropriate, to support common processes, to enhance the efficiency and effectiveness of Regional Entities' practices, to increase the consistency of the interface with registered entities, and to facilitate NERC's oversight function. Finally, all parties of the ERO Enterprise plan to continue the joint board coordination to ensure oversight and accountability of all elements of the enterprise, and to continue refining and expanding coordinated outreach to government entities in the U.S. and Canada, stakeholders, and media.

The Regional Entities believe that this coordinated effort with NERC to improve the self-regulation model will result in more clarity around the roles and responsibilities between them and among them which in turn will lead to better coordination of goals, more uniform work processes and tools, and performance measures across the enterprise, along with an understanding that all parties comprising the ERO Enterprise must be vested in each other's success. These improvements will also create higher levels of productivity, less duplication, and greater efficiency in the oversight and execution of statutory functions and mitigation of BPS reliability risks. The Regional Entities look forward to working with NERC and the stakeholders in their continual pursuit of opportunities to improve their operations that will promote the reliability of the nation's BPS.

## **D. Regional Reliability Standards**

The 2009 JRESA provided a brief overview of the regional Reliability Standards process and scope, and reviewed what had been achieved to date.<sup>12</sup> The following provides an update on that overview and review and additional information on the Regional Entities' progress in developing regional Reliability Standards.

### **1. Regional Reliability Standards Processes**

FPA §215(d), 16 U.S.C. §824o(d), requires the ERO to develop mandatory and enforceable Reliability Standards that are subject to Commission review and approval. Once approved, the Reliability Standards may be enforced by NERC, subject to Commission oversight, or by the Commission independently. A Regional Entity may also develop a Reliability Standard for Commission approval to be effective in that region only. In Order No. 672, the Commission stated that:

As a general matter, we will accept the following two types of regional differences, provided they are otherwise just, reasonable, not unduly discriminatory or preferential and in the public interest, as required under the statute: (1) a regional difference that is more stringent than the continent-wide Reliability Standard, including a regional difference that addresses matters that the continent-wide Reliability Standard does not; and (2) a regional Reliability Standard that is necessitated by a physical difference in the Bulk-Power System.<sup>[13]</sup>

In addition, FPA §215(d)(3), 16 U.S.C. §824o(d)(3), provides that the ERO “shall rebuttably presume that a proposal from a Regional Entity organized on an interconnection-wide basis for a reliability standard or modification to a reliability standard to be applicable on an interconnection-wide basis is just, reasonable, and not unduly discriminatory or preferential, and in the public interest.”<sup>14</sup>

In October 2010, as noted earlier, the Commission approved revised RDAs between NERC and each of the eight Regional Entities.<sup>15</sup> As relevant here, Exhibit C to the revised RDAs includes each Regional Entity's current RRSDP.<sup>16</sup> These procedures provide the process that each Regional Entity uses to develop regional Reliability Standards that are proposed to NERC for adoption, and, where applicable, regional variances if the Regional Entity is organized

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<sup>12</sup> See 2009 JRESA, at pp. 19-20.

<sup>13</sup> *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, at P 291, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

<sup>14</sup> See also 18 C.F.R. §39.5(b) (2013).

<sup>15</sup> See *North American Electric Reliability Corporation*, 133 FERC ¶ 61,061 (2010).

<sup>16</sup> See <http://www.nerc.com/AboutNERC/Pages/Regional-Entity-Delegation-Agreements.aspx>.

on an interconnect-wide basis. While the RRSDP's are not identical, each contains important common attributes that advance the development of regional Reliability Standards consistent with the objective of a uniform reliability program.<sup>17</sup> Illustratively, participation in the development of a regional Reliability Standard must be open to all organizations that are directly and materially affected by the Regional Entity's system, with no constraints based on financial capability, technical expertise or membership in the organization. The RRSDP must strive to have an appropriate balance of interests and may not be dominated by any two interest categories and no single interest category can defeat a matter. All entities with a direct and material interest in the BPS in the region may participate by expressing a position and its basis, having that position considered, and having the right to appeal. The RRSDP must also provide for reasonable notice and opportunity for public comment, and provide that all actions material to the development of any standards be transparent.<sup>18</sup> Under these circumstances, it can be fairly stated that during the assessment period, each of the Regional Entities fulfilled the obligation to provide an open, fair, balanced, and inclusive process for the development of regional Reliability Standards as demonstrated by the approval of those processes at the Commission, NERC, and regional levels.

NERC understandably focuses on the development of continent-wide standards as consistent with the goal of a reliable BPS, and, from the inception of the program, the Commission, NERC, and the Regional Entities anticipated that the Regional Entities would develop relatively few regional Reliability Standards to address unique situations with specific or more stringent requirements in a particular interconnection or geographic region which the continent-wide standards may not address. In fact, that has been proven to be the case. Since the Commission issued Order No. 693 in 2007, outside of WECC, the Commission has approved only seven regional Reliability Standards.<sup>19</sup> The regional Reliability Standards in effect as of the end of the assessment period are listed in Table 1.

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<sup>17</sup> The Regional Entities regularly review their RRSDPs to ensure they are adequate to develop regional Reliability Standards consistent with Commission's directives and NERC's *ROP Standard Processes Manual* at Appendix 3A. See, e.g., *North American Electric Reliability Corporation*, Docket Nos. RR13-5-000 (June 12, 2013) (MRO), RR12-12-000 (Oct. 24, 2012) (RF), RR14-1-000 (Jan. 31, 2014) (SPP RE), RR12-2-000 (March 1, 2012) (WECC) (unpublished delegated letter orders).

<sup>18</sup> In this regard, NERC maintains on its website a current overview of regional Reliability Standards under development, with detailed information on the status of the proceeding. See <http://www.nerc.com/pa/Stand/Pages/RegionalReliabilityStandardsUnderDevelopment.aspx>.

<sup>19</sup> WECC developed the most regional Reliability Standards because of a mandatory program it had in place prior to the approval of NERC as the ERO and the delegation to WECC. Under this program, called the Reliability Management System (RMS), WECC was required to translate existing reliability criteria into regional mandatory standards. See, e.g., *North American Electric Reliability Corporation*, 119 FERC ¶ 61,260 (2007) (describing the RMS and approving WECC-BAL-STD-002-0, WECC-IRO-STD-006-0, WECC-PRC-STD-001-1, WECC-PRC-STD-003-1, WECC-PRC-STD-005-1, WECC-TOP-STD-007-0, WECC-VAR-STD-002a-1, and WECC-VAR-STD-002b-1).

<b>Regional Reliability Standards – Table 1</b>	
<b>Regional Entity</b>	<b>Regional Reliability Standards (Description) FERC Docket Number, Citation</b>
<b>FRCC</b>	None
<b>MRO</b>	None
<b>NPCC</b>	<b>PRC-002-NPCC-01</b> (Disturbance Monitoring Equipment) RD11-8-000, 137 FERC ¶ 61,043 (2011).  <b>PRC-006-NPCC-01</b> (Automatic Underfrequency Load Shedding) RM12-12-000, Order No. 775, 142 FERC ¶ 61,128 (2013).
<b>RF</b>	<b>BAL-502-RFC-02</b> (Planning Resource Adequacy Analysis, Assessment and Documentation) RM10-10-000, Order No. 747, 134 FERC ¶ 61,212 (2011).
<b>SERC</b>	<b>PRC-006-SERC-01</b> (Automatic Underfrequency Load Shedding Requirements) RM12-9-000, Order No. 772, 141 FERC ¶ 61,243 (2012).
<b>SPP RE</b>	None
<b>TRE</b>	<b>CIP-001-2a</b> (Regional Variance) (Cyber Security – Sabotage Reporting) RD11-6-000, Delegated Letter Order, August 2, 2011.  <b>IRO-006-TRE-1</b> (Transmission Loading Relief) RD12-1-000, 139 FERC ¶ 61,169 (2012).  <b>BAL-001-TRE-1</b> (Real Power Balancing Control) RD13-12-000, 146 FERC ¶ 61,025 (2014).
<b>WECC</b>	<b>FAC-501-WECC-1</b> (Transmission Maintenance) <b>VAR-002-WECC-1</b> (Automatic Voltage Regulators) <b>VAR-501-WECC-1</b> (Power System Stabilizer) <b>PRC-004-WECC-1</b> (Protection System and Remedial Action Scheme Misoperation) RM09-9-000, Order No. 751, 135 FERC ¶ 61,061 (2011).  <b>IRO-006-WECC-1</b> (Qualified Transfer Path Unscheduled Flow Relief) RM09-19-000, Order No. 746, 134 FERC ¶ 61,199 (2011).  <b>BAL-004-WECC-02</b> (Automatic Time Error Correction) (replacing BAL-004-WECC-1) RD13-11-000k, Delegated Letter Order (Oct. 16. 2013).  <b>TOP-007-WECC-1</b> (System Operating Limits) RM09-14-000, Order No. 752, 135 FERC ¶ 61,062 (2011).  <b>BAL-002-WECC-2</b> (Contingence Reserve) (replacing BAL-STD-002-2) RM13-13-000, Order No. 789, 145 FERC ¶ 61,141 (2013).

Indeed, while the Regional Entities believe that they should still have the authority to develop regional Reliability Standards under the conditions laid out by the Commission and

maintain their RRS DP's accordingly, with the exception of WECC, they are no longer actively engaged in developing regional standards.<sup>20</sup> Rather, they prefer to avoid duplicating NERC efforts, and concentrate their relevant resources on working with NERC and stakeholders to develop clear, reasonable, and technically sound continent-wide standards in a timely and efficient manner, and to ensure that regional concerns are addressed in the continent-wide standards. To this end, and as further discussed later under §D.3 below, Prioritization of Standards Work, the Regional Entities are actively encouraging awareness and participation in the NERC standards process by stakeholders in their areas, by educational outreach efforts, and through participation in the NERC Standards Committee and related subcommittees. They also have standards committees or groups that analyze the draft ERO standards to determine their quality and effectiveness, and to ensure the reliability objective is adequate and cost effective.

## 2. Regional Fill-in-the-Blank Standards and Regional Criteria

The 2009 JRESA agreed with stakeholders' concerns about the effect on reliability of the outstanding and incomplete "fill-in-the-blank" reliability standards projects.<sup>21</sup> During the assessment period, the ERO Enterprise made considerable progress to respond to the Commission's directives on those standards. This was accomplished in large part by greater collaboration and cooperation between NERC and the Regional Entities. Furthermore, the Regional Entities believe now that the appropriate resolution to the issue of fill-in-the-blank standards is the timely development of continent-wide NERC Reliability Standards.<sup>22</sup> Accordingly, as a general matter, the Regional Entities are no longer planning to develop Regional Reliability Standards to address the "fill-in-the blank" standards; however, they may pursue any unaddressed reliability gaps that new continent-wide standards may not cover.

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<sup>20</sup> Illustratively, during the assessment period, FRCC stayed work on four regional Reliability Standards (PRC-003-FRCC-01, PRC-002-FRCC-01, PRC-006-FRCC-01, and PRC-024-FRCC-01) in large part because of related activities at the national level. MRO developed four regional Reliability Standards, but found them unnecessary before even submitting them to the board. RF worked on a number of regional Reliability Standards (e.g., MOD-024-RFC-01, MOD-025-RFC-01, EOP-007-RFC-01, and PRC-002-RFC-01) that it subsequently, using its RRS DP, converted to Regional Criteria, which are essentially RF board-approved good utility practices. In August 2012, RF also suspended work on drafting efforts for PRC-006-RFC-01 and PRC-012-RFC-01. SPP RE developed one board-approved regional Reliability Standard (PRC-006-SPP-01), but withdrew the FERC filing in August 2013, because a continent-wide standard eliminated the need for it.

In contrast, WECC maintained and continued to develop regional Reliability Standards during the assessment period for two primary reasons: (i) the Western Interconnection has some unique characteristics and concerns; and (ii) several of the current WECC regional Reliability Standards projects are required by the initial FERC orders approving the WECC regional Reliability Standards as part of the transition from the RMS program. *See supra* note 19. *See generally* <http://www.wecc.biz/Standards/Development/Pages/default.aspx>.

<sup>21</sup> As explained in the 2009 JRESA, at p. 19, when the Commission approved 83 Reliability Standards in Order No. 693, it withheld a decision on certain standards that referred to Regional requirements that were not specifically noted within the standards. These were referred to as "fill-in-the-blank," meaning the entity had to refer to a Regional document for the answer of what level of performance was required.

<sup>22</sup> In this regard, for example, the Commission's approval of Reliability Standard PRC-006-1 addressed an area of significant concern with respect to under-frequency load shedding. *See Automatic Underfrequency Load Shedding and Load Shedding Plans Reliability Standards*, Order No. 763, 139 FERC ¶ 61,098 (2012).

### 3. Prioritization of Standards Work

While NERC is responsible in the first instance to develop the continent-wide standards, the Regional Entities clearly have a stake in that process, because they are ultimately responsible for enforcing compliance with those standards. Accordingly, during the assessment period, the Regional Entities supported NERC in response to the Commission's concerns to increase the efficiency and effectiveness of the standards development process and to improve the quality of the resulting Reliability Standards. As now discussed, the Regional Entities are encouraged by the advances that NERC made in this regard.

First, the Regional Entities support NERC's objective to transform the current set of Reliability Standards in 2014 through 2015 to high quality, technically sound, results-based, cost-effective standards, which collectively will help ensure the reliable operation of the North American BPS. They especially appreciate NERC's piloting of the Cost Effective Analysis Process (CEAP), which is intended to evaluate the cost effectiveness of standards under development.

Second, the Regional Entities appreciate NERC's development of the *Weekly Standards Bulletin*, which helps the registered entities and other stakeholders to keep apprised of standards development. Along the same lines, the Regional Entities believe that the quarterly *Analyses of NERC Standards Process Results* were also very helpful for a better understanding of, and provides insight to, the development of continent-wide standards.<sup>23</sup>

Third, the Regional Entities are encouraged by the Commission's approval of revisions to the *NERC Standard Processes Manual*, ROP Appendix 3A, finding that those revisions are reasonable and allow for greater flexibility and efficiency in the process.<sup>24</sup> The Commission highlighted that the revisions recognize the need for highly qualified standards drafting teams that include technical writers, legal and compliance resources, and rigorous and highly trained project management.<sup>25</sup> The Regional Entities, which are in daily contact with the stakeholders who must deal with the intricacies of compliance with the standards, agree that well-trained personnel are needed to ensure the quality and effectiveness of the mandatory Reliability Standards, and believe that NERC has made significant strides to achieve that objective.

Fourth, the Regional Entities are encouraged by NERC's response to the Commission's March 2012 invitation to suggest retirement of requirements within standards, and the Commission's approval of NERC's proposal to withdraw 34 requirements within 19 Reliability Standards, and the additional withdrawal of 41 Commission directives that NERC develop

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<sup>23</sup> NERC submitted these analyses pursuant to FERC directives, including the order on the three-year assessment. See *Order on the Electric Reliability Organization's Three-Year Performance Assessment*, 132 FERC ¶ 61,217 (2010), at P 85.

<sup>24</sup> See *North American Electric Reliability Corporation*, 143 FERC ¶ 61,273 (2013), at P 18.

<sup>25</sup> *Id.*

modifications to Reliability Standards.<sup>26</sup> These actions signal a cooperative effort that will help alleviate some of the complexity and frustration that has plagued the development of standards for many years and ease compliance burdens on the registered entities. Along the same lines, the Regional Entities commend NERC's creation of the Standards Independent Experts Review project in 2012. During the assessment period, this group assessed the current non-Critical Infrastructure Protection (CIP) Reliability Standards to determine which requirements should be retired and to grade the remaining requirements for content and quality. More important, this group identified gaps where risks to reliability are not adequately addressed in the current set of standards, including outage coordination, governor frequency response, situational awareness models, and clear three-part communications.

Finally, the Regional Entities commend the NERC Board of Trustees (NERC Board) for forming the Reliability Issues Steering Committee (RISC) in August 2012. Through its efforts, RISC is helping to move the ERO Enterprise toward a more efficient standards development program and a sensible prioritization of the work to produce reasonable and effective standards and identify any emerging risks to reliability.

## **E. Organization Registration and Certification**

The 2009 JRESA discussed the subject of compliance registry within the context of the CMEP.<sup>27</sup> While the topic fits there, it also lends itself to a separate discussion, as set out below.

### **1. Organization Registration**

The Regional Entities and NERC are required to identify and register all entities that meet the criteria as laid out in the NERC ROP *Statement of Compliance Registry Criteria*, Appendix 5B.<sup>28</sup> The Regional Entities review and evaluate registration requests and changes and make registration recommendations to NERC when a request or change may affect the NERC Compliance Registry (NCR). NERC is responsible for registering those entities and establishing and maintaining the NCR of the BPS owners, operators, and users that are subject to approved Reliability Standards.<sup>29</sup>

As pointed out in the 2009 JRESA, the registration of BPS users, owners and operators has been a very successful aspect of the Regional Entities' obligation to monitor and enforce the

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<sup>26</sup> See *Electric Reliability Organization Proposal to Retire Requirements in Reliability Standards*, Order No. 788, 145 FERC ¶ 61,147 (2013).

<sup>27</sup> See 2009 JRESA, at pp. 21-23. The 2009 JRESA used the term "Compliance Registry" whereas this section will use the current term "Organization Registration" and also discuss Organization Certification.

<sup>28</sup> See [http://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/Appendix\\_5B\\_RegistrationCriteria\\_20140701\\_updated\\_20140602.pdf](http://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/Appendix_5B_RegistrationCriteria_20140701_updated_20140602.pdf). See generally ROP §500, [http://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/NERC\\_ROP\\_Effective\\_20140701\\_without\\_Appendices.pdf](http://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/NERC_ROP_Effective_20140701_without_Appendices.pdf).

<sup>29</sup> See <http://www.nerc.com/pa/comp/Pages/Registration-and-Certification.aspx>.

Reliability Standards.<sup>30</sup> The Regional Entities believe that continued to be the case during the assessment period, as evidenced by the acceptance by the *vast* majority of the registered entities of their inclusion in the NCR. Indeed, as of December 31, 2013, relatively few registered entities, just 47 out of over 1,850 registered entities in the U.S., appealed their registrations by the Regional Entities to the NERC Board, and only nine of those appeals were filed after January 1, 2009.<sup>31</sup> The NERC Board upheld the Regional Entities' decisions, except in one case, and remanded aspects of another appeal directing the Regional Entity to consider whether two entities should be jointly registered.<sup>32</sup> And in two instances, the NERC Board simply asked the Regional Entity to supply more information on an entity's status.<sup>33</sup> Most important, as of December 31, 2013, only eleven registered entities appealed the NERC Board decisions upholding the Regional Entities' registrations to the Commission.<sup>34</sup>

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<sup>30</sup> See 2009 JRESA, at p. 21.

<sup>31</sup> The number "47" does not refer to the actual number of appeals. Twenty-two of the 47 registrants were involved in just eight appeals of FRCC registrations, five of which concerned the same types of county resource recovery facilities. (No appeal of an FRCC registration has been filed since January 1, 2009.) The other appeals to the NERC Board were filed regarding the registration decisions of MRO (1), RF (8), SERC (6), SPP RE (1), TRE (4), and WECC (5). See <http://www.nerc.com/pa/comp/Pages/Decisions-on-Appeals.aspx>.

<sup>32</sup> In NERC Docket RA080012, on January 16, 2013, the BOT remanded to SERC the issue of whether Louisiana Generating should be registered as a Distribution Provider. In NERC Docket RA080002, on August 19, 2008, the BOT remanded to RF an appeal of Cordova Energy Co, LLC, to consider whether Cordova and Constellation Energy Commodities Group, Inc. should be jointly registered.

<sup>33</sup> The NERC Board directed these requests to SERC regarding the U.S. Army Corps of Engineers-Ft. Worth District (in NERC Docket RA080011) and the North Carolina Electric Membership Corporation (in NERC Docket RA080007).

<sup>34</sup> The Commission denied four, granted six, and denied in part and granted in part one of those appeals.

See the following orders where the Commission denied registrants' appeals: *City of Holland, Michigan Board of Public Works*, 139 FERC ¶ 61,055 (2012), *order on reh'g*, 145 FERC ¶ 61,054 (2013 (denying appeal of RF's decision to register entity as a transmission owner and a transmission operator), *appeal pending sub. nom. City of Holland, Michigan Board of Public Works v. FERC*, No. 13-1306 (D.C. Cir. Dec. 16, 2013); *Cedar Creek Wind Energy, LLC and Milford Wind Corridor Phase I, LLC*, 135 FERC ¶ 61,241 (2011), *order on reh'g*, 137 FERC ¶ 61,141 (2011), *order on compliance filing*, 139 FERC ¶ 61,214 (2012) (denying appeal of two entities of their registration by WECC as transmission owners and transmission operators); *Southeastern Power Administration*, 125 FERC ¶ 61,294 (2008) (affirming SERC's registration of SEPA as a transmission operator and resource planner).

See the following orders where the Commission granted registrants' appeals: *South Louisiana Electric Cooperative Association*, 144 FERC ¶ 61,050 (2013), *order on reh'g*, 145 FERC ¶ 61,232 (2013) (granting appeal of entity registered by SERC as a distribution provider and load-serving entity for lack of sufficient document); *Direct Energy Services, LLC, Sempra Energy Solutions LLC, and Strategic Energy, L.L.C.*, 121 FERC ¶ 61,274 (2007), *order on compliance filing*, 123 FERC ¶ 61,016 (2008) (granting appeals of three entities which objected to their registration as load serving entities and directing NERC to submit a plan to address a possible gap in reliability because of inconsistent registration of certain types of entities); *Mosaic Fertilizer, LLC and City of Tampa, Florida*, 121 FERC ¶ 61,058 (2007) (remanding case to NERC for reconsideration of FRCC's registration or to provide further explanation for underlying decision).

See the following orders where the Commission denied in part and granted in part a registrant's appeal: *U.S. Department of Energy, Portsmouth/Paducah Project Office*, 139 FERC ¶ 61,054, *order on reh'g*, 141 FERC ¶ 61,108 (2012) (granting the appeal of DOE and finding that its Portsmouth facility should not be registered as a

While some individual registration cases were challenging, the organization registration program remained steady during the assessment period. The means by which new registered entities were discovered, for example, were similar to the original means, including self-registrations, compliance audits, public websites, independent system operator (ISO), and regional transmission organization (RTO) memberships (where relevant), information provided by other registered entities, exchange of information between Regional Entities (e.g., through the Regional Registration and Certification Functional Group), Energy Information Administration data, questionnaires, and, of course, word of mouth. The average time to process uncontested entity requests to register or de-register for a function (measured from the time the entity makes the request to the time the request is approved by NERC) likewise stayed the same, or even improved, during that period, taking as little time as three to five business days, or longer up to 90 days if complications arose, such as entity trying to change its registration during an audit. The greatest, albeit not that great, movement within the program was the changes in the number of functions (as opposed to entities) for which entities are registered, as reflected in Table 2.

<b>Trends in the Activation and Deactivation of Functions – Table 2</b>					
<b>Regional Entity</b>	<b>Registered Entities</b>		<b>Registered Functions</b>		<b>Trends in the Activation and Deactivation of Functions in the Regions during Assessment Period</b>
	<b>2009</b>	<b>2013</b>	<b>2009</b>	<b>2013</b>	
<b>FRCC</b>	71	69	240	244	FRCC processed approximately 20 function activations, most of which were associated with changes to generating facility functional responsibilities such as a vendor accepting generator owner (GO) and generator operator (GOP) compliance responsibilities and new joint registration organizations (JROs); 14 function deactivations, most of which were associated with the same generation functional responsibility change and with distributor provider (DP) functional responsibilities being accepted by GO and TO; and 10 entity name changes.
<b>MRO</b>	118	134	435	453	MRO, which had registered 435 functions as of 1/1/09, had 453 registered functions at year-end 2013, for an increase of four percent.

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load-serving entity on the basis of the evidence submitted) (Commissioner Norris dissenting); *U.S. Department of Energy, Portsmouth/Paducah Project Office*, 124 FERC ¶ 61,072 (2008) (affirming RF's registration of DOE facility as a transmission owner, transmission operator and distribution provider, but remanding to NERC the issue of whether it functions as a load-serving entity).

Trends in the Activation and Deactivation of Functions – Table 2					
Regional Entity	Registered Entities		Registered Functions		Trends in the Activation and Deactivation of Functions in the Regions during Assessment Period
	2009	2013	2009	2013	
<b>NPCC</b>	287	301	576	602	The number of registered entities in NPCC fluctuated slightly during the assessment period. At the end of the period, the number had risen to 301. The ultimate increase in the number of entities was due to the number of new GOs, GOPs, and purchasing-selling entities (PSEs) outpacing the delisting of GOs, GOPs, and PSEs.
<b>RF</b>	358	343	677	686	<p>RF experienced very little change in the registration of new entities, and hence functions, during the assessment period. The majority of registry work involved name or ownership changes.</p> <p>A notable trend during the assessment period was the deactivation of GOs and GOPs that owned or operated blackstart resources. This deactivation may have occurred due to the compliance obligations and costs associated with owning and operating blackstart resources. RF is concerned by this trend, as it appears that the costs of compliance may be creating a perverse incentive for registered entities to dispose of blackstart resources, which are important to bulk electric system (BES) reliability.</p>
<b>SERC</b>	227	244	643	694	<p>SERC continued to see considerable change associated with PSE and GO/GOP functions, mostly due to changes in ownership or corporate structure. SERC also registered several new wind farms and a few new generating facilities. SERC's deactivations typically occurred when there was a change in ownership of an asset. Several BAs were deactivated in December 2013 as a result of integration into the MISO BA. Name changes occurred regularly.</p> <p>SERC anticipates most DPs/load serving entities (LSEs) connected via radial tie lines to request deactivation following the BES definition revisions and FERC's South Louisiana Electric Cooperative Association decision.</p> <p>SERC noted a particular challenge with deactivation—the inability to deactivate a registered entity that has an open enforcement action. There</p>

Trends in the Activation and Deactivation of Functions – Table 2					
Regional Entity	Registered Entities		Registered Functions		Trends in the Activation and Deactivation of Functions in the Regions during Assessment Period
	2009	2013	2009	2013	
					appears to be no mechanism to transfer a function to an acquiring registered entity, even if the new owner has agreed to accept the compliance responsibility and mitigation of the prior issues. During the assessment period, SERC's Compliance Database Management Functional Group began seeking a solution to this limitation.
<b>SPP RE</b>	117	140	379	438	SPP RE registered 117 new functions and deactivated 66 functions during the assessment period. Over half of the activations were GO and GOP, due in large part (60%) to construction of new generation. A large majority of the de-activations were due to sales and mergers, which also led to some name changes.
<b>TRE</b>	216	224	337	440	TRE registered 37 percent of the entities in the ERCOT footprint for at least two functions. Registration deactivations occurred only for the GO, GOP, LSE, PSE, and transmission Owner (TO) functions, the majority of which occurred during 2011 and 2012, and consisted mostly of the GO, GOP, and PSE functions.
<b>WECC</b>	471	474	1,258	1,250	Since January 1, 2010, WECC processed 239 registration requests, all of which were accepted and approved by NERC. WECC is forecasting that most DPs/LSEs connected via radial tie lines will request deactivation following the BES definition revisions. To help prepare for this anticipated influx, WECC introduced business process management software for the WECC Compliance Registration Process in 2013. Entities now complete a web-based registration form on the WECC.biz site that requires the entity to provide additional information and answer specific questions based on their request. The system delivers the information to a WECC engineer for review while updates are provided automatically to the applicant via template emails. Everything from the original application to the engineer's review notes and correspondence emails

Trends in the Activation and Deactivation of Functions – Table 2					
Regional Entity	Registered Entities		Registered Functions		Trends in the Activation and Deactivation of Functions in the Regions during Assessment Period
	2009	2013	2009	2013	
					are managed by the system thereby decreasing the processing time.
<b>TOTALS</b>	<b>1,865</b>	<b>1,929</b>	<b>4,545</b>	<b>4,807</b>	

Another important part of the Regional Entities' organization registration functions pertains to the joint registration organization (JRO) and coordinated function registration (CFR), both of which are intended to define the responsibilities and accountability among entities separately registered for the same function. Revisions to NERC ROP §507 and the addition of §508, approved by the Commission on June 10, 2010, helped to clarify the operations of both types of registrations during the assessment period.<sup>35</sup>

Specifically, ROP §507 allows an entity to register as a JRO on behalf of one or more of its members or related entities for one or more functions for which such members or related entities would otherwise be required to register, and, thereby, accept on behalf of such members or related entities all compliance responsibility for that function or those functions including all reporting requirements. Many of the registered entities that use the §507 process are cooperatives, municipalities, and other publicly owned utilities. For example, the Illinois Municipal Electric Agency is a JRO in RF, and accordingly is registered as a DP, LSE, and TO on behalf of certain of its municipal members.<sup>36</sup> As of end of the assessment period, all but two (NPCC and WECC) of the Regional Entities had registered a total of 30 JROs.<sup>37</sup> Otherwise, after the initial implementation, the program was fairly static, with few entities registering as JROs or changing their JRO status. For example, during the assessment period, (i) FRCC processed four JRO changes; (ii) FRCC, SERC, and TRE registered a few JROs; (iii) MRO registered one new JRO; and (iv) SPP RE registered no new JROs.

NERC ROP §508 allows multiple entities to register using a CFR for one or more Reliability Standard(s) or for one or more Requirements or sub-Requirements with particular Reliability Standard(s) applicable to a specific function. The Registration of the CFR is the complete Registration for each entity, and each entity must take full compliance responsibility for those standards or requirements or sub-requirements it has registered for in the CFR. For example, in 2010, TRE registered 13 entities as TOPs through CFR agreements. Each CFR is an agreement between ERCOT ISO and one other transmission entity that allocates responsibility

<sup>35</sup> See *North American Electric Reliability Corporation*, Docket No. RR10-8-000 (June 10, 2010) (unpublished delegated letter order).

<sup>36</sup> See the compliance audit report at [http://www.nerc.com/pa/comp/Audit%20Repos%20DL/2013\\_public\\_RFC\\_MRRE\\_IMEA.pdf](http://www.nerc.com/pa/comp/Audit%20Repos%20DL/2013_public_RFC_MRRE_IMEA.pdf).

<sup>37</sup> See the *JRO Member Listing* Excel spreadsheet at <http://www.nerc.com/pa/comp/Pages/Registration-and-Certification.aspx>.

for TOP requirements between ERCOT ISO and that entity. The CFRs are updated regularly to account for changes in the body of applicable NERC Reliability Standards.<sup>38</sup>

As of end of the assessment period, 184 registered entities took advantage of coordinating their registered functions pursuant to ROP §508.<sup>39</sup> This represented 44 coordination agreements in all Regional Entities but one (FRCC), some of which crossed regional lines. For example, one CFR involved 31 registered entities located in three different Regional Entities (MRO, RF, and SERC). TRE had the largest number of registered entities (73) in the CFR program with 17 CFR arrangements. As was true for the JROs, with the exception of TRE, there was little activity in the CFR program during the assessment period. For example, MRO saw only one JRO convert to a CFR; SPP RE had just one new CFR register; NPCC had two new CFRs register; RF and SERC had a few new CFRs register; and WECC had three new CFR changes. In TRE, in 2010, 60 entities were registered as LSEs in a CFR agreement, and 14 entities were certified and registered as TOPs in a CFR agreement with ERCOT ISO. Since that time, TRE accepted additional CFR registrations.

Notwithstanding the Regional Entities' overall success in registering entities to ensure sufficient coverage of the BPS, the 2009 JRESA listed five areas where improvements could be made to the process of organization registration.<sup>40</sup> As now discussed, in the Regional Entities' opinion, these areas were largely and appropriately resolved during the assessment period by FERC-approved changes to the NERC ROP and by other Commission actions, or were overtaken or resolved by other events or activities.

#### **a. The Scope of the Registration Criteria**

FERC-approved changes to NERC ROP Appendix 5B addressed, at least in part, the issue of whether the registration criteria appropriately capture the users, owners, and operators of the BPS to ensure reliability. The current version (effective July 1, 2014) of the *Statement of Compliance Registry Criteria* (contained in ROP Appendix 5B) reflect review by NERC and the Regional Entities, in consultation with the stakeholders. This review aimed to determine if there should be a different threshold for materiality to the reliability of the BES and to determine if the compliance resources could be better prioritized by changes to the registration criteria.<sup>41</sup> Along these same lines, the Regional Entities supported the efforts of the Registration and Certification Functional Group, working with the NERC Board-appointed Compliance and Certification Committee's Organization Registration and Certification Subcommittee, to develop proposed changes to the registry criteria.

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<sup>38</sup> To assist in this process, each Regional Entity's website includes a link to NERC's website to access its *Requirement Applicability List for Coordinated Functional Registration*. See <http://www.nerc.com/pa/comp/Pages/Registration-and-Certification.aspx>.

<sup>39</sup> See *supra* note 37.

<sup>40</sup> See 2009 JRESA, at pp. 21-23.

<sup>41</sup> See *North American Electric Reliability Corporation*, 141 FERC ¶ 61,241 (2012) (approving revisions to NERC ROP).

Also, during the assessment period, the ERO's activities to address the scope of the registration criteria became entwined with the Order No. 773 proceeding, in which the Commission modified the BES definition to remove regional discretion, and established a bright-line threshold that includes all facilities operated at or above 100 kV.<sup>42</sup> Order No. 773 also approved revisions to the NERC ROP to create an exception process to add elements to, or remove elements from, the BES on a case-by-case basis, and established a process pursuant to which an entity may seek a determination by the Commission whether facilities are "used in local distribution" as set forth in the FPA. As relevant here, while recognizing that the registration criteria and the BES definition have different applications (to entities and facilities, respectively), the Regional Entities believe that Order No. 773 addresses many of the concerns that were raised in 2009. The new BES definition and exception process, for example, may resolve the issue of small entities whose facilities are not necessary for the reliable operation of the BES. Currently, the Regional Entities are working with NERC to review and offer corresponding revisions to the *Statement of Compliance Registry Criteria* in NERC ROP Appendix 5B, and develop an application and database for the BES definition exception process (BESnet) to promote efficiency and consistency in the implementation of the new definition.

#### **b. Re-examination of Functional Model Definitions**

The 2009 JRESA noted commenters' concerns about the Reliability Functional Model, namely that it is conceptual whereas registered entities have (for historical or business reasons) often aligned their operations differently.<sup>43</sup> To address these concerns, that self-assessment discussed increasing the granularity of registration so it would focus on the requirement level, instead of the standard level, but it also recognized that redefining the terms of various functions may be impractical as it would unlikely resolve the immense diversity of organizational structures in the industry. While NERC and the Regional Entities spent some time at first to examine these ideas, they appropriately put the exercise on hold during the assessment period in light of the significant amount of work required to create and implement the new BES definition and the exception process. Also, the Order No. 773 effort may serve the same purpose and provide an increase in granularity as contemplated by the suggestions made in 2009 to revisit the Functional Model. Finally, NERC and the Regional Entities plan to start in 2014, to review and

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<sup>42</sup> See *Revisions to Electric Reliability Organization Definition of Bulk Electric System and Rules of Procedure*, Order No. 773, 141 FERC ¶ 61,236 (2012), *order on reh'g and clarification*, Order No. 773-A, 143 FERC ¶ 61,053 (2013), *order on reh'g and clarification*, 144 FERC ¶ 61,174 (2013), *appeal pending sub nom. People of the State of New York, et al. v. FERC*, No. 13-2316 (2<sup>nd</sup> Cir. filed June 12, 2013); see also *Revision to Electric Reliability Organization Definition of Bulk Electric System*, Order No. 743, 133 FERC ¶ 61,150 (2010), *order on reh'g*, Order No. 743-A, 134 FERC ¶ 61,210 (2011). On June 6, 2013, the Commission extended the effective date of the new definition, until July 1, 2014. See *Revisions to Electric Reliability Organization Definition of Bulk Electric System and Rules of Procedure*, Order Granting Extension of Time, 143 FERC ¶ 61,231 (2013), *order on reh'g*, 146 FERC ¶ 61,070 (2014). On March 20, 2014, the Commission approved NERC's proposed revised definition of "bulk electric system." See *North American Electric Reliability Corporation*, Order Approving Revised Definition, 146 FERC ¶ 61,199 (2014).

<sup>43</sup> See [http://www.nerc.com/pa/Stand/Functional%20Model%20Archive%201/Functional\\_Model\\_V5\\_Final\\_2009Dec1.pdf](http://www.nerc.com/pa/Stand/Functional%20Model%20Archive%201/Functional_Model_V5_Final_2009Dec1.pdf). The Reliability Functional Model is not approved by the Commission, and is not used by every Regional Entity.

clarify relationships between the functional model and the NERC ROP registration and certification directives (including Registry Criteria).

### **c. Oversight of Multi-Regional Entities**

As pointed out in the 2009 JRESA, there are instances where an entity owns or operates BES facilities in two or more regions and thus is subject to multiple compliance programs, and there are businesses that have operations in all eight Regional Entities. To address the challenges raised by these situations, several of the Regional Entities partnered during the assessment period to coordinate more effectively their compliance and enforcement efforts with respect to multi-regional registered entities (MRREs). In particular, they developed a lead region model, in which the Regional Entities decide which one will lead the compliance and enforcement efforts for a given MRRE. For example, RF, MRO, and SERC agreed that RF would be the lead Regional Entity for Mid-continent Independent System Operator (MISO) due to the location of its headquarters and load, and the complex seams issues between the MISO and PJM Interconnection markets, while RF and MRO agreed that MRO would be the lead Regional Entity for American Transmission Company (ATC) due to the majority of ATC's transmission being located within MRO's footprint. In addition, during the assessment period, the Regional Entities worked closely with NERC to improve the coordination of compliance monitoring, mitigation, and enforcement without requiring change to the registration process. To this end, toward the end of the period, the Regional Entities developed *Recommended Guidelines for Multi-Region Entity Coordination*, which the ERO Executive Management Group approved in April 2014 for implementation across the ERO. Efforts are currently underway to develop template agreements between the affected Regional Entities and the notification to registered entities.

### **d. Transfer of Registered Entities between Regional Entities**

Changes to NERC ROP §1208, approved by the Commission during the assessment period, on October 21, 2010, adequately addressed the issue of the appropriate conditions for the transfer of a registered entity from one Regional Entity to another.<sup>44</sup> In the order approving the changes, the Commission agreed with NERC that a registered entity does not have a right to choose the Regional Entity that will be its Compliance Enforcement Authority.<sup>45</sup> The Commission explained:

In addition, as the Commission stated in Order No. 672, it is important that the footprint of a Regional Entity makes sense from a reliability perspective and does not overlap with another regional footprint. The Commission explained that any change in size, scope or configuration of a Regional Entity would constitute an amendment to the Delegation Agreement, and any such amendment would be

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<sup>44</sup> See *North American Electric Reliability Corporation*, 133 FERC ¶ 61,061 (2010) (approving revised Delegation Agreements and changes to ROP, including §1208 governing Regional Entity transfer requests); see also *Nebraska Public Power District, et al.*, 136 FERC ¶ 61,047, order on reh'g, 137 FERC ¶ 61,144 (2011) (denying NPPD's request to transfer from MRO to SPP RE).

<sup>45</sup> 133 FERC ¶ 61,061, at P 72.

subject to review by the ERO and approval by the Commission. This process, under which the Commission must approve any change to the boundary of a Regional Entity to which the ERO has agreed, indicates that boundary changes should be carefully considered and should serve to improve the effectiveness or efficiency of the Regional Entities' and NERC's administration of reliability, and should not merely benefit an individual registered entity.<sup>[46]</sup>

The Regional Entities believe that ROP §1208 will assist them in maintaining a more stable structure for enforcing the reliability standards, and will therefore promote consistency of results.

#### e. Applicability of Reliability Standards to Federal Entities

The Commission's orders with respect to Southeastern Power Administration, the U.S. Army Corps of Engineers, and the Southwestern Power Administration generally resolved the related issues of: (i) the registration status of U.S. government agencies; (ii) compliance by those agencies with the Reliability Standards; and (iii) the application of penalties to those agencies found in violation of the Reliability Standards.<sup>47</sup> These decisions will greatly assist the Regional Entities in their efforts to ensure that such major users, owners and operators of the BES are held accountable for their actions regarding the reliability of that system.<sup>48</sup>

## 2. Organization Certification

Organization Certification is the process by which NERC and the Regional Entities ensure that an applicant to be a reliability coordinator (RC), balancing authority (BA), or transmission operator (TOP) has the tools, processes, training, and procedures to demonstrate its ability to meet the Requirements and sub-Requirements of all of the Reliability Standards applicable to the function(s) for which it is applying, thereby demonstrating the ability to become certified and then operational. The specific requirements for this process are found in the NERC ROP Organization Registration and Certification Programs (§500), and *Organization*

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<sup>46</sup> *Id.*

<sup>47</sup> See *Southeastern Power Administration*, 125 FERC ¶ 61,294 (2008) (affirming SERC's registration of SEPA as a transmission operator and resource planner); *North American Electric Reliability Corporation*, 133 FERC ¶ 61,214 (2010), *order on reh'g*, 137 FERC ¶ 61,044 (2011); *North American Electric Reliability Corporation*, 129 FERC ¶ 61,033 (2009), *order dismissing reh'g*, 130 FERC ¶ 61,002 (2010) (collectively, affirming TRE's and SPP RE's decisions to register the U.S. Army Corps of Engineers and finding that any other federal entity that uses, owns or operates the BPS must comply with mandatory Reliability Standards); *North American Electric Reliability Corporation*, 140 FERC ¶ 61,048, *order on reh'g*, 141 FERC ¶ 61,242 (2012) (finding that SWPA was liable for a \$19,500 penalty imposed by SPP RE for violating Reliability Standards), *appeal pending sub nom. Southwestern Power Administration, et al. v. FERC*, No. 13-1033 (D.C. Cir. Feb. 15, 2013).

<sup>48</sup> The implication of these decisions on the Regional Entities' workload is apparent from the statistics in NERC's May 8, 2013 PowerPoint presentation titled on *Key Compliance and Enforcement Metrics and Trends*. At that time, there were 419 open federal entity possible violations under review, of which 373 or 89% were "on hold" because the legal issues had not been resolved. Fortunately, the registered entities had mitigated or were in the process of mitigating 86 percent of the possible violations.

*Registration and Certification Manual* (Appendix 5A), and are also set out in the *ERO Certification and Review Procedure* manual (updated May 12, 2014).<sup>49</sup> Accordingly, the Regional Entities must organize certification teams that are subject to certain training requirements to ensure the accuracy of the certifications.<sup>50</sup> As is true of the registration process generally, the organization certification process ran smoothly during the assessment period. In that time, the Regional Entities certified 53 entities, conducted 68 reviews, and received only three objections to a Regional Entity’s certification team’s decision.<sup>51</sup>

## **F. Compliance Monitoring and Enforcement Program**

The 2009 JRESA discussed the Regional Entities’ implementation of the CMEP, covering ten topics: (i) compliance registry; (ii) consistency and use of discretion in application of penalties; (iii) CMEP consistency; (iv) compliance audit consistency; (v) consistency in interpretation of Reliability Standards; (vi) compliance caseload backlog; (vii) treatment of minor violations; (viii) compliance information management tools; (ix) compliance process transparency (within the ERO and the Regional Entities and between the ERO and its registrants); and (x) the hearings and appeals process.<sup>52</sup> The following updates that discussion, and provides additional information on the Regional Entities’ progress to implement and improve the CMEP.<sup>53</sup>

### **1. Development and Status of the Compliance Monitoring and Enforcement Program**

During the assessment period, the Regional Entities made significant progress and improvements in the implementation of the CMEP. This is important because the CMEP represents the Regional Entities’ primary responsibility under the FPA and the Commission’s regulations. FPA §215(a)(7), 16 U.S.C. §824o(a)(7), defines “regional entity” in the first instance as “an entity having enforcement authority” under the relevant statutory provisions. §39.1 of the Commission’s regulations, 18 C.F.R. §39.1, repeats that definition. Accordingly, during the assessment period, the Regional Entities devoted the majority of their resources to oversee compliance with and enforcement of the mandatory Reliability Standards.

<sup>49</sup> See <http://www.nerc.com/pa/comp/Pages/Organization-Certification.aspx>.

<sup>50</sup> *Id.* pp. 5-6

<sup>51</sup> These numbers break down by Regional Entity as follows:

	<u>FRCC</u>	<u>MRO</u>	<u>NPCC</u>	<u>RF</u>	<u>SERC</u>	<u>SPP RE</u>	<u>TRE</u>	<u>WECC</u>
Number of Certifications	0	1	3	5	10	3	18	13
Number of Reviews	4	7	4	11	17	4	4	17
Number of Appeals	0	0	0	0	0	1	0	2

<sup>52</sup> See 2009 JRESA, at pp. 21-31.

<sup>53</sup> The update to the section on Compliance Registry, included in the CMEP discussion in the 2009 JRESA, is found in the previous section of this self-assessment.

The Commission explained NERC's and the Regional Entities' roles in regard to the CMEP in its 2007 order accepting the initial RDAs and approving the original formulation of the CMEP.<sup>54</sup> In brief, NERC relies on the Regional Entities to enforce the NERC Reliability Standards with BES owners, operators, and users through approved RDAs. Regional Entities are responsible for monitoring compliance of the registered entities within their regional boundaries, assuring mitigation of all violations of approved Reliability Standards, and assessing penalties and sanctions for failure to comply. For that purpose, the CMEP specifies monitoring processes, including: (i) compliance audits; (ii) self-certification; (iii) spot checking; (iv) investigations; (v) self-reporting; (vi) periodic data submittals; and (vii) complaints.<sup>55</sup> It also includes procedures for enforcement actions, mitigation of violations, and remedial action directives, data retention, and confidentiality matters. In addition, the CMEP obligates each Regional Entity to establish and maintain a hearing body to conduct and render hearings concerning disputes over findings of alleged violations, proposed penalties, and mitigation plans.<sup>56</sup>

The Regional Entities have unwaveringly taken their compliance monitoring and enforcement responsibilities very seriously. In the beginning, they especially relied on their experience in conducting audits, and worked closely with NERC and the Commission's enforcement staff to structure their enforcement activities to ensure that the registered entities complied with the reliability standards. In addition, they increased their staffs to have adequate resources. More resources were necessary in part because the Regional Entities, while recognizing that they had discretion to determine appropriate remedies, conducted their enforcement programs with the understanding that they should investigate every possible violation of a standard or one of its requirements and compile a record sufficient to support any remedy chosen for a violation.<sup>57</sup> This was true regardless of the severity of the violations or the risk they posed to reliability. This was true even if the violations were simply a matter of documentation deficiencies.

No one in the reliability community, including FERC and NERC staff and the personnel at the Regional Entities and the registered entities, anticipated the number of violations that the Regional Entities would ultimately discover. When the 2009 JRESA was submitted to the Commission, the Regional Entities had amassed a significant backlog of over 1,700 violations. Clearly, as NERC and the Regional Entities recognized, this was an unacceptable situation.

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<sup>54</sup> See *North American Electric Reliability Corporation, et al.*, Order Accepting ERO Compliance Filing, Accepting ERO/Regional Entity Delegation Agreements, and Accepting Regional Entity 2007 Business Plans, 119 FERC ¶ 61,060 (2007).

<sup>55</sup> Early in the program, the monitoring processes also included "exception reporting," which was eliminated by a change in the NERC ROP, approved by the Commission in December 2012. See *North American Electric Reliability Corporation*, Order Conditionally Approving Revisions to North American Electric Reliability Corporation Rules of Procedure, 141 FERC ¶ 61,241 (2012).

<sup>56</sup> See 119 FERC ¶ 61,060 (2007), at P 26.

<sup>57</sup> See generally *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Statement of Administrative Policy on Processing Reliability Notices of Penalty and Order Revising Statement in Order No. 672, 123 FERC ¶ 61,046 (2008); Guidance on Filing Reliability Notices of Penalty, 124 FERC ¶ 61,015 (2008).

Within the following year, after many discussions and meetings between and among FERC, NERC, and Regional Entity staffs, and stakeholders, NERC and the Regional Entities were on their way to figuring out how to reduce that backlog, and, more to the point, to address the overarching issue of how much discretion the Regional Entities could exercise in the implementation of the CMEP.

In Fall 2009, several months after NERC had submitted its Three-Year ERO Performance Assessment Report, the Commission took three actions that set the stage for NERC and the Regional Entities to improve their implementation of the CMEP: (i) it provided further guidance on filing proposed penalties, and stated the agency's willingness to consider an abbreviated format for submitting certain types of NOPs;<sup>58</sup> (ii) it issued Order No. 728, which delegated to the FERC Enforcement Director authority to allow routine NOPs to become effective and to stay the effectiveness of NOPs when it was necessary to seek further information;<sup>59</sup> and (iii) it issued an order allowing 564 proposed penalties (labeled the "omnibus filing") to become effective by operation of law.<sup>60</sup>

In 2009 through 2012, the Commission issued additional orders providing direction to the members of the reliability community on what was expected of them and what they could expect from the Commission. These orders covered a variety of issues, including the importance of a mitigation record,<sup>61</sup> the implications of a registered entity's repeat violations and violations by its affiliates,<sup>62</sup> the Regional Entities' responsibility to examine a registered entity's compliance program when determining an appropriate remedy,<sup>63</sup> the need for Regional Entities to consider load loss and harm to customers resulting from violations of Reliability Standards in their penalty assessments for these violations,<sup>64</sup> and the recovery of penalties from third-parties doing business in RTOs and ISOs.<sup>65</sup>

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<sup>58</sup> See Further Guidance Order on Filing of Reliability Notices of Penalty, 129 FERC ¶ 61,069 (2009).

<sup>59</sup> See Delegations for Notices of Penalty, Order No. 728, 129 FERC ¶ 61,094 (2009). Subsequently, the Commission transferred the delegation from the Director of the Office of Enforcement to the Director of the Office of Electric Reliability. See Delegation of Authority Regarding Consideration of Notice of Penalty, Order No. 795, 146 FERC ¶ 61,083 (2014).

<sup>60</sup> See *North American Electric Reliability Corporation*, Order on Omnibus Notice of Penalty Filing, 129 FERC ¶ 61,119 (2009).

<sup>61</sup> See *North American Electric Reliability Corporation*, Order Accepting Notices Of Penalty, 126 FERC ¶ 61,014 (2009).

<sup>62</sup> See *North American Electric Reliability Corporation*, Notice of No Further Review and Guidance Order, 132 FERC ¶ 61,182 (2010).

<sup>63</sup> See Delegated Letter Order, 133 FERC ¶ 62,037 (2010). See also *North American Electric Reliability Corporation*, 134 FERC ¶ 61,146 (2011).

<sup>64</sup> See *Northern American Electric Reliability Corporation*, 134 FERC ¶ 61,209 (2011), *order on reh'g and clarification*, 139 FERC ¶ 61,248 (2012).

<sup>65</sup> See *Reliability Standard Compliance and Enforcement in Regions with Regional Transmission Organizations or Independent System Operators*, Order Providing Guidance on Recovery of Reliability Penalty Costs by Regional Transmission Organizations and Independent System Operators, 122 FERC ¶ 61,247 (2008); see also *PJM*

The omnibus filing eventually led to the Regional Entities' compiling processed violations on spreadsheets entitled Administrative Citation NOPs, an approach approved by the Commission in March 2011.<sup>66</sup> The Commission's statements at that time provide the status of NERC's and the Regional Entities' implementation of the CMEP:

The Commission recognizes that NERC and the Regional Entities expend substantial efforts and resources monitoring compliance with the Reliability Standards and building adequate records to support findings of violations for Commission review. On numerous occasions, the Commission has encouraged NERC and the Regional Entities to develop flexible approaches and more streamlined processes to achieve efficiency in the enforcement process, especially with regard to more minor violations. NERC has adopted an Abbreviated Notice of Penalty format and a Deficiency Notice of Penalty format that have been successful at increasing efficiency. 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.

We encourage NERC's continued use of the Administrative Citation Notices of Penalty format. We also encourage, particularly in the early stages of this process, the ongoing consultation between our staff and NERC prior to filing to determine what violations are appropriate for inclusion in an Administrative Citation Notice of Penalty and the appropriate amount of detail and description necessary to ensure that the Administrative Citation process continues to be a success.<sup>[67]</sup>

Six months later, in September 2011, Administrative Citation NOPs transitioned into Spreadsheet NOPs (SNOPs). Candidates for inclusion in an SNOP are those violations that posed minimal or moderate risk to the reliability of the BPS. In all cases, the SNOP sets forth whether the violations have been mitigated, certified by the respective registered entities as mitigated, and verified by the Regional Entity as having been mitigated. During the assessment period, the Regional Entities processed and submitted through NERC 5,128 confirmed violations in NOPs to the Commission, using the Administrative Citation NOP format for 296 and the

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*Interconnection, L.L.C.*, Order Accepting Tariff Revisions and Requiring Compliance Filing, 124 FERC ¶ 61,260 (2008) and *Midwest Independent Transmission Operator, Inc.*, Order Conditionally Accepting Proposed Tariff Revisions, 128 FERC ¶ 61,229 (2009).

<sup>66</sup> See *North American Electric Reliability Corporation*, Notice of No Further Review of Initial Administrative Citation Notice Of Penalty, 134 FERC ¶ 61,157 (2011).

<sup>67</sup> *Id.* PP 7-8 (footnotes omitted).

SNOP format for 1,428 of those violations. For the 27 months from September 30, 2011 to December 31, 2013, the use of SNOPs alone represented 58% of the total number of NOPs submitted to the Commission.<sup>68</sup>

The next phase in the evolution of the ERO Enterprise's implementation of the CMEP is reflected in the FFT program, which started as the centerpiece of NERC's Compliance Enforcement Initiative (CEI). Details of this program during the assessment period are found primarily in two Commission orders—one issued in March 2012 and one issued in June 2013—and the NERC filings addressed by those orders.<sup>69</sup> Candidates for FFT treatment are possible violations that pose minimal or moderate risk to reliability and have been fixed. A certification of completion of the mitigation activities is submitted, at least within 90 days from the date the FFT is filed or posted, by the respective registered entity for every FFT submission.<sup>70</sup>

Again, the Commission's statements in these FFT orders are evidence of the progress made by NERC and the Regional Entities in the implementation of the CMEP. In the March 2012 order, the Commission explained,

While the FFT initiative represents a significant change in the paradigm for monitoring and enforcing compliance with Reliability Standards, we agree with NERC that this change is warranted at this time. After several years of experience with the current program, we agree that NERC and the Regional Entities should have the flexibility to more efficiently process and track lesser risk violations in order to focus their resources on issues that pose the greatest risk to reliability.<sup>[71]</sup>

In its June 2013 order, the Commission found, “[b]ased on the information provided in NERC's filing... the FFT program is improving the ability of NERC and its Regional Entities to more efficiently process lesser-risk possible violations, enabling them to reduce the backlog of pending enforcement cases and focus on issues of greater importance to bulk-power system reliability.”<sup>72</sup> Notably, in that order, the Commission explained that its staff had reviewed a

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<sup>68</sup> See <http://www.nerc.com/pa/comp/CE/Pages/Enforcement-and-Mitigation.aspx>.

<sup>69</sup> See *North American Electric Reliability Corporation*, Order Accepting with Conditions the Electric Reliability Organization's Petition Requesting Approval of New Enforcement Mechanisms and Requiring Compliance Filing, 138 FERC ¶ 61,193 (2012); *North American Electric Reliability Corporation*, Order on Compliance Filing, 143 FERC ¶ 61,253 (2013).

<sup>70</sup> Originally, as approved by the Commission, the FFT program only pertained to possible violations with minimum risk; however, in the June 2013 order, the Commission approved NERC's proposal to expand coverage to possible violations that pose moderate risk to reliability, subject to NERC's submitting a report by June 20, 2014, justifying a continuation of the expansion of the program. The Commission likewise approved NERC's proposal to allow FFT treatment even before mitigation is completed provided it is completed within 90 days of the time when the FFT is filed or posted. See 143 FERC ¶ 61,253, at PP 32-34, 36-37.

<sup>71</sup> 138 FERC ¶ 61,193, at P 2 (footnote omitted).

<sup>72</sup> 143 FERC ¶ 61,253, at P 27.

sample of 100 FFT issues out of approximately 820 FFT issues filed with the Commission between September 2011 and September 2012, and determined that the Regional Entities properly treated those possible violations under the FFT program.<sup>73</sup>

As recognized by the Commission, the Regional Entities generally believe that the FFT program significantly improved the processing of violations of the reliability standards during the assessment period, and enabled them to focus resources and attention on more serious and complex matters.<sup>74</sup> During the assessment period, they processed total of 1,762 possible violations using the FFT procedures, which, in 2012 and 2013, respectively, represented 48% and 43% the total number of violations and possible violations processed by the Regional Entities. In addition, the FFT program had a positive impact on processing time, which was a major concern identified by the registered entities in 2009. In this regard, between January 1, 2012 and September 30, 2013, the average time for disposing of FFTs was 7.4 months as compared to 10.7 months for SNOPs and 13.1 months for NOPs.<sup>75</sup>

The Commission spoke favorably of the FFT program after its review in 2013, and encouraged NERC to continue to improve the program and report back to the Commission by June 20, 2014. Specifically, the Commission directed NERC to monitor the Regional Entities' eligibility determinations; requested more specificity regarding the FFT program's impact on BPS reliability; encouraged NERC to continue to work with the Regional Entities to improve and better coordinate their risk assessments; and stressed that NERC should continue its outreach to the Regional Entities to encourage the use of self-reports by the registered entities.<sup>76</sup> For their part, to a certain extent in response to the Commission's review, the Regional Entities elicited from focus groups other specific issues that they believed needed to be addressed in general or in certain Regional Entities as NERC and they continued to refine the program. These included overall processing time, the full mitigation plan requirement, insufficient information on content and process, no centralized information collection (particularly for MRREs), and inadequate communication during the process. The Regional Entities are committed to continue working closely with NERC and registered entities to address these issues and to bring about continuous improvement in the FFT program and related efforts.<sup>77</sup>

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<sup>73</sup> *Id.* P 31. Between December 6, 2013 and December 16, 2013, in Docket No. RC11-6-000, *et al.*, all eight Regional Entities responded to the Commission's annual FFT survey to collect data on the effectiveness and efficiency of the FFT program. Each response included data, correspondence, and other supporting information used by the Regional Entity staffs to evaluate and conclude that the previously submitted possible violations identified by FERC staff qualified for FFT treatment. The Commission's response to these filings was still pending at the end of the assessment period.

<sup>74</sup> See Attachment A to NERC's Report in Docket No. RC11-6-004, for information from each Regional Entity on the impact of the FFT program on its region. See also 143 FERC ¶ 61,253, at PP 8-9 (describing the information gleaned from Attachment A).

<sup>75</sup> See the PowerPoint presentation titled *Key Compliance and Enforcement Metrics and Trends*, Compliance Committee Meeting, November 6, 2013, at slide. 5.

<sup>76</sup> See 143 FERC ¶ 61,253, at PP 28-30.

<sup>77</sup> Indicative of the progress made to date is reflected in the Key Compliance Monitoring Index (KCMI) compiled by NERC, which reported that as of the end of 2012, 5,115 confirmed violations were processed for the period beginning June 18, 2007. Of these violations, 85 percent had minimal impact to reliability, 13 percent had moderate

The ERO Enterprise's next advancement in CMEP implementation is RAI. Started in late 2012, RAI is intended to transform the current compliance and enforcement program into one that is forward-looking, focuses on high reliability risk areas, simplifies compliance for registered entities, and creates alternative paths outside of enforcement to resolve minor matters. Accordingly, RAI has three main goals:

- (1) Develop enforcement incentives to recognize positive behavior that contribute to higher accountability and improved performance and discourage poor performance;
- (2) Design and scope compliance programs that recognize risk to reliability, including consideration of an entity's management controls and corrective action programs used to meet the reliability standards; and
- (3) Reduce unnecessary compliance and enforcement activities while gaining efficiencies.

As much if not more than any CMEP project undertaken since 2007, RAI is a collaborative and coordinated effort of the ERO, the Regional Entities, and the registered entities, without regard to ownership, but rather with an objective of working on a common set of deliverables.

A statement made at the July 9, 2013 FERC Reliability Technical Conference accurately portrays the situation in which the Regional Entities find themselves daily in their efforts to enforce the reliability standards, and serves as a backdrop to RAI:

Simply put, we know the current zero tolerance approach is not sustainable for the long term...[O]ur current processes tend to be backward-looking, and we need to move to a space where we're more forward-looking to really assess an entity's ability to stay in compliance and meet or exceed the reliability standards.<sup>[78]</sup>

As further discussed at the conference, RAI would not allow "small stuff" to be "swept under the rug." The "small stuff" matters. The expectation is that the registered entities would have management practices in place to resolve the "small stuff" before it becomes a reliability risk in the form of a material violation of a Reliability Standard. To this end, the Regional Entities would look to how well a registered entity meets the reliability objectives of the standards, and whether any identified violations rise to the level that needs enforcement. It would allow Regional Entities to, among other things, better tailor the scope of audits and other

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impact, and 2 percent had serious impact. Furthermore, the five-year assessment of the KCMI indicated that the risk to BPS reliability based on the number of violations of NERC Reliability Standards trended lower from 2008 to 2012. See NERC's *State of Reliability 2013* report (May 2013), [http://www.nerc.com/pa/RAPA/PA/Performance%20Analysis%20DL/2013\\_SOR\\_May%2015.pdf](http://www.nerc.com/pa/RAPA/PA/Performance%20Analysis%20DL/2013_SOR_May%2015.pdf), at p. 6.

<sup>78</sup> Testimony of Mark Rossi, Senior Vice President and Chief Operating Officer, NERC, Transcript of Reliability Conference (July 9, 2013), Docket Nos. AD13-6-000, *et al.*, at p. 86.

compliance monitoring activities based on an entity's risk (e.g., size, complexity of operations, and effectiveness of internal controls).<sup>79</sup> It would also provide for the determination of the nature of enforcement actions to be based on risk and the presence of internal controls. For example, a single missing record (out of hundreds) for maintaining and testing protection systems that is proactively identified and recorded by the registered entity as part of its normal management practices might not rise to an enforcement matter. While the matter would be part of the entity's compliance record, it would likely not require an enforcement filing. Traditional methods of enforcement and application of penalties, however, would still be used in connection with matters that pose a serious or substantial risk to the BPS. For those matters, the full NOP or SNOP would remain available.<sup>80</sup>

Starting in March 2013, several Regional Entities and registered entities became engaged in pilot programs as the initial steps towards full RAI implementation. In this regard, the Regional Entities appreciate that the Commission has previously recognized the value of pilot projects, pointing out that “[n]o matter how good the data suggesting that a regulatory change should be made, there is no substitute for reviewing the actual results of a regulatory action.”<sup>81</sup> With this in mind, each pilot project endeavored to further define the risk-based approach and develop effective tools, training, procedures, and policies to allow the ERO Enterprise to deploy these concepts in a consistent manner across all Regional Entities. The ERO Enterprise intends to keep the Commission apprised of the progress of the pilot projects, and will make appropriate revisions and submit any necessary filings with the Commission to establish a common framework throughout the ERO Enterprise.

In sum, in the ERO Enterprise's opinion, there are significant benefits to be gained through RAI, including better alignment to a culture of reliability. RAI would give credit to entities that demonstrate strong management practices and a culture of complying with the reliability standards. Similarly, the program would focus compliance monitoring on areas that pose the greatest risk to reliability, thereby enabling and encouraging an entity to address areas of higher risk by strengthening management practices around those risks. This in turn should result in a more effective program addressing risks to reliability consistent with internal control approaches used in other areas of the corporation.<sup>82</sup>

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<sup>79</sup> *Id.* pp. 86-87.

<sup>80</sup> See Reliability Assurance Initiative, *White Paper [No. 5] Change State Element No. 4 - Redesign of the Enforcement Strategy* (March 13, 2013), at p. 4, located at <http://www.nerc.com/pa/comp/Pages/Reliability-Assurance-Initiative.aspx>.

<sup>81</sup> Order No. 637, FERC Stats. & Regs. ¶ 31,091 (2000), at p. 31,279. The U.S. Court of Appeals for the D.C. Circuit agrees: “For at least 30 years this court has given special deference to agency development of such experiments, precisely because of the advantages of data developed in the real world.” *Interstate Natural Gas Association of America v. Federal Energy Regulatory Commission*, 285 F.3d 18, 24 (D.C. Cir. 2001).

<sup>82</sup> See generally <http://www.nerc.com/pa/comp/Pages/Reliability-Assurance-Initiative.aspx>. In this regard, the Regional Entities appreciate the Commission's recognition of the RAI's potential benefit. Toward the end of the assessment period, the Commission noted that “. . .the [RAI] process when fully developed may afford a consistent, informed approach that provides incentives for entities to develop robust internal control programs.” *Version 5 Critical Infrastructure Protection Reliability Standards*, Order No. 791, 145 FERC ¶ 61,160 (2013), at P 73 (footnote omitted).

Along with developing the RAI toward the end of the assessment period, NERC and the Regional Entities focused on three other major areas: (i) the development of a single ERO-wide audit process checklist and associated auditor handbook to ensure the use of more consistent processes and procedures by the staff in the field; (ii) the implementation of the FFT enhancements approved by the Commission in its June 20, 2013 order in Docket No. RC11-06-004; and (iii) the improvement in the self-reporting processes, including reducing the burden and cost of self-reporting. The Regional Entities, as part of the ERO Enterprise, made the following progress in each of these areas:

**a. Development of Single ERO-Wide Audit Process Checklist and Associated Auditor Handbook**

As the Regional Entities recognized in 2009, work was needed to ensure the consistency of compliance audits.<sup>83</sup> Accordingly, as discussed below, they worked on numerous projects within their own regions and across regions to improve their major tool to ensure compliance with the mandatory Reliability Standards. As relevant here, in September 2012, the Regional Entities engaged an outside firm to assess the current state of regional compliance audit procedures and underlying processes, and make recommendations that could lead to more consistent audit practices across the Regional Entities and better position them to adapt to future regulatory changes and demands. This engagement dovetailed with the development of the white papers and other conceptual documents underlying RAI, and naturally became part of the larger effort to revisit the CMEP paradigm. The outside firm produced its assessment (referred to as the Third-Party Assessment) in February 2013, and recommended that the Regional Entities:

- (1) Develop a single set of standardized audit methodology documents to be used across the ERO, after aligning their existing audit methodologies;
- (2) Deploy a pilot program to assess and implement the standardized audit checklist; and
- (3) Roll out a robust training program to provide the audit community with sufficient growth opportunities and ultimately guide auditors in the interpretation and optimal application of the audit guidance and checklist.

Subsequently, with NERC's support and cooperation, during the assessment period, the Regional Entities produced a standard *Compliance Auditor Checklist* and completed the first version of a common *Compliance Auditor Handbook*, as found in the *ERO Enterprise Compliance Auditor Manual*.<sup>84</sup> Also, certain Regional Entity staffs participated in pilot or

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<sup>83</sup> See 2009 JRESA, at p. 25.

<sup>84</sup> See [http://www.nerc.com/pa/comp/ERO%20Enterprise%20Compliance%20Auditor%20Manual%20DL/ERO\\_Enterprise\\_Compliance\\_Auditor\\_Manual\\_version\\_1.pdf](http://www.nerc.com/pa/comp/ERO%20Enterprise%20Compliance%20Auditor%20Manual%20DL/ERO_Enterprise_Compliance_Auditor_Manual_version_1.pdf).

comparable programs to see how the audit process checklist worked in the field, and collaborated with their colleagues in other Regional Entities to fashion appropriate training materials. The Regional Entities firmly believe that the use of the audit process checklist and handbook will create a standardized process that will improve efficiencies and drive consistency while ensuring that audits conform to professional auditing standards, particularly the Generally Accepted Government Accounting Standards (GAGAS).

### **b. Implementation of FFT Enhancements**

As noted earlier, in the June 2013 FFT order, the Commission approved, with conditions, four enhancements to the FFT program.<sup>85</sup> The Commission permitted an expansion of the program by allowing FFT treatment for a “limited pool” of possible violations involving moderate (in addition to minimal) risk, subject to NERC’s filing a report by June 20, 2014, justifying the continuation of the expanded FFT program; allowed the inclusion of possible violations as FFTs even if the mitigation was not yet completed, provided the mitigation was completed within 90 days from the date the FFT is filed or posted; permitted the Regional Entities to publicly post FFTs on a common website on the last business day of each month instead of NERC submitting a monthly informational filing to the Commission; and agreed with NERC’s proposal to review a representative sample of FFTs during the 60-day window following the Regional Entities’ monthly posting of FFTs on NERC’s website instead of reviewing each FFT before public posting. In July 2013, immediately after the issuance of the June 2013 order, the Regional Entities began implementing the approved FFT enhancement applicable to them. Specifically, they included FFTs where mitigating activities had not yet been completed, submitted monthly FFT compilations to NERC for posting on its website, and evaluated possible violations involving moderate risk for processing as FFTs.<sup>86</sup>

### **c. Improvement in the Self-Reporting Process**

As NERC President and CEO Gerry Cauley pointed out at the July 9, 2013 FERC Technical Conference, two-thirds of all violations at that time were self-reported.<sup>87</sup> Nevertheless, at that conference and in other forums such as the FERC FFT proceedings and NERC and regional meetings with the registered entities, the need to improve the self-report process was often stressed. Accordingly, the Regional Entities took steps to meet that need. To start with, as mentioned earlier, they identified areas for potential improvements. These included a lack of sufficient information on content in self-reports both in the details of the violation and the risk assessment information. In addition, there was a perception in certain cases of a lack of centralized information collection (particularly for MRREs), and the registered entity complaints on the combination of long overall processing time and a lack of communication throughout the process.

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<sup>85</sup> See 143 FERC ¶ 61,253 (2013). The Commission rejected one of NERC’s proposals, to eliminate senior officer certification. *Id.* P 17.

<sup>86</sup> See <http://www.nerc.com/pa/comp/CE/Pages/Enforcement-and-Mitigation.aspx> for the FFT postings.

<sup>87</sup> See Transcript of Reliability Conference (July 9, 2013), Docket Nos. AD13-6-000, *et al.*, at p. 135. Self-reports in this context also includes self-certifications.

Next, the Regional Entities worked together, with NERC, and with a focus group of registered entities to start putting in place enhancements to the self-report process. These included:

- (1) Additional guidance on processing and the content of self-reports;
- (2) Points of contact at the Regional Entity for additional guidance;
- (3) An improved intake form that has the capability of augmenting information and cross-referencing information already provided, and a centralized process for MRREs; and
- (4) Aggregation of minimal risk issues by selected registered entities in selected Regional Entities to allow training on risk assessment and mitigation development.

Significantly, by the end of the self-assessment period, with input from the industry focus group, NERC and the Regional Entities completed a draft of the *ERO Self-Report User Guide*, which was posted for broader stakeholder comment in January 2014. As explained in the posting, this user guide should provide registered entities with valuable information and insight on what to do to facilitate disposition of possible noncompliance by the ERO Enterprise.<sup>88</sup> Subsequently, in April 2014, NERC posted a revised *ERO Self-Report User Guide* with the express purpose of enhancing the Registered Entities' understanding of the information necessary for NERC and the Regional Entities to provide efficient and timely resolution of instances of potential noncompliance.<sup>89</sup>

## **2. Updates to the 2009 Joint Regional Entity Self-Assessment**

As described above, the 2009 JRESA addressed nine separate CMEP topics, in addition to the compliance registry. Four involved achieving consistency within the program (consistency and use of discretion in application of penalties, CMEP consistency, consistency in interpretation of reliability standards, and compliance audit consistency), four dealt with enforcement issues (caseload backlog, treatment of minor violations, information management tools, and process transparency), and one reviewed the hearing and appeals process. Because the previous discussion on the progress made by NERC and the Regional Entities on streamlining and improving the CMEP addresses or otherwise touches on most of these topics, the following will not repeat relevant parts of that discussion here. Rather, it will provide updates to specific topics and issues that were raised by the Commission, NERC, the Regional Entities themselves, or stakeholders, in 2009. The discussion is organized under the topics of: (i) Consistency; (ii) Compliance Monitoring; (iii) Enforcement; and (iv) Hearings and Appeals.

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<sup>88</sup> See <http://www.nerc.com/pa/comp/Pages/Reliability-Assurance-Initiative.aspx>.

<sup>89</sup> See [http://www.nerc.com/pa/comp/Reliability%20Assurance%20Initiative/ERO%20Self-Report%20User%20Guide%20\(April%202014\).pdf](http://www.nerc.com/pa/comp/Reliability%20Assurance%20Initiative/ERO%20Self-Report%20User%20Guide%20(April%202014).pdf).

### a. Consistency

In the 2009 JRESA, the Regional Entities identified consistency as an overarching issue in their discussion of the CMEP. That discussion, of course, reflects their recognition that the Commission has repeatedly tasked NERC to ensure consistency of compliance across the Regional Entities, and the NERC ROP explicitly provide that NERC must have a program to monitor the compliance enforcement efforts of each Regional Entity to achieve that objective. Accordingly, in 2009, the Regional Entities examined the issue from several different perspectives. Taken as a whole, these examinations break down into an understanding of the concept of consistency as a general matter and the efforts of the Regional Entities to achieve consistency within their own regions and across regions. To reiterate, what is now described is in addition or complementary to the ERO Enterprise's efforts to develop the RAI.

#### *Consistency as a General Matter*

The Regional Entities are committed to working within their own areas, across regions, and with NERC to meet the Commission's expectation that their compliance monitoring and enforcement endeavors adhere to the same principles, course, and form. That said, they also are aware, and urge the Commission and NERC to recognize, that consistency does not necessarily mean exactness in results. Indeed, the adoption of a risk-based approach to the CMEP, as introduced in NERC's 2011 through 2013 annual CMEP Implementation Plan,<sup>90</sup> will naturally result in different treatment of different entities and different outcomes of compliance and enforcement activities. Specifically, for example, penalty consistency does not mean the same penalty for specific alleged violations across all Regional Entities, because the risk posed by a specific alleged violation varies depending on the characteristics of the Regional Entity's footprint, the registered entity and its geographical location and interconnection, as well as other pertinent facts and circumstances. Instead, in the Regional Entities' opinion, penalty consistency must focus on the need for a uniform methodology to ensure that the penalty for each violation (i) is consistent with the risk posed by that violation, and (ii) encourages the appropriate behavior to improve the reliability of the BES.

#### *Consistency of Remedies Within the Regions*

While sensitive to consistency in their work generally, the Regional Entities expended considerable resources and paid special attention during the assessment period to ensure that their determinations on appropriate remedies for violations of the mandatory reliability standards were consistent within their own regions. For that purpose, they all used internal case management systems, which were similar in that they involved methodical comparisons of the violations to actual penalties assessed for violations of the same or similar standards or requirements within the Regional Entity; directed their staffs to coordinate and otherwise participate in regular meetings of the regional stakeholder compliance committees; required review or "sign off" by senior regional managers; and stressed internal training and regular

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<sup>90</sup> See, e.g., *ERO Compliance Monitoring and Enforcement Program 2013 Implementation Plan* (revised December 27, 2012) at <http://www.nerc.com/pa/comp/Resources/Pages/default.aspx?View={cb5b1d3f-f5b7-421d-8266-0bcf6a06fc08}&SortField=Date&SortDir=A>.

communications with and outreach to their registered entities. They also developed other specific means for achieving the objective of consistent remedial determinations, such as compiling and posting frequently asked questions (FAQs), using surveys, involving technical experts to address risk and harm, assigning a single point of contact for each registered entity, and separating their compliance and enforcement staffs.

***Consistency of Remedies and Other Matters Across the Regions***

The Regional Entities made substantial progress during the assessment period to improve CMEP consistency by increasing their interaction with each other. Notable accomplishments in this regard were made by the REMG, which proactively and persistently stressed the importance of information sharing, transparency, and consistency within and among Regional Entities, and working collaboratively with NERC. In addition, as mentioned earlier, several of the Regional Entities partnered to coordinate more effectively their compliance and enforcement efforts with respect to MRRE. In this regard, they developed a lead region model, in which the Regional Entities decide which one will lead the compliance and enforcement efforts for a given MRRE.<sup>91</sup> Further, the Regional Entity staffs regularly met with each other to promote consistency with CMEP processes and provide subject matter experts, as needed, to the same end, and conducted compliance workshops to which the registered entities from other regions were welcomed. They also collaborated on improving data management tools and the various forms used by the Regional Entities and the registered entities, including the self-report and the self-certification forms and, as discussed in greater detail below, the reliability standards audit worksheets (RSAWs).

Finally, and as apparent from the previous discussion of the developments in the CMEP during the assessment period, the Regional Entity staffs actively participated in NERC-led committees, task forces, and working groups. For example, the Regional Entities actively participated during the assessment period is the Enforcement Sanctions and Mitigation Working Group (ESMWG). This group reviews one or two Regional Entity enforcement processes during an in-person meeting, and then shares its review to help identify best practices and highlight areas where consistency could be improved. NERC Enforcement staff also participates in these meetings and is present for discussions regarding variations in approach to enforcement and mitigation responsibilities. Additionally, the ESMWG conducts periodic “risk assessment” exercises whereby each Regional Entity is asked to review particular fact patterns and descriptions of mitigating activities and assign the appropriate level of risk. Regional Entities are further asked to highlight any assumptions that are made or to identify additional information that would assist in the assignment of the risk posed by the particular facts and circumstances. Not only do these exercises provide value in driving consistency in assessment of risk, they highlight areas of improvement in the drafting of descriptions of violations, mitigating activities, and risk assessments. By becoming involved in in-depth analyses and discussions of potential and actual risk, the Regional Entities aim to continuously improve the final enforcement product.

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<sup>91</sup> For example, RF, MRO, and SERC agreed that RF would be the lead Regional Entity for MISO”, while RF and MRO agreed that MRO would be the lead Regional Entity for ATC”.

### b. Compliance Monitoring

During the assessment period, the Regional Entities steadfastly used their major tool to monitor compliance with the mandatory Reliability Standards—compliance audits of the registered entities. They also used other compliance monitoring tools, including: (i) spot checks; (ii) self-reports; (iii) self-certifications; and (v) periodic data submittals. The Regional Entities’ extensive compliance monitoring efforts, specifically with respect to compliance audits, spot checks, and self-reports, can be seen in Table 3.<sup>92</sup>

Compliance Monitoring Activities – Table 3									
		FRCC	MRO	NPCC	RF	SERC	SPP RE	TRE	WECC
<b>Compliance Audits</b>	2009	22	25	66	49	55	46	24	90
	2010	19	20	56	52	49	47	50	92
	2011	20	18	68	84	79	92	53	101
	2012	34	18	56	99	73	72	74	150
	2013	22	21	78	90	55	42	64	165
<b>Total</b>		<b>117</b>	<b>102</b>	<b>324</b>	<b>374</b>	<b>279</b>	<b>299</b>	<b>265</b>	<b>598</b>
<b>Spot Checks</b>	2009	40	64	40	147	45	90	1	8
	2010	12	27	51	57	24	14	53	32
	2011	61	8	30	30	11	17	45	16
	2012	5	1	120	3	0	6	43	0
	2013	5	0	483	2	0	3	12	6
<b>Total</b>		<b>123</b>	<b>100</b>	<b>724</b>	<b>239</b>	<b>80</b>	<b>130</b>	<b>154</b>	<b>62</b>
<b>Self-Reports</b>	2009	73	12	31	56	92	54	8	313
	2010	63	44	75	264	194	106	88	140
	2011	80	90	120	262	208	154	105	220
	2012	30	50	90	325	211	83	76	184
	2013	21	60	78	240	216	109	73	162
<b>Total</b>		<b>267</b>	<b>256</b>	<b>344</b>	<b>1,147</b>	<b>852</b>	<b>505</b>	<b>350</b>	<b>1,019</b>

The 2009 JRESA primarily focused on compliance audits, and the following discussion will be tailored accordingly. Importantly, during the assessment period, the Regional Entities completed the first three-year cycle of such audits for registered entities (registered in 2007 or 2008) performing the RC, BA, and TOP functions on schedule in 2010, and the six-year cycle for those registered entities not performing one of the three certified functions on schedule in 2013. Some Regional Entities also completed a portion of the second 3-year audits during the assessment period.

<sup>92</sup> The CMEP also once included Exception Reporting, which was removed by the revisions to the NERC ROP, approved by the Commission on December 20, 2012. See 141 FERC ¶ 61,241 (2102). The Regional Entities review self-certifications for all registered entities at least once annually. Some Regional Entities also require monthly self-certifications for certain Reliability Standards and Requirements. Periodic data submittals happen continuously, with certain information due to the Regional Entities on a monthly basis, other data on a quarterly basis.

The 2009 JRESA touched mainly on three topics related to Compliance Audits—the effectiveness of the RSAWs, the adequacy of audit training, and the status of NERC and FERC observers in regional audits. These will be taken up in turn.

### *Reliability Standards Audit Worksheets*

As a general matter, the Regional Entities believe that RSAWs are helpful in their conduct of compliance audits. For example, they provide a means for recording the conduct of the audit, including detailed auditor notes and findings, and can be linked to the registered entity's evidence that can then be more easily reviewed. Registered entities appear to appreciate them, and use them extensively to prepare for an audit. Nevertheless, all of the Regional Entities believe that the RSAWs could be improved, and are pleased that their staffs are involved in the task force for that purpose. They are concerned, among other things, that the RSAWs attempt to meet multiple diverse needs, with the result being that no need is met fully or effectively; lack sufficient detail or granularity to be effective in guiding the conduct of the audit; constitute nothing more at times than a restatement of the requirement and provide little meaningful guidance to the auditor or the audited entity; and are generally cumbersome to use. As a consequence, some of the Regional Entities have developed alternate or supplemental tools to augment the RSAWs, e.g., with detailed data requests and inventory workbooks. Of course, in the Regional Entities' opinion, the audit process checklist and auditor handbook, described earlier, will help alleviate many of the Regional Entities' current concerns.

### *Adequacy of Audit Training*

Without question, the Regional Entities are mindful of the importance of adequate audit training, both of their own staffs and for their registered entities. Accordingly, during the assessment period, they routinely encouraged, if not required, their staffs to attend or otherwise participate in relevant training sponsored by NERC (e.g., semi-annual ERO auditor workshops, GAGAS performance audit training, fundamentals of audits training, audit team leader training, compliance investigations training, *Crucial Conversations* training, and gathering quality evidence online training) or provided by third-party vendors; conducted their own in-house training; and regularly held compliance workshops for their registered entities.<sup>93</sup> In addition, they stressed the importance of their staffs continuing their education in specialized areas, such as cybersecurity, and maintaining or adding to their professional accreditations. As a result, the Regional Entities are confident that during the assessment period they assembled highly trained and professional audit staffs, which some of them supplemented with outside consultants with corresponding qualifications and credentials and with industry subject matter experts, to carry out their compliance monitoring obligations.<sup>94</sup>

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<sup>93</sup> A good overview of NERC's training can be found in its filing submitted in compliance with the Commission's initial order on the FFT program in Docket No. RC11-6-003, on October 12, 2012, and accepted by Delegated Letter Order, on February 25, 2013.

<sup>94</sup> The Regional Entities' Cyber Infrastructure Protection auditor qualifications are discussed in greater detail below under §F.3, Additional Statutory Functions.

The Regional Entities will steadfastly continue these efforts, which complement and otherwise support the development of RAI. In this regard, the Third-Party Assessment suggested ways for improving auditor training, which are currently under active consideration by the ERO Enterprise. These suggestions include:

- (1) Understanding and inventorying audit training over the past 2 to 3 years;
- (2) Identifying initial pockets of excellence that could be leveraged;
- (3) Preparing an initial listing and profile of known trainings and certifications that should be embedded within an on-going training program;
- (4) Reconfirming and defining key trainings that include content related to auditing and understanding the technical aspects of the NERC requirements;
- (5) Determining which professional certifications are best suited for audit professionals;
- (6) Developing a program that includes all desired training and certifications;
- (7) Assigning a target audience, delivery method, importance, approximate course length and frequency for each item in the training program;
- (8) Establishing a method to track employee completion which will report data on progress per employee, office and region;
- (9) Developing a process for proactive monitoring and continued improvements in the current training program;
- (10) Creating individual annual training requirements for each employee based on gaps in their current skill sets and their expressed interests; and
- (11) Tracking training and certification completion status and periodically reporting progress.

***Status of NERC and FERC Observers in Regional Audits***

The final compliance audit topic addressed in the 2009 JRESA concerned the uncertainty of the scope of participation by NERC and FERC observers in regional audits, even though as a general matter the Regional Entities found benefit in the observers' feedback. The Regional Entities believe that this uncertainty was largely resolved during the assessment period by Commission-approved changes to the NERC ROP Appendix 4C, §3.1.5.3, which clearly sets forth the role of audit observers, stating that “[c]ompliance Audit observers and attendees are not

Compliance Audit team members and do not participate in conducting the Compliance Audit or in making Compliance Audit findings and determinations.”<sup>95</sup>

### c. Enforcement

The 2009 JRESA touched on four specific enforcement-related topics in addition to issues of consistency—caseload backlog, treatment of minor violations, process transparency, and information management tools. As these topics overlap with each other and previously discussed topics, the following will combine the updates. As an initial matter, the Regional Entities want to stress that they continue to view communication and transparency in the enforcement process to be imperative to ensure a fair and effective implementation of the CMEP. They also believe that RAI is a positive step in that direction, and are committed to working with NERC and other members of the reliability community to make RAI a reality to advance BES reliability. In particular, RAI will support the goal of approaching the enforcement of the reliability standards on the basis of risk, as the initiative calls for evaluating registered entities’ internal controls and processes, an evaluation that will enable the Regional Entities to create risk profiles. Once known, those risk profiles will assist the Regional Entities in both their compliance monitoring and enforcement activities, and eventually help reduce the time to final resolution of compliance issues.

The Regional Entities experienced a significant increase in the number of new violations discovered during the assessment period, in large part because of the introduction of the CIP mandatory Reliability Standards in 2010. Indeed, with the exception of the last year, NERC reported that the number of violations consistently trended upward during the assessment period, generally for all Regional Entities. This trend can be seen by Regional Entity on Table 4. NERC also reported that the CIP Reliability Standards were consistently the most frequently violated since 2010.<sup>96</sup>

New Violations during Assessment Period – Table 4						
	2009	2010	2011	2012	2013	Total
<b>FRCC<sup>97</sup></b>	184	103	135	68	61	<b>551</b>
<b>MRO</b>	60	103	196	166	139	<b>664</b>
<b>NPCC</b>	43	99	130	213	66	<b>551</b>
<b>RF</b>	123	469	565	505	240	<b>1,902</b>
<b>SERC</b>	187	312	309	300	285	<b>1,393</b>
<b>SPP RE</b>	132	254	291	173	191	<b>1,041</b>
<b>TRE</b>	14	51	430	197	169	<b>861</b>

<sup>95</sup> See 141 FERC ¶ 61,241 (2012).

<sup>96</sup> See the PowerPoint presentation titled *Key Compliance and Enforcement Metrics and Trends* (February 2014), <http://www.nerc.com/gov/bot/BOTCC/Compliance%20Committee%202013/Presentations%20--%20February%205,%202014.pdf>, at slide 15.

<sup>97</sup> There is a slight difference between the FRCC number of violations in Table 4 and those found in NERC’s assessment of the Regional Entities. FRCC’s numbers here reflect the year in which the violations were discovered whereas the other numbers reflect the year the violations were reported to NERC.

<b>New Violations during Assessment Period – Table 4</b>						
	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>Total</b>
<b>WECC</b>	571	550	807	818	437	<b>3,183</b>
<b>TOTALS</b>	<b>1,314</b>	<b>1,941</b>	<b>2,863</b>	<b>2,440</b>	<b>1,588</b>	<b>10,146</b>

Notwithstanding the generally steady increase in new violations during the assessment period, the Regional Entities were able to meet their objectives, stated in the 2009 JRESA, to clear out what was described there as a backlog of violations, improve the time of processing violations (especially minor violations), and, generally speaking, establish stable workloads of enforcement cases. In particular, the Regional Entities' significant reduction in their pre-2012 caseload by the end of the assessment period can be seen on Table 5.<sup>98</sup>

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<sup>98</sup> As NERC reported in its 2014 business plan and budget proposal:

As of June 30, 2013, approximately 85% of the active non-CIP violations and 72% of the active CIP violations were discovered since January 1, 2012 (i.e., were discovered in the preceding 18 months). At June 30, 2013, there were no active non-CIP violations that were discovered prior to January 1, 2010 and only 12 active non-CIP violations that were discovered in 2010. There were only 16 active violations that were discovered in 2009 and 91 active CIP violations that were discovered in 2010. Further, for the 12 months ended June 30, 2013, the number of violations dismissed or filed with the Commission exceeded the number of new violations opened by 680 violations.

*Request for Acceptance of 2013 Business Plans and Budgets of NERC and Regional Entities and for Approval of Proposed Assessments to Fund Budgets*, Docket No. RR13-9-000 (submitted on August 23, 2013), at p. 104.

<b>Reduction in Pre-2012 Violations Caseload – Table 5</b>			
	<b>Total violations open at the end of 2011</b>	<b>Total violations open at the end of 2011 still open at end of 2013</b>	<b>Percentage of Reduction</b>
<b>FRCC</b>	95	0	100%
<b>MRO</b>	151	14	93%
<b>NPCC</b>	221	0	100%
<b>RF</b>	429	21 <sup>99</sup>	95%
<b>SERC</b>	575	25	96%
<b>SPP RE</b>	233	6	97.4%
<b>TRE</b>	283	0 <sup>100</sup>	100%
<b>WECC</b>	65	0	100%

The Regional Entities accomplished these objectives in the first instance by gaining more experience, expanding their enforcement staffs, increasing their outreach to registered entities, and focusing on improved efficiency. They also accomplished this by working with Commission staff, NERC, and the stakeholders in the development of the CEI, in particular the Administrative Citation NOPs, the SNOPs, and the FFTs.<sup>101</sup> As mentioned above, in 2012 and 2013, respectively, the use of SNOPs represented 48% and 43% of the total number of violations and possible violations submitted to the Commission. For the same years, the use of FFTs represented 38% and 43% of the total number of violations and possible violations processed by the Regional Entities.<sup>102</sup> Moreover, for violations and possible violations discovered after January 1, 2012 and filed by September 30, 2013, the average processing time for SNOPs and FFTs was 10.7 months and 7.4 months, respectively.<sup>103</sup> As the Commission can appreciate from the management of its own enforcement cases, as reported in its Enforcement staffs' annual reports, this represents a very respectable and acceptable time to process violations of the law.

<sup>99</sup> This number excludes Federal entity violations which are on hold due to legal issues.

<sup>100</sup> This number excludes one case involving two violations that is on appeal.

<sup>101</sup> The Regional Entities also credit the registered entities in the improvement in the processing of violations, namely that as they also gained experience through compliance and enforcement activities, they obtained a better understanding of how to comply with the standards and thereby were able to facilitate both activities.

<sup>102</sup> See the PowerPoint presentation titled *Key Compliance and Enforcement Metrics and Trends* (February 2014), <http://www.nerc.com/gov/bot/BOTCC/Compliance%20Committee%202013/Presentations%20--%20February%205,%202014.pdf>, at slide 10. For the period July 1, 2012 to June 28, 2013, this breaks down by region as follows:

	<u>WECC</u>	<u>TRE</u>	<u>SPP RE</u>	<u>SERC</u>	<u>RF</u>	<u>NPCC</u>	<u>MRO</u>	<u>FRCC</u>
FFT	25%	54%	44%	43%	41%	60%	57%	45%
SNOP	37%	23%	28%	38%	28%	39%	39%	40%
NOP	38%	23%	28%	19%	32%	1%	4%	15%

<sup>103</sup> See the PowerPoint presentation titled *Key Compliance and Enforcement Metrics and Trends* (November 2013), [http://www.nerc.com/gov/bot/BOTCC/Compliance%20Committee%202013/CC\\_Presentations\\_Nov\\_2013\\_Complete.pdf](http://www.nerc.com/gov/bot/BOTCC/Compliance%20Committee%202013/CC_Presentations_Nov_2013_Complete.pdf), at slide 5.

At the same time as they were working to reduce their pre-2012 caseload and otherwise improve their processing of violations of the mandatory Reliability Standards, the Regional Entities endeavored to strictly oversee the completion of plans to mitigate those violations, because, axiomatically, timely mitigation is imperative for BPS reliability. Toward the end of the assessment period, they were able to improve the average times of two major milestones to less than a year, or significantly less than a year—the time from discovery of the violation to the registered entity’s submittal of mitigation activities and the time from the discovery of a violation to the registered entity’s completion of mitigation activities. This can be seen by Regional Entity for September 2012 through September 2013 in Table 6.

<b>Average Times for Submittal and Completion of Mitigation Plans – Table 6</b>		
	<b>Average time from discovery of a violation to the registered entity’s submittal of mitigating activities</b>	<b>Average time from discovery of a violation to the registered entity’s completion of mitigating activities</b>
<b>FRCC</b>	5.6 months	10.2 months
<b>MRO</b>	5 months	9 months
<b>NPCC</b>	3 months	3.4 months
<b>RF</b>	5.6 months	6.4 months
<b>SERC</b>	11 months	9 months
<b>SPP RE</b>	6.4 months	10.2 months
<b>TRE</b>	8 months	6 months
<b>WECC</b>	4.6 months	5.6 months

The Regional Entities achieved another 2009 enforcement goal during the assessment period by compiling and sharing with each other and the reliability community “lessons learned” from their enforcement proceedings. Accordingly, they were able to improve their own operations and help the registered entities to understand better how to comply with the mandatory Reliability Standards. They did this by: (i) creating webpages;<sup>104</sup> (ii) producing training videos; (iii) issuing newsletters with information on frequently violated standards and violation processing metrics;<sup>105</sup> (iv) publishing cases and dismissal notes;<sup>106</sup> (v) developing and sharing compliance guidance statements;<sup>107</sup> (vi) compiling other relevant written materials such as FAQs;<sup>108</sup> (vii) holding frequent compliance calls with registered entities; (viii) conducting

<sup>104</sup> See, e.g., <http://www.texasre.org/StakeholderOutreach/LessonsLearned/Pages/Default.aspx>; and <http://www.serc1.org/Documents/Compliance/Statistics%20and%20Lessons%20Learned/2012/SERC%20Lessons%20Learned%20July%202012.pdf>.

<sup>105</sup> See, e.g., <https://rfirst.org/Pages/Newsletter.aspx>.

<sup>106</sup> See, e.g., [http://www.midwestreliability.org/02\\_compliance/Enforcement%20Case%20Notes/2013%20Case%20Notes/MRO%20Case%20Notes%202nd%20Quarter%202013.pdf](http://www.midwestreliability.org/02_compliance/Enforcement%20Case%20Notes/2013%20Case%20Notes/MRO%20Case%20Notes%202nd%20Quarter%202013.pdf).

<sup>107</sup> See, e.g., <https://www.npcc.org/Compliance/Compliance%20Guidance%20Statements/Forms/Public%20List.aspx>.

<sup>108</sup> See, e.g., <https://www.frcc.com/FAQ/default.aspx>.

numerous workshops, seminars, conferences, webinars, and open forums;<sup>109</sup> (ix) including detailed discussions in their compliance committee meetings; and (x) participating in trade and other industry conferences and conventions. Indeed, in the last three years of the assessment period (2011 through 2013), the Regional Entities' workshops and equivalent training programs attracted more than 30,000 attendees.<sup>110</sup>

Critical in the Regional Entities' enforcement activities is their use of information management tools. During the assessment period, they all changed or significantly improved or enhanced those tools. They did not, however, use the same tools (and there was no single, integrated compliance information system approach in place for them and NERC). Rather, they used one of two different integrated systems to manage compliance information received from registered entities. Five of the Regional Entities (RF, MRO, SPP RE, TRE, and WECC) used the web-based Compliance Data Management System (webCDMS), and three of the Regional Entities (SERC, NPCC, and FRCC) used the Compliance Issue Tracking System (CITS).<sup>111</sup> NERC used the Compliance Reporting and Tracking System (CRATS) to aggregate regional compliance data from webCDMS and CITS. While each system has its advantages, NERC and the Regional Entities plan to look to the feasibility of a common platform in the near future.

#### **d. Hearings and Appeals**

From the inception of the CMEP, the Regional Entities recognized the importance of providing sufficient process to registered entities which allegedly violated the mandatory Reliability Standards. Indeed, the Commission stressed more than once that the Regional Entities must have procedures in place to enable a registered entity to be heard in a trial-type hearing, and that NERC must have procedures in place to allow a registered entity to appeal a regional decision to the NERC Board and ultimately to the Commission.<sup>112</sup> Accordingly, the ERO Enterprise spent considerable time during the assessment period in developing and refining the *Hearing Procedures* laid out in Attachment 2 to NERC ROP Appendix 4C, and each Regional Entity issued its own CMEP hearing procedures, either incorporating or adopting by reference the procedures in Attachment 2. Many of the Regional Entities also provided training on the hearing procedures, including conducting a mock hearing, for their staffs, hearing bodies, or stakeholders.

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<sup>109</sup> See, e.g., <http://www.wecc.biz/Training/Pages/default.aspx>.

<sup>110</sup> This broke down by Regional Entity as follows: FRCC (2,176), MRO (1,219), NPCC (1,650), RF (1,260), SERC (4,019), SPP RE (2,451), TRE (2,924), and WECC (14,658). WECC had almost half of the attendees because it held routine open WebEx calls with pre-set agendas with the time dedicated for questions and answers.

<sup>111</sup> The Regional Entities also used a variety of other programs, such as SharePoint document management system and MK Insight materials repository system.

<sup>112</sup> See, e.g., *North American Electric Reliability Corporation, et al.*, Order Accepting ERO Compliance Filing, Accepting ERO/Regional Entity Delegation Agreements, and Accepting Regional Entity 2007 Business Plans, 119 FERC ¶ 61,060 (2007), at PP 134-165; *North American Electric Reliability Corporation, et al.*, Order Addressing Revised Delegation Agreements, 122 FERC ¶ 61,245, at PP 74-138, *order on compliance filing*, 125 FERC ¶ 61,330 (2008), at PP 58-60.

Toward the end of the assessment period, with active participation by the Regional Entities, NERC proposed changes to *Hearing Procedures*, which the Commission approved on December 20, 2012.<sup>113</sup> Among other things, the Commission agreed with NERC’s proposal to allow third-party interventions under a strict standard, namely that the intervenor must have a direct and substantial interest in the outcome of the alleged violation, proposed penalty or sanction, mitigation plan, or remedial action directive.<sup>114</sup> The Regional Entities agree that the codification of this standard will facilitate the resolution of enforcement proceedings, especially in those regions with RTOs or ISOs, where a third-party may be allocated all or a portion of a penalty and where the Commission’s objective of getting to the “root cause” of the violation is critical to such allocation.<sup>115</sup>

Even though all of the Regional Entities established hearing procedures and organized their resources to accommodate hearings, just three of them conducted a total of only five hearings during the assessment period.<sup>116</sup> RF conducted one regular hearing and one fast-tracked hearing, both of which were ultimately resolved by settlement. SPP RE conducted two regular hearings, one of which is pending resolution in the U.S. Court of Appeals for the D.C. Circuit,<sup>117</sup> and one for which a settlement was pending before the NERC Board of Trustees Compliance Committee as of December 31, 2013. TRE conducted one hearing, at the end of which its board of directors issued a confidential decision, in January 2013, and submitted the matter to the NERC Board where it was pending as of December 31, 2013. At this time, in light of the relatively little activity under the current ROP, the Regional Entities believe that they should

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<sup>113</sup> See *North American Electric Reliability Corporation*, Order Conditionally Approving Revisions to North American Electric Reliability Corporation Rules of Procedure, 141 FERC ¶ 61,241 (2012), at PP 108-110.

<sup>114</sup> *Id.* P 110. See also *Monongahela Power Co., et al.*, 135 FERC ¶ 61,226 (2011) (authorizing FirstEnergy to intervene in an RF hearing).

<sup>115</sup> See generally *Reliability Standard Compliance and Enforcement in Regions with Regional Transmission Organizations or Independent System Operators*, Order Providing Guidance on Recovery of Reliability Penalty Costs by Regional Transmission Organizations and Independent System Operators, 122 FERC ¶ 61,247 (2008); see also *PJM Interconnection, L.L.C.*, Order Accepting Tariff Revisions and Requiring Compliance Filing, 124 FERC ¶ 61,260 (2008) and *Midwest Independent Transmission Operator, Inc.*, Order Conditionally Accepting Proposed Tariff Revisions, 128 FERC ¶ 61,229 (2009).

<sup>116</sup> The Regional Entities also received very few complaints and conducted very few investigations (as that term is defined in the CMEP) during the assessment period as follows:

	FRCC	MRO	NPCC	RF	SERC	SPP RE	TRE	WECC
Complaints	2	1	6	4	4	1	3	0
Investigations	0	3	3	3	3	3	3*	1

\*One of TRE’s investigations involved a 2011 winter event that led to a FERC/NERC staff report, *Report on Outages and Curtailments During the Southwest Cold Weather Event on February 1-5, 2011*. See <http://www.ferc.gov/legal/staff-reports/08-16-11-report.pdf>.

<sup>117</sup> See *Southwestern Power Administration, et al. v. FERC*, No. 13-1033 (D.C. Cir. Feb. 15, 2013).

obtain more experience with hearings and appeals before any significant changes are made to Attachment 2.<sup>118</sup>

### 3. Additional Statutory Functions

The 2009 JRESA identified four other functions which are primarily the ERO's responsibility but which require the active involvement, cooperation, and assistance of the Regional Entities—Reliability Assessment, Event Analysis, Situation Awareness, and Critical Infrastructure Protection.<sup>119</sup> In regard to Reliability Assessment, Event Analysis, and Situation Awareness, NERC and some industry members expressed concerns about the Regional Entities' performance. In regard to Critical Infrastructure Protection, the Regional Entities noted a concern they had. As now demonstrated, during the assessment period, the Regional Entities successfully took steps to address and otherwise allay the concerns of NERC and the industry members, and had its own concern satisfactorily addressed as well.<sup>120</sup>

#### a. Reliability Assessment

FPA §215(g), 16 U.S.C. §824o(g), provides that “[t]he ERO shall conduct periodic assessments of the reliability and adequacy of the bulk-power system in North America.” Section 39.11 of the Commission's regulations, 18 C.F.R. §39.11 (2013), additionally directs the ERO to conduct such assessments and provide reports to the Commission and other designated entities. Accordingly, NERC prepares the annual *Long-Term Reliability Assessment*, *Summer Assessment*, *Winter Assessment*, and special assessments as needed. To this end, as can be gleaned from the NERC's *Reliability Assessment Guidebook* (version 3.1), NERC relies heavily on the Regional Entities to prepare these reports.<sup>121</sup> Indeed, as anticipated in the 2009 JRESA, the finalization of this guidebook during the assessment period adequately responded to the issues raised during the preparation of the Regional Entities' first performance assessment.<sup>122</sup> Nonetheless, the Regional Entities are committed to continue working with NERC to improve data collection and validation, and to foster greater alignment across the regions in the conduct of high quality, timely, and independent assessments that support the ERO Enterprise's valuation of reliability.

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<sup>118</sup> Notably, the Commission approved a major change to the TRE hearing procedures in August 2013, allowing TRE to change its hearing process, which previously provided for the Texas Public Utility Commission to serve as the hearing body, to be the same as used by the other seven Regional Entities. See *North American Electric Reliability Corporation*, Docket No. RR13-7-000 (August 19, 2013) (unpublished delegated letter order).

<sup>119</sup> See 2009 JRESA, at pp. 32-33.

<sup>120</sup> Additionally, as budget matters were discussed at various places in the 2009 JRESA, this section concludes with a brief overview of Regional business plans and budget activities during the assessment period.

<sup>121</sup> See [http://www.nerc.com/pa/RAPA/rg/ReliabilityGuidelines/Reliability\\_Assess\\_Guidebook\\_3\\_1Final.pdf](http://www.nerc.com/pa/RAPA/rg/ReliabilityGuidelines/Reliability_Assess_Guidebook_3_1Final.pdf).

<sup>122</sup> Concerns at that time included data checking and validation, process and procedures, stakeholder/member involvement, and overall quality and timeliness.

## b. Event Analysis

In the 2009 JRESA, the Regional Entities agreed with industry members that work needed to be done on the process of timely conducting, and disseminating information gathered from, event analyses performed by NERC and the Regional Entities.<sup>123</sup> Without question, the ERO Enterprise made tremendous strides during assessment period to address these concerns and otherwise improve the very critical reliability function of analyzing events and distributing lessons learned to the entire reliability community. For their part, the Regional Entities significantly contributed to this effort by helping to organize and actively participating in the voluntary ERO event analysis program.

By way of background, following the creation of the NERC Event Analysis Working Group (EAWG) and two industry trials in 2010, NERC approved an industry-wide event analysis program in February 2012, and revised it in 2013.<sup>124</sup> This voluntary program recognizes the need to establish an appropriate level of review for the events which occur on the BPS based on their varying levels of significance, while still providing otherwise unrealized lessons to be learned from both major and minor occurrences. To complete this effort, the registered entity, the Regional Entity, and NERC staff collaborate to prepare an event analysis report, identify root cause and contributing causes, perform a formal “cause-coding” analysis, and publish lessons learned gathered from the disturbance. The process also encourages registered entities to establish a liaison between their internal event analysis and compliance functions for development of a registered entity compliance self-assessment report separate from the event analysis report. During the assessment period, this integration of industry engagement and the collaborative review of disturbances greatly improved the effectiveness, consistency, and timeliness of event analyses performed by NERC and the Regional Entities.

The following shows the progress made by the voluntary ERO event analysis program, developed by NERC, the Regional Entities, and stakeholders. Between October 2010 and December 31, 2013, registered entities submitted 469 event reports through the program, two-thirds of which were classified as Category 1.<sup>125</sup> Generally, the registered entities were very

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<sup>123</sup> The *Report on Outages and Curtailments During the Southwest Cold Weather Event of February 1-5, 2011, Causes and Recommendations* (August 2011) (2011 Southwest Cold Weather Event) neatly summarizes the event analysis process:

Registered entities are required to report the occurrence of defined bulk power system disturbances and unusual occurrences to the appropriate Regional Entity and to NERC. The Regional Entity and/or NERC in turn undertakes various levels of analysis to determine the causes of the events, assure tracking of corrective actions to prevent recurrence, gather information needed to assess compliance, and provide lessons learned to the industry. The event analysis process also provides input for training and education, reliability trend analysis efforts and Reliability Standards development, all of which support continued reliability improvement.

<http://www.ferc.gov/legal/staff-reports/08-16-11-report.pdf>, at p. 23.

<sup>124</sup> See

[http://www.nerc.com/pa/rrm/ea/EA%20Program%20Document%20Library/Final\\_ERO\\_EA\\_Process\\_V2.1.pdf](http://www.nerc.com/pa/rrm/ea/EA%20Program%20Document%20Library/Final_ERO_EA_Process_V2.1.pdf). The EAWG eventually transitioned to the NERC Event Analysis Subcommittee.

<sup>125</sup> A Category 1 event includes, among other things, an unexpected outage, contrary to design, of three or more BPS elements caused by a common disturbance. See generally *Electric Reliability Organization Event Analysis Process*,

supportive of the process and worked with the Regional Entities' staffs to improve the quality of the reports, even providing subject matter experts to participate in calls to ensure that the reports were completely understood to more effectively assign categories and cause codes. The Regional Entities' staffs, in turn, were fully committed to the success of the lessons learned aspect of the program, and attempted to keep the registered entities up to date on the program and to help develop meaningful lessons learned. As is well known, during the assessment period, the two most notable event analyses were performed by NERC and FERC staffs with respect to the 2011 Southwest Cold Weather Event and the 2011 Arizona-Southern California Outages.<sup>126</sup> In both matters, the reports provided valuable information and recommendations that were closely examined by the other Regional Entities for application in their areas.<sup>127</sup>

### c. Situation Awareness

The 2009 JRESA touched briefly on situation awareness, and took note that NERC and the Regional Entities were actively participating with FERC to enhance situation awareness by having RCs provide near-real-time operating information for their respective footprints to the Commission, NERC and the Regional Entities in order to permit the Commission to “measure the health” of the Interconnections and to monitor parameters which might warn of a developing crisis. The Regional Entities cautioned in 2009 that the communication protocols should be followed in order to prevent this effort from exposing system operators to distracting inquiries during emergency situations. Since then, as now explained, the efforts underway in 2009 were largely successful and the Regional Entities' concerns were satisfactorily addressed.

During the assessment period, FERC, NERC, and Regional Entity staffs worked together to develop a near-real time situation awareness visualization tool called SAFNR (Situation Awareness for FERC, NERC, and the Regional Entities). SAFNR version 1 was implemented in June 2009. SAFNR version 2, which provides enhanced situation awareness with increased

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*Appendix E: Categorization of Events (February 2012) at*  
[http://www.nerc.com/pa/trm/ea/EA%20Program%20Document%20Library/ERO\\_Event\\_Analysis\\_Process\\_Document\\_Version\\_1\\_Feb\\_2012.pdf](http://www.nerc.com/pa/trm/ea/EA%20Program%20Document%20Library/ERO_Event_Analysis_Process_Document_Version_1_Feb_2012.pdf). There was only one Category 5 event during the assessment period—Hurricane Sandy in 2012.

The events covered by the reports break down by Regional Entity as follows:

FRCC	MRO	NPCC	RF	SERC	SPP RE	TRE	WECC
25	41	69	47	42	13	69	163

<sup>126</sup> See n. 125 and *Arizona-Southern California Outages on September 8, 2011, Causes and Recommendations* (April 2012) (2011 Arizona-Southern California Outages) <http://www.ferc.gov/legal/staff-reports/04-27-2012-ferc-nerc-report.pdf>. See also *Arizona Public Service Company*, Order Approving Stipulation and Consent Agreement, 148 FERC ¶ 61,009 (2014) (approving first settlement in 2011 Southwest Blackout case between FERC's Office of Enforcement, NERC, and Arizona Public Service Company).

<sup>127</sup> For example, in light of the recommendations in the Arizona-Southern California Outages report, SPP RE staff conducted a survey of entities regarding operational planning and real-time situational awareness, and worked with the SPP RTO and the SPP Event Analysis Working Group to craft training materials. In addition, the SPP RTO implemented a daily benchmark process of the “next day” models to validate load forecasting and generation dispatch assumptions as well as voltage performance. Also in consideration of the recommendations in that report, WECC launched an initiative to improve modeling of remedial action schemes and relays.

trending capability, was completed in late 2012. As contemplated in the 2009 JRESA, SAFNR calls for U.S. RCs to provide system conditions via the internet to FERC, NERC, and the Regional Entities thereby allowing them to monitor continuously operating conditions and emerging reliability events on the BPS. In addition to the near-real time monitoring capabilities of SAFNR, the RCs send situation awareness reports every morning to the Commission, NERC, and the Regional Entities. These reports include an overview of weather conditions, transmission line and generation outages, and operating reserves. Furthermore, the Regional Entities participate in weekly situation awareness and event analysis conference calls with NERC. From the Regional Entities' perspective, the combination of SAFNR, the daily situation awareness reports, and the weekly calls with the ERO, give them a good overview of what is happening on the BES. And, of course, they are in regular communication with the registered entities within their footprints, in particular the RCs, and provide those entities with the means to contact them or receive pertinent information from them at all times with respect to any incidents or events on the grid.<sup>128</sup>

#### d. Critical Infrastructure Protection

The 2009 JRESA posited only one issue with respect to CIP, namely that the Commission should approve a pending proposal to amend the NERC ROP to provide that any Technical Feasibility Exception (TFE) requests (from the coverage of the CIP Reliability Standards) be submitted in the first instance to the Regional Entities, rather than to NERC.<sup>129</sup> Early in the assessment period, the Commission approved the proposed amendment, thus mooting the issue raised in 2009.<sup>130</sup> More recently, in September 2013, the Commission approved what NERC described as the first comprehensive review of the TFE process since it was originally developed and approved.<sup>131</sup> The Commission explained that NERC and the Regional Entities had processed by that time over 3,800 TFE requests in the past three years, including over 1,300 TFE requests in 2011, experience that supported NERC's proposal to streamline the process for submitting, reviewing, and approving or disapproving TFE requests, and for modifying approved TFEs.<sup>132</sup> The Regional Entities are pleased that the Commission

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<sup>128</sup> For example, WECC established a web portal to allow BAs and TOPs access to actual RC real-time state estimator, contingency analysis, and other situational awareness-enhancing tools. NPCC introduced the *Emergency Preparedness Conference Call Procedures* to enable the RCs in its footprint, and, as circumstances may require, their counterparts in neighboring Regional Entities, to rapidly communicate the status of current operating conditions, facilitate the procurement of assistance during emergency conditions, and identify potential physical or cyber threats to the system.

<sup>129</sup> TFE requests primarily arise with respect to long-life equipment in place that is not readily compatible with a modern environment where cyber security issues are a concern. See *Mandatory Reliability Standards for Critical Infrastructure Protection*, Order No. 706, 122 FERC ¶ 61,040 (2008), at P 180.

<sup>130</sup> See *North American Electric Reliability Corporation*, Order Approving Technical Feasibility Exception Procedures and Ordering Compliance Filing, 130 FERC ¶ 61,050 (2010).

<sup>131</sup> See *North American Electric Reliability Corporation*, Order Approving Revisions to Electric Reliability Organization's Rules of Procedure and Directing Compliance Filing, 144 FERC ¶ 61,180 (2013), *order on compliance*, Docket No. RR13-3-001 (January 30, 2014) (unpublished letter order).

<sup>132</sup> *Id.* P 12.

approved NERC's proposed amendments, which will help reduce TFE processing times while maintaining the integrity of the CIP mandatory Reliability Standards.

In addition, during the assessment period, the Regional Entities significantly expanded the number and the expertise of their staffs, in particular their auditors, to verify compliance with the CIP mandatory Reliability Standards. They uniformly hired personnel with relevant credentials and experience. For example, SPP RE's audit team (as of mid-2013) had over 94 years of information technology, cybersecurity, and IT audit experience, including 52 years of experience in the electricity sector, and FRCC required (as of mid-2013), as a condition of employment, five years of experience in cybersecurity practices, information technology, auditing practices, implementation of NERC Reliability Standards, or other equivalent experience. Moreover, by the end of the assessment period, many of the Regional Entities' employees held active certifications recognized by the U.S. Department of Defense Directive 8570 (e.g., Certified Information Systems Auditor (CISA), Certified Information Systems Security Specialists (CISSP), Certified Ethical Hacker (CEH), and Network +). They also sought out personnel who understood energy management systems (EMS) and supervisory control and data acquisition (SCADA) systems and several of them augmented their staffs' expertise with contractors who held similar credentials and experience.

Needless to say, the Regional Entities recognize the incredibly important role that cybersecurity plays in the fulfillment of their statutory responsibilities.<sup>133</sup> Accordingly, during the assessment period, they uniformly expended considerable resources and effort to organize their CIP programs and to enforce the mandatory CIP Reliability Standards. Several also initiated on-site visits at their registered entities to assess their physical security, to discuss with those entities the intricacies of complying with the CIP Reliability Standards, and to explore best industry practices with respect to cybersecurity. In addition, the Regional Entities improved their own technology to be able to handle the transport and storage of the especially sensitive information that they collect in CIP compliance audits and investigations.

Finally, during the assessment period, Regional Entities participated in two NERC Grid Security Exercises (GridEx), which use best practices from the Department of Homeland Security, the Federal Emergency Management Agency, and the National Institute of Standards and Technology. Six Regional Entities (MRO, NPCC, RF, SERC, TRE, and WECC) joined 70 industry and government organizations in the 2011 GridEx, on November 16, 2011 through November 17, 2011, and six Regional Entities (FRCC, MRO, NPCC, RF, SERC, and TRE) joined more than 200 industry and government organizations, either as full participants or as observers, in the 2013 GridEx on November 13, 2013 through November 14, 2013. The 2011 GridEx was designed to validate the readiness of the Electricity Sub-sector to respond to a cybersecurity incident, strengthen registered entities' crisis response functions, and provide input for internal security program improvements. Overall, the exercise was widely regarded across industry and government as a critical imperative in preparing the BPS for a disruptive cyber event.<sup>134</sup> The 2013 GridEx gave participants the opportunity to check the readiness of their crisis

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<sup>133</sup> See 16 U.S.C. §§824o(a)(3) and (4).

<sup>134</sup> See *2011 NERC Grid Security Exercise After Action Report* (March 2012) at <http://www.nerc.com/pa/CI/CIPOutreach/Documents/NERC%20GridEx%20AAR%2016Mar2012%20Final.pdf>.

action plans through a simulated security exercise to self-assess response and recovery capabilities, and to adjust actions and plans as needed, while communicating with industry and government information sharing organizations.<sup>135</sup>

#### 4. Budget

The 2009 JRESA mentioned various budget matters but did not include a separate section on the topic. The significant progress made in this area during the assessment period by the Regional Entities under NERC leadership calls for at least a brief discussion here. Also, as related generally in the Introduction and specifically by each Regional Entity in Appendix C, the Regional Entities are required by FPA §215 to establish rules that “allocate equitably reasonable dues, fees, and other charges among end users for all activities,” an obligation that obviously necessitates that they function under a business plan and a budget. The Regional Entities first approached these budget responsibilities during the assessment period by developing, in collaboration with NERC, and proposing annual business plans and budgets, in accordance with Commission orders, ERO rules, and NERC business planning and budgeting policies and instructions. For this purpose, they used NERC forms for business plan and budget submittal and adhered to NERC’s schedule for preparation of the business plan and budget and related financial statements. They likewise followed NERC’s prescribed system of accounts (except to the extent that NERC permitted a departure from the prescribed system of accounts).

The Regional Entities made significant progress in the development and submission of their annual business plans and budgets partly as a result of their active participation in the Regional Entity Budget Group (REBG), which transitioned during the assessment period to the ERO Finance Group (EROFG). This group reviewed templates, budget processes, schedules and deadlines, account classifications, financial reporting, and accounting changes. Members of the group were able to share information concerning benefits, salaries, policies, and procedures that are used in the day-to-day accounting activities in the regions. The Regional Entities also took advantage of the opportunity to preview their preliminary annual budgets for Commission staff, and receive feedback generally and with respect to staffing needs and extraordinary items. They further worked with NERC to develop long term resource and financial planning, and to formulate a set of “common assumptions,” which helped to clarify expectations. As a consequence of the concerted efforts made by NERC, the Regional Entities, and the EROFG, the regional budget process significantly improved during the assessment period, progressing from a level of some uncertainty to a level of considerable predictability regarding needed resources and anticipated expenses.<sup>136</sup>

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<sup>135</sup> See *Grid Security Exercise (GridExII) After-Action Report* (March 2014) available at: <http://www.nerc.com/pa/CI/CIPOutreach/GridEx/GridEx%20II%20After%20Action%20Report.pdf>. The Regional Entities were also represented at the “tabletop” of executives from government, industry, and NERC, which took place after the 2013 exercise.

<sup>136</sup> An excellent overview of the progress made by the ERO Enterprise during the last year of the assessment period in preparing the Regional Entities’ 2014 business plans and budgets can be found in NERC’s *Request for Acceptance of 2014 Business Plans and Budgets of NERC and Regional Entities and for Approval of Proposed Assessments to Fund Budgets*, Docket No. RR13-9-000 (submitted on August 23, 2013), at pp. 24-30. See also

## CONCLUSION

The ERO Enterprise significantly matured during the assessment period, building on the foundation of the first three years of the program in which the ERO and the Regional Entities had to set up and organize their operations to implement a sweeping new set of Federal laws, regulations, policies and practices under the oversight of the Commission. Those first three years were truly a time of learning and adjusting to the new paradigm. The next five years, the current assessment period, were a time to learn from experience and explore ways to improve, refine, and stabilize the program. The Regional Entities successfully contributed to those objectives in several ways. They worked more closely and productively with the ERO and with each other. They reached out to and trained their registered entities and other stakeholders. They actively participated in FERC proceedings to keep the Commission informed and to help craft orders and policies that appropriately advance reliability. They continuously examined ways to be more efficient and effective in exercising their compliance enforcement authority and to better gauge the risk that noncompliance posed to reliability. Finally, at all times, they met their statutory obligations to be impartial, develop reasonable and technically sound standards, enforce those standards with due process, operate within sound business plans and budgets, coordinate their efforts in North America, where applicable, and function under RDAs that promote effective and efficient administration of BPS reliability.

## Appendix A Description of Regional Entities

A Regional Entity is an organization that has been delegated certain statutory functions of the Electric Reliability Organization (ERO). The ERO and each Regional Entity consummate the delegation through the execution of a Delegation Agreement, which must be approved by the Federal Energy Regulatory Commission (Commission or FERC) in the U.S. By entering into such an agreement, the Regional Entity becomes subject to the jurisdiction of the FERC and the rules of procedure of the ERO.

In July 2006, when the Commission certified the North American Electric Reliability Corporation (NERC) as the ERO, it also accepted NERC's proposal to delegate certain ERO functions to designated Regional Entities, as well as NERC's proposed *pro forma* Delegation Agreement.<sup>137</sup> In April 2007, NERC entered into separate Delegation Agreements with eight Regional Entities, through which NERC delegated certain ERO functions. Specifically, NERC delegated authority to the Regional Entities to audit, investigate, and otherwise ensure that users, owners, and operators of the BPS comply with NERC's mandatory Reliability Standards, subject to ERO oversight.<sup>138</sup> Further, the Delegation Agreements addressed: (i) Regional Reliability Standards development; (ii) registration of entities that must comply with Reliability Standards; and (iii) other services supporting NERC's functions, including reliability assessments, event analysis, and training and education. In October 2010, the Commission approved a revised *pro forma* Delegation Agreement, and revised Delegation Agreements between NERC and each of the eight Regional Entities.<sup>139</sup> Subsequently, the Commission also approved other changes to specific Delegation Agreements.<sup>140</sup>

As shown in Figure 1, the existing eight Regional Entities provide full geographic coverage for the jurisdictional scope of NERC as the international ERO.

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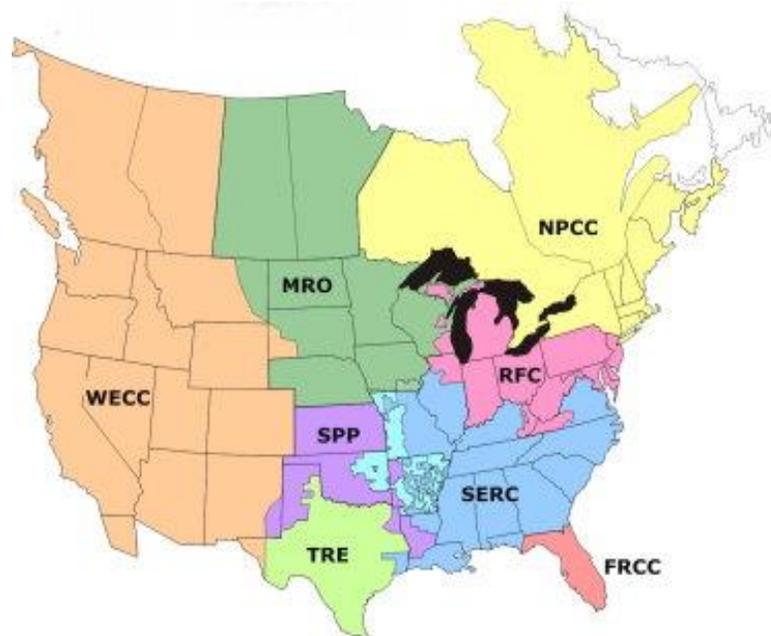
<sup>137</sup> See *North American Electric Reliability Corporation*, Order Certifying North American Electric Reliability Corporation as the Electric Reliability Organization and Ordering Compliance Filing, 116 FERC ¶ 61,062, *order on reh'g*, 117 FERC ¶ 61,126 (2006).

<sup>138</sup> See *North American Electric Reliability Corp.*, 119 FERC ¶ 61,060, *order on reh'g*, 120 FERC ¶ 61,260 (2007).

<sup>139</sup> See *North American Electric Reliability Corporation*, 133 FERC ¶ 61,061 (2010), *order on reh'g*, 134 FERC ¶ 61,179, *order on compliance filing*, 137 FERC ¶ 61,028 (2011).

<sup>140</sup> See, e.g. *North American Electric Reliability Corporation*, Docket Nos. RR13-7-000 (Aug. 19, 2013) (TRE), RR13-5-000 (June 12, 2013) (MRO), RR12-12-000 (Oct. 24, 2012) (RF), RR12-4-000 (June 12, 2012) (FRCC), and RR12-2-000 (March 1, 2012) (WECC) (unpublished delegated letter orders).

Figure 1 — Map of Regional Entities within NERC



Each of the Regional Entities is briefly described below.

**Florida Reliability Coordinating Council, Inc. (FRCC)** was formed in 1996. Its sole purpose is to ensure and enhance the reliability and adequacy of the BPS in Florida. Since becoming a Regional Entity, FRCC has made significant changes in its governance and organizational structure. FRCC amended its bylaws to create two membership divisions — Regional Entity Division (statutory functions) and Member Services Division (non-statutory functions), added a new General Sector to its membership sectors, added new employees strictly dedicated to the compliance and standards functions, and made changes in its organizational reporting structure. All staff members are independent of registered entities, and the organization is governed by a balanced stakeholder board. FRCC has also implemented internal controls in its accounting procedures to ensure there is no cross subsidization of funds between statutory and non-statutory activities.

**Midwest Reliability Organization (MRO)** was formed from the former Mid-Continent Area Power Pool (MAPP) Regional council and a portion of Mid-America Interpool Network (MAIN) as a new corporation for the purpose of becoming a Regional Entity under the Energy Policy Act of 2005 and the Bilateral Principles. The region spans eight states and two Canadian provinces. MRO's bylaws provide for members from the following industry sectors: municipal utilities, cooperatives, investor-owned utilities, federal power marketing agency, Canadian Crown Corporations, and independent power producers. MRO's bylaws also allow for adjunct members that are not eligible to belong to an industry sector and have a material interest in reliability issues in the MRO region. Membership is at no cost. MRO is independent of all BPS owners, operators, and users, and has no shared employees with any third party. MRO performs only responsibilities delegated from the ERO and similar functions in the Canadian provinces of Saskatchewan and Manitoba. MRO's board of directors (MRO Board) represents a hybrid

governance structure with both independent and stakeholder directors. The stakeholder directors represent the industry sectors noted above; two independent directors are elected by the entire membership. MRO's hybrid board is structured so that no two sectors can control a vote. The MRO Board has adopted procedures to ensure that it carries out its responsibilities in a non-discriminatory manner, free of conflicts.

**Northeast Power Coordinating Council, Inc. (NPCC)** was established as the voluntary, international regional reliability organization for Northeastern North America in January 1966. NPCC is a not-for-profit corporation with a Regional Entity division that performs the statutory functions delegated by NERC and a Criteria Services division that establishes, monitors, and enforces compliance with regionally-specific criteria. The NPCC geographic region includes the State of New York and the six New England states as well as the Canadian provinces of Ontario, Québec and the Maritime provinces of New Brunswick and Nova Scotia. Overall, NPCC covers an area of nearly 1.2 million square miles, populated by more than 55 million people. In total, from a NEL perspective, NPCC is approximately 45% U.S. and 55% Canadian. With regard to Canada, approximately 70% of Canadian NEL is within the NPCC region. NPCC's board of directors consists of seven stakeholder voting sectors that each consist of a maximum of two directors per sector, an independent sector consisting of two independent directors, an independent board chair with voting rights to preclude board deadlocks, and the President and CEO. Within NPCC, no two sectors can control and no one sector can block action.

**ReliabilityFirst Corporation (RF)** was formed from parts of the former East Central Area Reliability Council (ECAR), MAIN, and the Mid-Atlantic Area Council (MAAC) Regional reliability councils on January 1, 2006. The organization was specifically designed to address changes required by the Energy Policy Act of 2005 and to support the ERO in a self-regulating model by which the industry participants establish their own standards and independent Regional Entities determine compliance to those standards. The organization was modified from top to bottom compared to the legacy reliability councils it replaced, and exists solely to serve as a FERC-approved Regional Entity performing only those functions delegated to it by NERC as the ERO. All ReliabilityFirst staff are independent of registered entities, the organization is governed by a hybrid board of directors, which includes both independent and balanced industry sector directors, and the organization is funded (through the ERO) by all load-serving entities in the footprint as opposed to members (membership is free.)

**SERC Reliability Corporation (SERC)** was incorporated in April 2005, replacing the Regional reliability council previously in existence since 1969. The new organization was redesigned to meet FPA §215 and FERC criteria for delegating statutory authorities and responsibilities. SERC's scope includes only statutory functions delegated by NERC. The organization does not perform any registered entity functions and has no business affiliations with any registered entities. SERC adopted new bylaws, approved by FERC in April 2007, that provide for a balanced stakeholder board with seven sectors. All SERC staff are independent of registered entities. The organization is funded through the ERO. Membership is free and open to all owners, operators, and users in the SERC region.

**Southwest Power Pool Regional Entity (SPP RE)** has made fundamental governance and organizational changes necessary to carry out its delegated responsibilities. In response to

the Energy Policy Act of 2005, Southwest Power Pool, Inc. (SPP), created a new department to perform all compliance activities over SPP registered entities. SPP RE began engaging NERC to lead SPP audits in 2007. In April 2007, FERC approved changes to the SPP bylaws creating three independent trustees to manage all SPP RE delegated activities. These trustees, initially elected in June 2007, are required to be independent of SPP members and customers, and registered entities in the region. In March 2009, SPP RE hired a general manager, reporting directly to the three independent trustees, to oversee the execution of the Regional Entity strategic direction and direct the day-to-day operations, including all compliance and enforcement activities. The general manager oversees only delegated statutory functions. All reporting relationships between SPP RE employees and SPP employees have been terminated.

**Texas Reliability Entity, Inc. (Texas RE or TRE)** is a non-profit Texas corporation that was formed to serve as the Regional Entity for the Electric Reliability Council of Texas, Inc. (ERCOT) region, and to preserve and enhance reliability in the region. Effective July 1, 2010, Texas RE took over the duties of the previous Regional Entity, the Texas Regional Entity, an independent division of ERCOT. Texas RE also performs non-statutory activities as the Reliability Monitor for the ERCOT region pursuant to its July 1, 2010, agreement with the Public Utility Commission of Texas (PUCT) and ERCOT (the ISO in the region). As Reliability Monitor, Texas RE monitors and reports to the PUCT regarding market participants' compliance with electric reliability-related ERCOT Protocols, Operating Guides, and Texas rules (ERCOT Regional Rules). The ERCOT region is the geographic area located within the state of Texas that operates under the jurisdiction of the PUCT and is not synchronously interconnected with any electric utilities operating outside of Texas. The ERCOT region includes approximately 85 percent of Texas load and 75 percent of the Texas land area.

**Western Electricity Coordinating Council (WECC)** is the successor to the Western Systems Coordinating Council (WSCC), which was formed in 1967. WECC, established in April 2002, continues to be responsible for promoting and coordinating electric system reliability among industry stakeholders as had been done by WSCC since its formation. On July 20, 2006, pursuant to FPA §215, NERC was certified as the ERO in the U.S. Included in this certification was a provision for the ERO to delegate authority for the creation and enforcement reliability to Regional Entities such as WECC. WECC is geographically the largest and most diverse of the eight Regional Entities that have Delegation Agreements with NERC. WECC's service territory extends from Canada to Mexico. It includes the provinces of Alberta and British Columbia, the northern portion of Baja California, Mexico, and all or portions of the 14 Western states between. Due to the size and diverse characteristics of the region, WECC and its members face unique challenges in coordinating the day-to-day interconnected system operation and the long-range planning needed to provide reliable electric service across nearly 1.8 million square miles. Membership in WECC is open to all entities with an interest in the operation of the BPS in the Western Interconnection. All meetings are open and anyone may participate in WECC's standards development process.

On June 27, 2013, the WECC board of directors (WECC Board) approved the bifurcation of the company into a Regional Entity (WECC) and a Reliability Coordination Company (Peak Reliability). This decision—which is the culmination of a year of work by various WECC board committees, staff, WECC members, and WECC stakeholders—signals a major landmark in the

history of the organization. Under this new structure the reliability coordinator and interchange authority functions in the Western Interconnection became a separate company from WECC. When established, Peak Reliability will provide core and other associated reliability coordination services within the Western Interconnection. As anticipated, the Commission approved the relevant documents by the end of December 2013; however, as there were outstanding compliance filings, the bifurcation was not finalized during the assessment period. Nevertheless, WECC and Peak Reliability began operating as separate entities in many respects by that time.

**Appendix B**  
**Regional Entity Responses to Specific Concerns Raised in the Commission's**  
**September 16, 2010 Order on the Three-Year ERO Performance Assessment**

In the order on the Electric Reliability Organization's Three-Year Performance Assessment (2010 Order), the Commission discussed several specific concerns regarding Regional Entity activities including: (i) compliance monitoring and enforcement issues concerning all Regional Entities; (ii) NERC's evaluation of each Regional Entity compliance program; (iii) SPP independence; and (iv) WECC's voting structure.<sup>141</sup> The first topic has been addressed throughout the 2014 JRESA. The other three region-specific topics are addressed below (italicized paragraphs come from the 2010 Order).

**NERC's Evaluation of Each Regional Entity**

222. *With respect to FRCC, NERC states that FRCC needs to improve its timeliness in: (1) reporting alleged violations to NERC; (2) issuing notices of alleged violation; (3) confirming violations and issuing notices of confirmed violation or entering into settlement agreements; and (4) obtaining Board of Trustees Compliance Committee approval of confirmed violations. NERC relates that FRCC recently has increased its compliance program staffing and, as of the Performance Assessment filing date, had the second lowest number of registered functions per full-time equivalent (FTE) committed to compliance of any Regional Entity.*

The FRCC improved its timeliness in all aspects of the compliance and enforcement processes during the assessment period. Notices of alleged violations, notices of confirmed violations and settlements were handled by the FRCC Compliance Enforcement staff. In January 2010, FRCC created a new position of manager of compliance enforcement, promoted a senior auditor to that position, and added two new enforcement positions, an enforcement specialist and a compliance legal assistant. The enforcement specialist position was filled in January 2010, and the legal assistant was filled in May 2010. Subsequently, the FRCC added two more enforcement positions, both CIP enforcement specialists. With the increased enforcement staff, the FRCC worked steadily to improve all of its processes. Additionally, FRCC developed internal processes and goals to support and facilitate the processing of alleged violations, as follows:

- Created enforcement processing checklists;
- Developed violation and mitigation plan responsibility flowcharts;
- Developed enforcement procedures;
- Created annual success plan goals for enforcement team members;
- Implemented departmental caseload goal;
- Developed internal enforcement processing metrics;
- Collaborated with other Regional Entities in a Consortium Users Group (CUG) to improve data base management tool;
- Automated database reporting tools which improved efficiency;

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<sup>141</sup> *North American Electric Reliability Corporation, et al.*, 132 FERC ¶ 61,217 (2010) at PP 198-244.

- Implemented a secure vault system for registered entity CIP data, which eliminated onsite reviews; and
- Compiled with NERC requests to complete processing of all violations through 2011 to NERC goals.

223. *NERC views MRO as an effective Regional Entity. NERC indicates that MRO should improve by providing accurate statements of fact for each violation and assess penalties according to the facts of each situation. NERC has concerns about several of MRO's compliance processes, which NERC has not yet reviewed or approved. NERC states that although these methods may be effective, they are not consistent with NERC practices and could lead to inconsistency with other regions.*

NERC's 2009 assessment alluded to two situations which occurred in that year. The first involved the issuance by FERC of a formal notice extending the time for consideration of a NOP (NP09-21-000), in which FERC requested additional information and clarification of certain facts. While MRO was the first of the Regional Entities to receive such a formal notice, similar notices were subsequently issued to all of the Regional Entities. In some instances, the Commission issued multiple requests to the same region. In only one instance, during the assessment period, did the Commission undertake its own review of a regional enforcement determination (WECC decision in Turlock, FERC Docket No. NP10-18-000), which was ultimately affirmed. MRO has not received any other formal requests from FERC for additional information and clarification.

Also in 2009, the NERC BOTCC remanded an enforcement action because MRO characterized a self-certification as a self-report in its determination. This was a simple administrative error, which MRO appreciates being found by NERC. Subsequently, MRO worked with NERC staff to develop a process whereby NERC staff works with Regional Entity staff to ensure agreement with or clarification of discrepancies prior to presenting enforcement actions to the BOTCC for approval. At the time, the MRO self-certification process was a manual process, which then required MRO compliance staff to enter the information into the data management system (CDMS). In this instance, MRO compliance staff entered the self-certification into the CDMS application as a self-report without indicating that the possible violation was actually identified through the self-certification process. This was the only instance where such an error occurred and it did not change the enforcement determination.

Finally, MRO believes that NERC's concerns about several of MRO's compliance processes, which NERC stated may be effective, were due to NERC's misunderstanding MRO's practices at the time. Shortly before the submission of the 2009 JRESA, MRO adopted its three-step process for activities within the CMEP: (i) Compliance Monitoring, (ii) Risk Assessment and Mitigation, and (iii) Enforcement, each performed by its own personnel within MRO. Compliance Monitoring staff conducts audits and spot checks of compliance with Reliability Standards by registered entities. Risk Assessment and Mitigation undertakes an independent review of the facts and circumstances surrounding each violation discovered by Compliance Monitoring, and determines whether sufficient evidence supports each possible violation. Risk Assessment and Mitigation works with the registered entity to develop an effective mitigation plan in the event that a violation is confirmed. Confirmed violations move to the Enforcement

department staff, who review recommendations made by Risk Assessment and Mitigation staff, verify all relevant facts, and evaluate appropriate enforcement actions. The factual review conducted by Risk Assessment and Mitigation and Enforcement staff is intended to ensure a consistent, accurate application of the NERC Reliability Standards. The three-step process also provides for segregation of duties, establishing independence among those making the findings, those assessing risk, and those determining and negotiating penalties and sanctions. MRO believes that this process provides a high level of assurance that determinations are accurate, fair and non-discriminatory.

224. *NERC views NPCC as effective in that it is processing and completing identified violations in a timely manner. However, NERC is concerned that NPCC's low level of alleged violations per registered reliability function may indicate that NPCC is not identifying all violations that are occurring. NERC points out that, among the Regional Entities, NPCC had the second highest number of FTEs committed to the compliance program and the highest ratio of registered functions per compliance FTE as of the Performance Assessment filing date. NERC states that it will continue to work with NPCC to improve its process for compliance violation investigations.*

NPCC continues to have a low level of alleged violations per registered reliability function; however, the ratio is in line with several of the other Regional Entities. NPCC credits in part its low level of alleged violations per registered reliability function to its thorough outreach and communication both on an individual basis and through workshops and other forums with the registered entities within its region. Such outreach assists the registered entities in their compliance activities and enhances reliability. In addition, by the end of the assessment period, while NPCC had the lowest number of full-time equivalents (FTEs) committed to the compliance program and the highest ratio of registered functions per compliance FTE, it supplemented its compliance program with independent contractors that perform many of the compliance duties. In this manner, NPCC has been able to build a very cost effective compliance program. NPCC welcomes ERO-wide collaboration on improvements to the process for compliance violation investigations and other process related issues, and is actively involved in RAI-related projects, including running pilots on analyzing registered entities' internal controls, the auditor check list and workbook, and the transition from CIP version 3 to version 5 Reliability Standards.

225. *NERC and its outside auditing firm independently audited RF's compliance program and found no material deficiencies. NERC observes that RF was the first Regional Entity to receive approval from the NERC Board of Trustees Compliance Committee for a notice of penalty that imposed a non-zero dollar penalty. NERC notes that RF does need to find ways to increase its efficiency with respect to conducting enforcement activities.*

Since 2009, ReliabilityFirst has taken several steps to increase its efficiency with respect to conducting enforcement activities.

First, ReliabilityFirst has internal violation processing goals that are tied to its overall corporate goals. Second, enforcement staff members hold regular meetings to discuss their plans to meet these violation processing goals. At these meetings, enforcement staff members provide

projected timeframes for the resolution of their matters, and are held accountable to those timeframes. Third, ReliabilityFirst has held formal and informal meetings to better focus enforcement staff on how to tailor their fact gathering efforts and resolving documents to only relevant information. As a result, enforcement staff became more efficient at resolving violations in a shorter amount of time. Fourth, ReliabilityFirst has focused its efforts on those violations that pose the greatest risk to reliability, and expedited its processing of lesser risk violations via the FFT process. To date, ReliabilityFirst has processed approximately 330 FFTs. (Even prior to the FFT process, ReliabilityFirst followed an internal “fast track” process, where it expedited the processing of minimal risk violations in a separate internal process from its other violations.)

ReliabilityFirst’s efforts to increase its efficiency in the enforcement process were successful, and to date, ReliabilityFirst has processed over 1,400 alleged violations through NERC and the Commission. The volume of compliance work at ReliabilityFirst has increased significantly since the 2009 self-assessment,<sup>142</sup> but ReliabilityFirst has nevertheless become more efficient at processing violations. As a result, ReliabilityFirst has not only kept up with its caseload, but has simultaneously refined its approach to better focus its efforts on high risk violations and ensuring that major reliability enhancements result from their corresponding enforcement actions. ReliabilityFirst staff’s focus on high risk violations is fundamental to regulatory effectiveness as it is critical to prevent staff at the Regional Entities from spending unnecessary amounts of time on minimal risk issues, so they can focus on the high risk issues that are critical to reliability.

226. *NERC views SERC as an effective Regional Entity. NERC audited SERC’s compliance program and did not find any material deficiencies, but urges SERC to improve on its timeliness in issuing notices of alleged violation. NERC notes that SERC continues to use industry volunteer subject matter experts in addition to its own staff on compliance audits.*

SERC made significant progress during the assessment period to address the concerns raised in 2009. For example, in order to improve violation processing cycle time, SERC staff developed a comprehensive plan that included increasing productivity, improving process and tools, and reviewing staffing levels. This plan was unanimously approved by the SERC Board Executive Committee.<sup>143</sup> Furthermore, SERC implemented process improvements in order to

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<sup>142</sup> In 2009, ReliabilityFirst received 169 new violations, and in 2010, this number jumped to 453 violations. In 2011, ReliabilityFirst received 514 violations, in 2012, ReliabilityFirst received 549 violations, and as of August 9, 2013, ReliabilityFirst received 520 violations.

<sup>143</sup> In 2011, SERC removed some collateral duties from Enforcement staff to ensure a focus on violation processing and reduced the ancillary meetings attended by Enforcement staff by 50%. In 2011, SERC developed a corporate metric focused on improving violation processing time, increasing the average number of determinations completed per FTE from 1.4 determinations per month to 4 determinations per month. In 2012, SERC developed a corporate metric focused on improving violation processing to continue its work towards achieving a 12-month violation processing cycle time for Planning and Operations issues. In 2013, SERC developed a corporate metric focused on improving CIP violation processing to continue its work towards achieving a 12-month violation processing cycle time while maintaining a 12-month or less violation processing cycle time for Planning and Operations issues. In addition, SERC provides an ongoing interface and training for Enforcement, legal, and audit staff to allow for discussion of lessons learned and feedback to improve violation assessments and risk statements.

streamline the enforcement process and ensure that SERC has the necessary information to conduct a thorough and timely assessment. These improvements included automation of notification and letters, increased use of requests for information, seminars and outreach, simplified review steps for violation processing, continued use of streamlined enforcement processing (FFT and SNOP), and expanded capabilities for access to CIP evidence and data.

In addition to the increased focus on productivity and process improvements, SERC also has worked to implement organizational efficiencies. To this end, SERC restructured Enforcement staff after a review of other regional structures. Enforcement now reports directly to the vice president and chief program officer, which removes a redundant reporting structure and serves to elevate Enforcement in the organization, given its priority at SERC. SERC has also reviewed its staffing levels and has increased the number of Enforcement staff focused on CIP issues based on the increase in CIP possible violations reported to the region.

As a final matter, with respect to SERC's use of volunteer industry subject matter experts, during the assessment period, the Commission reviewed SERC's use of volunteer industry subject matter experts (ISMEs) on compliance audits as part of its audit of SERC (FERC Docket No. FA12-6-000). FERC found that SERC's use of ISMEs was consistent with the NERC ROP, but did recommend that SERC: (i) revise its process, procedures, and controls regarding ISME participation in compliance activities and ensure SERC has an adequate and detailed set of policies governing ISMEs' participation in compliance activities; and (ii) ensure greater awareness of SERC's ongoing training and education programs and use the feedback from ISME participation in compliance activities to better focus these outreach programs. SERC has committed to implement the recommendations contained in the FERC audit report.

*227. As of the filing date of the Performance Assessment, NERC views SPP Regional Entity as less effective in administering its compliance program than some other Regional Entities. NERC commends SPP Regional Entity for its ability to accurately identify high risk violations, but is concerned about SPP Regional Entity's ability to process alleged violations to completion in a timely manner and its situational awareness capabilities. NERC notes that SPP Regional Entity has been unaware of events that occurred within its footprint, while NERC and the Commission were aware of those events. NERC states that among the Regional Entities, SPP Regional Entity stands eighth in FTEs committed to the compliance program and second in the number of registered functions per compliance FTE.*

SPP RE has significantly reduced the amount of time it takes to process alleged violations to completion. Prior to January 1, 2009, SPP RE's average time to process alleged violations to completion was 24 months, compared to 9.2 months (as of June 30, 2013). The reduction is due to a number of factors, including developing internal Enforcement procedures, streamlining internal Enforcement processing procedures, and increasing the Enforcement staff.<sup>144</sup> SPP RE staff members have also taken several steps to increase their awareness of system events within the region. These steps include SPP RE staff's registering to receive NERC Reliability Coordinator Information System information and *NERC Alerts*, and their receiving and reviewing the *SPP RTO Daily Operations Report*, the *NERC Situational Awareness Morning*

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<sup>144</sup> Since January 1, 2009, SPP RE has increased its Enforcement staff from one FTE to ten FTEs and one part-time employee, and has steadily decreased the number of registered functions per compliance FTE to 11.62 (2013 figure).

*Report*, and the NERC BPS System Awareness Daily Report. In addition, SPP RE participates on weekly situational awareness calls with NERC staff, and has increased its outreach through workshops, webinars, newsletters, and personal communication to encourage reporting of events.

228. NERC rates **TRE** as an effective Regional Entity, commending TRE for focusing on identifying higher risk violations and noting that TRE excels in processing alleged violations through completion. NERC does have questions about a contrast between TRE's high percentage of "failure to perform" violations and low number of violations TRE has recommended for a non-zero dollar penalty. NERC states that it will continue to explore these concerns with TRE.

In 2007 and 2008, Texas RE recommended zero-dollar penalties in most cases because the Reliability Standards were new and registered entities were still learning how to comply with them. In 2009, in an effort to deter noncompliance, Texas RE began recommending more non-zero dollar penalties for "failure to perform" violations. However, in 2010 Texas RE implemented the Administrative Citation NOP process and by 2012 Texas RE adopted the FFT program. Using the Administrative Citation process and FFT processes, Texas RE stopped recommending monetary penalties for issues involving "failure to perform" if the issues presented low risk to reliability and had been mitigated.

231. NERC states that **WECC** is "one of the less effective Regional Entities" to date, but notes that WECC made significant progress in the spring of 2009, particularly with respect to processing a backlog of violations. NERC points out that although, as of the Performance Assessment filing date, WECC had the highest level of FTEs committed to the compliance program among the Regional Entities, WECC had the fourth highest ratio of registered functions to compliance FTEs. NERC notes that, due to the violations processing backlog, WECC cancelled all compliance audits scheduled for the fourth quarter of 2008 without coordinating with NERC. According to NERC, WECC also took several other unilateral actions, including issuing compliance bulletins containing Reliability Standards interpretations and/or guidance. NERC indicates that it will continue to work with WECC to resolve these issues. NERC also suggests that WECC create stronger separation between its compliance encouragement efforts and its enforcement activities, examine its staffing levels and compliance processes and stay focused on processing violations to completion. (Footnote omitted.)

WECC has thoughtfully and thoroughly addressed each of the areas of concern identified in the Three-Year ERO Performance Assessment and the 2010 Order. First, WECC cleared all of its pre-2012 violations caseload by December 31, 2013. As reported to the NERC Board in September 2013, WECC has a caseload index of 8.3 months, ranking third among the Regional Entities.<sup>145</sup> Second, WECC completed all audits contemplated in its annual Implementation Plans. Specifically, during the assessment period, WECC conducted 598 audits and 62 spot checks. The number of audits increased from 90 in 2009 to 165 in 2013, an increase of 83

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<sup>145</sup> The caseload index refers to a NERC metric that computes the number of months that it takes to clear the violations that are either in the Regional Entity's inventory, NERC's inventory, or the ERO's inventory based upon the respective average monthly processing rate over the preceding 12-month period. This metric is used to evaluate the efficiency of processing violations over time.

percent. Third, WECC developed and maintains a highly qualified Compliance staff, which increased from 31 to 57 during the assessment period. To further improve its compliance capabilities, in 2013, WECC launched an audit tracking system to assure timely audit completion and document integrity. WECC's internal metric for providing final audit reports to registered entities is 60 days after the close of the audit, a goal which was met 97 percent of the time. Fourth, WECC enhanced, streamlined and documented all of its Enforcement processes, an effort aided by using dedicated subject matter experts and tools such as FFT and expedited settlement agreements. As a result, by the end of the assessment period, WECC was able to process violations from intake through filing with NERC in less than five months, on average. Fifth, WECC successfully implemented new IT solutions and systems, and provided extensive training to registered entities on the new systems. Sixth, WECC expanded and enhanced its compliance encouragement and outreach efforts while ensuring "adequate separation between compliance encouragement efforts and its enforcement activities." This was accomplished in part by personnel changes and strengthening the role of the director of stakeholder outreach. Finally, WECC worked collaboratively with the other Regional Entities and NERC to bring forward the Omnibus proposal; proposed Rules of Procedure changes to streamline TFE processing; developed new registration system tools; and actively participated in several ongoing NERC IT projects, lending expertise and practical experience.

### **SPP Independence**

In the 2010 Order, the Commission laid out its initial concerns about the possible conflicts of interest between SPP RE and SPP RTO, and emphasized the heavy burden on SPP RE to demonstrate a strong separation of functions between the two organizations.<sup>146</sup> As a consequence, the Commission had required NERC to provide an appropriate discussion of SPP RE's bylaws in its first performance assessment. In response to NERC's submission, the Commission generally found that SPP RE had achieved sufficient separation from SPP RTO, citing in particular SPP RE's efforts to ensure that its standards development process was not unduly influenced by the RTO.<sup>147</sup> While the Commission's analysis in the 2010 Order does not necessarily require a further response at this time, SPP RE would like to point out that the Commission's second audit of SPP RE, which was finalized in 2011, reinforced the adequacy of Regional Entity's separation from the RTO.<sup>148</sup> Among other things, the second audit report described how SPP RE's general manager is the primary contact between NERC and SPP RE, with responsibility for administering SPP RE's programs under the Delegation Agreement. The report also described how SPP RE is governed by three independent trustees who operate separately from the SPP RTO board of directors, and that SPP RE trustees have autonomy over decisions in fund allocation and approval of SPP RE's budget, as well as oversight of SPP RE decisions on regional Reliability Standards, compliance enforcement actions, and penalties. In addition, as the report set out, SPP RE's organizational structure makes it independent from the

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<sup>146</sup> See 132 FERC ¶ 61,217 (2010), at P 232.

<sup>147</sup> See *id.* PP 237-241.

<sup>148</sup> See generally *Audit of Regional Entity Operations at Southwest Power Pool (SPP) for Compliance with its Bylaws, Delegation Agreement, Membership Agreement, and its Independence as an Regional Entity*, Final Audit Report, Delegated Order (October 5, 2011).

RTO in its performance of CMEP functions while linking with shared resources to use their expertise when performing delegated functions outside of the CMEP. Finally, the report detailed how SPP RE has reduced its reliance on shared staff and increased the number of FTEs since January 1, 2009.<sup>149</sup>

### **WECC Voting Structure**

In the 2010 Order, the Commission took note of some initial concerns that NERC had regarding the effectiveness of WECC's stakeholder voting structure, but that those concerns had been largely allayed by changes to WECC's bylaws and its process for developing and approving regional Reliability Standards.<sup>150</sup> WECC continues to improve its regional Reliability Standards development process. For example, on March 1, 2012, the Commission approved WECC's revised RRS DP, which call for voting by eligible members of the WECC Ballot Body rather than by a lead Standing Committee of WECC. In addition, WECC has developed a web-based system for balloting, and make all the proceedings of the standards drafting teams available using WECC's website. Available information includes notification of meetings, team meeting agenda and minutes, draft and final documents and supporting documents. Finally, WECC strives for continuous improvement and is always open to feedback from the various committees, standards drafting teams, and stakeholders at large.

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<sup>149</sup> *See id.*, at pp. 5-7.

<sup>150</sup> *See* 132 FERC ¶ 61,217 (2010), at P 243.

## Appendix C Regional Entities' Satisfaction of Statutory and Regulatory Criteria

During the 2009 through 2014 assessment period, all eight Regional Entities continued to satisfy the three sets of criteria set out in FPA §215(e)(4), 16 U.S.C. §824o(e)(4), as reiterated in §39.8 of the Commission's regulations, 18 C.F.R. §39.8 (2013), to maintain the authority delegated to them by the ERO, as approved by the Commission, to propose and enforce mandatory Reliability Standards. The three sets of criteria are:

1. The Regional Entity is governed by an independent board, a balanced stakeholder board or a combination independent and balanced stakeholder board.
2. The Regional Entity meets the requirements otherwise applicable to the ERO in FPA §215(c)(1) and (2), 16 U.S.C. §824o(c)(1)(2), namely that it (a) has the ability to develop and enforce reliability standards that provide for an adequate level of reliability of the bulk-power system; and (b) has established rules that (i) assure its independence of the users and owners and operators of the bulk-power system, while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any ERO committee or subordinate organization structure, (ii) allocate equitably reasonable dues, fees, and other charges among end users for all activities, (iii) provide fair and impartial procedures for enforcement of reliability standards through the imposition of penalties, (iv) provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing reliability standards and otherwise exercising its duties, and (v) provide for taking appropriate steps to gain recognition in Canada and Mexico,
3. The Regional Entity operates under a delegation agreement that promotes effective and efficient administration of bulk-power system reliability.

Specifically, the eight Regional Entities continued to satisfy the statutory and regulatory criteria for their delegated authority as follows:

### **Florida Reliability Coordinating Council, Inc. (FRCC)**

1. **FRCC “is governed by an independent board, a balanced stakeholder board or a combination independent and balanced stakeholder board.”** The FRCC board of directors (FRCC Board) is a balanced stakeholder board. The FRCC Board has a minimum of sixteen (16) members, who are allocated among the region's six sectors, and the chief executive officer (CEO). The sector representation is as follows: (i) three directors from the Suppliers Sector; (ii) two directors from the Non-Investor Owned Utility Wholesale Sector; (iii) two directors from the Load Serving Entity Sector (one Municipal and one Cooperative); (iv) three directors from the Generating Load Serving Entity Sector; (v) three directors from the Investor Owned Utility Sector; and (vi) two directors from the General Sector. FRCC's CEO is an ex-officio non-voting director. Directors are elected by their sector and serve two-year terms.

2. **FRCC meets the requirements of Federal Power Act Section 215 (c)(1)(2), because:**

- a. **FRCC is able to develop and enforce reliability standards that provide for an adequate level of reliability of the bulk power system.** The FRCC has a RRSDP that is based on the set of common attributes that provide for an open, balanced, fair, transparent and inclusive process. During the assessment period, FRCC placed two standards development projects on hold awaiting the completion of NERC standards development projects, and terminated one project as NERC's continent-wide standard was determined to be sufficient for FRCC reliability needs. Finally, the FRCC Registered Ballot Body and FRCC Board approved one project, which was nevertheless held in abeyance while the adequacy of the NERC continent-wide standard was evaluated, and will be withdrawn if the NERC Reliability Standard is determined to be sufficient for FRCC's needs. FRCC prefers the development of continent-wide standards, but will follow its RRSDP should a need arise for a more stringent standard or a standard to cover an area that NERC standards do not.

Compliance monitoring and enforcement of Reliability Standards is carried out by FRCC compliance staff which grew during the assessment period. FRCC enforcement staff began reporting directly to the vice president and executive director of standards and compliance in 2012, while the monitoring staff continued to report to the director of compliance. FRCC implemented this separation to provide more independence in enforcement decisions.

FRCC took additional steps to enforce reliability standards and provide an adequate level of reliability for the BPS. For example, its Compliance staff developed approximately 30 detailed internal procedures for all aspects of the compliance process, which were regularly reviewed and updated. These procedures helped promote consistent and effective application of its internal procedures and ensured that it met the obligations in the NERC ROP. In addition, FRCC upgraded its compliance portal application in 2012, to provide needed enhancements to protect security of the application and data held within the application along with providing some desired improvements in the use of many of its components.

FRCC improved its enforcement caseload processing during the assessment period, and also experienced a reduction of new violations in the last two years of that period. FRCC attributes the reduction in new violations in part to increased understanding of the registered entities in what the requirements mean and what their compliance expectations are. In addition to this reduction, FRCC worked hard to streamline its enforcement activities to utilize the available processes and were able to reduce its caseload index to approximately 6.5.

b. **FRCC has established rules that:**

- i. **Assure its independence of the users and owners and operators of the bulk-power system, while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any ERO committee or subordinate organization structure.** During the assessment period, FRCC implemented an annual employee recital and disclosures, which

includes a copy of the *FRCC Conflict of Interest Policy* and a process where each employee signs a *Conflict of Interest Questionnaire*, a *Disclosure Statement of Stock Ownership of FRCC Member Companies* and a *Non-Disclosure Acknowledgement*. As previously described, the governance of the FRCC is performed by a balanced stakeholder board, which assures fair stakeholder representation while also practicing balanced decision making where no one sector can block or no two sectors can pass any decision.

- ii. **Allocate equitably reasonable dues, fees, and other charges among end users for all activities.** The funding for the FRCC Regional Entity division is allocated among the FRCC load serving entities (LSEs) through a formula which is based on NEL. Each entity reports, on an annual basis, the NEL for the previous year. After the FRCC reviews this information, it is provided to NERC as part of the business plan and budget development process. The FRCC develops an annual budget each year, which is based on common assumptions that have been developed collaboratively by NERC and the eight Regional Entities, and which provides for the resources to carry out all of its delegated functions. The budget and accompanying LSE assessments are approved by the FRCC Board, the NERC Board, and the Commission.
- iii. **Provide fair and impartial procedures for enforcement of reliability standards through the imposition of penalties.** The FRCC has adopted the NERC CMEP, Appendix 4C to the NERC ROP. This is the primary document that the FRCC uses to provide fair and impartial procedures for enforcement. With respect to the calculation of penalties, the FRCC consistently uses the penalty calculator tool provided by NERC in order to provide a consistent application of the penalty and sanctions guidelines. In addition, the FRCC Board and their alternates are required to sign a *Code of Conduct* that obligates each of them to act in the best interest of FRCC and refrain from involvement in any situation where there is an actual or potential conflict of interest. In addition, since the FRCC Board is a balanced stakeholder board, FRCC does not allow members of the board to participate directly in settlement discussions with FRCC on behalf of their registered entities to avoid any conflict of interest or undue influence situation.
- iv. **Provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing reliability standards and otherwise exercising its duties.** FRCC has a RRSDP that is based on the required set of common attributes that provide for an open, balanced, fair, transparent and inclusive process. The process has the following characteristics:
  - Due Process – Any entity that is directly and materially affected by the reliability of the FRCC BPS has a right to participate in this process.

- Openness – Participation is open to any entity that is directly and materially affected by the reliability of the FRCC BPS. Participation is not conditional upon membership in the FRCC. All FRCC RRSDP meetings will be open and noticed on the FRCC website.
- Balance – The FRCC RRSDP process shall have a balance of interests and shall not be dominated by any two interest categories and no single interest category shall be able to defeat a matter.

The FRCC also provides reasonable notice and opportunity for public comment in its compliance monitoring and enforcement activities as required by the CMEP and the NERC ROP.

- v. **Provide for taking appropriate steps to gain recognition in Canada and Mexico.** This criterion is not applicable to the FRCC region.
3. **FRCC operates under a delegation agreement that promotes effective and efficient administration of bulk-power system reliability.** On June 12, 2012, the Commission approved the amended and restated FRCC Delegation Agreement which incorporated benefits of NERC’s and FRCC’s mutual experience and lessons learned while operating under the predecessor agreement. The revised Delegation Agreement provides for more efficient and effective execution of responsibilities that promote the reliability of the BES. These responsibilities include: (i) development and proposal of Reliability Standards; (ii) enforcement of compliance with Reliability Standards; (iii) certification of BPS entities; (iv) registration of owners, operators, and users of the BPS; (v) reliability assessment and performance analysis; (vi) event analysis and reliability improvement; (vii) training and education; and (viii) situation awareness and infrastructure security.

#### **Midwest Reliability Organization (MRO)**

- (1) **MRO “is governed by an independent board, a balanced stakeholder board or a combination independent and balanced stakeholder board.”** During most of the assessment period, MRO was governed by a balanced stakeholder board. On June 25, 2012, the Commission approved MRO’s proposal to change from a balanced stakeholder board to a combination independent and balanced stakeholder board. MRO’s two independent board members were elected for terms beginning January 2013; they bring cyber and data security expertise to the MRO Board’s set of executive and technical skills and expertise.
- (2) **MRO meets the requirements of Section 215 (c)(1)(2) of the Federal Power Act, because:**
  - a. **MRO is able to develop and enforce reliability standards that provide for an adequate level of reliability of the bulk power system.** MRO supports the development of continent-wide standards to maintain the reliable operations of the BES as opposed to regional Reliability Standards, particularly in the Eastern Interconnection, and decided during the assessment period to forego the development of regional

standards. Nevertheless, MRO has a RRS DP manual, which is found in Exhibit C to its Delegation Agreement with NERC, and a stakeholder Standards Committee comprised of subject matter experts in the event there was a need for a regional Reliability Standard in the future.

MRO also has the requisite staff both in terms of number of people and expertise, and adequate processes and procedures, to enforce the operating and CIP Reliability Standards. Notably, during the assessment period, MRO split the CMEP function into three distinct steps with their own assigned personnel— (i) Compliance Monitoring, (ii) Risk Assessment and Mitigation, and (iii) Enforcement. Compliance monitoring staff conducts audits and spot checks of compliance with reliability standards by registered entities. Risk Assessment and Mitigation undertakes an independent review of the facts and circumstances that surround each violation discovered by Compliance Monitoring, and determines whether sufficient evidence supports each possible violation. Risk Assessment and Mitigation also works with the registered entity to develop an effective and comprehensive mitigation plan in the event that a violation is confirmed. Confirmed violations move to the Enforcement department staff, who review recommendations made by Risk Assessment and Mitigation staff, verify all relevant facts, and evaluate appropriate enforcement actions.

The factual review conducted by Risk Assessment and Mitigation and Enforcement staff is intended to ensure a consistent, accurate application of the NERC reliability standards. The three-step process also provides for segregation of duties, establishing independence among those making the findings, those assessing risk, and those determining and negotiating penalties and sanctions. As a result of this approach, registered entities in the MRO region accept responsibility in 90% of all violations and settlements are reserved only for the more complicated compliance matters (thus, expediting less serious violations and lowering administrative costs).

**b. MRO has established rules that:**

- i. Assure its independence of the users and owners and operators of the bulk-power system, while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any ERO committee or subordinate organization structure.** In particular, MRO assures the independence of the users and owners and operators of the BPS by establishing processes and procedures for the conduct of its work. For example, by having a three-step process to implement the CMEP, MRO assures that its internal work is subjected to review and validation. MRO also has specific policies that prevent stakeholder conflicts of interest and prevent stakeholders from participating in its CMEP work. In addition, all MRO members elect the two independent directors; the remaining directors are elected by his or her sector.
- ii. Allocate equitably reasonable dues, fees, and other charges among end users for all activities.** MRO's funding requirements are equitably allocated in a manner similar to the one used by the other Regional Entities. Each year,

MRO develops an annual business plan and budget that describes in detail the resources MRO needs to carry out its delegated functions. The annual business plan and budget is reviewed and approved by the MRO Board and then submitted to NERC and ultimately filed with the Commission for approval. Assessments are made to MRO's LSEs through a formula which is based on NEL. MRO does not charge additional fees to be a member or to participate in its training. The annual business plan and budget as well as annual audits by independent auditors and periodic audits by FERC help ensure that MRO's expenses and assessments to end users are reasonable.

- iii. **Provide fair and impartial procedures for enforcement of reliability standards through the imposition of penalties.** To ensure fair and impartial procedures, as described above, MRO has implemented a three-step approach to fulfill its delegated responsibilities under the CMEP. MRO Compliance Monitoring staff conducts compliance monitoring activities, including audits, self-certifications, and spot checks. Risk and Mitigation staff is responsible for scoping MRO's compliance monitoring work under RAI. Risk and Mitigation staff also works with the entity to develop a thorough, comprehensive, and effective mitigation plan, not only to resolve the concern but to prevent recurrence of the noncompliance. MRO Enforcement staff completes the process by reviewing any recommendations from MRO Risk Assessment and Mitigation staff, verifying that all relevant facts have been gathered, and evaluating the possible violation for the appropriate enforcement action.

There are many factors which may affect a penalty determination. MRO does not utilize the penalty calculator/SIV tool for most minimal risk concerns, as those violations are currently resolved through the FFT process and under RAI, they will be primarily resolved as compliance exceptions outside the enforcement process. The penalty calculator/SIV tool is used as a resource for violations that pose greater risk. As a result of the extensive risk assessment conducted by MRO Risk Assessment and Mitigation staff, Enforcement is able to make fair, accurate and reasonable enforcement decisions scaled on the risk posed by an individual violation – the greater the risk, the greater the penalty and scrutiny of review and approval.

In addition MRO has policies and procedures to avoid conflicts of interest in its CMEP work. Those policies and procedures provide:

- (1) No MRO director or member of MRO committees may participate in any way in compliance violation investigations, compliance audits, reports, sanction determinations, or other matters within the CMEP.
- (2) An MRO director or member of an MRO committee may engage in actions on behalf of his or her employer regarding a compliance monitoring and enforcement matter undertaken by MRO; however,

that director or member of an MRO committee must recuse himself or herself from any board or committee decisions, meetings, and actions related to that compliance monitoring and enforcement matter. Potential concerns about the participation of a MRO director or member of an MRO committee are brought to the attention of the president and CEO who will seek an appropriate resolution of the matter with the advice and counsel of the independent directors.

- iv. **Provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing reliability standards and otherwise exercising its duties.** MRO does not have any regional Reliability Standards and does not anticipate developing any regional Reliability Standards because of its strong support for continent wide, or at least interconnection wide, standards. Nevertheless, MRO has a RRSDP manual which has been approved by NERC and FERC. This RRSDP manual is based on the set of common attributes that provide for an open, balanced, fair, transparent and inclusive process, and includes specific provisions relating to the process for the opportunity to comment and be heard.
- v. **Provide for taking appropriate steps to gain recognition in Canada.** MRO operates under provincial Manitoba regulations which were adopted in 2012. Prior to the adoption of regulations, MRO had a memorandum of understanding with Manitoba Hydro.

During the assessment period, MRO also had a memorandum of understanding with Saskatchewan Power Corporation and NERC governing MRO's work in Saskatchewan, Canada.

- (3) **MRO operates under a delegation agreement that promotes effective and efficient administration of bulk-power system reliability.** MRO has adopted principles associated with the theory of a "Highly Reliable" organization in its approach to its delegated responsibilities, an approach that has positioned MRO and its registered entities to move to the risk based approach contemplated by RAI. These principles recognize risk, and emphasize self-monitoring with strong corrective action programs. The approach has fostered greater engagement with registered entities to solve technical problems and resulted in a corporate theme—clarity, assurance, and results (CAR). Clarity sets clear expectations for registered entities on the technical requirements of the standards. Assurance measures performance against these key requisites. Results can be seen in improved reliability. For example, MRO leveraged the technical expertise of subject matter experts on stakeholder-led committees to develop application guides for NERC standards that provide clear expectations of compliance. While these application guides are not authoritative, they provide much needed direction on compliance requirements. As a result, MRO has seen a measurable drop in the frequency and severity levels of violations in higher risk standards, beginning with the most violated Reliability Standard several years ago, PRC-005.

Additionally, during the assessment period, an MRO stakeholder-led committee developed an internal controls and procedures framework for use by registered entities to strengthen their internal compliance programs. These types of guidelines provide the necessary clarity to industry to assure that key reliability requirements are met. This has now become part of a pilot project under RAI.

Registered entities, too, need to provide assurance to MRO staff that they understand the requirements and have established sustainable management practices to detect, correct, report, and prevent problems. For example, MRO staff sampled self-reported violations from 2013. In 90% of these violations, the registered entity's assessment of risk matched MRO's staff assessment of risk. When registered entities and MRO staff view risk the same way and accept responsibility, they have greater day-to-day, sustainable assurance.

### **Northeast Power Coordinating Council, Inc. (NPCC)**

1. **NPCC “is governed by an independent board, a balanced stakeholder board or a combination independent and balanced stakeholder board.”** On October 17, 2011, the Commission approved NPCC's proposal to change its board to a hybrid (combination independent and balanced stakeholder) board. That change became effective on January 1, 2012. NPCC's board of directors consists of seven stakeholder voting sectors that each consist of a maximum of two directors per sector, an independent sector consisting of two independent directors, an independent board chair with voting rights to preclude board deadlocks, and the president and CEO. Within NPCC, no two sectors can control and no one sector can block action.
2. **NPCC meets the requirements of Section 215(c)(1)(2) of the Federal Power Act, because:**
  - a. **NPCC is able to develop and enforce reliability standards that provide for an adequate level of reliability of the bulk power system.** NPCC has developed a RRS DP that provides the design-basis approach to a consensus building process by which NPCC may develop regional Reliability Standards and regional variances to be proposed to the ERO for adoption, under delegated authority by the FERC and the Canadian provincial regulatory and/or governmental authorities. This procedure contains common attributes that provide for an adequate level of reliability to provide for an open, balanced, fair, transparent, and inclusive standards development process. NPCC's RRS DP sets forth the structure for developing reliability standards that provide for an adequate level of reliability.

Illustratively, during the assessment period, NPCC developed a disturbance monitoring regional Reliability Standard, PRC-002-NPCC-01, to ensure that adequate disturbance data is available to facilitate BES event analyses. The Reliability Standard addresses a specific recommendation from the *August 14, 2003 Blackout Final NERC Report - Conclusions and Recommendations* (July 13, 2004) regarding the use of time-synchronized data recorders.<sup>151</sup> Substantively, the Reliability Standard outlines the basic requirements for the type, location and capability of

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<sup>151</sup> See <http://www.nerc.com/pa/rrm/ea/Pages/Blackout-August-2003.aspx>.

equipment to be placed on the power system to enable the analysis of grid disturbances effectively and efficiently. The Reliability Standard is intended to fill the reliability gap related to disturbance monitoring and reporting by establishing enforceable disturbance monitoring and reporting requirements for the NPCC region.

Compliance and enforcement activities are carried out by the NPCC compliance staff and are independent of all users, owners and operators of the international BPS and from the hearing officer. Compliance and enforcement activities are governed in the U.S. by the Delegation Agreement between NERC and NPCC, delegating portions of NERC's authority as the ERO to NPCC. In addition, pursuant to an agreement between NPCC and WECC that was approved by the Commission, NPCC assumed responsibility for the CMEP with respect to the WECC RC function and the WECC IA function from January 1, 2012 through the end of the assessment period.

Examples of NPCC's efforts to monitor compliance with, and enforcement of, the reliability standards include its use of extensive pre-audit data collection and pre-audit conference calls with the registered entities. NPCC staff thoroughly reviews the first round of data submittals, and via questions, routinely collects a second round of data from the registered entity before the audit is performed. From these pre-audit activities, NPCC is able to conduct a more targeted audit. This results in an efficient and effective audit for both NPCC and the registered entity. This efficiency also permits the auditors to drill down into other areas and to make recommendations to the registered entity for enhanced reliability performance. In addition, during the assessment period, developed an enforcement dashboard, highlighting the regional caseload index and the status of mitigation plans associated with high risk violations among other compliance parameters. The enforcement dashboard is an informational tool to both management and to the industry.

NPCC amended its hearing procedures to provide for a hearing body comprised of an independent hearing officer and two independent directors. As a result of the amendments, the hearing body will always be comprised of independent members and will not have stakeholder members to assure enforcement of reliability standards provides for an adequate level of reliability.

**b. NPCC has established rules that:**

- i. Assure its independence of the users and owners and operators of the bulk-power system, while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any ERO committee or subordinate organization structure.** The rules and procedures contained in the Delegation Agreement, ROP, amended and restated NPCC bylaws, and other NPCC committee governance documents assure the independence of the users and owners and operators of the BPS while assuring fair stakeholder representation and balanced decision-making at the same time. Fair stakeholder representation and participation is assured by NPCC's committees, subcommittees, task forces and other groups as the board of directors may deem appropriate. Industry technical experts from

within the membership also provide valuable input to the board through various working groups and task forces as well as the committees.

- ii. **Allocate equitably reasonable dues, fees, and other charges among end users for all activities.** The allocation of dues, fees, and other charges by NPCC is governed by Article XIII of its bylaws. Funding of Regional Entity division activities are undertaken pursuant to FPA §215 in accordance with the funding provisions and procedures of that law and related FERC regulations and orders. The NPCC board of directors approves the annual Business plan and Budget in time for submission to the ERO and to FERC for approval. NPCC funds reliability activities in Canadian provinces pursuant to the mechanisms established by the applicable Canadian provincial regulatory authority. Budgets for the costs of reliability activities are allocated equitably based on the NEL and other relevant factors consistent with applicable law, the Delegation Agreement, and any agreements with Canadian provincial authorities. NPCC members are not assessed an annual membership fee. For NPCC's Criteria Services division, which establish and monitor regional-specific non-statutory criteria, full members that perform the balancing authority function are assessed and pay based upon a NEL. Special assessments for Criteria Services may be separately budgeted to full members that perform the balancing authority function or upon Full Members with full members' consent.
- iii. **Provide fair and impartial procedures for enforcement of reliability standards through the imposition of penalties.** The NERC ROP is the primary document that NPCC uses to provide fair and impartial procedures for enforcement. Additionally, NPCC has in place *Conflict of Interest Guidelines* that require each NPCC director, officer, and employee to avoid and refrain from involvement in situation where there is an actual conflict of interest, disclose any actual or potential conflicts of interest that may arise, recuse himself or herself from participation in any action involving an actual or potential conflict of interest, and refrain from voting on any actions where there is an actual or potential conflict of interest. In addition, NPCC's *Code of Conduct*, which applies to its officers, board of directors, employees, and all participants of NPCC committees, task forces, and working groups, requires each individual to recognize conflicts of interest that may arise and to take steps to disclose such conflicts of interest and to refrain from voting and/or influencing others with respect to such conflicts of interest. With respect to penalties, NPCC consistently uses the penalty calculator tool for consistency in penalty calculation determinations
- iv. **Provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing reliability standards and otherwise exercising its duties.** NPCC follows a RRS DP that provides that participation in the development of a regional Reliability Standard shall be open to all organizations that are directly and materially

affected by the NPCC BPS reliability, that there shall be no undue financial barriers to participation, that participation shall not be conditioned upon membership in NPCC or unreasonably restricted on the basis of technical qualifications or other such requirements. Meetings of drafting teams are open to the NPCC members and others.

Compliance and enforcement activities are carried out by the NPCC compliance staff and are independent of all users, owners and operators of the international BPS and from the hearing officer. Compliance and enforcement activities are governed in the U.S. by the Delegation Agreement between NERC and NPCC, delegating portions of NERC's authority as the ERO to NPCC. NPCC's hearing procedures provide for a hearing body comprised of an independent hearing officer and two independent directors.

- v. **Provide for taking appropriate steps to gain recognition in Canada and Mexico.** NPCC has MOUs in place with the Northeastern Canadian provinces (New Brunswick, Nova Scotia, Ontario, and Quebec). At the end of the assessment period, NPCC was in the process of updating and revising MOUs to respond to recent Canadian legislative and regulatory changes and initiatives.

- 3. **NPCC operates under a delegation agreement that promotes effective and efficient administration of bulk-power system reliability.** Effective January 1, 2012, NPCC executed an amended and restated Delegation Agreement, which delegated to NPCC certain activities pursuant to FPA §215. These delegated activities include certification of BPS Entities, registration of owners, operators, and users of the BPS as responsible for compliance with requirements of Reliability Standards, developing assessments of the reliability of the BPS, developing and maintaining, and collecting data in support of the development and maintenance of, reliability performance metrics and assessments of risks to the reliable operation of the BPS, conducting and coordinating event analysis, providing training and education to registered entities, and gathering and assessing situation awareness information. NERC has also delegated NPCC the authority to propose Reliability Standards, regional variances, or modifications thereof to NERC and to develop regional Reliability Standards. In summary, the Delegation Agreement promotes the effective and efficient administration of the BPS by clearly identifying the delegation of authority provided to NPCC.

#### **ReliabilityFirst Corporation (RF)**

- 1. **RF “is governed by an independent board, a balanced stakeholder board or a combination independent and balanced stakeholder board.”** RF is governed by a combination independent and balanced stakeholder board, which consists of 14 directors: (i) three are independent directors; (ii) three are at-large directors elected by all the industry sectors voting together as a single class; and (iii) eight are elected by their industry sectors (suppliers elect two directors, transmission companies elect two directors, RTOs elect one

director, small LSEs elect one director, medium LSEs elect one director, and large LSEs elect one director).

2. **RF met the requirements of Section 215 (c)(1) (2) of the Federal Power Act, because:**

- a. **RF is able to develop and enforce reliability standards that provide for an adequate level of reliability of the bulk power system.** Although RF no longer develops regional Reliability Standards in order to avoid duplication with the NERC continent-wide Reliability Standards, RF has adopted a RRSDP, and has otherwise proved its ability to develop regional Reliability Standards, as illustrated by its development of RF's BAL-502-RFC-02 (Planning Resource Adequacy Analysis, Assessment and Documentation), which was approved by the Commission on March 17, 2011.

RF has sufficient staff with the requisite expertise to conduct compliance audits, investigations, spot checks, and other compliance reviews, and to enforce Reliability Standards as demonstrated in part by its performing over 290 audits and over 200 spot checks during the assessment period, and ensuring the mitigation of over 1,400 alleged violations of those standards. These enforcement activities have resulted in tangible improvements to the reliability of the BPS. To enhance its risk-determination process in enforcement, RF developed a "Risk-Harm" process which, among other things, provided for technical experts to answer a series of questions about the risk and harm posed by each violation using a common scale to ascertain a quantified risk assessment for each violation. Additionally, for serious violations of the NERC Reliability Standards, RF works with registered entities to implement substantial "above and beyond" activities to enhance reliability on their system and on the BPS.

b. **RF has established rules that:**

- i. **Assure its independence of the users and owners and operators of the bulk-power system, while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any ERO committee or subordinate organization structure.** As described earlier, RF is governed by a combination independent and balanced stakeholder board. Pursuant to RF's bylaws, no two industry sectors can control any RF decision and no single industry sector can veto any RF decision. This hybrid board structure assures RF's independence, while still assuring fair stakeholder representation and balanced decision-making. To further assure RF's independence of the users, owners and operators of the BPS, RF has the following protections in place:

- First, RF adopted the NERC CMEP, Appendix 4C to the NERC ROP, which provides fair and impartial procedures for the monitoring and enforcement of Reliability Standards.
- Second, all RF employees and contractors sign and must adhere to non-disclosure and confidentiality agreements and conflict of

interest forms, and RF employees, contractors, and directors are governed by the RF *Conflict of Interest Policy*, the RF *Code of Business Conduct and Ethics*, and §1500 of the NERC ROP.

- Third, to ensure the independence of its staff and eliminate any potential conflicts of interest, RF does not allow stakeholder participation in its compliance or enforcement activities (i.e., a registered entity staff member may not be on an RF audit or compliance investigation team).
  - Fourth, RF does not allow its industry sector directors to participate in settlement discussions with RF on behalf of their registered entity.
- ii. **Allocate equitably reasonable dues, fees, and other charges among end users for all activities.** The funding for RF's activities is equitably allocated among its end users and recovered through a formula based on NEL. Each year, RF develops an annual business plan and budget, which describes the adequate resources needed for RF to carry out its delegated functions. The annual business plan and budget and the assessments to the end users must be approved by the Commission. The annual business plan and budget process, the Commission's approval of the assessments, and periodic financial audits by the Commission all ensure that RF's expenses and assessments to end users are reasonable.
- iii. **Provide fair and impartial procedures for enforcement of reliability standards through the imposition of penalties.** RF has adopted the NERC CMEP, Appendix 4C to the NERC ROP, which provides fair and impartial procedures for the enforcement of Reliability Standards within RFC's geographic boundaries. Additionally, RF maintains the RF *Conflict of Interest Policy* and the RF *Code of Business Conduct and Ethics* to ensure the integrity and independence of its compliance and enforcement staff. To assess fair, impartial, and consistent penalties, RF follows the *Sanction Guidelines*, as set out in ROP Appendix 4B.
- iv. **Provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing reliability standards and otherwise exercising its duties.** Although RF no longer develops regional Reliability Standards, RF's RRSDP provides for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in the development of Reliability Standards.

The RRSDP includes public notice and a comment period for any proposed standard, due consideration of those public comments, and a ballot of interested stakeholders. Participation in the standards development process is open to all entities that are directly and materially affected by reliability in the

RF region, and there are no undue financial barriers to participation. The standards development process is balanced: it may not be dominated by any two interest categories, and no single interest category shall be able to defeat a matter.

RF provides for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in its CMEP activities. A registered entity has the right to receive notice when it is placed on the NCR, and may appeal their registration to NERC and to the Commission.

The CMEP requires RF to provide notice to a registered entity when it determines that the registered entity has violated a Reliability Standard, and the registered entity has an opportunity to respond. If a registered entity wishes to contest an alleged violation of a Reliability Standard or a penalty, it may request and receive a hearing, and may appeal the hearing decision to NERC. A registered entity also has the right to request a hearing to contest a twice-rejected mitigation plan or a remedial action directive.

At the conclusion of an enforcement matter, NERC publicly files a NOP with the Commission, which promotes openness and the opportunity for public comment. The ERO balances the interest in openness with the concern for the security of critical infrastructure information, and as such, all sensitive critical infrastructure information is redacted from all public NOP filings.

- v. **Provide for taking appropriate steps to gain recognition in Canada and Mexico.** This criterion is not applicable to RF, as its geographic boundaries do not include any portion of Canada or Mexico.
3. **RF operates under a delegation agreement that promotes effective and efficient administration of bulk-power system reliability.** Effective January 1, 2011, RF executed an amended and restated regional Delegation Agreement with NERC, which delegated to RF certain activities pursuant to FPA §215. These delegated activities include: (i) certification of BPS entities; (ii) registration of owners, operators, and users of the BPS responsible for compliance with the requirements of Reliability Standards; (iii) reliability assessment and performance analysis; (iv) event analysis and reliability improvement; (v) training and education; (vi) situational awareness and infrastructure security; (vii) the development and proposal of Reliability Standards to NERC; (viii) monitoring of compliance with Reliability Standards; and (ix) enforcement of compliance with Reliability Standards. These delegated activities are necessary for the effective administration of BPS reliability. RF only performs those activities delegated to it under the Delegation Agreement. This ensures that RF is not distracted by any other activities, and in turn promotes the efficiency and effectiveness of the corporation's efforts to improve reliability.

## SERC Reliability Corporation (SERC)

1. **SERC “is governed by an independent board, a balanced stakeholder board or a combination independent and balanced stakeholder board.”** SERC is governed by a balanced stakeholder board. Stakeholders are classified by the SERC Board Executive Committee in one of seven sectors (investor-owned utility sector, federal/state sector, cooperative sector, municipal sector, marketer sector, merchant electricity generator sector, and ISO-RTO sector). SERC’s bylaws establish voting rules that ensure that no two sectors are able to approve a decision and that no one sector can veto a decision.
2. **SERC met the requirements of Section 215 (c)(1)(2) of the Federal Power Act, because:**
  - a. **SERC is able to develop and enforce reliability standards that provide for an adequate level of reliability of the bulk power system.**

Standards: The SERC RRS DP defines the process for the development, revision, reaffirmation, and withdrawal of regional Reliability Standards. The SERC RRS DP requires any proposed regional Reliability Standard to be more stringent than a continent-wide Reliability Standard, whether the regional Reliability Standard addresses matters that the continent-wide Reliability Standard does not or the regional Reliability Standard is necessitated by a physical difference in the BPS within the SERC region. SERC regional Reliability Standards are required to provide for as much uniformity as possible with continent-wide reliability standards. Proposed SERC regional reliability standards are subject to approval by NERC and FERC prior to becoming mandatory and enforceable within the SERC region.

SERC has one FERC-approved regional Reliability Standard, PRC-006-SERC-01, which addresses automatic underfrequency load shedding requirements. SERC currently is not developing any additional Regional Reliability Standards because the continent-wide NERC Reliability Standards are presently adequate for the SERC region. SERC also participates in the NERC Standards Committee, hosts biannual meetings of the SERC Standards Committee, and hosts specific commenting sessions for NERC Standards Projects as NERC requests comments, all of which involve the discussion of proposed changes to NERC Reliability Standards.

Compliance: SERC’s authority to monitor reliability standards is based on the authority granted in its Delegation Agreement with NERC. SERC has the expertise on staff to conduct compliance audits, investigations, spot checks and other compliance reviews for the Operating, Planning, and CIP Reliability Standards. SERC develops and posts an annual CMEP implementation plan that is complementary to the NERC CMEP, but also addresses reliability issues specific to the SERC region. SERC builds upon the NERC actively monitored list and incorporates additional Standards or Requirements that relate to the SERC region's BES. SERC utilizes off-site and on-site audits, spot checks, and other compliance monitoring methods to assess registered entity compliance with NERC Reliability Standards. Compliance prepares detailed reports on each audit and makes

recommendations to Enforcement about possible violations of NERC Reliability Standards.

Enforcement: Over the past five years, SERC has demonstrated its ability to enforce Reliability Standards by processing approximately 800 alleged violations originating from audits, spot checks, self-certifications, complaints, self-reports, and compliance investigations following the requirements of the CMEP and NERC ROP. Enforcement staff conducts a thorough assessment of all possible violations to determine whether there is a sufficient basis to allege a violation. If a sufficient basis exists, Enforcement staff determines the complete scope of the violation and the actual and potential risk to the reliability of the BPS. Enforcement staff reviews the registered entity's mitigating activities to ensure that the entity corrects the noncompliance and prevents recurrence. Enforcement staff also participates in settlement negotiations with the registered entity. If a registered entity challenges the findings of the violation and/or penalty, Enforcement staff would prosecute the case before the Board Compliance Committee, which acts as SERC's hearing body. SERC's processing of possible violations has improved because of increased resources and improved tools such as FFT and the SNOP filing mechanisms.

**b. SERC has established rules that:**

- i. **Assure its independence of the users and owners and operators of the bulk-power system, while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any ERO committee or subordinate organization structure.** SERC's bylaws allow each SERC member company to appoint a director to SERC's board. The SERC Board Executive Committee is made up of 12 sector representatives from among the directors. All directors, alternate directors, and board committee representatives are required to comply with SERC's standards of conduct policy that prohibits participation in decisions that could pose a conflict of interest.

SERC's bylaws establish voting rules that ensure that no two sectors are able to approve a decision and that no one sector can veto a decision. These voting rules assure SERC's independence of the users, owners, and operators of the BPS. In addition, SERC has adopted the NERC CMEP, Appendix 4C to the NERC ROP, which provides fair and impartial procedures for the monitoring and enforcement of Reliability Standards. In addition, SERC employees and contractors sign non-disclosure and confidentiality agreements and conflict of interest forms.

- ii. **Allocate equitably reasonable dues, fees, and other charges among end users for all activities.** SERC develops a budget annually that will accomplish all delegated duties. The budget is reviewed and approved by SERC's board before going to NERC and FERC. The budget is paid by all registered entities based on their proportionate share, based on the NEL. Pursuant to §202 of the NERC ROP, NEL is the net generation of an electric

system plus energy received from others less energy delivered to others through interchange. It includes system losses but excludes energy required for the storage of energy at energy storage facilities. Each entity reports the energy generated on an annual basis for the previous year. After verification by SERC, this data is provided to NERC. NERC produces an allocation of the budgets to each appropriate region.

- iii. **Provide fair and impartial procedures for enforcement of reliability standards through the imposition of penalties.** SERC has adopted without exception the NERC CMEP, Appendix 4C to the NERC ROP, and the associated *Sanction Guidelines*, ROP Appendix 4B, which provide fair and impartial procedures for the enforcement of Reliability Standards within the SERC region. SERC maintains a *Conflict of Interest Policy* to ensure the integrity and independence of its compliance and enforcement staff. To ensure consistency and remain fair, unbiased and balanced in assessing penalties, SERC follows the *Sanction Guidelines* of NERC, utilizes the NERC penalty tool to develop a proposed penalty, and compares the proposed penalty with similarly situated violations that have been filed with and approved by FERC. All proposed penalties are reviewed and approved by a technical peer group, legal counsel, the director of enforcement, and the SERC CEO or vice president.
- iv. **Provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing reliability standards and other exercising its duties.** The SERC RRS DP requires SERC to provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in development reliability standards.

SERC provides for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in its CMEP activities. A registered entity has the right to receive notice when it is placed on the NCR, and may appeal its registration to NERC and to the Commission.

The CMEP requires SERC to provide notice to a registered entity when it determines that the Registered Entity has violated a Reliability Standard, and the registered entity has an opportunity to respond. If a registered entity wishes to contest an alleged violation of a Reliability Standard or a penalty, it may request and receive a hearing, and may appeal the hearing decision to NERC. A registered entity also has the right to request a hearing to contest a twice-rejected mitigation plan or a remedial action directive.

At the conclusion of an enforcement matter, NERC publicly files a NOP with the Commission, which promotes openness and the opportunity for public comment. The ERO balances the interest in openness with the concern for the

security of critical infrastructure information, and as such, all sensitive critical infrastructure information is redacted from all public NOP filings.

- v. **Provide for taking appropriate steps to gain recognition in Canada and Mexico.** The SERC region does not extend into any part of Canada or Mexico. Thus SERC has no need to establish rules that provide for taking appropriate steps to gain recognition in Canada or Mexico.
3. **SERC operates under a delegation agreement that promotes effective and efficient administration of bulk-power system reliability.** On January 1, 2011, SERC executed an amended and restated regional Delegation Agreement with NERC, which delegated to SERC certain activities pursuant to FPA §215. FERC approved this Delegation Agreement on June 12, 2012. These delegated activities include: (i) certification of BPS entities; (ii) registration of owners, operators, and users of the BPS responsible for compliance with the requirements of Reliability Standards; (iii) reliability assessment and performance analysis; (iv) event analysis and reliability improvement; (v) training and education; (vi) situational awareness and infrastructure security; (vii) the development and proposal of Reliability Standards to NERC; (viii) monitoring of compliance with Reliability Standards; and (ix) enforcement of compliance with Reliability Standards. These delegated activities are necessary for the effective administration of BPS reliability. SERC only performs those activities delegated to it under the Delegation Agreement.

#### **Southwest Power Pool Regional Entity (SPP RE)**

1. **SPP RE “is governed by an independent board, a balanced stakeholder board or a combination independent and balanced stakeholder board.”** SPP RE is governed by three independent Regional Entity trustees. These trustees have autonomy over decisions in fund allocation and SPP RE budget approval, as well as oversight of SPP RE decisions on regional standards, compliance enforcement actions, and penalties. SPP RE's general manager reports directly to the SPP RE trustees. Only the trustees and certain SPP RE staff members have authority to make compliance and enforcement decisions.
2. **SPP RE met the requirements of Section 215 (c)(1)(2) of the Federal Power Act, because:**
  - a. **SPP RE is able to develop and enforce reliability standards that provide for an adequate level of reliability of the bulk power system.** SPP RE is not actively developing any reliability standards at this time; however, it does have a RRSDP if the need for such standards were to arise.<sup>152</sup> The RRSDP allows for a fair and open process for adoption, approval, revision, reaffirmation, and deletion of a regional Reliability Standard. Due process is the key to ensuring that the Reliability Standards are developed in an environment that is equitable, accessible and responsive to the requirements of all interested and affected parties. SPP RE supports development of continent-wide

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<sup>152</sup> *SPP RE Regional Reliability Standards Development Process Manual* (SPP RRSDP Manual), version 0 became effective October 2, 2007. A petition, in Docket No. RR14-1-000, to update the SPP RRSDP manual was filed by NERC with FERC on December 20, 2013. A 10-day comment period ended on January 10, 2014 with no comments being received.

Reliability Standards at NERC and any regional Reliability Standard developed by SPP RE will go beyond, add detail to, or cover matters not addressed in the NERC Reliability Standards.

Moreover, SPP RE is able to enforce reliability standards by the implementation of the CMEP. Illustratively, during the assessment period, SPP RE experienced a dramatic reduction in the average time to process violations to completion, a dramatic increase of self-reported violations, a dramatic reduction in average time for issuance of final on-site compliance audit reports, and a dramatic reduction in average time for issuance of a notice of possible violation (NPV). Specifically, prior to January 1, 2009, SPP RE's average time to process alleged violations to completion was 24 months, compared to 9.2 months during 2013. In 2009, only 3.1 % of incoming possible violations came from either self-reports or self-certifications, compared to 68.4% in 2013. In 2008, the average time to issue a final on-site compliance audit report to registered entities was 152 days, compared to 54 days during 2013. Prior to January 1, 2009, the average days for SPP RE to issue an NPV was 20.5 days, compared to 3.6 days in 2013.

**b. SPP RE has established rules that:**

- i. **Assure its independence of the users and owners and operators of the bulk-power system, while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any ERO committee or subordinate organization structure.** SPP is governed by an independent board of directors and has an extensive organizational group structure comprised of stakeholders that represent the membership's diversity. SPP's bylaws provide for fair stakeholder representation and balanced decision-making. SPP RE does not have a separate committee structure or bylaws; however, it is an independent unit of SPP. and reports to its Regional Entity Trustees (SPP RE Trustees). In addition, SPP RE's employees are subject to standards of conduct, its employees and contractors are screened for conflicts of interest, and its compliance monitoring teams must agree to maintain strictly the confidentiality of their auditing efforts.
- ii. **Allocate equitably reasonable dues, fees, and other charges among end users for all activities.** SPP RE follows the common assumptions developed by NERC and the Regional Entities to guide its budget projections. As such, SPP RE allocates projected statutory costs to end users via an annual assessment fee based on the SPP RE's registered entity's NEL. At the end of each budget cycle, a reserve balance is determined by taking the difference between the monies collected from end users through the assessment fee and the statutory costs incurred. This reserve balance is then used to offset the next year's funding requirement in addition to any penalty monies received during a twelve-month period. The annual assessment fee is adjusted at the beginning of each budget year (January 1).
- iii. **Provide fair and impartial procedures for enforcement of reliability standards through the imposition of penalties.** The following, generally

describes the steps the SPP RE enforcement attorneys follow for penalty determinations, which are outlined in SPP RE's internal processes and procedures:

Step 1: Utilizing the NERC penalty determination framework tool (Penalty Tool), the enforcement attorney determines a suggested penalty amount for the violation. Note: Although not procedurally codified, once the SPP RE enforcement attorney member has calculated a preliminary penalty via the Penalty Tool, the enforcement attorney compares the proposed penalty (when possible) with similarly situated previous violations that have been filed and subsequently approved by FERC. Furthermore, enforcement attorneys implement guidance from *Sanction Guidelines*, ROP Appendix 4B, the NERC CMEP, ROP Appendix 4C, and FERC orders as to how the enforcement attorneys should assess factors such as load loss and repeat/similar/affiliate violation history.

Step 2: The enforcement attorney submits its proposed penalty amount, the Penalty Tool, notice(s) of alleged violation and proposed penalty or sanction and/or settlement documents, and any other information relevant to the proposed penalty to the sanctions review team (SRT), which consists of the SPP RE general manager, the manager of enforcement, and the director of compliance.

Step 3: The SRT reviews the information presented by the enforcement attorney and collectively either approves the proposed penalty amount or determines the appropriate penalty amount for the violation or violations. **Note:** Penalties in excess of \$250,000 are required by procedure to receive additional approval of the SPP RE Trustees.

- iv. **Provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing reliability standards and otherwise exercising its duties.** The SPP RE RRSDP includes steps for a fair and open standards process that is open to all regional stakeholders. Any entity within the SPP RE or SPP RTO region has a right to participate by: (a) expressing a position and its basis; (b) having that position considered; (c) voting through a segment-weighted balanced process; and (d) having the right to appeal.
  - v. **Provide for taking appropriate steps to gain recognition in Canada and Mexico.** This criterion does not apply to SPP RE.
3. **SPP RE operates under a delegation agreement that promotes effective and efficient administration of bulk-power system reliability.** The Delegation Agreement between SPP RE and NERC grants SPP RE the authority to carry out certain statutory activities, including: (i) certification of BPS entities; (ii) registration of owners, operators, and user of the BPS as responsible for compliance with requirements of Reliability Standards; (iii) reliability assessment and performance analysis; (iv) event analysis and reliability improvement; (v)

training and education; and (vi) situational awareness and infrastructure security. This delegation of authority has promoted the effective and efficient administration of the BPS. Through its delegated authority from NERC, SPP RE has successfully implemented the NERC CMEP, and is working with NERC and the other Regional Entities to improve both the effectiveness and efficiency of the program. As evidence of the success of the early program, SPP RE's region successfully navigated nine consecutive quarters without a reportable transmission vegetation contact.

SPP RE has also, in combination with the other Regional Entities and NERC, greatly enhanced the functionality of the electronic tool (webCDMS), used by registered entities to report compliance issues. Enhancements to webCDMS have allowed both the Regional Entities and registered entities to realize efficiency gains through the automation of processes such as: (i) self-reports, (ii) self-certifications, (iii) submission of mitigation plans, (iv) exchange of mitigation information, (v) mis-operations reporting, (vi) analysis of prior violations, and (vii) violation processing in general. Furthermore, the SPP RE compliance audit teams utilize a risk-based assessment to determine the scope of the compliance audit, and adjust the scope of compliance audits based on violation history and the particular risk presented by certain registered functions. To further improve the effectiveness and efficiency of the program going forward, SPP RE is working with NERC and the other Regional Entities to shift the focus of the ERO Enterprise to those areas of the BPS that present the greatest risk to reliability. To that extent, SPP RE is an active participant in the RAI process.

In addition, since January 1, 2009, SPP RE has steadily increased its outreach efforts. SPP RE has held annual workshops since 2009 and attendance has increased each year. SPP RE staff has made incremental improvements to the workshops, such as inviting more guest speakers from outside the SPP RE footprint including FERC Commissioners, NERC Board members, and Department of Homeland Security staff, adding break-out sessions to give registered entities a smaller setting to ask questions and voice concerns, and refining both advance and on-site preparations to ensure the workshops run smoothly and on-time. In 2011, workshop attendees began providing feedback via evaluation forms following the workshops; feedback has generally been very favorable. In 2011, SPP RE began publishing monthly newsletters and implemented an e-news format that is easily readable on handheld devices. In 2012, SPP RE created a video training webpage and began filming and publically posting training videos in-house and at workshops. The feedback from the training videos has been generally positive and benefits not only registered entities in the SPP RE footprint, but registered entities across all Regional Entities.

### **Texas Reliability Entity, Inc. (TRE or Texas RE)**

1. **TRE “is governed by an independent board, a balanced stakeholder board or a combination independent and balanced stakeholder board.”** Texas RE currently has a combination independent and balanced stakeholder board. From 2007 to 2010, the Regional Entity for the ERCOT region was Texas Regional Entity, Inc., an independent division of the Electric Reliability Council of Texas, Inc. (ERCOT, the ISO for the region). During that time, Texas RE shared the same board of directors as ERCOT ISO.

To ensure that the Regional Entity would remain independent from all registered entities, including ERCOT, a new Texas non-profit corporation called Texas Reliability Entity, Inc. (Texas RE), was formed to take over the functions as Regional Entity effective July 1, 2010. As part of this process, Texas RE separated its board of directors from ERCOT ISO. Texas RE is now governed by a combination independent and balanced stakeholder board consisting of nine members: (i) four independent directors; (ii) two industry-affiliated directors; (iii) the Texas RE CEO; and (iv) two ex-officio non-voting directors (the Public Utility Commission of Texas Chairman or delegate, and the Public Counsel from the Office of Public Utility Counsel). The independent directors are elected by Texas RE membership to serve staggered three-year terms. The two-industry-affiliated directors may not be from the same market sector and may not concurrently serve on the ERCOT ISO board of directors.

2. **TRE met the requirements of Section 215 (c)(1) (2) of the Federal Power Act, because:**
  - a. **TRE is able to develop and enforce reliability standards that provide for an adequate level of reliability of the bulk power system.** Texas RE follows the requirements as defined by the NERC ROP, including the CMEP, and by the Delegation Agreement with NERC, including TRE's current RRSDP, and has used these documents to develop standards and to audit and enforce compliance with the standards.

Standards Development: Texas RE participates in the NERC Standards Committee and develops, comments and votes on Reliability Standards. Texas RE also hosts quarterly meetings of the Reliability Standards Committee (RSC) and twice-monthly meetings of the NERC Standards Review Subcommittee (NSRS). Changes and proposed changes to NERC Reliability Standards are discussed in these forums. Texas RE created one major regional Reliability Standard (BAL-001-TRE) and several minor regional Reliability Standards (CIP-001 regional variance and IRO-0006-TRE) designed to improve reliability. The major regional Reliability Standard, BAL-001-TRE, was designed to maintain Interconnection steady-state frequency within defined limits in the ERCOT region. It requires individual generation facilities to operate with properly configured governors in service to meet frequency response performance requirements.

Compliance: Between January 1, 2009 and December 31, 2013, Texas RE successfully completed more than 260 audits of registered entities for compliance with Reliability Standards. Texas RE uses the complete list of NERC-approved actively monitored Reliability Standards and Requirements as the minimum audit scope. Audit staff also investigates possible violations of the Reliability Standards arising from BPS disturbances, outages, self-reports, and complaints. Texas RE requires all Compliance employees, not just the auditors, to complete NERC scheduled basic training classes for auditors so that all employees have an understanding of the significance of the auditing process. In addition, Texas RE has developed a robust CIP compliance and audit program. All current CIP auditors have earned Department of Defense 8570 recognized certifications (e.g., CISSP, CEH, CISA, and Network+).

Enforcement: In addition to the auditing program, Texas RE has implemented a separate Enforcement program with a dedicated staff. The Enforcement group processes alleged violations originating from audits, spot checks, self-certifications, complaints, and self-reports. This includes managing settlement negotiations, supporting legal staff in contested case hearings, and reviewing and approving mitigation plans. Texas RE has been successful in streamlining the Enforcement process since 2009 by implementing a new webCDMS data management system and implementing new processes such as the FFT program.

- b. TRE has established rules that:**
- i. Assure its independence of the users and owners and operators of the bulk-power system, while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any ERO committee or subordinate organization structure.** Texas RE has adopted bylaws to assure its independence from industry while assuring fair stakeholder representation in selection of its directors and balanced decision-making in its committees. Its bylaws first provide that Texas RE membership is voluntary and open to any entity that is a user, owner or operator of the ERCOT region BPS that registers as a member with Texas RE and complies with Texas RE bylaws. In addition to the structure of the board described earlier, independent directors and members of their immediate families or households may not: (1) have current or recent status (within the past two years) as a director, officer or employee of an ERCOT region NERC registered entity or ERCOT region electric Market Participant, or (2) have direct business relationships, other than as customers, with any NERC registered entity or ERCOT region electric Market Participant. The industry-affiliated directors are selected annually by the Texas RE Member Representatives Committee and each must come from a different Texas RE membership sector: System Coordination and Planning, Transmission and Distribution, Cooperative, Municipal Utility, Generation, or Load-Serving and Marketing. The Texas RE bylaws prohibit an entity from belonging to any two membership sectors, and require the board of directors and any of its committees to operate using balanced decision-making.
  - ii. Allocate equitably reasonable dues, fees, and other charges among end users for all activities.** Texas RE bylaws and its Delegation Agreement with NERC provide that it will allocate equitably reasonable dues, fees, and other charges among end users for its statutory activities. Each year Texas RE produces a draft budget using templates provided by NERC, and posts the draft on its website for public comment. The budget includes the costs necessary to perform Texas RE's statutory functions under the Delegation Agreement with NERC and any expected income, such as membership fees. The budget is reviewed for reasonableness by the Texas RE Member Representatives Committee and approved by the Texas RE board of directors, NERC and FERC. Pursuant to Exhibit E to

its Delegation Agreement, assessments to fund Texas RE delegated functions and related activities are allocated to all load-serving entities in the region on the basis of NEL. Penalty monies received by Texas RE are applied as a general offset to its budget requirements for the subsequent fiscal year.

- iii. **Provide fair and impartial procedures for enforcement of reliability standards through the imposition of penalties.** Texas RE has adopted and implemented the CMEP in accordance with its Delegation Agreement with NERC. Texas RE is committed to five guiding principles: (1) independence; (2) ethics and integrity; (3) inclusiveness; (4) fairness and openness; and (5) organizational effectiveness and efficiency. Texas RE strives to be fair, unbiased and balanced in its enforcement actions and imposition of penalties, and its internal procedures incorporate these concepts. After a possible violation is found by the Compliance group, the violation is reviewed and verified by a member of the Enforcement group. Penalties are calculated using the NERC *Sanction Guidelines* and are reviewed in relation to similar penalties assessed in this and other regions. In addition, all penalties are reviewed by the director of enforcement prior to issuance.

Texas RE also has implemented policies and procedures to ensure its employees act with independence, ethics, integrity, fairness, and openness. All Texas RE employees and contractors must annually sign an ethics agreement which requires them to conduct Texas RE business with total objectivity and to avoid situations in which his or her personal or financial interests conflict or appear to conflict with the interests of Texas RE. A conflict of interest arises when: (1) the personal, financial, or other interest of a Texas RE employee is significantly affected or may reasonably appear to be affected by the employee's actions or decisions in the employee's capacity at Texas RE; or (2) the action of any employee is in any way detrimental to the best interests of Texas RE. Financial interest includes any ownership, investment, or compensation interest by the employee or a member of the employee's household, and specifically includes any direct or indirect remuneration, as well as gifts or favors which are not insubstantial. An employee must immediately inform the Texas RE legal department if a conflict of interest or even the appearance of a conflict of interest might exist, to allow Texas RE management to evaluate the situation. After full disclosure by the employee, Texas RE management may agree to conditions that appropriately limit any potential influence from a conflict of interest.

Texas RE also follows the CMEP requirement to provide biographies of all potential audit team members to registered entities prior to a Compliance engagement and provide opportunity for entities to object to use of any employee where a potential conflict of interest exists. At the

end of each audit, registered entities are also provided a questionnaire which allows them to directly report to NERC any concerns they have with fairness, openness, or objectivity with respect to how Texas RE conducted the audit. In addition, Texas RE has implemented a Compliance hotline to allow anyone to report (anonymously if desired) any noncompliance by a registered entity and any ethics complaints they have concerning Texas RE.

- iv. **Provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing reliability standards and otherwise exercising its duties.** As part of its Delegation Agreement, Texas RE has adopted and follows a RRSDP designed to provide for reasonable notice and opportunity for public comment, due process, and balancing of interests. The RRSDP requires that proposed Reliability Standards must be drafted by a standards drafting team and be posted publicly, and it requires a public comment period prior to any vote on the standard by Texas RE membership.

Texas RE also conducts its general operations in a manner that is transparent to the public. As required by its bylaws, it posts public notices of its board and committee meetings on its public website and posts meeting materials, including draft budgets, for public review prior to the meetings. The Texas RE public website includes training materials, useful compliance information, and the contact information for key Texas RE personnel.

Texas RE also provides due process to registered entities seeking to contest a violation, penalty or sanction. Texas RE adheres to the NERC ROP and CMEP, which require Regional Entities to provide registered entities reasonable notice of possible violations, the ability to contest a violation or penalty or sanction, and the ability to appeal such matters to the NERC Compliance Committee and FERC. In August 2013, FERC approved Texas RE's request to begin using the same hearing procedures as are used by the other seven Regional Entities.

- v. **Provide for taking appropriate steps to gain recognition in Canada and Mexico.** This criterion is not applicable to Texas RE.
3. **TRE operates under a delegation agreement that promotes effective and efficient administration of bulk-power system reliability.** Under its Delegation Agreement with NERC, Texas RE has promoted effective and efficient administration of the BES in the ERCOT region. Texas RE has worked with industry to create a major regional Reliability Standard (BAL-001-TRE) and several minor regional Reliability Standards (CIP-001 regional variance and IRO-006-TRE) designed to improve reliability in the ERCOT region. The major regional Reliability Standard requires individual generation facilities to operate with properly configured governors in service to meet frequency

response performance requirements. Texas RE also has successfully implemented the CMEP in the region, performing more than 260 audits since January 2009 and developing a robust CIP audit program. Since 2009, Texas RE has streamlined its Enforcement processing by implementing the webCDMS data management system in 2011 and implementing the FFT program to more quickly process lower risk violations. From 2010 to 2012, Texas RE also worked in cooperation with NERC, the other regions and industry to develop an events analysis program in which registered entities report their performance during system events and develop lessons learned to be shared with the industry. Early in the program, when Texas faced rotating outages during the 2011 Southwest Cold Weather Event, Texas RE used the framework the events analysis program provided to quickly collect and analyze information from the event and to disseminate it to FERC, NERC, and the industry.

### Western Electricity Coordinating Council (WECC)

1. **WECC “is governed by an independent board, a balanced stakeholder board or a combination independent and balanced stakeholder board.”** Since its creation, WECC has been governed by a hybrid board of directors including both non-affiliated directors and a balanced group of stakeholder directors as envisioned by the FPA §215(e)(4), 16 U.S.C. §824o(e)(4). However, on June 27, 2013, the WECC Board approved the bifurcation of the company into a Regional Entity (WECC) and a Reliability Coordination Company, Peak Reliability. This decision—the culmination of a year of work by various WECC board committees, staff, WECC members, and WECC stakeholders—signals a major landmark in the history of the organization. Under this new structure the RC and IA functions in the Western Interconnection will become a separate company from WECC. When established, Peak Reliability will provide core and other associated reliability coordination services within the Western Interconnection. As anticipated, the Commission approved the relevant documents by the end of December 2013;<sup>153</sup> however, as there were outstanding compliance filings, the bifurcation was not finalized during the assessment period.<sup>154</sup> Nevertheless, WECC and Peak Reliability began operating as separate entities in many respects by that time.
2. **WECC met the requirements of Section 215 (c)(1) (2) of the Federal Power Act, because:**
  - a. **WECC is able to develop and enforce reliability standards that provide for an adequate level of reliability of the bulk power system.** WECC’s authority to enforce Reliability Standards is based on the authority granted in its Delegation Agreement with NERC. FERC’s approval of the Delegation Agreement conferred authority to WECC to manage and enforce compliance with FERC-approved Reliability Standards and to apply penalties up to the extent of FERC’s civil penalty

<sup>153</sup> See *Western Electricity Coordinating Council*, Order on Petition for Declaratory Order, 143 FERC ¶ 61,239, order on reh’g, 145 FERC ¶ 61,202 (2013), appeal pending sub nom. *Edison Electric Institute v. FERC*, No. 14-1012 (D.C. Cir. Jan. 27, 2014).

<sup>154</sup> The Commission accepted the compliance filings on February 12, 2014. See *North American Electric Reliability Corporation; Western Electricity Coordinating Council*, 146 FERC ¶ 61,092 (2014), order on reh’g, 147 FERC ¶ 61,063 (2014), appeal pending sub nom. *Edison Electric Institute v. FERC*, No. 14-1071 (D.C. Cir. May 9, 2014).

authority. Additionally, WECC develops Regional Criteria and practices to improve the functioning and efficiency of the Western Interconnection. This combination provides a forum for addressing system-wide issues and an oversight role to promote reliable operation of the Western Interconnection.

WECC also demonstrated its ability to enforce reliability standards during the assessment period, by successfully clearing its backlog of Enforcement work; completing all audits contemplated in its annual Implementation Plans; developing and maintained highly qualified Compliance staff; enhancing, streamlining and documenting all the Enforcement processes; successfully implementing new IT solutions and systems; and expanding and enhancing its compliance encouragement and outreach efforts. Furthermore, WECC worked collaboratively with the other Regional Entities and NERC to bring forward the Omnibus proposal; proposed NERC ROP changes to streamline TFE processing; developed new registration system tools; and, actively participated in several ongoing NERC IT projects, lending expertise and practical experience.

**b. WECC has established rules that:**

- i. Assure its independence of the users and owners and operators of the bulk-power system, while assuring fair stakeholder representation in the selection of its directors and balanced decision-making in any ERO committee or subordinate organization structure.** WECC currently has a hybrid board comprised of member class directors and non-affiliated (independent) directors, who are subject to standards of conduct set out in WECC's bylaws. This ensures that member/stakeholder views are well-represented and that board decisions are ultimately made fairly and in the best interests of WECC as a whole. Effective January 1, 2014, WECC transitioned to an all independent director board. Accordingly, directors are directly elected by the WECC membership and members are represented on a newly created Member Advisory Committee that has direct access to the WECC Board to provide advice and recommendations regarding WECC policy and proposed board decisions. In addition, WECC staff members, and representatives from WECC member entities, routinely participate in ERO and ERO Enterprise committees and work groups.
  
- ii. Allocate equitably reasonable dues, fees, and other charges among end users for all activities.** The allocation of dues, fees and other charges is governed by §12.1 of the WECC bylaws, Funding of Reliability Activities. WECC funds all activities undertaken pursuant to FPA §215 in accordance with the funding provisions and procedures of that law and related FERC regulations and orders. The WECC Board approves the annual business plan and budget in time for submission to the ERO and to FERC for approval. WECC funds reliability activities undertaken pursuant to any agreements with appropriate Canadian or Mexican authorities in accordance with the provisions of those agreements. In adopting budgets for the costs of reliability activities, the WECC Board seeks an equitable allocation based upon the NEL

and other relevant factors consistent with applicable law, the Delegation Agreement and any international reliability agreements. To the extent that WECC elects to fund any activities not eligible for funding pursuant to §§12.1.1 and 12.1.2, it does so through the use of service fees, charges or dues applicable to the persons or entities that voluntarily participate in such activities.

- iii. **Provide fair and impartial procedures for enforcement of reliability standards through the imposition of penalties.** WECC's Delegation Agreement with NERC is based on the NERC *pro forma* Delegation Agreement and has been reviewed and approved by FERC. As required, WECC developed an annual CMEP Implementation Plan, which identifies the NERC Reliability Standards on the actively monitored list as well as the compliance monitoring methods that will be used to enforce those standards. The plan was submitted to NERC for approval. Additionally, WECC has developed and documented all formal processes and procedures relating to enforcement activities, including penalties. In this regard, WECC uses the NERC *Sanction Guidelines* as a framework for assessing fair and reasonable penalties, and considers all facts associated with the registered entity and the alleged violation. Individuals responsible for assessing, recommending, or negotiating penalties are not otherwise involved in compliance monitoring or discovery of violations. In other words, WECC specifically segregates the duties associated with violation discovery or review and violation disposition and penalty assessment. Furthermore, WECC has a layered review approach to penalties, including non-monetary ones. Specifically, the manager of enforcement policy reviews all penalties and communicates with the director of enforcement, who then reviews and, as appropriate, approves them. WECC management reviews these processes and procedures bi-annually. Finally, WECC's enforcement staff receives regular training on all aspects of their duties to ensure consistency of application. This training is delivered in weekly staff meetings as well as at formal training sessions held at least annually.
- iv. **Provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing reliability standards and otherwise exercising its duties.** WECC uses the FERC-approved WECC RRS DP to develop regional Reliability Standards along with regional criteria and regional business practices. These procedures assure that the documents will be developed in a fair and open manner with contribution and review by subject matter experts and that all affected parties will have the chance to comment and vote on the documents. Illustratively, proposed standards are drafted by a standards drafting team, publicly posted, and subject to a mandatory public comment period prior to any vote.

In regard to the exercise of its other duties, WECC posts on its website notices of, and agendas and materials for, board and committee meetings. WECC

also adheres to the NERC ROP and the CMEP processes, which provide due process protections to registered entities with respect to compliance obligations and enforcement of standards violations. Accordingly, registered entities are provided reasonable notice of possible violations, and the right to contest a violation, penalty or sanction, and to appeal the Regional Entity's decisions to the NERC Board of Trustees Compliance Committee, and the Commission.

- v. **Provide for taking appropriate steps to gain recognition in Canada and Mexico.** WECC has negotiated various agreements with the applicable governmental authorities for British Columbia, Canada, Alberta, Canada, and Baja, Mexico, the three international areas included in the Western Grid, as detailed below:

British Columbia:

Under the Administration Agreement (dated October 8, 2009) between the British Columbia Utilities Commission (BCUC) and the WECC, WECC acts as the administrator for the BCUC in carrying out certain activities relating to the Mandatory Reliability Standards program in British Columbia. Working under this agreement, WECC monitors compliance to the standards adopted in BC. WECC receives and reviews self-reports, self-certifications, and periodic data submittals; conducts audits; and reviews mitigation plans and other such activities. At the BCUC's request, WECC has set up a separate webCDMS portal, an electronic system to collect compliance data, dedicated to BCUC and its entities.

Alberta:

WECC acts as the Compliance Monitor for the Alberta Market Surveillance Administrator (Alberta MSA), under the Services Agreement (dated April 30, 2010) between the Alberta MSA and WECC, in carrying out certain activities related to Alberta Reliability Standards, specific to the Alberta Electric System Operator (AESO), in Alberta, Canada. WECC operates under the Services Agreement with the MSA, and as contemplated in the membership and operating agreement (MOA) (dated September 23, 2008) with the AESO.

Mexico:

Under the MOA (dated December 31, 2010) between Comisión Federal de Electricidad (CFE) and WECC, WECC acts as CFE's compliance monitor for certain activities in Baja California, Mexico, monitoring compliance with its mandatory Reliability Standards. The agreement between CFE and WECC requires that WECC not disclose any confidential data to anyone other than CFE. Any request from NERC or FERC to WECC for data relating to WECC activities in Mexico is directed to CFE. The CFE/WECC annual Implementation Plan, based on WECC's

recommendations and after consultation with the Area de Control Baja California (ACBC), CFE's compliance program administrator, includes a list of actively monitored standards, a description of the monitoring methods WECC uses for designated entities, and the compliance audit timeline. As with British Columbia, the Alberta MSA, and the AESO, WECC set up a separate webCDMS portal for use by CFE.

In summary, WECC does not have enforcement or registration authority for any of the international jurisdictions within the Western Interconnection. WECC provides monitoring, reviews mitigation plans and completed mitigation plans, and assessment recommendations with respect to alleged violations.

**3. WECC operates under a delegation agreement that promotes effective and efficient administration of bulk-power system reliability.** WECC assures the reliability and efficient administration of the Western Interconnection through a variety of activities authorized under its Delegation Agreement. To start with, during the assessment period, WECC continued to develop regional Reliability Standards, in large part due to its unique situation among the Regional Entities. Indeed, WECC has developed the most regional Reliability Standards because of a mandatory program it had in place prior to the approval of NERC as the ERO and the delegation to WECC. Under this program (called the Reliability Management System (RMS)), WECC is required to translate existing reliability criteria into regional mandatory standards. As a consequence, whereas all of the other Regional Entities have a total of seven regional Reliability Standards, WECC alone has a total of eight.<sup>155</sup>

WECC likewise promoted effective and efficient administration of the BPS in the Western Interconnection during the assessment period through its implementation of NERC's CMEP approved by the Commission. Illustratively, WECC successfully cleared its backlog of Enforcement work; completed all audits contemplated in its annual Implementation Plans; developed and maintained a highly qualified Compliance staff; enhanced, streamlined and documented all the Enforcement processes; successfully implemented new IT solutions and systems; and expanded and enhanced its compliance encouragement and outreach efforts. Furthermore, WECC worked collaboratively with the other Regional Entities and NERC to bring forward the Omnibus proposal; proposed ROP changes to streamline TFE processing; developed new registration system tools; and, actively participated in several ongoing NERC IT projects, lending expertise and practical experience.

As a separate matter with respect to the administration of the Western Interconnection, during the assessment period, WECC managed a comprehensive planning database, provided guidance on the analysis and modeling of the transmission system, and developed scenario

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<sup>155</sup> These eight regional Reliability Standards are: (i) FAC-501-WECC-1 (Transmission Maintenance); (ii) VAR-002-WECC-1 (Automatic Voltage Regulators); (iii) VAR-501-WECC-1 (Power System Stabilizer); (iv) PRC-004-WECC-1 (Protection System and Remedial Action Scheme Misoperation); (v) IRO-006-WECC-1 (Qualified Transfer Path Unscheduled Flow Relief); (vi) BAL-004-WECC-01 (Automatic Time Error Correction); (vii) TOP-007-WECC-1 (System Operating Limits); and (viii) BAL-002-WECC-2 (Contingence Reserve) (replacing BAL-STD-002-2).

studies of system performance to establish operating policies and limits, and regional transmission planning. In addition, WECC performed annual assessments of 10-year loads and resources in the Western Interconnection and created a 10-year coordinated plan of system growth. WECC also provided information to NERC for their annual summer and winter assessments of the reliability of the BPS. Beginning in 2012, WECC produced an annual *State of the Interconnection* report to provide WECC's members and stakeholders with an independent assessment of data collected annually in the Western Interconnection. The goal was to develop reasonable measurements that would identify reliability trends in the Interconnection.

**FEDERAL ENERGY REGULATORY COMMISSION  
DOCKET NO. RR14-\_\_\_\_\_**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

**ATTACHMENT 3**

**TO**

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

**NERC ASSESSMENT OF REGIONAL ENTITY  
DELEGATED FUNCTIONS**

**JULY 21, 2014**

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This **Attachment 3** is NERC's assessment of the Regional Entities' performance of their delegated functions during the five-year assessment period 2009 through 2013. Following are brief descriptions of the geographic footprints of the eight Regional Entities.

Florida Reliability Coordinating Council, Inc. (FRCC) is the Federal Energy Regulatory (FERC or Commission)-approved Regional Entity for the territory covering peninsular Florida in the Eastern Interconnection.

Midwest Reliability Organization (MRO) is the FERC-approved Regional Entity for the north central region of North America within the Eastern Interconnection. MRO's footprint spans the states of North Dakota, Minnesota, and Nebraska, the majority of the territory in the states of South Dakota, Iowa, and Wisconsin, portions of Michigan and Montana, and the Canadian provinces of Saskatchewan and Manitoba.

Northeast Power Coordinating Council, Inc. (NPCC) is the FERC-approved Regional Entity for the northeastern North American region in the Eastern Interconnection. NPCC's footprint includes the states of Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont, as well as the Canadian provinces of New Brunswick, Nova Scotia, Ontario, and Quebec.

ReliabilityFirst Corporation (ReliabilityFirst) is the FERC-approved Regional Entity for portions of the mid-Atlantic and east central areas of the United States within the Eastern Interconnection. ReliabilityFirst's footprint includes all or portions of the states of New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, Ohio, Michigan, Kentucky, Tennessee, Indiana, Illinois, Wisconsin, and the District of Columbia.

SERC Reliability Corporation (SERC) is the FERC-approved Regional Entity for the southeastern United States region within the Eastern Interconnection. SERC's footprint includes the states of Alabama, Georgia, Mississippi, Missouri, North Carolina, South Carolina, and Tennessee, and portions of the states of Arkansas, Florida, Illinois, Iowa, Kentucky, Louisiana, Oklahoma, Texas, and Virginia.

Southwest Power Pool Regional Entity (SPP RE) is the FERC-approved Regional Entity for the central southern United States within the Eastern Interconnection. SPP RE's footprint includes all or parts of the states of Arkansas, Kansas, Louisiana, Mississippi, Missouri, New Mexico, Oklahoma, and Texas. SPP RE is an independent and functionally separate division of Southwest Power Pool, Inc., one of nine independent system operators (ISOs)/RTOs in North America.

Texas Reliability Entity, Inc. (Texas RE) is the FERC-approved Regional Entity for the Electric Reliability Council of Texas (ERCOT) region in the Texas Interconnection. At the time of the three-year performance assessment, Texas Regional Entity, an independent division of ERCOT, performed compliance monitoring and enforcement activities for the ERCOT region. Texas RE was formed on January 1, 2010 to become the successor Regional Entity for the ERCOT region. Effective July 1, 2010, NERC delegated to Texas RE the authority and responsibility for

the continuation of all compliance monitoring and enforcement activities that it had previously delegated to Texas Regional Entity.

Western Electricity Coordinating Council (WECC) is the FERC-approved Regional Entity for the portions of the Western United States and Canada in the Western Interconnection. WECC's footprint extends from the provinces of Alberta and British Columbia in Canada to the northern portion of Baja California, Mexico. WECC's service territory includes all or portions of 14 states in the western United States. Geographically, WECC's territory is the largest of all the Regional Entities.

## **I. RELIABILITY STANDARDS DEVELOPMENT**

Section 215(d) of the Federal Power Act (FPA), 16 U.S.C. §824o(d), requires NERC to develop mandatory and enforceable Reliability Standards that are subject to Commission review and approval. A Regional Entity may also develop a Reliability Standard for approval by NERC and by the Commission, to be effective in that Regional Entity only. The FPA and Commission regulations provide that the ERO shall rebuttably presume that a proposal from a Regional Entity organized on an interconnection-wide basis for a Reliability Standard or modification to a Reliability Standard to be applicable on an interconnection-wide basis is just, reasonable, and not unduly discriminatory or preferential, and in the public interest.<sup>1</sup> This presumption is also embodied in the Regional Delegation Agreements (RDAs), which delegate to each Regional Entity authority to propose regional Reliability Standards to NERC for approval.

In Order No. 672, the Commission stated that:

As a general matter, we will accept the following two types of regional differences, provided they are otherwise just, reasonable, not unduly discriminatory or preferential and in the public interest, as required under the statute: (1) a regional difference that is more stringent than the continent-wide Reliability Standard, including a regional difference that addresses matters that the continent-wide Reliability Standard does not; and (2) a regional Reliability Standard that is necessitated by a physical difference in the Bulk-Power System.[<sup>2</sup>]

These parameters are embodied in the NERC Rules of Procedure (NERC ROP). Section 312.1 of the NERC ROP specifies that Regional Entities may propose regional Reliability Standards that set more stringent reliability requirements than the NERC Reliability Standard or cover matters not covered by an existing NERC Reliability Standard. Section 313.1 of the NERC ROP specifies that Regional Entities may develop Regional Criteria that are necessary to implement, augment, or comply with NERC Reliability Standards, but which are not Reliability Standards; or which address issues not within the scope of Reliability Standards.

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<sup>1</sup> FPA §215(d)(3), 16 U.S.C. §824o(d)(3), 18 C.F.R. §39.5(b).

<sup>2</sup> *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, at P 291, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

Regional Reliability Standards must be approved by NERC and are then submitted by NERC to the Commission; they become enforceable as NERC Reliability Standards under §215 of the FPA in the U.S. once they are approved by the Commission. Therefore, regional Reliability Standards must meet the requirements set out by the Commission for approval of such standards, including having violation risk factors (VRFs) and violation severity levels (VSLs) that meet the criteria the Commission has set out in its various orders.

To evaluate each Regional Entity's performance during the assessment period, NERC focused on two parameters. First, NERC reviewed whether each Regional Entity has in place a regional Reliability Standards Development Procedure (RSDP) that meets applicable requirements. This portion of the evaluation was straightforward because, as described in §I.A below, each Regional Entity is required to have in place, as part of its RDA, a NERC-approved and Commission-approved RSDP that satisfies a pre-established set of attributes. During the assessment period, some of the Regional Entities developed revisions to their RSDPs, which were approved by NERC and by the Commission. Second, NERC reviewed each Regional Entity's activity, if any, in developing proposed regional Reliability Standards during the assessment period. As described in §I.B below, with the exception of WECC, the Regional Entities have, in general, suspended regional Reliability Standards development activities in favor of devoting resources and stakeholder participation to the development of, and reliance on, NERC's continent-wide Reliability Standards. However, during the assessment period, NPCC, ReliabilityFirst, SERC and Texas RE, in addition to WECC, had regional Reliability Standards approved by the Commission. The Regional Entities will continue to develop regional Reliability Standards only to the extent that NERC Reliability Standards do not address a perceived gap in reliability specific to a particular region.

**A. Regional Entity Standards Development Processes**

Exhibit C to each RDA contains (i) the list of NERC's common attributes of an appropriate RSDP, and (ii) each Regional Entity's current RSDP. In reviewing and approving a Regional Entity's RSDP for inclusion in Exhibit C to the RDA, NERC reviews the RSDP against the common attributes to determine whether the RSDP meets the common attributes. During the assessment period, some of the Regional Entities' RSDPs were revised and approved by NERC and then by the Commission.<sup>3</sup>

The RSDPs include the process that each Regional Entity uses to develop regional Reliability Standards that are proposed to NERC for adoption, and, where applicable, regional variances if the Regional Entity is organized on an interconnection-wide basis. While the RSDPs are not identical, each one must, as noted, satisfy the common attributes that advance the development of regional Reliability Standards consistent with the objective of a uniform reliability program. Among other things, participation in the development of a regional Reliability Standard must be open to all organizations that are directly and materially affected by the bulk power system (BPS) located in the Regional Entity's footprint, with no constraints based on financial capability, technical expertise or membership in the organization. The RSDP must provide for an appropriate

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<sup>3</sup> NERC maintains on its website each Regional Entities' RSDP which lists the date of the current version. See <http://www.nerc.com/pa/Stand/Pages/RegionalStandardsDevelopment.aspx>.

balance of interests and the process must be structured so that it may not be dominated by any two interest categories and no single interest category can defeat a matter. All entities with a direct and material interest in the BPS in the Regional Entity may participate in the development of regional Reliability Standards by expressing a position and support for that position. Participating entities then will have that position considered and have the right to appeal the final outcome. The RSDP must also allow for reasonable notice and opportunity for public comment, and include language that states that all actions material to the development of any regional Reliability Standards be transparent.<sup>4</sup>

Based on its review and approval of the Regional Entities' RSDPs for inclusion in the RDAs and the subsequent approval by the Commission, NERC believes that during the assessment period, all of the Regional Entities met the requirements applicable to the ERO in the development of regional Reliability Standards.<sup>5</sup> Specifically, the Regional Entities: (i) demonstrated the ability to develop Reliability Standards that provide for an adequate level of reliability of the BPS; (ii) established rules that assure the independence of the users and owners and operators of the BPS, (iii) took action to ensure balanced decision-making in applicable committees or subordinate organization structures; and (iv) developed rules that provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing Reliability Standards. During the assessment period, each Regional Entity fulfilled the obligation to provide an open, fair, balanced, and inclusive process for the development of regional Reliability Standards, as demonstrated by the approval of those processes by NERC and the Commission.

**B. Review of Each Regional Entity's Standards Development Activities During the Assessment Period**

NERC focuses on the development of its continent-wide Reliability Standards as consistent with the goal of a reliable BPS. The Regional Entities have developed relatively few regional Reliability Standards to address unique situations with specific or more stringent requirements in a particular interconnection or geographic region which the NERC continent-wide standards may not address. Since the Commission issued Order No. 693 in 2007, approving the initial set of NERC continent-wide Operations and Planning Reliability Standards, the Commission has approved a total of only seven regional Reliability Standards submitted by Regional Entities other than WECC.

The Regional Entities are concentrating their standards development resources on working with NERC and stakeholders to develop clear, reasonable, and technically sound continent-wide Reliability Standards in a timely and efficient manner, and to ensure that regional concerns are addressed in the continent-wide Reliability Standards. This approach also avoids duplicating NERC's efforts at the regional level. Barring the existence of a perceived region-specific gap in reliability not addressed by NERC Reliability Standards, the Regional Entities will refrain from developing further regional Reliability Standards.

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<sup>4</sup> NERC maintains on its website a current overview of regional Reliability Standards under development, with detailed information on the status of the proceeding.

See <http://www.nerc.com/pa/Stand/Pages/RegionalReliabilityStandardsUnderDevelopment.aspx>.

<sup>5</sup> FPA §215(c)(1) and (2); 16 U.S.C. §824o(c)(1)(2).

To this end, the Regional Entities are actively encouraging awareness and participation by stakeholders in their respective areas in the NERC standards development process, by engaging in educational outreach efforts, and through participation in the NERC Standards Committee (NERC SC) and related subcommittees. The Regional Entities also have standards committees or similar groups at the regional level that analyze the draft ERO standards to determine their quality and effectiveness and evaluate whether the reliability objective is adequate and cost effective, and to provide input on these topics in the NERC standards development process.

The following subsections provide a review of the activities of each Regional Entity in the development of regional Reliability Standards during the assessment period.

**1. Florida Reliability Coordinating Council, Inc.**

The most recent version of the FRCC RSDP was approved by the Commission on June 12, 2012 and is included as Appendix C to the FRCC RDA. FRCC currently has no FERC-approved regional Reliability Standards or regional variances. During the assessment period, FRCC placed two regional Reliability Standards development projects on hold awaiting the completion of NERC standards development projects, and terminated one project because NERC's continent-wide Reliability Standard was determined to be sufficient for FRCC's reliability needs. Additionally, FRCC's registered ballot body and board of directors approved one project, which was held in abeyance while the adequacy of the NERC continent-wide Reliability Standard was evaluated, and will be withdrawn if it is determined to be sufficient for FRCC's needs. FRCC prefers the development of continent-wide Reliability Standards, but will follow its regional RSDP should a need arise for a more stringent standard or a standard to cover an area that NERC Reliability Standards do not.

**2. Midwest Reliability Organization**

MRO supports the development of continent-wide Reliability Standards to maintain the reliable operations of the BPS, as opposed to regional Reliability Standards, particularly in the Eastern Interconnection. Therefore, MRO decided during the assessment period to forego the development of regional Reliability Standards. Nevertheless, MRO has a regional RSDP in effect. The most recent revised version of the MRO RSDP was approved by the Commission on June 12, 2013<sup>6</sup> and is included as Appendix C to the MRO RDA. The principal purposes of these amendments to the MRO RSDP include: (i) to provide greater alignment of MRO's standards develop procedures with the NERC *Standard Processes Manual*; (ii) to incorporate a requirement for a review of the MRO RSDP every five years; and (iii) to provide various clarifications to the process development steps in the MRO RSDP. MRO also has a stakeholder-based Standards Committee comprised of subject matter experts (SMEs) in the event there is a need for a regional Reliability Standard in the future.

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<sup>6</sup>*North American Electric Reliability Corporation*, Docket Nos. RR13-5-000 (June 12, 2013) (unpublished letter order).

### 3. Northeast Power Coordinating Council, Inc.

NPCC has developed a revised RSDP that provides a results-based, consensus building approach by which NPCC may develop regional Reliability Standards and Regional Variances proposals to the ERO for adoption, under delegated authority by the Commission and the Canadian Provincial regulatory and/or governmental authorities.

During the assessment period, NPCC developed a disturbance monitoring regional Reliability Standard, PRC-002-NPCC-01, to ensure that adequate disturbance data are available to facilitate event analyses. This NPCC regional Reliability Standard addresses a specific recommendation from the August 14, 2003 Blackout final NERC report regarding the use of time-synchronized data recorders.<sup>7</sup> Substantively, this NPCC regional Reliability Standard outlines the basic requirements for the type, location and capability of equipment to be placed on the BPS to enable analysis of grid disturbances to be conducted effectively and efficiently. This regional Reliability Standard is intended to establish enforceable and uniform requirements for disturbance monitoring throughout the NPCC region. On October 20, 2011, the Commission issued an order approving regional Reliability Standard PRC-002-NPCC-01, the related VRFs and VSLs, implementation plan, and two associated regional definitions in the *Glossary of Terms Used in NERC Reliability Standards* (NERC Glossary).

NPCC also developed regional Reliability Standard PRC-006-NPCC-1, Automatic Underfrequency Load Shedding, during the assessment period. The purpose of PRC-006-NPCC-1 is to provide a regional Reliability Standard that ensures the development of an effective regional automatic underfrequency load shedding (UFLS) program in order to preserve the security and integrity of the BPS during declining system frequency events, in coordination with the NERC UFLS Reliability Standard characteristics. Further, this NPCC regional Reliability Standard creates a region-wide and fully coordinating single set of UFLS requirements that will serve as a last resort to preserve the BPS during a major system failure that may cause a system frequency collapse. On February 21, 2013, the Commission issued Order No. 775 approving regional Reliability Standard PRC-006-NPCC-1, the related VRFs and VSLs, implementation plan, and the effective dates proposed by NERC.<sup>8</sup>

### 4. ReliabilityFirst Corporation

ReliabilityFirst has an approved RSDP in place as Exhibit C to its RDA. ReliabilityFirst no longer develops regional Reliability Standards, in order to avoid duplication with the NERC continent-wide Reliability Standards. However, ReliabilityFirst has proved its ability to develop regional Reliability Standards, as shown by its development of regional Reliability Standard BAL-502-RFC-02, Planning Resource Adequacy Analysis, Assessment and Documentation, during the assessment period. The purpose of this standard and associated definitions is to establish common criteria based on the principle of “one day in ten years” loss of load expectation for the analysis,

<sup>7</sup> See *Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations* available at: <http://www.nerc.com/pa/rrm/ea/Pages/Blackout-August-2003.aspx>.

<sup>8</sup> *Regional Reliability Standard PRC-006-NPCC-1 – Automatic Underfrequency Load Shedding*, Order No. 775, 142 FERC ¶ 61,128 (2013).

assessment, and documentation of resource adequacy for load in the ReliabilityFirst footprint and to establish requirements for planning coordinators in the ReliabilityFirst region regarding resource adequacy assessment, a subject matter not addressed in NERC's continent-wide Reliability Standards. The Commission approved regional Reliability Standard BAL-502-RFC-02 and related filings in an order issued on March 17, 2011, directing that the regional Reliability Standard and associated VSLs, VRFs, and definitions become effective on the date of that order.<sup>9</sup>

## **5. SERC Reliability Corporation**

The SERC RSDP, included in Exhibit C to the SERC RDA, defines the process for the development, revision, reaffirmation, and withdrawal of SERC regional Reliability Standards. The SERC RSDP requires any proposed SERC regional Reliability Standard to be more stringent than a continent-wide Reliability Standard, whether the regional Reliability Standard addresses matters that the continent-wide Reliability Standard does not or the regional Reliability Standard is necessitated by a physical difference in the BPS within the SERC region. SERC regional Reliability Standards are required to provide for as much uniformity as possible with continent-wide Reliability Standards.

SERC has one Commission-approved regional Reliability Standard, PRC-006-SERC-01, Automatic Underfrequency Load Shedding Requirements. The purpose of this standard and the associated VSLs and VRFs is to establish consistent and coordinated requirements for the design, implementation, and analysis of automatic UFLS schemes among all applicable entities within the SERC region so that distribution providers and transmission owners may effectively mitigate the consequences of an underfrequency event. The standard effectively mitigates the consequences of an underfrequency event while accommodating differences in system transmission and distribution topology among SERC planning coordinators. The Commission approved regional Reliability Standard PRC-006-SERC-01 in Order No. 772 issued on December 20, 2012.<sup>10</sup>

SERC currently is not developing any additional regional Reliability Standards because the continent-wide NERC Reliability Standards are presently adequate for the SERC region.

## **6. Southwest Power Pool Regional Entity**

SPP RE has a RSDP in place and included in Exhibit C to its RDA. During the assessment period, SPP RE developed a substantially revised RSDP. A principal objective of the revisions was to confirm the SPP RE RSDP more closely to the NERC *Standard Processes Manual*. The revised SPP RE was approved by NERC and filed with the Commission for approval in December 2013, and was approved by the Commission in an order issued January 31, 2014.<sup>11</sup>

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<sup>9</sup> *Planning Resource Adequacy Assessment Reliability Standard, Final Rule*, Order No. 747, 134 FERC ¶ 61,212 (2011).

<sup>10</sup> *Regional Reliability Standard PRC-006-SERC-01—Automatic Underfrequency Load Shedding Requirements*, 141 FERC ¶ 61,243 (2012).

<sup>11</sup> *Revised Southwest Power Pool Regional Entity Standards Development Process Manual*, Docket No. RR14-1-000 (January 31, 2014) (unpublished letter order).

SPP RE is not actively developing any Reliability Standards at this time. SPP RE supports development of continent-wide Reliability Standards at NERC. Any regional Reliability Standard developed by SPP RE will go beyond, add detail to, or cover matters not addressed in the NERC Reliability Standards.

During the assessment period, SPP RE developed proposed regional Reliability Standard PRC-006-SPP-1, Automatic Underfrequency Load Shedding Requirements. On November 7, 2012, the NERC Board of Trustees (NERC Board) approved the proposed standard. The purpose of the proposed standard was to ensure the development and implementation of an effective automatic UFLS program for entities in the SPP RE region in order to preserve the security and integrity of the BPS during declining system frequency events. The regional Reliability Standard was designed to develop, coordinate and document requirements for automatic UFLS programs to arrest declining frequency and assist recovery of frequency following underfrequency events in the SPP RE region. On April 26, 2013, NERC submitted the proposed standard to the Commission for approval,<sup>12</sup> but on December 11, 2013, NERC submitted a Notice of Withdrawal of the petition because, due to the creation and pending approval of NERC Reliability Standard PRC-024-1, changes to PRC-006-SPP-01 could be needed to account for generator trip zones that may differ between proposed regional Reliability Standard PRC-006-SPP-01 and NERC Reliability Standard PRC-024-1.<sup>13</sup>

## 7. Texas Reliability Entity, Inc.

Texas RE has a RSDP in effect and included in Exhibit C to its RDA, and has used its RSDP to develop Texas RE regional Reliability Standards. Texas RE has developed one major regional Reliability Standard, BAL-001-TRE-1, Primary Frequency Response in the ERCOT Region, and two minor regional standards (CIP-001-2a regional variance and IRO-006-TRE-1). The major regional Reliability Standard, BAL-001-TRE, was designed to maintain Interconnection steady-state frequency within defined limits in the ERCOT region; its purpose is to provide a regional Reliability Standard for the ERCOT Interconnection related to the maintenance of steady-state frequency within defined limits by balancing real power demand and supply in real-time. This proposed standard was developed to establish and maintain adequate frequency response in the ERCOT region by ensuring prompt and sufficient frequency response from resources to stabilize frequency during changes in the system generation-demand balance. Because there are physical differences present in the ERCOT system, a more stringent means of assuring frequency response performance was needed than that provided by the continent-wide NERC Reliability Standard. The Commission unconditionally approved the proposed standard by letter order on January 16, 2014 as well as the staggered implementation date requested by NERC

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<sup>12</sup> Available at:

[http://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/FINAL\\_Petition%20PRC-006-SPP-01\\_complete.pdf](http://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/FINAL_Petition%20PRC-006-SPP-01_complete.pdf).

<sup>13</sup> *Notice of Withdrawal of the Joint Petition for Approval of Proposed Regional Reliability Standard PRC-006-SPP-01 (Underfrequency Load Shedding)*, Docket No. RD13-9-000 (December 11, 2013), available at: [http://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/Final\\_Notice\\_of\\_Withdrawal\\_of\\_PRC-006-SPP-01\\_20131211.pdf](http://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/Final_Notice_of_Withdrawal_of_PRC-006-SPP-01_20131211.pdf).

and Texas RE.<sup>14</sup> (The Commission concurrently approved NERC Reliability Standard BAL-003-1, which addresses frequency response on a continent-wide basis.)

## 8. Western Electricity Coordinating Council

WECC uses the Commission-approved WECC RSDP to develop regional Reliability Standards along with Regional Criteria and Regional Business Practices. WECC develops Regional Criteria and Regional Business Practices to improve the functioning and efficiency of the Western Interconnection. This combination provides a forum for addressing system-wide issues and enables effective oversight to promote reliable operation of the Western Interconnection.<sup>15</sup>

As of the end of the assessment period, WECC had the following eight Commission-approved WECC regional Reliability Standards in effect.

- **FAC-501-WECC-1 (Transmission Maintenance)**

FAC-501-WECC-1 requires, for specified transmission paths, a highly detailed maintenance and inspection plan for all transmission and substation equipment components. This ensures that certain transmission owners of transmission paths identified by a table titled “Major WECC Transfer Paths in the Bulk Electric System” (including associated facilities) have a transmission maintenance and inspection plan (TMIP); and perform and document maintenance and inspection activities in accordance with the TMIP.<sup>16</sup>

- **VAR-002-WECC-1 (Automatic Voltage Regulators)**

NERC continent-wide Reliability Standard VAR-002-1a requires that generator operators operate a generator connected to the interconnected transmission system in automatic voltage control mode unless the operator has notified the transmission operator. WECC regional Reliability Standard VAR-002-WECC-1 adds an additional responsibility for compliance in the WECC region, requiring all synchronous generators within the WECC region to have their voltage regulators in service at all times, with exceptions only for specified circumstances.<sup>17</sup>

- **VAR-501-WECC-1 (Power System Stabilizer)**

NERC continent-wide standard VAR-002-1a requires that a generator operator notify its transmission operator when it removes power system stabilizers (PSS) from service, but does not limit the amount of time for operating generators without PSS in service. WECC regional

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<sup>14</sup> *North American Electric Reliability Corporation*, Docket No. RD13-12-000 (January 16, 2014) (unpublished letter order).

<sup>15</sup> While WECC currently maintains Regional Business Practices, all of these fit within the description of Regional Criteria contained in the NERC ROP §313 (Other Regional Criteria, Guides, Procedures, Agreements, etc.). WECC is currently undertaking efforts to re-categorize its Regional Business Practices as Regional Criteria so that going forward WECC will no longer create or maintain items called Regional Business Practices.

<sup>16</sup> *Version One Regional Reliability Standards for Facilities Design, Connections, and Maintenance; Protection and Control; and Voltage and Reactive*, Order No. 751, 135 FERC ¶ 61,061 (2011).

<sup>17</sup> *Id.*

Reliability Standard VAR-501-WECC-1 is more stringent than the NERC Reliability Standard; it ensures that synchronous generators shall be kept in service in order to ensure that the generator provides the proper damping to maintain system stability when generation and transmission outages occur, and an exception is provided only for very specific conditions and for a cumulative time limit per quarter.<sup>18</sup>

- **PRC-004-WECC-1 (Protection System and Remedial Action Scheme Misoperation)**

WECC regional Reliability Standard PRC-004-WECC-1 sets a specific timeframe for the analysis and mitigation of all transmission and generation protection system and remedial action scheme misoperations on major WECC Transfer Paths. This standard augments requirements for certain entities found under NERC continent-wide Reliability Standards PRC-003-1 and PRC-004-1.<sup>19</sup>

- **IRO-006-WECC-2 (Qualified Transfer Path Unscheduled Flow Relief)**

The purpose of WECC regional Reliability Standard IRO-006-WECC-2 is to provide a regional standard that specifies the mitigation of transmission overloads due to unscheduled flow on qualified transfer paths. The standard modifies IRO-006-WECC-1 to correct references, wording, and format issues that would update the standard and bring it into compliance with NERC's drafting conventions for Reliability Standards. On December 20, 2013, NERC and WECC submitted a joint petition to the Commission seeking approval of IRO-006-WECC-2 along with an associated implementation plan and new or revised definitions in the NERC Glossary. On May 13, 2014, FERC issued a letter order approving IRO-006-WECC-2.<sup>20</sup>

- **BAL-004-WECC-02 (Automatic Time Error Correction)**

During the assessment period, WECC revised its regional Reliability Standard BAL-004-WECC-01, Automatic Time Error Correction, resulting in BAL-004-WECC-02. The revision was developed in response to a directive from the Commission in Order No. 723 to modify regional Reliability Standard BAL-004-WECC-01 to clarify certain terms used therein.<sup>21</sup> The purpose of the revised regional Reliability Standard is to maintain Interconnection frequency and to ensure that time error corrections and primary inadvertent interchange playback are effectively conducted in a manner that does not adversely affect the reliability of the Interconnection. On August 20, 2013, NERC and WECC submitted a joint petition to the Commission seeking approval of BAL-004-WECC-02 along with an associated implementation plan, new definitions in the NERC Glossary, and a regional variance to BAL-001-1.<sup>22</sup> The Commission unconditionally approved

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<sup>18</sup> *Id.*

<sup>19</sup> *Id.*

<sup>20</sup> *North American Electric Reliability Corporation*, Docket No. RD14-9-000 (May 13, 2014) (unpublished letter order).

<sup>21</sup> *Western Electricity Coordinating Council Regional Reliability Standard Regarding Automatic Time Error Correction*, Order No.723, 127 FERC ¶ 61,176 (2009).

<sup>22</sup> Available at:

<http://www.nerc.com/FilingsOrders/us/NERC%20Filings%20to%20FERC%20DL/Petition%20for%20BAL-004-WECC-02%20and%20BAL-001-1.pdf>.

the revised WECC regional Reliability Standard on October 16, 2013, and it became effective as of the date of the order.<sup>23</sup>

- **TOP-007-WECC-1 (System Operating Limits)**

The primary purpose of WECC regional Reliability Standard TOP-007-WECC-1 is to implement the directives in Order No. 693 approving NERC Reliability Standard TOP-007-0, and related concerns, by ensuring that actual flows and associated scheduled flows on major WECC transfer paths do not exceed system operating limits for more than 30 minutes. The Commission approved TOP-007-WECC-1 in an order issued April 21, 2014.<sup>24</sup> In approving TOP-007-WECC-1, the Commission ordered WECC to address the concern regarding the need for WECC to develop a means to provide consistency and transparency when making revisions to the list of major transmission paths instead of the WECC transfer path table and to modify the associated VRFs and VSLs to adequately reflect the size and scope of the actual violation. Any future modifications will be handled through the established standards process.

- **BAL-002-WECC-2 (Contingence Reserve)**

On March 25, 2009, NERC submitted to the Commission for approval WECC regional Reliability Standard BAL-002-WECC-1, Contingency Reserves, but in 2010, the Commission issued Order No. 740 wherein it remanded this standard based on concerns that WECC had not provided adequate technical support to demonstrate that the requirements of the proposed regional Reliability Standard are sufficient to ensure the reliable operation of the BPS within WECC.<sup>25</sup> The purpose of proposed regional Reliability Standard BAL-002-WECC-2 is to provide a regional Reliability Standard that specifies the quantity and types of contingency reserve required to ensure reliability under normal and abnormal conditions. In response to the Commission's directives in Order No. 740, WECC developed modifications to proposed regional Reliability Standard BAL-002-WECC-1. On April 12, 2013, NERC filed a petition with the Commission to approve regional Reliability Standard BAL-002-WECC-2, Contingency Reserve, and associated VRFs and VSLs. On November 21, 2013, the Commission issued Order No. 789 approving WECC regional Reliability Standard BAL-002-WECC-2, the associated VRFs, VSLs, implementation plan, the effective date proposed by NERC and WECC, and the retirement of BAL-STD-002-0 and two WECC regional definitions from the NERC Glossary. In that order, the Commission directed NERC to submit an informational filing after the first two years of implementation of the regional

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<sup>23</sup> *North American Electric Reliability Corporation*, Docket No. RR13-11-000 (October 16, 2013) (unpublished letter order).

<sup>24</sup> *Version One Regional Reliability Standard for Transmission Operations*, 135 FERC ¶ 61,062 (2011).

<sup>25</sup> *Version One Regional Reliability Standard for Resource and Demand Balancing*, Order No. 740, 133 FERC ¶ 61,063 (2010).

Reliability Standard that addresses the adequacy of contingency reserve in the Western Interconnection.<sup>26</sup>

## II. COMPLIANCE MONITORING AND ENFORCEMENT

The RDAs set forth the delegated authorities and responsibilities of the Regional Entities with respect to compliance monitoring and enforcement.<sup>27</sup> In Exhibit D to each RDA, each Regional Entity adopts the uniform NERC Compliance Monitoring and Enforcement Program (CMEP; Appendix 4C to the NERC ROP) in its entirety, adopts the uniform NERC CMEP with stated differences, or adopts a separate CMEP (however, the CMEP of a Regional Entity that has deviations from or is different than the uniform CMEP must comply with the requirements of the RDA and with §403 of the NERC ROP).

The RDA gives the Regional Entities delegated authorities and responsibilities to, among other things, maintain a program of proactive monitoring and enforcement of compliance with Reliability Standards in accordance with the CMEP and the annual NERC CMEP Implementation Plan (IP);<sup>28</sup> report to NERC any possible violations, alleged violations or confirmed violations of Reliability Standards and the dispositions thereof; maintain violations as nonpublic until the matter is filed with the Commission as a Notice of Penalty (NOP); conduct, in a confidential manner, compliance investigations of possible violations and alleged violations; and maintain a conflict of interest policy to ensure the integrity and independence of the Regional Entity's CMEP, including the integrity and independence of the persons or decision-making bodies making final determinations in compliance enforcement actions.

In addition, the RDAs give the Regional Entities responsibilities with respect to the registration of owners, operators and users of the BPS as entities responsible to comply with mandatory Reliability Standards; and with respect to the certification of certain registered entities to perform certain reliability functions.<sup>29</sup>

Section 4 of the RDAs obligates the Regional Entity to comply with, among other things the NERC ROP. Provisions of the ROP applicable to compliance monitoring and enforcement functions, include, in addition to the uniform CMEP, the following ROP sections and appendices: §400, Compliance Enforcement (§403 sets forth required attributes of Regional Entity CMEPs), §500, Organization Registration and Certification, Appendix 4B, *Sanction Guidelines*, Appendix 5A, *Organization Registration and Certification Manual*, Appendix 5B, *Statement of Compliance Registry Criteria*, and Appendix 5C, *Procedure for Requesting and Receiving an Exception from the Application of the NERC Definition of Bulk Electric System* (effective July 1, 2014).

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<sup>26</sup> *Regional Reliability Standard BAL-002-WECC-2 – Contingency Reserve*, Order No. 789, 145 FERC ¶ 61,141 (2013).

<sup>27</sup> Generally, each Regional Entity's responsibilities with respect to compliance monitoring and enforcement are set forth in §6 of its RDA.

<sup>28</sup> Available at: <http://www.nerc.com/pa/comp/Resources/Pages/default.aspx>.

<sup>29</sup> These provisions are generally found in §7 of the RDAs.

In this §II, NERC describes and evaluates the Regional Entities' performance during the assessment period separately with respect to the three major components of their compliance monitoring and enforcement responsibilities: Organization Registration and Certification (ORC) (§II.A below), Compliance Monitoring (§II.B below), and Compliance Enforcement (§II.D below). In addition, Compliance Investigations are discussed separately in §II.C.

**A. Organization Registration and Certification**

NERC is ultimately responsible for devising the criteria that determine which BPS users, owners and operators are subject to approved Reliability Standards, and for maintaining the NERC Compliance Registry of organizations subject to Reliability Standards. In carrying out these responsibilities, NERC relies on the Regional Entities to apply and implement registration and certification criteria as part of the ORC program. Pursuant to the RDAs and §500 and Appendices 5A (*Organization Registration and Certification Manual*) and 5B (*Statement of Compliance Registry Criteria*) of the NERC ROP, the Regional Entities are responsible for the following registration and certification tasks:

Registration

- (1) Providing NERC with timely and accurate information relating to registrations and registered entities to enable NERC to maintain a registration database that is accurate and up-to-date;
- (2) Collecting data on and mapping BPS facilities and those facilities that have a material impact on the BPS within each Regional Entity's defined regional boundaries;<sup>30</sup>
- (3) Approving or disapproving entity registration applications;
- (4) Notifying NERC of each coordinated functional registration (CFR) and joint registration organization (JRO) that the Regional Entity accepts; and
- (5) Maintaining a list of active CFRs and JROs.

Certification

- (1) Verifying that all reliability coordinators, balancing authorities, and transmission operators (i.e., the reliability entities required to be certified to perform their reliability functions) meet the registration requirements of ROP §501.1.4;
- (2) Reviewing entity certification applications for completeness and notifying NERC of applications;

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<sup>30</sup> Each Regional Entity's boundaries are defined in Exhibit A to its RDA.

- (3) Evaluating the competency of entities requiring certification to meet the NERC certification requirements;
- (4) Establishing certification procedures, including (i) evaluation processes, schedules, and deadlines; (ii) expectations of the applicants and all entities participating in the process; and (iii) requirements for certification team members;
- (5) Approving or denying certification team recommendations and notifying the entity and NERC of the decision; and
- (6) Providing leadership to the certification team throughout the certification process.

NERC and the Regional Entities are working towards two goals for registration. First, they recognize the need for consistency between and among Regional Entities and across the continent in the application of the criteria for registering entities. Second, any entity whose facilities or operations are reasonably deemed material to the reliability of the BPS will be registered, irrespective of other considerations.

During the assessment period, the NERC ORC program increased its efforts regarding consistency and transparency. The ORC program developed and posted on NERC's website eight registration and 38 certification templates to be used by the Regional Entities and industry. The ORC program worked with the Certification and Registration Working Group to develop a prototype common registration form (CRF). The CRF requires the provision of information related to entity relationships, and will thereby provide greater assurance that all entities that should be registered are in fact registered. Further, since consistent forms are now used by each Regional Entity, entities that need to register in multiple Regional Entities should find the registration process more streamlined.

During the assessment period, the ERO experienced an incremental increase in the number of registered entities. As of January 30, 2009, NERC and the Regional Entities had registered a total of 1,860 entities for a total of 4,482 reliability functions. As of May 1, 2014, NERC and the Regional Entities have registered 1,920 entities for 4,774 reliability functions. Further, a review of the registration activity by Regional Entity shows a significant number of registrations and deactivations in four Regional Entities (NPCC, ReliabilityFirst, Texas RE, and WECC) for the following three functions: (i) generator owners; (ii) generator operators; and (iii) purchasing-selling entities. This trend is in part attributed to corporate ownership changes. The registration and deactivation activity in the remaining Regional Entities (FRCC, MRO, SERC, and SPP RE) was minimal.

The JRO and CFR mechanisms are important components of the ORC program. These vehicles are used to define the responsibilities and accountability among entities separately registered for the same function. During the assessment period, revisions to NERC ROP §507 and the addition of §508, approved by the Commission on June 10, 2010, clarified the operations of

both types of registration.<sup>31</sup> Specifically, revised ROP §507 allows an entity to register as a JRO on behalf of one or more of its members or related entities for one or more functions for which such members or related entities would otherwise be required to register. The registering entity thereby accepts on behalf of such members or related entities all compliance responsibility for that function or those functions including all reporting requirements. NERC ROP §508 allows multiple entities to register using a CFR for one or more Reliability Standard(s) or for one or more requirements or sub-requirements with particular Reliability Standard(s) applicable to a specific function. The CFR is the complete registration for each entity, with each entity taking full compliance responsibility for those Reliability Standards or requirements or sub-requirements applicable to the CFR.

Many of the registered entities that use the NERC ROP §507 process are cooperatives, municipalities, and other publicly-owned or member-owned utilities. As of May 1, 2014, a total of 34 JROs are registered; however, NPCC, SPP RE, and WECC have not registered any JROs.<sup>32</sup> Since its initial implementation, use of the joint registration option has been fairly static, with few additional entities registering as JROs or changing their JRO status. Many registered entities have, however, taken advantage of the opportunity to coordinate their registered functions pursuant to NERC ROP §508. There are a total of 44 CFR agreements, with FRCC being the only Regional Entity in which there is not a coordinated registration. Some of these coordinated registration agreements cross Regional Entity boundaries.

As the above discussion indicates, the registration and certification processes have been fairly stable during the assessment period in terms of the numbers of entities registered and certified. However, NERC has identified several initiatives or opportunities for improvement in how the Regional Entities perform their registration and certification functions. The first initiative is in the area of multi-regional registered entities (MRREs). MRREs are entities that own or operate BES facilities in two or more Regional Entity footprints. MRREs pose a consistency challenge because they are subject to multiple compliance programs. To address this challenge, during the assessment period, several Regional Entities partnered to coordinate their compliance and enforcement efforts with respect to MRREs. In particular, they developed a “lead region” model in which the involved Regional Entities select one of them to lead the compliance and enforcement efforts for a given MRRE. The purpose of this MRRE initiative is to describe the coordinated CMEP processes that will be used by NERC and the Regional Entities for a subset of registered entities that are registered in multiple Regional Entities and volunteer for this program. The MRRE process provides the opportunity for these entities to request to be accountable to one Compliance Enforcement Authority (CEA). The coordinated MRRE process provides for increased efficiencies in compliance resource allocation for NERC, the Regional Entities, and the registered entities while, maintaining the reliability of the BPS.

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<sup>31</sup> *North American Electric Reliability Corporation*, Docket No. RR10-8-000 (June 10, 2010) (unpublished delegated letter order).

<sup>32</sup> See the JRO member listing Excel spreadsheet available at: <http://www.nerc.com/pa/comp/Pages/Registration-and-Certification.aspx>.

A second area of opportunity for improvement is the efficiency with which a Regional Entity is able to process registration activation and deactivation requests. This initiative is part of the risk-based registration effort described in further detail in the *Overview of NERC Activities and Accomplishments in the Five-Year Period*.

**B. Compliance Monitoring**

**1. NERC Oversight of Regional Entity Compliance Monitoring Activities**

NERC's oversight of and involvement with the Regional Entities' compliance monitoring activities is ongoing and continuous. Although this document is a five-year assessment of the Regional Entities' performance of specified functions, including compliance monitoring, NERC's ongoing oversight of and involvement with the Regional Entities' compliance monitoring activities provides a significant component of the informational and observational basis for NERC's evaluation of the Regional Entities in this area. This §II.B.1 provides an overview of NERC's oversight activities for the Regional Entity compliance monitoring programs, which is one of the key information and observation sources for NERC's assessment of the Regional Entities' performance.

At the start of the assessment period, the Regional Entity audit program consisted of Agreed-Upon Procedures (AUP) developed by NERC in collaboration with an independent third-party. The AUP oversight program operated on a three-year audit cycle.

In 2010, NERC restructured its Regional Entity oversight program. Based on NERC's observations of the audits completed under the AUP oversight program, NERC determined that conducting an AUP audit once every three years did not provide the desired level of qualitative evaluation of effectiveness of the programs within and across the Regional Entities. As a result, NERC refocused the Regional Entity audit program to move to an on-going and simultaneous evaluation of performance-based objectives to gauge the effectiveness of the Regional Entities' CMEPs. NERC staff utilized the findings, exceptions and lessons learned from the initial AUP program engagements to develop processes and procedures for the restructured audit program. The restructured Regional Entity oversight program provides for continuous oversight of each Regional Entity in focused, discrete time intervals that allows NERC to provide immediate feedback to Regional Entity compliance staff. This feedback enables Regional Entity staff to improve the consistency of its compliance processes and their application in a timelier manner.

Under NERC's current oversight model, NERC Audit Assurance and Oversight (AAO) staff and the Regional Entities conduct compliance monitoring of registered entities primarily through regular and scheduled compliance audits and random spot checks. Each Regional Entity has a compliance monitoring program that includes all the compliance monitoring methods specified in the uniform NERC CMEP, Appendix 4C to the NERC ROP.<sup>33</sup> NERC is responsible

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<sup>33</sup> The compliance monitoring methods are compliance audits, self-certification, spot checks, investigations, self-reports, periodic data submittals, and complaints. See CMEP §3.0 (Compliance Monitoring Processes). The Regional Entities review self-certifications for all registered entities at least once annually. Some Regional Entities also require monthly self-certifications for certain Reliability Standards and requirements. Periodic data submittals occur on an ongoing basis, with certain information due to the Region Entity on a monthly basis, and other data due on a quarterly basis.

for oversight and monitoring of the Regional Entities' compliance monitoring activities, which must be carried out in accordance with the NERC ROP and the terms of the RDAs. NERC uses the following tools (each of which is described in the subsections below), to carry out its oversight and monitoring of the Regional Entities' activities:

- (1) An annual review of Regional Entity CMEP IPs for approval and posting, as well as an annual review of each Regional Entity's CMEP for incorporation into the ERO's annual CMEP report;
- (2) Annual assessments of compliance monitoring for selected Reliability Standards for consistency of approach through the Key Reliability Standard Spot Check (KRSSC) program;
- (3) Oversight audits of selected registered entity compliance audits performed by Regional Entities, as well as periodic assessments of Regional Entity auditor capabilities;<sup>34</sup> and
- (4) NERC training for Regional Entity CMEP personnel.

The oversight engagement of NERC AAO staff and Critical Infrastructure department (CID) staff, as well as NERC Training and Education program staff, increased over the assessment period, thereby providing an enhanced view of the Regional Entities' performance. These oversight activities are further discussed below.

**a. Annual CMEP Implementation Plan**

As part of NERC's annual oversight, each Regional Entity is required to develop and submit to NERC, for approval, an annual Regional Entity CMEP IP in accordance with Appendix 4C of the ROP. In its IP, each Regional Entity identifies which Reliability Standards and requirements it will actively monitor, evaluate, report, sanction and appeal during the period covered by the IP (both those Reliability Standards and requirements that NERC specifies shall be monitored, and any additional Reliability Standards and requirements the Regional Entity proposes to monitor). These IPs are submitted to NERC on the schedule established by NERC, generally on or about October 1 of the preceding year. NERC previously published the Regional Entity IPs, and its own IP, as separate documents; however, beginning with the 2014 IPs, NERC now combines its IP and the Regional Entity IPs into a single document.<sup>35</sup>

Each Regional Entity must also report annually to NERC regarding how the Regional Entity carried out its delegated compliance monitoring and enforcement authority in the previous year, the effectiveness of its CMEP, and changes it expects to make to correct any deficiencies

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<sup>34</sup> Due to ongoing restructuring and transitioning pursuant to the Reliability Assurance Initiative (RAI), these compliance activities ceased in early 2013, but are scheduled to resume in the fourth quarter of 2014.

<sup>35</sup> See *ERO Compliance Monitoring and Enforcement Program 2014 ERO CMEP Implementation Plan*, version 1.1, available at: [http://www.nerc.com/pa/comp/Resources/ResourcesDL/2014\\_ERO\\_CMEP\\_IP\\_v1.1\\_%2804012014%20posting%29.pdf](http://www.nerc.com/pa/comp/Resources/ResourcesDL/2014_ERO_CMEP_IP_v1.1_%2804012014%20posting%29.pdf).

identified. Each Regional Entity provides its annual report on a schedule established by NERC, generally on or about February 15 of the following year. The Regional Entities' annual reports, along with Regional Entity responses to an annual NERC CMEP survey, are used to prepare NERC's annual CMEP report.

**b. Key Reliability Standard Spot Check Program**

The KRSSC program focuses on issues that have the highest potential to result in major impacts to the BPS. Through the KRSSC program, NERC compares and contrasts the procedures Regional Entities use when auditing a set of high-risk, high-impact or frequently violated Reliability Standards. The KRSSC focuses on the observation activities of the Regional Entity compliance audit team during pre-audit work and on-site audit work, as these are the primary audit observation procedures used in gathering and analyzing evidence. Through this program, NERC seeks to identify issues that Regional Entity audit teams experience when evaluating compliance with selected Reliability Standards, as well as areas in Regional Entity audit evaluations for which additional guidance may be needed to improve evaluation processes or to promote consistency in evaluations. The objective of the KRSSC program is not to identify a minimum acceptable auditing approach or to determine the best practices for determining compliance; rather, the emphasis is upon enhancing consistency and improving auditing approaches. The KRSSC process addresses a need, which was identified early in the assessment period, to increase opportunities to share best practices among Regional Entities.

For issues identified during KRSSCs, NERC provides Regional Entities with overall recommendations and guidance as needed regarding how to remediate issues and to enhance consistency across all the Regional Entities. Regional Entities also receive individualized information through confidential appendices. NERC audit staff holds teleconferences with each Regional Entity to discuss both Regional Entity-specific results and cross-Regional Entity results. NERC's proposed best practices are intended to apply to enhance elements of the Regional Entities' auditing practices and approaches. While NERC typically derives the KRSSC recommendations and best practices from review of the auditing practices for specific Reliability Standards, many of the audit practices and approaches identified have broader applicability to other Reliability Standards.

During the assessment period, NERC conducted three KRSSCs with the Regional Entities. The three KRSSCs focused on the following Reliability Standards: EOP-005-1, PRC-005-1, CIP-001, and EOP-004 (the latter two were evaluated jointly). For each KRSSC, two registered entity compliance audits from each Regional Entity were selected based upon the potential and actual risk posed to the BPS by the audited registered entities as well as the completion date of the audits. As part of its evaluation, NERC AAO staff examined the credentials, resource levels and audit implementation methods of the individual Regional Entities in conducting their compliance audits. NERC evaluated the Regional Entities separately during this process; however, in an effort to increase consistency, NERC communicated any departure from best practices to the individual Regional Entities.

**c. Oversight Audits of Regional Entity Audits of Registered Entities**

NERC conducts oversight audits of selected registered entity audits being performed by Regional Entities. The purpose of an oversight audit is to determine whether the Regional Entity conducted its compliance audit and related tasks in accordance with the requirements of the NERC ROP, the CMEP and the RDAs. NERC staff members observe a Regional Entity compliance audit of a registered entity on-site at the registered entity or at the relevant Regional Entity's office. A Regional Entity audit of Operations and Planning Reliability Standards is observed by NERC AAO staff, while a Regional Entity audit of Critical Infrastructure Protection (CIP) Reliability Standards is observed by NERC CID staff. The Commission may also assign auditors to participate by observing the pre-audit activities and the on-site audit, although Commission participation is not specifically a component of the NERC oversight audit. Following the oversight audit, NERC AAO staff identifies best practices and recommendations for the Regional Entity.

**d. NERC Training Activities for Regional Entity Compliance Staff**

Early in the assessment period, NERC and the Regional Entities identified training, education and communication as key initiatives for compliance monitoring. As a result, during the assessment period, training opportunities for Regional Entity CMEP staff (as well as for registered entities) have been increased.<sup>36</sup>

Training of CEA staff is a central component of NERC's compliance monitoring oversight of Regional Entities. NERC's training programs for compliance auditors are based upon the U.S. Government Accountability Office's Generally Accepted Government Auditing Standards (GAGAS) for performance audits. GAGAS is primarily used by auditors of government entities and entities that receive government grants and other funding. All of NERC's CEA training material is reviewed and updated based on changes to GAGAS, the CMEP, the NERC ROP, and internal procedures, as well as feedback from experience.

From 2009 to 2013, NERC conducted the following training sessions for ERO compliance auditors:

- 18 auditor workshops and webinars
- 11 audit team leader (ATL) training sessions
- 3 CIP training sessions
- 12 compliance investigation training sessions

In addition, NERC made a total of 25 presentations at Regional Entity compliance workshops, including 18 presentations in 2012. Examples of topics presented in the auditor workshops and webinars during this period included:

- Fundamentals of NERC Compliance Audits
- GAO Auditing Standards
- Audit Scoping

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<sup>36</sup> Regional Entity training activities provided for registered entities are described in §II.B.2.a below and in the individual Regional Entity assessments in §II.B.2.b below.

- Auditor Checklist and Handbook
- Gathering Quality Evidence
- Sampling/Random Sampling Techniques
- Quality Audit Documentation
- Conducting Performance Audits
- Find, Fix, Track, and Report (FFT) Process
- Internal Controls
- CIP Reliability Standards
- Critical Asset Identification and CIP-002 Sufficiency Reviews
- CIP Compliance

2. **NERC Evaluation of Regional Entity Compliance Monitoring Programs**

Subsection 2.a below discusses, on a collective basis, the Regional Entities' training and education programs for registered entity personnel. Each Regional Entity maintains, for organizational, budgeting and accounting purposes, a Training, Education, and Operator Certification program separate from its Compliance Monitoring and Enforcement and Organization Registration and Certification program. For purposes of this assessment, the Regional Entities' training, education and outreach activities are being discussed and assessed as part of the evaluation of their compliance programs because these activities are heavily focused on compliance-related topics. Subsection 2.b then evaluates each Regional Entity's compliance monitoring program on an individual basis.

a. **Regional Entity Training, Education, and Outreach Programs for Registered Entity Personnel**

The RDAs provide that the Regional Entity "may provide training and education to registered entities, as it deems necessary, in support of its performance of delegated functions and related activities under this Agreement."<sup>37</sup> Providing training for registered entities is critical to reliability for the following reasons:

- (1) To ensure that registered entities understand what is required to comply with Reliability Standards, with a particular focus on the most frequently violated Reliability Standards;
- (2) To equip registered entities with the tools to identify risks to reliability; and
- (3) To help registered entities establish compliance programs that systematically detect, report, correct and prevent risks to reliability and therefore reduce violations.

The Regional Entities offer two types of training opportunities for registered entities. First, each Regional Entity conducts training and outreach initiatives with registered entities through its

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<sup>37</sup> This provision is generally found in §7(e) of the RDAs.

Training, Education, and Operator Certification program. Under this program, Regional Entities offer NERC-approved continuing education program courses and activities necessary to maintain one's status as a NERC-certified system operator. The target audience of the program is BPS operating personnel, including system operations personnel, operations support personnel (engineering and information technology), supervisors and managers, and training personnel. NERC's Personnel Certification and Continuing Education staff and Training and Education staff support the Regional Entities' efforts in this area. Second, Regional Entities conduct supplemental compliance and enforcement training for registered entities, typically through workshop events. For the supplemental compliance and enforcement training and outreach for registered entities, the Regional Entity has the discretion to choose the content, delivery method, and location of such training.

Feedback from registered entities regarding the Regional Entity training workshops has been very positive, and participants have sought coverage of additional topics. To address requests from the industry for an increased level of compliance information as well as for enhanced CMEP transparency, many Regional Entities have committed more resources to training in order to engage in additional training, education and outreach activities. These increased activities have included additional workshops, newsletters to industry, and other direct communications. Much of the information covered by these increased outreach and communication activities takes the form of lessons learned.

**b. Assessments of the Individual Regional Entities**

As an overall evaluation, during the assessment period, the Regional Entities made meaningful progress in improving their compliance monitoring programs and their audit practices and procedures consistent with the requirements of the ROP (specifically, the CMEP, Appendix 4C) and the RDAs. Overall, the Regional Entities worked diligently to plan and complete their scheduled compliance audits during the assessment period. NERC's oversight of the Regional Entity compliance programs shows that the Regional Entities are meeting the baseline requirements of the ROP and the RDAs. NERC's oversight has also shown that there continue to be varying compliance monitoring practices across the ERO.

NERC has three main objectives for the continued evolution of the compliance monitoring program. First, the Regional Entities are revising their existing practices to better align with risk using generally accepted audit practices. Second, NERC and the Regional Entities have developed a standardized audit checklist to ensure consistent conduct of audits across the ERO. Third, NERC, in conjunction with the Regional Entities, has developed competency guidelines for compliance monitoring staff and is developing training to accompany the competency guidelines. Through RAI, the ERO Enterprise is moving away from a one-size-fits-all approach for monitoring registered entities to a compliance oversight approach that considers risk and the controls registered entities have established around compliance with Reliability Standards.

NERC AAO staff has collaborated with the Regional Entities to develop RAI pilot projects conducted by several Regional Entities. Some Regional Entities volunteered to establish pilot programs to test strategies regarding: (i) entity risk assessment; (ii) management controls (identification and testing methodology); (iii) audit scope linked to risk; and (iv) data gathering techniques (interviews, surveys, etc.) and the process for disseminating the pilot across the ERO.

The participating Regional Entities then conducted the pilot programs with registered entities within their respective footprints. Each participating Regional Entity used varying techniques with the goal of establishing a repeatable risk assessment and internal control review process, tied to Reliability Standards that could be replicated by non-participating Regional Entities.

In the individual Regional Entity assessments that follow, NERC examines how the Regional Entities satisfied the baseline requirements of the ROP and RDAs in executing their compliance monitoring responsibilities during the assessment period. NERC's review encompassed two major areas: (i) department structure and staffing, and (ii) compliance monitoring tools and audit planning. With respect to the first area, NERC examined the structure of the Regional Entity CMEP departments, the adequacy and qualifications of staff resources, and the involvement of industry SMEs and Regional Entity members, as well as the existence of policies to maintain the independence and integrity of the Regional Entity compliance staff. In the second area, NERC examined the compliance monitoring tools available to assist the Regional Entities in audit planning and execution. Elements central to these audit planning and execution efforts are validation of data accuracy, confidentiality of audit information, and quality assurance of audit findings and audit reports. In addition, for each Regional Entity compliance monitoring program, NERC reviewed the Regional Entity's guidance and training offered to industry stakeholders and its participation to date in RAI.

**i. Data on Regional Entity Compliance Resources**

The following two tables show the amounts of (i) budgeted direct expenses and (ii) budgeted direct full-time equivalent (FTE) staffing in each Regional Entity's CMEP in 2009 and 2014, as taken from their business plans and budgets filed with the Commission. These figures are for the Regional Entity's entire Compliance Monitoring and Enforcement and Organization Registration and Certification program.<sup>38</sup> As the tables show, during the assessment period, each Regional Entity significantly increased its budgeted direct expenses and its budgeted FTE staffing for its CMEP.

<b>Regional Entity</b>	<b>2009 Budget</b>	<b>2014 Budget</b>	<b>Percent Increase</b>
<b>FRCC</b>	\$2,019,650	\$4,281,909	112.0%
<b>MRO</b>	\$2,071,510	\$3,864,192	86.5%
<b>NPCC</b>	\$2,095,204	\$5,080,485	142.5%
<b>RFC</b>	\$5,099,328	\$9,788,246	92.0%
<b>SERC</b>	\$4,805,617	\$7,389,556	53.8%
<b>SPP RE</b>	\$1,283,653	\$4,258,217	231.7%
<b>Texas RE</b>	\$1,628,935	\$5,991,654	267.8%
<b>WECC</b>	\$6,165,303	\$8,592,053	39.4%

<b>Regional Entity</b>	<b>2009 FTE</b>	<b>2014 FTE</b>	<b>Percent Increase</b>
<b>FRCC</b>	9.26	19.26	108.0%
<b>MRO</b>	10.00	21.26	112.6%

<sup>38</sup> MRO's 2014 budgeted expense does not include the expenses for its Organization Registration and Certification activities, which MRO conducted in and budgeted under its Reliability Standards program.

<b>NPCC</b>	9.00	16.00	77.8%
<b>RFC</b>	23.00	43.00	87.0%
<b>SERC</b>	21.50	42.50	97.7%
<b>SPP RE</b>	6.00	22.10	268.3%
<b>Texas RE</b>	14.15	40.00	182.7%
<b>WECC</b>	30.00	58.00	93.3%

ii. **Florida Reliability Coordinating Council, Inc.**

*Department Structure / Staffing / Conflict of Interest Avoidance*

During the assessment period, FRCC's Compliance department was split into two sections, a Compliance Monitoring group and an Enforcement group. In October 2012, FRCC separated the reporting of these two groups to create more independence between monitoring and enforcement activities. The manager of compliance enforcement reports directly to the vice president and executive director of reliability standards and compliance while the manager of compliance audits reports to the director of compliance. In addition, in June 2014, FRCC created a third group, Risk Assessment and Mitigation. This group is focused on risk assessment, both before a compliance monitoring activity takes place, to help determine the scope of the monitoring oversight; and after a possible violation is discovered, to help to determine the risk posed by the violation so that the most efficient disposition can take place. The risk evaluation before a compliance monitoring activity takes place will include both inherent risk assessment and assessment of the registered entity's internal controls. Additionally, the Risk Assessment and Mitigation group is now the primary contact for registered entities with respect to the development, implementation and completion of mitigation plans. The manager of risk assessment and mitigation reports to the director of compliance.

While NERC does not specifically endorse a particular organizational structure for CMEP departments at the Regional Entity level, NERC supports department models that facilitate the prioritization of risk. All Regional Entities are currently evaluating the structure of their CMEP departments to similarly assess how best to organize around risk.

With the recent change just described, FRCC's Compliance Monitoring group consists of eight positions, while the Risk Assessment and Mitigation group consists of four positions. Many of FRCC's audit team members individually have over 15 years of industry experience. Five audit team members were certified or hold active NERC certifications as system operators. Between 2011 and 2012, FRCC increased its staffing to add areas of expertise.

FRCC CIP auditors are required to at least have Certified Information Systems Security Professional (CISSP) certification or Certified Internal Security Auditor (CISA) certification and to demonstrate security background knowledge covering multiple domains including physical and network security. Each CIP auditor is required to maintain this certification by attending annual conferences and training seminars to achieve the required minimum of 20 continuing professional education hours annually. The FRCC manager of compliance audits is responsible for vetting the topics covered during these conferences and seminars.

The FRCC Compliance Monitoring group prepares its Operations and Planning auditors to be supplemental team members during CIP audit engagements by conducting training sessions for them to review NERC CIP Reliability Standards and evidence that can be used to demonstrate compliance with those Reliability Standards. The Operations and Planning auditors serve as supplemental team members for CIP audits on a rotational basis to increase their knowledge of CIP Reliability Standards.

FRCC tracks the on-going educational needs related to certifications for both CIP and Operations and Planning auditors. FRCC also develops an annual budget to support this training effort. During the assessment period, FRCC began using the *Compliance Auditor Capabilities and Competency Guide* recently developed by the ERO Enterprise,<sup>39</sup> as well as building a matrix to plan for and ensure training and development opportunities for the range of skills needed in the auditor positions. The FRCC audit team members participate in various auditor training sessions and workshops. FRCC audit staff members are required to attend NERC-sponsored ERO training.

Although FRCC is not presently using SMEs from outside the organization for its CIP or Operations and Planning audit engagements, FRCC has developed a procedure should it need to use such experts in the future. This procedure is titled *Procedure for the Use of Industry Volunteer Subject Matter Experts* and is posted alongside the *Nomination Form for the Industry Volunteer Subject Matter Expert Pool* on FRCC's website. This procedure guides FRCC compliance staff on the use of industry volunteer SMEs.

FRCC has adopted policies and procedures to avoid conflicts of interest in its CMEP work. During the assessment period, FRCC implemented an Annual Employee Recital and Disclosures process. Each FRCC employee receives a copy of the *FRCC Conflict of Interest Policy* and signs the *Conflict of Interest Questionnaire, Disclosure Statement of Stock Ownership of FRCC Member Companies, and Non-Disclosure Acknowledgement*. FRCC maintains a document titled *FRCC Auditor Objectivity, Independence and Impairment* on its public web page. This document provides, among other things, that auditors must remain free from "personal impairments to independence" that might cause auditors to limit the scope of their audit or alter audit findings.

### ***Compliance Monitoring Tools and Procedures***

FRCC utilizes a number of tools to execute its audits, several of which are highlighted in this section. FRCC uses an evidence index tool to catalogue evidence submitted throughout the audit process. FRCC references the evidence index numbers when referring to documentation during compliance audits and includes these references in its audit documentation. FRCC also developed its own tool for tracking additional evidence requests and for issuing follow-up data requests. These tools increase the efficiency of its audits by facilitating tracking. In addition to these tools, FRCC audit teams use several other standard auditor tools. For example, FRCC utilizes the RSAWs and the Regional Advanced Techniques Staff (RAT-STATS) sampling tool.

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<sup>39</sup> See *ERO Enterprise Compliance Auditor Manual* (Auditor Manual) available at: <http://www.nerc.com/pa/comp/Pages/ERO-Enterprise-Compliance-Auditor-Manual.aspx>.

In 2012, FRCC developed its own risk assessment document to use as an interim step until NERC and the Regional Entity working groups create a template for ERO-wide use.

FRCC maintains copies of its *Compliance Audit Procedure*, *Spot Check Procedure*, and *Compliance Investigation Procedure* on its public web page. The procedures are reviewed periodically and updated as necessary. FRCC's Compliance Tracking and Submittal system (CTS) is also central to its compliance monitoring efforts. The database provides multiple functionality for entities registered in FRCC including:

- (1) The ability to input and maintain registered entity contact information;
- (2) The ability to submit and update CIP Technical Feasibility Exceptions (TFEs);
- (3) The ability of FRCC Compliance staff to review draft registered entity compliance responses, such as mitigation plans, prior to submittal by the registered entity;
- (4) The ability to submit compliance-related documentation; and
- (5) The ability to allow the review of historical compliance submittals.

FRCC Compliance staff use a related software system called Compliance Information Tracking System (CITS) to store information related to processing of violations and mitigation plans. CITS is also used for developing reports for management, development of metrics and for supplying data to the NERC associated database.

### ***Quality Assurance***

After each compliance audit or spot check, the FRCC team involved conducts a lessons learned session focused on quality and process improvement. Action plans are developed to address these lessons learned. To ensure completeness and consistency, the manager of compliance audits reviews all audit reports before they are finalized and shared with NERC and the registered entity. FRCC Compliance staff have developed a number of internal procedures based upon the procedures and requirements identified in the NERC ROP. These procedures are reviewed on an annual basis and updated as necessary. These procedures are followed to ensure that FRCC Compliance staff implement compliance and enforcement activities in accordance with the guidance established by NERC and FERC.

### ***Guidance and Training for Industry Stakeholders***

FRCC utilizes its compliance workshops as the primary mechanism for outreach to its registered entities. In 2013, FRCC hosted two general compliance workshops (with an Operations and Planning focus) and one CIP compliance workshop. During these workshops, multiple techniques are used to increase the effectiveness of addressing current topics including use of registered entities to provide presentations on "best practices." Registered entities are encouraged to discuss compliance-related topics with auditors during small group breakout sessions. FRCC also conducts webinars on various topics of interest to registered entities throughout the year. Previous webinars covered topics such as preparing for an audit, enforcement process, audit approaches for specific Reliability Standards, the transition to Version 5 of the CIP Reliability

Standards, and the annual FRCC CMEP IP. FRCC also maintains a Frequently Asked Questions section on its website. FRCC Compliance staff participates in regular Regional Entity Committee and Compliance Forum (RECCF) meetings to disseminate the latest information regarding its compliance program to industry stakeholders. In addition FRCC CIP auditors are regularly scheduled on the agenda of the regional member services CIP Subcommittee meetings that are held monthly to address CIP monitoring processes and CIP audit approach issues.

### ***Maintaining Confidentiality***

There are strict confidentiality requirements associated with all CMEP activities.<sup>40</sup> FRCC follows the NERC CMEP to maintain the confidentiality of any complaint and maintains a link to NERC's complaint reporting page from the FRCC web site. FRCC ensures that its officers, directors, and employees with access to confidential data and information are under obligations of confidentiality pursuant to the *FRCC Confidentiality Policy*. Annually, all FRCC Compliance and Enforcement staff is trained on the *FRCC Confidentiality Policy*. FRCC has also implemented a secure vault system to receive electronic compliance evidence from registered entities. The vault system uses 256-bit advanced encryption standard (AES) cipher encryption to deliver evidence to FRCC. Access to the vault is restricted to Compliance staff and supporting IT staff, and CIP evidence is limited to viewing only in the vault.

### ***Participation in RAI***

FRCC Compliance staff have been involved in several aspects of RAI. FRCC provided a participant on the ERO Compliance and Enforcement Management Group (ECEMG) Manual Task Force (MTF) that developed the *Compliance Auditor Handbook* and associated *Compliance Auditor Checklist*, as found in the Auditor Manual. FRCC also provided personnel to aide in the training of auditors relative to the handbook and checklist at the ERO auditors workshop.

In January 2014, FRCC Enforcement staff began to triage and review all possible violations to determine the disposition method within 60 days on average. FRCC is participating in the piloting of an approach that allows selected registered entities to aggregate and submit periodically any possible minimum risk violations they may have for certain Reliability Standards and requirements.

FRCC Compliance staff have been involved with the pilot integration team that is reviewing the results of Regional Entity pilots concerning inherent risk assessment and internal controls evaluation to determine the ERO approach to scoping more risk-based compliance monitoring.

### **iii. Midwest Reliability Organization**

#### ***Department Structure / Staffing / Conflict of Interest Avoidance***

In 2009, MRO split its CMEP function into three distinct departments, each with its own assigned personnel: (i) Compliance; (ii) Risk Assessment and Mitigation; and (iii) Enforcement.

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<sup>40</sup> See ROP §402.8 (NERC Oversight of the Regional Entity Compliance Monitoring and Enforcement Programs — Confidentiality).

MRO Compliance staff conduct audits and spot checks of compliance with Reliability Standards by registered entities. Since 2009, MRO has expanded its Compliance staff from five to eight auditors, split evenly between Operations and Planning and CIP, with most of the additions being CIP auditors. MRO seeks to achieve a balance of skills in its Compliance department, including technical expertise and audit experience. This balance is achieved through hiring of staff with needed skillsets and experience (i.e., system planning, protection systems, or cybersecurity) as well as through supplemental training. Training on core skills, such as ethics or audit practices, is offered generally, while specific skill gaps or training needs are identified on an individual basis. MRO currently has Operations and Planning auditors who are all certified as either NERC system operators or registered professional engineers. CIP audit staff generally hold certifications, such as CISSP and CISA that align with Department of Defense requirements.<sup>41</sup>

MRO Risk Assessment and Mitigation staff undertake an independent review of the facts and circumstances surrounding each violation discovered by Compliance staff. They determine whether sufficient evidence supports each possible violation. Risk Assessment and Mitigation staff also work with the registered entity to develop an effective and comprehensive mitigation plan in the event that a violation is confirmed.

Confirmed violations move to the Enforcement department staff, who review recommendations made by Risk Assessment and Mitigation staff, verify all relevant facts, and evaluate appropriate enforcement actions. The factual review conducted by Risk Assessment and Mitigation and Enforcement staff is intended to ensure a consistent, accurate application of the NERC Reliability Standards. Through this segregation of duties, MRO seeks to establish independence among those making the findings, those assessing risk, and those determining and negotiating penalties and sanctions.

MRO has adopted policies and procedures to avoid conflicts of interest in its CMEP work and to ensure the independence of its staff. Those policies and procedures provide that:

- (1) No MRO director or member of MRO committees may participate in any way in compliance violation investigations, compliance audits, reports, sanction determinations, or other matters within the CMEP.
- (2) An MRO director or member of an MRO committee may engage in actions on behalf of his or her employer regarding a compliance monitoring and enforcement matter undertaken by MRO; however, that director or member of an MRO Committee must recuse himself or herself from any board or committee decisions, meetings, and actions related to that compliance monitoring and enforcement matter. Potential concerns about the participation of a MRO director or member of an MRO committee are brought to the attention of the president and chief executive officer who will seek an appropriate resolution of the matter with the advice and counsel of the independent directors.

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<sup>41</sup> See Department of Defense Directive 8570.1, "Information Assurance Training, Certification, and Workforce Management" (August 15, 2004) available at: <http://www.dtic.mil/whs/directives/corres/dir.html>.

### *Compliance Monitoring Tools and Procedures*

MRO uses 32 primary tools to execute its audits, four of which are highlighted in this section. A key guidance source for MRO is GAGAS, which provides a framework for conducting quality audits. MRO's primary audit template tool for documenting audit procedures, testing, findings and reports is its *Audit and Spot Check Process and Procedures* dated May 2012. This document consists of 31 templates and serves as a detailed roadmap and reference tool for MRO's Compliance staff to use during Operations and Planning and CIP audits as well as spot checks. The audit team also uses an FSAW audit workbook which is an MRO-specific tracking tool built on the RSAW for documenting audit work.<sup>42</sup> This tool facilitates evidence requests from registered entities as well as tracking of Reliability Standards to ensure that an audit proceeds in a timely fashion. This tool was updated in 2013 prior to its incorporation into the Auditor Manual.

MRO's web Compliance Database Management System (webCDMS) is also central to its compliance monitoring efforts. WebCDMS assists registered entities in documenting and submitting compliance information. The database provides multiple functionality including:

- (1) Viewing Regional Entity and NERC requirements per a registered entity's function(s);
- (2) Reviewing compliance information prior to submittal;
- (3) Submitting compliance documentation;
- (4) Generating compliance reports; and
- (5) Tracking mitigation plans.

The webCDMS tool previously required each registered entity to use different logins and passwords. A recent enhancement to webCDMS provides the ability for a registered entity to logon and access webCDMS on behalf of multiple affiliated entities within a particular Regional Entity, using a single username, password, and webCARES digital certificate.

### *Quality Assurance*

MRO relies on a number of tools to assist in its quality assurance efforts. Compliance staff perform peer reviews of audit documentation during audit fieldwork, in addition to reviews conducted by management and by non-Compliance personnel. Such reviews ensure the completeness of audit documentation and that any findings are consistent with the elements of a finding per GAGAS. In addition to audit documentation reviews, Compliance staff rely on "lessons learned" discussions and post-audit surveys of registered entities to help identify opportunities to improve compliance monitoring-related processes and to improve future interactions with registered entities. Finally, Compliance staff review audit findings with Risk Assessment and Mitigation staff to ensure consistent application of the NERC Reliability

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<sup>42</sup> FRCC and WECC also have tools that mirror this tool.

Standards among MRO staff and across registered entities in the MRO footprint. All lessons learned are shared internally and, if more broadly applicable outside of MRO, with personnel from NERC and other Regional Entities.

***Guidance and Training for Industry Stakeholders***

MRO supports industry in developing compliance guidance in the form of Application Guides. Application Guides offer non-binding, training guidance regarding how to meet the requirements of existing and emerging Reliability Standards. They can include the following:

- (1) Presentation materials developed by MRO member organizations who volunteer SMEs to the NERC SC;
- (2) FERC comments relating to a Reliability Standard;
- (3) Documentation and evidence demonstrating compliance; and
- (4) References and source documents related to laws, policies, directives, instructions, Reliability Standards and guidelines.

MRO tracks the impact of Application Guides through trend analysis of Reliability Standard violations.

MRO's website contains posted compliance guidance directed to industry stakeholders, including content about internal controls, best practices for internal compliance programs, and aids to assist in compliance for specific and more challenging Requirements. Instructional materials informing stakeholders as to what they can expect and what professional audit standards they should anticipate for their compliance audits is made available on this site. Guidance is also offered to registered entities in their audit notification packets from MRO. With regard to small entities, MRO routinely communicates to the representatives of the applicable trade associations that their members should contact MRO directly with any concerns, including regulatory burden.

MRO holds at least two one-day workshops per year addressing reliability, compliance, and enforcement. In 2013, MRO also held a model building workshop to provide direction and instruction for those who are directly involved in the preparation and submittal of model data. MRO's bi-monthly newsletters have a regular column titled "Tips and Lessons Learned" which covers a wide range of topics from how to use webCDMS more effectively to changes in the procedures for requesting and processing TFEs. Occasionally, "Tips and Lessons Learned" are authored by registered entities covering topics like the CIP Version 5 transition study. MRO conducted its first webinar in 2014 and as part of its review of training initiatives, MRO will be asking its stakeholders for input on the use of webinars. MRO is not participating in any initiative with other Regional Entities to decrease or consolidate the number of announcements published for industry; however, MRO reports that in response to its stakeholder surveys, registered entities have generally encouraged MRO to communicate more, not less.

### *Maintaining Confidentiality*

There are strict confidentiality requirements associated with all CMEP activities.<sup>43</sup> MRO follows the CMEP to maintain the confidentiality of any complaint and has a third-party hotline available to complainants to maintain anonymity. Complainants can contact MRO's chief compliance and ethics officer, who does not do any CMEP work, to maintain anonymity.

All data related to MRO's CMEP activities, particularly registered entity data that may be designated Critical Energy Infrastructure Information, are protected according to §1500 of the NERC ROP to ensure that confidentiality is maintained. Data is stored on a restricted network drive, to which access is granted on a need-to-know basis according to individuals' job responsibilities. Outside of the restricted drive, data may only be stored for limited periods of time on encrypted hard drives or IronKey-encrypted USB drives. When transferring data to or from registered entities, MRO makes use of a secure Enhanced File Transfer (EFT) server, which includes encryption both during transfer and while stored on the EFT server. The EFT server is also utilized for all data transfers involving NERC, FERC, or other Regional Entities.

### *Participation in RAI*

As part of RAI, NERC has assisted with ensuring consistency among audits conducted by the Regional Entities by developing the Auditor Manual. MRO has already taken steps to follow the protocols established in the Auditor Manual. In particular, MRO has changed its protocol regarding independence of audit staff to conform to GAGAS. MRO has also indicated that it will fully adopt the Auditor Manual protocols.

#### **iv. Northeast Power Coordinating Council, Inc.**

##### *Department Structure / Staffing / Conflict of Interest Avoidance*

Activities performed pursuant to the CMEP are performed within the NPCC Compliance Monitoring and Enforcement and Organization Registration and Certification (CORC) program. In total, NPCC's CORC program area consists of 16 employee positions. The CORC program is divided into two subprograms: (i) an Audits and Investigations subprogram and (ii) a Registration and Enforcement subprogram. The Audits and Investigations subprogram conducts audits, spot checks, and compliance investigations. It is comprised of eight staff employees. The Audits and Investigation subprogram utilizes approximately a dozen independent consultants in addition to NPCC employees. During an audit, spot check, or compliance investigation, the Audits and Investigation team makes a determination of whether a registered entity has any possible violations of NERC Reliability Standards, and provides NPCC enforcement staff with a final report.

The Registration and Enforcement subprogram is comprised of eight staff employees. The Registration and Enforcement subprogram reviews the audit, spot check, or compliance investigation report, and makes an independent evaluation of the facts and circumstances surrounding each possible violation identified in the report. Registration and Enforcement will

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<sup>43</sup> See NERC ROP §402.8 (NERC Oversight of the Regional Entity Compliance Monitoring and Enforcement Programs — Confidentiality).

determine whether sufficient evidence supports each possible violation and will work with the registered entity to develop an effective and comprehensive mitigation plan. Registration and Enforcement will also evaluate the appropriate enforcement actions, including sanctions and/or penalties.

Many NPCC audit team members individually have over 30 years of industry experience. Two audit team members are NERC-certified system operators and two are registered professional engineers. As described above, NPCC also relies on independent SME consultants who have no other industry obligations or conflicts of interest to perform compliance monitoring activities and to support any increases in its workload. NERC AAO staff recommends that NPCC consider having more audit staff become NERC-certified system operators.

NPCC audit team members participate in various auditor training sessions and workshops. All NPCC auditors attend at least one of the two annual NERC ERO compliance workshops to keep apprised of current topics and NERC initiatives affecting compliance. NPCC itself conducts four in-house auditor training sessions each year. In addition, NPCC auditors augment their training with annual required or suggested NERC training.

With respect to monitoring compliance with the CIP Reliability Standards, NPCC recruits employees with network systems protection experience. Two NPCC auditors have CISSP certifications and one auditor has physical security protection experience. NPCC examines the training that these auditors will need for the upcoming year or other future time frame and assures that its CIP auditors (both employees and consultants) receive the appropriate supplemental training, in addition to the regular training described above.

NPCC has adopted policies and procedures to avoid conflicts of interest in its CMEP work and to maintain the independence of its compliance staff. Those policies and procedures provide that each NPCC director, officer, and employee shall: (i) avoid and refrain from involvement in situations where there is an actual conflict of interest; (ii) disclose any actual or potential conflicts of interest that may arise; (iii) recuse himself or herself from participation in any action involving an actual or potential conflict of interest; and (iv) refrain from voting on any actions where there is an actual or potential conflict of interest.

### ***Compliance Monitoring Tools and Procedures***

NPCC utilizes a number of tools to execute its audits, several of which are highlighted in this section. NPCC instituted an improved process in order to facilitate its data reviews in both pre-audit and on-site phases. Its pre-audit process involves several rounds of questions and answers between NPCC and the registered entity relating to a subset of Reliability Standards within the audit scope. The NPCC auditor catalogs the data requests in an evidence tracking spreadsheet. Following this initial evidence review, NPCC provides the evidence tracking spreadsheets to the registered entity prior to on-site activities. During the on-site portion of the audit, the evidence tracking spreadsheets are used by the audit team to direct SME interviews and record additional questions and data requests determined throughout the interview process. NPCC also developed a change management process to ensure the integrity of evidence tracking spreadsheets. At the end of each day of the audit, the NPCC audit team reviews the updated evidence tracking spreadsheets with the registered entity in a debrief.

NPCC's Compliance Data Administration Application (CDAA) is central to its compliance monitoring efforts. All registered entities in NPCC are required to use the CDAA to submit self-certifications and self-reports. Information submitted into the CDAA is automatically placed into CITS. The CDAA database provides multiple functionality, including:

- (1) Viewing Regional Entity and NERC requirements per a registered entity's function(s);
- (2) Reviewing compliance information prior to submittal;
- (3) Submitting compliance documentation;
- (4) Generating compliance reports; and
- (5) Tracking mitigation plans.

### ***Quality Assurance***

NPCC's audit processes are documented in its compliance procedures; these procedures are reviewed on a periodic basis.<sup>44</sup> Following the conclusion of every on-site and off-site audit, NPCC asks registered entities to complete a feedback form. NPCC's audit group reviews comments in order to assess how to improve its processes. NPCC chooses to include detailed information and justification for all audit conclusions in the nonpublic audit reports, including "No Finding" and "Not Applicable." NPCC performs a quality check of draft reports prior to sending them to registered entities for comment. As a result, NPCC does not always meet the 60-day timeline for issuance of audit reports. Additionally, in 2013, NPCC began assigning a minimum of two auditors, in addition to the audit manager, to each off-site audit. This allows the auditors to learn from each other and provides additional quality assurance. Prior to 2013, NPCC assigned a minimum of one auditor, in addition to the audit manager, to each off-site audit.

### ***Guidance and Training for Industry Stakeholders***

Since 2009, NPCC has provided the same level of resources for its Training, Education, and Operator Certification program. NPCC dedicated 0.1 FTE to its Training, Education, and Operator Certification program in 2009.<sup>45</sup> For 2013, NPCC also dedicated 0.1 FTE to this program.<sup>46</sup> NPCC utilizes its semi-annual standards and compliance workshops as its main mechanism for outreach to its registered entities, and these activities are budgeted in those respective program areas. NPCC also conducts webinars open to all NPCC registered entities on an as-needed basis. It also posts question-and-answer documents on its website as appropriate. NPCC responds to individual requests from registered entities, but if an individual concern can be applied to all registered entities, NPCC will post a *Compliance Guidance Statement* or clarification

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<sup>44</sup> Available at: <https://www.npcc.org/Compliance/Compliance%20Procedures/Forms/Public%20List.aspx>.

<sup>45</sup> 2009 Business Plan and Budget, Northeast Power Coordinating Council, Inc., June 24, 2008.

<sup>46</sup> 2013 Business Plan and Budget, Northeast Power Coordinating Council, Inc., June 26, 2012.

to address that concern. NPCC hosts regular stakeholder-based Compliance Committee meetings to disseminate the latest information regarding the compliance program to industry stakeholders. Many of these regularly-scheduled meetings are hosted on a web conferencing platform to enable broad and cost-effective participation. NPCC also developed an internal entity guide to assist registered entities in meeting quarterly reporting requirements pursuant to PRC-004 and NERC ALR4-1.

In 2013, NPCC implemented a Physical Security Outreach program. Under this program, NPCC physical security SMEs performed physical security assessments for registered entities that have requested such assistance. NPCC has developed a new Cyber Security Outreach program for 2014.

### ***Maintaining Confidentiality***

There are strict confidentiality requirements<sup>47</sup> associated with all CMEP activities. NPCC follows the CMEP and §1500 of the NERC ROP to maintain the confidentiality of all confidential CMEP-related activities. Additionally, NPCC staff involved in CMEP-related activities have signed confidentiality agreements.

### ***Participation in RAI***

As part of the RAI initiative described in NERC's *Overview of NERC Activities and Accomplishments in the Five-Year Period*, NPCC participated in efforts to develop the Auditor Manual for the ERO. NPCC also participated in the RSAW Working Group to ensure commonality on audit approaches to the NERC Reliability Standards. NPCC senior management participated in the RAI workgroups charged with developing a framework for Entity Risk Assessment and Internal Control Assessment. NPCC also participates in various Regional Entity compliance and enforcement groups to further consistency in compliance applications across the Regional Entities.

## **v. ReliabilityFirst Corporation**

### ***Department Structure / Staffing / Conflict of Interest Avoidance***

During the assessment period, three departments carried out ReliabilityFirst's CMEP functions: (i) Compliance Audits (handling audits and spot checks of compliance with Reliability Standards by registered entities);<sup>48</sup> (ii) Investigations and Compliance Services (handling compliance investigations, registration and certification, self-certifications and periodic data submittals, complaints, and industry training); and (iii) Enforcement (handling all aspects of

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<sup>47</sup> See ROP §402.8 (NERC Oversight of the Regional Entity Compliance Monitoring and Enforcement Programs — Confidentiality).

<sup>48</sup> Upon the implementation of the CIP Reliability Standards, Compliance Monitoring was subdivided into a CIP Compliance Audit department and an Operations and Planning Compliance Audit department.

enforcement actions, including fact and circumstance review, risk-harm assessment,<sup>49</sup> mitigation plan review and validation, and the negotiation and drafting of settlements and final disposition documents).

At the beginning of 2014, ReliabilityFirst reorganized its compliance structure in order to more clearly focus around risk and to support RAI. Presently, ReliabilityFirst's Compliance Monitoring group handles compliance audits, spot checks, investigations, and complaints, and is subdivided into two departments: (i) a CIP Compliance Monitoring department and (ii) an Operations and Planning Compliance Monitoring department. ReliabilityFirst created a new Reliability Assurance and Monitoring group, which is comprised of three departments: (i) Entity Development (which conducts assist visits, appraisals, certifications, and entity training); (ii) Risk Analysis & Mitigation (which conducts risk-harm assessments, handles mitigation activities, and conducts risk-based assessments, event analyses, and analytics); and (iii) Standards and Services (which is responsible for Reliability Standards, registration, self-certifications and data submittals). ReliabilityFirst's Enforcement group is now housed under Legal & Regulatory Affairs.

ReliabilityFirst's Compliance department (consisting of the Compliance Monitoring and Reliability Assurance and Monitoring groups) consists of 33 positions. Many employees within those positions have at least 15 years of industry experience. Additionally, many of ReliabilityFirst's compliance staff are registered professional engineers, and many are NERC-certified system operators. ReliabilityFirst's CIP auditors have extensive experience in information technology and cybersecurity and hold various security, audit, and IT certifications.

ReliabilityFirst requires regular training for its Compliance staff. ReliabilityFirst's Compliance Audit Procedure has specific training requirements that its audit team members must complete prior to attending an audit. ReliabilityFirst audit team participants and ReliabilityFirst observers must complete all required NERC auditor training courses. All ATLS must complete the *Fundamentals of Auditing for NERC Compliance Team Leaders* and *Gathering Quality Evidence* modules. All other audit team participants must complete the *Fundamentals of Auditing for NERC Compliance Audit Team Members* and *Gathering Quality Evidence* modules. Audit team members participate in various auditor training sessions and workshops. ReliabilityFirst sends its auditors to NERC-led training events whenever they occur. ReliabilityFirst also holds its own staff training week during which it provides on-site training to all staff members, including auditors. For example, during the 2013 ReliabilityFirst training week, ReliabilityFirst's Operations and Planning auditors received training on protection systems, while its CIP auditors received training on various cybersecurity issues. All auditors received training on the evaluation and communication of risk and using risk-based criteria in informed decision-making.

ReliabilityFirst has adopted policies and procedures to avoid conflicts of interest in its CMEP work in order to maintain the independence of its compliance staff. All ReliabilityFirst employees, contractors, and directors are governed by the ReliabilityFirst *Conflict of Interest Policy*, the *ReliabilityFirst Code of Business Conduct and Ethics*, and §1500 of the NERC ROP.

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<sup>49</sup> To enhance its risk determination process in enforcement, ReliabilityFirst developed a risk-harm assessment process which, among other things, requests technical experts to answer a series of questions about the risk and harm posed by each violation using a common scale to ascertain a quantified risk assessment.

Its employees and contractors must sign and adhere to nondisclosure and confidentiality agreements and complete conflict of interest forms. ReliabilityFirst does not allow stakeholder participation in its compliance or enforcement activities. Further, ReliabilityFirst does not allow its industry sector directors to participate in settlement discussions with ReliabilityFirst on behalf of their Registered Entity.<sup>50</sup>

### ***Compliance Monitoring Tools and Procedures***

ReliabilityFirst utilizes a number of tools to execute its audits, several of which are highlighted in this section. During the assessment period, ReliabilityFirst implemented changes to its compliance monitoring processes and tools to ensure that they are consistent with NERC guidance, other Regional Entities, and GAGAS.

Most entities in the ReliabilityFirst footprint utilize an application called “Color-Code-It” to make evidence submittals which saves audit teams considerable review time and helps ensure a comprehensive and a focused audit or spot check. Use of this application also allows registered entities to organize and monitor their own compliance, maintain internal controls, and reduce the burden of compliance monitoring.

ReliabilityFirst uses a pre-audit review period to review evidence submittals, seek additional information, make compliance determinations, and develop a focused requirement listing to be addressed at the audit review. Audit reviews are typically scheduled two to three weeks prior to the audit. ReliabilityFirst believes that this improvement has provided the time to do a very comprehensive audit and maintain focus on items which need more attention or clarification.

During the assessment period, ReliabilityFirst began to develop and implement an audit management system. This system will allow ReliabilityFirst to manage audits, spot checks, and potentially other monitoring processes of an entity in one application. The software resembles a project management system and has been developed to follow the various steps of an audit checklist, such as planning, pre-audit review, production, reporting and metrics. This system provides auditors with a structured format to follow and help to ensure consistency and completeness in each audit that is performed.

ReliabilityFirst has developed and implemented a risk-based assessment process. This process was initiated in June 2011. During the risk-based assessment process, a designated cross-functional team<sup>51</sup> conducts a risk assessment of a registered entity and makes recommendations to help shape the scope and focus of the registered entity’s upcoming compliance audits and/or spot checks. During the assessment, the team evaluates the potential impact of the registered entity on the BPS based upon various factors, including the registered entity’s registration, size, location, technical characteristics (e.g., existence of special protection systems), organizational makeup, compliance history and culture, and trends and emerging risks in the industry. ReliabilityFirst implemented this process based on guidance from NERC. ReliabilityFirst will refine the risk-

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<sup>50</sup> See 2014 Joint Regional Entity Self-Assessment (JRESA) Appendix 2-C at 21.

<sup>51</sup> This cross functional team includes representatives from the ReliabilityFirst engineering, compliance audit, compliance enforcement, and reliability assurance departments.

based assessment process further throughout 2014 to develop a comparable, repeatable process that is aligned with efforts being undertaken under RAI.

ReliabilityFirst's webCDMS system is central to its compliance monitoring efforts. ReliabilityFirst uses webCDMS as its information management tool to collect securely, track, and monitor compliance information from its registered entities. The database provides multiple functionality including:

- (1) Linking Regional Entity and NERC requirements to a registered entity's function(s);
- (2) Allowing registered entities to review compliance information prior to submittal;
- (3) Allowing registered entities to submit compliance documentation, including self-reports, self-certifications, and mitigation plans;
- (4) Allowing ReliabilityFirst and registered entities to generate compliance reports; and
- (5) Allowing ReliabilityFirst to track mitigation plans.

### ***Quality Assurance***

ReliabilityFirst's quality assurance processes are contained within its internal compliance procedures, which ReliabilityFirst reviews on a periodic basis. The ReliabilityFirst Audit Procedure requires ReliabilityFirst to follow a multi-layered quality review process for its draft audit reports, which includes peer reviews and management reviews. The ReliabilityFirst Audit Procedure also requires ReliabilityFirst to ask entities to provide feedback on the audit process and any other concerns they may have, using a feedback form. ReliabilityFirst then uses the feedback and concerns for quality assurance and continuous improvement.

### ***Guidance and Training for Industry Stakeholders***

Since 2009, ReliabilityFirst increased its training resources for its Training, Education, and Operator Certification program, which provides continuing education hours through the NERC Continuing Education program. ReliabilityFirst dedicated 0.05 FTE to its Training, Education, and Operator Certification program in 2009.<sup>52</sup> For 2013, ReliabilityFirst increased training resources to 3.1 FTEs.<sup>53</sup>

ReliabilityFirst uses several different methods to communicate with and train its registered entities. ReliabilityFirst has implemented an "Assist Visit" program. Under this program, a registered entity may request a one-on-one or small group meeting where ReliabilityFirst provides guidance on compliance-related activities. Assist Visits can be in the form of a conference call, web meeting, or on-site visit, and topics can range from helping a registered entity become more

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<sup>52</sup> 2009 Business Plan and Budget, ReliabilityFirst Corporation, August 13, 2008.

<sup>53</sup> 2013 Business Plan and Budget, ReliabilityFirst Corporation, June 22, 2012.

familiar with general compliance-related material and activities to specific guidance on an area of concern. ReliabilityFirst has prepared and implemented an internal policy and procedure that requires it to internally document Assist Visit training activities to extrapolate and share generic lessons learned where appropriate. The policy and procedure ensures that ReliabilityFirst documents its Assist Visit training activities in a uniform manner, which will help it better distill Assist Visits into useful lessons learned to share with ReliabilityFirst stakeholders where appropriate.

ReliabilityFirst also provides a monthly newsletter to approximately 600 compliance contacts at its registered entities. This newsletter provides registered entities with news and information relating to reliability and compliance activities. In addition, ReliabilityFirst provides a monthly compliance update letter that provides the registered entities with any changes made to the compliance monitoring schedule and the due dates of compliance submittals. ReliabilityFirst's public website provides a number of compliance and technical materials to assist registered entities in their compliance program implementation.

ReliabilityFirst also hosts bi-annual compliance workshops and periodic webinars throughout the year to train registered entities on compliance processes, reliability initiatives, and the Reliability Standards. In addition, ReliabilityFirst holds a monthly conference call with web presentation capabilities for registered entities; this monthly call is an open forum for registered entities to voice concerns, ask questions, and receive information.

### ***Maintaining Confidentiality***

ReliabilityFirst has a variety of security measures in place that are designed to protect confidential compliance information. All ReliabilityFirst laptops have encrypted hard drives, minimizing the risk of confidential information being disclosed in the event of a lost or stolen laptop. ReliabilityFirst requires employees to change the passwords on their laptops every 90 days, and requires work phones to be password protected. ReliabilityFirst's offices have physical security measures including badge readers and access badges for all employees. Visitors must be escorted by ReliabilityFirst employees in nonpublic areas of the offices.

ReliabilityFirst uses a confidential and secure extranet website to exchange documents with a registered entity during a compliance monitoring process or an enforcement action. To provide another layer of protection, ReliabilityFirst encrypts sensitive documents.

There are strict confidentiality requirements<sup>54</sup> associated with the investigation of any complaints regarding such potential violations of Reliability Standards. ReliabilityFirst follows the CMEP to maintain the confidentiality of any complainant and maintains a complaint reporting form on its web page.

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<sup>54</sup> See NERC ROP §402.8 (NERC Oversight of the Regional Entity Compliance Monitoring and Enforcement Programs — Confidentiality).

### *Participation in RAI*

ReliabilityFirst participated in the conceptualization, development, testing, and integration of several RAI programs. ReliabilityFirst led a series of pilot programs to test the evaluation of internal controls at registered entities using an appraisal process. As part of the RAI, ReliabilityFirst participated in efforts to develop the Auditor Manual. ReliabilityFirst also participated in the RSAW Working Group to ensure commonality on audit approaches to the NERC Reliability Standards. In the enforcement area, ReliabilityFirst staff participated in the Aggregation of Minimal Risk Issues pilot program, maintaining the sole MRRE log. Additionally, ReliabilityFirst staff participated in the Enforcement Discretion pilot program and served on the *ERO Self-Report User Guide* and *ERO Enterprise Mitigation Plan Guide* drafting teams. Further, ReliabilityFirst staff participated in the process to develop improvements for the compliance and enforcement oversight of MRREs. Finally, ReliabilityFirst participates in various Regional Entity compliance and enforcement groups to further consistency in compliance applications across the Regional Entities.

#### **vi. SERC Reliability Corporation**

##### *Department Structure / Staffing / Conflict of Interest Avoidance*

SERC's CMEP function is split into two departments, (i) Compliance and (ii) Enforcement, each with its own assigned personnel. SERC Compliance staff utilize off-site and on-site audits, spot checks, and other compliance monitoring methods to assess registered entity compliance with NERC Reliability Standards. Compliance is also responsible for registering users, owners, and operators of the BPS and for certifications. Compliance staff prepare detailed reports on each audit and make recommendations to Enforcement about possible violations of NERC Reliability Standards.

SERC Enforcement staff undertake an independent review of the facts and circumstances surrounding each possible violation discovered by Compliance staff or through the other discovery methods. If a sufficient basis exists, then Enforcement staff determine the complete scope of the violation and the actual and potential risk to the reliability of the BPS. The segregation of duties between Compliance and Enforcement staff establishes independence between those making the findings and those determining and negotiating penalties and sanctions.

In 2009, SERC had six Operations and Planning auditors and two CIP auditors. In 2014, SERC has seven Operations and Planning auditors and eight CIP auditors. SERC Operations and Planning audit team members possess the education, industry experience and technical expertise in planning and real-time operations necessary to conduct audits. Several of the Operations and Planning auditors are NERC-certified system operators. Many of the SERC CIP audit team members possess physical security or information security credentials, professional engineering licenses, and/or industry experience. For Operations and Planning audits, SERC audit teams work in two groups. One group reviews audit evidence for NERC operations Reliability Standards and the other group reviews evidence for planning Reliability Standards. For CIP audits, SERC audit teams also work in two groups. One group reviews evidence for physical security Reliability Standards and the other group reviews evidence for cybersecurity Reliability Standards. Each group has a lead moderator and a scribe.

SERC uses industry subject matter experts (ISMES) from various registered entities that are members of SERC as participants in the audit team. The ISMEs help the audit team to review evidence, and provide insight into issues that the audit team may encounter throughout the audit process. While ISMEs are involved in every aspect of the audit, including interviews of the audited entity's SMEs, they are not voting members of the audit team. ISMEs bring knowledge of the latest changes that are occurring within industry and in the individual ISME's organization. ISMEs are required to sign nondisclosure agreements and complete a conflict of interest form. SERC reviews the conflict of interest forms before assigning ISMEs to audits. If a conflict exists or there is the appearance of a conflict, SERC will assign an ISME to an audit of a different registered entity.

SERC audit team members participate in various SERC internal auditor training sessions, consultant-provided auditor training sessions, NERC auditor training modules, NERC audit team lead training, and ERO auditor workshops. NERC uses training accountability databases to confirm the credentials of audit team members. SERC requires all audit team members to complete "Just-In-Time" training if the audit team member has not completed appropriate training in the last 90 days. The purpose of this training is to refresh fundamental concepts of auditing and thereby supplement that which is required by NERC. This additional training is an excellent method to re-enforce the importance of quality evidence and documentation during the audit process.

Cross-training is also an important feature of auditor training at SERC. Early in the assessment period, SERC utilized CIP auditors as scribes during Operations and Planning audits so that the CIP auditors would have an opportunity to learn the audit process and approach with Operations and Planning Reliability Standards. SERC auditors have also participated on audit teams in other Regional Entity footprints to cross-train and learn.

To determine the skill level required for auditors, SERC relies on feedback from existing audit staff, the input and experiences of NERC and the other Regional Entities, and changes in the Reliability Standards and industry. SERC anticipates training needs by looking at gaps that exist in the audit teams and focuses training on addressing those gaps. SERC considers the direction in which the ERO and other Regional Entities are moving and, if needed, adapts its training plans and desired skill sets to address those needs. SERC also considers new or revised Reliability Standards and the audit approaches associated with them, and provides training if necessary. SERC also listens to what the auditors identify as useful training and development opportunities and allows them to pursue relevant opportunities to strengthen their skills.

SERC has a documented conflict of interest policy which applies to all SERC staff. The conflict of interest policy requires SERC staff to provide an annual update of any employment or director or officer relationships with SERC registered entities, financial interests in any businesses from the energy sector other than SERC, and any business relationships with energy sector businesses other than SERC by the SERC employee or members of the employee's immediate household. SERC personnel with a financial interest in a registered entity or any other current conflict are not allowed to review, discuss, or participate in compliance or enforcement activities.

### *Compliance Monitoring Tools and Procedures*

SERC utilizes a number of tools to execute its audits, several of which are highlighted in this section. As an overarching procedure in completing and tracking the audit progress, SERC uses its audit event tracking spreadsheet. In this spreadsheet, SERC details the actions required to successfully administer an audit and notes the completion of milestones. Registered entities use an internet-based portal for the transmission of audit information and the audit RSAWs and pre-audit questionnaires. During on-site audits and throughout the period leading up to the audit, SERC utilizes email notifications, worksheet summaries, and spreadsheet tables for tracking the review of evidence and for delivering updates to the registered entity and audit team members. SERC also uses established ERO auditor tools, including the RAT-STATS sampling tool and RSAWs. SERC also uses a pre-populated spreadsheet to document the review status for each requirement, including data requests and follow-up questions to be asked on-site. The SERC audit team uses a tool called an audit workbook. This workbook accounts for each of the Reliability Standards and associated requirements that compose the audit scope, any outstanding data requests, and a list of ongoing findings by the audit team.

Until 2013, SERC did not perform formal pre-audit reviews. The absence of a formal pre-audit review is an area of concern because formal pre-audit reviews and the opportunity to thoroughly review documentation would provide SERC with more time to investigate exceptions to audit procedures. It also helps to ensure that sufficient evidence is collected. In 2013, SERC began conducting pre-audit reviews of evidence submittals, which allowed audit teams to better prepare for audits and seek additional information as needed before arriving on-site. Audit reviews are typically scheduled two to three weeks prior to an audit. These efforts have allowed SERC to reduce its time on-site, thereby reducing the burden on the registered entity, and ensure that the on-site audit focuses less on preliminary data collection and more on reviewing higher risk issues and areas where additional clarification is needed.

While SERC has a comprehensive process for registered entity assessment and audit scoping, the associated documentation supporting this process was not thorough until recently. Maintaining thorough audit scoping documentation is an auditing best practice per GAGAS. Adequate scoping helps justify auditing the areas that pose potential risk to the BPS. Starting in mid-2013, SERC conducts an inherent risk assessment and internal controls review (if appropriate) of the registered entity to determine the audit scope and scale. This includes a review of registered entity compliance history, events and misoperations history, registered entity specific data, regional factors affecting reliability, legal or regulatory issues affecting compliance, and public information about the reliability impact of the registered entity. Detailed audit scoping will enable SERC management to better supervise and assess audits. SERC is now actively working to build GAGAS audit principles into its audit process. SERC's sampling methodology could be improved by integrating NERC's *Sampling Methodology Guidelines and Criteria* in order to avoid inconsistency in identifying and quantifying population, sample sizes, sample selection and lack of documentation memorializing sampling procedures and to avoid incorrect conclusions.

SERC tracks mitigation plans in CITS, a compliance information tracking system used by SERC, FRCC, and NPCC. CITS allows SERC to track mitigation plans submitted by registered entities, any revisions requested by SERC, and certifications of mitigation plan completion. SERC works with registered entities to answer questions about SERC's expectations for mitigation plans

and encourages them to submit mitigation plans in a timely manner. SERC occasionally asks registered entities to submit revised mitigation plans when the proposed mitigation plan milestones would result in an extended period of noncompliance that would pose an additional risk to the reliability of the BPS.

SERC presently is unable to consolidate its compliance and reliability assessment portals because they are hosted on separate systems. SERC is exploring an enhancement to these portals that that will provide a registered entity with a summary of all forms (Compliance, Reliability Assessments, and Reliability Services) due for that entity. This will allow users to navigate between both portals to complete the required filings.

SERC develops an annual reporting schedule which identifies required periodic data submittals. Once the matrix is developed, SERC posts it to its website and Compliance Portal, and notifies its registered entities. The Compliance Portal automatically assigns the applicable periodic data submittals to each registered entity's portal site, based on the schedule, identifying the due dates. SERC monitors the submittal of each periodic data submittal using a reporting tool and issues a notification to the registered entity's designated contacts for any periodic data submittals that have not been submitted to SERC. The data received from the periodic data submittals are reviewed and any potential noncompliance issues are documented and reported to Enforcement.

### ***Quality Assurance***

SERC's internal process requires a management review within two weeks of an audit engagement, and prior to the audit exit briefings before a decision is made with respect to the registered entity's compliance with NERC Reliability Standards. The management review evaluates the significant judgments made by the audit team and the related conclusions reached in forming the overall conclusion on the engagement. SERC Enforcement staff reviews the audit team's findings of noncompliance and makes a final determination before notifying the registered entity and NERC of any possible violations.

SERC Compliance staff meet weekly and discuss lessons learned after each audit. If appropriate, a plan is developed for any areas that need changes or improvements internally. SERC also develops lessons learned as part of its outreach efforts and these are shared with registered entities. The Operations and Planning and CIP audit groups each have a point of contact for their respective areas who are made aware of any trends or important information that they feel should be communicated to SERC registered entities. A brief description and observations are written and posted quarterly on a dedicated area of the SERC website where registered entities can review it.

SERC has a document retention policy that requires audit documents be maintained for seven years. SERC has a document management system with a retention policy service that allows for the configuration of retention policies. The system also requires administrative permissions to delete documents, files, and folders.

### ***Guidance and Training for Industry Stakeholders***

Since 2009, SERC increased its training resources for its Training, Education, and Operator Certification program, which provides continuing education hours through the NERC Continuing

Education program. SERC dedicated 1.4 FTE to its Training, Education, and Operator Certification program in 2009.<sup>55</sup> In 2013, SERC delivered its training program through 2.41 FTEs.<sup>56</sup>

A catalog of all SERC outreach and training has been posted to the home page of the SERC website. Three compliance seminars are held annually with one focused exclusively on CIP topics. In addition, periodic Open Forum WebEx sessions are scheduled along with focused webinars on new and/or revised Reliability Standards and changes in regulatory policy such as the new BES definition process. Specific training on SERC policy changes and enhancement to tools offered to registered entities is also conducted on an as-needed basis. The majority of outreach events are offered via WebEx, and recordings are posted to the SERC website. Select events also offer the opportunity to attend in person and/or earn continuing education hours.

The SERC Training, Education, and Operator Certification program provides education and training necessary to understand and operate the BPS. The target audience of the program is BPS operating personnel – including system operations personnel, operations support personnel (engineering and information technology), supervisors and managers, and training personnel. The program held four system operator conferences in 2013, a wide area restoration drill, and several standard-focused webinars and workshops. The program also supports SERC staff training and development as well as the administration of records necessary to maintain status as a NERC continuing education provider. The majority of outreach events are offered via WebEx, and recordings are posted to the SERC website. Select events also offer the opportunity to attend in person and/or earn continuing education hours.

SERC outreach has conducted small entity workshops specifically focusing on topics of interest to smaller registered entities. An informal group consisting of representatives from four small entities is consulted as to what topics are appropriate and of interest to them. The annual *SERC Filing Due Dates* document is posted to the SERC website in Excel format to make it easy for entities to sort by registered function in order to determine what compliance filings are due and when. An email address (serccomply@serc1.org) is available, and publicized in all outreach materials, for entities to contact SERC with any questions they may have.

### ***Maintaining Confidentiality***

SERC has a variety of security measures in place that are designed to protect confidential compliance information. All SERC laptops have encrypted hard drives, minimizing the risk of confidential information being disclosed in the event of a lost or stolen laptop. SERC requires employees to change the passwords on their laptops every 90 days. SERC requires work phones to be password protected and these phones can be remotely wiped. SERC's offices have physical security measures including badge readers, access badges for all employees, and video cameras at all entrances and exits. Visitors must be escorted by SERC employees in nonpublic areas of the offices.

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<sup>55</sup> 2009 Business Plan and Budget, SERC Reliability Corporation, July 9, 2008.

<sup>56</sup> 2013 Business Plan and Budget, SERC Reliability Corporation, July 11, 2012.

In addition, SERC implemented a Protected Entity Information (PEI) program in 2012 to handle confidential CIP information and other protected entity information. This PEI program was implemented in order to allow registered entities to provide SERC with CIP and other confidential information without SERC having to visit registered entities' sites. The PEI program protects this information using standards at least as strict as those in the CIP Reliability Standards. Access to PEI information is restricted to those SERC employees with a need to know who have taken cybersecurity awareness training within the past year and have passed SERC-initiated background checks within the previous seven years. In addition, SERC logs and controls physical access to the hardware used for the PEI program. SERC also logs and controls electronic access to the PEI information stored on that hardware, which is encrypted at rest.

### ***Participation in RAI***

A key focus of SERC's strategic plan for 2013-2015 is to develop, advocate, and support RAI. SERC has established a plan to implement audit function structural improvements to produce more effective, efficient audits that recognize BPS reliability risk. By incorporating risk principles in the planning and execution of compliance engagements, in conjunction with broader RAI outcomes, the focus of SERC and its registered entities will shift towards identification and mitigation of risks to reliability – preventing uncontrolled, unplanned cascading events. Scoping and timing of monitoring activities will move from a mechanical approach (fixed set of entities monitored for a pre-established set of Reliability Standards on a pre-defined frequency) to a risk-based approach customized around SERC-specific reliability issues and tailored to the specific registered entity. Through more extensive information analysis and dialogue with registered entities, SERC staff will seek to fully understand risk and the registered entity's management practices and controls employed to obtain reasonable assurance of the reliable operation of the BPS. Based on this more proactive review and assessment, SERC will adjust the scope and frequency of its compliance monitoring activities with respect to the specific registered entity.

Throughout 2013, SERC worked with an inter-regional team to develop the *Compliance Auditor Handbook* that describes a uniform process for implementing the *Compliance Auditor Checklist*. In addition, SERC piloted a new approach to risk assessments and auditing practices that permits more focused attention and resources on those issues that present the greatest risk to the BPS. Currently, SERC is working with all eight Regional Entities to develop a common methodology to identify and assess risk in a manner consistent with GAGAS criteria.

### **vii. Southwest Power Pool Regional Entity**

#### ***Department Structure / Staffing / Conflict of Interest Avoidance***

The SPP RE CMEP is administered by the SPP RE direct staff organized into three groups: (i) Compliance Monitoring - Operations and Planning; (ii) Compliance Monitoring - CIP; and (iii) Enforcement. The Compliance groups are responsible for registering BPS owners, operators, and users, and monitoring and assessing registered entity compliance with the approved Reliability Standards. The Compliance groups make the initial determination of a registered entity's compliance or noncompliance by performing audits, spot checks, and reviews of self-identified violations. The SPP RE Enforcement group reviews the Compliance groups' findings of noncompliance, notifies registered entities and NERC of possible violations, reviews and verifies

registered entity mitigation plans, determines proposed monetary penalties and non-monetary sanctions, and participates in settlement negotiations. To meet its RDA and ROP obligations and its goals, SPP RE has increased its Compliance and Enforcement staff and its budget.

All SPP RE auditors are required to attend various SPP RE internal auditor training sessions, consultant-provided auditor training sessions, NERC auditor training modules, NERC ATL training, and ERO auditor workshops. Out of the ten personnel assigned to the Compliance groups, one is a NERC-certified system operator, five are certified information system auditors, and four are registered professional engineers.

SPP RE requires all auditors participating in an audit to undergo a conflict of interest review to identify any potential conflicts of interest between an auditor and the registered entity. Similarly, SPP RE also created a *Contractor Conflict of Interest Audit Procedure* that establishes due diligence requirements for the review of contractor conflicts of interest, validates and documents requirements concerning gaps in contractor employment, and identifies contract consulting history.

### ***Compliance Monitoring Tools and Procedures***

SPP RE utilizes numerous tools to facilitate its audits, several of which are highlighted here. SPP RE's audit teams maintain an audit workbook to facilitate evidence request tracking. SPP RE also uses a compliance pre-audit survey, an audit opening and closing presentation template, an operator interview questions template, and a control center checklist template. For CIP audits, SPP RE has implemented the use of a Network Access Policy Tool (NetAPT), which helps auditors with the visualization of the registered entity's network architecture. SPP RE also utilizes a secure file transfer protocol (FTP) server (EFT server) to facilitate the upload and continuous protection of audit evidence.

### ***Quality Assurance***

SPP RE's audit process requires all members of the audit team to participate in the review of evidence and SME interviews. The auditors collectively determine a registered entity's compliance with NERC Reliability Standards. All audit findings are reviewed and approved by SPP RE management. After the Compliance group completes a preliminary screen of a potential noncompliance, it enters the potential noncompliance into SPP RE's webCDMS, and notifies the registered entity and NERC of the potential noncompliance. The Compliance group and the Enforcement group then convene a hand-off meeting to discuss the audit findings. If the Enforcement group determines that sufficient evidence exists to support a possible violation, then the Enforcement group sends the registered entity a notice of a possible violation. The Enforcement group conducts a thorough secondary review of all possible violations before final disposition of a registered entity's noncompliance.

### ***Guidance and Training for Industry Stakeholders***

The SPP RE Outreach staff works closely with the SPP Regional Transmission Organization (RTO) Outreach and Training staff to coordinate an array of training opportunities for all of the registered entities in the SPP RE footprint. In 2013, SPP RE and SPP RTO provided approximately 25,000 continuing education hours of training to over 1,800 participants.

Additionally, training related to Reliability Standards and compliance activities was provided to over 700 participants on webinars, over 800 participants at workshops and over 1,200 participants on conference calls.<sup>57</sup> All SPP RE workshops and webinars are free and open to the public. SPP RE frequently provides speakers to industry groups such as the Registered Entity SME conferences, executive conferences, and numerous SPP RTO technical groups and committees.

SPP RE continues to add to its library of training videos,<sup>58</sup> publish e-newsletters, and organize lessons learned educational sessions. SPP RE has worked to refine its workshop logistics and presentations, and continues to update the SPP RE webpages with relevant compliance materials. SPP RE's CIP Compliance team made an effort in 2013 to ensure registered entities undergoing a CIP audit understood that, as permitted by GAGAS, the SPP RE audit teams perform outreach activities during the course of the audit. This practice is communicated in the initial audit notice to the registered entity. The ATL periodically communicates with the registered entity during the pre-audit stage to gauge the effectiveness of outreach activities. If the entity is receptive to the outreach, this practice is reiterated during the opening audit presentation.

### ***Maintaining Confidentiality***

The SPP RE audit team strictly follows SPP RE's policies and procedures for the custody of confidential audit material. To ensure that the confidentiality of registered entity audit documents is maintained, SPP RE's uses a secure EFT server for storing the registered entity's data during the audit period. To provide yet another layer of protection, SPP RE stores all evidence documents in encrypted form.

### ***Participation in RAI***

SPP RE designated two SPP RE auditors as members of the ECEMG MTF that developed the Auditor Manual. In addition, SPP RE designated one SPP RE auditor as a member of the Pilot Evaluation Committee, and two auditors participated as observers during the ReliabilityFirst entity risk assessment pilot for American Electric Power Service Corporation. SPP RE designated three auditors as members of the RSAW Task Force RAI project, where they assisted in the development of new RSAW templates and a Compliance Application Notice conversion process for the new RSAWs. As a member of the Enforcement Functional Group, SPP RE helped draft the *ERO Enterprise Mitigation Plan Guide* and provided input during the development of the NERC Aggregation and Compliance Exception pilot programs. Internally, SPP RE has taken steps to facilitate the Compliance Exception process by adopting changes to its webCDMS and by implementing a triage process for the screening of incoming compliance issues to identify candidates for compliance exception. A SPP RE registered entity is also participating in the CIP Version 5 transition study to identify issues related to the transition from CIP Version 3 to CIP

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<sup>57</sup> See *2013 Compliance Outreach Report* (December 3, 2013), which was discussion item 3H at the December 10, 2013 SPP RTO Board of Directors/Members Committee meeting, available at: <http://www.spp.org/publications/BODAGD&BKGD121013.pdf>.

<sup>58</sup> SPP RE's video library received the Bronze Quill Award of Merit from the International Associated of Business Communications, Arkansas Chapter (April 2014), available at: <http://vimeopro.com/sppcompliance/re>.

Version 5. SPP RE CIP Compliance staff is working closely with the registered entity to identify and document transition compliance issues. SPP RE has provided training on the RAI program during its workshops and continues to support RAI by conducting outreach as RAI unfolds.

**viii. Texas Reliability Entity, Inc.**

***Department Structure / Staffing / Conflict of Interest Avoidance***

During the assessment period, Texas RE increased its compliance audit staff from 13 to 19 employees, and increased its registration and certification staff from one to two employees plus a supervising director. Audit teams typically consist of the ATL, a dedicated clerk, and team members auditing a subset of requirements included in the audit scope. Many audit team members have over 20 years of industry experience. In 2012, NERC determined that Texas RE needed to increase its CIP audit staffing levels to ensure its continued ability to perform compliance monitoring activities. Since then, Texas RE has increased its dedicated CIP audit staff from four to five employees and cross-trained several Operations and Planning auditors to assist with the workload.

Texas RE auditors participate in various Texas RE internal auditor training sessions, consultant-provided auditor training sessions, NERC auditor training modules, NERC audit team lead training, and ERO auditor workshops. Texas RE has published an audit procedure manual, which contains procedures for confidentiality, training, conflict of interest, and a procedure related to confirmation that the auditor has completed approved training. Texas RE employees must attend ethics and confidentiality training annually and sign agreements confirming that they will disclose any potential conflicts of interest and maintain the confidentiality of registered entity information. During Texas RE's audits, ATLs confirm that confidentiality and ethics agreements have been signed by all audit team members.

***Compliance Monitoring Tools and Procedures***

Texas RE utilizes a number of tools to execute its audits, several of which are highlighted in this section. Texas RE's compliance management tools, specifically its audit planning publications, audit procedures, audit agenda, and audit team expectations document, serve to organize the responsibilities of each audit team member, provide audit timelines, and include a comprehensive achievement matrix of audit milestones.

Texas RE audit teams utilize NERC's *Actively Monitored List of Reliability Standards* (AML) to identify requirements applicable to the audited entity and to scope audits. They use NERC's RSAWs and Texas RE's CMEP guidelines, which are sometimes used to expand the scope of an audit and include Regional Entity-specific reliability compliance requirements. They also employ a RAT-STATS statistical tool to select testing samples and create a workbook addressing each audited compliance requirement. Texas RE developed a CIP audit checklist used during the walk-through portions of a CIP audit to identify critical assets, critical cyber Assets, access points, and all other cyber assets within the electronic security perimeter. Texas RE's CIP audit checklist tool ensures that all areas of audit concern are addressed. Additional examples of audit tools used during on-site audits and throughout the period leading up to an audit include

email notifications, worksheet summaries, and spreadsheet tables for tracking evidence, and for delivering updates to the registered entity and to audit team members.

One of the notable improvements in the auditing process was Texas RE's implementation of webCDMS software in 2012, which allowed it to eliminate the manual tracking and reporting processes and synchronize document submission with NERC's database. Texas RE has also updated its audit desk procedures to ensure that auditors are using uniform processes to determine the scope of audits, notify entities of audits, document audit findings, and ensure that draft audit findings are reviewed by management before being sent to registered entities.

### *Quality Assurance*

Texas RE's audits are led by the Texas RE ATLs, who coordinate audit activities and communicate issues pertinent to the performance of the team's work. These teams meet to review the progress of the audit and at the close of the day, the ATL meets with the entity to review audit progress and clarify the status of outstanding data requests and delivery expectations. All audit documentation is saved on a secure server and is subject to a formal document retention schedule. On the last day of the on-site portion of an audit, the audit team provides a summary briefing to the registered entity, describing any possible issues the team identified. The audit manager also reviews the draft audit findings before providing them to the registered entity for comment. At the conclusion of the audit, the audited entity is provided a questionnaire asking for comments on how the audit process could be improved. Questionnaires are reviewed by Texas RE management and lessons learned from the feedback are shared with audit staff.

### *Guidance and Training for Industry Stakeholders*

Since 2009, Texas RE increased its training resources for its Training, Education, and Operator Certification program, which provides continuing education hours through the NERC Continuing Education program. Texas RE dedicated 0.6 FTE to its Training, Education, and Operator Certification program in 2009.<sup>59</sup> Last year, Texas RE delivered its 2013 training program through 1.75 FTEs.<sup>60</sup> Texas RE has an external relations manager and a communications and external relations coordinator who coordinate scheduling of training and development of training materials; however, most training is conducted by auditors from Texas RE's Compliance department. In an effort to improve outreach and training for smaller registered entities with insufficient resources to participate in-person at compliance workshops, Texas RE offers webinar capabilities. On occasion, Texas RE conducts smaller, in-person training presentations for stakeholders unable to attend annual workshops, but that are experiencing compliance issues identified during audits.

Texas RE offers the following additional sources of guidance and training to industry members:

- (1) A website with information about Texas RE and its activities, including links to CMEP information and enforcement information;

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<sup>59</sup> 2010 Business Plan and Budget, Texas Regional Entity, Inc., June 15, 2009.

<sup>60</sup> 2013 Business Plan and Budget, Texas Regional Entity, Inc., June 27, 2012.

- (2) A listserv for distribution of announcements;
- (3) Monthly regional stakeholder CIP working group meetings which must be attended in person due to the sensitive nature of the shared information;
- (4) “Talk with Texas RE” webinar meetings, which facilitate open discussions of reliability and compliance issues with stakeholders;
- (5) Teleconference meetings of the NERC Standards Review Subcommittee (a subcommittee of the Texas RE Reliability Standards Committee) approximately every two weeks, which serve as a forum for discussion of NERC Reliability Standards under development; and
- (6) The *Texas REview* a monthly newsletter which includes topics related to NERC compliance (including reminders about compliance deadlines), enforcement, and lessons learned.

### ***Maintaining Confidentiality***

Texas RE requires all employees to attend ethics and confidentiality training annually and to sign an agreement requiring them to keep registered entity information confidential. Texas RE also has procedures requiring its employees to keep all compliance information confidential. Texas RE has a hotline and website where anyone can file a complaint regarding a registered entity’s compliance with NERC Reliability Standards, and the complainant may remain anonymous. In addition, Texas RE safeguards the confidentiality of registered entity data by using a secure compliance data portal (WebCDMS), using a secure FTP site for data submission, and maintaining data server security through the use of firewalls, system monitoring and penetration testing. All Texas RE staff are also required to complete annual IT and physical security training.

### ***Participation in RAI***

Texas RE has been working with NERC and the other Regional Entities to implement RAI. In 2013, Texas RE worked with NERC and the other Regional Entities to develop the *Compliance Auditor Checklist*, and provided significant support toward the development of the *Compliance Auditor Handbook*, as found in the Auditor Manual. In 2014, Texas RE helped evaluate the effectiveness of the RAI pilot programs conducted in other Regional Entities. Texas RE is working to encourage collaboration, emphasize consistency and align proven processes. Texas RE co-hosted an RAI and Internal Controls workshop in February 2014, and a follow-up meeting with Texas RE in March 2014 to answer questions received during and after the workshop.

## **ix. Western Electricity Coordinating Council**

### ***Department Structure / Staffing / Conflict of Interest Avoidance***

FERC issued its final orders on February 12, 2014 approving the bifurcation of WECC. Bifurcation resulted in a more focused reliability assurance mission for WECC and Peak

Reliability (Peak) (the new company formed to be the reliability coordinator for the Western Interconnection). WECC will continue as the Regional Entity for the Western Interconnection and focus on RAI activities as it assumes the role of compliance enforcement authority for Peak along with all other registered entities in WECC's footprint. That role includes monitoring and enforcing compliance with mandatory Reliability Standards, as well as having a leadership role in reliability planning and performance assessment of the BPS in the Western Interconnection.

Since January 2009, the Compliance staffing at WECC has increased from 31 to 53 employees, not counting contractors. Staffing increases have occurred throughout Compliance to satisfy the CMEP requirements associated with the increased number of registered entities and registered functions, which to date respectively total 510 and 1,353 respectively, up from the 466 and 1,248 reported in 2009. WECC's number of scheduled audits has almost doubled from 98 in 2009 to 171 in 2013.

WECC's Program Administration department was established in 2008 and restructured in 2012 to ensure the accurate, efficient, and timely exchange of compliance information between registered entities, WECC, and NERC. The department supervises the services and support used by the registered entities and WECC employees to interact with such systems as webCDMS and the WECC EFT server. Staff in this department are currently comprised of one manager and six employees.

Since 2009, the WECC Compliance department has put in place a rigorous training and development program. Like other Regional Entities, WECC struggled initially to fill both Operations and Planning and CIP auditor positions. A recruitment and development plan to recruit, graft and grow expertise included mentoring, cross-training and implementing development milestones programs. WECC also benefits from using industry SMEs as contractors for its audits. These contractors possess operations, planning, and power system knowledge as well as skills and abilities that complement that of WECC's audit staff to fill gaps where specific deficiencies may exist. WECC partners these contractors with less experienced auditors at each audit to provide detailed and in-depth on-the-job training, and educational experiences regarding specific Reliability Standards and requirements. Additionally, all CIP auditors hold at least one relevant certification (e.g. CISA, CISSP).

Audit teams regularly participate in cross-training within their own team through constant rotation in ATL responsibility. In addition, auditors in teams of two are frequently assigned different Reliability Standards and requirements to audit, depending on an audit's scope. This approach provides varied and valuable training opportunities to increase auditor knowledge of and expertise on multiple Reliability Standards. Operations and Planning and CIP SMEs from both Compliance and Enforcement are assigned to participate with auditors on the audit team for at least two audits per year as part of the cross-training effort. This results in a greater understanding of the WECC audit approach by the Enforcement team SMEs, while providing much needed "bench strength" to the audit teams and their ability to satisfy audit staffing requirements. Both Operations and Planning and CIP audit team members in WECC have participated in various WECC internal auditor training sessions, consultant-provided auditor training sessions, NERC auditor training modules, NERC ATL training, and ERO auditor workshops.

WECC conducts conflict of interest checks for its auditors and contractors. WECC's compliance program coordinators (CPCs) are responsible for distributing and collecting these forms. These forms are reviewed by the audit managers and the managing director of compliance at the beginning of every year. In August 2013, WECC included the additional step of having the CPC and the ATL review these forms in connection with every audit, as part of WECC's preliminary audit preparation. This will add an extra layer of review to ensure that the conflict of interest forms are complete and accurate. WECC has also codified these existing and new processes in the CPC informal process manual as part of a basic checklist for audits.

### ***Compliance Monitoring Tools and Procedures***

WECC utilizes a number of tools to execute its audits, several of which are highlighted in this section. WECC performs audits in the timeframes anticipated by the CMEP. WECC's Operations and Planning audit teams rely primarily on RSAWs to record audit findings, interview notes, evidence and samples. While WECC did not initially follow GAGAS audit procedures to conduct audits, particularly in the areas of planning, scope, evidence, testing, sampling and documentation, WECC later adopted various professional resources such as the GAGAS, NERC auditor training guidance and other best practices. WECC leverages the *Compliance Auditor Handbook* and associated *Compliance Auditor Checklist* (as found in the Auditor Manual) in addition to the WECC CIP standard operating procedures for documented audit procedures.

The audit teams use a number of secure tools, leveraged by PGP encryption methodologies, to manage the administrative and logistical support for audits. The primary tool used by the audit team is an Audit Remote File server used to expedite the availability of electronic information to auditors during a remote audit. This tool works in conjunction with WECC's EFT server and the WECC internal Sharedrive. When an entity uploads audit evidence to the EFT server, a WECC employee is notified of the change and moves the files to the correct location within the WECC internal Sharedrive. The software then automatically synchronizes the files on WECC's internal Sharedrive with the files on the Audit Remote File server. This system allows all users to access the exact same information from different connection points.

In 2013, WECC launched the Audit Tracking System (ATS) to help manage the tracking, and the timely completion and filing, of audits. The software minimizes rework, helps prevent errors in documentation, and ensures that all related tasks are completed in a timely manner. There are four pieces to the new ATS: audit scheduling, audit metrics, audit library, and audit report task list. Another feature of the ATS is that metrics are now readily and easily available to managers through the system. The system uses an Audit Library to minimize document duplication by tracking the version history on each file and eliminating multiple copies of the same report. Finally the system incorporates an audit task list that reduces manual oversight by electronically tracking task assignments, completions, and notifications.

WECC has been able to greatly reduce the amount of human and budget resources required for compliance support activities. Actual expenditures in 2010 exceeded \$1.9 million; in 2012 that number dropped to less than \$1.1 million. Starting in 2012, WECC began to concentrate on operational efficiencies that could simplify the growing complexity of managing compliance data and transactions. The single greatest change in that process was upgrading the compliance transaction platform from the WECC Compliance Portal to webCDMS. The new system brought

drastic reductions in the amount of time WECC employees spent on sending data requests, sending reminder notices to registered entities, summarizing compliance data, and transmitting compliance data to NERC.

WECC created an audit report tool that provides readable access to critical data, drives visibility across audit team members and management, and improves the efficiency of the audit report processes. This project streamlines the audit schedule activities and audit report process for audit management, ATLs, and CPCs. The solution minimizes rework, helps prevent errors in documentation, and ensures that all related tasks are completed in a timely manner. This tool also enables management and audit team members to understand workload and prioritize items. Prior to the launch of this tool, significant time and effort was spent on manual oversight.

WECC also created the Compliance Standards Index (CSI). The CSI works by drawing on a number of data sources to place relevant information about Reliability Standards in a single view. The CSI queries NERC's Reliability Standards database, which is the repository for the most current and updated information on Reliability Standards. The system then combines this data with related information such as a link to the WECC RSAW and the WECC AML. Altogether, the CSI allows users to get a more complete view of applicable Reliability Standards.

### ***Quality Assurance***

Audit findings are reviewed by the entire audit team, including the ATL, before a possible violation is identified. All possible violations are then reviewed by an Enforcement SME for confirmation. All audit reports and findings are reviewed and approved by senior Compliance management before being sent to the registered entity and NERC. Post audit feedback forms are completed by audited registered entities and reviewed by the ATL, the audit team and senior Compliance management before being discussed in auditor staff meetings. Lessons learned are discussed on an informal basis in both the Operations and Planning and CIP audit team meetings. CIP audit teams document lessons learned and store them on an internal secure WECC server for future auditor review and reference. Audit documents, including evidence, data and reports, are stored on a dedicated drive and SharePoint and archived according to the WECC formal data retention policy of five years.

### ***Guidance and Training for Industry Stakeholders***

Beginning in 2009, WECC has offered annual training sessions and workshops for operators, schedulers, and dispatchers. During the assessment period, WECC decreased its training resources for its Training, Education, and Operator Certification program, which provides continuing education hours through the NERC Continuing Education program. WECC dedicated 3.5 FTE to its Training, Education, and Operator Certification program in 2009.<sup>61</sup> Last year, WECC delivered its 2013 training program through 1.5 FTEs.<sup>62</sup>

WECC formalized a compliance outreach program in the fall of 2008 with the hiring of a designated individual to act as a liaison with the registered entities and to coordinate various

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<sup>61</sup> 2009 Business Plan and Budget, Western Electricity Coordinating Council, July 9, 2008.

<sup>62</sup> 2013 Business Plan and Budget, Western Electricity Coordinating Council, June 25, 2012.

compliance outreach activities. The director of compliance outreach reported directly to the WECC CEO at that time. This reporting structure assured the separation of Outreach and Compliance Audit and Enforcement. In January 2011, the scope of this position expanded to include outreach to other interested stakeholders. The current position is managing director of stakeholder outreach which reported to the vice president of communications and external affairs during the assessment period and now reports to the vice president and chief administrative officer. This individual is responsible for the coordination of all compliance outreach activities as well as ad hoc outreach for other WECC areas, as appropriate (e.g. BES definitional process).

Below are examples of WECC outreach to registered entities:

- (1) WECC hosts three Compliance User Group (CUG)/Critical Infrastructure Protection User Group (CIPUG) meetings annually. These meetings, held over three days, allow time for industry-only Western Interconnection Forum (WICF) sessions. Attendance records (kept electronically since 2011) indicate that participation continues to increase yearly while satisfaction surveys show favorable responses. The CUG/CIPUG agendas cover a wide range of topics including management updates, regulatory actions, industry trends, new Reliability Standards, audit approaches and best user practices. Registration for 2011 through 2013 was 5,717.
- (2) WECC hosts open webinars on the third Thursday of most months. These sessions are used to provide time-sensitive updates on topics and issues that arise between CUG meetings and reminders of upcoming events and deadlines. Participation is also very good in this Outreach program with 150 to 250 active ports for each webinar. WECC added real time video streaming capability in 2013.
- (3) Starting in January 2011, enforcement SMEs started conducting outreach events to educate registered entities about best practices in submitting information to WECC, and mitigation and prevention of violations. Some of the specific outreach activities include:
  - (a) Eight Steps for Prevention and Mitigation – The goal of this outreach presentation was to share best practices in creating effective mitigation plans. It provided registered entities eight important elements to consider while creating a mitigation plan for a violation.
  - (b) Detection and Future Prevention – The goal of this outreach program was to highlight the importance of determining the root cause and implementing strong detection and preventative measures to reduce the likelihood for future recurrence of violations and security issues.
  - (c) Reliability Standard Specific Outreach – Enforcement SMEs have conducted various events to discuss the audit approach, root cause analysis and effective mitigation solutions for most commonly violated Reliability Standards in the WECC region. Some of these Reliability Standards include: PRC-005; PER-002 and PER-003; PRC-023; VAR-002; and CIP-007.

- (4) The WICF is run by and on behalf of entities subject to WECC and NERC compliance requirements. The purpose of WICF is to provide registered functional entities within the Western Interconnection a venue to share knowledge and lessons learned regarding compliance matters, and to collectively develop best practices.
- (5) CIP 101 is a two-day class held generally in WECC's Salt Lake City, UT meeting space and is taught by WECC cybersecurity auditors. This class has been offered three times and has sold out each time. Agendas include comprehensive discussions of CIP Reliability Standards, audit approaches, best evidence and interactive work between participants and the WECC auditors.
- (6) A "Compliance 101 Webinar" which is a 90-minute session offering an overview of the development of the mandatory compliance program and its major parts. WECC offers this webinar just before each CUG/CIPUG meeting to aid those new to their compliance duties or who may just want refresher training.
- (7) WECC hosts compliance systems (EFT/webCDMS) training and webinars providing registered entities with an opportunity to learn about the improvements to these electronic systems.

### ***Maintaining Confidentiality***

WECC employs a number of security measures to protect confidential compliance information. WECC laptops with access to confidential information have encrypted hard drives, minimizing the risk of that information being disclosed in the event of a lost or stolen laptop. WECC requires employees to change the passwords on their laptops every 90 days. WECC's offices have physical security measures including badge readers, access badges for all employees, and video cameras which cover the building entrances and exits. There is also an on-site security guard for the building during business hours. Visitors must be escorted by WECC employees in nonpublic areas of the offices. Additionally, WECC uses two secure portals/repositories for registered entity submittals: webCDMS and the EFT server.

### ***Participation in RAI***

As part of the RAI, WECC volunteered for the ECEMG MTF that created the Auditor Manual. WECC has also provided its internal training materials to NERC, at its request.

WECC completed its first RAI pilot in 2013 with limited scope and time. WECC provided recommendations to the entity to further consolidate its internal controls. Based on the results, WECC customized the self-certification requirements for the entity. WECC used the entity's feedback to improve its internal controls evaluation process. In May 2014, WECC completed its second RAI pilot. WECC highlighted best practices and recommendations to the entity. A WECC audit team used the results of the controls evaluation to exclude certain requirements from the entity's compliance audit. The entity was also selected for the Compliance Exception pilot. The

entity provided helpful and positive feedback which WECC has used to improve the evaluation process. Currently, the third RAI pilot is in progress.

**C. Compliance Investigations**

The Compliance Investigations group provides quality assurance of the Regional Entities' compliance evaluations of industry compliance assessments from events that have occurred in their footprints. The Compliance Investigation group's process articulates NERC's technical investigations staff review and facilitates a compliance evaluation of BPS events as they relate to the entities involved in the event. It also outlines subsequent compliance responsibilities under the NERC Reliability Standards.

NERC's Compliance Investigations group works closely with Regional Entity compliance staff to review significant BPS disturbances. These reviews include evaluation of events from a compliance perspective, which includes a review of possible gaps in existing NERC Reliability Standards. During such events, registered entities are encouraged to conduct a compliance self-assessment and submit these assessments to the relevant Regional Entity for review. The registered entity is encouraged to self-report possible violations it identifies during this self-analysis. In its oversight role, NERC reviews and analyzes each compliance self-assessment to ensure consistency and to initiate lessons learned or compliance monitoring follow-up activities.

At the beginning of the assessment period, compliance investigations and event-driven compliance evaluations proved difficult to complete at the Regional Entity level, in part due to the need for more resources. NERC found that the Regional Entities had difficulty determining which BPS events required a more detailed review and in understanding what was required of them in compliance investigations. As further detailed in the *Overview of NERC Activities and Accomplishments in the Five-Year Period*, these issues were addressed through several initiatives including the creation of the ERO Event Analysis program and NERC's development of a compliance investigations leaders training class for NERC and Regional Entity staff compliance investigators. The compliance investigations leaders training material is continuously reviewed and improved based on feedback from compliance investigation experiences and changes to GAGAS, CMEP, and the NERC ROP. As a result of these efforts, the Compliance Investigations group regularly processes over 30 events per year and works with the Events Analysis group to publish relevant NERC alerts.

In addition, the Compliance Investigations group handles all complaints reported to NERC regarding alleged violations of NERC's Reliability Standards. These matters are reported through the compliance hotline or by voice messaging. Between March 2009 and December 2012, NERC in collaboration with the Regional Entities, received, processed and closed all 70 complaints that were received by the ERO.

## D. Compliance Enforcement

### 1. Performance of the ERO Enterprise

#### a. Overview

During the assessment period, the Regional Entities made remarkable progress in establishing mature, effective enforcement programs consistent with their obligations under the RDAs and the NERC ROP. The RDAs delegate authority over enforcement of compliance with Reliability Standards. The RDAs provide that NERC shall review the Regional Entities' CMEP as often as NERC deems necessary to ensure that: (1) the Regional Entity's program meets all applicable legal requirements; (2) the actual practices of the Regional Entity reflect the requirements; and (3) the program promotes consistent interpretations across North America of Reliability Standards and comparable levels of sanctions and penalties for violations of Reliability Standards constituting comparable levels of threat to the reliability of the BPS.<sup>63</sup> The NERC ROP require the Regional Entities to make initial determinations of compliance or noncompliance and recommend penalties where authorized,<sup>64</sup> apply penalties and sanctions that bear a reasonable relation to the seriousness of a violation and that follow the directives, principles, and processes set forth in NERC's *Sanction Guidelines*,<sup>65</sup> regularly report on the status of the review and assessment of violations of Reliability Standards as well as associated mitigation plan information,<sup>66</sup> and obtain sufficient resources to meet their delegated obligations, including maintaining sufficient staffing.<sup>67</sup> NERC, as part of its oversight role, regularly reviews Regional Entity enforcement activities to ensure that these obligations are being satisfied and to drive the implementation of best practices in enforcement activities throughout the ERO Enterprise. NERC's oversight activities provide an ongoing view of the Regional Entities' effectiveness in executing their compliance enforcement responsibilities.

At the time of the *Three-Year ERO Performance Assessment Report* (mid-2009), the NERC Reliability Standards had been mandatory and enforceable for just over two years. Early in the implementation of the uniform CMEP, the Regional Entities successfully identified some 2,000 violations from the over 2,700 reported possible violations.<sup>68</sup> Additionally, the Regional Entities addressed a large number of self-reported Reliability Standard violations<sup>69</sup> from the period before

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<sup>63</sup> Section 6 of each RDA contains the provisions relating to delegation of compliance monitoring and enforcement authority.

<sup>64</sup> NERC ROP §402 (NERC Oversight of the Regional Entity Compliance Monitoring and Enforcement Programs).

<sup>65</sup> NERC ROP §401 (Scope of the NERC Compliance Monitoring and Enforcement Program); *Sanction Guidelines* are Appendix 4B to the ROP.

<sup>66</sup> See NERC CMEP, NERC ROP Appendix 4C, at §6.0 (Mitigation of Violations of Reliability Standards).

<sup>67</sup> NERC ROP §403 (Required Attributes of Regional Entity Compliance Monitoring and Enforcement Programs).

<sup>68</sup> *Three-Year ERO Performance Assessment Report*, Attachment 3 at 10-11.

<sup>69</sup> Unless otherwise indicated, "violation" refers to any report of noncompliance submitted to a Regional Entity, regardless of its status as a possible, alleged, or confirmed violation or whether the noncompliance was or will be processed as a "remediated issue" through the Find, Fix, Track and Report (FFT) track.

the Reliability Standards became mandatory and enforceable.<sup>70</sup> NERC recognized in the three-year performance assessment the success of the Regional Entities in the cataloging, processing, and tracking of each violation and the completion of the associated mitigation plans. NERC also recognized that substantial work remained to be done to complete the transition to a more mature enforcement program. In the three-year performance assessment, NERC noted several areas of improvement for the Regional Entities, including increasing the speed of processing violations (and associated mitigation plans) and improving upon the thoroughness and accuracy of the information provided to support each Notice of Confirmed Violation (NOCV) or settlement agreement submitted to NERC for review.<sup>71</sup>

During the current assessment period,<sup>72</sup> NERC and the Regional Entities worked to develop more mature enforcement processes for the ERO Enterprise. NERC and the Regional Entities collaboratively implemented streamlined enforcement processing mechanisms, such as the Spreadsheet Notice of Penalty (SNOP) and FFT enforcement mechanism.<sup>73</sup> NERC and the Regional Entities also worked together to design and build a system for the collection, management, and exchange of compliance-related information between NERC and the Regional Entities. The Regional Entities implemented compliance data systems that interface with NERC's Compliance Reporting, Analysis, and Tracking System (CRATS). These complementary systems are the webCDMS, which is used by MRO, ReliabilityFirst, SPP RE, Texas RE, and WECC, and the CITS, which is used by FRCC, NPCC, and SERC. These systems enable enforcement processing efficiencies and facilitate consistent tracking of violation status across the ERO Enterprise. These systems are continuously evaluated and improved.

For several years, NERC has closely tracked various aspects regarding the overall performance of the ERO Enterprise as it relates to enforcement activities. Beginning in 2013, NERC and the Regional Entities developed and implemented a series of metrics to track and evaluate the performance of the ERO Enterprise and of each Regional Entity. These metrics allow NERC to analyze trends and identify areas where further improvements may be achieved. To facilitate consistent application of these metrics, NERC and the Regional Entities agreed to a set of business rules to govern submission of data to the complementary compliance data systems. For 2014 and beyond, NERC and the Regional Entities have agreed to use some of these metrics to measure achievement of the goals of the *ERO Enterprise Strategic Plan*.<sup>74</sup> Although these metrics were not in place during the entire assessment period, they provide insight into the current status of enforcement processing in the ERO Enterprise, and therefore are used in this evaluation.

NERC recognizes the substantial progress each Regional Entity has made in addressing the enforcement-related issues raised in the three-year performance assessment. NERC also

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<sup>70</sup> *Three-Year ERO Performance Assessment Report*, Attachment 3 at 12.

<sup>71</sup> *Three Year ERO Performance Assessment Report*, Attachment 3 at 11-12.

<sup>72</sup> For purposes of evaluating the Regional Entities' activities, NERC has used a five-year period of January 1, 2009 to December 31, 2013.

<sup>73</sup> The SNOP and FFT enforcement mechanisms are described in §II.D.b.iv below.

<sup>74</sup> See *ERO Enterprise Strategic Plan 2014-2017*, available at: <http://www.nerc.com/gov/Annual%20Reports/ERO%20Enterprise%20Strategic%20Plan%202014-2017%20and%20Performance%20Metrics.pdf>.

recognizes the progress each Regional Entity has made in improving consistency and transparency in enforcement-related processes. However, and as explained more fully below, NERC has identified the need for additional improvements with respect to enforcement processing and the Regional Entities' implementation of certain aspects of the CMEP.

This assessment of the enforcement activities of the Regional Entities begins with a discussion of the collective accomplishments of the ERO Enterprise with respect to enforcement processing and a discussion of general recommendations for areas of improvement. Topics that will be covered include ensuring the timely processing and mitigation of older violations, ensuring the quality of data in the compliance data tracking systems, ensuring the quality of submitted information in settlement agreements and NOCV, and NERC's oversight of the performance of the Regional Entities with respect to certain areas of the CMEP. The analysis of the collective accomplishments of the Regional Entities in enforcement is followed by in-depth analysis of the performance of each Regional Entity in executing its compliance enforcement responsibilities.

**b. Improvements in Enforcement Processing, 2009-2013**

In 2009, at the time of the three-year performance assessment, the Regional Entities had collectively accumulated what was described as a substantial backlog of cases. Of the total 1,926 violations identified by the Regional Entities, only 475 violations had been filed with NERC for its review and for Board of Trustees Compliance Committee (BOTCC) approval as of May 31, 2009. Roughly 75 percent of all violations that had been identified remained to be processed by Regional Entity staff.<sup>75</sup>

During the current assessment period, the Regional Entities have made substantial progress in reducing the number of open violations, despite substantial increases in the numbers of new violations during the assessment period.

**i. The Composition of the ERO Enterprise Caseload**

As shown by the table below, 10,163 violations were reported to NERC by the Regional Entities during the current assessment period. The Regional Entities reported a significant increase in the number of violations from 2010 through 2012, in large part due to the implementation and enforcement of the CIP Reliability Standards:

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<sup>75</sup> *Three-Year ERO Performance Assessment Report*, Attachment 3 at 11.

Violations for all Regional Entities 2009-2013 by Year Reported to NERC  
U.S. Violations Only<sup>76</sup>

<b>Regional Entity</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>Grand Total</b>
FRCC <sup>77</sup>	188	109	141	69	61	568
MRO	60	103	196	166	139	664
NPCC	43	99	130	213	66	551
RFC	123	469	565	505	240	1902
SERC	187	312	309	300	285	1393
SPP RE	132	254	291	173	191	1041
TRE	14	51	430	197	169	861
WECC	571	550	807	818	437	3183
<b>Grand Total</b>	<b>1318</b>	<b>1947</b>	<b>2869</b>	<b>2441</b>	<b>1588</b>	<b>10163</b>

The drop in violations from 2012 to 2013 is attributable to a number of factors.<sup>78</sup> Since the Reliability Standards became mandatory and enforceable, most registered entities have completed at least one full audit cycle and in some instances more than one audit cycle. A number of registered entities have responded to their past compliance audits by improving their management practices, thus decreasing the likelihood of the Regional Entity discovering new violations in recent compliance audits. In addition, the Regional Entities have conducted significant and varied outreach activities. These efforts have included Operations and Planning standards workshops, CIP standards workshops, and training to enhance their registered entities' understanding of the Reliability Standards. Registered entities with better knowledge of the Reliability Standards have improved their compliance cultures, and therefore are less likely to have violated Reliability Standards. The drop in violations is also attributable to an enhancement in the preliminary screening processes as of December 2012. Specifically, this enhancement reduced the likelihood that new potential noncompliance issues were duplicates of issues already being processed.

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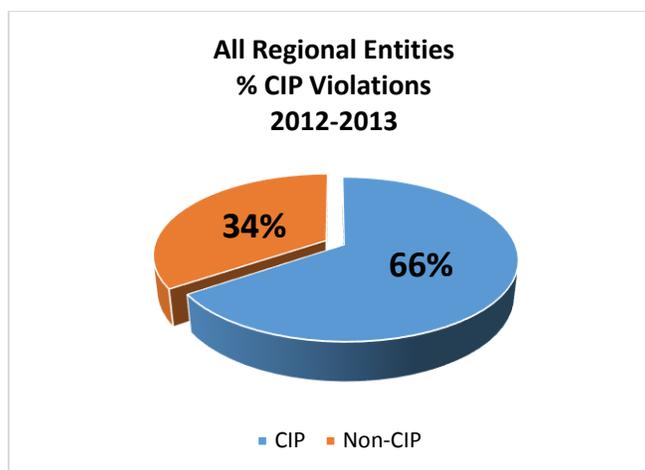
<sup>76</sup> This table reflects all U.S. violations that were submitted via the complementary compliance data systems to NERC's centralized database (CRATS) in 2009, 2010, 2011, 2012, and 2013. This table includes all violations, whether they were later dismissed or were held due to a court, regulator, or appeal. For some violations, the year the violation was discovered and the year the violation was first reported to NERC's centralized database are different. For example, a violation first discovered during an audit in late 2012 may not have been reported to NERC's centralized database until early 2013. Therefore, the total number of violations for a particular Regional Entity or a particular year may vary depending on whether violations are reported by discovery year or by year submitted to NERC's centralized database. To clarify, these differences, where they appear, are attributable to a difference in presentation and reporting rather than an underlying difference in the number of overall violations. For consistency throughout this analysis, the year the violation was first reported to NERC's centralized database is used in this five-year performance assessment unless otherwise specified.

<sup>77</sup> In the JRESA, FRCC reported violations by the year the violations were discovered, rather than the year the violations were submitted to NERC's centralized database. *See* JRESA at 41. As noted above, the differences between the numbers reported by NERC in the table above and the numbers reported by FRCC in the JRESA are attributable to the difference in presentation, rather than an underlying difference in the overall number of violations.

<sup>78</sup> This drop in violations appears whether the number of violations is presented by discovery year or by year reported to NERC's centralized database. When calculated by year of discovery, there was a 12% decline in violations from 2011 to 2012, and a 30% decline in violations from 2012 to 2013.

However, despite the decrease in the overall number of potential noncompliance issues identified, the composition of the ERO Enterprise caseload remained fairly consistent from 2012 to 2013. Since 2010, violations of the CIP Reliability Standards have comprised the majority of violations in each year, with the overall proportion of CIP violations increasing somewhat year over year. CIP violations comprised 66% of the total violations submitted to NERC’s centralized database from January 1, 2012 through December 31, 2013.

Type of Violations Reported to NERC by all Regional Entities, 2012-2013



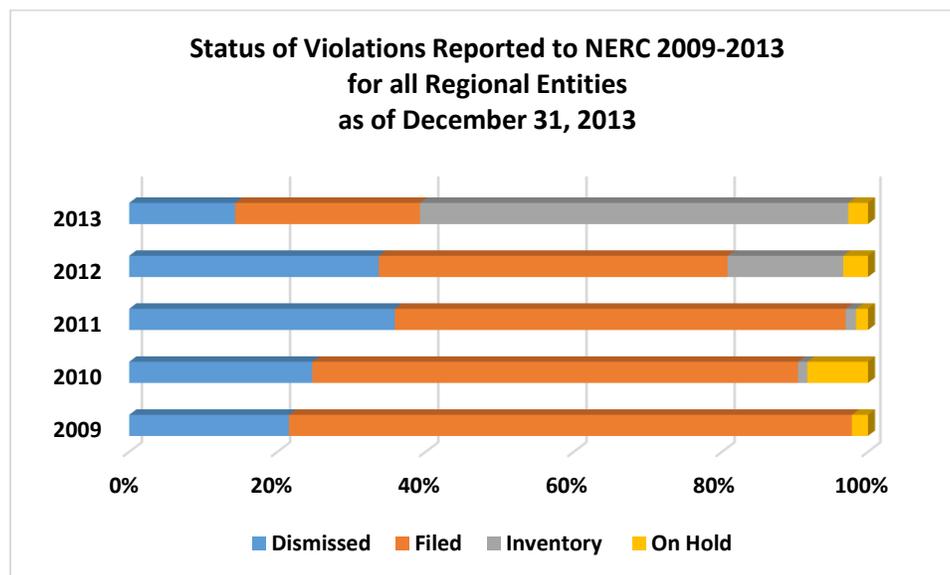
The top five most violated Reliability Standards were CIP-004, CIP-005, CIP-006, CIP-007, and PRC-005. The most violated Reliability Standards were generally consistent across the Regional Entities.

Despite the influx of CIP violations during the assessment period, the Regional Entities actively worked to reduce the number of open violations in their caseloads. As of December 31, 2013, the Regional Entities had processed 100% of the violations available to be processed that were reported to NERC in 2009; nearly 99% of the violations available to be processed that were reported to NERC in 2010 and 2011; and 84% of the violations that were reported to NERC in 2012.<sup>79</sup> Violations reported to NERC in 2012 and 2013 comprised over 95% of the total 1,375 violations available for processing as of December 31, 2013.

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<sup>79</sup> NERC recognizes that the Regional Entities are not able to process certain violations because the violations are being held by or due to an appeal, a court, or a regulator. NERC refers to these violations as being “on hold.” In evaluating the performance of the Regional Entities with respect to violation processing, NERC excludes any “on hold” violations.

Status of Violations Reported to NERC 2009-2013 for all Regional Entities



As of December 31, 2013, the majority of violations in the ERO Enterprise inventory (67%) consisted of violations reported to NERC in 2013.<sup>80</sup> In addition, during 2013, the Regional Entities processed approximately 39% of the new violations reported to NERC in 2013. By reducing the number of older violations, the Regional Entities are moving toward a caseload consisting primarily of newer violations. The efforts of the Regional Entities to process older violations in their inventories, which has resulted in the reduction in caseload, are described more fully in §II.D.1.b.iii below, Efforts to Reduce Older Caseload.

**ii. The Caseload Index**

As noted above, NERC and the Regional Entities developed a series of enforcement processing metrics to aid in monitoring and improving the efficiency of enforcement processing throughout the ERO Enterprise. The Caseload Index is one of these metrics. It is used to facilitate planning, coordination, and collaboration between NERC and the Regional Entities.

The Caseload Index is a snapshot of current enforcement processing rates. It measures the amount of time, in months, that it will take the ERO Enterprise (or an individual Regional Entity) to eliminate the existing inventory, assuming no new violations are received. This calculation is based on the processing rate of the previous 12 months. For example, if the Caseload Index is calculated on December 31, 2013, the time to process existing inventory will be based on the processing rate from January 2013 to December 2013. A lower Caseload Index indicates that the ERO Enterprise will need fewer months to clear out its existing inventory of violations available to be processed, based on the processing rate of the previous 12 months. A higher Caseload Index indicates that the ERO Enterprise (or individual Regional Entity) would need more months to clear

<sup>80</sup> The violations in “inventory” refers to identified violations that have not completed processing and are not “on hold.”

out its existing inventory. The Caseload Index may fluctuate from month to month as violations are received and processed, but is helpful for evaluating performance over time.

NERC first began monitoring the Caseload Index in 2011 and has targeted achieving a lower average ERO Enterprise Caseload Index in each successive year. As of July 1, 2011, the average ERO Enterprise Caseload Index was 35 months. NERC set a goal to achieve an average ERO Enterprise Caseload Index of 24 months by the end of the year. By the end of 2011, the average ERO Enterprise Caseload Index was 24 months, meeting the goal and marking a substantial improvement from just six months earlier.

In 2012, the calculation of the Caseload Index was refined to account for matters processed through dismissal. The average ERO Enterprise Caseload Index as of December 31, 2012 was 13.3 months.<sup>81</sup> For 2013, NERC sought to achieve an average ERO Enterprise Caseload Index of under 10 months. Throughout 2013, the Caseload Index decreased fairly steadily to approximately 6.5 months at the end of the year.

The overall decrease in the ERO Enterprise average Caseload Index since 2011 reflects the substantial work by NERC and the Regional Entities to implement processing efficiencies and reduce the number of older open violations. These efforts are described more fully in the next section.

### **iii. Efforts to Reduce Older Caseload**

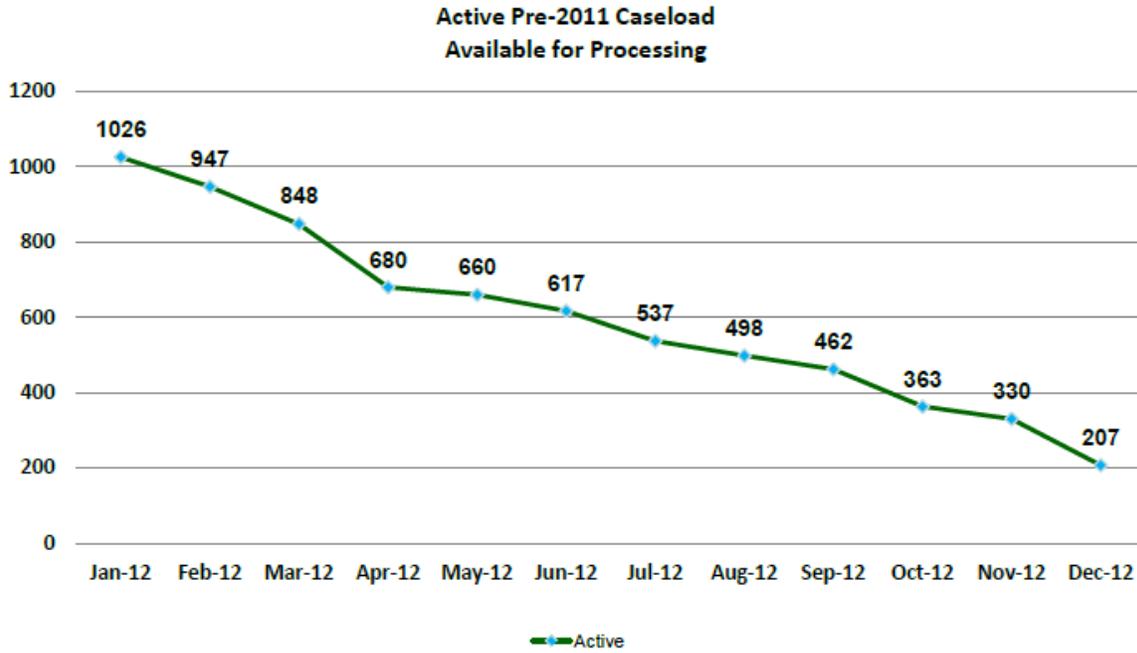
In the Three-Year Performance Assessment, NERC noted that the Regional Entities needed to make substantial improvements in the processing of violations. NERC noted that the Regional Entities needed to reduce what NERC termed a “backlog” of aging violations. During the current assessment period, the Regional Entities made substantial progress in this regard. Whereas the Regional Entities had processed only about 25% of then-existing violations at the time of the Three-Year Performance Assessment in 2009, the Regional Entities have collectively processed more than 86% of violations reported to NERC from 2009 to 2013. The efforts of the Regional Entities to reduce the number of aging violations have been commendable. These efforts reflect the growth and maturity of enforcement staff across the ERO Enterprise and demonstrate the willingness of the Regional Entities to participate in the development and execution of common goals under NERC leadership and oversight.

In 2012, 2013, and 2014, NERC established corporate goals to reduce the number of older violations remaining to be processed. Working with NERC, the Regional Entities invested significant time and resources in processing the older violations. As a result, the ERO Enterprise reduced the number of open, older violations substantially. For example, during 2012, NERC and the Regional Entities successfully worked to reduce the number of open violations dating from before 2011 (excluding on-hold violations) by 80%, as shown below:

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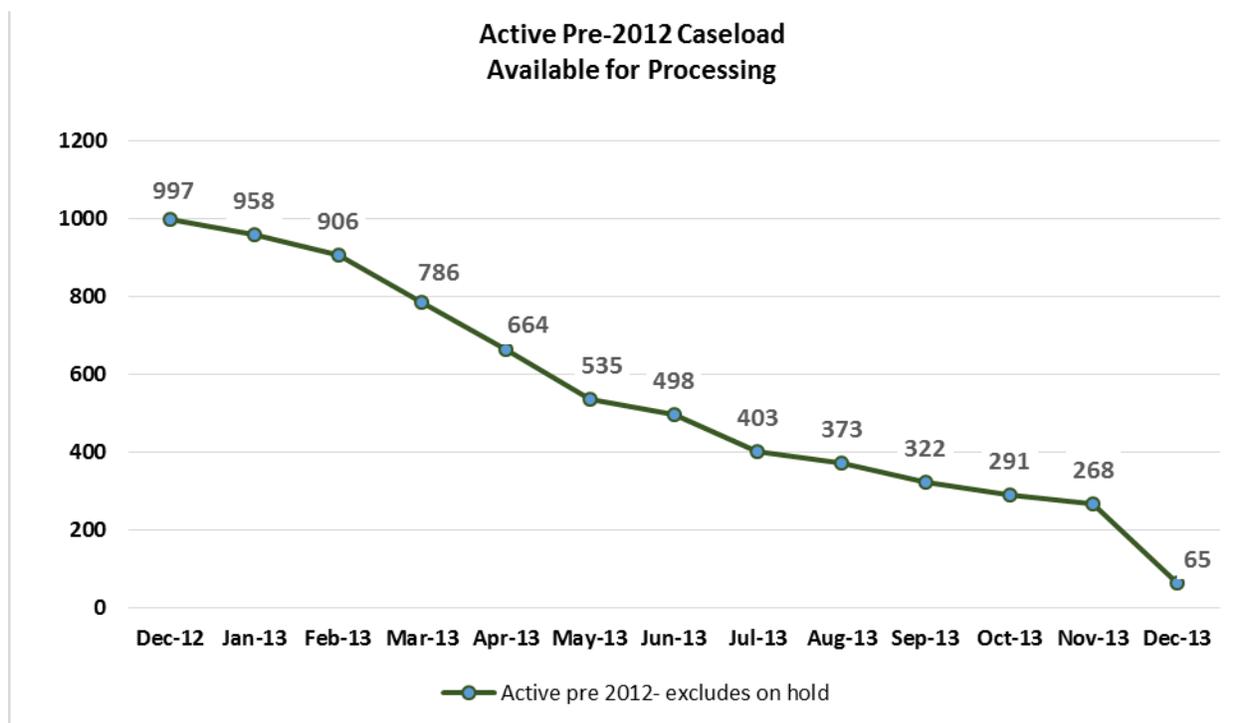
<sup>81</sup> For 2012, NERC established a corporate goal of 12 months for the ERO Enterprise average, with the threshold set at 19 months.

ERO Enterprise Caseload Consisting of Violations Discovered Before 2011  
(excluding on hold violations), by Month in 2012



During 2013, the Regional Entities built on the successes of 2012. By December 31, 2013, NERC and the Regional Entities reduced the number of pre-2012 violations (excluding on hold violations) by 93%, as demonstrated below:

ERO Enterprise Caseload Consisting of Violations Discovered Before 2012  
(excluding on hold violations), by Month in 2013



Only 65 violations discovered before 2012 remained to be processed as of December 31, 2013, representing less than one percent of total violations discovered from 2007 through 2011 and less than five percent of the violations available to be processed as of December 31, 2013. By working to reduce the number of aging violations while improving the processing speed for newer violations, NERC and the Regional Entities have reduced the average violation age from 11.86 months in 2012 to 11.2 months in 2013 – an improvement of nearly six percent.

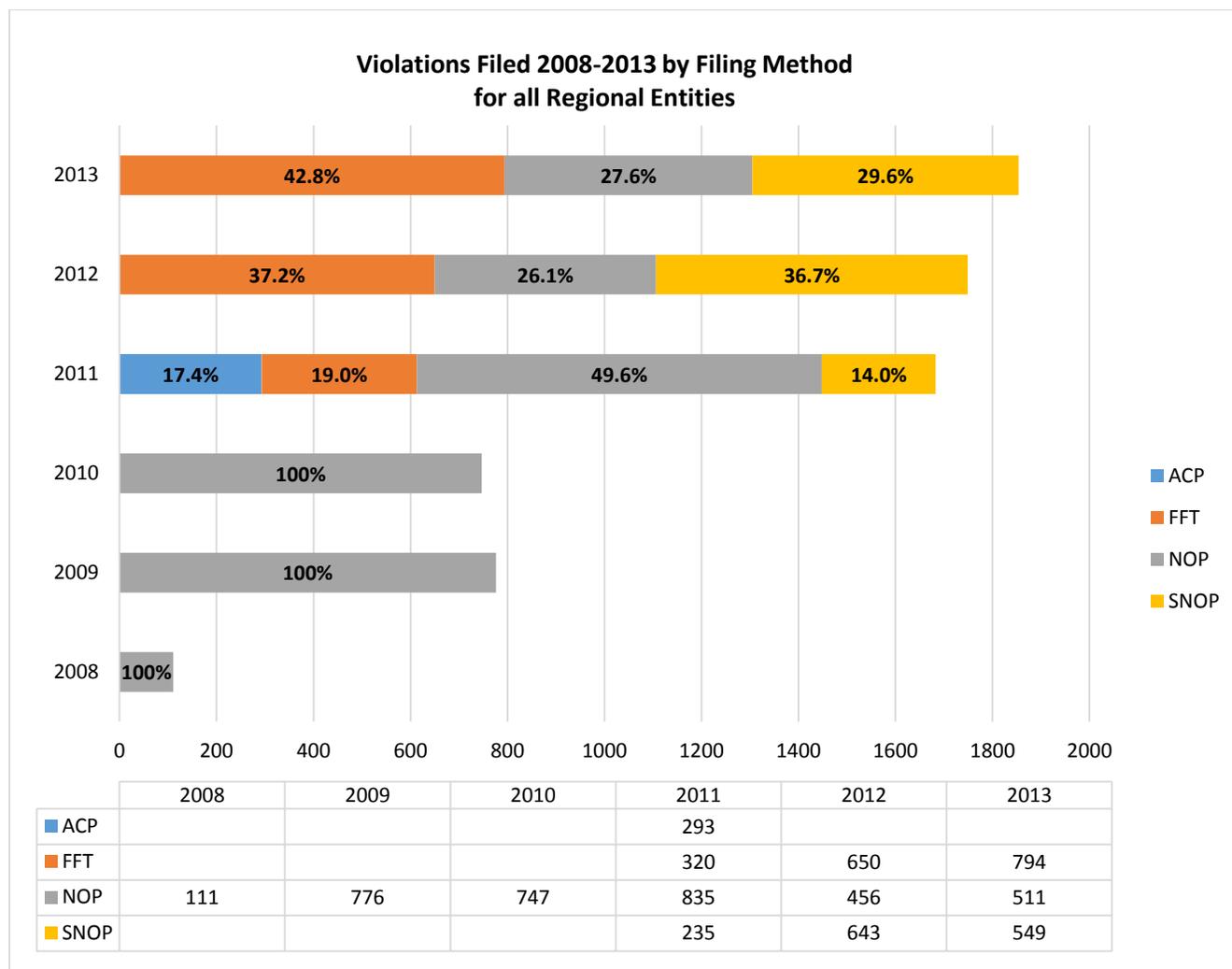
In 2014, NERC and the Regional Entities are continuing to work together to reduce the number of violations in inventory that are older than 24 months. These efforts will ensure that Regional Entities are prioritizing and resolving older violations appropriately. Combined with efforts to decrease processing times through the use of streamlined enforcement mechanisms and enforcement processing process refinements, the Regional Entities will reduce overall processing times and provide finality sooner to registered entities.

**iv. Implementation of Streamlined Enforcement Processing Mechanisms**

During the five-year assessment period, the Regional Entities worked with NERC to develop, refine, and implement process improvements to ensure the timely processing of new violations while also allowing for the reduction of the number of older violations. Most notable among these process improvements was the development of streamlined enforcement processing mechanisms that simplify the process of filing violations with the Commission. These mechanisms include the SNOP and the FFT program.

At the time of the three-year performance assessment, NERC and the Regional Entities used the NOP mechanism to process all violations. Using only the NOP format, 1,634 violations were filed with the Commission from 2008 through 2010. In 2011, following the implementation of the Administrative Citation Process (ACP) and the FFT and SNOP processes, the Regional Entities collectively filed 1,683 violations – more than the previous three years combined.<sup>82</sup>

Violations Filed per Year by Filing Method, 2008-2013



In 2012, the Regional Entities continued the implementation of the FFT and SNOP processes, which, along with the NOP, are the three enforcement processing mechanisms in use today. During the assessment period, the ERO Enterprise caseload consisted primarily of violations posing a lower risk to the reliability of the BPS. The FFT and SNOP processes proved to be especially useful for processing these lower-risk violations.

<sup>82</sup> The ACP was an alternative enforcement processing mechanism used to process a number of lower risk violations in 2011. The format was similar to the SNOP format currently being used.

In 2012, the number of violations processed by means of SNOP or FFT increased after the Regional Entities developed knowledge and experience with the new mechanisms. These methods accounted for over 70% of the total filed violations in 2012 and 2013. NERC and the Regional Entities continued to use the NOP format for violations that posed a serious and substantial risk to reliability, required the completion of substantial above-and-beyond mitigating activities,<sup>83</sup> or presented other facts and circumstances requiring a detailed presentation. Going forward, NERC expects the proportion and use of the filing mechanisms to evolve as the ERO Enterprise implements the process refinements being developed under RAI.

In 2013, NERC and the Regional Entities worked together to expand the FFT program by implementing the latest round of FFT enhancements, which were approved by the Commission in an order issued June 20, 2013.<sup>84</sup> These enhancements will also reduce the amount of time required to process issues through the FFT program. As a result of these enhancements, FFT treatment is now available for a limited pool of possible violations posing a moderate risk to the reliability of the BPS (in addition to possible violations posing a minimal risk). In addition, certain unmitigated possible violations may be processed through the FFT program, so long as mitigation is completed within 90 days from the date the FFT item is posted.

To streamline processing of FFTs, Regional Entities now submit their FFTs for public posting on NERC's website at the end of each month. This replaces the prior requirement that NERC submit monthly informational filings to the Commission. NERC maintains its enforcement oversight by reviewing a representative sample of FFTs during the 60-day window following the public posting as well as through an annual spot check. NERC's spot checks ensure that issues selected for FFT treatment are appropriate for the program; that the issues are explained sufficiently in the posted documents; that the FFT program is implemented consistently across the regions, and that information about FFT issues is presented consistently across regions.

In addition to feedback provided through the spot check process, NERC provides ongoing training and guidance to the Regional Entities. Risk assessments play a large role in the FFT process and will be important to the success of the risk-based enforcement processes being implemented under RAI. In recognition of the importance of risk assessments, NERC provides ongoing training to the Regional Entities on how to evaluate the risk posed by an issue and how to document the results of the risk assessment in a clear and consistent manner. NERC also developed FFT templates to ensure that information regarding FFT issues, such as issue descriptions, mitigating activities, and other relevant information, is presented in a consistent manner across all Regional Entities. In addition, NERC, working with the Regional Entities, developed and posted an *ERO Self-Report User Guide*.<sup>85</sup> The *ERO Self-Report User Guide*

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<sup>83</sup> As described in the evaluations of the individual Regional Entities, "above-and-beyond" activities refers to activities that a registered entity agrees to undertake as part of the resolution of an instance of noncompliance, in addition to completing a mitigation plan or other mitigating activities and/or paying a monetary penalty.

<sup>84</sup> *North American Electric Reliability Corporation, Order on Compliance Filing*, 143 FERC ¶ 61,253 (2013).

<sup>85</sup> Drafts of the *ERO Self-Report User Guide* and the companion *ERO Enterprise Mitigation Plan Guide* documents were posted for public comment in January 2014. The final user guides are posted on the RAI page on the NERC website at: <http://www.nerc.com/pa/comp/Pages/Reliability-Assurance-Initiative.aspx>.

provides registered entities with helpful guidance on assessing risk and communicating relevant information to the Regional Entities.

Additional information regarding the FFT process and NERC's oversight of it is provided below.

v. **Implementation of Compliance Data Systems**

As noted above, the Regional Entities have implemented compliance data systems to collect and track violation data. These systems interface with NERC's centralized database. At the Regional Entity level, these systems have enabled substantial enforcement processing efficiencies. At the NERC level, these systems have enhanced NERC's ability to identify compliance and enforcement trends and compile accurate metrics.

To ensure the quality, integrity, and completeness of the data that is submitted to NERC's centralized database, NERC and the Regional Entities worked together to create a series of business rules. NERC commends the Regional Entities for the resources and effort they have expended in developing these business rules and the associated systems. However, improvements remain to be made in ensuring that data submitted to NERC's centralized database meets the parameters of the business rules. NERC will continue to work with the Regional Entities to address these areas.

vi. **Quality of Submitted Information**

In the three-year performance assessment, NERC noted that Regional Entities needed to improve the thoroughness and accuracy of the information provided to NERC staff for review to meet NERC expectations and the requirements of Commission orders.<sup>86</sup> Since the filing of the three-year performance assessment in 2009, NERC and the Regional Entities have taken concrete steps to improve the quality, clarity, and consistency of enforcement-related documentation. NERC considers these efforts to have been successful.

NERC developed a series of enforcement processing templates to assist the Regional Entities in ensuring that all required information is presented in a consistent and easily-understood format. Generally, the Regional Entities provide information in the requested format, using the templates, with the record documents that are necessary for filing.<sup>87</sup> The implementation of the various templates has improved the quality of submitted information since the three-year performance assessment.

However, through its regular review of submitted information, NERC has identified opportunities for further improvement. In particular, descriptions of the facts of each violation, assessments of the risk posed by each violation, and descriptions of factors contributing toward the imposition of a certain dollar penalty are not always clear or complete when violations are submitted to NERC for review in settlement agreements or NOCV. Specifically, Regional Entities

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<sup>86</sup> *Three-Year ERO Performance Assessment Report*, Attachment 3 at 12.

<sup>87</sup> NERC has advised the Regional Entities to submit all necessary documentation at the time the NOCV or settlement agreement is submitted to NERC for review and BOTCC approval, where possible.

should explain fully what factors were considered aggravating, which factors were considered mitigating, and when previous violations of the same or similar Reliability Standards were or were not considered aggravating (and why). Careful and complete drafting will facilitate greater transparency of Regional Entity decision-making, an area noted for improvement by the commenters.<sup>88</sup> In addition, careful and complete drafting will avoid protracted follow-up periods and processing delays.

Through NERC's outreach efforts and other process improvements and guidance being implemented under RAI, NERC expects that the quality and clarity of risk assessment, violation description information, and other information relevant to enforcement processes will continue to improve. For example, NERC and the Regional Entities have developed two documents to enhance communication between registered entities and the Regional Entities and to facilitate the shift toward a risk-based enforcement approach. The first document, the *ERO Self-Report User Guide*, provides registered entities with additional insight into the information NERC and the Regional Entities need to provide efficient and timely resolution of instances of potential noncompliance. The second document, the *ERO Enterprise Mitigation Plan Guide*, provides guidance on the information that should be considered when developing a mitigation plan and the elements and analysis that should be included. Although targeted specifically to registered entities, the user guides also provide guidance and insight to Regional Entity auditors, new enforcement staff, and other stakeholders.

**c. Improving Reliability Across the ERO Enterprise**

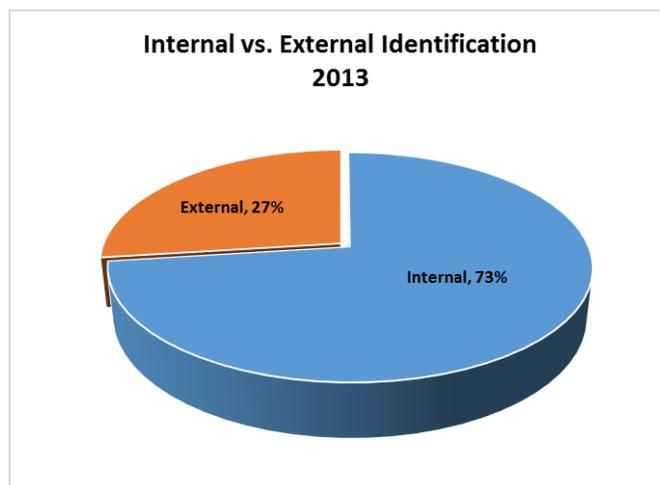
**i. Encouraging Internal Discovery of Violations**

Regional Entity enforcement programs play an important role in improving the reliability of the BPS. Early self-identification, self-reporting, and mitigation of noncompliance are important steps in improving electric reliability. By deploying incentives to encourage the self-discovery and timely self-reporting of violations, the Regional Entities have encouraged registered entities to take proactive steps to self-identify their noncompliance and thereby promote a more reliable BPS.

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<sup>88</sup> See the stakeholder comments summarized in the "Enforcement" sections of the comment and response tables in **Attachment 4**.

Percentage of Violations by Method of Identification, 2013



In 2013, internally-discovered (i.e., self-reported) violations comprised the majority of violations identified across the ERO Enterprise.

NERC recognizes that the percentage of self-identified violations necessarily depends on the number of violations identified by the Regional Entities through other compliance monitoring methods (i.e. spot checks and compliance audits). As NERC and the Regional Entities work together to implement efficiency and consistency-enhancing improvements under the compliance components of RAI, NERC expects to gain additional insight into audit finding and self-reporting trends across the Regional Entities. NERC expects that, as the ERO Enterprise gains experience in evaluating the internal controls and management practices of registered entities, it will develop a better understanding of what factors drive internal self-identification of violations. This insight will allow NERC and the Regional Entities to refine self-reporting incentives appropriately.

**ii. Ensuring the Timely Mitigation of Violations**

NERC monitors all items with ongoing mitigating activities regardless of where the violations are in the enforcement process and expects mitigating activities to be completed in a timely manner.<sup>89</sup> Throughout the assessment period, the Regional Entities worked to ensure that violations, including older violations that have not yet been processed, are mitigated and no longer pose a risk to reliability.

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<sup>89</sup> As defined in the NERC ROP, Appendix 2, “mitigating activities” means actions taken by a registered entity to correct and prevent recurrence of a noncompliance, whether or not the actions are embodied in a mitigation plan.

Status of Mitigating Activity for Violations Discovered from 2007-2013 and Requiring Mitigation for the ERO Enterprise as of December 31, 2013<sup>90</sup>

<b>Year of Discovery</b>	<b>% Completed</b>	<b>% in Progress</b>
2013	36.0%	64.0%
2012	79.6%	20.4%
2011	92.4%	7.6%
2010	96.4%	3.6%
2009	100.0%	0.0%
2008	99.6%	0.4%
2007	100.0%	0.0%
<b>Grand Total</b>	<b>84.6%</b>	<b>15.4%</b>

However, as the above chart demonstrates, a small number of older violations remain for which mitigating activities have not been completed. For these violations, mitigating activities may have been started, but not yet completed. Further, some of the older violations with open mitigation relate to registered entities for which violations cannot be processed as a result of a pending court dispute.

In 2014, NERC will continue to focus on the completion of mitigating activities and track this closely. NERC will measure the success of each Regional Entity and the ERO Enterprise as a whole in ensuring that violations are mitigated and no longer pose a threat to reliability.

**iii. Promoting Reliability through Enforcement Philosophy and Practices**

The Regional Entities have encouraged registered entities to proffer “above-and-beyond” mitigating activities in lieu of, or as an offset to, the full monetary penalties assessed pursuant to the NERC *Sanction Guidelines*. By encouraging registered entities to invest in improvements beyond those necessary to ensure compliance with violated Reliability Standards, this enforcement approach improves reliability and reduces the likelihood of future noncompliance. Examples of such above-and-beyond activities are provided in the individual Regional Entity assessments below.

**d. NERC’S Ongoing Monitoring of Specific Regional Entity Processes Under the CMEP**

NERC Enforcement staff uses its oversight role to ensure that the Regional Entities are implementing the CMEP effectively, to provide constructive feedback where appropriate, to identify trends, and to drive the implementation of best practices. Over time, as enforcement

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<sup>90</sup> This table reports the percentage of violations discovered from the years 2007 through 2013 with completed or open mitigation for all Regional Entities and NERC acting as the CEA as of December 31, 2013. This table excludes dismissed violations and non-U.S. violations.

processes and organizations evolved and matured, NERC's oversight role has evolved and matured. As the Regional Entities have demonstrated the adequacy and maturity of their enforcement-related processes and procedures, NERC has adjusted its oversight activities. For example, whereas NERC formerly reviewed all FFTs before filing with the Commission, NERC now reviews only a representative sample of FFTs that have been posted to NERC's website.<sup>91</sup> In addition, following a 2013 spot check of Regional Entity dismissal procedures, NERC no longer requires preapproval of letters of dismissal for externally-discovered violations (except for violations arising from compliance investigations).

NERC continually looks for ways to exercise its oversight role to drive improvement in Regional Entity processes and its own oversight processes. The results of several of NERC's oversight activities are presented below and in the individual Regional Entity sections of this evaluation.

During the assessment period, NERC conducted spot checks of different aspects of the Regional Entities' implementation of the CMEP. As examples of the types of spot checks it performed, NERC reviewed Regional Entity dismissal procedures in 2013. This spot check provided valuable insight into the reasons why self-reported violations are dismissed.<sup>92</sup> The spot check also gave NERC the opportunity to examine Regional Entity dismissal procedures and documentation in depth. Based on its analysis of the spot check results, NERC concluded that the Regional Entities are preparing letters of dismissals that generally communicate the reasons for dismissal to the registered entities. NERC prepared several letter of dismissal templates to assist Regional Entities in ensuring that the letters of dismissal contain all required information on a consistent basis.

NERC engages in various activities to ensure consistency and exercise oversight over the FFT process. Public and nonpublic versions of the FFTs are submitted by the Regional Entities to NERC, in the NERC-provided template, for posting on a monthly basis. NERC staff reviews moderate risk issues for suitability for FFT filing. If NERC staff determines that the moderate risk issues are not appropriate for FFT filing, staff will discuss concerns with Regional Entity staff. NERC, concurrently with the Commission, reviews a representative sample of FFTs during the 60-day window following the posting of the FFT on NERC's website. NERC also includes moderate-risk FFTs and FFTs with ongoing mitigation as part of its review. Following its review

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<sup>91</sup> As noted above, NERC's oversight of the FFT program consists of a review during the 60-day window following the monthly FFT posting as well as an annual spot check.

<sup>92</sup> NERC concluded that 67% of dismissals from its randomly-selected sample were attributable to an expansion of scope or a duplication of already-existing violations. In 22% of dismissals, the registered entity submitted additional information supporting compliance after the initial determination of possible violation was made. Approximately 11% of the dismissals were attributable to changes in the applicable Reliability Standard and requirement, transfer to another CEA, or administrative reasons.

NERC expects the number of dismissals to decrease as a result of the implementation of enhancements to the preliminary screen process in December 2012 (this process requires Regional Entities to review new noncompliance and determine whether it is a duplicate of a violation already being processed) and the issuance of the *ERO Self-Report User Guide*.

of the FFT samples, NERC coordinates any questions or concerns it may have with FERC staff, which conducts an independent sampling and review during the same 60-day period.

In addition to sampling during this 60-day review period, NERC also conducts a separate sampling of the FFTs to gather information related to NERC's annual filing with the Commission. In late 2012, NERC initiated a review of the Regional Entities' FFT programs, the results of which were detailed in NERC's March 15, 2013 compliance filing and report.<sup>93</sup>

During the first quarter of 2014, NERC Enforcement staff performed another review of the Regional Entities' FFT programs, the results of which were detailed in NERC's June 20, 2014 compliance filing and report.<sup>94</sup> In summary, NERC found that the quality of the FFTs submitted by the Regional Entities for posting has continued to improve from the FFTs submitted to NERC for review in prior years. NERC also found that the Regional Entities are appropriately selecting issues for FFT treatment. However, NERC identified additional areas for improvement to promote accuracy and consistency in implementation of the FFT program, as described in detail in that filing.

In addition to its periodic spot checks, NERC performs regular oversight of certain Regional Entity enforcement processes. For example, NERC reviews all SNOP violations and NOP violations before filing these violations with the Commission, and it provides feedback to the Regional Entities as appropriate. As part of this review, NERC reviews all proposed penalties for appropriateness and consistency with monetary penalties assessed for violations of the same Reliability Standard and requirement occurring under similar facts and circumstances, in accordance with the principles contained in the NERC *Sanction Guidelines*.

**e. Conclusion**

The Regional Entities have made substantial progress during the five-year assessment period in improving the efficiency and timeliness of enforcement processing. Going forward, each of the Regional Entities should focus on continuing to prioritize older violations for completion of processing, ensuring that all violations are mitigated in a timely manner, and ensuring the quality of data and information that is submitted to NERC in the compliance data information systems and in settlement agreements and NOCV. Further, each of the Regional Entities should implement the process improvements recommended by NERC through its oversight activities.

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<sup>93</sup> *Compliance Filing and Report on the Compliance Enforcement Initiative and Proposed Enhancements to the Find, Fix, Track and Report (FFT) Program*, Docket No. RC11-6-004 (Mar. 15, 2013).

<sup>94</sup> *North American Electric Reliability Corporation's Compliance Filing and Report on the Find, Fix, Track and Report Program*, filed June 20, 2014, in Docket No. RC11-6-004.

## 2. Evaluation of Florida Reliability Coordinating Council, Inc.

### a. Overview

In the three-year performance assessment, NERC concluded that FRCC needed to improve its timeliness in enforcement processing in several respects.<sup>95</sup> In response, during the assessment period, FRCC has taken several steps to address the concerns identified by NERC. FRCC added personnel to its enforcement staff and developed a number of processes to support and facilitate the processing of violations. FRCC has also developed checklists, flowcharts, caseload goals, and automated database reporting tools.<sup>96</sup>

During the assessment period, FRCC has increased the number of FTE staff dedicated to enforcement from 0 FTEs in 2009 to 4 FTEs as of December 31, 2013. Based on FRCC's processing speed and efficiency as measured at the end of the assessment period, NERC views FRCC's enforcement staffing to be sufficient to process the number of violations that it receives.

FRCC ended the assessment period with a Caseload Index that was consistent with the ERO Enterprise Caseload Index. FRCC processed all violations discovered before 2012, in furtherance of an ERO Enterprise goal. FRCC's caseload tends to consist of more-recent violations, and FRCC has made progress in ensuring the completion of mitigation for older violations. Finally, NERC has reviewed FRCC's enforcement-related processes as part of its oversight role and found that, while areas for improvement remain, FRCC generally implements those processes in a satisfactory manner.

In addition, FRCC staff have actively participated in the development of RAI. FRCC staff have participated in the Aggregation of Minimal Risk Issues and Enforcement Discretion pilot programs and served on the *ERO Self-Report User Guide* and *ERO Enterprise Mitigation Plan Guide* drafting teams. This participation is vital as the ERO Enterprise shifts toward a risk-based model of compliance and enforcement.

As explained more fully below, based on FRCC's Caseload Index, FRCC's successful processing of its older violations (as facilitated by its effective implementation of streamlined enforcement processing mechanisms), and the results of NERC's oversight activities, NERC concludes that FRCC has performed as an effective Regional Entity with respect to enforcement activities during the assessment period. NERC will continue to work with FRCC to ensure that violations are mitigated promptly, with an added emphasis on ensuring the completion of mitigation for older violations.

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<sup>95</sup> *Three-Year ERO Performance Assessment Report*, Attachment 3 at 16.

<sup>96</sup> 2014 JRESA Appendix 2B at 1-2.

**b. Evaluation of Caseload Processing Efficiency**

**i. The Composition of FRCC's Caseload**

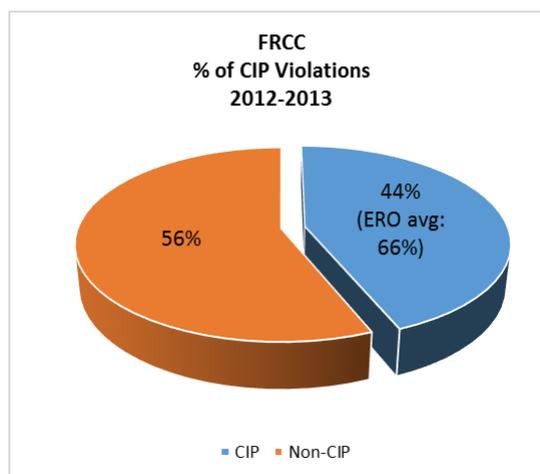
During the assessment period, FRCC reported 568 violations to NERC.

Violations for FRCC 2009-2013 by Year Reported to NERC<sup>97</sup>

<b>Year Reported to NERC</b>	<b>Violations Reported</b>
2009	188
2010	109
2011	141
2012	69
2013	61
<b>Total</b>	<b>568</b>

As shown in the table above, FRCC reported a relatively high number of violations in 2009, with a significant drop occurring after 2011. In 2011, over 70% of total violations were of the CIP Reliability Standards. In the years 2012 and 2013, violations of CIP Reliability Standards represented 44% of total violations; this is a substantially lower percentage than the ERO Enterprise average.

Type of Violations Reported to NERC by FRCC, 2012-2013



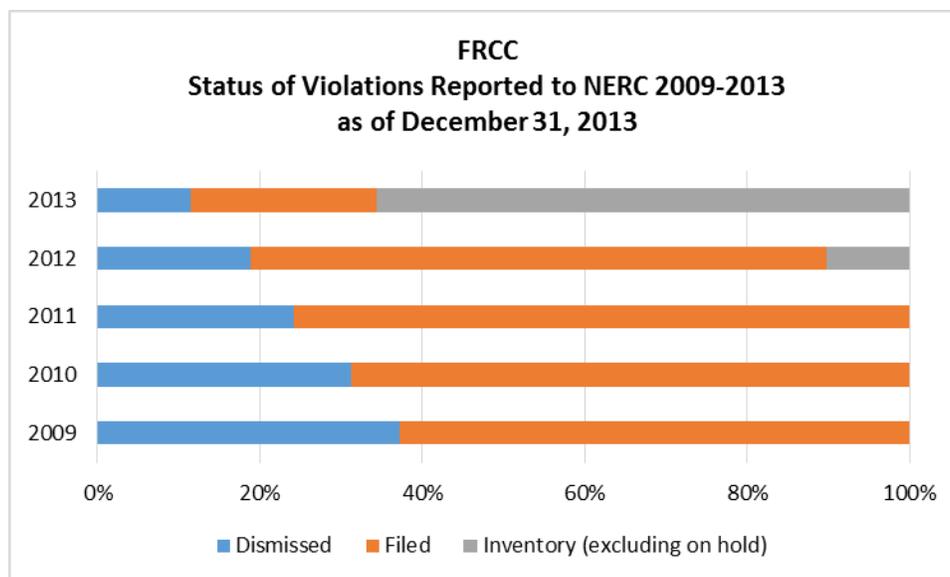
FRCC believes that the lower-than-average ratio of CIP violations in 2012 and 2013 may be due to two factors. During 2011, FRCC performed spot checks on all registered entities within the FRCC region that had critical cyber assets. As a result, FRCC had a high ratio of CIP violations

<sup>97</sup> For an explanation of the methodology used to calculate the data in this table and throughout this §II.D, see *supra* n. 766.

for that year (approximately 75%). In addition, FRCC believes that it has a lower percentage of registered entities with critical cyber assets than other Regional Entities.

Of the total violations reported to NERC by FRCC during the assessment period, 47 violations, or approximately 8%, remained to be processed as of December 31, 2013 (excluding on-hold violations). As shown in the table below, FRCC has processed all violations reported to NERC in 2009, 2010, and 2011. FRCC processed 90% of violations reported to NERC in 2012.

Status of Violations Reported to NERC 2009-2013 for FRCC



FRCC processed 34% of violations reported to NERC in 2013. This was somewhat lower than the ERO 2013 processing rate of 39%. However, violations reported to NERC in 2013 represent approximately 85% of the violations available for processing in FRCC’s caseload, which compares favorably to the overall ERO Enterprise average of 67%. FRCC appears to be moving toward a caseload consisting primarily of newer violations.

**ii. Caseload Index**

The Caseload Index for FRCC is 7.3 months as of December 31, 2013. This is consistent with the ERO Enterprise Caseload Index of approximately 6.5 months.

Based on its achievements in processing its caseload to date and its Caseload Index, it appears that FRCC’s efforts to strengthen and streamline its enforcement processes during the assessment period have been effective.

**iii. Efforts to Reduce Older Caseload**

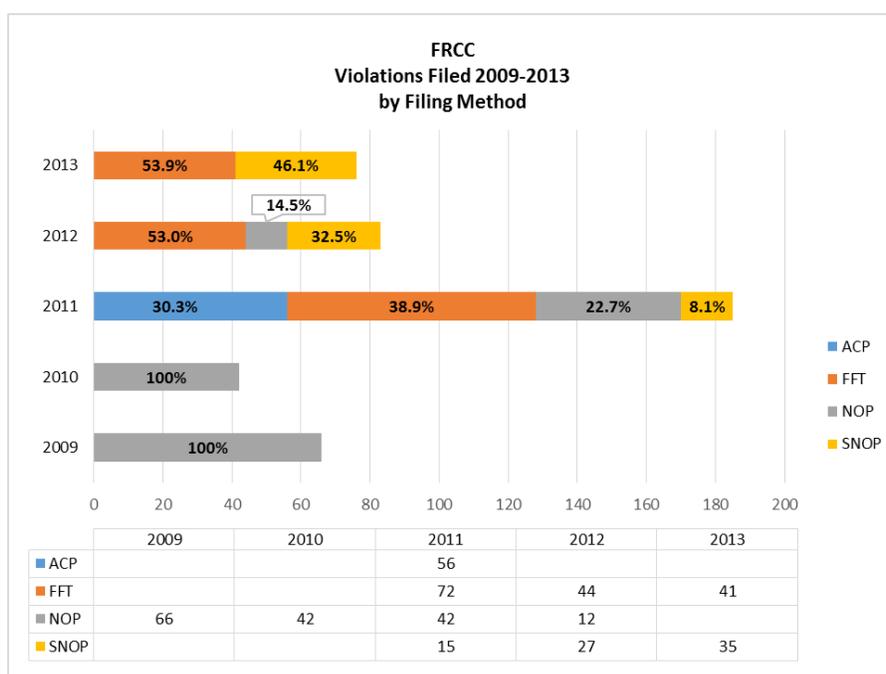
In 2013, FRCC processed all remaining cases in its pre-2012 caseload. NERC commends FRCC for its responsiveness and efforts to achieve this important ERO Enterprise goal.

Based on the current composition of its inventory of violations available to be processed and its successful efforts in processing its older violations, FRCC is especially well-positioned to achieve the goal of ensuring that violations are processed before reaching 24 months in age.

**iv. Implementation of Streamlined Enforcement Processing Mechanisms**

FRCC effectively used streamlined processing mechanisms to process a substantial portion of its caseload during the assessment period. In 2011, following the implementation of these mechanisms, FRCC filed 185 violations – more than the previous two years combined.

Violations Filed per Year by Filing Method for FRCC, 2009-2013



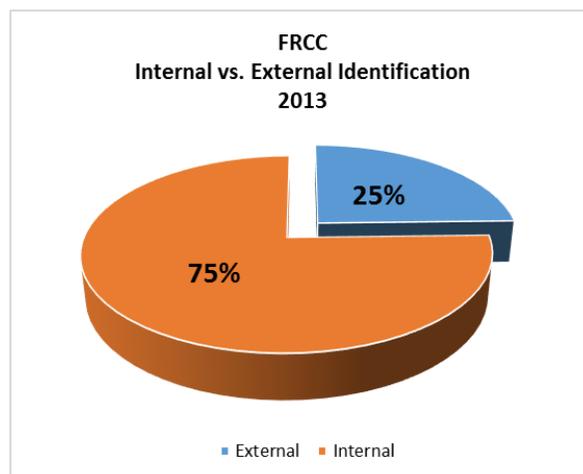
By 2013, FRCC filed all of its violations using either SNOP or FFT. NERC expects that FRCC will continue to reserve the NOP format for violations that require NOP treatment and will take advantage of further process refinements available under RAI. Additional information regarding FRCC’s application of FFT is presented later in this assessment.

**c. Improving Reliability**

**i. Encouraging Internal Discovery of Violations**

In 2013, violations discovered by registered entities through internal mechanisms comprised 75% of total violations in the FRCC region.

Percentage of Violations by Method of Identification for FRCC in 2013



This is consistent with the ERO Enterprise average of 73%.

**ii. Ensuring the Timely Mitigation of Violations**

FRCC reported that it takes several steps to encourage the prompt submission of mitigation plans or mitigating activities. First, FRCC encourages registered entities to submit the mitigating activities that are planned or which have been completed as part of the registered entity's submission of a self-report or self-certification. FRCC also encourages registered entities to submit mitigation plans early, before the issuance of a Notice of Alleged Violation. Second, FRCC enforcement staff contacts each registered entity to encourage the submission of a mitigation plan approximately ten days after the issuance of a Notice of Possible Violation. FRCC also encourages registered entities to submit draft mitigation plans for review by FRCC staff before formal submission. In evaluating the sufficiency of a registered entity's proposed mitigation, FRCC carefully considers the time it will take to mitigate the violation and the steps taken to prevent reoccurrence of violations. In 2013, FRCC reported that it continued to see some improvement in the timeliness and quality of mitigating activities and mitigation plans submitted by most registered entities, and that most registered entities within its region were willing to work with FRCC staff to create mitigation plans that would be acceptable to FRCC earlier in the mitigation process.

As demonstrated in the table below, FRCC has made substantial progress in ensuring that violations from 2007 through 2010 have been mitigated. However, approximately four violations from 2011 had open mitigation plans at the end of the assessment period. FRCC reported that in those cases, the registered entities had mitigated the violations and completed all milestones required of their mitigation plans; however, they had not yet certified the completion of their mitigation plans and supplied evidence for FRCC to verify completion.

FRCC: Status of Mitigating Activity for Violations Discovered from 2007-2013 and Requiring Mitigation as of December 31, 2013<sup>98</sup>

<b>Year of Discovery</b>	<b>% of Violations with Completed Mitigation Plans or Activities</b>	<b>% of Violations with Mitigation in Progress</b>
2013	25.0%	75.0%
2012	89.3%	10.7%
2011	96.0%	4.0%
2010	100.0%	0.0%
2009	100.0%	0.0%
2008	100.0%	0.0%
2007	100.0%	0.0%
<b>Grand Total</b>	<b>89.6%</b>	<b>10.4%</b>

In addition, approximately three-quarters of violations discovered in 2013 had open mitigation plans by the end of the year. FRCC reported that in many of these newer cases, the violation had been mitigated, but the registered entity did not yet certify completion or submit completion evidence to FRCC for verification. NERC will continue to work with FRCC to ensure that mitigation of violations is completed in a timely manner.

**iii. Promoting Reliability through Enforcement Philosophy and Practices**

FRCC's enforcement philosophy consists of the following components. FRCC provides training and communication to registered entities to help them understand and be more compliant with the Reliability Standards. FRCC strives for efficiency in disposition processing and fairness throughout the enforcement process, and it commits to maintain open communication with registered entities.

In its settlement processes, FRCC has worked with registered entities, where appropriate, to accept the completion of certain activities above-and-beyond those required to ensure compliance with one or more Reliability Standards in lieu of the full monetary penalties permitted by the NERC *Sanction Guidelines*. FRCC reported that it typically performs a thorough review and critique of a registered entity's internal compliance program as part of settlement discussions, and that registered entities within its region have frequently committed to initiating actions within their organizations to improve their compliance programs. Registered entities in the FRCC region have committed to: (i) implementing software applications; (ii) creating, improving, or disseminating programs relating to internal controls; (iii) creating compliance job positions; (iv) developing and delivering presentations for FRCC compliance workshops; and (v) hiring contractors to evaluate and make recommendations for the development of a sustainability plan

<sup>98</sup> This table reports the percentage of violations discovered from the years 2007 through 2013 with completed or open mitigation. This table excludes dismissed violations.

and training regarding internal control processes. These efforts allow registered entities to allocate their resources to those projects that can increase overall reliability and reduce the likelihood of future noncompliance. NERC encourages FRCC to continue deploying solutions such as these that promote reliability and insight into processes that can manage risk.

**d. FRCC'S Implementation of Various Aspects of the CMEP**

As noted in §II.D.1.a above, NERC conducts ongoing oversight activities to evaluate the effectiveness of each Regional Entity's implementation of the CMEP. These activities include regular reviews and periodic spot checks of specific Regional Entity processes. NERC's oversight activities give NERC an ongoing view into how effectively and efficiently the Regional Entity is executing its enforcement responsibilities. Below is a summary of some of NERC's more recent oversight activities specific to FRCC.

FRCC has adopted the NERC CMEP as the basis for providing fair and impartial procedures for enforcement. With respect to assessing penalties, FRCC follows NERC guidance.<sup>99</sup> FRCC reviews a registered entity's internal compliance program and its impact on the violations being processed. FRCC includes consideration of the internal controls that a registered entity may have in place as a part of this review. NERC reviews all penalties submitted by FRCC for appropriateness and consistency with monetary penalties assessed by FRCC and by other Regional Entities for violations of the same Reliability Standards and Requirements occurring under similar facts and circumstances. NERC has found that FRCC assesses monetary penalties that are appropriate and consistent with penalties assessed for similar violations.

Based on a spot check in 2013, NERC determined that FRCC dismisses violations for appropriate reasons and generally includes the required information when issuing letters of dismissal. NERC identified opportunities where FRCC could improve its letters of dismissal and communicated those opportunities to FRCC. By implementing the recommended improvements, FRCC can improve the quality of its compliance guidance to registered entities.

As part of its ongoing FFT review processes, NERC reviewed a sample of FFT issues filed or posted by FRCC during the assessment period to examine FRCC's procedures for FFT processing and the application of those procedures to the FFT issues in its caseload. Following its review, NERC concluded that FRCC's process documents provide clear and concise guidance for FFT processing and drafting and follow the NERC guidance. Further, NERC concluded that FRCC consistently applies the processes set forth in its process documents, and that FRCC applied FFT treatment and evaluated risk in a consistent manner. NERC noted several ways that FRCC could improve its FFT postings and related documentation to provide additional transparency to its determinations.

**e. Conclusion**

Based on NERC's review of the factors described above, NERC concludes that FRCC has performed as an effective Regional Entity with respect to enforcement activities during the

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<sup>99</sup> 2014 JRESA, Appendix 2-C at 11.

assessment period. FRCC should adopt the recommendations for improvement provided as part of NERC's oversight activities.

### **3. Evaluation of Midwest Reliability Organization**

#### **a. Overview**

In the three-year performance assessment, NERC concluded that MRO was an effective Regional Entity as demonstrated by several metrics.<sup>100</sup> At the time NERC noted that MRO needed to improve on providing accurate statements of fact for each violation, assessing penalties according to the facts of each situation as required by FERC orders, and ensuring consistency in its practices with NERC practice and the practice of other Regional Entities.<sup>101</sup>

Consistent with the trends across the ERO Enterprise, the quality of information submitted by MRO for NERC review has improved during the assessment period. Further, MRO believes that its three-step process that segregates duties among its Compliance Monitoring, Risk Assessment and Mitigation, and Enforcement teams, which it established in 2009, provides a "high level of assurance that determinations are accurate, fair and non-discriminatory."<sup>102</sup>

During the assessment period, MRO has increased the number of FTE staff dedicated to enforcement from 2.46 FTEs in 2009 to 4 FTEs as of December 31, 2013. In addition, MRO's Risk Assessment and Mitigation staff consisted of 1 FTE in 2009, and as of December 31, 2013 it consists of 6.25 FTEs (including two open positions). MRO's proposed 2015 Business Plan and Budget anticipates an additional 1.35 FTEs in these two groups. Based on MRO's processing speed and efficiency as measured at the end of the assessment period, NERC views MRO's historic staffing to be insufficient to process the number of violations that it receives in accordance with the performance objectives of the ERO Enterprise. However, MRO has taken steps to increase its staffing throughout the assessment period and beyond into 2014 and 2015.

NERC recognizes the progress MRO has made in enforcement processing during the assessment period. NERC also recognizes that MRO often takes the lead in settlement negotiations to resolve violations from MRREs, and that MRO has demonstrated a commitment to use the enforcement process to promote the reliability of the BPS. Further, NERC has reviewed MRO's enforcement-related processes as part of its oversight role and found that, while areas for improvement remain, MRO generally implements those processes in a satisfactory manner. However, MRO ended the assessment period with a Caseload Index that was much higher than the ERO Enterprise Caseload Index. NERC and MRO believe that, with the additional staff MRO expects to add, MRO's processing times (and its Caseload Index) will improve.

In addition, MRO made substantial strides in reducing the portion of its caseload consisting of violations dating to before 2012. While MRO still has older violations in its inventory that must

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<sup>100</sup> *Three-Year ERO Performance Assessment Report*, Attachment 3 at 18.

<sup>101</sup> *Id.*

<sup>102</sup> 2014 JRESA, Appendix 2-B at 2-3.

be processed and mitigated, NERC is working with MRO to accomplish the ERO Enterprise goal of having no cases older than 24 months in inventory at the end of 2014.

NERC recognizes the substantial contributions MRO staff have made in the development of RAI and the related enforcement pilot programs. MRO has taken a leadership role in the conceptualization, development, and testing of several programs, and a member of MRO's staff led the multi-region working group on enforcement activities. This participation is vital as the ERO Enterprise shifts toward a risk-based model of compliance and enforcement.

In light of all of the relevant factors, which are explained more fully below, NERC concludes that MRO has performed as an effective Regional Entity with respect to enforcement activities during the assessment period. However, substantial improvement remains to be made with respect to MRO's enforcement processing time as measured by the Caseload Index metric.

## **b. Evaluation of Caseload Processing Efficiency**

### **i. The Composition of MRO's Caseload**

During the assessment period, MRO reported 664 violations to NERC.<sup>103</sup>

#### Violations for MRO 2009-2013 by Year Reported to NERC<sup>104</sup>

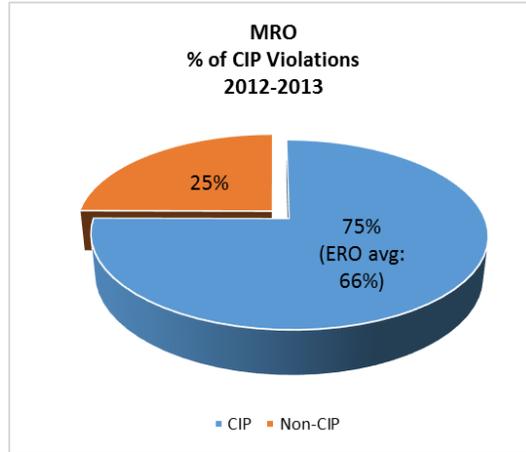
<b>Year Reported to NERC</b>	<b>Violations Reported</b>
2009	60
2010	103
2011	196
2012	166
2013	139
<b>Total</b>	<b>664</b>

As noted in the table above, the highest number of violations reported to NERC by MRO was in 2011, with the number decreasing by 29% in 2013. Most of the violations in 2011 were of the CIP Reliability Standards. In the years 2012 and 2013, violations of CIP Reliability Standards represented 75% of total violations; this is a higher percentage than the ERO Enterprise average of 66%.

<sup>103</sup> This table reflects U.S. violations only. When including Canadian violations, MRO received 693 violations for evaluation and processing from 2009 through 2013.

<sup>104</sup> For an explanation of the methodology used to calculate the data in this table and throughout this §II.D, see *supra* n. 766.

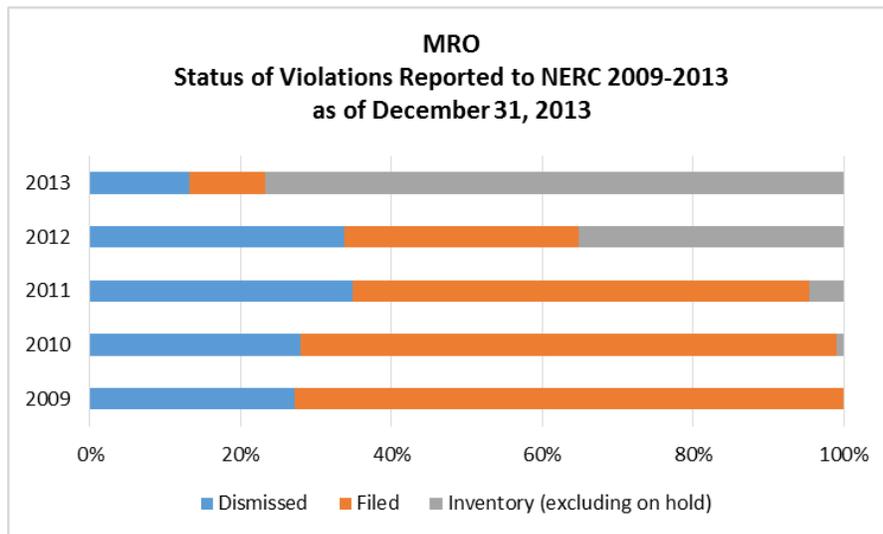
Type of Violations Reported to NERC by MRO, 2012-2013



The discovery method of the CIP violations was fairly evenly split between external and internal methods of identification.

Of the total violations reported to NERC during the assessment period, approximately 159 violations, or 24%, remained to be processed as of December 31, 2013. As demonstrated in the table below, MRO has processed all violations that it reported to NERC in 2009. MRO has processed approximately 99% of violations reported to NERC in 2010, 95% of violations reported to NERC in 2011, and 65% of violations reported to NERC in 2012.

Status of Violations Reported to NERC 2009-2013 for MRO



MRO processed approximately 23% of violations reported to NERC in 2013. This is lower than the ERO 2013 processing rate of 39%. Further, the percentage of MRO’s caseload consisting of violations reported to NERC in 2013, approximately 62.3%, is slightly lower than the overall ERO Enterprise average of 67%.

**ii. Caseload Index**

The Caseload Index for MRO was 14.3 months as of December 31, 2013, compared to the ERO Enterprise Caseload Index of approximately 6.5 months.

MRO believes that its Caseload Index is higher than the ERO Enterprise average due to several factors. MRO states that it places a premium on gaining a comprehensive understanding of the violation and developing mitigation plans that reduce the risk of recurrence, which can be time consuming and increases MRO's Caseload Index. MRO reported a number of violations of CIP-005 and CIP-007, which often require longer processing times due to the need to ensure that the risk is understood and is being comprehensively addressed. Additionally, MRO's risk assessment staff is heavily involved in RAI development efforts.

In light of MRO's Caseload Index and as reflected in the characteristics of its caseload (i.e., MRO's caseload consists of a greater portion of older violations than other Regional Entities), NERC encourages MRO to implement measures so that it is better equipped to process violations as it receives them. MRO currently has two open positions in its Risk Assessment and Mitigation group which, when filled, will help MRO improve its Caseload Index. In addition, MRO created the position of CMEP process principal. This position is responsible for quality assurance and oversight of MRO's business practices related to compliance monitoring and enforcement, including internal transitions among the compliance, risk assessment and mitigation, and enforcement groups. MRO believes it will achieve greater efficiency, enhance communication, and ensure repeatability of its CMEP-related activities through this position. MRO also believes that the increase in staffing will allow it to improve processing times while maintaining its dedication to gaining a complete understanding of violations in its region and examining the best ways to prevent reoccurrence. NERC will work with MRO to evaluate the effectiveness of this and other measures taken to improve efficiency in MRO's enforcement processes.

**iii. Efforts to Reduce Older Caseload**

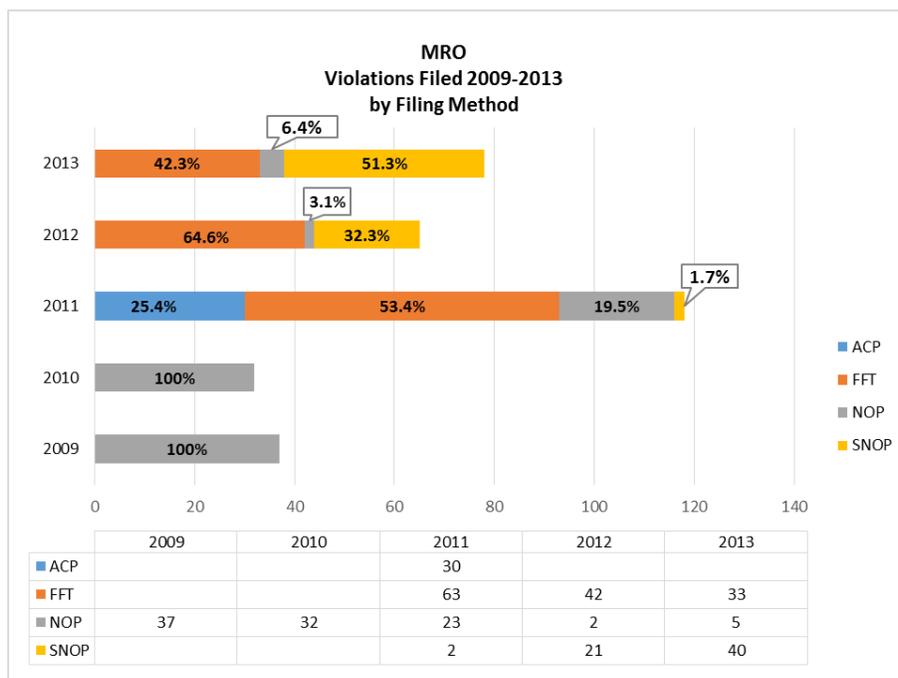
In 2013, MRO reduced the portion of its caseload consisting of violations dating to before 2012 by 89%. NERC commends MRO for its responsiveness and efforts to achieve this important ERO Enterprise goal. MRO states that its remaining inventory consisted of particularly complex violations, and that it is committed to having all 2012 and older cases resolved by the end of 2014.

NERC will work with MRO to ensure that these and other older violations are resolved as soon as is practicable in light of the facts of each violation.

**iv. Implementation of Streamlined Enforcement Processing Mechanisms**

MRO effectively used streamlined enforcement processing mechanisms to process a substantial portion of its caseload during the assessment period. In 2011, following the implementation of the streamlined enforcement processing mechanisms, MRO filed 118 violations – more than the previous two years combined.

Violations Filed per Year by Filing Method for MRO, 2009-2013



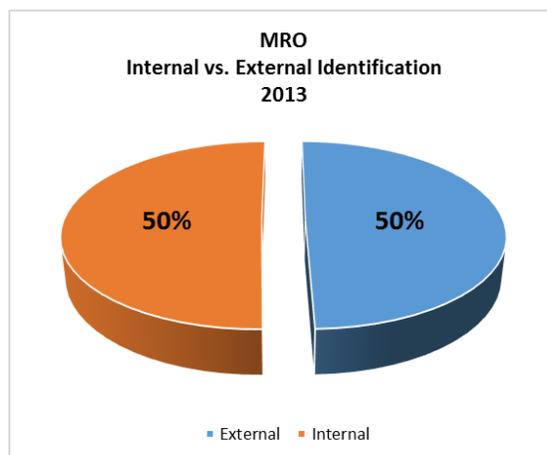
MRO has used the streamlined processing mechanisms to file over 88% of violations since 2011. MRO is using the FFT process to resolve violations posing a minimal risk to the BPS, and it seeks to use the enforcement mechanisms in a manner that promotes consistency. NERC expects that MRO will continue to reserve the NOP format for violations that require it and take advantage of further process refinements available under RAI. Additional information regarding MRO’s implementation of FFT is presented later in this assessment.

**c. Improving Reliability**

**i. Encouraging Internal Discovery of Violations**

In 2013, violations discovered by registered entities through internal mechanisms comprised approximately 50% of total violations in the MRO region. This is lower than the ERO Enterprise average of 73%. Stated differently, during the assessment period, MRO discovered a higher percentage of violations through external methods (i.e., compliance audit and spot check) than other Regional Entities.

Percentage of Violations by Method of Identification for MRO in 2013



As noted above, NERC and the Regional Entities are working to understand the regional variations in the percentages of noncompliances discovered through self-discovery and audits across the ERO Enterprise. Understanding these differences, and how they may relate to registered entity internal controls and management practices, will allow NERC and the Regional Entities to continue to provide the right incentives for discovering and self-reporting noncompliances.

**ii. Ensuring the Timely Mitigation of Violations**

MRO reported that, upon validation of a violation, MRO mitigation staff conduct a thorough review of the present circumstances at the registered entity to ensure better, more effective corrective actions for prevention. MRO mitigation staff collaborate with the registered entities to develop a thorough, comprehensive, and effective mitigation plan that includes documentation and implementation of controls that are used to monitor performance and correct deficiencies to help prevent recurrence of noncompliance. MRO's position is that while it recognizes that prompt submission or early completion of mitigation plans may be desirable, its overarching goal of preventing recurring issues is of greater concern. MRO uses the webCDMS platform to automate processes for the review, approval, tracking, and certification of mitigation plans, and it participates in efforts across the ERO Enterprise to develop metrics to encourage timely processing of mitigation plans.

As demonstrated in the table below, MRO has made substantial progress in ensuring that older violations have completed mitigation, with 100% of violations discovered from 2007 through 2010 having completed mitigation.

MRO: Status of Mitigating Activity for Violations Discovered from 2007-2013 and Requiring Mitigation as of December 31, 2013<sup>105</sup>

<b>Year of Discovery</b>	<b>% Completed</b>	<b>% in Progress</b>
2013	14.7%	85.3%
2012	58.5%	41.5%
2011	79.5%	20.5%
2010	100.0%	0.0%
2009	100.0%	0.0%
2008	100.0%	0.0%
2007	100.0%	0.0%
<b>Grand Total</b>	<b>70.4%</b>	<b>29.6%</b>

NERC is working closely with MRO to understand the nature of the violations with open mitigation and ensure that violations are mitigated in a timely manner. Specifically, NERC will work with MRO to understand why just over half of 2012 violations have completed mitigation and less than 15% of 2013 violations have completed mitigation.<sup>106</sup> NERC encourages MRO to continue to seek solutions that will promote reliability and work to ensure that mitigation is completed in a timely manner.

**iii. Promoting Reliability through Enforcement Philosophy and Practices**

MRO's enforcement philosophy is to ensure that enforcement determinations match its essential purpose: to improve reliability and address risks to reliability. MRO reserves settlements for more complicated matters and encourages investments in systems and people as an offset for proposed penalties. An important tenet of MRO's enforcement philosophy is to use technical experts with the requisite knowledge and experience to assess actual risk posed by individual violations. MRO's enforcement philosophy considers highly effective reliability organizations to be those that prevent uncontrolled cascading outages through disciplined management practices and are accountable for their performance. As a result, registered entities in the MRO region accept responsibility (or "admit") in 90% of all violations.<sup>107</sup>

Similar to the other Regional Entities, MRO worked with registered entities, where appropriate, to accept the completion of certain activities above-and-beyond those required to ensure compliance with one or more Reliability Standards, in lieu of the full monetary penalties

<sup>105</sup> This table reports the percentage of violations discovered from the years 2007 through 2013 with completed or open mitigation. This table excludes dismissed violations and non-U.S. violations.

<sup>106</sup> Although a number of violations from 2011 have open mitigation, most of these violations involve the same registered entity.

<sup>107</sup> JRESA, Appendix 2-C at 13. MRO's Regulatory Philosophy (April 30, 2014) is available at: [http://www.midwestreliability.org/01\\_about\\_mro/Public%20Awareness/2014/MRO\\_Regulatory\\_Philosophy\\_043014.pdf](http://www.midwestreliability.org/01_about_mro/Public%20Awareness/2014/MRO_Regulatory_Philosophy_043014.pdf).

permitted by the NERC *Sanction Guidelines*. MRO states that, during the assessment period, it sought to include above-and-beyond commitments whenever possible. These efforts allow registered entities to allocate their resources to those projects that can increase overall reliability and reduce the likelihood of future noncompliance.

As an example of the type of above-and-beyond commitments made by registered entities in the MRO region, one registered entity committed to the hiring of additional compliance personnel, installation of new alarming systems, replacement of electromechanical relays and communication equipment with microprocessor relays and mirrored bit over fiber communications, and the provision of additional training for entity staff. Another registered entity committed to the following activities: (i) sharing its experience and lessons learned related to compliance with PRC-005-1 with at least three industry peer groups such as the North American Generator Forum and the Mid Continent Compliance Forum; (ii) securing NERC Compliance training from an outside consultant for at least six individuals from its Nuclear Business Unit; (iii) coordinating with and benchmarking the adoption of NERC compliance efforts at two nuclear facilities owned and operated by two different entities (one within the MRO region and one outside the MRO region); and (iv) replacing certain solid state relays with microprocessor relays. In another instance, the registered entity accelerated its replacement schedule for aging assets to include replacement of four additional electro-mechanical relay panels with completely digital, self-diagnostic relays, among other above-and-beyond actions over a three year period. NERC encourages MRO to continue deploying solutions such as these that promote reliability and insight into processes that can manage risk.

**d. MRO'S Implementation of Various Aspects of the CMEP**

As noted in §II.D.1.a above, NERC conducts ongoing oversight activities to evaluate the effectiveness of each Regional Entity's implementation of the CMEP. These activities include regular reviews and periodic spot checks of specific Regional Entity processes. NERC's oversight activities give NERC an ongoing view into how effectively and efficiently the Regional Entity is executing its enforcement responsibilities. Below is a summary of some of NERC's more recent oversight activities specific to MRO.

With respect to the appropriateness of monetary penalties, MRO undertook several efforts during the assessment period to ensure consistency of remedies within its region. MRO also participated in various initiatives to increase interaction with other Regional Entities, such as through the various Regional Entity working groups. MRO does not review or track all monetary penalties proposed by other Regional Entities. However, MRO reviews penalty determinations for similar violations in the MRO region and other Regional Entities and, as appropriate, discusses proposed penalties with other Regional Entities and NERC. NERC reviews all penalties submitted by MRO for appropriateness and consistency with monetary penalties assessed by MRO and by other Regional Entities for violations of the same Reliability Standards and Requirements occurring under similar facts and circumstances. NERC has found that MRO assesses monetary penalties that are appropriate and consistent with penalties assessed for similar violations.

Based on a spot check, NERC determined that MRO dismisses violations for appropriate reasons and generally includes the required information when issuing letters of dismissal. NERC

identified opportunities where MRO could improve its letters of dismissal, and communicated those opportunities to MRO. By implementing the recommended improvements, MRO can improve the quality of its compliance guidance to registered entities.

As part of its ongoing FFT review processes, NERC reviewed a sample of MRO FFT issues filed or posted during the assessment period to examine MRO's procedures for FFT processing and the application of those procedures to the FFT issues in its caseload. NERC concluded that MRO's process documents for FFT processing are clear, easy-to-follow, and facilitate consistent application. Further, NERC noted that MRO uses a checklist to ensure that it follows its process by tracking all of the steps that must be taken. NERC concluded that MRO generally assessed the risk posed by an issue in light of all relevant facts and ensured that mitigating activities addressed both mitigation of the issue and prevention of reoccurrence. NERC noted several ways that MRO could improve its FFT postings and related documentation to provide additional transparency to its determinations.

**e. Conclusion**

Based on NERC's review of the factors described above, NERC concludes that MRO has performed as an effective Regional Entity with respect to enforcement activities during the assessment period. In addition, NERC commends MRO for its substantial efforts in the development of RAI. MRO should adopt the recommendations for improvement noted above. In particular, based on MRO's performance in several enforcement processing metrics, MRO should work to identify and implement solutions so that it is better equipped to ensure that violations are processed as quickly as is practicable consistent with the circumstances of each violation. MRO should also adopt the other recommendations for improvement provided as part of NERC's oversight activities.

**4. Evaluation of Northeast Power Coordinating Council, Inc.**

**a. Overview**

In the three-year performance assessment, NERC concluded that NPCC was a relatively effective Regional Entity in that it processed and completed identified violations in a timely manner. However, NERC indicated its concern that NPCC may not be identifying all violations that are occurring.<sup>108</sup>

NPCC believes that, during the assessment period, it has built a very cost-effective compliance program through the use of independent contractors. NPCC's level of alleged violations per registered reliability function remains low, but in line with other Regional Entities. NPCC believes its low level of violations per registered reliability function is a product of its thorough outreach and communication with registered entities in its region.<sup>109</sup>

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<sup>108</sup> *Three-Year ERO Performance Assessment Report*, Attachment 3 at 19-20.

<sup>109</sup> 2014 JRESA, Appendix 2-B at 3.

During the assessment period, NPCC has increased the number of FTE staff dedicated to enforcement from 2 in 2009 to 4 as of December 31, 2013. Based on NPCC’s processing speed and efficiency as measured at the end of the assessment period, NERC views NPCC’s enforcement staffing to be sufficient to process the number of violations that it receives.

NPCC ended the assessment period with a Caseload Index that was somewhat better than the ERO Enterprise Caseload Index. NPCC processed all violations that were discovered before 2012, in furtherance of an ERO Enterprise goal. NPCC’s caseload now consists of more-recent violations, and NPCC has made progress in ensuring that older violations are mitigated. Finally, NERC has reviewed NPCC’s enforcement-related processes as part of its oversight role and found that, while areas for improvement remain, NPCC generally implements those processes in a satisfactory manner.

In addition, NPCC staff have actively participated in the development of RAI. Specifically, NPCC staff have participated in the Aggregation of Minimal Risk Issues and Enforcement Discretion pilot programs and served on the *ERO Self-Report User Guide* and *ERO Enterprise Mitigation Plan Guide* drafting teams. NPCC also participated in several compliance-based programs. In addition, NPCC staff have participated in the process to develop improvements for the compliance and enforcement oversight of MRREs. This participation is vital as the ERO Enterprise shifts toward a risk-based model of compliance and enforcement.

As explained more fully below, based on NPCC’s Caseload Index, NPCC’s successful processing of its older violations (as facilitated by its effective implementation of streamlined enforcement processing mechanisms), and the results of NERC’s oversight activities, NERC concludes that NPCC has performed as an effective Regional Entity with respect to enforcement activities during the assessment period. Going forward, NERC will work with NPCC to ensure that violations are mitigated promptly.

**b. Evaluation of Caseload Processing Efficiency**

**i. The Composition of NPCC’s Caseload**

During the assessment period, NPCC reported 551 violations to NERC.<sup>110</sup>

Violations for NPCC 2009-2013 by Year Reported to NERC<sup>111</sup>

<b>Year Reported to NERC</b>	<b>Violations Reported</b>
2009	43
2010	99
2011	130

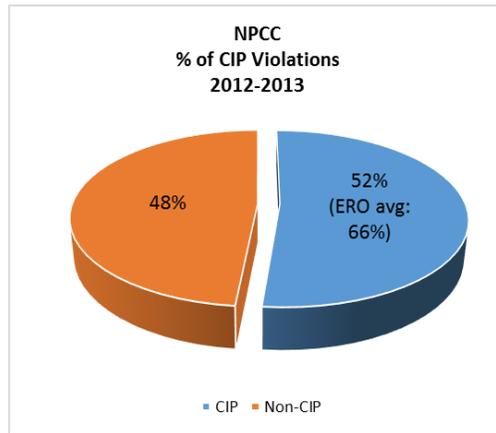
<sup>110</sup> This table reflects U.S. violations only. When including Canadian violations, NPCC reported 670 violations from 2009 through 2013.

<sup>111</sup> For an explanation of the methodology used to calculate the data in this table and throughout this §II.D, *see supra* n. 766.

2012	213
2013	66
<b>Total</b>	<b>551</b>

As noted in the table above, NPCC reported the highest number of violations in 2012, with a substantial decline in 2013. In the years 2012 and 2013, violations of CIP Reliability Standards represented 52% of total violations; this is a lower percentage than the ERO Enterprise average of 66%.

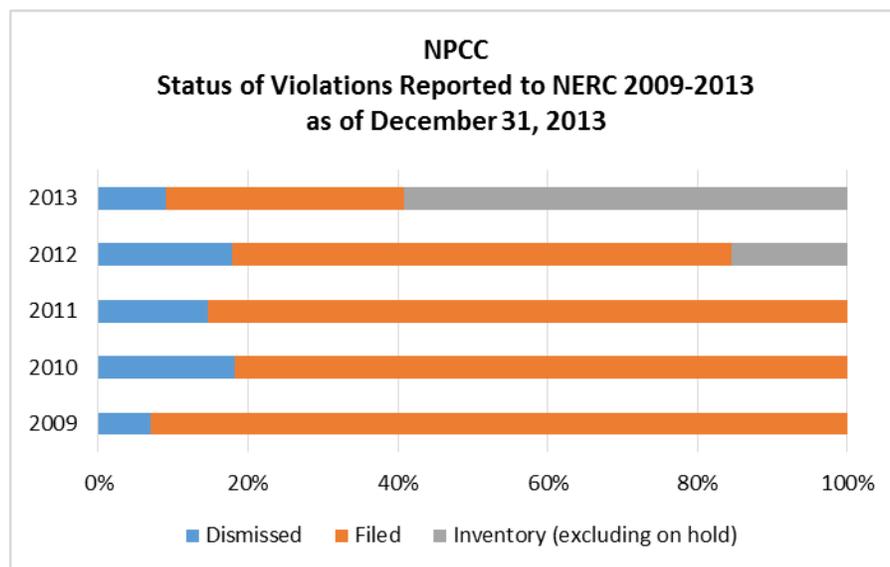
Type of Violations Reported to NERC by NPCC, 2012-2013



Over the assessment period, CIP violations made up 54.6% of total violations in NPCC, compared to the ERO Enterprise average of 59.4%. Approximately 70% of the CIP violations were self-identified. NERC will work with NPCC to understand what factors may have caused NPCC to have a lower percentage of CIP violations than other Regional Entities in 2012-2013.

Of the total violations reported to NERC during the assessment period, approximately 72 violations, or 13%, remained to be processed as of December 31, 2013 (excluding violations that are held by appeal, a court, or a regulator). As demonstrated in the table below, NPCC has processed all violations that were reported to NERC in 2009, 2010, and 2011. NPCC has processed approximately 85% of violations reported to NERC in 2012.

Status of Violations Reported to NERC 2009-2013 for NPCC



NPCC processed approximately 41% of violations that it reported to NERC in 2013. This is consistent with the ERO 2013 processing rate of 39%. Approximately 54% of the violations available for processing in NPCC's inventory consist of violations reported to NERC in 2013. This is lower than the overall ERO Enterprise average of 67%.

**ii. Caseload Index**

The Caseload Index for NPCC is 6.7 months as of December 31, 2013. This is consistent with the ERO Enterprise Caseload Index of approximately 6.5 months.

In light of NPCC's Caseload Index and as reflected in the general characteristics of its caseload (i.e., NPCC's caseload consists entirely of violations reported to NERC in 2012 and 2013), NPCC continued to process violations in a timely manner during the assessment period.

**iii. Efforts to Reduce Older Caseload**

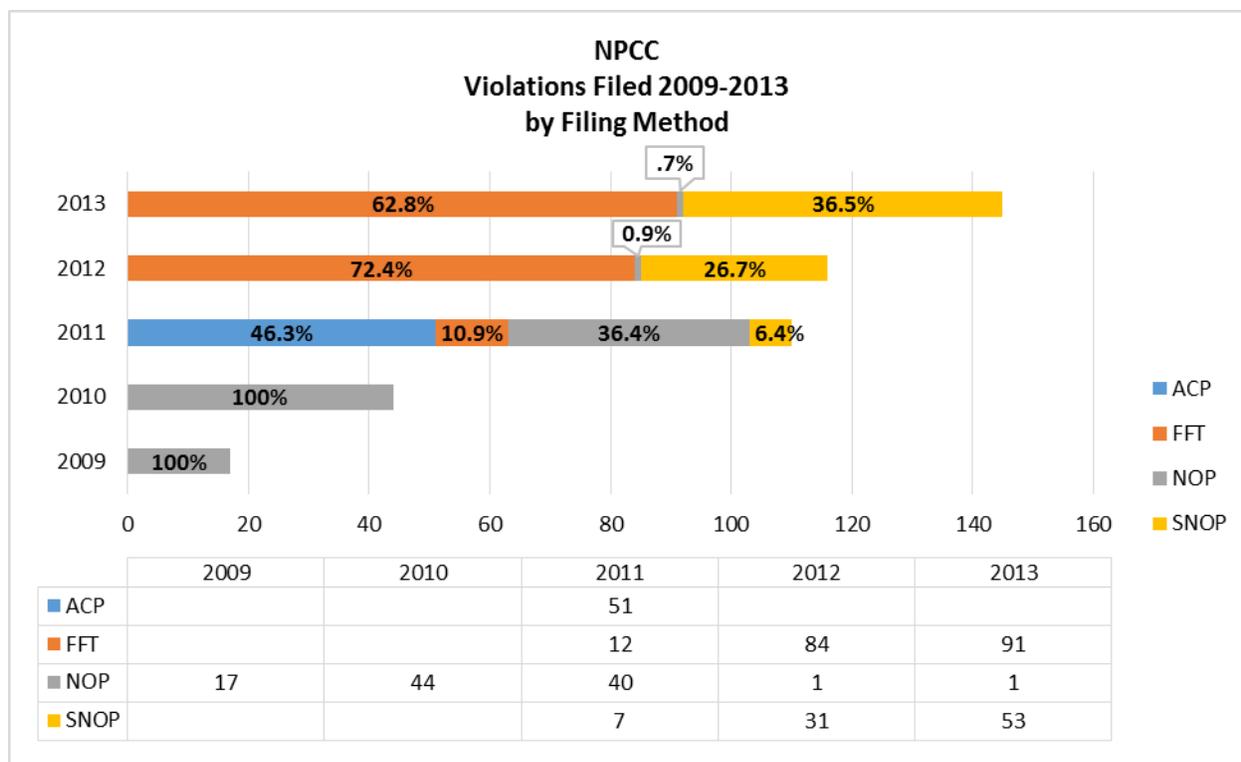
In 2013, NPCC completed processing of all pre-2012 violations. NERC commends NPCC for its responsiveness and efforts to achieve this important ERO Enterprise goal. Based on the current composition of its inventory of violations available to be processed, NPCC is well-positioned to achieve the goal of ensuring that violations are processed before reaching 24 months in age.

**iv. Implementation of Streamlined Enforcement Processing Mechanisms**

NPCC effectively used streamlined processing mechanisms to process a substantial portion of its caseload during the assessment period. In 2011, following the implementation of the

streamlined enforcement processing mechanisms, NPCC filed 110 violations – more than the previous two years combined.

Violations Filed per Year by Filing Method for NPCC, 2009-2013



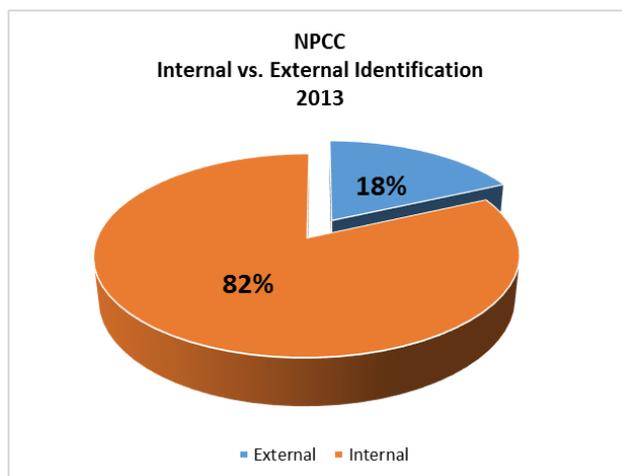
By 2012, NPCC filed nearly all of its violations using either SNOP or FFT. NPCC reported that it discusses the application of FFT and SNOP with other Regional Entity representatives to ensure consistency. NERC expects that NPCC will continue to reserve the NOP format for violations that require it and to take advantage of further process refinements available under RAI. Additional information regarding NPCC’s application of FFT is presented later in this assessment.

**c. Improving Reliability**

**i. Encouraging Internal Discovery of Violations**

In 2013, violations discovered by registered entities through internal mechanisms comprised 82% of total violations in the NPCC region. This is somewhat higher than the ERO Enterprise average of 73%.

Percentage of Violations by Method of Identification for NPCC in 2013



**ii. Ensuring the Timely Mitigation of Violations**

NPCC has enhanced its self-report form to include data fields that allow registered entities to supply details of mitigation plans or mitigating activities when submitting a self-report. NPCC believes that use of these new data fields has resulted in earlier implementation of mitigation, thereby promoting improved reliability. NPCC works closely with each registered entity to process mitigation plans in a timely manner.

As demonstrated in the table below, NPCC has made substantial progress in ensuring that pre-2012 violations have been mitigated.

NPCC: Status of Mitigating Activity for Violations Discovered from 2007-2013 and Requiring Mitigation as of December 31, 2013<sup>112</sup>

<b>Year of Discovery</b>	<b>% Completed</b>	<b>% in Progress</b>
2013	37.5%	62.5%
2012	86.3%	13.7%
2011	100.0%	0.0%
2010	100.0%	0.0%
2009	100.0%	0.0%
2008	100.0%	0.0%
2007	100.0%	0.0%
<b>Grand Total</b>	<b>89.0%</b>	<b>11.0%</b>

<sup>112</sup> This table reports the percentage of violations discovered from the years 2007 through 2013 with completed or open mitigation. This table excludes dismissed violations and non-U.S. violations.

Approximately 22 violations from 2012 remain to be mitigated, along with 62.5% of violations from 2013. NERC is working closely with NPCC to ensure that violations are mitigated in a timely manner.

**iii. Promoting Reliability through Enforcement Philosophy and Practices**

NPCC's enforcement philosophy is to develop relationships with the registered entities in its region to: (1) educate them on the aspects of the CMEP and its implementation; (2) inform them of the changes to the enforcement process during biannual workshops; and (3) promote RAI.

In its settlement processes, NPCC has worked with registered entities, where appropriate, to accept the completion of certain activities above-and-beyond those required to ensure compliance with one or more Reliability Standards in lieu of the full monetary penalties permitted by the NERC *Sanction Guidelines*. These efforts allow registered entities to allocate their resources to those projects that can increase overall reliability and reduce the likelihood of future noncompliance.

As an example of above-and-beyond activities, one registered entity within the NPCC region committed to establish an enterprise-wide compliance program, with resources dedicated to implementing that program. Another registered entity committed to implement software systems (rather than manual record-keeping) to track protection system devices and their associated maintenance intervals. On one occasion, a registered entity committed to implement Light Detection and Ranging (LiDAR)-based Power Line Systems as a supplemental tool to identify site conditions. NERC encourages NPCC to continue deploying solutions such as these that promote reliability and insight into processes that can manage risk.

**d. NPCC'S Implementation of Various Aspects of the CMEP**

As noted in §II.D.1.a above, NERC conducts ongoing oversight activities to evaluate the effectiveness of each Regional Entity's implementation of the CMEP. These activities include regular reviews and periodic spot checks of specific Regional Entity processes. NERC's oversight activities give NERC an ongoing view into how effectively and efficiently the Regional Entity is executing its enforcement responsibilities. Below is a summary of some of NERC's more recent oversight activities specific to NPCC.

NPCC reported that, in addition to using the NERC *Sanction Guidelines* as a guide for assessing monetary penalties, NPCC reviews the monthly enforcement filings. Specifically, NPCC compares the penalties that other Regional Entities assess for violations of Reliability Standards and Requirements and contacts other Regional Entities to discuss penalties where appropriate. NERC reviews all penalties submitted by NPCC for appropriateness and consistency with monetary penalties assessed by NPCC and other Regional Entities for violations of the same Reliability Standards and Requirements occurring under similar facts and circumstances. NERC has found that NPCC assesses monetary penalties that are appropriate and consistent with penalties assessed for similar violations.

Based on a spot check, NERC determined that NPCC generally dismisses violations for appropriate reasons, and generally includes the required information when issuing letters of dismissal. NERC identified opportunities for NPCC to improve its letters of dismissal and communicated those opportunities to NPCC. By implementing the recommended improvements, NPCC can improve the quality and clarity of its compliance guidance to registered entities.

As part of its ongoing FFT review processes, NERC reviewed a sample of NPCC FFT issues filed or posted during the assessment period to examine NPCC's procedures for FFT processing and the application of those procedures to the FFT issues in its caseload. Following its review, NERC concluded that NPCC maintains process documents governing the application of the FFT process. NERC noted that NPCC ensures that mitigating activity is completed. NPCC's issue descriptions are generally adequate to describe the issue. NERC noted several ways that NPCC could improve its FFT postings and related documentation to provide additional transparency to its determinations.

**e. Conclusion**

Based on NERC's review of the factors described above, NERC concludes that NPCC has performed as an effective Regional Entity with respect to enforcement activities during the assessment period. NPCC should adopt the recommendations for improvement provided as part of NERC's oversight activities.

**5. Evaluation of ReliabilityFirst Corporation**

**a. Overview**

In the three-year performance assessment, NERC concluded that, consistent with the overall findings for the ERO Enterprise, ReliabilityFirst needed to improve its efficiency with respect to conducting enforcement activities.<sup>113</sup> ReliabilityFirst has taken several steps to increase its efficiency with respect to conducting enforcement activities during the assessment period, including setting internal violation processing goals that are tied to corporate goals and training enforcement staff on how to become more efficient in their fact-gathering efforts. In 2013, ReliabilityFirst implemented a practice of consolidating multiple violations of the same standard with similar facts into a single docket number and consolidating multiple docket numbers with similar violations into a single settlement agreement or FFT. ReliabilityFirst believes this practice furthers its approach to resolving violations, an approach which it described as "holistic." ReliabilityFirst has also focused its efforts on those violations that pose the greatest risk to reliability and expedited its processing of lesser-risk violations through the FFT process.<sup>114</sup>

During the assessment period, ReliabilityFirst increased the number of FTE staff dedicated to enforcement from 8 in 2009 to 12 as of December 31, 2013.

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<sup>113</sup> *Three-Year ERO Performance Assessment Report*, Attachment 3 at 21-22. NERC also noted that an independent audit of ReliabilityFirst's compliance program found no material deficiencies.

<sup>114</sup> 2014 JRESA, Appendix 2-B at 6.

NERC recognizes the progress ReliabilityFirst has made in enforcement processing during the assessment period. ReliabilityFirst made significant progress in reducing the number of open violations, despite substantial increases in new violations during the assessment period. Moreover, during the assessment period, ReliabilityFirst worked with and resolved a number of complex matters concerning registered entities with significant BPS operations. When resolving each of these complex matters, ReliabilityFirst encouraged registered entities to implement actions above and beyond baseline compliance to improve the reliability and security of the BPS. Examples of these above-and-beyond actions are presented below.

NERC also recognizes that ReliabilityFirst often takes the lead in settlement negotiations to resolve violations from MRREs. ReliabilityFirst has routinely demonstrated a commitment to use the enforcement process to promote the reliability of the BPS. Further, NERC has reviewed ReliabilityFirst's enforcement-related processes as part of its oversight role and found that, while areas for improvement remain, ReliabilityFirst generally implements those processes in a satisfactory manner. However, ReliabilityFirst ended the assessment period with a higher-than-average Caseload Index. In addition, while ReliabilityFirst made substantial strides in reducing the portion of its caseload consisting of violations dating to before 2012, ReliabilityFirst had a number of older violations in its inventory that needed to be mitigated and processed by the end of the assessment period. As is discussed in more detail below, ReliabilityFirst is working closely with the registered entities to complete mitigation and processing of these older violations.

NERC recognizes the contributions ReliabilityFirst staff have made in the development of RAI and the related enforcement pilot programs. ReliabilityFirst has taken a leadership role in the conceptualization, development, testing, and integration of several programs, and a member of ReliabilityFirst's staff led the multi-region working group on enforcement activities during the assessment period. ReliabilityFirst staff participated in the Enforcement Discretion pilot program and served on the *ERO Self-Report User Guide* and *ERO Enterprise Mitigation Plan Guide* drafting teams. ReliabilityFirst staff have also participated in the process to develop improvements for the compliance and enforcement oversight of MRREs. ReliabilityFirst also maintained the sole MRRE log during the Aggregation of Minimal Risk Issues pilot program. This participation is vital as the ERO Enterprise shifts toward a risk-based model of compliance and enforcement.

In light of all the relevant factors, which are explained more fully below, NERC concludes that ReliabilityFirst has performed as an effective Regional Entity with respect to enforcement activities during the assessment period. However, ReliabilityFirst should consider exploring and implementing solutions that will assist ReliabilityFirst in processing the substantial number of violations that it receives on a yearly basis while meeting the performance objectives of the ERO Enterprise.

**b. Evaluation of Caseload Processing Efficiency**

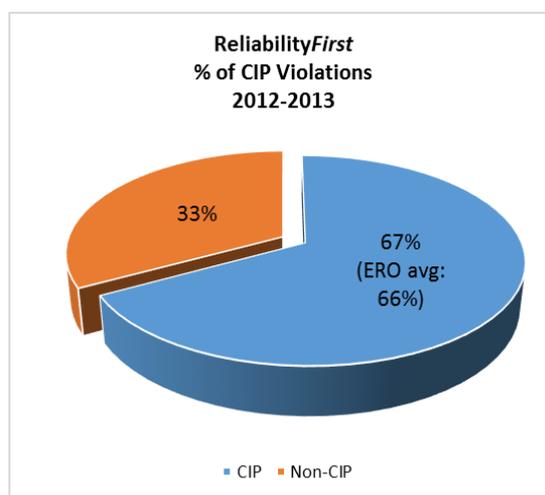
**i. The Composition of ReliabilityFirst's Caseload**

During the assessment period, ReliabilityFirst reported 1,902 violations to NERC, the second highest number among the Regional Entities.

Violations for ReliabilityFirst 2009-2013 by Year Reported to NERC<sup>115</sup>

Year Reported to NERC	Violations Reported
2009	123
2010	469
2011	565
2012	505
2013	240
<b>Total</b>	<b>1902</b>

As shown in the table above, ReliabilityFirst reported the highest number of violations in 2011, with a gradual decrease in 2012 and a substantial decrease in 2013. Approximately two-thirds of the violations in 2011 were of the CIP Reliability Standards. In the years 2012 and 2013, violations of CIP Reliability Standards represented 67% of total violations; this percentage is consistent with the ERO Enterprise average of 66%.

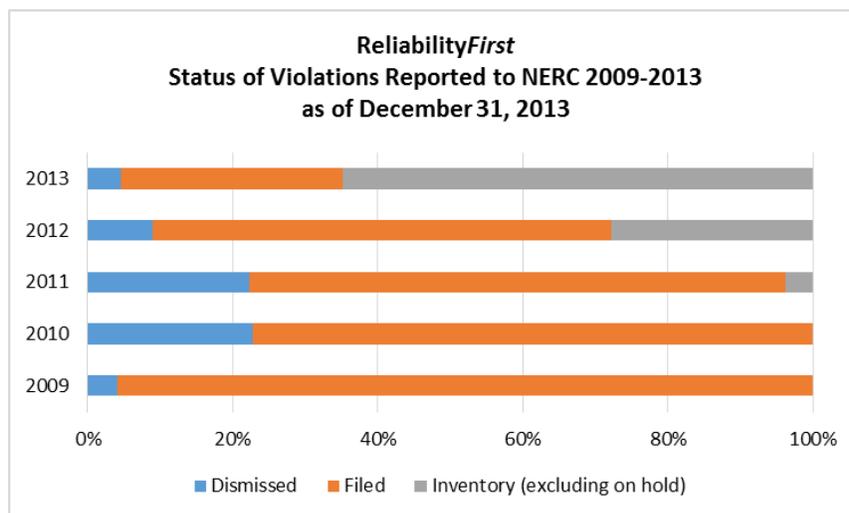
Type of Violations Reported to NERC by ReliabilityFirst, 2012-2013

Approximately 76% of the CIP violations were discovered through internal means.

Of the total violations reported to NERC during the assessment period, approximately 316 violations, or approximately 17%, remained to be processed as of December 31, 2013 (excluding violations that are held by appeal, a court, or a regulator). As demonstrated in the table below, ReliabilityFirst has processed all violations that were reported to NERC in 2009 and 2010 (excluding on hold violations). ReliabilityFirst has processed approximately 96% of violations reported to NERC in 2011 (excluding on hold violations), and approximately 72% of violations reported to NERC in 2012.

<sup>115</sup> For an explanation of the methodology used to calculate the data in this table and throughout this §II.D, see *supra* n. 766.

Status of Violations Reported to NERC 2009-2013 for ReliabilityFirst



ReliabilityFirst processed approximately 35% of violations reported to NERC in 2013 (excluding on hold violations). This is slightly lower than the ERO 2013 processing rate of 39%. Further, the percentage of ReliabilityFirst's caseload consisting of violations reported to NERC in 2013 (approximately 49%), is substantially lower than the overall ERO Enterprise average of 67%.

**ii. Caseload Index**

The Caseload Index for ReliabilityFirst was 9.8 months as of December 31, 2013. Although this is higher than the ERO Enterprise Caseload Index of approximately 6.5 months, NERC notes that ReliabilityFirst performed well, relative to the ERO Enterprise average, for the majority of the assessment period. NERC also recognizes that in 2014, ReliabilityFirst has resolved a significant number of the current set of cases and is on track to resolve the remaining cases that are responsible for the higher-than-average Caseload Index at the end of the assessment period. The majority of these cases are large, multi-regional matters.

**iii. Efforts to Reduce Older Caseload**

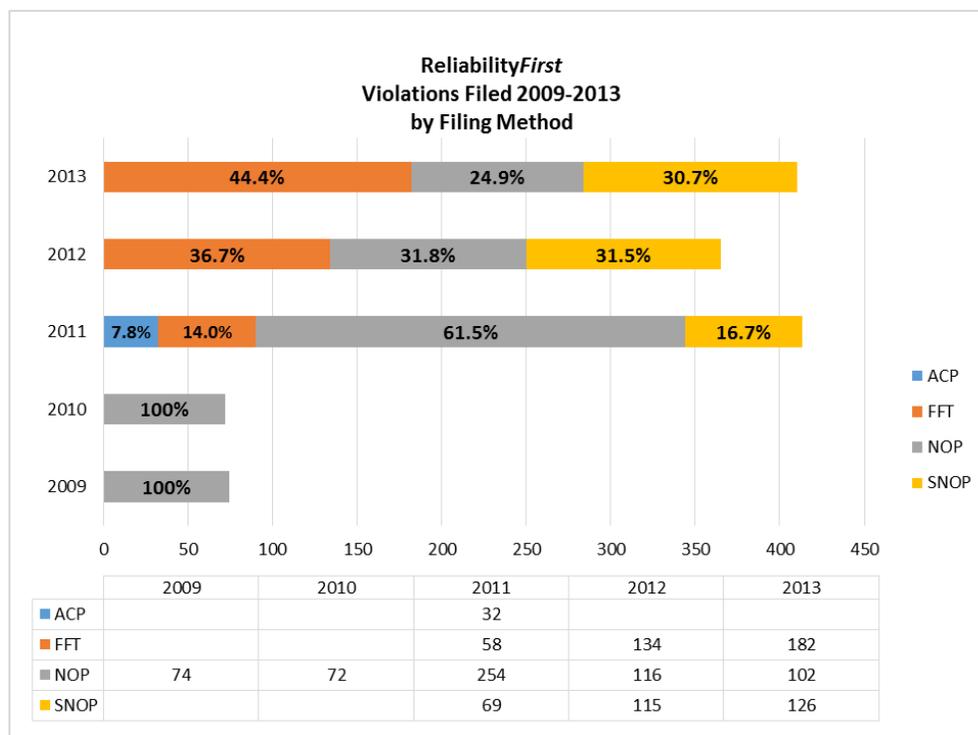
In 2013, ReliabilityFirst reduced the portion of its caseload consisting of violations dating to before 2012 by 88%. NERC commends ReliabilityFirst for its responsiveness and efforts to achieve this important ERO Enterprise goal. ReliabilityFirst reported that its remaining inventory consisted of particularly broad and complex violations that are part of large settlement agreements in the process of being negotiated. ReliabilityFirst also reported that it has been closely monitoring and working with the registered entities to ensure effective and holistic mitigation for these older, more complex violations.

NERC will continue to work with ReliabilityFirst to prioritize the processing of these violations and other older violations so that ReliabilityFirst may achieve the goal of ensuring that violations are processed before reaching 24 months in age.

**iv. Implementation of Streamlined Enforcement Processing Mechanisms**

ReliabilityFirst effectively used streamlined enforcement processing mechanisms to process a substantial portion of its caseload during the assessment period. In 2011, following the implementation of the streamlined enforcement processing mechanisms, ReliabilityFirst filed 413 violations – more than two-and-a-half times the total of the previous two years combined.

Violations Filed per Year by Filing Method for ReliabilityFirst, 2009-2013



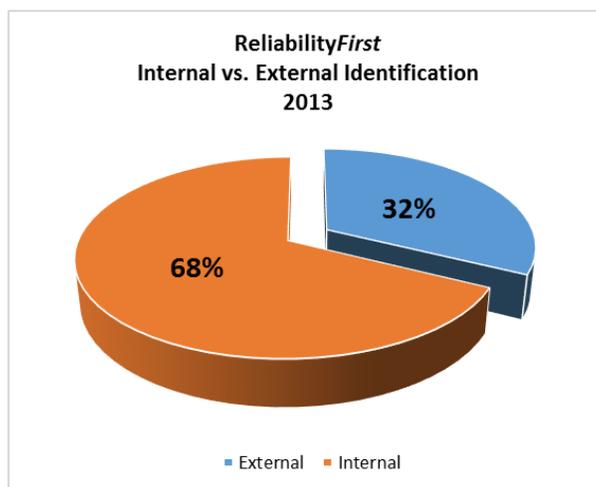
ReliabilityFirst uses the FFT process for minimal or moderate risk violations where it seeks to encourage certain entity behavior (or conversely, where there is an absence of behavior that ReliabilityFirst wishes to discourage). ReliabilityFirst prepares NOPs where there are important mitigating actions, above-and-beyond commitments, or reliability concerns that may not be adequately presented in the SNOP format. ReliabilityFirst also confers with other Regional Entities through an enforcement activities working group to ensure that each of the Regional Entities develops consistent documentation for the FFT process and makes consistent risk determinations when deciding whether to grant FFT or SNOP treatment for a violation. NERC expects that ReliabilityFirst will continue to take advantage of further process refinements available under RAI. Additional information regarding ReliabilityFirst’s implementation of FFT is presented later in this assessment.

**c. Improving Reliability**

**i. Encouraging Internal Discovery of Violations**

In 2013, violations discovered by registered entities through internal mechanisms comprised 68% of total violations in the ReliabilityFirst region. This is slightly lower than the ERO Enterprise average of 73%.

**Percentage of Violations by Method of Identification for ReliabilityFirst in 2013**



**ii. Ensuring the Timely Mitigation of Violations**

ReliabilityFirst reported that it encourages the prompt submission of mitigation plans in its notices of possible violation, in compliance audit exit briefings, and as part of its enforcement process. ReliabilityFirst considers the prompt submission of mitigation plans when making its penalty determinations and the prompt identification of mitigating activities in its determination of FFT eligibility. ReliabilityFirst has processes in place for the review, acceptance, and verification of mitigation plans, and it has tracking systems in place to help ensure that mitigation plans are submitted, reviewed, and accepted in a timely manner. ReliabilityFirst does not require formal mitigation plans for some minimal and moderate risk violations, but rather requires submission of a formal mitigation plan based on the risk posed by each violation. ReliabilityFirst sends notifications to registered entities when necessary to ensure that they submit mitigation plans promptly and meet associated deadlines. Acceptance and verification of mitigation plans passes through a multi-layer review and approval process. During this process, ReliabilityFirst works closely with the applicable registered entity to ensure that the proposed mitigating activities address the underlying cause of the violation, the time to complete the mitigating activities is reasonable, and effective steps are taken to prevent reoccurrence of violations.

NERC is working closely with ReliabilityFirst to ensure that violations are mitigated in a timely manner. As demonstrated in the table below, ReliabilityFirst has made notable progress in ensuring that older violations have been mitigated, with 100% of violations discovered from 2007-

2009, 98.1% of violations discovered in 2010, and 89.1% of violations discovered in 2011 having completed mitigation.

ReliabilityFirst: Status of Mitigating Activity for Violations Discovered from 2007-2013 and Requiring Mitigation as of December 31, 2013<sup>116</sup>

<b>Year of Discovery</b>	<b>% Completed</b>	<b>% in Progress</b>
2013	24.5%	75.5%
2012	68.3%	31.7%
2011	89.1%	10.9%
2010	98.1%	1.9%
2009	100.0%	0.0%
2008	100.0%	0.0%
2007	100.0%	0.0%
<b>Grand Total</b>	<b>79.6%</b>	<b>20.4%</b>

ReliabilityFirst reported that it is working closely with registered entities to ensure the completion of effective mitigating activities for these violations. NERC will continue to work closely with ReliabilityFirst to ensure that violations are mitigated in a timely manner.

**iii. Promoting Reliability through Enforcement Philosophy and Practices**

ReliabilityFirst has taken a proactive approach to developing a detailed enforcement philosophy. ReliabilityFirst's enforcement philosophy consists of several overarching themes governing enforcement and a series of philosophies governing particular aspects of the enforcement process. ReliabilityFirst's philosophy is to not see the enforcement process as adversarial, but rather as an opportunity to work collaboratively with registered entities to craft forward-thinking resolutions designed to enhance reliability. ReliabilityFirst's philosophy is to use the enforcement process as a tool to shape and encourage desired registered entity behavior, and to only assess monetary penalties where the penalty is appropriate to encourage or discourage behavior and where the justification is supported by sound, consistent, and risk-based reasoning. ReliabilityFirst encourages the development of strong internal controls and other steps taken to improve compliance.

In its settlement processes, ReliabilityFirst has worked with registered entities, where appropriate, to accept the completion of certain activities above-and-beyond those required to ensure compliance with one or more Reliability Standards in lieu of the full monetary penalties permitted by the NERC *Sanction Guidelines*. These efforts allow registered entities to allocate their resources to those projects that can increase overall reliability and reduce the likelihood of future noncompliance.

<sup>116</sup> This table reports the percentage of violations discovered from the years 2007 through 2013 with completed or open mitigation. This table excludes dismissed violations.

ReliabilityFirst has worked with registered entities to include commitments in their mitigation plans going beyond those actions necessary to mitigate the underlying violations. Several notable examples are presented here. One registered entity committed to an aggressive timeline for the completion of mitigating actions, including completing certain activities faster than required by NERC guidance. To resolve a violation involving facility ratings, one registered entity committed to perform a broad review and verification of system components, to implement a new ratings software application, and to use LiDAR-based Power Line Systems – Computer Aided Design and Drafting (PLS-CADD) modeling as a supplemental tool to identify site conditions that may indicate potential ratings issues. One registered entity committed to perform an ongoing risk analysis of its cybersecurity policies and procedures using a Failure Modes Effects Analysis tool (a continuous improvement tool to improve the quality of process outputs by identifying and removing the cause of defects and errors and minimizing variability in processes). Another registered entity committed to conduct an evaluation of the U.S. Department of Energy Electricity Subsector Cybersecurity Capability Maturity Model (ES-C2M2) and create and implement an action plan with the goal of increasing the entity’s maturity indicator level in domains related to the CIP Reliability Standards. ReliabilityFirst has also imposed the non-monetary sanction of conducting an unscheduled audit before the next six-year scheduled audit to ensure that a registered entity’s implementation of a new compliance program improved and better positioned the registered entity’s compliance posture prospectively. NERC encourages ReliabilityFirst to continue deploying solutions such as these that promote reliability and insight into processes that can manage risk.

**d. ReliabilityFirst’s Implementation of Various Aspects of the CMEP**

As noted in §II.D.1.a above, NERC conducts ongoing oversight activities to evaluate the effectiveness of each Regional Entity’s implementation of the CMEP. These activities include regular reviews and periodic spot checks of specific Regional Entity processes. NERC’s oversight activities give NERC an ongoing view into how effectively and efficiently the Regional Entity is executing its enforcement responsibilities. Below is a summary of some of NERC’s more recent oversight activities specific to ReliabilityFirst.

With respect to assessing monetary penalties, ReliabilityFirst reported that it has implemented a multi-step internal process for making penalty determinations. First, an assigned case manager makes all penalty recommendations (subject to senior executive review and approval) for his or her assigned registered entities, including the application of the adjustment factors set forth in the NERC *Sanction Guidelines*. Second, ReliabilityFirst has implemented what it calls the “Risk-Harm” process, whereby technical experts answer a series of questions about the risk and harm posed by each violation using a common scale which results in a quantified risk assessment for each violation. Third, ReliabilityFirst analyzes the risk assessment produced from the Risk-Harm process and checks to ensure that the penalty is consistent with the risk posed by the violation. Fourth, ReliabilityFirst looks at previously assessed penalties for comparable violations in the ReliabilityFirst region and in other regions, to ensure the internal and external consistency of its penalties. Finally, ReliabilityFirst requires senior management approval for each settlement agreement or Notice of Alleged Violation and Penalty, to ensure that the penalty is consistent with the risk posed by the violations at issue and is consistent with the enforcement philosophy it wishes to convey to other entities in the region. NERC reviews all penalties

submitted by ReliabilityFirst for appropriateness and consistency with monetary penalties assessed by ReliabilityFirst and other Regional Entities for violations of the same Reliability Standards and requirements occurring under similar facts and circumstances. NERC has found that ReliabilityFirst assesses monetary penalties that are appropriate and consistent with penalties assessed for similar violations.

Based on a spot check, NERC determined that ReliabilityFirst dismisses violations for appropriate reasons and generally includes the required information when issuing letters of dismissal. NERC identified opportunities for ReliabilityFirst to improve its letters of dismissal and communicated those opportunities to ReliabilityFirst. By implementing the recommended improvements, ReliabilityFirst can improve the quality of its compliance guidance to registered entities.

As part of its ongoing FFT review processes, NERC reviewed a sample of ReliabilityFirst FFT issues filed or posted during the assessment period to examine ReliabilityFirst's procedures for FFT processing and the application of those procedures to the FFT issues in its caseload. Following its review, NERC concluded that ReliabilityFirst has clear FFT processes that follow the directives, principles, and processes of the NERC guidance and the directives issued by the Commission regarding FFTs. NERC found that ReliabilityFirst applies its processes consistently. NERC noted several ways that ReliabilityFirst could improve its FFT postings and related documentation to provide additional transparency to its determinations.

**e. Conclusion**

Based on NERC's review of the factors described above, NERC concludes that ReliabilityFirst has performed as an effective Regional Entity with respect to enforcement activities during the assessment period. ReliabilityFirst should adopt the recommendations for improvement noted above and the recommendations provided as part of NERC's oversight activities. In particular, based on ReliabilityFirst's recent performance in several enforcement processing metrics, ReliabilityFirst is encouraged to continue to identify and implement solutions so that it is better equipped to ensure that violations are processed as quickly as practicable consistent with the circumstances of each violation.

**6. Evaluation of SERC Reliability Corporation**

**a. Overview**

In the three-year performance assessment, NERC concluded that SERC was an effective Regional Entity.<sup>117</sup> Consistent with the overall findings for the ERO, NERC noted a need to improve the efficiency of enforcement processes. During the assessment period, SERC made a number of organizational and process improvements to streamline its enforcement process and elevate enforcement within the SERC organizational structure.<sup>118</sup> In particular, SERC has expanded its CIP capabilities based on the increase of CIP violations reported to the region.

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<sup>117</sup> *Three-Year ERO Performance Assessment Report*, Attachment 3 at 26.

<sup>118</sup> 2014 JRESA, Appendix 2-B at 5.

During the assessment period, SERC has increased the number of FTE staff dedicated to enforcement from 4.25 FTE in 2009 to 7 FTE as of December 31, 2013. Based on SERC’s recent improvements in its processing speed and efficiency (as measured at the end of the assessment period), NERC views SERC’s enforcement staffing to be sufficient to process the number of violations that it receives.

SERC ended the assessment period with a Caseload Index that was notably better than the ERO Enterprise Caseload Index. SERC processed a substantial number of violations discovered before 2012 in furtherance of an ERO Enterprise goal and in so doing, improved its performance and shifted the composition of its caseload to newer violations. NERC has reviewed SERC’s enforcement-related processes as part of its oversight role and found that, while areas for improvement remain, SERC generally implements these processes in a satisfactory manner.

In addition, SERC staff have actively participated in the development of RAI. SERC staff have participated in the Aggregation of Minimal Risk Issues and Enforcement Discretion pilot programs, and have provided input and feedback during the *ERO Self-Report User Guide* and *ERO Enterprise Mitigation Plan Guide* development processes. In addition, SERC staff have participated in the process to develop improvements for the compliance and enforcement oversight of MRREs. This participation is vital as the ERO Enterprise shifts toward a risk-based model of compliance and enforcement.

As explained more fully below, NERC concludes that SERC has performed as an effective Regional Entity with respect to enforcement activities during the assessment period. However, work remains to be done to ensure that violations are mitigated in a timely manner. Going forward, NERC will work with SERC to ensure that violations are mitigated promptly, with an added emphasis on ensuring the completion of mitigation for older violations.

**b. Evaluation of Caseload Processing Efficiency**

**i. The Composition of SERC’s Caseload**

During the assessment period, SERC reported 1,393 violations to NERC.

Violations for SERC 2009-2013 by Year Reported to NERC<sup>119</sup>

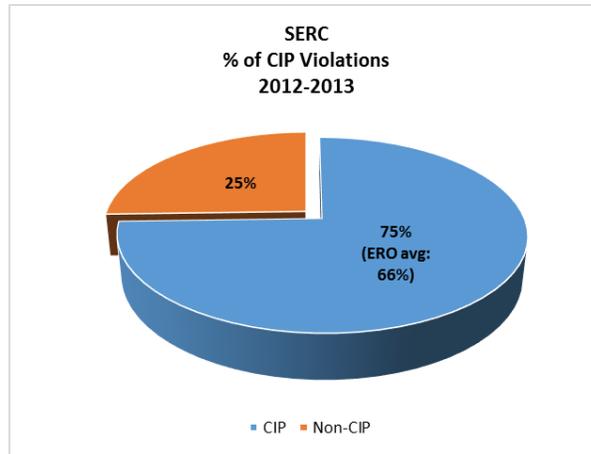
<b>Year Reported to NERC</b>	<b>Violations Reported</b>
2009	187
2010	312
2011	309
2012	300
2013	285

<sup>119</sup> For an explanation of the methodology used to calculate the data in this table and throughout this §II.D, see *supra* n. 76.

<b>Total</b>	<b>1393</b>
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As shown in the table above, SERC reported a fairly steady number of violations from 2010-2013. In the years 2012 and 2013, violations of CIP Reliability Standards represented a higher percentage (75%) of total violations in the SERC region than the ERO Enterprise as a whole.

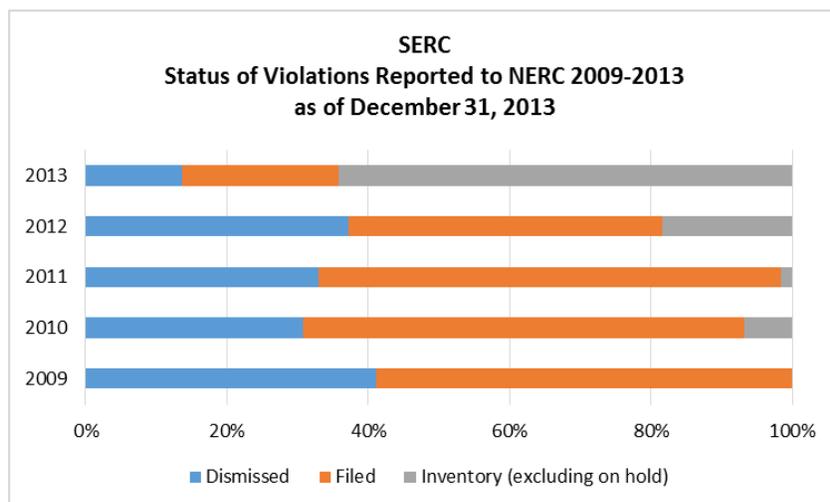
Type of Violations Reported to NERC by SERC, 2012-2013



Over two-thirds of CIP violations received from SERC in 2012 and 2013 were self-identified. SERC’s recent expansion of its CIP capabilities should assist SERC in ensuring the timely evaluation and processing of the CIP violations it has received as well as the CIP violations it is likely to receive in the future.

Of the total violations reported by SERC to NERC during the assessment period, approximately 264 violations, or 19%, remained to be processed as of December 31, 2013 (excluding violations that are held by appeal, a court, or a regulator). As demonstrated in the table below, SERC has processed all violations reported to NERC in 2009, 93% of violations reported to NERC in 2010, 98% of violations reported to NERC in 2011, and 82% of violations reported to NERC in 2012 (excluding on hold violations).

Status of Violations Reported to NERC 2009-2013 for SERC



SERC processed approximately 36% of violations it reported to NERC in 2013. This is slightly lower than the ERO 2013 processing rate of 39%. However, violations reported to NERC in 2013 represent approximately 69% of the violations available for processing in SERC's caseload, which is consistent with the overall ERO Enterprise average of 67%.

**ii. Caseload Index**

The Caseload Index for SERC is 5.1 months as of December 31, 2013. This is better than the ERO Enterprise Caseload Index of approximately 6.5 months and represents a significant improvement in SERC's performance from earlier in the assessment period.

Through 2013, SERC improved its pace of enforcement processing in a dedicated effort to process its older violations. SERC reduced the average age of violations in its inventory by approximately three months from the end of the first quarter of 2013 to the end of 2013. SERC's processing efforts are reflected in the Caseload Index and the other informational measures described in this assessment.

**iii. Efforts to Reduce Older Caseload**

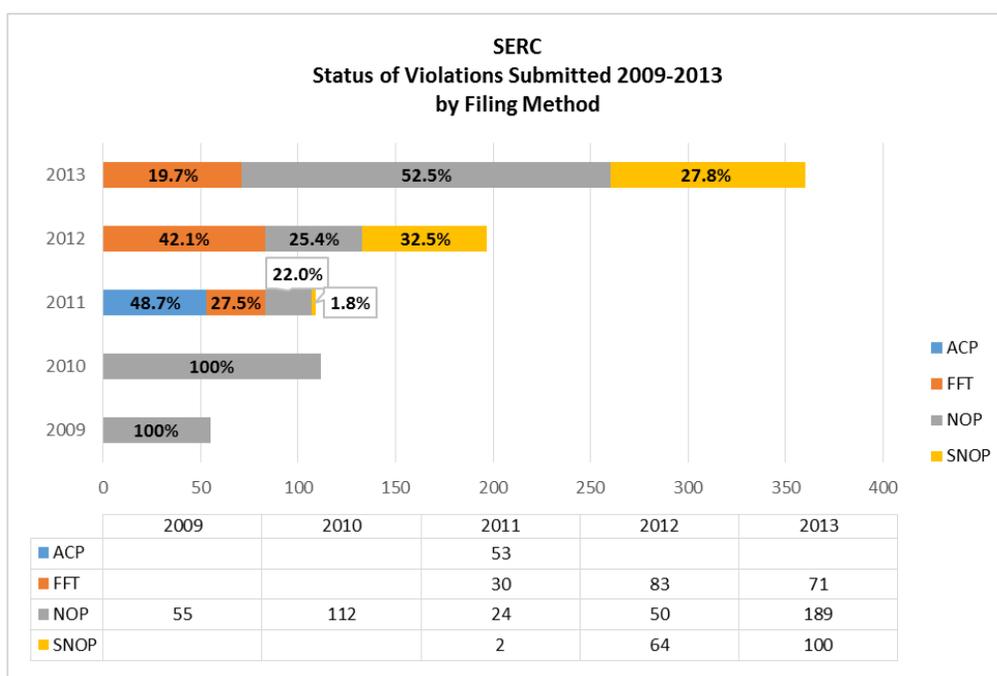
In 2013, SERC reduced its pre-2012 caseload by 92%. Over 90% of these pre-2012 violations were of the CIP Reliability Standards. NERC commends SERC for its responsiveness and efforts to achieve this important ERO Enterprise goal. SERC's remaining pre-2012 violations were in the settlement process or scheduled for processing in early 2014. NERC will work with SERC to ensure that these older violations are resolved and that future accumulations of older violations in the SERC region does not occur.

Based on the current composition of its inventory of violations available to be processed and its recent success in processing its older violations, SERC is positioned to achieve the ERO Enterprise goal of ensuring that violations are processed before reaching 24 months in age.

#### iv. Implementation of Streamlined Enforcement Processing Mechanisms

SERC believes that its processing of violations has improved because of increased resources and improved tools such as FFT and the SNOP filing mechanisms.<sup>120</sup> As demonstrated in the table below, SERC effectively used streamlined enforcement processing mechanisms to process a substantial portion of its caseload during the assessment period. In 2010, SERC filed an exceptionally high number of violations using the NOP format; in subsequent years, it used the streamlined enforcement processing mechanisms to file 50% or more of violations. In 2013, SERC had a higher percentage of violations processed as an NOP than most Regional Entities, based in large part on SERC's efforts to reduce the number of older, higher-risk CIP violations in its inventory.

##### Violations Filed per Year by Filing Method for SERC, 2009-2013



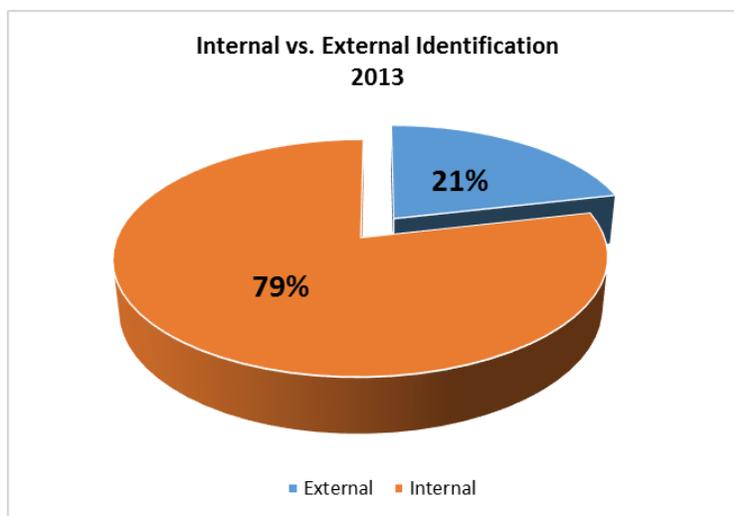
SERC generally uses the FFT process for minimal risk issues, the SNOP process for minimal and moderate risk issues and medium-scale compliance failures, and the NOP process for serious risk issues or large-scale compliance failures. SERC reviews previously-filed violations by SERC and other Regional Entities as part of its process for determining the appropriate enforcement processing mechanism. NERC expects that SERC will continue to reserve the NOP format for violations that require it and take advantage of further process refinements available under RAI. Additional information regarding SERC's implementation of FFT is presented later in this assessment.

<sup>120</sup> 2014 JRESA, Appendix 2-C at 24.

**c. Improving Reliability****i. Encouraging Internal Discovery of Violations**

In 2013, violations discovered by registered entities through internal mechanisms comprised 79% of total violations in the SERC region. This is somewhat higher than the ERO Enterprise average of 73%.

Percentage of Violations by Method of Identification for SERC in 2013

**ii. Ensuring the Timely Mitigation of Violations**

SERC reported that it has taken several steps to encourage the timely mitigation of violations. First, SERC encourages and discusses the benefits of prompt submission of mitigation plans during its compliance seminars, open forum web conferences, and its compliance program updates to its board of directors. SERC requires a registered entity, when submitting a self-report form, to provide the status of its mitigating activities, detailed information on mitigating activities that are in progress or are completed, and the registered entity's efforts to prevent reoccurrence. To ensure timely follow-up and completion of mitigation plans, SERC has dedicated a staff member to mitigation processing for operations and planning violations, and several staff members share responsibility for CIP mitigation processing. SERC believes that the efforts of its enforcement staff to discover the complete scope of each violation are likely to result in the creation of mitigation plans that fully address each violation and reduce the likelihood of reoccurrence. SERC tracks mitigation plan information and documents in its compliance information tracking system, including mitigation plans submitted by entities, mitigating activities submitted through self-reports or other means, any revisions requested by SERC, and certifications of mitigation plan completion. If a registered entity does not include mitigating activities in its self-report form, SERC enforcement staff will contact the registered entity to ensure that mitigating activities are occurring. SERC may accept the mitigating activities and details to prevent reoccurrence, through the self-report form, as an informal mitigation plan. The review and acceptance process is similar for both mitigating activities and a formal mitigation plan. In the

case of mitigating activities, SERC does not send a formal notification of its review to the registered entity, but SERC reviews and confirms completion. SERC reported that it works with registered entities to answer questions about SERC's expectations for mitigation plans, and that it has occasionally requested that a registered entity revise a mitigation plan when proposed milestones would result in an extended period of noncompliance posing an additional risk to the BPS.

Many of the mitigation plans in the SERC region from 2010 and 2011 that are still in progress are for issues where SERC has combined more recent instances of noncompliance into the older enforcement action. In many of those cases, the registered entities have completed mitigating activities for the older occurrences but are still completing the mitigating activities for the newer occurrences.

SERC: Status of Mitigating Activity for Violations Discovered from 2007-2013 and Requiring Mitigation as of December 31, 2013<sup>121</sup>

<b>Year of Discovery</b>	<b>% Completed</b>	<b>% in Progress</b>
2013	27.8%	72.2%
2012	75.9%	24.1%
2011	81.7%	18.3%
2010	83.8%	16.2%
2009	100.0%	0.0%
2008	96.9%	3.1%
2007	100.0%	0.0%
<b>Grand Total</b>	<b>74.6%</b>	<b>25.4%</b>

As shown in the table above, as of December 31, 2013, SERC had a small number of 2008 violations for which mitigating activities had not been completed. These violations involve a single registered entity, and the violations are currently on hold due to a pending court case involving a similarly-situated registered entity. SERC reported that the pending court case has impacted its ability to verify the timely completion of mitigation for these violations. .

NERC will continue to work with SERC to ensure that newer violations are mitigated in a timely manner.

**iii. Promoting Reliability through Enforcement Philosophy and Practices**

SERC's enforcement philosophy is to manage all enforcement activities in an unbiased, fair, transparent, and consistent manner, affording registered entities appropriate due process. SERC strives to manage all enforcement actions in such a way to ensure consistent application of penalties for violations of Reliability Standards. SERC's view of the enforcement process is that

<sup>121</sup> This table reports the percentage of violations discovered from the years 2007 through 2013 with completed or open mitigation. This table excludes dismissed violations.

it should be used to assist registered entities in assessing, understanding, and managing risk to the BPS and deploying innovative solutions to not only restore compliance, but also mitigate risk, increase reliability, and prevent reoccurrence. SERC believes that it is important to leverage relationships with registered entities and other Regional Entities to promote effective collaboration, cooperation, and communication around significant risks to the reliability of the BPS to produce outcomes that effectively manage risk.

In its settlement processes, SERC has worked with registered entities, where appropriate, to accept the completion of certain activities above-and-beyond those required to ensure compliance with one or more Reliability Standards in lieu of the full monetary penalties permitted by the NERC *Sanction Guidelines*. These efforts allow registered entities to allocate their resources to those projects that can increase overall reliability and reduce the likelihood of future noncompliance.

As examples of above-and-beyond activities, SERC has accepted the following commitments as formal conditions of settlement. To address a series of CIP violations, a registered entity committed to centralize physical monitoring activities by implementing a new access control and video monitoring system and establishing a central security monitoring station.<sup>122</sup> To settle another series of CIP violations, a registered entity committed to conduct an evaluation of the U.S. Department of Energy Electricity Subsector Cybersecurity Capability Maturity Model (ES-C2M2) and share the evaluation with SERC; create and implement an action plan with the goal of increasing the entity's maturity indicator level in domains related to the CIP Reliability Standards; provide SERC with quarterly updates regarding its progress in implementing the action plan; and provide SERC with notification and evidence upon completion of activities.<sup>123</sup> NERC encourages SERC to continue deploying solutions such as these that promote reliability and insight into processes that can manage risk.

**d. SERC's Implementation of Various Aspects of the CMEP**

As noted in §II.D.1.a above, NERC conducts ongoing oversight activities to evaluate the effectiveness of each Regional Entity's implementation of the CMEP. These activities include regular reviews and periodic spot checks of specific Regional Entity processes. NERC's oversight activities give NERC an ongoing view into how effectively and efficiently the Regional Entity is executing its enforcement responsibilities. Below is a summary of some of NERC's more recent oversight activities specific to SERC.

With respect to the assessment of monetary penalties, SERC reviews previously-filed violations by SERC and other Regional Entities as part of its process to determine appropriate monetary penalties for violations. SERC seeks to apply a uniform process for determining monetary penalties that ensures that they are both (i) appropriate in light of the scope of, and risk posed by, the violations, and (ii) reasonable in light of monetary penalties levied by SERC and other Regional Entities for similar violations. NERC reviews all penalties submitted by SERC for appropriateness and consistency with monetary penalties assessed by SERC and other Regional Entities for violations of the same Reliability Standards and requirements occurring under similar

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<sup>122</sup> *Unidentified registered entity*, NP14-18-000 (Dec. 30, 2013).

<sup>123</sup> *See Unidentified registered entity*, NP14-21-000 (Dec. 31, 2013).

facts and circumstances. NERC has found that SERC assesses monetary penalties that are appropriate and consistent with penalties assessed for similar violations.

Based on a spot check, NERC determined that SERC dismisses violations for appropriate reasons and generally includes the required information when issuing letters of dismissal. NERC identified opportunities for SERC to improve its letters of dismissal and communicated those opportunities to SERC. By implementing the recommended improvements, SERC can improve the quality of its compliance guidance to registered entities.

As part of its ongoing FFT review processes, NERC reviewed a sample of SERC FFT issues filed or posted during the assessment period to examine SERC's procedures for FFT processing and the application of those procedures to the FFT issues in its caseload. Following its review, NERC concluded that SERC's documented FFT process was adequate and that SERC follows its process. NERC noted that SERC generally provides all relevant information in its issue description, ensures the completion of mitigating activities, and considers violation history appropriately. NERC noted several ways that SERC could improve its FFT postings and related documentation to provide additional transparency to its determinations.

**e. Conclusion**

Based on NERC's review of the factors described above, NERC concludes that SERC has performed as an effective Regional Entity with respect to enforcement activities during the assessment period. SERC should adopt the recommendations for improvement provided as part of NERC's oversight activities.

**7. Evaluation of Southwest Power Pool Regional Entity**

**a. Overview**

In the three-year performance assessment, NERC expressed concerns about SPP RE's ability to process violations to completion in a timely manner.<sup>124</sup> During the current assessment period, SPP RE developed and streamlined enforcement procedures and increased enforcement staff in an effort to reduce processing times.<sup>125</sup> SPP RE now also has internal performance metrics in place to encourage the processing of violations as quickly as possible.

During the assessment period, SPP RE increased the number of FTE staff dedicated to enforcement from one FTE in 2009 to ten FTEs and one part-time employee as of December 31, 2013. Based on SPP RE's processing speed and efficiency as measured at the end of the assessment period, NERC views SPP RE's enforcement staffing to be sufficient to process the number of violations that it receives in accordance with ERO Enterprise performance objectives.

SPP RE closed the assessment period with a Caseload Index consistent with the ERO Enterprise average. SPP RE also made remarkable progress in meeting older caseload reduction goals for 2012 and 2013. Finally, NERC has reviewed SPP RE's enforcement-related processes

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<sup>124</sup> *Three-Year ERO Performance Assessment Report*, Attachment 3 at 24.

<sup>125</sup> 2014 JRESA, Appendix 2-B at 5.

as part of its oversight role and found that, while areas for improvement remain, SPP RE generally implements those processes in a satisfactory manner.

SPP RE staff have actively participated in the development of RAI. SPP RE staff participated in several NERC working groups that are developing, testing, and implementing the Aggregation of Minimal Risk Issues and Enforcement Discretion pilot programs. SPP RE staff took a leadership role in the development of the *ERO Enterprise Mitigation Plan Guide*. In addition, SPP RE staff also participated in various RAI projects and programs falling under the compliance function. This participation is vital as the ERO Enterprise shifts toward a risk-based model of compliance and enforcement.

In light of all of the relevant factors, which are explained more fully below, NERC concludes that SPP RE has performed as an effective Regional Entity during the assessment period with respect to enforcement activities. NERC will continue to work with SPP RE to ensure that violations are processed and mitigated promptly, with an emphasis on ensuring the completion of mitigation for older violations.

**b. Evaluation of Caseload Processing Efficiency**

**i. The Composition of SPP RE's Caseload**

During the assessment period, SPP RE reported 1,041 violations to NERC.

Violations for SPP RE 2009-2013 by Year Reported to NERC<sup>126</sup>

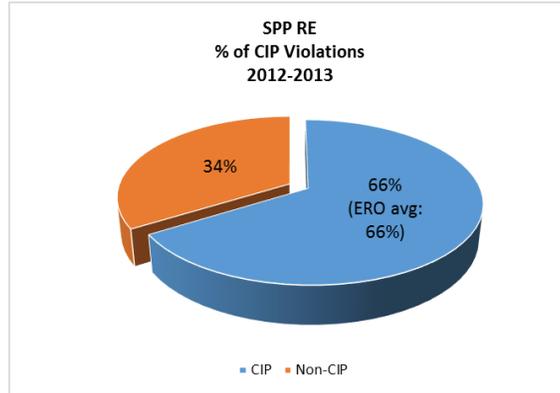
<b>Year Reported to NERC</b>	<b>Violations Reported</b>
2009	132
2010	254
2011	291
2012	173
2013	191
<b>Total</b>	<b>1041</b>

As shown in the table above, SPP RE reported its highest number of violations in 2010 and 2011. CIP violations were the majority of those violations. In the years 2012 and 2013, violations of CIP Reliability Standards comprised 66% of total violations. This is consistent with the ERO Enterprise average.

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<sup>126</sup> For an explanation of the methodology used to calculate the data in this table and throughout this §II.D, see *supra* n. 76.

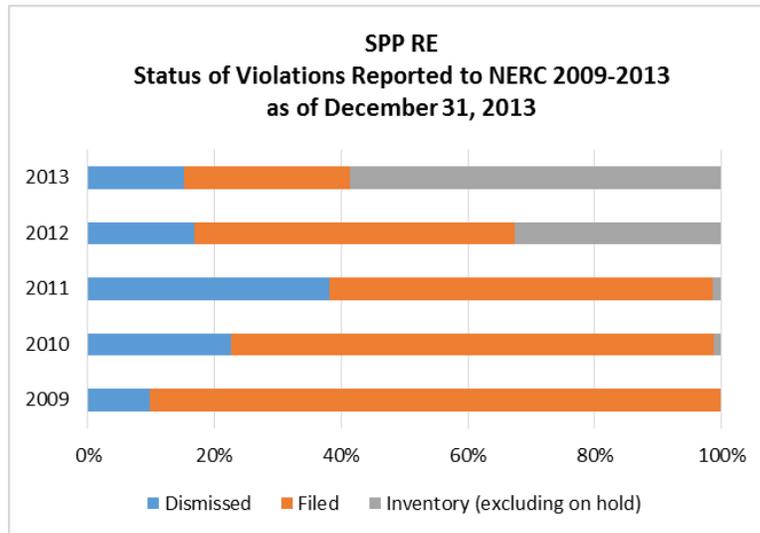
Type of Violations Reported to NERC by SPP RE, 2012-2013



Approximately 56% of CIP violations were discovered through internal mechanisms.

Of the total violations reported by SPP RE to NERC during the assessment period, approximately 175 violations, or about 17%, remained to be processed as of December 31, 2013 (excluding on-hold violations). As demonstrated in the table below, as of December 31, 2013, SPP RE had processed all violations that were reported to NERC in 2009; 98.8% of violations reported to NERC in 2010; 98.6% of violations reported to NERC in 2011; and 67.4% of violations reported to NERC in 2012 (excluding on hold violations).

Status of Violations Reported to NERC 2009-2013 for SPP RE



SPP RE processed approximately 41% of violations reported to NERC in 2013. This is consistent with the ERO 2013 processing rate of 39%. The percentage of SPP RE’s caseload consisting of violations reported to NERC in 2013 (64%) is also consistent with the overall ERO Enterprise average of 67%.

**ii. Caseload Index**

The Caseload Index for SPP RE is 8.3 months as of December 31, 2013. This is slightly higher than the ERO Enterprise Caseload Index of approximately 6.5 months, but nevertheless lower than the 2013 ERO Enterprise average goal of 10 months.

In light of SPP RE's Caseload Index and as reflected in the characteristics of its caseload (i.e., the percentage of SPP RE's caseload consisting of older violations is consistent with the ERO average), it appears that SPP RE's efforts to streamline its enforcement processes and increase its enforcement staffing during the assessment period have been effective.

**iii. Efforts to Reduce Older Caseload**

In 2013, SPP RE reduced its pre-2012 caseload by 96%.<sup>127</sup> NERC commends SPP RE for its responsiveness and efforts to achieve this important ERO Enterprise goal. SPP RE states that several factors specific to the remaining violations caused delays in processing, but SPP RE expects to resolve those issues in 2014.

Based on the current composition of its inventory of violations available to be processed and its largely successful efforts in processing its older violations, SPP RE is positioned to achieve the goal of ensuring that violations are processed before reaching 24 months in age.

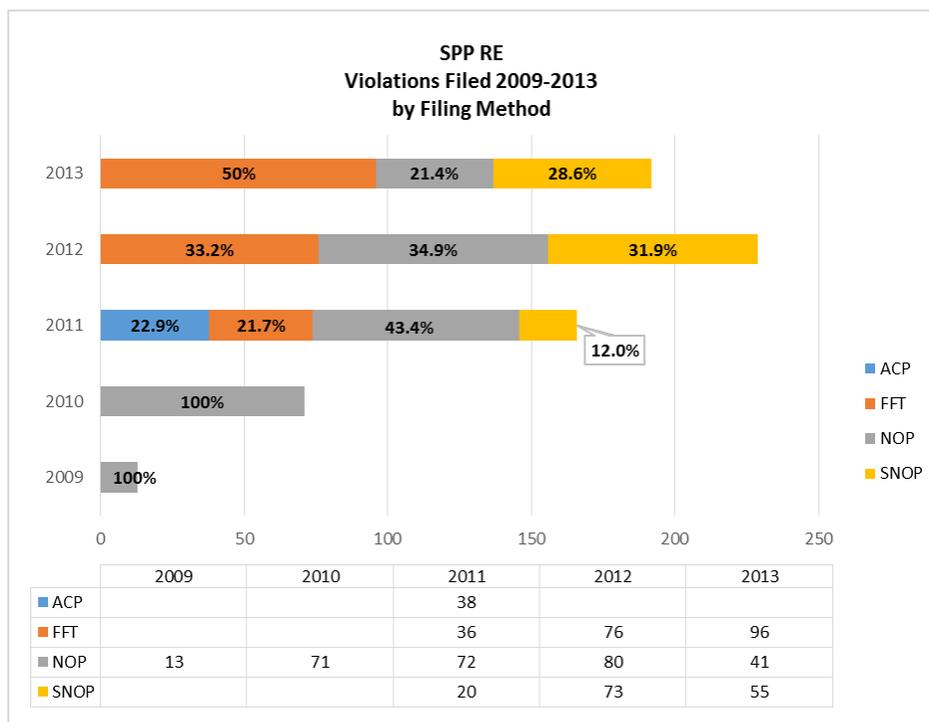
**iv. Implementation of Streamlined Enforcement Processing Mechanisms**

From 2007 through 2010, SPP RE filed a total of 89 violations. In 2011, SPP RE filed a total of 166 violations, almost double the total number of violations from the previous three years combined. SPP RE credits its success in improving its violation processing rate to several factors. SPP RE developed internal enforcement procedures, streamlined its enforcement processes, and dedicated resources to increasing both the number and maturity of its enforcement staff. For example, SPP RE decreased the time it spends drafting CMEP required and related documents by utilizing its compliance database to automate the issuance of a number of documents. In addition, SPP RE effectively implemented alternative enforcement processing mechanisms, including using FFT to process its lower-risk violations, as demonstrated in the table below.

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<sup>127</sup> All but four pre-2012 violations were processed before the end of 2013. Of the four violations, two were MRRE violations for which another Regional Entity took lead responsibility. One violation was being held pending an interpretation of the associated Reliability Standard.

Violations Filed per Year by Filing Method for SPP RE, 2009-2013



SPP RE filed the majority of violations using FFT or SNOP in 2012 and 2013. In 2013, the percentage of FFTs relative to SNOPs increased notably. SPP RE generally limits the use of the FFT process to minimal risk issues, and it uses the SNOP process for those violations that do not represent a serious or substantial risk to the BPS and do not qualify for FFT disposition. Every FFT and SNOP is reviewed by the SPP RE sanction review team to ensure consistency and uniform application. Going forward, NERC encourages SPP RE to continue its review processes and consider increasing the use of FFT for moderate risk issues that qualify for FFT.

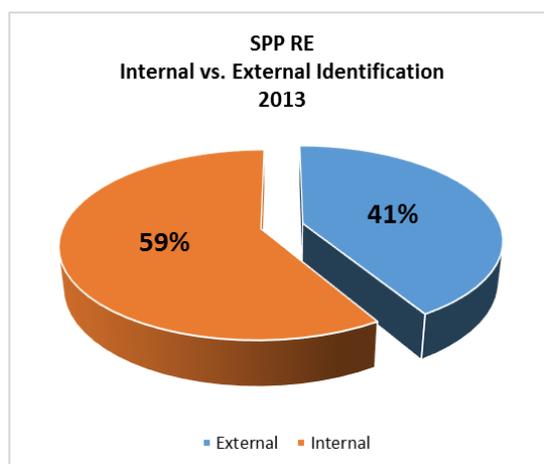
**c. Improving Reliability**

**i. Encouraging Internal Discovery of Violations**

SPP RE regularly encourages the value of self-reporting, and it gives presentations on how to self-report effectively during its regional workshops. Additionally, SPP RE discusses the value of self-reporting when it gives penalty determination presentations at workshops.

In 2013, violations discovered by registered entities through internal mechanisms comprised 59% of total violations in the SPP RE region. This is lower than the ERO Enterprise average of 73%. Stated differently, during the assessment period, SPP RE discovered a higher percentage of violations through external methods (i.e., compliance audit and spot check) than other Regional Entities.

Percentage of Violations by Method of Identification for SPP RE in 2013



As noted above, NERC and the Regional Entities are working to understand the regional variations in the percentages of noncompliance discovered through self-discovery and audits across the ERO Enterprise. Understanding these differences, and how they may relate to registered entity internal controls and management practices, will allow NERC and the Regional Entities to provide the right incentives for discovering and self-reporting noncompliance.

**ii. Ensuring the Timely Mitigation of Violations**

SPP RE has undertaken a number of efforts to encourage the timely mitigation of violations. It has implemented internal metrics to: (i) encourage enforcement staff to solicit mitigation plans as soon as possible for higher-risk violations; (ii) measure whether mitigation plans are accepted or rejected within 30 days of submission; and (iii) measure whether mitigation plan completion evidence is reviewed by SPP RE staff within 30 days of when the registered entity's certification of mitigation plan completion and associated evidence are submitted. SPP RE tracks mitigation plan information in its webCDMS. SPP RE has put standardized processes in place for the review and approval of registered entity mitigation plans, and the associated forms become part of the violation case record.

SPP RE requires registered entities to complete mitigation plans for all compliance issues identified for FFT treatment, and it requires each registered entity desiring to remain in settlement negotiations to submit an acceptable mitigation plan. SPP RE typically requires mitigation plans to be completed before it will execute a settlement agreement and file it with NERC.<sup>128</sup>

SPP RE has strengthened its active monitoring of mitigation plans by increasing its communication with registered entities since 2010. SPP RE issues email reminder notices to registered entities as due dates approach. SPP RE staff has continued to communicate and give

<sup>128</sup> SPP RE does not yet accept completion of mitigating activities in lieu of a formal mitigation plan; however, SPP RE reported that will accept mitigating activities as soon as appropriate changes are made to the webCDMS system.

presentations to registered entities regarding best practices for submitting and managing information associated with self-reports, self-certifications, and mitigation plans.

As demonstrated in the table below, SPP RE has made substantial progress in ensuring that older violations have been mitigated, with 100% of violations discovered from 2007-2009 having completed mitigation.

SPP RE: Status of Mitigating Activity for Violations Discovered from 2007-2013 and Requiring Mitigation as of December 31, 2013<sup>129</sup>

<b>Year of Discovery</b>	<b>% Completed</b>	<b>% in Progress</b>
2013	43.6%	56.4%
2012	77.8%	22.2%
2011	96.7%	3.3%
2010	96.0%	4.0%
2009	100.0%	0.0%
2008	100.0%	0.0%
2007	100.0%	0.0%
<b>Grand Total</b>	<b>84.0%</b>	<b>16.0%</b>

NERC is working closely with SPP RE to understand the nature of the violations with open mitigation, particularly the older violations. NERC is also working with SPP RE to ensure that violations are mitigated in a timely manner.

**iii. Promoting Reliability through Enforcement Philosophy and Practices**

SPP RE reported that it has been its experience that most registered entities desire to be as reliable and as compliant as possible, and that avoiding or minimizing penalties and sanctions is only a secondary motivation. SPP RE reported that it has undertaken a number of efforts to improve the efficiency of its enforcement processes and encourage the prompt mitigation of violations. For instance, SPP RE has supplied registered entities with online training videos covering topics such as evidence submission, mitigation processing, and self-reporting. SPP RE was recently awarded the Bronze Quill Award of Merit from the International Association of Business Communicators, Arkansas Chapter for the quality of its video library. SPP RE developed a flow diagram that is used for small group discussions at regional workshops. The diagram facilitates conversation about the enforcement process with registered entities and provides a visual aid for how violations and mitigation plans move through the enforcement process. SPP RE has also conducted on-site visits with several registered entities to discuss internal compliance program improvements following negative audit findings.

<sup>129</sup> This table reports the percentage of violations discovered from the years 2007 through 2013 with completed or open mitigation. This table excludes dismissed violations.

SPP RE's enforcement group tracks various metrics on a monthly basis, including: (i) the expediting of high risk violations; (ii) caseload processing time; (iii) mitigation plan acceptance review time; (iv) mitigation plan completion review time; (v) processing of pre-2013 violations; (vi) incoming compliance issue triage time; and (vii) case record review and close-out time. To facilitate transparency, SPP RE posts a monthly metrics tracking dashboard covering these areas on its web page.<sup>130</sup>

The FFT process has enabled SPP RE to improve its processing efficiency substantially. As a result, SPP RE reported that it has been able to devote a substantial portion of the efforts of its personnel toward evaluating and processing higher-risk violations.

In its settlement processes, SPP RE has worked with registered entities, where appropriate, to accept the completion of certain activities above-and-beyond those required to ensure compliance with one or more Reliability Standards in lieu of the full monetary penalties permitted by the NERC *Sanction Guidelines*. For example, SPP RE has considered a registered entity's initiatives to audit and improve its internal compliance program to be a mitigating factor in SPP RE's penalty determination. NERC encourages SPP RE to continue deploying such solutions that promote reliability and insight into processes that can manage risk.

**d. SPP RE's Implementation of Various Aspects of the CMEP**

As noted in §II.D.1.a above, NERC conducts ongoing oversight activities to evaluate the effectiveness of each Regional Entity's implementation of the CMEP. These activities include regular reviews and periodic spot checks of specific Regional Entity processes. NERC's oversight activities give NERC an ongoing view into how effectively and efficiently the Regional Entity is executing its enforcement responsibilities. Below is a summary of some of NERC's more recent oversight activities specific to SPP RE.

With respect to the assessment of monetary penalties, SPP RE requires its case managers to follow the penalty guidance established by NERC and the Commission. Each violation and its associated penalty must be approved by the SPP RE sanction review team. When presenting a violation and proposed penalty to the sanction review team, an SPP RE case manager will provide the basis for the proposed penalty and a comparison to similar violations and the penalties assigned to those violations. The SPP RE sanction review team will then review the violation and proposed penalty to determine whether the proposed penalty is justified, reasonable, and consistent with penalties assessed for similar violations by SPP RE and by other Regional Entities. NERC reviews all penalties submitted by SPP RE for appropriateness and consistency with monetary penalties assessed by SPP RE and other Regional Entities for violations of the same Reliability Standards and requirements occurring under similar facts and circumstances. NERC has found that SPP RE assesses monetary penalties that are appropriate and consistent with penalties assessed for similar violations.

Based on a spot check, NERC determined that SPP RE dismisses violations for appropriate reasons and generally includes the required information when issuing letters of dismissal. NERC

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<sup>130</sup> See <http://www.spp.org/section.asp?group=2754&pageID=27>.

identified opportunities where SPP RE could improve its letters of dismissal and communicated those opportunities to SPP RE. SPP RE has already implemented at least one of the recommended improvements. These improvements will ensure SPP RE has access to the information it needs to process each violation properly. Such efforts will also assist NERC in its oversight role and allow the Commission to evaluate the efficiency and effectiveness of the dismissal process.

As part of its ongoing FFT review processes, NERC reviewed a sample of SPP RE FFT issues filed or posted during the assessment period to examine SPP RE's procedures for FFT processing and the application of those procedures to the FFT issues in its caseload. NERC noted that SPP RE developed a checklist which delineates the steps that need to be taken by each SPP RE staff member and indicates that the final document will be attached to the record for tracking purposes. If completed on a regular basis, this checklist could provide valuable insight into SPP RE's determination of FFT treatment and facilitate future review by NERC and the Commission. NERC recommended several areas in which SPP RE could improve its FFT postings and related documentation to provide additional transparency to its determinations.

**e. Conclusion**

Based on NERC's review of the factors described above, NERC concludes that SPP RE has performed as an effective Regional Entity with respect to enforcement activities during the assessment period. SPP RE should adopt the recommendations for improvement provided as part of NERC's oversight activities.

**8. Evaluation of Texas Reliability Entity, Inc.**

**a. Overview**

In the three-year performance assessment, NERC concluded that Texas Regional Entity was an effective Regional Entity, and it praised Texas Regional Entity's processing efficiency and focus on identifying higher-risk violations that result from failure to comply with Reliability Standards.<sup>131</sup> At the time, NERC noted questions regarding the contrast between the high percentage of "failure to perform" violations and the low number of violations recommended for a zero-dollar penalty. Texas RE reported that it recommended zero-dollar penalties in 2007 and 2008 for most cases as the Reliability Standards were new, and registered entities were still learning how to comply with them. Texas RE reported that it began recommending more monetary penalties for "failure to perform" violations in 2010 in an effort to deter noncompliance. As the streamlined enforcement mechanisms were developed and implemented, Texas RE began using these mechanisms to process violations posing a low risk to reliability and that had been mitigated.<sup>132</sup> Texas RE also made organizational changes related to its enforcement processes in late 2013 to provide for a clear delineation between processing tasks; Texas RE believes that these changes have resulted in efficiency gains and decreased processing time.

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<sup>131</sup> *Three-Year ERO Performance Assessment Report*, Attachment 3 at 26.

<sup>132</sup> 2014 JRESA, Appendix 2-B at 6.

During the assessment period, Texas RE increased the number of FTE staff dedicated to enforcement from 3 in 2009 to 11 as of December 31, 2013. Based on Texas RE's processing speed and efficiency as measured at the end of the assessment period, NERC views Texas RE's enforcement staffing to be sufficient to process the number of violations that it receives.

Texas RE ended the assessment period with a Caseload Index that was the lowest among all Regional Entities. Texas RE processed all violations discovered before 2012 in furtherance of an ERO Enterprise goal. Texas RE's caseload tends to consist of more-recent violations, and generally, Texas RE has made progress in ensuring that older violations have completed mitigation. Finally, NERC has reviewed Texas RE's enforcement-related processes as part of its oversight role and found that, while areas for improvement remain, Texas RE generally implements those processes in a satisfactory manner.

In addition, Texas RE staff have actively participated in the development of RAI. Many Texas RE employees worked on various aspects of RAI in collaboration with NERC and the other regions. Texas RE staff participated in the Aggregation of Minimal Risk Issues and Enforcement Discretion pilot programs and served on the *ERO Self-Report User Guide* and *ERO Enterprise Mitigation Plan Guide* drafting teams. Texas RE staff also participated in several compliance-related programs under RAI. This participation is vital as the ERO Enterprise shifts toward a risk-based model of compliance and enforcement.

As explained more fully below, based on Texas RE's performance in several enforcement processing metrics and the results of NERC's oversight activities, NERC concludes that Texas RE has performed as an effective Regional Entity with respect to enforcement activities during the assessment period. NERC will continue to work with Texas RE to ensure that violations are mitigated promptly.

**b. Evaluation of Caseload Processing Efficiency**

**i. The Composition of Texas RE's Caseload**

During the assessment period, Texas RE reported 861 violations to NERC.

Violations for Texas RE 2009-2013 by Year Reported to NERC<sup>133</sup>

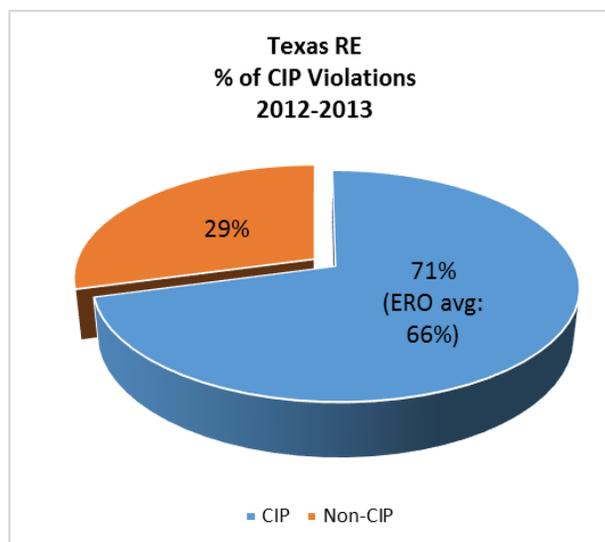
<b>Year of Submission</b>	<b>Violations Reported</b>
2009	14
2010	51
2011	430
2012	197
2013	169

<sup>133</sup> For an explanation of the methodology used to calculate the data in this table and throughout this §II.D, see *supra* n. 76.

<b>Total</b>	<b>861</b>
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As shown in the table above, Texas RE reported a spike in violations in 2011.<sup>134</sup> The violations reported to NERC in 2011 were split almost evenly between CIP and non-CIP violations and internal and external methods of discovery. In the years 2012 and 2013, violations of CIP Reliability Standards represented a higher percentage of total violations in the Texas RE region than the ERO Enterprise as a whole.

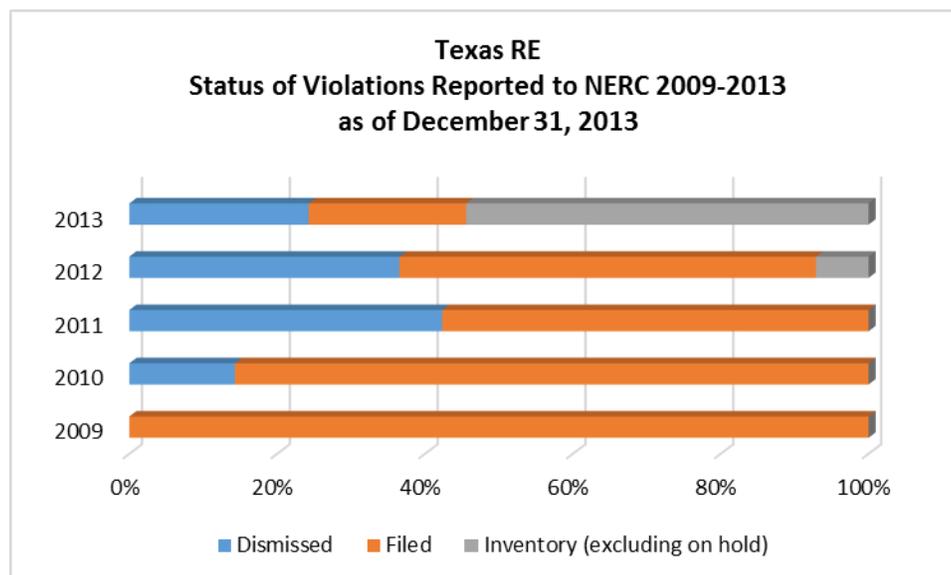
Type of Violations Reported to NERC by Texas RE, 2012-2013



Of the total violations reported to NERC during the assessment period, 106 violations, or approximately 12%, remained to be processed as of December 31, 2013 (excluding violations that are held by appeal, a court, or a regulator). As demonstrated in the table below, Texas RE has processed all violations reported to NERC in 2009, 2010, and 2011 (excluding on hold violations). Texas RE processed approximately 93% of violations reported to NERC in 2012.

<sup>134</sup> When adjusted for year of discovery, 157 violations were discovered in 2010, and 298 violations were discovered in 2011.

Status of Violations Reported to NERC 2009-2013 for Texas RE



Texas RE processed approximately 46% of violations reported to NERC in 2013, which is better than the ERO Enterprise average 2013 processing rate of 39%. Approximately 87% of the violations available for processing in Texas RE's inventory consist of violations reported to NERC in 2013. This greatly exceeds the overall ERO Enterprise average of 67%. Texas RE appears to be moving toward a caseload consisting primarily of newer violations.

**ii. Caseload Index**

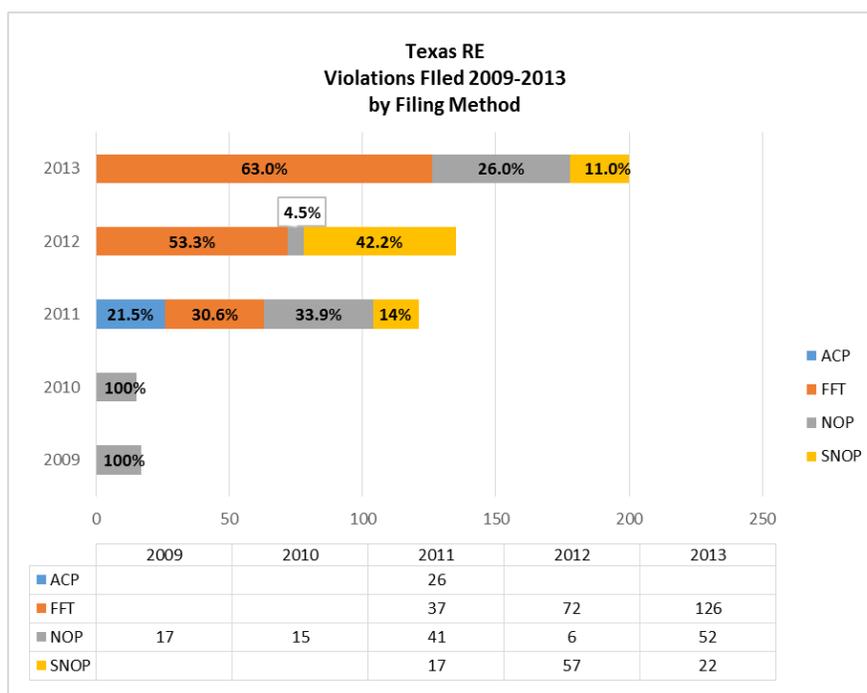
The Caseload Index for Texas RE is 3.8 months as of December 31, 2013. This is the lowest of all Regional Entities and notably better than the ERO Enterprise Caseload Index of approximately 6.5 months.

Based on the current composition of its inventory of violations available to be processed and its success in achieving the timely processing of violations to date, Texas RE is well-positioned to achieve the goal of ensuring that violations are processed before reaching 24 months in age.

**iii. Implementation of Streamlined Enforcement Processing Mechanisms**

A number of factors are responsible for Texas RE's successes in processing its caseload. As demonstrated in the table below, Texas RE effectively used alternative processing mechanisms to process a substantial portion of its caseload during the assessment period. In 2011, following the implementation of the streamlined enforcement processing mechanisms, Texas RE filed 121 violations – almost quadruple the number of violations filed in the previous two years combined.

Violations Filed per Year by Filing Method for Texas RE, 2009-2013

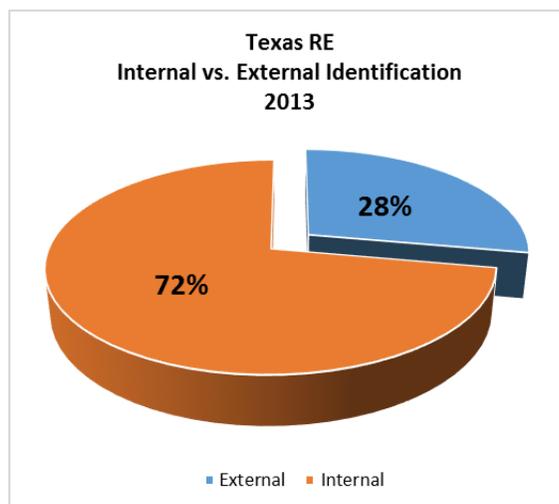


Texas RE reviews posted FFT and SNOP filings before determining the disposition method it will use for a particular violation, and it coordinates all FFT and SNOP-related issues with NERC. These methods help ensure the consistent application of FFTs and SNOPs across the Regional Entities. In 2011 and in every year since, Texas RE filed the majority of its violations using the streamlined enforcement processing mechanisms, including using FFT to file lower-risk violations of the CIP Reliability Standards. NERC expects that Texas RE will continue to reserve the NOP format for violations that require it and take advantage of further process refinements available under RAI. Additional information regarding Texas RE's application of FFT is presented later in this assessment.

**c. Improving Reliability**

**i. Encouraging Internal Discovery of Violations**

In 2013, violations discovered by registered entities through internal mechanisms comprised 72% of total violations in the Texas RE region. This is consistent with the ERO Enterprise average of 73%.

Percentage of Violations by Method of Identification for Texas RE in 2013**ii. Ensuring the Timely Mitigation of Violations**

During the assessment period, Texas RE reported that it implemented a number of measures to ensure the timely mitigation of violations. Texas RE stressed the importance of prompt mitigation in workshops and other communications with registered entities and encouraged early completion of mitigation. Texas RE modified its self-report form to require a description of mitigating activities, preventative measures, and a date of mitigation. As a result of this modification, Texas RE began receiving more information regarding mitigation earlier in the enforcement process. Texas RE has also strengthened processes and documentation standards for the review, approval, tracking, and certification of mitigation plans. When reviewing a mitigation plan, Texas RE determines if the completion date is reasonable, considering the nature of the violation. Texas RE has requested that mitigation plans be revised because Texas RE determined that the completion date was unreasonable. Texas RE tracks the mitigation plan or mitigation activities completion date and has informed registered entities that violations cannot be closed until the mitigation is complete. Texas RE also tracks mitigation plan milestones in webCDMS and provides notifications to registered entities for upcoming milestones. In an effort to hold registered entities accountable, Texas RE will only discuss settlement and suspend deadlines if the entity submits a mitigation plan, or Texas RE has verified that the entity has mitigated the violation.

As demonstrated in the table below, Texas RE has made substantial progress in ensuring that older violations have completed mitigation. Only three violations from 2010 through 2011 remained to be mitigated at the end of the assessment period.

Texas RE: Status of Mitigating Activity for Violations Discovered from 2007-2013  
and Requiring Mitigation as of December 31, 2013<sup>135</sup>

<b>Year of Discovery</b>	<b>% Completed</b>	<b>% in Progress</b>
2013	28.1%	71.9%
2012	91.2%	8.8%
2011	99.4%	0.6%
2010	98.1%	1.9%
2009	100.0%	0.0%
2008	100.0%	0.0%
2007	100.0%	0.0%
<b>Grand Total</b>	<b>82.5%</b>	<b>17.5%</b>

NERC will continue to work closely with Texas RE to ensure the completion of mitigating activities.

**iii. Promoting Reliability through Enforcement Philosophy and Practices**

Texas RE's enforcement philosophy is to abide by the requirements of the NERC ROP, reserve the enforcement process for those violations posing a serious or substantial risk to the reliability of the BPS, and encourage the development of strong internal compliance programs and internal controls. As part of encouraging strong internal controls, Texas RE encourages registered entities to address the results of internal controls by self-reporting and mitigating violations promptly. Texas RE may consider the method of discovery, presence of internal compliance programs, and the prompt mitigation of violations among the factors in determining how to dispose of a violation (i.e., FFT, SNOP, or NOP) and in assessing potential penalties.

In its settlement processes, Texas RE has worked with registered entities, where appropriate, to accept the completion of certain activities above-and-beyond those required to ensure compliance with one or more Reliability Standards in lieu of the full monetary penalties permitted by the NERC *Sanction Guidelines*. These efforts allow registered entities to allocate their resources to those projects that can increase overall reliability and reduce the likelihood of future noncompliance.

As examples of above-and-beyond activities, registered entities in the Texas RE region have committed to hire additional compliance staff, install new software to track maintenance and testing intervals, contribute to future compliance efforts (such as making an entity's SME available for a compliance workshop), develop additional training for staff, perform additional technical modifications beyond those required to achieve compliance, and upgrade physical security measures. NERC encourages Texas RE to continue deploying solutions such as these that promote reliability and insight into processes that can manage risk.

<sup>135</sup> This table reports the percentage of violations discovered from the years 2007 through 2013 with completed or open mitigation. This table excludes dismissed violations.

**d. Texas RE's Implementation of Various Aspects of the CMEP**

As noted in §II.D.1.a above, NERC conducts ongoing oversight activities to evaluate the effectiveness of each Regional Entity's implementation of the CMEP. These activities include regular reviews and periodic spot checks of specific Regional Entity processes. NERC's oversight activities give NERC an ongoing view into how effectively and efficiently the Regional Entity executes its enforcement responsibilities. Below is a summary of some of NERC's more recent oversight activities specific to Texas RE.

Texas RE calculates penalties using the NERC *Sanction Guidelines* and reviews its determinations in relation to similar penalties assessed by Texas RE and by other Regional Entities. NERC reviews all penalties submitted by Texas RE for appropriateness and consistency with monetary penalties assessed by Texas RE and other Regional Entities for violations of the same Reliability Standards and requirements occurring under similar facts and circumstances. NERC has found that Texas RE assesses monetary penalties that are appropriate and consistent with penalties assessed for similar violations.

Based on a spot check, NERC determined that Texas RE dismisses violations for appropriate reasons and generally includes the required information when issuing letters of dismissal. NERC identified opportunities for Texas RE to improve its letters of dismissal and communicated those opportunities to Texas RE. By implementing the recommended improvements, Texas RE can improve the quality of its compliance guidance to registered entities.

As part of its ongoing FFT review processes, NERC reviewed a sample of Texas RE FFT issues filed or posted during the assessment period to examine Texas RE's procedures for FFT processing and the application of those procedures to the FFT issues in its caseload. Following its review, NERC concluded that Texas RE maintains adequate documentation and written procedures for its FFT process. NERC noted that Texas RE developed a process checklist which could prove to be a useful tool for FFT processing, provided the checklist is completed on a consistent basis. NERC further concluded that Texas RE generally provides an adequate description of the issue in its FFT postings. NERC noted several ways that Texas RE could improve its FFT postings and related documentation to provide additional transparency to its determinations.

**e. Conclusion**

Based on NERC's review of the factors described above, NERC concludes that Texas RE has performed as an effective Regional Entity with respect to enforcement activities during the assessment period. Texas RE should adopt the recommendations for improvement provided as part of NERC's oversight activities.

## 9. Evaluation of Western Electricity Coordinating Council

### a. Overview

In the three-year performance assessment, NERC concluded that WECC was one of the less effective Regional Entities in carrying out its compliance obligations, but noted that WECC was starting to make significant strides in reducing the portion of violations described as its “backlog” in the first half of 2009. NERC encouraged WECC to create a stronger separation of its compliance encouragement efforts from its enforcement activities and to maintain its focus on processing violations to completion.<sup>136</sup>

During the assessment period, WECC has taken several steps to address the concerns identified by NERC in the three-year performance assessment. WECC reported that it has enhanced, streamlined, and documented all of its enforcement processes with the assistance of dedicated enforcement SMEs. Further, WECC has implemented the alternative enforcement processing mechanisms. WECC calculated its processing time (from intake through submittal to NERC) to be less than five months, on average. WECC also has enhanced its compliance encouragement activities while maintaining separation from its enforcement activities.<sup>137</sup>

During the assessment period, WECC increased the number of FTE staff dedicated to enforcement processing from 6 in 2009 to 8 as of December 31, 2013.<sup>138</sup> Based on WECC’s processing speed and efficiency as measured at the end of the assessment period, NERC views WECC’s enforcement processing staffing to be sufficient to process the number of violations that it receives.

WECC ended the assessment period with a better-than-average Caseload Index. In addition, WECC made substantial progress in processing the especially large number of violations that it received during the assessment period, including processing almost all of its older caseload. NERC notes that WECC has a few older violations that still need to be mitigated and processed. In addition, NERC has reviewed WECC’s enforcement-related processes as part of its oversight role and found that, while areas for improvement remain, WECC generally implements those processes in a satisfactory manner.

NERC recognizes the contributions WECC staff have made in the development of RAI. WECC staff participated in the Enforcement Discretion pilot program and served in leadership roles on the *ERO Self-Report User Guide* and *ERO Enterprise Mitigation Plan Guide* drafting teams. This participation is vital as the ERO Enterprise shifts toward a risk-based model of compliance and enforcement.

In light of all of the relevant factors, which are explained more fully below, NERC concludes that WECC has performed as an effective Regional Entity with respect to enforcement

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<sup>136</sup> *Three-Year ERO Performance Assessment Report*, Attachment 3 at 26.

<sup>137</sup> 2014 JRESA Appendix 2B at 6-7.

<sup>138</sup> WECC has additional staff dedicated to reviewing violations from a technical perspective and reviewing and approving mitigation plans.

activities during the assessment period. NERC will continue to work with WECC to ensure that violations are mitigated and processed promptly.

**b. Evaluation of Caseload Processing Efficiency**

**i. The Composition of WECC's Caseload**

During the assessment period, WECC reported 3,183 violations<sup>139</sup> to NERC.

Violations for WECC 2009-2013 by Year Reported to NERC<sup>140</sup>

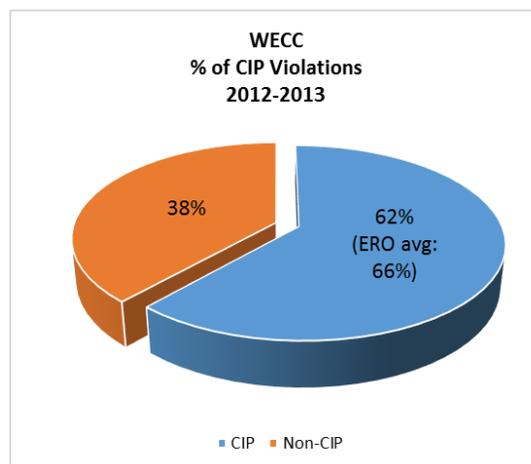
<b>Year Reported to NERC</b>	<b>Violations Reported</b>
2009	571
2010	550
2011	807
2012	818
2013	437
<b>Total</b>	<b>3,183</b>

As shown in the table above, WECC reported the most violations to NERC in 2011 and 2012. CIP violations comprised more than half of total violations in 2011 through 2012. In the years 2012 and 2013, violations of CIP Reliability Standards represented a slightly lower percentage of total violations in the WECC region (62%) than the ERO Enterprise as a whole.

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<sup>139</sup> This table reflects U.S. violations only.

<sup>140</sup> For an explanation of the methodology used to calculate the data in this table and throughout this §II.D, *see supra* n. 76.

Type of Violations Reported to NERC by WECC, 2012-2013

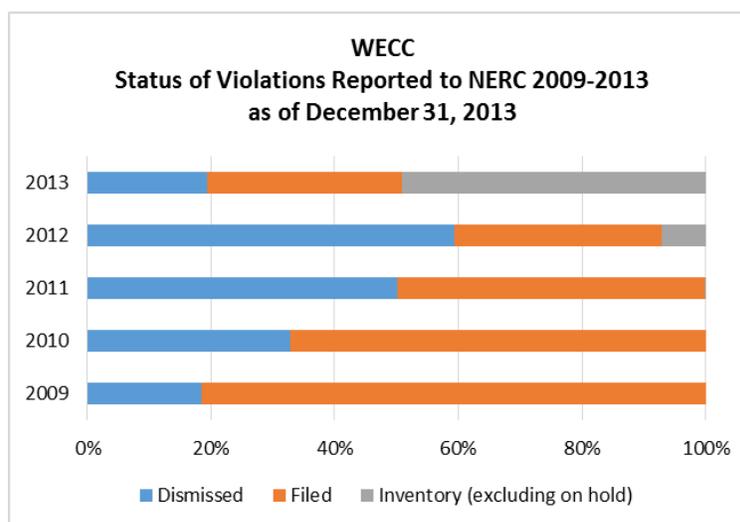
More than 85% of the total number of CIP violations reported by WECC to NERC in 2012 and 2013 were identified through internal means; nearly half of these CIP violations were later dismissed.<sup>141</sup>

Of the total violations reported by WECC to NERC during the assessment period, approximately 254 violations, or approximately 9%, remained to be processed as of December 31, 2013 (excluding violations that are held by appeal, a court, or a regulator). As demonstrated in the table below, WECC has processed 100% of violations reported to NERC in 2009 and 2010 and 99.9% of violations reported to NERC in 2011 (excluding on hold violations). WECC has processed approximately 93% of violations reported to NERC in 2012.

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<sup>141</sup> WECC had a larger number of dismissals than other Regional Entities during the assessment period as a result of duplicate self-reporting. In early 2012, WECC had a number of violations where an entity submitted both a self-report and a self-certification. Since that time, WECC implemented a process to check for duplicate violations. In addition, the NERC ROP were amended to add several enhancements to the preliminary screen process; part of this process requires Regional Entities to confirm that new violations are not duplicates of violations already in process.

Status of Violations Reported to NERC 2009-2013 for WECC



WECC processed nearly 51% of violations reported to NERC in 2013. This is notably higher than the ERO 2013 processing rate of 39%. Approximately 78% of the violations available for processing in the WECC region consist of violations reported to NERC in 2013. This is notably better than the overall ERO Enterprise average of 67%. WECC appears to be moving toward a caseload consisting primarily of newer violations.

**ii. Caseload Index**

The Caseload Index for WECC is 5.7 months as of December 31, 2013. This compares favorably to the ERO Enterprise Caseload Index of approximately 6.5 months.

Based on its achievements in processing its caseload to date and its Caseload Index, it appears that WECC's efforts to enhance and streamline its enforcement processes have been effective.

**iii. Efforts to Reduce Older Caseload**

In 2013, WECC processed 98% of remaining cases in its pre-2012 caseload. NERC commends WECC for its responsiveness and efforts to achieve this important ERO Enterprise goal.

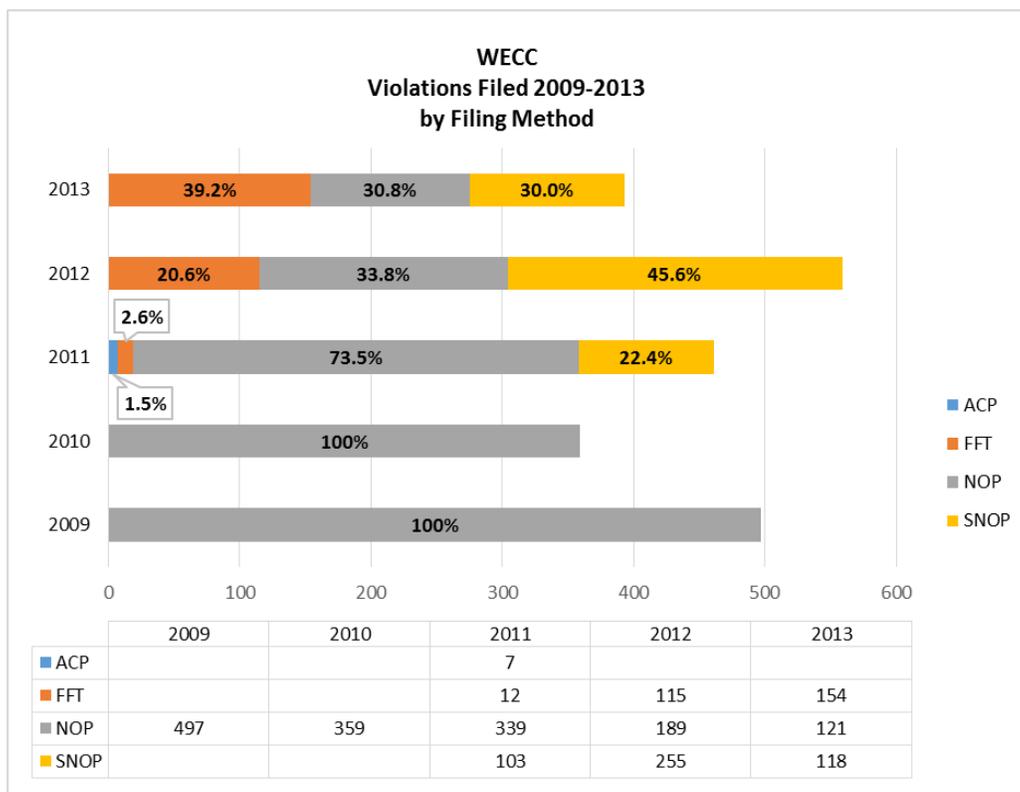
Based on the current composition of its inventory of violations to be processed and its successful effort in processing its older violations, WECC is well-positioned to achieve the goal of ensuring that violations are processed before reaching 24 months in age.

**iv. Implementation of Streamlined Enforcement Processing Mechanisms**

A number of factors are responsible for WECC's successes in processing its caseload. As

demonstrated in the table below, WECC effectively used streamlined processing mechanisms to process a substantial portion of its caseload during the assessment period. WECC did not implement streamlined processing mechanisms as quickly as some other Regional Entities, but by 2012, WECC was using the streamlined processing mechanisms to file nearly two-thirds of its violations.

Violations Filed per Year by Filing Method for WECC, 2009-2013



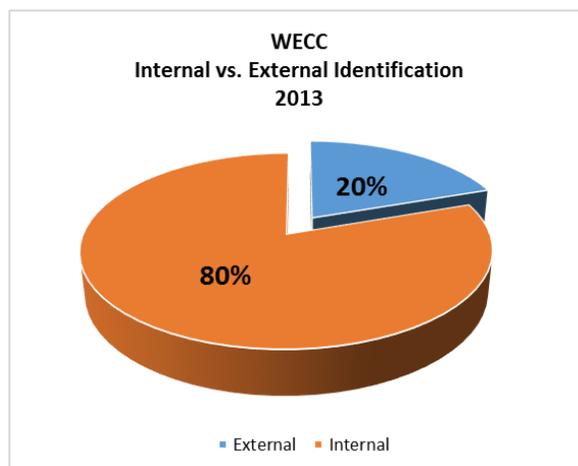
WECC has enhanced, streamlined, and documented all of its enforcement processes; WECC believes that these efforts will help ensure effective and consistent use of the enforcement processing mechanisms (including FFT and SNOP). NERC encourages WECC to continue its utilization of alternative enforcement processing mechanisms. Going forward, NERC expects that WECC will continue to use the NOP format for violations that require it and take advantage of further process refinements under RAI. Additional information regarding WECC’s implementation of FFT is presented later in this assessment.

**c. Improving Reliability**

**i. Encouraging Internal Discovery of Violations**

In 2013, self-identified violations comprised 80% of total violations in the WECC region. This is somewhat higher than the ERO Enterprise average of 73%.

Percentage of Violations by Method of Identification for WECC in 2013



**ii. Ensuring the Timely Mitigation of Violations**

During the assessment period, WECC increased relevant staffing, enhanced relevant processes and procedures, and strengthened metrics to help ensure timely mitigation plan and completed mitigation plan processing. These actions were taken to address certain concerns regarding WECC's mitigation plan processing that were identified in a 2010 FERC audit report.<sup>142</sup> Specifically, WECC created two SME teams, one to review mitigation plans associated with violations of the CIP Reliability Standards, and the other to review mitigation plans associated with Operations and Planning Reliability Standards. WECC also implemented several internal process improvements, including establishing a priority review process for mitigation plans associated with violations posing a high risk to reliability or otherwise requiring prompt attention. WECC now tracks its mitigation plan review efficiency through the use of an internally-developed metric.

WECC has strengthened its active monitoring of mitigation plans by increasing its communication with registered entities. These increased efforts began in 2013. WECC now issues email reminder notices to registered entities as due dates approach. WECC staff also continue to communicate with and give presentations to registered entities regarding best practices for submitting and managing information associated with self-reports, self-certifications, and mitigation plans. WECC now accepts mitigating activities in lieu of a formal mitigation plan for a limited number of cases.

As demonstrated in the table below, WECC has made substantial progress in ensuring that violations from 2007 through 2009 have been mitigated. Only about 11 violations from 2010 and 2011 remained to be mitigated by the end of the assessment period.

<sup>142</sup> See *Order Approving Audit Report, Determining Issue of Separation of Functions, and Directing Compliance and Other Corrective Actions*, 132 FERC ¶ 61,149 (Aug. 10, 2010) at Appendix A.

WECC: Status of Mitigating Activity for Violations Discovered from 2007-2013 and Requiring Mitigation as of December 31, 2013<sup>143</sup>

<b>Year of Discovery</b>	<b>% Completed</b>	<b>% in Progress</b>
2013	56.6%	43.4%
2012	92.0%	8.0%
2011	98.5%	1.5%
2010	98.7%	1.3%
2009	100.0%	0.0%
2008	100.0%	0.0%
2007	100.0%	0.0%
<b>Grand Total</b>	<b>93.2%</b>	<b>6.8%</b>

WECC has made progress in ensuring that newer violations have been mitigated, with over half of violations discovered in 2013 having completed mitigation by the end of the year. NERC will continue to work with WECC to ensure that all violations are mitigated in a timely manner.

**iii. Promoting Reliability through Enforcement Philosophy and Practices**

WECC's enforcement philosophy is to use the enforcement process as a tool to influence and encourage desired behavior by registered entities. To that end, WECC Enforcement has adopted risk-based processes and projects that it believes will promote, foster, and influence a reliable BPS. WECC Enforcement seeks opportunities to work collaboratively with and educate registered entities in the enforcement space. WECC Enforcement also recognizes its obligation to ensure fair and reasonable outcomes.

WECC created a new violation assessment process to improve its ability to assess the impact and the root cause of violations, and to determine effective solutions to address the root causes. WECC calls this process a Violation Risk Assessment Methodology (vRAM). This framework is used to assist WECC Enforcement staff in determining the risk posed by a violation, as well as the level of resource allocation that must be dedicated to each violation. During a violation review, WECC Enforcement staff use a four-step process to assess the risk of each violation. This process consists of a severity analysis, controls analysis, likelihood analysis, and risk analysis. This new risk characterization allows a more granular reflection of the risk. In addition, this process considers an entity's connectivity, internal controls, and functions when determining the severity of a violation. WECC believes that this process helps WECC process lesser-risk violations more quickly than in the past.

In its settlement processes, WECC has worked with registered entities, where appropriate, to agree to the future completion of certain activities above-and-beyond those required to ensure

<sup>143</sup> This table reports the percentage of violations discovered from the years 2007 through 2013 with completed or open mitigation. This table excludes dismissed violations and non-U.S. violations.

compliance with one or more Reliability Standards in lieu of the full monetary penalties permitted by the NERC *Sanction Guidelines*. These efforts allow registered entities to allocate their resources to those projects that can increase overall reliability and reduce the likelihood of future noncompliance.

As an example of above-and-beyond activities, registered entities in the WECC region have committed to implement improvements to enhance their ability to comply with Reliability Standards. Examples of compliance-related improvements included developing a process to mitigate violations in a timely manner, implementing meetings and programs to increase awareness of compliance issues, and developing processes to identify the full scope of violations promptly. NERC encourages WECC to continue deploying solutions such as these that promote reliability and insight into processes that can manage risk.

**d. WECC's Implementation of Various Aspects of the CMEP**

As noted in §II.D.1.a above, NERC conducts ongoing oversight activities to evaluate the effectiveness of each Regional Entity's implementation of the CMEP. These activities include regular reviews and periodic spot checks of specific Regional Entity processes. NERC's oversight activities give NERC an ongoing view into how effectively and efficiently the Regional Entity is executing its enforcement responsibilities. Below is a summary of some of NERC's more recent oversight activities specific to WECC.

With respect to the assessment of monetary penalties, WECC tracks and reviews penalty information to ensure that penalties are applied consistently. Responsibility for penalty tracking analysis lies with WECC's compliance enforcement case management team, which works with WECC management to determine appropriate penalties. NERC reviews all penalties submitted by WECC for appropriateness and consistency with monetary penalties assessed by WECC and other Regional Entities for violations of the same Reliability Standards and requirements occurring under similar facts and circumstances. NERC has found that WECC assesses monetary penalties that are appropriate and consistent with penalties assessed for similar violations.

Based on a spot check, NERC determined that WECC dismisses violations for appropriate reasons. NERC identified opportunities where WECC could improve its letters of dismissal and communicated those opportunities to WECC. By implementing these improvements, WECC can improve the quality of its compliance guidance to registered entities.

As part of its ongoing FFT review processes, NERC reviewed a sample of WECC FFT issues filed or posted during the assessment period to examine WECC's procedures for FFT processing and the application of those procedures to the FFT issues in its caseload. Following its review, NERC concluded that WECC's procedures generally followed FFT requirements and guidance. NERC noted that WECC's Notice of FFT Treatment was very useful and included details on the factors WECC considers, such as the description of the issue, risk statement, and mitigating activities, when considering whether to afford FFT treatment. The WECC sample set contained several instructive examples where the risk statement adequately addressed the issue and the minimal risk to the reliability of the BPS. NERC noted several ways that WECC could

improve its FFT postings and related documentation to provide additional transparency to its determinations.

**e. Conclusion**

Based on NERC's review of the factors described above, NERC concludes that WECC has performed as an effective Regional Entity with respect to enforcement activities during the assessment period. WECC should adopt the recommendations for improvement provided through NERC's ongoing oversight activities.

**III. RELIABILITY ASSESSMENTS**

**A. Overview of Regional Entity Responsibilities**

One of the ERO's responsibilities, as set forth in §215(g) of the FPA, 16 U.S.C. §824o(g), and 18 C.F.R. §39.11, is to conduct periodic assessments of the reliability and adequacy of the BPS in North America.<sup>144</sup> These assessments are conducted by the NERC Reliability Assessment and Performance Analysis (RAPA) department. Pursuant to the RDAs, the Regional Entities help to assess reliability and to provide performance assessment and event analysis of the BPS in their footprints.<sup>145</sup> Section 804 of the NERC ROP specifies that the Regional Entities are to provide data and information to support NERC's annual long-term and seasonal assessments of the reliability of the BPS and any special reliability assessments. In addition, the Regional Entities are to conduct self-assessments of resource adequacy and transmission constraints within their footprints.

Throughout the assessment period, the Regional Entities have supported the RAPA program area by providing Regional Entity-specific data and information for the development of NERC's seasonal, long-term, probabilistic and special reliability assessments. These continent-wide assessments are developed annually by NERC through ongoing coordination between the RAPA department and the NERC Reliability Assessment Subcommittee (RAS), a subcommittee of the NERC Planning Committee (PC).<sup>146</sup> The assessments are primarily based on information and data submitted by a variety of registered entities within the Regional Entities.<sup>147</sup> Data includes

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<sup>144</sup> Section 39.11(b) of the U.S. FERC's regulations provide that: "The Electric Reliability Organization shall conduct assessments of the adequacy of the Bulk-Power System in North America and report its findings to the Commission, the Secretary of Energy, each Regional Entity, and each Regional Advisory Body annually or more frequently if so ordered by the Commission."

<sup>145</sup> Assessment of the Regional Entities' performance in the event analysis function is provided in §IV on Reliability Risk Management, below. This §III is focused on the reliability assessment function.

<sup>146</sup> Information on the Reliability Assessment Subcommittee can be found at: [http://www.nerc.com/comm/PC/Pages/Reliability-Assessment-Subcommittee-\(RAS\)-2013.aspx](http://www.nerc.com/comm/PC/Pages/Reliability-Assessment-Subcommittee-(RAS)-2013.aspx).

<sup>147</sup> Prior to 2011, data was collected and presented based on the political boundaries of each Regional Entity. Following approval by the NERC PC, assessment areas were introduced in 2011. These assessment areas were based on planning coordinator boundaries (or groups of planning coordinators), which more accurately reflect the planning and operational activities of the BPS. The eight Regional Entities are still responsible for providing reliability assessment data to NERC, but data is collected on an assessment area basis.

peak load (demand) forecasts, projected availability of capacity and demand-side management (DSM) resources, and existing and future transmission.<sup>148</sup>

The Regional Entities provide technical input to support the objectives of the RAPA department through the following ERO committees, subcommittees, and working groups:

- PC: The PC is a stakeholder committee chartered by the NERC Board to proactively support the ERO Enterprise mission<sup>149</sup> and associated NERC program areas by carrying out a broad array of technical activities and responsibilities focused on the reliable planning and assessment of the interconnected BPS of North America. The PC's mission is to promote the reliability of the interconnected BPS in North America and to assess and encourage resource and transmission adequacy. The PC also provides a forum where industry representatives and subject matter experts can address reliability, planning and adequacy issues. The PC supports NERC's reliability mission by executing the policies, directives, and assignments from the NERC Board and by advising the NERC Board on matters related to bulk electric system transmission planning, reliability, and resource adequacy.
- RAS: The RAS reviews, assesses, and reports on the overall reliability (adequacy and security) of existing and planned BPS. Six meetings are held annually to support the peer review and information verification necessary for the development of seasonal, long-term, and probabilistic (biennial) assessments. These peer reviews ensure that each assessment area conforms to its own planning criteria, guides and the applicable NERC Reliability Standards. The RAS reports directly to the NERC PC.
- Performance Analysis Subcommittee (PAS): The PAS provides input to and supports the objectives of the NERC RAPA department. The PAS reviews, assesses, and reports on the state of reliability based on historical performance of BPS. The key findings and recommendations of the PAS serve as technical input to NERC's Reliability Standards and project prioritization, compliance process improvements, reliability assessments, event analysis, and CIP, and ultimately support the *State of Reliability* report.
- Reliability Assessment Data Working Group (RADWG): The RADWG (formerly known as the Data Coordination Working Group), operates at the direction of the RAS. The primary function of the RADWG is to facilitate existing data collection

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<sup>148</sup> Additional information about the assessment development process is provided in *NERC Reliability Assessment Guidebook*, version 3.1 (NERC Guidebook), available at: [http://www.nerc.com/pa/RAPA/rg/ReliabilityGuidelines/Reliability\\_Assess\\_Guidebook\\_3\\_1Final.pdf](http://www.nerc.com/pa/RAPA/rg/ReliabilityGuidelines/Reliability_Assess_Guidebook_3_1Final.pdf).

<sup>149</sup> The ERO's mission is to ensure the reliability of the North American BPS. NERC achieves this mission by facilitating: industry awareness and management of risks to reliability; developing clear, reliability-focused standards; providing reliability assurance and excellence; assessing reliability performance; identifying and improving reliability models; and providing firm and fair enforcement of compliance with mandatory Reliability Standards.

efforts of the Regional Entities for NERC's seasonal and long-term reliability assessments. Additionally, this working group provides a platform for collaborative enhancements of current data collection processes to improve the accuracy, consistency, transparency, and efficiency of NERC's reliability assessment processes. Finally, the RADWG collaborates with the Department of Energy Energy Information Administration and other governmental/regulatory agencies that conduct similar data collection efforts. The goal of the RADWG is to reduce duplicative reporting requirements while promoting consistent data definitions.

**B. Regional Entity Responsibilities in the Preparation of Assessment Reports**

NERC annually prepares two seasonal (summer and winter), one long-term (10-year), and one probabilistic (biennial) assessment under the direction of NERC's PC and with support from the RAS. To support these assessments, each Regional Entity conducts reliability assessments for its footprint (assessment area, as described above) in accordance with guidelines provided in the NERC Guidebook. The NERC Guidebook is a "living document" which aims to improve consistency and transparency, to enhance granularity, and to establish a core framework for conducting independent assessments. While inherent differences in the way that the BPS is planned and operated across North America result in different approaches in conducting reliability assessments, NERC maintains a consistent framework for how the BPS is assessed in different areas. This framework includes a common set of definitions and measures for demand, resources, transfers, transmission, and resource adequacy.

Ongoing coordination between NERC and the Regional Entities occurs throughout the assessment development process. This is accomplished through monthly calls with each Regional Entity to identify Regional Entity-specific challenges in the collection of assessment data and information.

**1. Reliability Assessment Data Collection**

NERC collects seasonal and long-term electricity supply and demand data for the assessments areas through the Regional Entities. The data is collected through a series of forms that are developed and distributed by the RAPA department, in coordination with the RAS and RADWG. Specific seasonal and long-term data collected for the reliability assessments include: (i) peak load (demand) forecasts; (ii) on-peak capacity (including DSM); and (iii) transmission facilities. Although these metrics have been collected by NERC since 1968, the level of detail for each metric has grown, especially during the last decade. The data collection activities for each assessment require ongoing coordination between NERC and the Regional Entities. This coordination is executed through the RADWG and RAS to ensure that the data are accurate and consistently reported at the assessment area level.

The underlying data collection processes and planning methods also vary by assessment area or Regional Entity. These variances exist due to the inherent complexity, different corporate structures and unique history of the industry. More importantly, different attributes within each assessment area (e.g., climate, resource mix, market structures) require Regional Entity-specific or assessment area-specific planning considerations. These issues are identified and addressed

through the RAS and RADWG. More recently, in 2012, NERC's RAPA department instituted the development of individual Methods and Assumptions reports<sup>150</sup> for the long-term, seasonal, and probabilistic assessments. These reports, updated annually, provide detailed documentation of the planning activities and special considerations applicable to each assessment area or Regional Entity and ensure consistency across all Regional Entities.

## **2. Reliability Assessment Narratives**

NERC's seasonal, long-term reliability, and probabilistic assessments include information from each assessment area (or Regional Entity if prior to 2011). Similar to the data collection process (described above), the NERC RAPA department coordinates the collection of assessment information through the RAS. Specifically, narrative guides (or questionnaires) are developed annually, with RAS input, to assess future resource adequacy and identify potential NERC-wide or Regional Entity-specific reliability issues. Narrative guides for the seasonal, long-term, and probabilistic assessments are distributed to each Regional Entity several months prior to the data submittal due date to NERC.

The assessment areas submit their self-assessments (in response to the narrative guides) to NERC through the Regional Entities. Each Regional Entity's self-assessment is then distributed to RAS members from other Regional Entities for an in-depth and comprehensive review of the data and information. Peer reviewer comments are discussed with Regional Entity and assessment area representatives, and refinements and adjustments are made, as needed. The Regional Entity self-assessments are then subjected to scrutiny and review by the entire RAS. This peer review process provides an essential check and balance to ensure the validity of the information provided for each assessment. It also provides a mechanism for the members of the RAS to become fully convinced that each Regional self-assessment is accurate, thorough, and complete. Regional Entity representatives are able to examine and better understand planning methods and assumptions in other Regional Entities while also critiquing these processes or identifying potential gaps or shortfalls. Finally, the peer review also ensures consistency of methods and assumptions so that reliability evaluations are uniform.

Following the peer review process, the NERC RAPA compiles all Regional self-assessments into a single draft report, which is reviewed by the NERC Operating Committee (OC), the Member Representatives Committee (MRC), and NERC senior management. The report ultimately requires NERC PC approval before it is submitted to the NERC Board for final approval. This comprehensive vetting process promotes the development of independent assessments with heavy coordination among Regional Entity stakeholders.

### **C. Regional Entity Responsibilities in the Preparation of *State of Reliability* Reports**

NERC annually produces a *State of Reliability* report that provides NERC's independent view of ongoing BPS trends to objectively present an integrated view of reliability performance. The key findings and recommendations serve as technical input to NERC's processes for risk assessment, Reliability Standards projects prioritization, compliance process improvements, event

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<sup>150</sup> Methods and Assumptions reports are available at: <http://www.nerc.com/pa/RAPA/ra/Pages/default.aspx>.

analysis, and CIP activities. The analysis of BPS performance developed as part of the report provides an industry reference of historical reliability, offers analytical insights regarding industry action, and enables the identification and prioritization of specific steps that can be taken to manage risks to reliability. The data that are analyzed to produce the *State of Reliability* report are submitted by entities across North America. Each Regional Entity is responsible for reviewing the data submitted by entities in its respective region for completeness and accuracy. Once this review is complete, the Regional Entity staff informs NERC staff that the data are ready for analysis.

**D. Regional Entity Responsibilities in the Collection of Data for NERC Reliability Databases**

The NERC Board has approved mandatory data reporting concerning conventional generating units, transmission outages, and demand response availability. NERC collects this data using its Generating Availability Data System (GADS), Transmission Availability Data System (TADS), and Demand Response Availability Data System (DADS) databases. This unique series of databases is used to collect, record, and retrieve operating information tracking, reporting, analyzing, and improving the reliability performance of the BPS. Regional Entity staff work with NERC staff to ensure the data submitted by entities is timely, complete, and accurate.

**E. Regional Entity Resources Budgeted for Reliability Assessment and Performance Analysis During the Assessment Period**

During the assessment period, each Regional Entity increased its budgeted direct expenses and its budgeted FTE staffing for its RAPA program. The following table shows the amounts of direct expense budgeted by each Regional Entity for its RAPA program in its 2009 and 2014 business plans and budgets as filed with the Commission:<sup>151</sup>

<b>Regional Entity</b>	<b>2009 Budget</b>	<b>2014 Budget</b>	<b>Percent Increase</b>
<b>FRCC</b>	\$918,744	\$1,270,439	38.3%
<b>MRO</b>	\$982,029	\$1,329,480	35.4%
<b>NPCC</b>	\$1,446,942	\$1,888,972	30.5%
<b>RFC</b>	\$985,605	\$2,213,282	124.6%
<b>SERC</b>	\$976,109	\$1,398,882	43.3%
<b>SPP RE</b>	\$432,558	\$1,345,065	211.0%
<b>Texas RE</b>	\$365,180	\$1,055,983	189.2%
<b>WECC</b>	\$2,742,063	\$6,516,514	137.7%

The following table shows the direct FTE staffing budgeted by each Regional Entity for its RAPA program in its 2009 and 2014 business plan and budget as filed with the Commission:

<sup>151</sup> WECC amounts include spending to perform work under DOE grants.

Regional Entity	2009 Budget	2014 Budget	Percent Increase
FRCC	3.67	5.29	44.1%
MRO	4.75	6.49	36.6%
NPCC	3.90	5.83	49.5%
RFC	5.50	10.00	81.8%
SERC	4.50	7.60	68.9%
SPP RE	3.40	7.13	109.7%
Texas RE	2.20	4.75	115.9%
WECC	14.00	23.60	68.6%

**F. Evaluation of Regional Entity Performance in Reliability Assessment Activities and Areas for Improvement**

As the discussion in §§III.B, C, and D above makes clear, the quality of NERC’s reliability assessments depends heavily on the collaborative efforts of the Regional Entities, working through the RAS. The ability of the NERC RAPA staff to identify NERC-wide highlights and key findings is heavily dependent on the submittal of on-time, complete, and accurate data and information from each assessment area and Regional Entity.

NERC has assessed the performance of the Regional Entities during the assessment period against the following criteria pertaining to the Regional Entities’ roles and responsibilities:

- (1) Regional Entities interface with registered entities to support and assure overall alignment with wide-area, ERO-formulated, reliability assessments and performance analyses, program design and structure, and to undertake support functions for wide-area studies and analyses and the development of specific region-centric assessments initiated by the Regional Entity to gather greater insight into a particular reliability issue.
- (2) Regional Entities evaluate and provide seasonal, long-term reliability, and probabilistic assessments of the planning coordinator within their regions (assessment areas) including the data supporting the various analyses and evaluations of anticipated reliability conditions.
- (3) Regional Entities compile interconnection-wide, steady-state and dynamic models of the registered entities within their regions that have been developed by the applicable planning coordinators consistent with the program design and structure.
- (4) Regional Entities perform the data gathering function for certain performance analysis data efforts, assuring integrity, quality, and timeliness of the underlying data, and using data-gathering quality control procedures, forms and reporting mechanisms provided by NERC.
- (5) Regional Entities provide technical resources and expertise in support of strategic plan initiatives, aligning budget and resource process proposals that maximize the efficiency and effectiveness of the overall ERO enterprise on technical, analyses, information technology and program approaches.

- (6) Regional Entities manage their technical participation in applicable ERO committees and sub-groups in alignment with overall strategic objectives and the RAPA program structure and design while minimizing duplication and the overlap with SMEs and technical groups.
- (7) Regional Entities coordinate with registered entities and provide technical resource support to wide-area analysis of technical issues (oscillations, frequency, modeling, system protection, BES, etc.) that involve joint efforts.
- (8) Regional Entities support the development and implementation of major projects and initiatives (e.g., application of the BES definition), process exceptions requests, implement compliance, registration and standards applicability activities, and arrange Regional Entity processes for consistent use within North America.
- (9) Regional Entities manage the relationship with registered entities with respect to RAPA program deliverables and objectives, including data and analytic assembly quality, integrity, and timeliness.
- (10) Regional Entities collect misoperation data in fulfillment of obligations in PRC-004-2.1a, Requirement R3. The Regional Entities, in conjunction with their respective protection system subcommittees, analyze the data to determine trends and recommendation actions.

Based on its review of the Regional Entities' performance in Reliability Assessment during the assessment period, NERC makes the following observations:

- (1) All Regional Entities conduct Reliability Assessments in general accordance with the NERC Guidebook.
- (2) NERC supports and collaborates with Regional Entity staff through stakeholder committees to ensure consistent execution of delegated functions. In addition, the Regional Entities directly collaborate and communicate with registered entity personnel when conducting reliability assessments. Together, NERC and the Regional Entities have maintained a common framework for assessing the reliability of the BPS.
- (3) Further improvements in data checking and validation processes are needed. Regional Entities are leading and participating in the development of the NERC Reliability Assessment Data System (RADS). While this automated data system is still under development, significant improvements to data collection and validation have already been made at the Regional Entity level to support RADS in 2015.
- (4) Each Regional Entity reviews the data submitted by registered entities for completeness and accuracy in TADS, DADS, and GADS. Once the review is complete, the Regional Entity informs NERC that the data is ready for analysis. The Regional Entities have typically met these expectations.

- (5) In the future, some Regional Entities may need more resources to support evolving assessment approaches. More granular reliability assessments, which are expected through the course of increased evaluations of high-priority emerging reliability issues, may require additional data and information. This is true particularly in response to a changing resource mix and an evolving electricity grid; different approaches for measuring and evaluating future reliability may be needed. Most reliability assessment data supports the measurement of resource adequacy. To support a comprehensive understanding of essential reliability services, NERC will be considering how other long-term reliability evaluations should occur and what data and information will be needed over the next several years. These efforts, along with further evaluation of environmental regulations, DSM, gas and electric interdependencies, increasing variable generation, and other emerging reliability issues, require strong support from the ERO.
- (6) Some Regional Entities rely upon their member entities to perform various technical reviews. In order for Regional Entities to provide an independent review of both BPS performance and future states of reliability, Regional Entities may need increased staff participation. The need for independent review by regional staff will be greater over time given the challenges of the evolving BPS.

Based on its review, NERC makes the following recommendations for improvements:

- (1) NERC and the Regional Entities should work collaboratively to develop an ERO enterprise-wide database solution to reinforce the existing structures and processes (including Regional Entity involvement) used to develop NERC assessments. An ERO-wide database solution would allow for consistent data error checking which would ultimately improve the overall efficiency across the ERO and contribute to better reliability assessments.
- (2) NERC RAPA department management needs to further work on the best design for managing functional area relationships with the Regional Entities and developing better metrics to evaluate Regional Entity performance.

Going forward, NERC, in collaboration with the Regional Entities, will: (i) develop a comprehensive overarching design and set of controls, reporting requirements, metrics, and feedback mechanisms for reliability assessment activities, including the essential oversight elements listed above; (ii) identify functional qualifications for performance of reliability assessment activities; and (iii) adopt risk-based approaches to monitoring performance of delegated functions and providing effective feedback and coaching to continuously improve overall ERO Enterprise performance.

In conjunction with these improvement efforts, the Regional Entities should (1) continue to support NERC in the development of comprehensive functional program designs and controls (e.g., performance metrics and Regional Entity assessments based on common criteria); and (2) adapt existing Regional Entity programs for reliability assessment activities to conform with emerging program designs provided by NERC (e.g., ERO-enterprise wide data collection and database systems).

Many of the improvement activities described above have been initiated during the latter stages of the assessment period. In October 2013, the ERO Executive Management Group, comprised of senior management from NERC and each Regional Entity, approved a revised ERO-RAPA group charter. The purpose of the revised ERO-RAPA group charter is to provide a forum for Regional Entities and NERC RAPA department staff to collaborate on ongoing activities that are part of the RAPA department's approved roles and responsibility. This group will facilitate the flow of information, jointly coordinate work product expectations (scope, timing, resource expenditures, schedule, etc.) and promote consistency in the final products. The ERO-RAPA group includes a staff person from each of the eight Regional Entities (selected by the Regional Entity) to provide overall coordination of assessment activities with the NERC RAPA staff. Also, the ERO-RAPA group will implement, promote, and provide strategic and tactical guidance for Reliability Assessment activities per the ERO oversight model.

#### **IV. RELIABILITY RISK MANAGEMENT (SITUATION AWARENESS AND EVENT ANALYSIS)**

This §IV evaluates the Regional Entities' activities during the assessment period with respect to Reliability Risk Management (RRM). RRM encompasses the program areas of Situation Awareness and Event Analysis.

##### **A. Regional Entity Progress in Identifying and Analyzing System Events and Improving Situation Awareness**

Pursuant to the RDAs and the NERC ROPs, NERC and the Regional Entities collaborate to monitor present conditions on the BPS by gathering and assessing situation awareness information from registered entities.<sup>152</sup> The Regional Entities also assist NERC in analyzing major events, off-normal occurrences, BPS performance and BPS vulnerabilities.<sup>153</sup> NERC notes that as a general matter, the Regional Entities have not devoted, and have not been asked to devote, a level of resources to these activities comparable to the resources devoted to compliance monitoring and enforcement and reliability assessment. However, during the assessment period, the Regional Entities as a group made significant progress in executing these duties. The primary, collaborative achievement during this period was the formalization of a voluntary ERO Event Analysis process which facilitates coordinated responses to and review and analysis of system events. As part of the formalization of the Event Analysis process, an event classification system based on event severity was developed and put into effect. During the assessment period, NERC and the Regional Entities began using the event analysis process to analyze events and disseminate lessons learned to all industry members and to Regional Entities.

Prior to formalization of the Event Analysis process, which brought the ERO Event Analysis program to a mature state, the Regional Entities interacted individually with registered entities without a coordinated ERO-wide program for information sharing. In 2010, the Regional Entities initiated a dialogue with registered entities to discuss the requirements for preparing

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<sup>152</sup> ROP §1001 (Situation Awareness). The Regional Entities' responsibilities with respect to event analysis and situation awareness are described in §7 of the RDAs.

<sup>153</sup> ROP §§807 (Analysis of Major Events) and 808 (Analysis of Off-Normal Occurrences, Bulk Power System Performance, and Bulk Power System Vulnerabilities).

consistently formatted event reports. ReliabilityFirst, for example, developed a series of questions and a list of Reliability Standards that registered entities could use as a guideline as they developed event analysis reports and performed internal compliance reviews.

In June 2010, NERC and the Regional Entities created the NERC Event Analysis Working Group (EAWG), which included members from every Regional Entity. The EAWG expended significant efforts to develop an ERO Event Analysis process document in coordination with industry stakeholders for use across North America. On October 25, 2010, personnel from NERC, the Regional Entities, and the EAWG commenced a field trial of the ERO Event Analysis process, and conducted a comprehensive evaluation of the field trial data. Industry engagement in the field trials was noteworthy. Using the extensive feedback received from registered entities during the field trials, the EAWG developed version 1 of the *ERO Event Analysis Process*, which went into effect on February 21, 2012.<sup>154</sup> In June 2012, the NERC OC approved version 2 of the *ERO Event Analysis Process*, and the EAWG was transitioned to the NERC Event Analysis Subcommittee (EAS). By integrating industry engagement and the collaborative review of disturbances into the ERO Event Analysis process, the EAWG improved the effectiveness, predictability, consistency, and timeliness of the ERO Event Analysis program. The EAWG has since been elevated from a working group to a subcommittee under the NERC OC. Regional Entity staff continue to actively participate in the implementation and improvement of the ERO Event Analysis program. Since October 2010, registered entities have submitted more than 325 event reports through the ERO Event Analysis program. Several lessons learned have already been shared with the industry as a result of the ERO Event Analysis program.

The ERO Event Analysis program facilitates the sharing of lessons learned from applicable system events and trends. This sharing of lessons learned provides benefits to industry in terms of enhanced reliability. The new process provides a mechanism for registered entities to complete a preliminary event report for events occurring on their system. The higher the category of the system event (based on the event classification system), the more detailed analysis the registered entity is expected to perform and to share with the Regional Entity and NERC.

During the assessment period, a major test of the Regional Entities' progress in situation awareness and event analysis occurred in connection with the February 2011 Southwest Cold Weather Event, which affected areas of New Mexico, Arizona, and Texas and was the first major Category 4 Event to occur after the current ERO Event Analysis process was put in place. Approximately 1.3 million electric customers were out of service at the peak of this event. NERC, the Commission, and the Regional Entities whose areas were affected jointly analyzed the Southwest Cold Weather Event, conducted an assessment of previous severe winter events, published lessons learned, distributed training materials, and hosted an informational webinar to help industry members prepare for future severe cold weather events. As a result of the experience with this event, the ERO Event Analysis program was enhanced.

In addition to executing the Event Analysis process upon the occurrence of significant system events, the Regional Entities support NERC's situation awareness efforts by providing

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<sup>154</sup> See the Event Analysis Program web page, available at: <http://www.nerc.com/pa/trm/ea/Pages/EA-Program.aspx>.

more detailed information on occurrences of interest,<sup>155</sup> making initial notifications of certain Regional Entity-specific occurrences, and participating in daily situation awareness conference calls and weekly event analysis meetings. The Regional Entities also code all events and present them in monthly discussions with NERC.

NERC and the Regional Entities are continuously refining the ERO Event Analysis process based on experience and as system conditions change. For example, in 2013, NERC began focusing on energy management system (EMS) outages and their impact on BPS reliability. This focus on EMS outages has resulted in the publication and dissemination of two NERC Advisories pursuant to NERC ROP §810 as well as multiple lessons learned. NERC and the Regional Entities also conducted a monitoring and situation awareness workshop in September 2013 to share the lessons learned and the good industry practices learned from this work.

An added benefit of the ERO Event Analysis process is that it has driven a significant decrease in the initiation of formal compliance investigations by NERC and the Regional Entities. The responsiveness of registered entities in providing more extensive information about BPS disturbances has enabled NERC and the Regional Entities to perform more complete compliance assessments of these occurrences, without the use of a formal compliance monitoring method.

**B. Hurricane Sandy Provided a Meaningful Case Study and Test of the ERO's Situation Awareness Capabilities**

During the assessment period, in late October 2012, Hurricane Sandy provided a major test of the abilities of NERC, the Regional Entities, and the registered entities to engage in large-scale situation awareness and information sharing activities during a major system event. The hurricane made landfall on the Eastern Seaboard on October 29, 2012, and caused massive disruptions to the electric power system in New York, New England, and the Mid-Atlantic states. Over the course of the event, 20,007 MW of generation capacity was rendered unavailable and the distribution system was severely damaged. Approximately 8.35 million electric customer outages were reported across the impacted area.

In preparation for Hurricane Sandy, the Regional Entities and registered entities assisted NERC in monitoring conditions on the BPS and in responding to events as necessary. For example, ReliabilityFirst, NPCC, SERC, the New York Independent System Operator, ISO New England (ISO-NE), and PJM Interconnection, in conjunction with NERC's situation awareness team, coordinated storm preparation plans with the transmission owners, generation owners, balancing authorities, and other registered entities within the area forecasted to be impacted. Entities worked to ensure that sufficient numbers of additional field operation crews were scheduled and available to respond to the expected storm-related disruptions. Where possible, previously scheduled outages were postponed to ensure that facilities would be available over the next several days. Generators were advised of expectations during the storm, which included the potential for abnormal dispatch instructions. Blackstart units were also contacted to confirm that the units had sufficient fuel available to run for an extended duration.

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<sup>155</sup> Many of these occurrences do not rise to the level of a reportable event within the ERO Event Analysis program.

A day before the hurricane made landfall, NPCC initiated a series of daily coordination conference calls. During these calls, the reliability coordinators in NPCC shared reported current and projected system status and operational challenges. These regional conference calls were an important means of monitoring and communicating events with adjacent reliability coordinators, and they continued daily throughout the storm and during the ensuing recovery efforts. In addition, gas pipelines were contacted and requested to advise ISO-NE of any special procedures or anticipated abnormal conditions in light of the impending storm. All gas pipelines implemented their hurricane preparedness plans for the Northeast region, which included checking on-site generators for compressor stations and reviewing staffing plans and facility flood plans.

Registered entities convened or participated in numerous conference calls and broadcasts. They also communicated with the mutual assistance groups to which they belonged. These calls began on October 27, 2012, and continued through the restoration effort, with some lasting through November 9, 2012. Following the storm, NPCC, ReliabilityFirst and SERC, whose footprints include the areas directly impacted by the storm, participated in a joint effort with NERC to provide an overview of the impact of Hurricane Sandy on the interconnected BPS and gather lessons learned for storm preparation and restoration. The results of this effort are included in the *Hurricane Sandy Event Analysis Report* published by NERC in April 2014.<sup>156</sup>

Other Regional Entities have had the opportunity to exercise their situation awareness and information sharing processes and to demonstrate their proficiency, but not at the level that was required during Hurricane Sandy. FRCC, SERC, and SPP RE demonstrated their situation awareness processes and proficiency during Hurricane Isaac in September, 2012. ReliabilityFirst demonstrated its situation awareness processes and proficiency during the Derecho storm response in June through July 2012. Finally, WECC demonstrated its situation awareness processes and proficiency during multiple wildfires that caused transmission system disturbances in the Spring of 2013. While all of these events were smaller in scale and impact than Hurricane Sandy, the general processes used by the Regional Entities were the same and in each instance they were successfully executed.

### **C. Areas for Future Improvement and Enhancements**

The EAS of the NERC OC conducts an annual review of the ERO Event Analysis process. The OC receives comments from industry members on the ERO Event Analysis process and gives these comments full consideration during the annual review. Some commenters have suggested that communication and coordination between the parties involved in event analysis should be further enhanced. Examples of suggested improvements include increasing the timeliness, transparency and comprehensiveness of dissemination of information relating to event analysis and lessons learned, and streamlining the cause coding mechanism. In response, NERC is exploring the possibility of implementing enterprise information technology systems to provide efficiencies in event analysis and related reporting processes.

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<sup>156</sup> Available at:

[http://www.nerc.com/pa/rrm/ea/Oct2012HurricaneSandyEventAnalysisRptDL/Hurricane\\_Sandy\\_EAR\\_20140312\\_Final.pdf](http://www.nerc.com/pa/rrm/ea/Oct2012HurricaneSandyEventAnalysisRptDL/Hurricane_Sandy_EAR_20140312_Final.pdf).

## V. BUSINESS PLANNING AND BUDGETING, FINANCE AND ACCOUNTING

### A. Provisions of Commission Orders, the RDAs and the ROP Concerning the Regional Entities' Business Plans and Budgets and Financial Accounting and Reporting

The Commission's regulations at 18 C.F.R. §39.4(b) require that the ERO's annual business plan and budget submission include "the entire annual budget for statutory and non-statutory activities for each Regional Entity, with supporting materials, including . . . each Regional Entity's complete business plan and organization chart, explaining . . . the proposed expenditure of funds collected in sufficient detail to justify the requested funding collection and budget expenditures . . . ." The regulation further specifies that the ERO's annual budget submission "shall include the line item budgets for the activities of each Regional Entity that are delegated or assigned to each Regional Entity pursuant to §39.8." Further, in Order No. 672, the Commission stated that "The ERO must determine, at a minimum, whether each Regional Entity's proposed budget is adequate to carry out the functions delegated to it."<sup>157</sup>

The RDAs specify that the Regional Entity and NERC shall develop, through a collaborative process, an annual business plan and budget, in accordance with the Commission's regulations and orders and NERC business planning and budgeting policies and instructions.<sup>158</sup> The Regional Entity's business plan and budget is to describe the activities necessary for, and provide a budget with adequate resources for, the Regional Entity to carry out its delegated activities under the RDA. The business plan and budget is also required to show the funding sources and amounts to fund the proposed budget, including, as applicable, assessments to end users, penalty monies and other sources of funds. The RDAs further provide that NERC is to provide the Regional Entity with the form or forms, and accompanying instructions, for submittal of the Regional Entity's business plan and budget. NERC and the Regional Entities are to develop an annual schedule for preparation of the business plan and budget, and each Regional Entity is to submit its proposed annual business plan and budget for carrying out its delegated authority functions and related activities in accordance with the schedule. These RDA provisions are also reflected in §§1103 and 1104 of the NERC ROP.

Additionally, the RDAs specify that NERC shall develop, in consultation with the Regional Entities, a reasonable and consistent system of accounts, with a level of detail and record keeping comparable to the Commission's Uniform System of Accounts and sufficient to allow the Commission to compare the Regional Entity's approved budget with actual results for the year.<sup>159</sup> The Regional Entity must follow NERC's prescribed system of accounts except where a departure is specifically allowed by NERC. Further, the RDAs require the Regional Entities to submit to NERC (i) unaudited quarterly interim financial statements, in a form provided by NERC, no later than 20 days after the end of each fiscal quarter, and (ii) audited annual financial statements,

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<sup>157</sup> *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006), at P 229.

<sup>158</sup> The RDA provisions described in this paragraph are generally found in §9 of each RDA.

<sup>159</sup> This provision is also specified in NERC ROP §1103.4 (NERC Budget Development).

including supporting materials, in a form provided by NERC, no later than May 1 of the following year.

The Commission has also required NERC and the Regional Entities to file annual comparisons of each entity's budget to actual results for the year. These reports (sometimes referred to as "true-up reports") are to be filed on or before May 30 of the following year. The Commission originally imposed this requirement in its order accepting the NERC and Regional Entity business plans and budgets for the year 2008,<sup>160</sup> and clarified the requirements for this filing in several subsequent orders. The filings are to provide a comparison of the NERC and Regional Entity budgets to actual costs incurred in the preceding year, "in sufficient detail and with sufficient explanations for the Commission to determine, by program area, the reasons for deviations from the budget and the impacts of those deviations."<sup>161</sup> In an order issued in June 2008, the Commission provided additional direction concerning the required contents of the Regional Entities' annual true-up reports:

37. To promote consistency and transparency, the Commission directs the use of certain practices and formats in future true-up filings. In particular, Regional Entities must provide a cover letter discussing major areas of actual cost-to-budget variances for all of the Regional Entity's statutory programs in the aggregate. Regional Entities should also follow NERC's template for the presentation of actual costs and budgeted costs on a program-by-program and line-item basis. Significant variances must be explained on a line-item basis with enough particularized information to clearly support each such variance. Regional Entities should refrain from using generic, program area summaries to support significant variances. The cause for each such variance should therefore be clear on its face. Further, each Regional Entity must provide an explanation of the allocation methods it used to allocate indirect costs to the direct statutory program or functional areas, as well as any allocation between any statutory and non-statutory activities.<sup>162</sup>

In addition, the Commission directed that in the annual true-up reports, NERC and the Regional Entities should justify any use of cash reserves as variances.<sup>163</sup>

**B. Regional Entity Performance in Business Planning and Budgeting, Accounting, and True-Up Reporting**

Throughout the assessment period, consistent with the provisions of the Commission's regulations and orders, the RDAs, and the ROP summarized above, NERC and the Regional Entities have collaboratively developed annual business plans and budgets for each year 2010 through 2014 which describe the activities and resources necessary to execute the Regional

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<sup>160</sup> *North American Electric Reliability Corporation, Order Conditionally Accepting 2008 Business Plan and Budget of the North American Electric Reliability Corporation and Ordering Compliance Filings*, 121 FERC ¶ 61,057 (2007).

<sup>161</sup> *Id.* at P 23. In addition, any use of statutory funds for non-statutory activities is to be identified and an explanation provided as to how the statutory funds will be reimbursed. *Id.* at P 66.

<sup>162</sup> *North American Electric Reliability Corporation, Order Conditionally Accepting Compliance Filing*, 123 FERC ¶ 61,282 (2008), at P 37.

<sup>163</sup> *Id.* at P 38.

Entities' delegated authority functions and related activities. Overall, the Regional Entities have performed their responsibilities in the business planning and budgeting process in accordance with the requirements of the Commission's regulations and orders, the RDAs and the NERC ROPs. In a sense, the five-year evaluation of the Regional Entities' performance in business planning and budgeting, accounting and true-up reporting can be considered redundant because NERC and the Regional Entities engage in these activities on an annual basis (or more frequent basis for some aspects of financial reporting), which provides NERC with continuous opportunities to review each Regional Entity's performance of these functions and its compliance with procedures and requirements, and to identify and correct any deviations or deficiencies. Further, the Commission's annual review and acceptance of each Regional Entity's business plan and budget and true-up report provides an ultimate check on the Regional Entity's performance.

To provide ongoing, collaborative oversight of the business planning and budgeting and accounting and financial reporting processes, NERC and the Regional Entities have formed an ERO Finance Group comprised of representatives of NERC and each Regional Entity. The purpose of the group is to: (i) facilitate the coordination, preparation, review and approval by NERC and the Commission of the NERC and Regional Entity business plans and budgets consistent with the requirements of the NERC ROP, the RDAs, any specific requirements established by the NERC Finance and Audit Committee or Board, and applicable statutory, governmental and regulatory requirements; (ii) facilitate the coordination, preparation, review and filing of the NERC and Regional Entity business plans and budgets with Canadian and, to the extent applicable, other governmental and regulatory authorities consistent with applicable governmental and regulatory requirements; (iii) collaborate and support initiatives to improve the cost effectiveness and efficiency of NERC and Regional Entity operations; and (iv) provide general support to the NERC and Regional Entity executive leadership regarding such other finance and accounting matters as may from time to time be deemed necessary.

Since NERC became the ERO, NERC and the Regional Entities have continuously striven for consistency and improved transparency and detail in the annual NERC and Regional Entity business plans and budgets. The ERO Enterprise business planning and budgeting processes matured significantly during the assessment period. During this period, the ERO Enterprise implemented numerous process improvements in the areas of business and resource planning, allocation and budgeting. In the development of the 2010 business plans and budgets, in particular, a number of significant improvements were adopted. NERC believes that in the preparation of the 2012 business plans and budgets, a mature, steady state was reached with respect to process, format and content. This steady state has been maintained in the development of the 2013 and 2014 business plans and budgets and the currently ongoing development of the 2015 business plans and budgets (which will be completed outside of the assessment period). A partial list of steps that have been taken to achieve consistency, transparency and appropriate levels of detail includes the following:

- (1) Development, adoption and use of a common, consistent chart of accounts by all entities and the presentation of budget and financial information in accordance with the accounting system;
- (2) Development and use of a consistent organization and format for the business plans and budgets and the annual true-up reports, including a common table of contents,

common and consistent information, and common and consistent format for tables and charts providing the Regional Entity's funding, budget, actual costs, and staffing information;

- (3) Development and use of a common definition of administrative (indirect) costs and consistent methodologies for identifying budgeted and actual expenses as "direct" or "indirect" expenses;
- (4) Development and use of a consistent methodology for allocating indirect expenses to the direct program budgets;
- (5) Development and use of a consistent policy for capitalizing vs. expensing expenditures;
- (6) Collaborative development, on an annual basis, of a set of detailed shared (common) business planning and budgeting assumptions to be used by NERC and each Regional Entity in preparing their individual business plans and budgets. In recent budget preparation cycles, these assumptions have been expanded from a one-year set of assumptions to a three-year set of assumptions;
- (7) Development of a common set of budget metrics for each Regional Entity to present in the annual business plan and budget filings; and
- (8) Introduction of a three-year budget forecast into NERC's and each Regional Entity's annual business plan and budget.

In addition, NERC and the Regional Entities jointly develop a three-year rolling *ERO Enterprise Strategic Plan* which includes goals, objectives and deliverables over the planning period and is used in the development of each entity's business plan and budget. The development and implementation of these common formats and methodologies has helped to continuously improve the efficiency of the business plan and budget preparation process and enabled NERC and Regional Entity financial and accounting staffs and senior management to devote greater attention to more substantive budget issues.

In accordance with the RDA provisions described earlier, NERC and the Regional Entities establish and publish, for each annual budget preparation cycle, a detailed schedule for preparation, review, and approval of the business plans and budgets. The annual business planning and budgeting process for a year typically begins late in the second preceding year or early in the preceding year. The schedule provides for posting of initial and revised drafts, and periods for receipt of stakeholder comments, leading up to the ultimate approval of the business plans and budgets by the NERC Board at its August meeting and filing of the business plans and budgets with the Commission by on or about August 23 as required by the Commission's regulation. In addition, each Regional Entity goes through a posting and stakeholder review and comment process for its membership and other interested parties prior to approval of its business plan and budget by its governing body for submission to NERC. In its business plan and budget filing with the Commission, NERC provides descriptions of each Regional Entity's internal process. Over the assessment period, NERC and the Regional Entities have significantly increased the

transparency of the business plan and budgeting process, by providing numerous opportunities for stakeholder input and feedback prior to Regional Entity board and NERC Board approval and submittal to the Commission.

NERC's oversight of the Regional Entities' business plan and budget preparation, leading up to approval of the Regional Entities' business plans and budgets, is generally focused on the following areas:

- (1) An assessment of the adequacy of the Regional Entities' resources and activities being budgeted by the Regional Entity to perform delegated functions.
- (2) A review of the alignment of the Regional Entity's goals, objectives and major activities to the *ERO Enterprise Strategic Plan*.
- (3) A review of the quality and completeness of the financial information presented by the Regional Entities, including:
  - (a) Conformance with the Commission's budget reporting requirements;
  - (b) Separation of statutory and non-statutory activities;
  - (c) Supporting detail for projections; and
  - (d) Working capital and operating reserve budgets, projections, policies and controls.
- (4) A review of the Regional Entities' efforts to improve efficiency and control costs.

Throughout the budget review process, where appropriate, NERC requests additional information and recommends changes. As needed, NERC and Regional Entity management and finance staffs convene meetings and conference calls to provide feedback and to refine their respective business plans and budgets. In addition to reviewing and providing feedback to the Regional Entities, NERC management considers other relevant information when reviewing the Regional Entity budgets, such as the findings and recommendations contained in the audits the Commission has conducted of NERC and the Regional Entities.

During the assessment period, the Regional Entities also performed in accordance with requirements with respect to financial reporting, including the preparation of the annual true-up reports. During the assessment period, NERC and the Regional Entities have significantly increased the transparency and content of quarterly and year-end actual-to-budget variance reporting to the Finance and Audit Committee of the NERC Board. In general, the Regional Entities have consistently submitted their unaudited quarterly financial reports on a timely basis as required by the RDAs. With respect to the annual true-up reports, NERC and the Regional Entities developed a common, consistent format for these reports complying with the Commission's directives. The format consists of: (i) a cover letter identifying major areas of actual cost to budget variance for each program and providing the other information specified by Commission orders (e.g., whether any statutory funds were used for non-statutory activities, the Regional Entity's use of cash reserves and change in its working capital position); (ii) tables comparing on a line-item basis actual to budgeted expenditures on a total statutory basis and (if the Regional Entity also has non-statutory activities) total company basis; and (iii) tables

comparing on a line-item basis actual to budgeted expenditures for each of the Regional Entity's direct statutory programs and its administrative (indirect) programs, with narrative explanations provided for line-item variances that exceed \$10,000 and 10% of budget. In general, the Regional Entities have submitted their audited annual financial reports and their draft true-up reports to NERC on a timely basis to allow for NERC to review and provide any feedback and the reports to be filed with the Commission by the May 30 deadline. In addition, NERC and the Regional Entities have developed a set of administrative cost metrics to be presented to the Commission as part of the annual true-up report filing.

**FEDERAL ENERGY REGULATORY COMMISSION  
DOCKET NO. RR14-\_\_\_**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

**ATTACHMENT 4**

**TO**

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

**NERC CONSIDERATION OF INDUSTRY FEEDBACK**

**JULY 21, 2014**

This Attachment presents information from the stakeholder survey that the North American Electric Reliability Corporation (NERC) conducted in October 2013 for purposes of the *Five-Year Electric Reliability Organization (ERO) Performance Assessment Report*, and from stakeholder comments received on postings of drafts of the *Five-Year ERO Performance Assessment Report*. This Attachment includes tables summarizing key comments received from stakeholders and NERC's responses to those comments, including identifying where in the *Five-Year ERO Performance Assessment Report* the comment is addressed.

This Attachment also includes summary information on the responses to the questions posed in the stakeholder survey and the type and distribution of the respondents. The stakeholder survey requested comments on the following broad categories of the ERO Enterprise's activities:

- (1) Reliability Standards
- (2) Compliance Operations
- (3) Enforcement
- (4) Registration and Certification
- (5) Reliability Assessment & Performance Analysis Metrics
- (6) Training, Education, and Personnel Certification
- (7) Event Analysis
- (8) Critical Infrastructure Protection
- (9) Stakeholder Communications, Public Relations, and IT
- (10) Business Plan and Budget
- (11) Independence and Stakeholder Input

**Table 1: Stakeholder Comments Concerning NERC**

In the following table, (i) the first column contains summaries of key stakeholder comments; and (ii) the second column lists a brief response to an individual comment and, where applicable, the specific location(s) where the comment is addressed within the *Five-Year ERO Performance Assessment Report*. The table is divided into sections that correspond to the broad categories of questions asked in the stakeholder survey.

Summary of Key Stakeholder Comments	Where Comment is Addressed <sup>1</sup>
<b>Reliability Standards</b>	
<p>Improve articulation of the need for a new Reliability Standard before development.</p>	<p>II(A)(6)(a); II(A)(6)(b); II(A)(6)(d)</p> <p>In 2013, NERC spearheaded an “informal development” effort, which uses informal groups composed of industry subject matter experts to conduct early outreach to industry stakeholders prior to initiating formal development of new or revised Reliability Standards. This early outreach encourages stakeholder conversations to obtain inputs on the proposed Reliability Standards development project. This approach is positively affecting how standard drafting teams are conducting their work.</p> <p>The Reliability Issues Steering Committee (RISC) provides a framework for steering, developing, formalizing, and organizing recommendations to help NERC and the industry effectively focus their resources on the critical means to improve the reliability of the bulk power system (BPS). In some cases, this includes recommending reliability solutions other than the development of new or revised Reliability Standards and offering high-level stakeholder leadership engagement and input on issues that enter the Reliability Standards process. In other cases, the development of a new Reliability Standard or modification of an existing Reliability Standard may be the best way to address a particular issue.</p>
<p>Speed up the process for developing Reliability Standards.</p>	<p>II(A)(6)</p> <p>Projects that were initiated and completed after FERC’s approval of the <i>Standard Processes Manual</i> (SPM) changes, effective June 26, 2013, have shown significant increases in efficiency while simultaneously improving quality. Implementing the revisions within other projects that were already in process has also resulted in improvements.</p>

<sup>1</sup> Unless otherwise indicated, all references in this table are to the *Overview of NERC Activities and Accomplishments in the Five-Year Period*.

	<p>The most significant improvement is the composite result of all the revisions – the amount of time required to develop a quality Reliability Standard. As reported in the <i>Analysis of NERC Standards Process Results, Fourth Quarter 2013</i> filing, the baseline for the time to revise an existing Reliability Standard was approximately 27 months and 40 months to develop a new Reliability Standard. The times to produce each of the eight standards development projects that began formal development after implementing the revised SPM were dramatically reduced. Six and one-half of the projects (GMD Phase 1, INT, Physical Security, MOD A, MOD B, PER, and one of the two standards in the VAR project (VAR-001)) completed formal development from posting the SAR to being adopted by the NERC Board of Trustees in less than seven months. The remaining Reliability Standard in the VAR project (VAR-002) and the MOD C project completed formal development in ten months.</p>
<p>Better articulate how prioritization is determined in the Reliability Standards development process.</p>	<p>II(A)(1)-(4); II(A)(6)(a)-(b)</p> <p>The <i>Reliability Standards Development Plan 2014-2016</i> (RSDP) prioritizes future Reliability Standards projects as high, medium, low, or pending technical committee input based on a series of inputs. Prioritization considerations were influenced by: (i) RISC areas of risk and category rankings; (ii) outstanding regulatory directives; (iii) regulatory deadlines; (iv) Paragraph 81 retirement candidates; (v) content and quality assessments by the Standards Independent Experts Review Panel (IERP); and (vi) additional considerations such as fill-in-the-blank status and five-year standards review assessment commitments.</p> <p>The RISC provides input into prioritizing Reliability Standards development activities by providing input to the RSDP in two ways: first, by considering whether the projects identified in the RSDP address areas of risk for the BPS; and second, by developing a priority rank for each of the projects. In reviewing the priority of each project, the RISC provides a mechanism for addressing any scheduling conflicts between projects through the development process.</p> <p>NERC will continue working with the RISC to develop risk profiles for the ERO, which will include high impact low frequency (HILF) issues. These profiles of the BPS will inform how the ERO prioritizes and ranks reliability risks. For high priority risks, NERC will develop project plans and business case assessments outlining initiatives to address those risks.</p>

<p>Provide greater clarity regarding the “Applicability” section of each Reliability Standard.</p>	<p>Where practical, the applicability of Reliability Standards is being targeted to entities meeting specific requirements. This effort narrows applicability to specifically identified entities within registered functions, thus focusing requirements to entities where the actions impact the reliability of the BPS.</p> <p>For example, in PER-005-2, rather than the Reliability Standard being applicable to all Transmission Owners, it is applicable to those Transmission Owners that have:</p> <p style="text-align: center;"><i>Personnel, excluding field switching personnel, who can act independently to operate or direct the operation of the Transmission Owner’s Bulk Electric System [(BES)] transmission Facilities in Real-time.</i></p> <p>Additionally, the Reliability Standard narrows applicably from all Generator Owners to those Generator Owners that have:</p> <p style="text-align: center;"><i>Dispatch personnel at a centrally located dispatch center who receive direction from the Generator Operator’s Reliability Coordinator, Balancing Authority, Transmission Operator, or Transmission Owner, and may develop specific dispatch instructions for plant operators under their control. These personnel do not include plant operators located at a generator plant site or personnel at a centrally located dispatch center who relay dispatch instructions without making any modifications.</i></p>
<p>Clarify avenues to obtain information regarding the development history of Reliability Standards.</p> <p>Streamline and enhance communications regarding the development of Reliability Standards to be more useful to industry.</p>	<p>II(A)(7); II(A)(6)(a)</p> <p>The revision of the NERC public website that was implemented during the assessment period significantly increased the information available on this topic and improved the ease of accessing it. On the current website, all Reliability Standards are available to stakeholders on the “Standards” webpage (see “Program Areas &amp; Departments”). The “US Enforcement Dates” link on the page offers listings for: (i) Reliability Standards that are currently enforceable in specific jurisdictions (i.e. in the U.S. and Canadian provinces); (ii) Reliability Standards pending regulatory approval; (iii) Reliability Standards approved by the NERC Board of Trustees and pending regulatory filing; and (iv) Reliability Standards no longer subject to enforcement. This page also includes information regarding the enforcement dates for Reliability Standards and, for standards pending enforcement, the NERC Board of Trustees adoption date and the date the standard was filed with FERC. Stakeholders can also locate</p>

	<p>historical information on the “US Enforcement Status/Functional Applicability” link, which offers information regarding when the NERC Board of Trustees adopted, filed or retired requirements. It also provides the date standards were filed with FERC, the effective date of the FERC order and the enforcement date of each requirement. Stakeholders may see all prior versions of standards on the “Reliability Standards” section of the webpage. A click on the “related information” for link for each standard will provide access to historical project development pages. In 2012, NERC launched an improved interface, the VRF matrix, to allow stakeholders to filter the complete set of Reliability Standards so that they could identify which Reliability Standards were applicable to their respective registered functions. Work is ongoing to improve the completeness and timeliness of the above information for non-U.S. jurisdictions (i.e., Canadian provinces or Mexico).</p> <p>Additionally, beginning in 2013, interested entities can track current Reliability Standards development projects in a publicly posted spreadsheet, the <i>Project Tracking Spreadsheet</i>, available on the left navigation tab of the NERC Standards home page. NERC updates this spreadsheet monthly. The spreadsheet also provides a link to the projects page, the deliverables, the number of Paragraph 81 requirements, the number of regulatory directives or guidance, the Project Management and Oversight Subcommittee (PMOS) liaison assigned to the project, the NERC Reliability Standards developer, and a month-by-month timeline. Also in 2013, NERC began posting the <i>Projected Standards Posting Schedule</i>, which provides the industry with an outlook of near term postings.</p>
<p>Provide greater transparency regarding the process for selecting standard drafting teams and the rationale for standard drafting team decision-making.</p>	<p>II(A)(6)(a)</p> <p>NERC has improved the composition of standard drafting teams by enhancing the selection process to identify, for each project, the necessary technical, writing, and project management expertise to form a balanced team that will foster improved effectiveness and enhanced efficiency. These changes were instituted as a result of the recommendations made by the Standards Process Improvement Group (SPIG) to modify the way NERC develops Reliability Standards, which resulted in revisions to the SPM. In these revisions, NERC memorialized the intent to revise the composition of standard drafting teams to ensure they are appropriately equipped to meet reliability objectives (e.g., by adding legal and compliance experts).</p>

	<p>Additionally, the NERC Standards Committee created a new subcommittee, the PMOS that acts as an industry and standard drafting team partner. The PMOS assigns a representative to each standard drafting team for the purpose of oversight. This oversight includes such actions as: (i) assisting the standard drafting team in understanding any stakeholder concerns; (ii) reaching out to stakeholders if they do not understand the actions being taken by the standard drafting team; (iii) being partners in reviewing the standards for quality; and (iv) assisting with advice on a range of topics from direction to posting schedules. This group has assisted standard drafting teams in avoiding or overcoming hurdles during the process.</p> <p>The revisions made to the SPM and other changes made to the standards development process, including strengthened partnerships, while still in their infancy, are showing great promise as improvements to the process, both in creating efficiency and improving quality. These improvements have allowed the ERO Enterprise to make significant progress towards achieving a body of steady-state Reliability Standards.</p>
<p>Provide a detailed explanation as to how the Standards improve reliability for the industry.</p>	<p>II(D)(1)-(2)</p> <p>This <i>Five-Year ERO Performance Assessment Report</i> shows that NERC is improving the performance of, and mitigating risks to, the BPS as measured by avoidable outages. Further, as detailed in NERC’s <i>State of Reliability 2014</i> report, the number of BPS transmission-related events resulting in loss of firm load, other than events caused by factors external to the transmission system’s actual performance (i.e., weather-initiated events), decreased from an average of ten per year over a ten-year period (2002 through 2011) to seven in 2013. The daily severity risk index value, a new metric created by NERC that measures risk impact or “stress” from events resulting in the loss of transmission, generation, and load, has been stable from 2008 to 2013. Including weather-initiated events, 2013 had no high-stress days, which is within the range of zero to seven days experienced during 2008 through 2013. The availability of the bulk transmission system continues to remain high with no statistically significant change from 2008 to 2013.</p> <p>This improved performance is due to a combination of activities led by the ERO Enterprise. NERC Reliability Standards are one component of these activities; they are designed to prevent events that are detrimental to the reliability of the BPS. As detailed in this <i>Five-Year ERO Performance Assessment Report</i>, during the</p>

	<p>assessment period, NERC’s compliance monitoring and enforcement efforts have matured into a robust program that provides industry with more certainty on actions, outcomes, and reliability consequences. The actions taken to identify, correct, and prevent violations of Reliability Standards have promoted the reliability of the BPS. For example, the adoption and rigorous enforcement of NERC’s transmission vegetation management Reliability Standard, which became mandatory and enforceable in 2007, has dramatically reduced the number of outages caused by vegetation growing into high voltage lines. From 2004 through 2008, there were 58 reported outages. By contrast, from 2009 through 2013, only six instances were reported.</p> <p>The RISC identifies new or emerging issues that could impact the reliability of the BPS, and various solutions for mitigating those issues are investigated. Those solutions may include the development of a Reliability Standard, a guideline, necessitate an alert, initiate training, or other potential solutions tailored to the issue. It is the combination and sequencing of these actions – identify risk, determine solutions (of which a standard may be one), monitor compliance or adherence to the solution, and monitor until issue is resolved – that improves the reliability of the BPS.</p> <p>NERC will continue working with the RISC to develop risk profiles for the BPS, which will include HILF issues. These risk profiles of the BPS will inform how the ERO prioritizes and ranks reliability risks. For high priority risks, NERC will develop project plans and business case assessments outlining initiatives to address those risks.</p>
<p>Consider equally or more effective tools than a Reliability Standard for emerging issues such as Geomagnetic Disturbances (GMD), new Critical Infrastructure Protection (CIP) threats such as coordinated physical attack, cold weather preparedness, etc.</p>	<p>NERC will continue working with the RISC to develop risk profiles for the BPS, which will include HILF issues. These profiles of the BPS will inform how the ERO Enterprise prioritizes and ranks reliability risks. For high priority risks, NERC will develop project plans and business case assessments outlining initiatives to address those risks. This will include evaluating whether the risk is most effectively and efficiently addressed through a new or revised Reliability Standard or through some other initiative.</p> <p>In response to direction from the NERC Board of Trustees in February 2013, NERC developed a Reliability Risk Management (RRM) process to create and execute plans for managing reliability risk and to integrate these plans with the business</p>

	<p>planning and budgeting process. The RRM process leverages several resources including the business acumen of the RISC.</p>
<p>Continue to integrate recommendations of the RISC into NERC’s decision-making.</p>	<p>II(A)6(b); II(D)(1)</p> <p>NERC will continue working with the RISC to develop risk profiles for the BPS. These profiles of the BPS will inform how the ERO Enterprise prioritizes and ranks reliability risks. For high priority risks, NERC will develop project plans and business case assessments outlining initiatives to address those risks.</p> <p>In response to direction from the NERC Board of Trustees in February 2013, NERC developed a RRM process to create and execute plans for managing reliability risk and to integrate these plans with the business planning and budgeting process. The RRM process leverages several resources including the business acumen of the RISC.</p>
<p>Consider alternatives such as the forum process, which engages asset owners, to address reliability issues.</p>	<p>II(A)(8)(e); III(D)(3)</p> <p>NERC has used and will continue to use the North American Transmission Forum (NATF) and North American Generator Forum (NAGF), where efficient and appropriate, to address reliability issues. For example, the response to FERC’s directive to develop and submit a physical security Reliability Standard within 90 days offered an opportunity for NERC to use the forum process to solicit industry input. On April 1, 2014, NERC staff convened a technical conference to focus stakeholder discussion on developing a draft of CIP-014-1 – Physical Security, with the intent of assisting the standard drafting team to quickly develop and post a Reliability Standard for comment and ballot. The conference provided a forum for industry input on the concepts in the draft Reliability Standard, to include criteria for determining applicable entities, identification of critical facilities, evaluation of potential threats and vulnerabilities, development and implementation of physical security plans, and the proposed standard’s implementation plan. NERC Compliance staff also provided an overview of the Reliability Standard Audit Worksheet (RSAW) approach.</p> <p>Additionally, NERC is collaborating with the NATF and the NAGF to further enhance the Event Analysis process and lessons learned dissemination in identifying risks to the BPS.</p>
<p><b>Compliance Operations</b></p>	

<p>Provide better oversight to ensure consistency in auditing practices.</p>	<p>II(C)(2)(a); Attachment 3 – (II)(B)<sup>2</sup></p> <p>During the assessment period, the Regional Entities made meaningful progress in improving their compliance monitoring programs and their audit practices and procedures consistent with the requirements of the NERC Rules of Procedure (specifically, the <i>Compliance Monitoring and Enforcement Program (CMEP)</i>, Appendix 4C) and the Regional Delegation Agreements. Overall, the Regional Entities worked diligently to plan and complete their scheduled compliance audits during the assessment period. NERC’s oversight of the Regional Entity compliance programs shows that the Regional Entities are meeting the baseline requirements of the NERC Rules of Procedure and the Regional Delegation Agreements. However, NERC’s oversight has also shown (as this comment suggests) that there continue to be varying compliance monitoring practices across the ERO Enterprise.</p> <p>NERC has three main objectives for the continued evolution of the compliance monitoring program. First, the Regional Entities are revising their existing practices to better align with risk using generally accepted audit practices. Second, NERC and the Regional Entities have developed a standardized <i>Compliance Auditor Checklist</i> and <i>Compliance Auditor Handbook</i>, as found in the <i>ERO Enterprise Compliance Auditor Manual</i>, to ensure consistent conduct of audits across the ERO Enterprise. Third, NERC, in conjunction with the Regional Entities, have developed competency (qualifications) guidelines for compliance monitoring staff and are developing training to accompany the competency guidelines.</p>
<p>Provide greater clarity on the Reliability Assurance Initiative (RAI) to inform industry about what is expected.</p>	<p>II(C)(2)</p> <p>To foster dialogue and seek industry feedback on the various aspects of RAI, NERC hosted a series of workshops in 2013 that addressed important components of RAI including defining internal controls, conducting risk assessment, launching pilot programs, enhancing the Find, Fix, Track and Report (FFT) process, and improving self-reporting. NERC also included the Compliance and Certification Committee (CCC) in the development and review of RAI activities including the development of white papers on internal controls and other guidance.</p>

<sup>2</sup> Attachment 3 to the *Five-Year ERO Performance Assessment Report* is titled *NERC Assessment of Regional Entity Delegated Functions*.

	<p>Compliance-related activities under the RAI program will help achieve a risk-based approach for compliance monitoring by evaluating current compliance monitoring practices, identifying improvements, and addressing the consistent application of audit techniques and the use of uniform tools to carry out compliance monitoring activities.</p> <p>Similar to the RAI compliance monitoring effort, the enforcement element of RAI seeks to align the ERO Enterprise’s enforcement processing activities with levels of risk to the reliability of the BPS. Achieving this alignment will promote efficiencies for both the ERO Enterprise and registered entities by eliminating undue regulatory burdens, streamlining documentation and filing requirements, and substantially improving the processing of noncompliance and related mitigating activities.</p>
<p>Improve communications regarding how registered entities are to demonstrate compliance by making them more substantive, timely, and useful to the industry.</p>	<p>II(C)(2); Attachment 3 – II(B)(1)-(2)</p> <p>In 2013, NERC and the Regional Entities began to develop and implement tools that will define techniques and methods to perform compliance monitoring in a consistent manner across the ERO Enterprise. The Regional Entities began using the first of these tools, the <i>Compliance Auditor Checklist</i>, in August 2013. In December 2013, NERC and the Regional Entities completed the first draft of a companion document for the <i>Compliance Auditor Checklist</i>, the <i>Compliance Auditor Handbook</i>, as found in the <i>ERO Enterprise Compliance Auditor Manual</i>. NERC disseminated the manual and provided initial training to Regional Entity auditors during the first quarter of 2014. In the second quarter of 2014, the Regional Entities began to use the <i>ERO Enterprise Compliance Auditor Manual</i> and its related processes and procedures on a select number of audits. Throughout 2014, NERC and the Regional Entities will revise and expand the manual to address additional audit topics, reflect additional processes developed through RAI activities, and include lessons learned. NERC has made the <i>Compliance Auditor Checklist</i> and <i>Compliance Auditor Handbook</i>, as found in the <i>ERO Enterprise Compliance Auditor Manual</i>, available to industry.</p> <p>A second key RAI compliance activity, the Prototypes and Pilot program, focuses on the development and implementation of a formalized approach to risk assessments and testing of management controls. NERC and the Regional Entities initiated the first phase of the pilot program during 2013. This phase explored different approaches to applying risk-based auditing</p>

	<p>concepts (e.g., audit scoping, reliability risk assessments, and management controls review and testing). For 2014 and beyond, a team consisting of NERC, Regional Entity, and industry representatives as well as an independent audit consultant will evaluate the findings and determine the best audit approach to implement throughout the ERO Enterprise.</p> <p>In addition, NERC and the Regional Entities have consolidated the annual CMEP Implementation Plans into a single document with the goal of implementing certain risk-based compliance enhancements. The CMEP Implementation Plan is provided to stakeholders annually.</p> <p>Finally, NERC has aligned the RSAW development process with the development and publishing of balloted Reliability Standards. This initiative enables stakeholders to follow the development of this compliance monitoring tool contemporaneous with the development of the Reliability Standard to which it relates, and to provide comments on the draft RSAW.</p>
<p>Reassess the role of Compliance Application Notices (CANs) in an audit.</p>	<p>(II)(A)(4)</p> <p>CANs were notices drafted to respond to questions that arose in the compliance monitoring process regarding how to assess compliance. Although developed for the use of audit teams and other compliance monitoring personnel, CANs were posted on the NERC website to provide transparency to industry. However, since CANs were drafted well after the related Reliability Standard was developed, the compliance assessment positions articulated in the CANs often varied from industry’s perspective of the intent of the Reliability Standard or requirement at the time of its development and adoption.</p> <p>The CAN process demonstrated that there is a need for concurrent development and dialogue between standard drafting teams and Compliance Operations staff. As a result, in 2013, NERC began incorporating the concurrent development of compliance assessment information into the Reliability Standards development process. After June 2013, informal development project teams began posting documents during standards development titled “Compliance Input.” These documents provided questions from industry and answers developed by Compliance Operations staff regarding how to assess compliance for specific requirements, or phrases in the requirements, of the proposed Reliability Standard. This basic</p>

	<p>tool opened the door for discussions between the standard drafting teams and Compliance Operations staff. It also allowed for discussions regarding the wording of requirements and the effect of that wording on how compliance would be assessed.</p> <p>The move to develop RSAWs concurrently with Reliability Standard development eliminates the need for CANs, as separate documents, effective February 2013.</p>
<p>Make RSAWs available before, during, and after the balloting process and ensure that they do not exceed the scope of the Requirement.</p>	<p>(II)(A)(4)</p> <p>As a result of the new processes adopted during the assessment period as described in the preceding response, RSAWs are now written concurrently with new Reliability Standard development projects. A draft RSAW is now posted during the formal comment period and prior to the ballot period for a Reliability Standard, thereby allowing stakeholders to provide comments or to raise concerns about the RSAW at that time.</p>
<p>Ensure that compliance guidance tools like Case Notes, Compliance Analysis Reports (CARs), CANs and Bulletins are used for guidance only, and not as vehicles for interpretations of or revisions to Reliability Standards.</p>	<p>Compliance training going forward will reinforce the fact that documents cannot interpret Reliability Standards. NERC has eliminated CANs (as noted in a previous response), and RSAWs are meant only as guidance to obtaining and reviewing evidence in order to obtain reasonable assurance of compliance with reliability standards. Any existing documents that are used as audit guidance will be addressed to remove language that interprets the Reliability Standard and all training going forward will be developed to demonstrate testing and audit methodology only.</p>
<p>Provide small entities with additional guidance regarding scoping their internal self-assessments and programs.</p>	<p>The purpose of RAI is to assure that entities and auditors focus on relevance. In this connection, as processes are developed for the assessment of risk and more specifically linking risks to functions and Reliability Standards, this will allow a registered entity (including smaller entities) to receive better guidance on where they should focus. Over the course of the next few months, this guidance will be published and supported with training to help smaller entities target their specific risks.</p>
<p>Require self-certifications only for quarters in which a misoperation occurred, rather than for every quarter.</p>	<p>The Regional Entities review self-certifications for all registered entities at least once annually. Regional Entities have the discretion to require monthly self-certifications for certain Reliability Standards and requirements.</p>

<p>Clarify how registered entities will be impacted by improvements to RAI.</p>	<p>II(C)(2)</p> <p>Building upon the success of FFT through RAI, NERC and the Regional Entities are creating additional incentives to discourage poor performance and encourage positive behaviors that contribute to higher accountability and improved reliability performance.</p> <p>In 2013, NERC began implementing RAI processes that promote more effective reliability risk mitigation by encouraging development and enhancement of internal management controls and corrective action programs at registered entities. Achieving the desired alignment of enforcement processing and compliance monitoring with levels of risk will benefit registered entities by eliminating undue regulatory burdens, streamlining documentation and filing requirements and improving the processing of noncompliance and related mitigating activities.</p> <p>The development of tools like the <i>Compliance Auditor Checklist</i> and <i>Compliance Auditor Handbook</i>, as found in the <i>ERO Enterprise Compliance Auditor Manual</i>, also help to set clear expectations for registered entities regarding audit practices and procedures; thereby allowing them to increase the efficiency and effectiveness of their pre-audit preparation.</p> <p>The ability to appropriately evaluate the risks of a registered entity will result in a more appropriately scoped audit and test plan in contrast to a one-size-fits-all approach to compliance. The more the ERO Enterprise understands the control environment and function of controls, the frequency and extent of oversight will change accordingly. In addition to compliance, sound controls also drive organizational efficiencies for the registered entities.</p> <p>Overall, a positive impact of RAI for registered entities is expected to be a more efficient compliance monitoring process that enables registered entities to reduce the extent of time and resources expended on external compliance monitoring activities by implementing or improving effective internal controls to minimize reliability risk.</p>
<p>While some regions are already employing RAI-like approaches in audits and other compliance enforcement activities, all</p>	<p>II(C)(2); Attachment 3 – II(B)(1); II(D)(1)(b)(iv); II(D)(1)(c)-(d)</p> <p>NERC is developing standardized training for Regional Entity compliance auditors to ensure that Regional Entities are consistently (both within each Regional Entity and across all</p>

<p>regions should be implementing an ERO-wide program as soon as possible.</p>	<p>Regional Entities) applying the procedures and methodologies of the new compliance monitoring documents such as the <i>Compliance Auditor Checklist</i> and <i>Compliance Auditor Handbook</i>, as found in the <i>ERO Enterprise Compliance Auditor Manual</i>, and RSAWs.</p>
<p><b>Enforcement</b></p>	
<p>Treat similar findings with greater consistency.</p>	<p>II(C)(4)(b); Attachment 3 – II(D)(1)(d)</p> <p>NERC and the Regional Entities engage in a number of activities to enhance consistency in enforcement processing across the ERO Enterprise. NERC and the Regional Entities participate in a multi-region working group on enforcement activities. Through this group, NERC communicates guidance and provides training on many different aspects of the enforcement program. This group is actively involved in the development or enhancement of any enforcement activities. In addition, NERC conducts oversight to ensure the consistent application of enforcement processing mechanisms and other enforcement-related processes under the CMEP. Examples of NERC’s oversight includes the annual review of FFTs which results in a public report filed with FERC. Additionally, NERC reviews and approves all Notices of Penalty (NOPs) prepared and submitted by Regional Entities. One aspect of NERC’s review of NOPs is to ensure that similar actions and inactions are treated consistently within and across Regional Entities in terms of whether a violation is determined to have occurred; and, to ensure that consistent penalty determinations are made for similar violations, both within the Regional Entity and across the Regional Entities.</p>
<p>Streamline and refine the scope of investigations.</p>	<p>Attachment 3 – II(C); IV(A)</p> <p>The NERC Rules of Procedure permit all eight Regional Entities and NERC to conduct compliance investigations (CIs), and it is extremely important for the ERO Enterprise to have a consistent approach for this activity. NERC developed a CI leaders training class to provide a methodology for the conduct of the CI process.</p> <p>The class introduces the approach of conducting CIs in phases, with accompanying activities and deliverables for each phase. It also explains the roles of the Regional Entity, NERC, and the applicable governmental authority in CIs.</p> <p>One of the key messages in the class is to reinforce that CIs are one of several formal compliance monitoring tools, and there are</p>

	<p>specific circumstances where a CI may be the best tool, and other circumstances where a CI is not the best tool.</p> <p>In addition, the class introduces the Events Analysis process. NERC found that Compliance staffs benefit from additional exposure to and familiarity with this process. The Event Analysis process has greatly reduced the number of CIs, as the Event Analysis process provides the relevant facts and circumstances of events that were previously only available through the tools employed in a CI.</p>
<p>While efforts are outlined in the report regarding a transition to a risk-based approach for compliance and enforcement, including discretion, targeted measurable improvements are still needed.</p>	<p>II(C)(4)(a); Attachment 3 – II(B)(1); II(D)(1)(b)</p> <p>NERC and the Regional Entities have continued to work collaboratively to develop and implement a set of metrics to measure the efficiency with which enforcement items are processed.</p> <p>The four metrics which have been developed during the assessment period to monitor the performance of NERC and the Regional Entities in processing enforcement items are:</p> <ul style="list-style-type: none"> <li>(1) Caseload Index – computes the number of months it would take to clear the violations in a Compliance Enforcement Authority’s (CEA, i.e., NERC or a Regional Entity) inventory based on the CEA’s average monthly processing rate for the preceding twelve-month period;</li> <li>(2) Violations in Inventory – reports the number of violations in the CEA’s caseload;</li> <li>(3) Violation Aging – reports, by Regional Entity, the number of violations discovered in each year beginning with 2007 which have not been filed with the Commission or otherwise resolved; and</li> <li>(4) Mitigation Activity Aging – identifies the status of mitigation activity based upon age of violations.</li> </ul> <p>These metrics now provide quantitative measures by which efficiency gains (or losses) in enforcement processing can be seen and resources can be focused on areas as needed to improve performance.</p>
<p>Increase the timeliness of enforcement processing.</p>	<p>II(C)(4)(a); Attachment 3 – II(D)(1)(b)(i)-(ii)</p> <p>The ERO Enterprise has achieved significant success in processing older cases and reducing processing times. NERC</p>

	<p>tracks enforcement processing rates through its Caseload Index metric. The ERO Enterprise has demonstrated substantial improvement in this metric from July 2011 through the end of 2013. By working to reduce the number of aging violations while improving the processing speed for newer violations, NERC and the Regional Entities reduced the average age of violations in the ERO caseload by six percent in 2013, from 11.86 months in 2012 to 11.2 months. Other data on improvements in the timeliness of enforcement processing is provided in III(D) of Attachment 3. As noted in that section, as of December 31, 2013, several Regional Entities had completed processing of all or virtually all of their enforcement items that were discovered before 2012, thereby achieving or moving toward achievement of the ERO Enterprise goal of completing processing of all enforcement items within 24 months after discovery.</p>
<p>Provide greater transparency and detail regarding penalty calculation and enforcement in general.</p>	<p>II(C)(4)(b); Attachment 3 – II(D)(1)(d)</p> <p>NERC and the Regional Entities have taken steps to increase the transparency regarding penalty calculations and enforcement in general. With respect to penalty calculations, each of the Regional Entities considers the factors set forth in the NERC <i>Sanction Guidelines</i> when assessing penalties. During the assessment period, the <i>Sanction Guidelines</i> were significantly revised to simplify them and state more clearly how mitigating and aggravating factors are to be taken into account in penalty determinations. NERC conducts ongoing oversight of the penalty determination process, reviewing each penalty determined by a Regional Entity to ensure consistency with other penalties assessed across the ERO Enterprise for similar violations occurring under similar facts and circumstances.</p> <p>NERC also reviews Regional Entity processes associated with all aspects of the enforcement program. NERC also provides information on enforcement actions, trends, and metrics on a regular basis, usually by posting the information on its website. In 2013, NERC conducted a training session to better enable stakeholders to locate all publicly available enforcement-related information.</p>
<p>Treat repeat violations that could not have been prevented by any of the mitigating activities approved by the Regional</p>	<p>II(C)(2)(b); Attachment 3 – II(D)(1)(c)(ii)</p> <p>The ERO Enterprise works closely with registered entities to develop mitigating activities that will both address the noncompliance as well as work to prevent future reoccurrence. These are by definition fact-specific determinations.</p>

<p>Entity and NERC similarly as non-repeat violations.</p>	<p>Violations are considered repeat when the conduct underlying the two violations is repetitive. As a general matter, whether a repeat instance of noncompliance will be treated as a repeat violation for the purposes of compliance history, and whether that compliance history will warrant aggravation of the monetary penalty under the <i>Sanction Guidelines</i> in a given case, necessarily depends on the facts and circumstances of the specific case.</p>
<p>Provide sufficient details regarding the different tracks for disposition of compliance issues, and explain how the CEA will make the determination as to which is the proper track for disposition. Also, explain how the oversight roles will be administered between the CEA Compliance staff, the CEA Enforcement staff, NERC, and FERC.</p>	<p>II(C)(2)(b); II(C)(4)(b); Attachment 3 – II(D)(1)(d)</p> <p>The different tracks for disposition of compliance issues are as follows:</p> <ul style="list-style-type: none"> <li>(1) The FFT program, which was recently enhanced to include additional possible violations;</li> <li>(2) The Spreadsheet Notice of Penalty (SNOP) format; and</li> <li>(3) The full NOP format. The criteria for use of each disposition are discussed in Attachment 3.</li> </ul> <p>In addition, the ERO Enterprise, through the RAI, is developing mechanisms for addressing noncompliance outside of the enforcement process through the use of greater enforcement discretion. Under this initiative, minimal risk issues will be eligible to be recorded as compliance exceptions and mitigated without triggering an enforcement action.</p> <p>Among other things, NERC reviews and approves all violations filed through the SNOP or full NOP mechanisms. NERC also conducts a monthly sampling and yearly spot check of issues posted by each Regional Entity through the FFT program to ensure that the issues processed through FFT are appropriate for the FFT program, and to identify areas for further improvement.</p> <p>NERC and FERC maintain visibility and exercise oversight over all noncompliances, regardless of the disposition track (FFT, SNOP, full NOP, or compliance exception). FERC reviews each filing or posting and also conducts a yearly review of a sample of issues posted as FFTs.</p>
<p>Associate timeframes with CEA actions to be taken during the disposition process. This will provide a tracking measure to help expedite processing of low reliability risk violations.</p>	<p>II(C)(4)(a); Attachment 3 – II(D)(1)(b)(i), (ii), (iii)</p> <p>NERC works closely with each of the Regional Entities to ensure that noncompliance is processed in a timely and efficient manner and measures performance through a number of metrics. These metrics include the Caseload Index, Violations in Inventory, Violation Aging, and Mitigation Activity Aging. These metrics</p>

	<p>are described in further detail in II(C)(4)(a) of the <i>Overview of NERC Activities and Accomplishments in the Five-Year Period</i> and in II(D)(1)(b) and the individual evaluations of the Regional Entities in Enforcement in Attachment 3.</p> <p>The time needed to process a particular case may vary considerably based on the facts and circumstances of that case. However, NERC has developed and is using the above-referenced metrics to monitor overall increases and decreases in the timeliness and efficiency of enforcement processing activities by each Regional Entity.</p>
<p>Better communicate and emphasize the benefits of self-reporting.</p>	<p>II(C)(1); II(C)(2)(b); Attachment 3 – II(D)(1)(c)(i)</p> <p>To encourage registered entities to take proactive steps to self-identify their noncompliance and thereby promote a more reliable BPS, the ERO Enterprise provides certain incentives. For example, self-reporting is considered a mitigating factor in the penalty determination pursuant to the <i>Sanction Guidelines</i>. In addition, whether or not noncompliance was self-reported is a factor considered when selecting a streamlined disposition track such as FFT. Further, as the RAI is implemented, the extent of a registered entity’s self-reporting of noncompliances (versus discovery by the CEA) will be a factor considered in evaluating the quality of the registered entity’s internal controls and therefore the frequency, nature and extent of compliance monitoring of the registered entity.</p> <p>Early self-identification, self-reporting, and mitigation of noncompliance are important steps in improving electric reliability. NERC has established a corporate goal that reflects the importance of self-reporting and closely tracks progress with respect to this goal.</p>
<p>Do not issue penalties for administrative violations.</p>	<p>NERC does not believe that it is appropriate to determine whether or not to assess a penalty based solely on whether the violation is characterized as “administrative.” The disposition of any instance of noncompliance, including whether a penalty is appropriate, is based on the risk posed by the noncompliance to the reliability of the BPS as well as other factors. Penalties were assessed for 52% of the violations processed in 2012 and 2013.</p>
<p>While NERC has made progress toward reducing its caseload through FFT and the bulk processing of</p>	<p>II(C)(1); II(C)(2)(b); Attachment 3 – II(D)(b)</p> <p>NERC and the Regional Entities are continually exploring ways to adopt streamlined processes to resolve noncompliances or to</p>

<p>violations, effort should be made to reduce time spent by the registered entities.</p>	<p>improve the efficiency of existing processes. During the assessment period, NERC adopted and enhanced several streamlined enforcement processing tracks. Through the metrics that have been developed, as described in earlier responses, NERC is able to monitor increases and decreases in enforcement processing timeliness and efficiency at each Regional Entity. The metrics are showing that progress is being made, e.g., as evidenced by reduction of processing times and reduced caseloads</p> <p>In addition, the ERO Enterprise has enhanced outreach efforts so that time spent by registered entities in providing information regarding noncompliance, risk, and mitigation is more efficiently and effectively used. For example, NERC and the Regional Entities recently distributed the <i>ERO Self-Report User Guide</i> and <i>ERO Enterprise Mitigation Plan Guide</i>. These documents were developed by NERC and the Regional Entities to provide guidance to registered entities on submitting self-reports and mitigation plans that have all of the details necessary to facilitate timely processing and avoid protracted follow-up periods and requests.</p>
<p>Clarify how registered entities will be impacted by improvements to the FFT program.</p>	<p>II(C)(1); II(C)(2)(b); Attachment 3 – II(D)(b)(iv)</p> <p>Through the use of FFT, the ERO more efficiently resolves instances of noncompliance that pose a lesser risk to BPS reliability, recognizing that efficient disposition of such issues allows the ERO Enterprise and industry to devote its emphasis and resources to more important reliability matters. The FFT process provides incentives for self-reporting and encourages registered entities to continue to aggressively self-identify, self-report, and mitigate reliability issues. Recent expansion of the scope of the program to possible violations posing a moderate risk to reliability, as well as issues that will be mitigated after the FFT posting, make this efficient enforcement processing mechanism available for a larger number of possible violations.</p> <p>Issues resolved through the FFT process are typically resolved more expeditiously than issues resolved through other disposition tracks. Further, resolution through the FFT track means that those issues will not result in the assessment of a monetary penalty.</p>
<p>Describe the efficiency and effectiveness of the compliance and</p>	<p>II(C)(2), (4); Attachment 3 – II(D)(1)</p>

<p>enforcement programs and their impact on reliability in light of the high percentage of lower risk violations.</p>	<p>The actions taken by the ERO Enterprise to identify, correct, and prevent violations of NERC’s Reliability Standards have promoted the reliability of the BPS. For example, the adoption, modification, and rigorous enforcement of NERC’s transmission vegetation management Reliability Standard (FAC-003), which became mandatory and enforceable in 2007, has dramatically reduced the number of outages caused by vegetation growing into high voltage lines.</p> <p>Beyond individual standards, the ERO Enterprise compliance and enforcement programs promote reliability by encouraging registered entities to create and maintain cultures of compliance. The ERO Enterprise creates incentives for registered entities to proactively self-identify and mitigate noncompliance. For example, the FFT program allows for a streamlined disposition of noncompliances without a monetary penalty being assessed. Through the RAI, NERC and the Regional Entities are working together to implement further enhancements that will allow minimal risk noncompliance to be processed outside the enforcement track.</p> <p>NERC and the Regional Entities are also developing and implementing procedures and processes to enhance auditing approaches across the ERO Enterprise. These efforts will allow registered entities and the ERO Enterprise to shift toward a risk-based model of compliance and enforcement, thereby allowing registered entities to dedicate more of their resources toward addressing issues posing greater risks to reliability.</p>
<p>Clarify how NERC’s compliance monitoring and enforcement efforts have matured into a “robust program that provides industry with more certainty on actions, outcomes, and reliability consequences.”</p>	<p>II(C); Attachment 3 -II(D)(1)(a)</p> <p>During the assessment period, NERC and the Regional Entities worked on increasing consistency in compliance monitoring processes across the ERO Enterprise. These efforts have included the development of common auditor qualifications and competency requirements, development of the common <i>Compliance Auditor Checklist</i> and <i>Compliance Auditor Handbook</i>, as found in the <i>ERO Enterprise Compliance Auditor Manual</i>, and development of a common training program for auditors.</p> <p>During the assessment period, NERC and the Regional Entities also worked to develop more mature enforcement processes for the ERO Enterprise. The resulting efficiency gains in enforcement processing ensure that final outcomes relating to noncompliances are known earlier.</p>

	<p>The implementation of streamlined enforcement processing mechanisms, such as SNOP and FFT, has facilitated the faster resolution of noncompliance items. NERC provides significant transparency regarding the processing tracks that are available and the associated criteria for a noncompliance item to be placed onto each track.</p> <p>In addition, NERC and the Regional Entities worked together to design and build a system for the collection, management, and exchange of compliance-related information between NERC and the Regional Entities. NERC’s centralized system and the complementary systems in place at the Regional Entities enable enforcement processing efficiencies and facilitate consistent tracking of violation status across the ERO Enterprise.</p> <p>Further, for several years, NERC has closely tracked various measures regarding the overall performance of the ERO Enterprise as it relates to enforcement activities. Beginning in 2013, NERC and the Regional Entities developed and implemented a series of metrics (described in earlier responses) to track and evaluate the performance of the ERO Enterprise and of each Regional Entity in enforcement processing. These metrics allow NERC to analyze trends and identify areas where further improvements may be achieved.</p>
<b>Registration and Certification</b>	
<p>Enhance the System Operator Certification program by making training for exam preparation more available.</p>	<p>The System Operator Certification program has multiple vendors and individual utilities that have developed NERC system operator certification exam preparation courses. NERC does not believe that further assistance from NERC is appropriate. As an independent certifying entity, if NERC were to develop and/or sponsor training, NERC would compete with established vendors.</p>
<p>Provide greater clarity, guidance, and consistency regarding Coordinated Functional Registration (CFR) and Joint Registration Organizations (JROs), and examine how the process can be streamlined.</p>	<p>II(B); Attachment 3 – II(A)</p> <p>During the assessment period, revisions to NERC Rules of Procedure Section 507 and the addition of Section 508, approved by the Commission on June 10, 2010, clarified the operations of CFR and JRO registrations. Specifically, revised Section 507 allows an entity to register as a JRO on behalf of one or more of its members or related entities for one or more functions for which such members or related entities would otherwise be required to register. The registering entity thereby accepts on behalf of such members or related entities all compliance</p>

	<p>responsibility for that function or those functions including all reporting requirements. Section 508 allows multiple entities to register using a CFR for one or more Reliability Standard(s) or for one or more requirements or sub-requirements with particular Reliability Standard(s) applicable to a specific function. The CFR is the complete registration for each entity, with each entity taking full compliance responsibility for those Reliability Standards or requirements or sub-requirements applicable to the CFR.</p>
<p>Registration should be more carefully tailored and based on sounder reasoning.</p> <p>Update the functional model to provide greater clarity and guidance to registered entities.</p> <p>The risk-based registration concept must be carefully developed and implemented to ensure that entities that remain registered are not adversely impacted.</p>	<p>II(B)(1)-(2); Attachment 3 – II(A)</p> <p>In January 2014, NERC launched the Risk-based Registration Assessment initiative to enhance the compliance registration and certification program to be more efficient and better aligned with reliability benefit. Through this initiative, NERC will register entities and assign appropriate Reliability Standard requirements commensurate with the need to mitigate the risk that they pose to the BES, by scaling registration criteria based on their contributions to reliability. NERC will also develop tools that will enhance a registered entity’s understanding of the relevant Reliability Standards and requirements that apply to them. Scoping compliance responsibilities according to BPS reliability risks will equate to better use of resources at both the registered entity level in the implementation of compliance programs, and at the Regional Entity level in their overall compliance monitoring efforts.</p> <p>During the assessment period, NERC revised the definition of the BES in the <i>Glossary of Terms Used in NERC Reliability Standards</i>, in response to Commission directives in Order Nos. 743 and 743-A. The objective of the revisions is to ensure consistent inclusion or exclusion of entities and elements that are subject to Reliability Standard requirements. The Commission-approved revised BES definition enables NERC and the Regional Entities to identify assets that are material to the reliability of the interconnected transmission network. By using a set of continent-wide, “bright line” criteria that eliminates regional discretion, the revised definition effectively ensures that the users, owners and operators of BES assets are identified and registered on a consistent basis in order to comply with applicable Reliability Standards. The revised BES definition provides improved clarity for industry by identifying specific categories of facilities and configurations as inclusions and exclusions to the BES. Additionally, the case-by-case exception process to add elements to, and to remove elements from, the BES provides</p>

	<p>transparency and uniformity to the determinations of what constitutes the BES. In summary, the revised, much more detailed and granular BES definition along with the BES exception process should result in greater consistency, transparency and predictability in registration determinations.</p>
<p>Provide additional clarification, guidance, and training regarding the definition of the term BES to ensure consistent application in both Reliability Standards and the compliance registration process.</p>	<p>II(B)(2)</p> <p>In March 2014, FERC approved the revised definition of BES. As described in the preceding response, the revised BES definition provides improved clarity for industry by identifying specific categories of facilities and configurations as inclusions and exclusions to the BES.</p> <p>During the first half of 2014, NERC held communications and training sessions for Regional Entities, registered entities, and NERC staff to address, among other things: (i) evidentiary requirements for BES determinations; (ii) review and appeal mechanisms; and (iii) Reliability Standards applicability. These sessions included workshops and webinars.</p> <p>NERC has a dedicated webpage for information related to the BES definition and the notification and exception processes. This page hosts links to materials that support the application of the BES definition and provide entities with the information needed to make uniform determinations of BES elements. These materials include, among other things, webinars, training videos, process documents, and guidelines. The page is updated as new materials become available.</p> <p>The webpage is available at:  <a href="http://www.nerc.com/pa/RAPA/Pages/BES.aspx">http://www.nerc.com/pa/RAPA/Pages/BES.aspx</a>.</p>
<p>Provide an explanation regarding the use of the term BES in certain instances and BPS in other instances.</p>	<p>The full definitions of BES and BPS are contained in the <i>Glossary of Terms Used in NERC Reliability Standards</i>. “BPS” is the statutory term in Section 215 of the FPA and sets the outer limit of NERC (and FERC) authority. FERC has accepted NERC’s use of the term “BES” and its definition and has indicated that the “BES” does not exceed the scope of the “BPS.” Entities that use, own, or operate elements of the BES as established by the FERC-approved definition of BES are: (i) owners, operators, and users of the BPS; and (ii) candidates for registration. Since 2006, NERC has registered entities for one or more functional categories depending on whether it is a user, owner or operator of the BPS.</p>

	<p>NERC has used “BES” principally for registration purposes. In March 2014, FERC approved the revised definition of “BES.” As described in a previous response, the revised BES definition includes bright line core criteria with various enumerated inclusions and exclusions. Now that “BES” is clearly defined, the term can be used to determine on a consistent basis the entities that warrant registration and address material impacts on reliability.</p>
<b>Reliability Assessment &amp; Performance Analysis Metrics</b>	
<p>Develop performance measures to determine if a Reliability Standard is actually reducing risk to reliability.</p>	<p>Performance measures from the CMEP assist NERC in assessing whether a Reliability Standard is actually providing more certainty on actions, outcomes, and reliability consequences. NERC compliance staff supply standard drafting teams with compliance and enforcement information, statistics, and perspectives to help develop Reliability Standards that provide an increased reliability benefit and clarify compliance risks.</p>
<p>Explain more thoroughly how the information provided in reliability assessments affects the future adequacy and reliability of the BPS.</p>	<p>II(D)(1), II(D)(2), II(D)(3)</p> <p>In response to direction from the NERC Board of Trustees in February 2013, NERC has developed a RRM process to create and execute plans for managing reliability risk and to integrate these plans with the business planning and budgeting process.</p> <p>The RRM process includes the identification of the <i>ERO Top Priority Reliability Risks</i> for each upcoming business planning and budget cycle. The development of the list of top ten high priority reliability risks is intended to focus the efforts of the ERO Enterprise program areas, including training and education, Reliability Standards setting, and compliance. NERC developed a set of the top ten priority reliability risks to be focused on in the development of the <i>ERO Enterprise Strategic Plan 2014-2017</i>.</p> <p>NERC has also developed a voluntary Event Analysis process that delivers quality, timely and actionable lessons learned to registered entities. NERC assesses every event submitted through the voluntary Event Analysis process to identify and share possible risks to reliability with industry members.</p>
<p>Provide metrics that focus not only on enforcement but also measure performance risk and</p>	<p>VII</p> <p>NERC and the Regional Entities have collaboratively made significant progress in developing a shared, rolling three-year <i>ERO Enterprise Strategic Plan</i>, which includes performance</p>

specify specifically what is working and what is not.	metrics. The NERC Board of Trustees approved the 2014 <i>ERO Enterprise Performance Metrics</i> . These performance metrics will be used to assess the overall effectiveness of the ERO Enterprise in addressing risk to the BPS, achieving reliability results, measuring and assuring the effectiveness of Reliability Standards and compliance programs, and improving risk mitigation and program execution. NERC’s performance metrics include four overarching metrics focused on overall effectiveness in addressing BPS risks and improving reliability. NERC’s performance metrics also include a number of supporting measures that assess the effectiveness of the key operational elements of the ERO Enterprise.
Describe the basis for including the 345-kV breaker failures as a potential trend in risk prioritization.	II(D)(2)  Circuit breaker failures, in conjunction with another fault, may lead to more BES facilities removed from service than required to clear the original fault. NERC has identified a potential trend of 345 kV SF6 puffer type breakers failing as being one of the ten high priority reliability risks.
Provide a more complete explanation of how the daily severity risk index is used to help prioritize risks.	I(A)  The daily severity risk index value, a metric created by NERC that measures risk impact or “stress” from events resulting in the loss of transmission, generation, and load, provides an industry reference for historical BPS reliability. This metric also offers analytical insights toward industry action and enables the identification and prioritization of specific steps that can be implemented in order to reduce and manage risks to reliability.
<b>Training, Education, and Personnel Certification</b>	
Increase the availability and accessibility of training regarding audit preparation, Reliability Standard compliance, Event Analysis, and major NERC initiatives such as BES definition, and CIP Version 5 Reliability Standards.	II(A)(4), II(B)(2), II(C)(2), II(D)(1), II(D)(2), II(D)(3), II(E)(1)(c); Attachment 2, pp. 44, 45; <sup>3</sup> Attachment 3 – II(B)(1)(d) ( <i>NERC Training Activities for Regional Entity Compliance Staff</i> ); II(B)(2)(a) ( <i>Regional Entity Training, Education and Outreach Programs for Registered Entity Personnel</i> ); II(B)(2)(b)(ii)-(ix) ( <i>Assessments of the Individual Regional Entities</i> )  Between 2011-2013, the Regional Entities’ workshops and equivalent training programs attracted more than 30,000 attendees. NERC and the Regional Entities develop new training

<sup>3</sup> Attachment 2 to the *Five-Year ERO Performance Assessment Report* is titled *Joint Regional Entity Self-Assessment*.

offerings as new needs arise. Recent examples are provided below. Additionally, NERC developed a set of the top ten priority reliability risks to be focused on in the development of the *ERO Enterprise Strategic Plan 2014-2017*. The development of these top ten high priority reliability risks is intended to focus the efforts of the ERO Enterprise program areas, including training and education, Reliability Standards setting, and compliance.

NERC is working to provide training to industry (as well as to compliance auditors) on how to assess compliance with new or revised Reliability Standard. This training is provided following FERC approval of a Reliability Standard, but well before the Reliability Standard effective date.

To implement the revised BES definition, NERC developed a web-based, ERO Enterprise-wide application to provide a consistent platform for registered entities to submit self-determined notifications and to submit exception requests for inclusions in or exclusions from the BES. This application is called the BESnet Enterprise Application Tool. During the first two quarters of 2014, NERC held communications and training sessions for Regional Entities, registered entities, and NERC staff to address, among other things: (i) evidentiary requirements for BES determinations; (ii) review and appeal mechanisms; and (iii) Reliability Standards applicability. These sessions included workshops and webinars.

NERC hosted a series of workshops in 2013 that addressed defining internal controls, conducting risk assessment, launching pilot programs, enhancing the FFT process, and improving self-reporting.

In 2013, NERC and the Regional Entities began to develop and implement tools that will define techniques and methods to perform compliance monitoring in a consistent manner across the ERO Enterprise. The Regional Entities began using the first of these tools, the *Compliance Auditor Checklist*, in August 2013. In December 2013, NERC and the Regional Entities completed the first draft of a companion document for the *Compliance Auditor Checklist*, the *Compliance Auditor Handbook*, as found in the *ERO Enterprise Compliance Auditor Manual*. NERC disseminated the manual and provided initial training to Regional Entity auditors during the first quarter of 2014. NERC has made the *Compliance Auditor Checklist* and *Compliance Auditor Handbook*, as found in the *ERO Enterprise Compliance Auditor*

	<p><i>Manual</i>, available to industry to provide guidance on audit preparation.</p> <p>Specific documentation or other aids to assist in the implementation of the RRM process, document templates, and detailed instructions and training are being developed to support the execution of this process and will be made available to industry.</p> <p>NERC provides registered entities (as well as Regional Entity staff) with cause analysis training. As of December 2013, 164 personnel from all eight Regional Entities and over 600 people from 115 different registered entities have received more than 4,000 hours of cause analysis training, with 432 hours of continuing education hours awarded to 54 NERC-certified system operators. NERC is adding a training and education component to the Event Analysis process to increase the relevance and impact of lessons learned for the Regional Entities, industry, and other stakeholders.</p> <p>Beginning during the assessment period, NERC holds an annual Grid Security Conference (GridSecCon). Over 300 industry and government stakeholders attended the most recent GridSecCon in October 2013. Additionally, almost 200 stakeholders attended credentialed training sessions in cybersecurity and physical security.</p> <p>NERC is committed to working with industry to ensure smooth transition to the CIP Version 5 Reliability Standards. NERC has been collaborating with Regional Entities and responsible entities by establishing a transition program to support implementation of Version 5. NERC has implemented several program elements related to outreach, communication, and training, to include periodic guidance documents to keep industry informed during the transition period. NERC conducted a pilot Version 5 implementation study, which included six volunteer entities that implemented the Version 5 Reliability Standards on an accelerated basis. Future training will include auditor training, technical workshops, guidance, and other lessons learned from the Version 5 implementation study.</p>
<p>Incorporate registered entity independent subject matter experts into the audit process.</p>	<p>Attachment 3 – II(B)(2)(b)(ii)-(ix) (<i>Assessments of the Individual Regional Entities - Department Structure / Staffing / Conflict of Interest Avoidance</i>)</p>

	<p>As a key RAI compliance activity, the Prototypes and Pilot program focuses on the development and implementation of a formalized approach to risk assessments and testing of management controls. NERC and the Regional Entities initiated the first phase of the pilot program during 2013. This phase explored different approaches to applying risk-based auditing concepts (e.g., audit scoping, reliability risk assessments, and management controls review and testing). For 2014 and beyond, a team consisting of NERC, Regional Entity, and industry representatives as well as an independent audit consultant will evaluate the findings and determine the best audit approach to implement throughout the ERO Enterprise.</p>
<b>Event Analysis</b>	
<p>Separate Event Analysis from Compliance Operations.</p>	<p>II(D)(3)</p> <p>Event Analysis and Compliance Operations are separate processes. NERC has developed a voluntary Event Analysis process. Participation in this voluntary process does not relieve registered entities of their obligation to comply with NERC Reliability Standards. Registered entities are encouraged to continue performing critical self-assessments of compliance with Reliability Standards in connection with a qualifying event, occurrence or any other time when adherence to the NERC Reliability Standards is in question.</p>
<p>Increase the efficiency and clarity of the compliance assessment process associated with an event.</p>	<p>II(D)(3); Attachment 3 – IV(A) and (C)</p> <p>The annual NERC CMEP Implementation Plan and the <i>ERO Event Analysis Process</i> document describe the expected actions by affected registered entities following an event or disturbance. While voluntary on the part of registered entities, this process includes a systematic review of the event against approved Reliability Standards, improved self-reporting and expedited mitigation of any possible noncompliances, thus improving reliability. The Regional Entities use outreach forums and other mechanisms to describe the process and encourage these actions by registered entities.</p>
<p>Streamline the cause coding mechanism.</p>	<p>II(D)(3)</p> <p>NERC is continuously striving to improve how it defines, catalogs and trends the causes of system events. The cause code assignment allows for greater historical trending and predictive analysis. NERC plans to further facilitate event analysis by merging its event-driven databases across the ERO Enterprise</p>

	and defining the relationships between various system cause codes.
Increase the timeliness, transparency and comprehensiveness of dissemination of information relating to Event Analysis and lessons learned.	<p>II(D)(3)</p> <p>NERC is collaborating with the NATF and the NAGF to further enhance the Event Analysis process and lessons learned dissemination in identifying risks to the BPS. NERC plans to improve the timeliness of the availability of and access to final event reports by creating a secure portal that will be accessible by industry to obtain these reports.</p>
Improve the consistency of the NERC alert system by ensuring that alert levels are commensurate with the risk of the issue presented and do not impose unnecessary burdens on registered entities.	<p>II(D)(3)</p> <p>NERC generates alerts in limited circumstances. If an event merits an alert, NERC first discusses the potential alert with Regional Entities and registered entities before disseminating the alert.</p> <p>Under Section 810 of the NERC Rules of Procedure, NERC can issue “Level 1 Advisories,” “Level 2 Recommendations,” and “Level 3 Essential Actions,” depending on the underlying circumstances. Each of these issuances requires different actions (if any) by registered entities. NERC strives to use the issuance that is appropriate to the circumstances so as not to impose undue burdens on registered entities.</p>
Ensure that sabotage events are communicated by NERC Alert.	Not all sabotage events are appropriate for issuing an alert; however, additional information on security-related events is available to all users on the improved Electricity Sector Information Sharing and Analysis Center (ES-ISAC) portal and through other ES-ISAC channels.
Make improvements in full publication of events (under appropriate confidentiality controls) to users, owners and operators.	NERC now has a secure site that allows registered entities to gain NERC-authorized access to reports from other registered entities that have agreed to share such information.
Consider that not all issues identified by the Event Analysis program are issues that should become standards or even alerts.	Reliability issues presenting a risk to the BPS that have been identified by Event Analysis are subject to further NERC consideration and discussion with Regional Entities and registered entities before becoming the subject of a Reliability Standard development project. The decision to issue an alert or develop a Reliability Standard is based on this collaborative process. Additionally, the RISC considers risk-related issues and

	<p>advises the NERC Board of Trustees on the appropriate action to take to address risks to the BPS.</p> <p><i>See also</i> II(A)(6)(a) and II(A)(6)(b)</p>
<b>Critical Infrastructure Protection</b>	
Increase the focus on physical security, in addition to cybersecurity.	<p>II(A)(8)(e); II(E)</p> <p>NERC recognizes that identifying, assessing, and preventing threats and risks to both the physical security and the cybersecurity of the BPS, while always matters of concern, have attained increasing significance in the last three to four years. NERC, through its Critical Infrastructure department, ES-ISAC, and the Critical Infrastructure Protection Committee, is engaged in various activities to address physical security issues. In addition, NERC recently developed and submitted for Commission approval a new physical security Reliability Standard (CIP-014-1).</p>
Increase the speed at which registered entities will be able to learn how CIP Reliability Standards will be interpreted by auditors, and ensure that these interpretations are consistent across the Regional Entities.	<p>II(A)(4)</p> <p>RSAs are now being written concurrently with new Reliability Standard development projects. Draft RSAs are to be posted during the formal comment period and prior to the ballot period for the associated Reliability Standards. Stakeholders are encouraged to provide feedback on the draft RSAs.</p>
Provide additional guidance with alerts that will help avoid public disclosure request responses with CIP-related information.	<p>NERC exercises the utmost caution and will not issue alerts that include sensitive CIP-related information. It is also the responsibility of the entity responding to a request for information to ensure that any sensitive information it provides is appropriately marked and that appropriate exemptions from disclosure are claimed.</p>
Explore a full functional separation of NERC and the ES-ISAC as recommended in the February 2014 report from the co-chairs of the Bipartisan Policy Center's Electric Grid Cybersecurity Initiative.	<p>II(E)(2)</p> <p>NERC is committed to keeping the ES-ISAC separate from NERC's compliance monitoring and enforcement activities and enforcing the Board of Trustees-approved corporate policies that are in place. In addition, NERC is considering a physical separation of ES-ISAC personnel in the Washington, D.C. office.</p>
Strengthen inter-sector coordination: the ES-ISAC should explore ways to	<p>ES-ISAC has acted to strengthen inter sector coordination through increased information sharing and support to ESCC in the following ways:</p>

<p>provide information and support the activities of the Electricity Sub-Sector Coordinating Council (ESCC).</p>	<ol style="list-style-type: none"> <li>(1) Extensive subject matter expert contribution to “Energizer” and ESCC Playbook products;</li> <li>(2) Alignment of ES-ISAC capability under ESCC to provide operationally informed context and implementation;</li> <li>(3) Full ESCC Senior Executive Working Group participation;</li> <li>(4) National Cybersecurity and Communications Integration Center watch floor and Department of Homeland Security Unified Coordination Group (UCG) participation; and</li> <li>(5) Full participation at Department of Energy Sector Specific Agent (SSA) hosted Clear Path II restoration event and all pertinent OSD Defense Critical Infrastructure Program (DCIP) events.</li> </ol> <p>In addition, ES-ISAC contributed subject matter expert leadership to initiation of a pilot continuous monitoring and automated information exchange capability undertaken with selected major utilities, known as the Cybersecurity Risk Information Sharing Program (CRISP). This capability provides foundational support to top future ESCC inter-sector information sharing objectives. Further involvement in CRISP by the ES-ISAC on a permanent basis is under active consideration.</p> <p>Further, ES-ISAC accelerated its own capability maturation consistent with NERC CIPC Information Sharing Task Force and Government-Industry Information Sharing Survey findings with an advanced portal fitted to entity, ESCC Secretariat, and National Council of ISACs cross sector sharing requirements.</p>
<p><b>Stakeholder Communications, Public Relations, and IT</b></p>	
<p>Offer more unified, coordinated, and user-friendly IT tools and programs to registered entities.</p>	<p>ERO senior leadership intends to develop ERO Enterprise IT applications, where appropriate, to support common processes, to enhance the efficiency and effectiveness of Regional Entities’ practices, to increase the consistency of the interface with registered entities, and to facilitate NERC’s oversight function.</p>
<p>Provide greater consistency between NERC and Regional Entity websites.</p>	<p>VII; Attachment 6, pp. 14-16.<sup>4</sup></p> <p>NERC and the Regional Entities are engaged in several activities to develop unified or consistent IT programs and tools and to</p>

<sup>4</sup> Attachment 6 to the *Five-Year ERO Performance Assessment Report* is titled *NERC’s Plan and Initiatives for Improving Coordinated Operations Across the ERO Enterprise*.

	<p>coordinate key messages and direction and enhance consistency across the ERO Enterprise.</p>
<p>Improve technical support, accessibility, and organization of the NERC website.</p>	<p>In 2013, the NERC public website was converted from a legacy platform to a SharePoint site greatly improving search functions, security and scalability of the website. Converting the website to a contemporary off-the-shelf application will allow continued improvements to document organization, and enhanced search capability through the use of metadata. Technical support has been enhanced by usage of the contact form, with relevant questions and comments being directed to the correct program area or to the IT department for resolution.</p>
<p>Reduce travel expenses for registered entities by more frequently changing locations where meetings are held (beyond Atlanta), and increasing the availability of webinars and teleconferences.</p>	<p>Industry engagement is a critical component of NERC’s activities and strategic initiatives. NERC uses webinars to engage and educate industry on a number of topics. For example, in 2013 alone, NERC hosted 43 Reliability Standard industry webinars attended by an average of 360 participants.</p> <p>However, NERC decided to move its headquarters from Princeton, N.J. to Atlanta, G.A., among other reasons, because Atlanta is a major airline hub that is directly accessible from many parts of the country. In addition, in selecting meeting locations, NERC must balance the cost to and convenience for potential participants of using Atlanta versus locations other than Atlanta, with the cost savings associated with holding the meeting in NERC’s own facilities (rather than in rented space in another location and the travel expenses for NERC staff to other locations.</p>
<p>Improve retention of NERC staff to ensure better, less disruptive functioning of the ERO.</p>	<p>NERC management and the Board of Trustees recognize the importance of retaining experienced employees. Several initiatives are in place or underway to enhance employee engagement, including improving hiring practices, conducting regular check-ins with new staff periodically after hiring, periodic evaluation of culture through formal employee surveys, and the development of appropriate initiatives including a set of corporate core values, as well as ongoing review of market compensation for personnel with the necessary skills and experience.</p>
<p>Increase the consistency and clarity of the communications of NERC leadership regarding the end-state vision and</p>	<p>VII; Attachment 6, pp. 16.</p> <p>To facilitate effective communications across the ERO Enterprise, in May 2013 the NERC Board of Trustees initiated a practice of meeting twice yearly as a group with all the chairs and</p>

progress of major ERO initiatives.	vice-chairs of the Regional Entities, with a portion of these meetings conducted with the NERC and Regional Entity CEOs also present. Additionally, a NERC-Regional Entity communications working group has been active for several years, coordinating consistent messaging across the ERO Enterprise. Further, NERC and the Regional Entities have coordinated outreach to FERC Commissioners and staff and to Canadian governments. NERC is working to address the areas where improvement is needed.
Make processes for developing documents related to compliance more transparent and open to stakeholder feedback.	II(A)(4); II(C)(2)(a)  NERC has taken several steps to address this concern. RSAWs are now developed concurrently with Reliability Standards development projects, allowing for increased coordination among compliance staff and the standard drafting teams and the opportunity for industry comment on the draft RSAWs. Draft RSAWs are to be posted during the formal comment period and prior to the ballot period for the associated Reliability Standards, allowing stakeholders to provide comments or raise concerns at that time. Further, NERC is also engaged in several activities under RAI to enhance transparency and consistency in auditor practices across the ERO Enterprise, including making the <i>Compliance Auditor Checklist</i> and <i>Compliance Auditor Handbook</i> , as found in the <i>ERO Enterprise Compliance Auditor Manual</i> , available to industry.
Increase the specificity of the ERO strategic plan.	VII  NERC and the Regional Entities have collaboratively made significant progress in developing a shared, rolling three-year <i>ERO Enterprise Strategic Plan</i> .  In May 2014, the NERC Board of Trustees approved a series of performance metrics which will be used to assess the overall effectiveness of the ERO Enterprise in addressing risk to the BPS, achieving reliability results, assuring Reliability Standards and compliance effectiveness, and improving risk mitigation and program execution. They include four overarching metrics focused on overall effectiveness in addressing BPS risks and improving reliability. They also include a number of supporting measures that assess the effectiveness of the key operational elements of the ERO Enterprise.
Improve and streamline external communications to	NERC has created a once-a-week bulletin for Reliability Standards announcements, and is working to include compliance

make them more useful and accessible to stakeholders.	activities in this bulletin as well. Additionally RSS feeds have been added to the “NERC Newsroom” webpage enabling stakeholders to subscribe or unsubscribe to the NERC newsletters or NERC headlines. Future releases will include more RSS feeds that will provide stakeholders the opportunity to subscribe or unsubscribe to information on the NERC website, coupled with ongoing enhancements to content and search features.
Continue to work with Canadian entities regarding NERC’s efforts to seek recognition in Canada, including preparing and verifying the information in Attachment 1. <sup>5</sup>	<p>III; Attachment 1 – I(6)</p> <p>NERC is actively working with Canadian entities in a variety of ways.</p> <p>NERC participates in the meetings of a trilateral group consisting of regulators from Mexico, FERC, and the Federal-Provincial-Territorial Electricity Working Group (Canada).</p> <p>In addition, each month NERC staff participates in calls to discuss standards drafting efforts and associated governance and committee-related activities. Workshops and organized forums over the course of each year provide dedicated time for outreach and exchange of perspectives.</p> <p>NERC is also working with relevant stakeholders in Canada, including registered entities and applicable government authorities, on increasing visibility of compliance monitoring and enforcement activities that assure reliability in Canada.</p> <p>NERC appreciates the assistance provided by Canadian entities in the preparation and verification of information in the detailed discussion in Attachment 1 regarding NERC’s efforts to seek recognition in Canada.</p>
<b>Business Plan and Budget</b>	
<p>Give stakeholders earlier opportunities to provide input for the business plan development process and the business plan.</p> <p>Extend the time by which stakeholders have an opportunity to provide input into the business plan and</p>	<p>Attachment 3 – V(B)</p> <p>NERC and the Regional Entities typically start the BP&amp;B process in the fourth quarter of the second preceding year. The process includes multiple opportunities for stakeholder input, and NERC attempts to provide opportunities for stakeholder input on the <i>ERO Enterprise Strategic Plan</i> and the BP&amp;B as early as reasonably possible in the process.</p>

<sup>5</sup> Attachment 1 to the *Five-Year ERO Performance Assessment Report* is titled *Discussion of How NERC Meets the ERO Certification Criteria of 18 C.F.R. §39.3(b)*.

<p>budget (BP&amp;B), and increase the clarity of projected costs.</p>	<p>In the preparation schedule for the 2015 BP&amp;B, policy input for the <i>ERO Enterprise Strategic Plan</i> was requested by the NERC Board of Trustees on January 8, 2014 with a response date of January 29, 2014. Meetings with trade associations were held in January 2014 on the <i>ERO Enterprise Strategic Plan</i> and in April 2014 on the 2015 BP&amp;B. The Member Representatives Committee (MRC) meetings on February 5, 2014 and May 6, 2014 included further opportunities for policy input. A draft NERC 2015 BP&amp;B was posted on May 16, 2014 for a 45-day stakeholder comment period. A final draft of the 2015 BP&amp;B was posted on July 15, 2014 for a 2-week stakeholder comment period.</p> <p>Additional opportunities for stakeholder comment are provided through multiple scheduled meetings of the MRC BP&amp;B Input Group (described below) and meetings of several NERC standing committees (Operating, Planning, Standards, Critical Infrastructure Protection, Compliance and Certification, and Reliability Issues Steering Committees) to receive input, as well as through opportunities for stakeholder comments in open sessions of the quarterly MRC and NERC Board of Trustees meetings.</p> <p>NERC provided more opportunities for stakeholder input in the 2015 BP&amp;B preparation schedule than was provided for the 2014 BP&amp;B.</p>
<p>Explain how stakeholder input on the BP&amp;B is actually utilized</p>	<p>NERC carefully and thoroughly considers all stakeholder input on the BP&amp;B, whether it is submitted in writing during formal posting and comment periods or in open meetings. Typically, stakeholder comments are not directed to individual detailed line items in the draft BP&amp;B, but rather are primarily directed to the overall amount of increase in the proposed budget for the ERO Enterprise or for certain departments, or the overall assessment increase. In a number of years, NERC has responded to stakeholder concerns about the overall level of budget and assessment increases shown in earlier drafts of the BP&amp;B, by reducing planned expenditures (e.g., through eliminating or deferring specific projects and other initiatives or by reducing planned levels of compensation increases for some or all employee categories) to produce a lower level of expenditures and assessments in the final BP&amp;B. Additionally, in each annual BP&amp;B filing with FERC beginning with the filing for 2009, NERC has included an attachment summarizing stakeholder comments received during development of the BP&amp;B and how NERC addressed or considered the comments. Finally, a number</p>

	<p>of enhancements to NERC’s BP&amp;Bs have been the result, in whole or in part, of stakeholder comments, including the provision of greater granularity and more detailed explanations for consultant and contractor expenses and for proposed Information Technology and other information systems and infrastructure projects in the BP&amp;B; and the development and inclusion of long-term (three-year) future budget projections in the BP&amp;B.</p>
<p>Permit greater incorporation of policy input from the MRC into the business plan.</p>	<p>Under the NERC Bylaws, one of the purposes of the MRC is “to provide advice and recommendations to the board with respect to the development of annual budgets, business plans and funding mechanisms, and other matters pertinent to the purposes and operations of the Corporation” (Article VIII, §1). Under Article XIII, §4 of the Bylaws, consultation with the MRC and posting of draft BP&amp;Bs for review and comment by the MRC are mandatory components of the development of the annual BP&amp;B. Obtaining MRC comments and input has always been a part of the BP&amp;B development process; however, over the last three BP&amp;B cycles, steps have been taken to increase MRC input. Specifically, a MRC BP&amp;B Input Group was formed in August 2012 and began to function as part of the development of the 2013 BP&amp;B; the participation of this group has been formalized as a specific mechanism for the provision of MRC input. The BP&amp;B development process now includes a specific schedule of meetings with the MRC BP&amp;B Input Group – for example, the preparation schedule for the 2015 BP&amp;B includes 5 scheduled meetings or conference calls with the MRC BP&amp;B Input Group, as well as 2 scheduled MRC informational session webinars and the regular quarterly MRC meetings. Additionally, as indicated earlier, the NERC Board of Trustees has now made it a regular practice to solicit policy input from the MRC as well as other stakeholder groups, early in the process, on various issues relevant to the <i>ERO Enterprise Strategic Plan</i> and the BP&amp;B; the policy input received is then discussed at subsequent meetings of the Board of Trustees.</p> <p>NERC does not believe that prior policy input from the MRC regarding goals has not been taken into account in developing business plans, as suggested by the comment. However, the development of both the rolling three-year <i>ERO Enterprise Strategic Plan</i> and the annual BP&amp;B reflects consideration and accommodation of input and comments from numerous stakeholder sources, some of which may be inconsistent or even conflicting, as well as the need to meet NERC’s legal, regulatory, and corporate responsibilities. Therefore, it will not necessarily</p>

	<p>be possible to trace specific input from a specific source into specific provisions of the BP&amp;B.</p>
<p>Clarify that certain non-statutory requirements were transitioned out of the NERC BP&amp;B.</p>	<p>Without agreeing or disagreeing that these were non-statutory activities, this comment is correct that the Interchange Distribution Calculator, previously funded by NERC, has been transitioned to the IDC Association, and the E-Tag registry has been transferred to the North American Energy Standards Board; both are no longer funded by NERC. Other reliability-related tools have been transitioned to industry sponsorship and funding. NERC Rule of Procedure Section 1002, as amended during the assessment period, states that NERC will review all tools and services it provides to determine if they can be transitioned to an appropriate industry group or organization. Additionally, NERC will be ending its funding and management of the North American Synchro-Phasor initiative by the end of 2014 as it is transitioned to private sector sponsorship and funding. Finally, the formation of the NATF and NAGF has resulted in those organizations taking responsibility for some educational and collaborative activities that otherwise might have been conducted and funded by NERC.</p>
<p>Provide presentations to stakeholders on NERC’s efforts to ensure maximum efficiency in the use of resources.</p> <p>The <i>Five-Year ERO Performance Assessment</i> should address reasons for budget increases and NERC’s plans to control costs going forward.</p>	<p>NERC strives to explain in each annual BP&amp;B how it is using resources efficiently within the proposed budget. Specific actions that have been taken to reduce budgeted costs and use resources efficiently are described in each BP&amp;B; typically, these actions are at a very granular level (e.g., actions within specific program areas) rather than actions that will impact the efficiency of all aspects of NERC’s operations. In addition to the textual discussion in the final BP&amp;B, during the BP&amp;B preparation process, NERC conducts a number of meetings, conference calls and webinars for stakeholders and stakeholder groups to explain the proposed BP&amp;B. These include meetings with trade associations and NERC committees as well as webinars, meetings, and conference calls (such as meetings and conference calls with the Board of Trustees, the Finance and Audit Committee, and the MRC) that are open to all stakeholders. In these meetings, conference calls and webinars, the proposed BP&amp;B is typically reviewed at a more aggregated level with focus on the more significant projects and initiatives impacting cost increases and decreases.</p> <p>There are several specific initiatives that NERC has implemented or is in the process of implementing that have increased or will increase the efficiency of the ERO Enterprise operations. These initiatives have been discussed and described through numerous</p>

	<p>means accessible to stakeholders including in the rolling three-year <i>ERO Enterprise Strategic Plan</i>, BP&amp;Bs, CMEP Implementation Plans, and workshops, seminars and webinars, as applicable to each particular activity.</p> <p>NERC will continue to look for additional means to communicate with stakeholders on NERC's efforts to use its resources efficiently, both through giving added focus to this topic in existing presentations and through additional stakeholder communications addressing this topic.</p> <p>NERC respectfully disagrees that a detailed analysis of budget increases over the five-year period and possible future increases is necessary for the <i>Five-Year ERO Performance Assessment Report</i>. NERC's annual BP&amp;Bs already provide an annual review of (and opportunity for stakeholder comment on) budget increases from the prior year to the budget year. Each annual BP&amp;B provides an explanation of budget increases (if any) in each of several line items for each program area, with more extensive discussion of more significant cost increase items.</p> <p>The <i>Five-Year ERO Performance Assessment Report</i> describes a number of initiatives that NERC has implemented and is continuing to undertake to improve the efficiency of NERC and Regional Entity operations while enhancing BPS reliability, including: (i) the SNOP process and FFT process (which continues to be enhanced); (ii) the RAI and the entire RRM process, all of which are focused on making more efficient use of ERO Enterprise (and stakeholder) resources while focusing resources on the issues and areas that pose the greatest risk to BPS reliability; (iii) the development of common training programs, the <i>Compliance Auditor Checklist</i>, and the <i>Compliance Auditor Handbook</i>, as found in the <i>ERO Enterprise Compliance Auditor Manual</i>, for compliance auditors across all Regional Entities; (iv) the Paragraph 81 project and the Standards Independent Expert Review Panel review of Reliability Standards requirements, which have resulted in the elimination of numerous requirements, thereby reducing the number of requirements that NERC and the Regional Entities must expend resources to monitor; and (v) the risk-based and cost-effectiveness reviews of proposed standards development projects so that resources are not expended on development of standards that will have minimal impact on reliability. The development of new or enhanced, uniform information and data management systems (both internal and user-facing) to be used by the entire ERO Enterprise will also increase efficiencies and</p>
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	<p>help to control costs in the future. Additionally, NERC has reorganized departments, such as Reliability Standards, to use personnel more efficiently.</p> <p>By far the most significant component of NERC's BP&amp;B are personnel-related costs, both direct personnel expenses (salaries and benefits) and costs that vary primarily based on the number of personnel (such as travel expense, office space costs, and telecommunications and computing costs). Therefore, as NERC has increased staffing in response to input from FERC and stakeholders indicating the need for more extensive or expeditious activities in specific areas (e.g., faster Reliability Standards development, increased NERC staff support for standard drafting teams, increased oversight of Regional Entity compliance monitoring activities, more expeditious processing of noncompliance items, increased training, education and outreach activities, and additional, focused reliability assessment reports), and has responded to the increased significance of certain reliability risk areas (e.g., cybersecurity), NERC staffing has necessarily increased and therefore budgets have increased. A second, overall area of budget increases has been for new and enhanced IT and other information and infrastructure systems in response to: (i) stakeholder desires for more efficient systems with commonality across Regional Entities; (ii) the need for more efficient NERC and Regional Entity internal business processes; and (iii) the development of new user-facing systems to meet emerging needs such as the Technical Feasibility Exceptions process and the BES definition exceptions process.</p>
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**Table 2: Stakeholder Comments Concerning Regional Entities**

In the following table, (i) the first column contains summaries of key stakeholder comments concerning the Regional Entities; and (ii) the second column lists, where applicable, the specific location within the *Five-Year ERO Performance Assessment Report* where the comment is addressed. Additionally, for most of the stakeholder comments, the second column contains a brief response to the comment. The table is divided into sections that correspond to the broad categories of questions asked in the Stakeholder survey.

Summary of Key Stakeholder Comment About Regional Entities	Where Comment is Addressed
<b>Reliability Standards</b>	
<p>Improve the dissemination of information by providing additional information regarding evolving Reliability Standards.</p>	<p>Attachment 3 – I.A; II.B.2.a<sup>6</sup></p> <p>Many Regional Entities have committed more resources in order to engage in additional training, education, and outreach activities to assist registered entities with their compliance and enforcement responsibilities. These increased activities have included additional workshops, newsletters to industry, and other direct communications.</p>
<b>Compliance Operations</b>	
<p>Improve the speed and consistency of CIP compliance audits.</p>	<p>Attachment 3 – II.B.2.b</p> <p>An important goal of RAI is to develop standard audit policies and procedures for all Regional Entities to serve as a common baseline approach to compliance audits. NERC and the Regional Entities have developed a standardized <i>Compliance Auditor Checklist</i> and <i>Compliance Auditor Handbook</i>, as found in the <i>ERO Enterprise Compliance Auditor Manual</i>, to ensure consistent application of audit procedures across the ERO Enterprise and is now beginning auditor training on these tools.</p>
<p>Enhance the quality, consistency, and accessibility of compliance training.</p>	<p>Attachment 3 – II.B.2.b; <i>see also</i> II.B.2.b.ii-ix (<i>Guidance and Training for Industry Stakeholders</i>)</p>

<sup>6</sup> Attachment 3 to the *Five-Year ERO Performance Assessment Report* is titled *NERC Assessment of Regional Entity Delegated Functions*.

	<p>Feedback from registered entities regarding training workshops has generally been positive. To address requests from the industry for an increased level of compliance information, many Regional Entities have committed more resources to training. Training activities during the assessment period have included in-person workshops, webinars, training videos and recordings, compliance update letters, on-site visits, and individualized outreach to registered entities.</p>
<p>Ensure that compliance audits are carried out in an efficient, accurate, consistent, and professional manner, and that the procedures and methodology followed by auditors are clear and ultimately useful to the registered entity.</p>	<p>Attachment 3 – II.B.1.c and d; II.B.2.b</p> <p>During the assessment period, NERC and the Regional Entities have increased training opportunities for Regional Entity audit staffs. Through RAI, NERC and the Regional Entities are working together to enhance the clarity and consistency of audit practices across the ERO Enterprise.</p>
<p>Better communicate to the registered entity how to become compliant.</p>	<p>Attachment 3 – II.B.2.a; <i>see also</i> II.B.2.b.ii-ix (<i>Guidance and Training for Industry Stakeholders</i>); II.D.2.c.ii-iii – II.D.9.ii-iii (<i>Ensuring the Timely Mitigation of Violations / Promoting Reliability through Enforcement Philosophy and Practices</i>)</p> <p>In addition to workshops and webinars intended for a broad stakeholder audience, the Regional Entities offer individualized outreach opportunities to the registered entities within their regions to help facilitate compliance with Reliability Standards.</p> <p>Enforcement and mitigation staff at each Regional Entity also work with registered entities to develop and implement effective, appropriate mitigating activities to both address noncompliance and prevent recurrence.</p>

<p>Increase the quality and consistency of compliance-related IT applications.</p>	<p>Attachment 3 – II.B.2.b.ii-ix (<i>Compliance Monitoring Tools and Procedures / Maintaining Confidentiality</i>)</p> <p>The Regional Entities are currently exploring ways to enhance their compliance-related IT applications. Several Regional Entities have implemented enhancements, which are described in the individual assessments.</p>
<p>Streamline self-report and enforcement resolution processes.</p>	<p>Attachment 3 – II.D.1.a and b; <i>Overview of NERC Activities and Accomplishments in the Five-Year Period II(C)</i></p> <p>The Regional Entities have worked with NERC to streamline enforcement processes during the assessment period. NERC and the Regional Entities developed and implemented streamlined enforcement processing mechanisms, such as the SNOP and FFT program, which allowed for a marked improvement in enforcement processing rates. Through regular communication and the oversight activities of NERC, NERC and the Regional Entities work to develop and share efficiency-enhancing process improvements. These improvements include the <i>ERO Self-Report User Guide</i> and the aggregation program, which were developed under RAI.</p>
<p>Better articulate the CIP Reliability Standards compliance and performance expectations.</p>	<p>Attachment 3 – II.B.2.a; <i>see also</i> II.B.2.b.ii-ix (<i>Guidance and Training for Industry Stakeholders</i>); <i>Overview of NERC Activities and Accomplishments in the Five-Year Period II.A.4.</i></p> <p>In addition to their regular training and outreach to registered entities, the Regional Entities are working with NERC to identify challenges and best practices for transitioning to Version 5 of the CIP Reliability Standards. The results of a transition implementation study will inform a report that will be broadly shared among industry and stakeholders.</p>

<p>Ensure that guidance tools like Case Notes, CARs, CANs, etc., are consistent and useful to registered entities, but do not become vehicles to reinterpret or revise Reliability Standards outside of the stakeholder process.</p>	<p><i>Overview of NERC Activities and Accomplishments in the Five-Year Period II.A.4 (Development of Compliance Assessment Tools Concurrently with Reliability Standards Development)</i></p> <p>NERC and Regional Entity staff are coordinating on the development of RSAWs as new Reliability Standards are developed.</p> <p>By creating a uniform understanding of compliance expectations for each Reliability Standard early in the standard development process, the need for interpretations or other forms of compliance guidance should be reduced.</p> <p>NERC has terminated the issuance of CANs as of February 2013.</p>
<p>Consider ways to improve the clarity and utility of RSAWs.</p>	<p><i>Overview of NERC Activities and Accomplishments in the Five-Year Period II.A.4</i></p> <p>See response to immediately preceding comment.</p>
<p><b>Enforcement</b></p>	
<p>Increase transparency regarding the process by which penalties and sanctions are calculated and assigned, and the reasoning behind the calculation and assignment of those penalties and sanctions.</p>	<p>Attachment 3 – II.D.1.d, II.D.2.d-II.D.9.d (individual Regional Entity <i>Implementation of Various Aspects of the CMEP</i>)</p> <p>Each of the Regional Entities has taken steps to increase the transparency regarding its penalty determination processes through the assessment period. Each of the Regional Entities follows the NERC <i>Sanction Guidelines</i>, and each penalty is reviewed to ensure consistency with other penalties assessed across the ERO Enterprise for similar violations occurring under similar facts and circumstances.</p>
<p>Streamline and hasten the enforcement process so as to make it more efficient and reduce the cost burden on registered entities.</p>	<p>Attachment 3 – II.D.1.a-b; <i>Overview of NERC Activities and Accomplishments in the Five-Year Period II(C)</i></p>

	<p>The Regional Entities have worked to streamline their enforcement processes during the assessment period. NERC and the Regional Entities developed and implemented streamlined enforcement processing mechanisms, such as SNOP and FFT, which allowed for a marked improvement in enforcement processing rates and reductions in caseloads. Through regular communication and the oversight activities of NERC, NERC and the Regional Entities work to develop and share efficiency-enhancing process improvements. These improvements include the <i>ERO Self-Report User Guide</i> and the aggregation program, which were developed under RAI.</p>
<p>Address the backlog in violation processing.</p>	<p>Attachment 3 – II.D.1.b.i-iii; <i>Overview of NERC Activities and Accomplishments in the Five-Year Period II(C)(4)</i></p> <p>By the end of the assessment period, NERC and the Regional Entities processed over 99% of violations discovered from 2007 through 2011 (excluding on hold violations).</p> <p>NERC and the Regional Entities are working to achieve an objective that all violations are processed before reaching 24 months in age. Some Regional Entities achieved this objective as of the end of 2013.</p>
<p>Better communicate why violations occurred so registered entities can learn from them.</p>	<p>Attachment 3 – II.D.2.c.ii-iii–II.D.9.ii-iii (<i>Ensuring the Timely Mitigation of Violations / Promoting Reliability through Enforcement Philosophy and Practices</i>); II.B.2.a; see also II.B.2.b.ii-ix (<i>Guidance and Training for Industry Stakeholders</i>)</p> <p>In the event a registered entity is found to be noncompliant with one or more Reliability Standards, Enforcement and Mitigation staff at the Regional Entity will work with the registered entity to develop and implement effective, appropriate mitigating activities to both address the noncompliance and prevent recurrence.</p>

	<p>Compliance and Enforcement staff at the Regional Entities also conduct workshops, webinars, and individualized outreach opportunities to help facilitate compliance with Reliability Standards.</p>
<p>Expand the use of FFTs.</p>	<p>Attachment 3 – II.D.1.b.iv; <i>Overview of NERC Activities and Accomplishments in the Five-Year Period II(C)(1)</i></p> <p>In 2013, NERC and the Regional Entities worked together to expand the FFT program and implement certain enhancements approved by the Commission. As a result of these enhancements, FFT treatment is now available for a limited pool of possible violations posing a moderate risk to the reliability of the BPS (in addition to possible violations posing a minimal risk). In addition, certain unmitigated possible violations may be processed through the FFT program, so long as mitigation is completed within 90 days from the date the FFT is posted.</p> <p>Additional FFT enhancements may be implemented in the future under RAI.</p>

<p>Enhance consistency regarding enforcement processing across the regions.</p>	<p>Attachment 3 – II.D.1.b.vi; II.D.1.d; <i>Overview of NERC Activities and Accomplishments in the Five-Year Period II(C)(4)(a)-(c)</i></p> <p>NERC and the Regional Entities engage in a number of activities to enhance consistency. For example, each of the Regional Entities have participated in RAI development activities and the multi-region working group on enforcement activities. In addition, NERC conducts oversight activities to facilitate the consistent application of streamlined enforcement processing mechanisms and other enforcement-related processes under the CMEP. Further, NERC and the Regional Entities take steps to promote reasonable consistency in the application of monetary penalties. Each penalty is reviewed to ensure consistency with other penalties assessed across the ERO Enterprise for similar violations occurring under similar facts and circumstances.</p>
<p><b>Registration and Certification</b></p>	
<p>Increase the clarity, regional consistency, quality, and overall efficiency of the CFR and JRO process.</p>	<p>Attachment 3 – II.A ; <i>Overview of NERC Activities and Accomplishments in the Five-Year Period II.B.1</i></p> <p>The JRO and CFR mechanisms are important components of the NERC Organization Registration and Certification program. Amendments to the NERC Rules of Procedure during the assessment period have clarified the operations of both types of registration.</p> <p>In addition, the Regional Entities began using consistent registration forms during the assessment period.</p> <p>As of May 1, 2014, there are 34 JROs and 44 CFRs, which illustrates that numerous entities have been able to utilize these registration options.</p>
<p>Reduce redundancies in the registration and certification processes.</p>	<p>Attachment 3 – II.A ; <i>Overview of NERC Activities and Accomplishments In the Five-Year Period II.B</i></p>

<p>Better communicate the requirements for certification and re-certification.</p> <p>Increase clarity and guidance surrounding how entities are registered by NERC, and respond timely to deregistration inquiries.</p>	<p>During the assessment period, the Regional Entities began using consistent registration forms. In addition, a Regional Entity working group developed a prototype “Common Registration Form” which will provide greater assurance that all entities that should be registered are in fact registered.</p> <p>Two initiatives are underway to improve registration and certification processes. The first pertains to multi-regional registered entities. The second is the risk-based registration effort, which will improve the efficiency with which a Regional Entity is able to process registration activation and deactivation requests.</p>
<p><b>Reliability Assessment &amp; Performance Analysis Metrics</b></p>	
<p>Ensure that the Regional Entity self-assessments are consistent by using consistent criteria and trigger points.</p>	<p>Attachment 3 – III.B</p> <p>Each Regional Entity’s self-assessment is distributed to Regional Entity members of the NERC Reliability Assessment Subcommittee (RAS) for an in-depth and comprehensive review of the data and information. Peer reviewer comments are discussed with Regional Entity and assessment area representatives, and refinements and adjustments are made, as needed. The Regional Entity self-assessments are then subjected to scrutiny and review by the entire RAS. This peer review process provides an essential check and balance to ensure the validity of the information provided for each assessment. It also provides a mechanism for the members of the RAS to become fully convinced that each Regional Entity self-assessment is accurate, thorough, and complete.</p>
<p><b>Training, Education, and Personnel Certification</b></p>	
<p>Increase the availability, quality, and accessibility of training regarding audit preparation and Reliability Standard compliance.</p>	<p>Attachment 3 – II.B.2.a; <i>see also</i> II.B.2.b.ii-ix (<i>Guidance and Training for Industry Stakeholders</i>); <i>Overview of NERC Activities and Accomplishments in the Five-Year Period</i> II.C.2.a.</p> <p>To address requests from the industry for an increased level of compliance information, many</p>

	<p>Regional Entities have committed more resources to training and expanded their training offerings. Training activities during the assessment period have included in-person workshops, webinars, training videos and recordings, compliance update letters, on-site visits, and individualized outreach to registered entities.</p> <p>In addition, under RAI, the Regional Entities are working with NERC to develop and implement improvements to audit processes, including changes in the timing of preparation of RSAWs and development of a common <i>Compliance Auditor Checklist</i> and <i>Compliance Auditor Handbook</i>, as found in the <i>ERO Enterprise Compliance Auditor Manual</i>, which was made available to industry. These improvements provide additional insight for registered entities into how they will be audited and what they can do to prepare.</p>
<b>Event Analysis</b>	
<p>Increase the speed by which Event Analysis information (including lessons learned) is disseminated.</p>	<p>Attachment 3 – IV.A; <i>Overview of NERC Activities and Accomplishments in the Five-Year Period II(D)(3)</i></p> <p>In June 2010, NERC and the Regional Entities created the NERC Event Analysis Working Group (EAWG). The EAWG expended significant efforts to develop an ERO Event Analysis process for use across North America. By integrating industry engagement and the collaborative review of disturbances into the ERO Event Analysis process, the effectiveness, predictability, consistency, and timeliness of the program was increased. Several lessons learned have already been shared with industry. The Event Analysis process is resulting in faster dissemination of information and lessons learned from outage events and other system disturbances than had been occurring through compliance investigations.</p>
<p>Improve the quality of disseminated Event Analysis information by showing relative</p>	<p>Attachment 3 – IV.C</p>

<p>and key emerging risks based on data analyzed through Event Analysis processes and by releasing more meaningful lessons learned.</p>	<p>NERC is considering improvements to increase the timeliness, transparency, and comprehensiveness of dissemination of information relating to Event Analysis and lessons learned.</p>
<p>Better coordinate information requests when NERC and a Regional Entity are involved in an event investigation.</p>	<p>Attachment 3 – IV.C</p> <p>In response to suggestions received during the ERO Event Analysis annual review, NERC is exploring potential solutions (including the possibility of implementing enterprise IT systems) to provide efficiencies in Event Analysis and related reporting processes.</p>
<p>Increase the effectiveness and efficiency of ERO-wide Event Analysis communications, particularly as to when an event is closed out.</p>	<p>Attachment 3 – IV.A; <i>Overview of NERC Activities and Accomplishments in the Five-Year Period II(D)(3)</i></p> <p>NERC and the Regional Entities are continuously refining the ERO Event Analysis process based on experience and as system conditions change.</p>
<p><b>Stakeholder Communications, Public Relations, and IT</b></p>	
<p>Make Regional Entity websites more accessible, user-friendly, secure, and useful to registered entities.</p>	<p>Attachment 3 – II.B.2.b.ii-ix (<i>Guidance and Training for Industry Stakeholders / Maintaining Confidentiality</i>)</p> <p>The Regional Entities post a number of compliance and technical materials to assist registered entities in their compliance program implementation. In addition, the Regional Entities use encryption and other methods to ensure that information submitted through Regional Entity websites is secure.</p>
<p><b>Business Plan and Budget</b></p>	
<p>Increase transparency regarding the funding mechanisms for Regional Entities when they undergo reorganization.</p>	<p>Attachment 3 – V.B.</p> <p>NERC and the Regional Entities have continuously striven for improved transparency and detail in the business plans and budgets. Numerous improvements have been implemented in this regard. To provide ongoing, collaborative oversight of the business planning,</p>

	<p>budgeting, accounting, and financial reporting processes, NERC and the Regional Entities have formed an ERO Finance Group comprised of representatives of NERC and each Regional Entity.</p>
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**Table 3: Overview of Five-Year and Three-Year Survey**

The following table provides comparative statistics concerning the stakeholder survey that was taken in connection with the preparation of the *Three-Year ERO Performance Assessment Report*, in 2009, and the stakeholder survey that was taken in late 2013 in connection with the preparation of this *Five-Year ERO Performance Assessment Report*.

Five-Year Survey	Three-Year Survey
326 registered entity responses	128 registered entity responses
0 trade association or organized group responses	5 trade association or organized group responses
0 regulator, state, provincial, federal or other responses	3 regulator, state, provincial, federal or other responses
0 reliability stakeholder or public responses	6 reliability stakeholder or public responses

**Table 4: Stakeholder Average Scores**

The remainder of this Attachment summarizes information from the stakeholder survey conducted in October 2013.

Regional Entity	Response Rate (%)	Total Number of Responses	Total Unique NCR IDs
FRCC	33	23	69
MRO	28	38	135
NPCC	21	62	301
RF	22	75	343
SERC	32	74	233
SPP RE	27	39	145
TRE	20	46	225
WECC	20	97	477

Reliability Standards Questions						
	1. Develops Reliability Standards that indicate which BPS owners, operators and users must comply with individual requirements	2. Develops Reliability Standards that have a sound basis in engineering and operations	3. Develops and modifies Reliability Standards in a timely manner giving consideration to the prioritization of reliability objectives	4. Develops an annual <i>Reliability Standards Development Plan</i> that is an effective tool to communicate and gather stakeholder input to the proposed scope of work, schedules, and priorities for developing and	5. Communicates information about Reliability Standards, their development, and opportunities for stakeholder participation in an efficient and	

				revising Reliability Standards	effective manner
Average Score					
NERC	4.0	3.3	3.2	4	3.8

Compliance Operations Questions					
	1. Provides accessible information about the level of performance necessary to comply with requirements of applicable Reliability Standards	2. Provides accessible information about what documentation and other evidence is needed to demonstrate compliance	3. Conducts audits, investigations, spot-checks and other compliance monitoring methods in a professional, thorough, and efficient manner	4. Utilizes electronic tools and forms that provide for clear, effective, and efficient submittal and handling of compliance information	5. Encourages registered entities to conduct internal self-assessments of compliance and self-report possible violations
Average Score					
<b>NERC</b>	2.1	1.8	1.6	1.4	3.3
<b>FRCC</b>	3.2	3.1	3.7	3.5	4.2
<b>MRO</b>	3.3	3.3	3.8	3.7	4.1
<b>NPCC</b>	3.8	3.6	4.0	4.0	4.2
<b>RF</b>	3.6	3.6	3.6	3.9	4.0
<b>SERC</b>	3.7	3.5	4.1	3.9	4.2
<b>SPP RE</b>	3.4	3.3	3.4	3.6	3.8
<b>TRE</b>	3.7	3.6	4.0	4.0	4.1
<b>WECC</b>	3.6	3.6	3.9	3.8	4.1

Enforcement Questions			
	1. Ensures that possible violations are investigated, assessed and closed in a timely manner	2. Levies penalties and sanctions for the violation of a Reliability Standard that bear a reasonable relation to the risk to reliability the violation presents	3. Levies penalties and sanctions that reflect consideration of the other factors specified in the <i>Sanction Guidelines</i>
Average Score			
<b>NERC</b>	1.7	2.1	2.3
<b>FRCC</b>	3.5	3.6	3.4
<b>MRO</b>	2.9	2.8	2.9
<b>NPCC</b>	2.8	2.7	2.8
<b>RF</b>	3.2	3.1	3.2
<b>SERC</b>	2.9	3.2	3.2

<b>SPP RE</b>	2.9	2.4	2.4
<b>TRE</b>	3.2	3.1	3.2
<b>WECC</b>	3.1	2.8	2.8

<b>Registration and Certification Questions</b>			
	1. Establishes adequate criteria to determine which owners, operators, and users of the BPS perform certain reliability functions and should therefore be registered as responsible for complying with Reliability Standards applicable to those reliability functions	2. Has a registration process that is effective in addressing situations in which compliance responsibilities are shared or delegated among entities, such as through the use of CFR or JRO	3. Conducts inquiries in a professional, thorough, and efficient manner for entities applying or submitting changes for certification as Reliability Coordinators, Balancing Authorities, and/or Transmission Operators
Average Score			
<b>NERC</b>	2.5	2.6	1.2
<b>FRCC</b>		3.5	3.2
<b>MRO</b>		3.4	2.8
<b>NPCC</b>		3.3	3.0
<b>RF</b>		3.3	2.8
<b>SERC</b>		3.4	2.5
<b>SPP RE</b>		3.2	2.5
<b>TRE</b>		3.3	2.5
<b>WECC</b>		2.6	2.6

<b>Reliability Assessment Questions</b>		
	1. Effectively communicates reliability assessments to stakeholders, policy makers, and the public, to explain why certain actions are necessary or appropriate to ensure future adequacy and reliability of the BPS	2. Effectively reports on regional self-assessments of electric supply and bulk power transmission reliability, including emerging and long-term reliability issues of specific regional and North American concern
Average Score		
<b>NERC</b>	2.4	2.2

Performance Analysis and Metrics Questions		
	1. Compiles and publishes useful information on performance metrics and benchmarks to observe and understand trends in the reliability and performance of the BPS and in the reliability performance of users, owners and operators, and to highlight areas for potential improvements	2. Identifies reliability performance issues for consideration in the development or modification of Reliability Standards
Average Score		
<b>NERC</b>	2.7	2.7

Training, Education, and Personnel Certification Questions			
	1. Provides effective training to registered entities on complying with Reliability Standards	2. Provides effective training on how to demonstrate compliance to auditors	3. Has an effective program for issuing certification credentials to skilled, trained, and qualified BPS operators, and for the maintenance of those certification credentials
Average Score			
<b>NERC</b>	2	1.8	2.9
<b>FRCC</b>	3.7	3.6	
<b>MRO</b>	3.2	2.9	
<b>NPCC</b>	3.5	3.4	
<b>RF</b>	3.4	3.1	
<b>SERC</b>	3.6	3.4	
<b>SPP RE</b>	3.5	3.4	
<b>TRE</b>	3.8	3.5	
<b>WECC</b>	3.8	3.4	

Event Analysis Questions				
	1. Develops and disseminates timely and useful information about system events and specific reliability risks affecting reliable operation of BPS through the lessons learned processes	2. Effectively uses the Alert Level 2 (Recommendations) and Level 3 (Essential Actions) under Rules of Procedure Section 810 to effectively track specific reliability risks affecting the reliable operation of the BPS	3. Has an Event Analysis program that provides and supports analysis on reliability risks that is useful to the industry and focused on BPS reliability	4. Investigates and analyzes events in an efficient manner, appropriate to the severity of the event
Average Score				
<b>NERC</b>	2.3	1.4	2.7	2.7

<b>FRCC</b>	3.6		3.4	3.3
<b>MRO</b>	3.0		2.9	2.8
<b>NPCC</b>	3.3		3.3	3.4
<b>RF</b>	3.3		3.0	3.1
<b>SERC</b>	3.5		3.3	3.2
<b>SPP RE</b>	3.2		3.1	2.8
<b>TRE</b>	3.6		3.5	3.5
<b>WECC</b>	3.2		3.0	2.9

<b>Critical Infrastructure Protection Questions</b>		
	1. Serves as an effective leader and facilitator of the industry's efforts to identify and protect BPS critical infrastructure, including by identifying and publicizing threats to critical infrastructure	2. Provides cybersecurity alerts that are effective for notifying BPS owners, operators, and users of vulnerabilities and actions to address those vulnerabilities
Average Score		
<b>NERC</b>	2.3	1.7

<b>Stakeholder Communications, Public Relations, and IT Questions</b>			
	1. Provides a public website that is useful in meeting stakeholder needs and provides easy access to information	2. Provides newsletters, conferences, and other stakeholder communications that are effective in providing stakeholders with useful and timely information regarding reliability and ERO/Regional Entity activities	3. Provides effective outreach to all jurisdictional stakeholders, including smaller entities with limited ability to travel to meetings and conferences
Average Score			
<b>NERC</b>	3.3	4.1	3.9
<b>FRCC</b>	3.4	3.6	3.3
<b>MRO</b>	3.4	3.9	3.6
<b>NPCC</b>	3.6	3.8	3.4
<b>RF</b>	3.6	3.9	3.4
<b>SERC</b>	3.6	3.9	3.9
<b>SPP RE</b>	3.4	3.6	3.4
<b>TRE</b>	3.9	3.9	3.8
<b>WECC</b>	3.6	3.9	3.7

<b>Business Plan and Budget Questions</b>	
1. Provides reasonable opportunity for members and other stakeholders to provide	2. Provides sufficient financial information in support of its business plan and budget and its

	input in the annual business plan and budgeting process	quarterly and annual financial reporting
Average Score		
<b>NERC</b>	2.4	2
<b>FRCC</b>	2.9	2.9
<b>MRO</b>	3.2	3.1
<b>NPCC</b>	2.8	2.7
<b>RF</b>	3.2	3.0
<b>SERC</b>	3.5	3.3
<b>SPP RE</b>	2.8	2.7
<b>TRE</b>	3.4	3.3
<b>WECC</b>	3.0	2.9

Independence and Stakeholder Input Questions				
	1. Retains staff that are independent of BPS owners, operators and users and responsive to the needs of reliability stakeholders	2. Effectively communicates a vision and expectations and provides effective leadership to achieve that vision consistent with the <i>ERO Enterprise Strategic Plan</i>	3. Performs statutory functions in a transparent manner with adequate opportunity for stakeholder input	4. Provides fair stakeholder representation in the selection of directors and other decision-making in committees or other subordinate organizational structures
Average Score				
<b>NERC</b>	3.8	2.3	3.7	3

**FEDERAL ENERGY REGULATORY COMMISSION  
DOCKET NO. RR14-\_\_\_\_**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

**ATTACHMENT 5**

**TO**

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

**STATUS OF AREAS FOR IMPROVEMENT IDENTIFIED  
IN THE ORDER ON THE THREE-YEAR ERO PERFORMANCE ASSESSMENT**

**JULY 21, 2014**

**Attachment 5: Status of Areas for Improvement Identified in the Order on the Three-Year ERO Performance Assessment**

Citation to Order on the Three-Year ERO Performance Assessment (¶)	Areas for Improvement	Status Update <sup>1</sup>
100-102	Believes that NERC (along with its stakeholders) should prioritize those Reliability Standards projects that, in its expert judgment, are the most critical to the reliability of the Bulk-Power System (BPS).	<p>The NERC Board of Trustees has established the Reliability Issues Steering Committee (RISC) to set priorities on issues of importance to the BPS, including the development of Reliability Standards.</p> <p><i>See Overview of NERC Activities and Accomplishments in the Five-Year Period, page 28.</i></p>
104	Reach out to registered entities to provide expert volunteers on Reliability Standards drafting teams and continue streamlining NERC’s procedure to aid in reducing the strain on industry resources overall.	<p>NERC has increased focus on outreach to stakeholders for participation in the Reliability Standards development process. At the end of May 2014, 858 stakeholder representatives had registered their eligibility to vote on proposed Reliability Standards as members of the Registered Ballot Body, and in 2013 alone NERC hosted 43 Reliability Standard industry webinars attended by an average of 360 participants. During the last six months of 2013, standard drafting teams (SDTs) and five-year review teams made up of 195 industry volunteers participated in 60 team meetings to advance Reliability Standards development activities.</p> <p>NERC has also made revisions to the <i>Standard Processes Manual</i>, which were approved by the Commission on June 26, 2013. These revisions have, among other things, led to a substantial decrease in the time required to revise an existing Reliability Standard or to develop a new one. This reduction in time provides registered entities with increased flexibility in staffing SDTs due to the reduced time commitment.</p>

**Attachment 5: Status of Areas for Improvement Identified in the Order on the Three-Year ERO Performance Assessment**

		<i>See Overview of NERC Activities and Accomplishments in the Five-Year Period, pages 5, 25.</i>
108	NERC must clearly demonstrate that any proposed elimination of a requirement does not diminish the reliability and enforceability of the existing Reliability Standard.	<p>In the first quarter of 2013, NERC assembled the Reliability Standards Independent Experts Review Panel (IERP) consisting of five independent industry experts and a sixth participant from the Commission. At the end of its review in August 2013, the IERP recommended (among other things) the retirement of 147 existing Requirements of Reliability Standards. In making this determination, the IERP assessed whether a requirement: (i) did not support a reliability principle; (ii) met the Paragraph 81 criteria for retirement; or (iii) was better suited as a guideline rather than as a part of a Reliability Standard. The IERP’s recommendations set the course for delivering high quality, results-based Reliability Standards with sustainable requirements. For the remaining requirements that the IERP did not recommend for retirement, the IERP applied content and quality criteria to examine whether they were steady-state or needed additional work. The IERP evaluated whether these remaining requirements addressed a risk to reliability by examining: (i) the ranking developed by the NERC RISC; (ii) the violation risk factor (VRF) for each requirement; and (iii) the IERP members’ own professional judgment</p> <p>The P 81 initiative identified three layers of criteria to determine whether a requirement should be recommended for retirement. These criteria were identified in a technical</p>

<sup>1</sup> Status update references made to previous sections of this *Five-Year ERO Performance Report* include: (i) *Overview of NERC Activities and Accomplishments in the Five-Year Period*; (ii) Attachment 1: *Discussion of How NERC Meets the ERO Certification Criteria of 18 C.F.R. §39.3(b)*; and (iii) Attachment 3: *NERC Assessment of Regional Entity Delegated Functions*.

**Attachment 5: Status of Areas for Improvement Identified in the Order on the Three-Year ERO Performance Assessment**

		<p>whitepaper dated December 20, 2012. The Commission issued an order on November 21, 2013 approving the retirement of 34 Requirements and sub-Requirements within 19 Reliability Standards.</p> <p><i>See Overview of NERC Activities and Accomplishments in the Five-Year Period, pages 14-17, 17-19.</i></p>
<p>103</p>	<p>NERC and the Regional Entities should also plan to complete the fill-in-the-blank Reliability Standards, which remain pending from Order No. 693. We agree with NERC that setting priorities regarding fill-in-the-blank standards is an issue that should be resolved jointly by NERC and the Regional Entities.</p>	<p>NERC and the Regional Entities have determined that replacing the fill-in-the-blank Reliability Standards with continent-wide Reliability Standards is the optimal approach to addressing outstanding fill-in-the-blank Reliability Standards.</p> <p>NERC has been steadily working to complete revisions to replace fill-in-the-blank Reliability Standards with continent-wide versions. These revisions have been completed for Reliability Standards in four areas:</p> <ol style="list-style-type: none"> <li>(1) Emergency planning for system restoration and blackstart;</li> <li>(2) Data for steady state and dynamic system modeling;</li> <li>(3) Transfer capability requirements; and</li> <li>(4) Underfrequency load-shedding programs.</li> </ol> <p>Revisions are in progress at the time of this writing for Reliability Standards in five additional areas:</p> <ol style="list-style-type: none"> <li>(1) Analysis and mitigation of protection system misoperations (two projects, one scheduled for completion in 2014 and one in 2015);</li> <li>(2) Undervoltage load-shedding (scheduled for completion in early 2015);</li> <li>(3) Facility connection requirements (scheduled for completion in 2014);</li> </ol>

**Attachment 5: Status of Areas for Improvement Identified in the Order on the Three-Year ERO Performance Assessment**

		<p>(4) Disturbance monitoring (scheduled for completion in 2014); and</p> <p>(5) Data for modeling demand (scheduled for completion in 2014).</p> <p>Once these in-progress projects are completed, all of the fill-in-the-blank Reliability Standards will have been revised through a Commission-approved standards development process.</p>
85	<p>Renews the directive that NERC submit quarterly reports on Reliability Standards development for an additional three years, with additional detail of required analysis.</p> <p>The quarterly reports should include: (i) the time required to complete projects; (ii) the time required to complete projects initiated in response to NERC’s urgent action progress; and (iii) the time required to complete projects in response to Commission directives.</p> <p>The analysis should include data on the time required for each stage of the process.</p>	<p>NERC has been filing quarterly analyses of Reliability Standards voting results in Docket No. RR06-1 since May 2007. NERC continued to file these quarterly reports, including the additional information directed in the Order on the Three-Year ERO Performance Assessment, through and including the fourth quarter of 2013.</p>
107-112	<p>The Commission provided guidance regarding NERC’s initiative to transition to results-based Reliability Standards.</p> <p>107-108: the revised Reliability Standards should incorporate the Commission’s</p>	<p>During the assessment period, NERC launched several initiatives designed to evolve the Reliability Standards into “steady-state,” which means a stable set of clear, concise, high-quality, and technically sound Reliability Standards. Several important components of this evolution are: (i) the results-based Reliability Standards initiative; (ii) the P 81</p>

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	<p>directives from prior orders that address the substantive performance goals of the BPS.</p> <p>109: expanded background sections, purpose sections, or explanations of intent, should not contradict or seek to supersede or interpret the requirements within a Reliability Standard.</p> <p>110: a requirement cannot be retired without its associated reliability benefit being addressed fully in another requirement or Standard.</p> <p>111: revised Reliability Standards should include objective language rather than subjective modifiers, and 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> <p>112: revised Reliability Standards should not reduce BPS reliability from that which would be required by the existing approved Standards.</p>	<p>project; (iii) changes to the <i>Standard Processes Manual</i>; (iv) reorganization of the NERC Standards department; and (v) the work of the IERP.</p> <p>107-108: Addressing Commission directives relating to Reliability Standards is a major priority to facilitate the transformation to steady-state Reliability Standards. As of December 2012, there were 191 outstanding Commission directives that were related to Reliability Standards development. More than half of the total number of Commission-issued directives were addressed during 2013. At the February 2014 meeting of the NERC Standards Oversight and Technology Committee (SOTC), it was reported that 128 directives had been addressed by the end of 2013, with 107 remaining. NERC anticipates that 90% of Commission directives issued to date will be resolved between the end of 2014 and the first half of 2015.</p> <p><i>See Overview of NERC Activities and Accomplishments in the Five-Year Period, page 12.</i></p> <p>109: The NERC <i>Standard Processes Manual</i> explicitly states that “[t]he only mandatory and enforceable components of a Reliability Standard are the: (1) applicability, (2) Requirements, and the (3) effective dates. The additional components are included in the Reliability Standard for informational purposes, to establish the relevant scope and technical paradigm, and to provide guidance to Functional Entities concerning how compliance will be assessed by the Compliance Enforcement Authority.”</p>
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		<p><i>See Section 2.5 of the NERC Standard Processes Manual, Appendix 3A to the NERC Rules of Procedure.</i></p> <p>110: The IERP works in conjunction with the RISC to ensure requirements are not recommended for retirement so as to leave gaps in reliability.</p> <p>Additionally, NERC systematically manages the development of new Reliability Standards and revisions to standards, in areas of highest need and importance, through its rolling three-year <i>Reliability Standards Development Plan (RSDP)</i>. The RSDP is revised annually and identifies and prioritizes Reliability Standards development projects in the immediate three-year time horizon, taking into account, among other information, perceived gaps in the Reliability Standards, proposals for closing those gaps, and timing priorities for standards development projects.</p> <p><i>See Overview of NERC Activities and Accomplishments in the Five-Year Period, pages 14-17, 85.</i></p> <p>111: The IERP applies content and quality criteria when assessing whether standards are steady-state or need revisions.</p> <p>Additionally, Section 4.6 of the <i>NERC Standard Processes Manual</i> requires that NERC Standards staff conduct a quality review of the Reliability Standard, implementation plan, and VRFs and violation severity level (VSLs) in parallel with the development of the Reliability Standard and implementation plan, to assess whether the documents are within the scope of the associated standard authorization request (SAR), whether</p>
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		<p>the Reliability Standard is clear and enforceable as written, and whether the Reliability Standard meets the criteria specified in NERC’s Benchmarks for Excellent Standards and criteria for governmental approval of Reliability Standards. Item #4 of NERC’s <i>Ten Benchmarks of an Excellent Reliability Standard</i> requires that “[e]ach performance requirement shall be stated so as to be objectively measurable by a third party with knowledge or expertise in the area. Each performance requirement shall have one or more associated measures used to objectively evaluate compliance with the requirement. If performance can be practically measured quantitatively, metrics shall be provided to determine satisfactory performance.”</p> <p><i>See Overview of NERC Activities and Accomplishments in the Five-Year Period</i>, pages 15-16; Section 4.6 of the NERC <i>Standard Processes Manual</i>, Appendix 3A to the NERC Rules of Procedure; and <i>Ten Benchmarks of an Excellent Reliability Standard</i>, available at: <a href="http://www.nerc.com/pa/Stand/Resources/Documents/10BenchmarksOfExcellentReliabilityStandards.pdf">http://www.nerc.com/pa/Stand/Resources/Documents/10BenchmarksOfExcellentReliabilityStandards.pdf</a>.</p> <p>112: Section 4.6 of the NERC <i>Standard Processes Manual</i> requires that NERC Standards staff conduct a quality review of the Reliability Standard, implementation plan, and VRFs and VSLs in parallel with the development or modification of the Reliability Standard and implementation plan, to assess whether the documents are within the scope of the associated SAR, whether the Reliability Standard is clear and enforceable as written, and whether the Reliability Standard meets the criteria specified in NERC’s Benchmarks for</p>
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		<p>Excellent Standards and criteria for governmental approval of Reliability Standards.</p> <p><i>See Section 4.6 of the NERC Standard Processes Manual, Appendix 3A to the NERC Rules of Procedure.</i></p>
<p>102</p>	<p>NERC should determine whether there are new or modified Reliability Standards that would address identified gaps that may belong in the high priority group.</p>	<p>Two of the recommendations made by the IERP when it presented its report to the NERC Board of Trustees in August 2013 were that NERC address seven areas (high-level gaps) not currently addressed by the Reliability Standards, and complete standards development projects to address gaps within individual requirements. The IERP also made recommendations regarding compliance monitoring, prioritization for addressing the identified gaps, using risk to determine whether a future standard is needed, and use of the IERP’s identified criteria to determine the quality and content as future standards are developed. The potential reliability gaps identified by the IERP were evaluated by the RISC and assigned in some cases to active drafting projects. The IERP recommendations that apply to Reliability Standards that were not part of active drafting projects were assigned to teams that conduct periodic reviews of Reliability Standards in the future for consideration.</p> <p>Additionally, NERC systematically manages the development of new Reliability Standards and revisions to Reliability Standards, in areas of highest need and importance, through its rolling three-year RSDP. The RSDP is revised annually and identifies and prioritizes Reliability Standards development projects in the immediate three-year time horizon, taking into account, among other information, perceived gaps in the Reliability Standards, proposals for</p>

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		<p>closing those gaps, and timing priorities for standards development projects.</p> <p><i>See Overview of NERC Activities and Accomplishments in the Five-Year Period, pages 15-17, 85.</i></p>
<p>74</p>	<p>Urge NERC to take measures, including hiring staff with the technical capability to independently advise the NERC Board of Trustees regarding the substantive content of a proposed Reliability Standard.</p>	<p>Although much of the work in the Reliability Standards development process is performed by committees and task groups comprised of volunteer technical experts, significant NERC professional staff resources are needed to facilitate and coordinate the work of industry volunteers, to administer the process and help ensure that it functions efficiently, and to provide input to support development of technically sound standards. NERC has budgeted 25.92 full-time equivalents (FTEs) for the Reliability Standards Program for 2014, which is a slight decrease of 0.58 FTEs from the 2013 budget and reflects the application of the 4% personnel attrition. In accordance with its 2013 business plan and budget, NERC has added 3 positions in the Reliability Standards Program in 2013.</p> <p>NERC has improved the composition of SDTs by enhancing the selection process to identify, for each project, the necessary technical, writing, and project management expertise to form a balanced team that will foster improved effectiveness and enhanced efficiency. In addition, SDTs now receive increased NERC staff support, including dedicated legal support for each project. Each standard development project is staffed by a lead standard developer, and many projects have a second supporting standard developer. Standard developers provide project management and facilitation experience as well as additional skills,</p>

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		<p>including technical writing, legal skills, and outreach/consensus-building skills, to the SDT, which contributes to the development of high-quality Reliability Standards.</p> <p>Additionally, Section 4.6 of the <i>NERC Standard Processes Manual</i> requires that NERC Standards staff conduct a quality review of the Reliability Standard, implementation plan, and VRFs and VSLs in parallel with the development of the Reliability Standard and implementation plan, to assess whether the documents are within the scope of the associated SAR, whether the Reliability Standard is clear and enforceable as written, and whether the Reliability Standard meets the criteria specified in NERC’s Benchmarks for Excellent Standards and criteria for governmental approval of Reliability Standards. Item #5 of NERC’s <i>Ten Benchmarks of an Excellent Reliability Standard</i> requires that “[e]ach reliability standard shall be based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in the particular field.”</p> <p><i>See NERC 2014 Request for Acceptance of Business Plan and Budget</i>, page 42, Docket No. RR13-9-000; <i>Overview of NERC Activities and Accomplishments in the Five-Year Period</i>, pages 31-32; Section 4.6 of the <i>NERC Standard Processes Manual</i>, Appendix 3A to the NERC Rules of Procedure; and <i>Ten Benchmarks of an Excellent Reliability Standard</i>, available at: <a href="http://www.nerc.com/pa/Stand/Resources/Documents/10BenchmarksOfExcellentReliabilityStandards.pdf">http://www.nerc.com/pa/Stand/Resources/Documents/10BenchmarksOfExcellentReliabilityStandards.pdf</a>.</p>
152	Encourages NERC to intensify its efforts to provide additional oversight and guidelines to	

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	<p>assist registered entities in accurately determining that an asset is critical to the BPS (critical cyber asset identification).</p>	<p>The CIP Version 4 and 5 Reliability Standards move away from the use of the registered entities’ risk-based assessment methodology in the identification of critical cyber assets.</p> <p>In Order No. 791, the Commission approved NERC’s proposed implementation plan for CIP Version 5 to bypass CIP Version 4 and move directly to CIP Version 5. Recognizing that registered entities are in various stages of implementation of CIP Versions 3 and 4, NERC addressed the need for flexibility as well as the need to identify and address the associated transition challenges for the industry through guidance.</p> <p><i>See Overview of NERC Activities and Accomplishments in the Five-Year Period</i>, pages 34-36; and <i>Cybersecurity Standards Transition Guidance</i>, available at: <a href="http://www.nerc.com/pa/comp/Resources/ResourcesDL/Cyber%20Security%20Standards%20Transition%20Guidance%20(Revised).pdf">http://www.nerc.com/pa/comp/Resources/ResourcesDL/Cyber%20Security%20Standards%20Transition%20Guidance%20(Revised).pdf</a>.</p>
<p>154</p>	<p>NERC’s proposed action item for “fast-track” interpretations of CIP Reliability Standards lacks specificity.</p> <p>NERC states that this process would not require implementation of the full existing Reliability Standards development process, and could improve efficiency without sacrificing quality, but otherwise NERC does not provide any details how it would implement this proposal. While we support efforts to provide greater guidance on CIP</p>	<p>A CIP-specific fast-track process for interpretations of CIP Reliability Standards has not been developed during the assessment period. However, the revisions to the <i>Standard Processes Manual</i> approved by the Commission on June 26, 2013, included a waiver provision that allows for modifications to the Reliability Standards development process for good cause, with five days’ notice and reporting of the exercise of a waiver to the NERC SOTC. This waiver provision could be used to fast-track the development of an interpretation of a Reliability Standard, including a CIP Reliability Standard.</p>

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	<p>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 Reliability Standards.</p> <p>If NERC develops this proposal, NERC should submit it to the Commission for review, possibly in the form of a petition for approval of modifications to NERC’s Rules of Procedure.</p>	<p><i>See Overview of NERC Activities and Accomplishments in the Five-Year Period, page 24.</i></p>
<p>169</p>	<p>Regarding Event Analysis, 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.</p>	<p>NERC has developed a voluntary Event Analysis process, including criteria to categorize events, that delivers quality, timely and actionable lessons learned to registered entities. Development of the Event Analysis process was led by the Event Analysis Subcommittee (EAS), a cross-functional group of industry experts. The Event Analysis process begins with a registered entity making an initial assessment of an occurrence and determining if the occurrence falls within one of five qualifying event categories. The event category is determined by weighing the level of significance of a qualifying event and its impact on the interconnected BPS. After a qualifying event occurs, the applicable Regional Entity holds a planning meeting with all involved parties, including other registered entities. If a qualifying event is categorized as Category 3 or higher, the registered entity will prepare an Event Analysis Report (EAR), in which the registered entity describes the sequence of events and identifies causal factors and appropriate corrective actions. The registered entity then submits the EAR to the applicable Regional Entity or Entities for review, and then to NERC.</p>

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		<p>The registered entity, in collaboration with the ERO, drafts the proposed lessons learned from the event and submits them to the applicable Regional Entity. Once the event analysis is complete, NERC shares any lessons learned with industry by publishing them as soon as practical. NERC staff analyzes EARs to identify reliability risks, trends, and potential gaps in Reliability Standards, compliance, and other programs. NERC also reviews the EARs to assign descriptive cause codes, which assist in identifying trends and corrective actions that will prevent recurrence of similar events.</p> <p>Since initial implementation of the Event Analysis process in 2010, there have been more than 388 qualified events reported to the ERO and more than 77 lessons learned, including 14 published in 2013.</p> <p><i>See Overview of NERC Activities and Accomplishments in the Five-Year Period, pages 68-71.</i></p>
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<p>170-171, 173-178</p>	<p>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.</p> <p>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.</p> <p>174: If a Compliance Violation Investigation (CVI) is initiated, it should be conducted concurrently with an Event Analysis and both processes should begin as soon as possible to the extent necessary.</p> <p>175: maintain the respective focuses of the CVI and Event Analysis to ensure independence of the roles each mechanism is designed to fulfill.</p> <p>176: 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</p>	<p>170 - 171: NERC staff compiles and provides a daily summary of newly reported qualifying events to FERC staff, NERC’s Event Investigation group under Compliance Operations, and Regional Entity situational awareness and event analysis points of contact. Event status is reviewed in a biweekly conference with NERC and FERC staff, and in a separate weekly conference call with NERC and Regional Entity staff.</p> <p>174 - 178: Compliance Investigations (formerly CVIs) are governed by Section 3.4 of the <i>Compliance Monitoring and Enforcement Program</i> (CMEP), Appendix 4C to the NERC Rules of Procedure. Event Analysis is governed by Sections 807 and 808 of the NERC Rules of Procedure, along with Appendix 8. These are two separate processes within NERC.</p> <p>Additionally, widespread use of mechanisms like the voluntary Event Analysis process has in practice greatly reduced the need to initiate formal Compliance Investigations following events.</p> <p><i>See Overview of NERC Activities and Accomplishments in the Five-Year Period</i>, pages 68-71.</p>
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	<p>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.</p> <p>177: 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. 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.</p> <p>178: NERC shall report on the steps it has taken to clarify the interface between event analyses and compliance activities, including Compliance Investigations, in response to the Commission’s guidance in the informational filing.</p>	
126	<p>Directs NERC to continue its oversight of Regional Entity audits with NERC staff that are technically proficient.</p>	<p>As outlined in the NERC Rules of Procedure and the Regional Entity Delegation Agreements, NERC is responsible for oversight of the Regional Entities compliance monitoring program. NERC restructured its oversight process to include a participatory role during Regional Entity compliance. In addition to oversight engagements, NERC has developed the Key Reliability Standard Spot Check (KRSSC), performs</p>

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		<p>capability assessments of the Regional Entities, reviews reports submitted by the Regional Entities and conducts two workshops per year in addition to other auditor and lead auditor training. The KRSSC is a study of a single Reliability Standard and a sampling multiple audits across all eight Regional Entities to determine consistency of approach. The results of the study are then provided to the regions to identify improvement opportunities.</p> <p>Starting in 2012, NERC began the process of reviewing the background, education and credentials of the regional compliance auditors and providing feedback to Regional Entities. NERC reads each audit report submitted by the Regional Entities prior to posting to FERC.</p> <p>NERC conducts auditor workshops, performs lead auditor training and provides resources to enhance the consistency of auditor practices across the Regional Entities as well as to improve the technical proficiency of those NERC staff that provide oversight of the Regional Entities’ compliance monitoring activities. Finally, NERC participates in the ERO and Compliance and Enforcement Management Group (ECEMG) on a monthly basis where audit activities and projects that improve audit processes and identify opportunities to drive consistency are discussed.</p> <p><i>See also Sections 402 and 403 of the NERC Rules of Procedure; and Attachment 3, pages 16-21.</i></p>
127	Directs NERC and Regional Entities to have their staff, and Commission staff where applicable, discuss the appropriate role of	Section 3.1.5.3 of the CMEP defines who may participate as an observer in a Regional Entity compliance audit of a Registered Entity. This section also stipulates that

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	observers during their pre-audit meetings or conferences.	<p>“Compliance Audit observers and attendees are not Compliance Audit team members and do not participate in conducting the Compliance Audit or in making Compliance Audit findings and determinations.”</p> <p><i>See Section 3.1.5.3 of the CMEP, Appendix 4C to the NERC Rules of Procedure.</i></p>
220	Direct NERC to explain how it would implement risk-based approaches to compliance activities and at the same time complete its currently-required audit cycles.	<p>A key, strategic transformation that NERC, in collaboration with the Regional Entities and stakeholders, embarked upon during the assessment period is the construction of a risk-based model for compliance monitoring and enforcement. This risk-based approach enables NERC to focus ERO and industry resource investment on the most important issues to BPS reliability.</p> <p><i>See Overview of NERC Activities and Accomplishments in the Five-Year Period, pages 50-62.</i></p>
153	<p>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.</p> <p>NERC should consider the worthiness of an ongoing “accreditation” of qualified auditor candidates through continued education. A program that establishes the requisite level of knowledge and skills needed to maintain necessary levels of technical expertise on a continuous basis should be the goal of the CIP</p>	<p>The NERC CIP audit staff works closely with the Regional Entity CIP staff and provides guidance to the ERO CIP Auditors. NERC provided direct feedback in the past on audit reports and has participated in post-audit phone calls to review best practices, lessons learned and staff qualifications. In order to share best practices and promote consistency, NERC has utilized Regional Entity working groups such as the CIP Compliance Working Group (CCWG) and the ECEMG to discuss technical and policy CIP issues.</p> <p><i>See also Overview of NERC Activities and Accomplishments in the Five-Year Period, pages 53-54, 61-62, for a discussion of the ERO Enterprise Compliance Auditor Manual, which</i></p>

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	audit program. These qualifications should be designed to verify the knowledge and skills of the auditor in the area of CIP, control systems and information technology.	includes the <i>Compliance Auditor Handbook</i> and <i>Compliance Auditor Checklist</i> , as well as auditor qualifications.
118	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.	As part of its Compliance Operations function, NERC is responsible for supporting the development of qualified and trained compliance operations and auditing staffs at both NERC and the Regional Entities. In addition to the development of a common set of auditor qualifications, NERC ensures the proper qualifications of personnel for auditing and other essential compliance roles through training.  <i>See Overview of NERC Activities and Accomplishments in the Five-Year Period, page 62.</i>
121	Encourages NERC to continually review its RSAWs to improve their quality and usefulness.	Prior to 2013, NERC developed RSAWs after regulatory approval of a Reliability Standard and at least six months before the Reliability Standard’s enforcement date. Today, RSAWs are written concurrently with new Reliability Standard development projects. Each Reliability Standards project is assigned dedicated staff support and led by compliance. NERC compliance staff are coordinating with Regional Entity staff. This increased and ongoing coordination will help ensure that standard drafting teams, compliance staff and RSAWs are aligned with the intent of Reliability Standards, thereby increasing the quality and usefulness of these documents  <i>See Overview of NERC Activities and Accomplishments in the Five-Year Period, pages 19-21.</i>

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<p>180</p>	<p>Directs NERC to continue developing scenario analysis in the long-term reliability assessments.</p> <p>The Commission requires 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.</p>	<p>The latest version of the NERC <i>Reliability Assessment Guidebook</i> is version 3.1 (dated August 2012). This version was approved by the NERC Planning Committee in June 2012. <i>See</i> <a href="http://www.nerc.com/comm/PC/Pages/Reliability%20Assessment%20Subcommittee%20(RAS)/Reliability-Assessment-Guidebook.aspx">http://www.nerc.com/comm/PC/Pages/Reliability%20Assessment%20Subcommittee%20(RAS)/Reliability-Assessment-Guidebook.aspx</a>. This version makes more explicit the requirement for an annual scenario analysis to be included in all future long-term reliability assessment (LTRA) reports.</p> <p>Since 2009, the following LTRAs include scenario analyses:</p> <ul style="list-style-type: none"> <li>• <i>2009 Long-Term Reliability Assessment</i></li> <li>• <i>2010 Long-Term Reliability Assessment</i></li> <li>• <i>2011 Long-Term Reliability Assessment</i></li> <li>• <i>2012 Long-Term Reliability Assessment</i></li> </ul> <p>Additional scenarios completed as part of the Reliability Assessment program in support of the LTRA:</p> <ul style="list-style-type: none"> <li>• <i>2013 Special Reliability Assessment: Accommodating an Increased Dependence on Natural Gas for Electric Power:</i> <a href="http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_PhaseII_FINAL.pdf">http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_PhaseII_FINAL.pdf</a>.</li> <li>• <i>2011 Potential Impacts of Future Environmental Regulations:</i> <a href="http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/EPA%20Section.pdf">http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/EPA%20Section.pdf</a>.</li> </ul>
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		<ul style="list-style-type: none"> <li>• <i>2010 Special Reliability Scenario Assessment: Resource Adequacy Impacts of Potential U.S. Environmental Regulations:</i>  <a href="http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/EPA_Scenario_Final_v2.pdf">http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/EPA_Scenario_Final_v2.pdf</a>.</li> <li>• <i>2010 Special Reliability Scenario Assessment: Potential Reliability Impacts of Swift Demand Growth After a Long-Term Recession:</i>  <a href="http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_Swift_Scenario_Aug_2010.pdf">http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_Swift_Scenario_Aug_2010.pdf</a>.</li> <li>• <i>2010 Reliability Impacts of Climate Change Initiatives: Technology Assessment and Scenario Development:</i>  <a href="http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/RICCI_2010.pdf">http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/RICCI_2010.pdf</a>.</li> </ul> <p><i>See also Overview of NERC Activities and Accomplishments in the Five-Year Period, pages 71-73.</i></p>
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 LTRA and file its preliminary plan and timeline in the informational filing.	<p>NERC implemented probabilistic assessments in the LTRA in 2012 with a trial phase based on voluntary participation occurring in 2011.</p> <p>A detailed plan was included in the 2011 LTRA. In summary, the plan includes the following milestone dates:</p> <ol style="list-style-type: none"> <li>(1) Request for participation in voluntary trial period (March 2011);</li> <li>(2) Draft methods due to NERC (May 2011);</li> <li>(3) Results of 2011 study (October 2011);</li> <li>(4) Trial view complete (March 2012);</li> </ol>

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		<p>(5) 2011 trial results to be included in 2012 LTRA (October 2012);</p> <p>(6) Request for full participation (March 2012); and</p> <p>(7) 2012 results to be included in 2013 LTRA (October 2013).</p> <p>Additionally, appropriate modifications were made to NERC’s <i>Reliability Assessment Guidebook</i> to reflect these changes in the reliability assessment process.</p> <p>NERC completed the “Pilot” assessment in July 2011. <i>See</i> NERC’s <i>Pilot Probabilistic Assessment</i> (dated June 2012), available at:  <a href="http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/2012_ProbA.pdf">http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/2012_ProbA.pdf</a>.</p> <p>NERC completed the first NERC-wide probabilistic study using the 2012 LTRA reference case in June 2013. <i>See</i> <i>NERC Probabilistic Assessment</i>, available at:  <a href="http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_2012_Probabilistic_Assessment_Final.pdf">http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_2012_Probabilistic_Assessment_Final.pdf</a>.</p> <p>These probabilistic assessments will be completed on a biannual basis.</p> <p><i>See</i> NERC’s <i>2013 Long-Term Reliability Assessment</i> published in December 2013, available at:  <a href="http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/2013_LTRA_FINAL.pdf">http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/2013_LTRA_FINAL.pdf</a>.</p>
185	Directs NERC to consider establishing permanent databases that could be automatically populated with: (i) new	NERC and the Regional Entities are working on the development of the Reliability Assessment Data System (RADS). While this automated data system is still under

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	<p>transmission projects data from the Regional Entities; (ii) generation interconnection queue data; and (iii) other data relevant for reliability assessment.</p> <p>The Commission requires 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.</p>	<p>development, significant improvements to data collection and validation have already been made at the Regional Entity level to support RADS in 2014.</p> <p>The NERC Board of Trustees has also approved mandatory data reporting concerning conventional generating units, transmission outages, and demand response availability. NERC collects this data using its Generating Availability Data System (GADS), Transmission Availability Data System (TADS), and Demand Response Availability Data System (DADS) databases. This unique series of databases is used to collect, record, and retrieve operating information tracking, reporting, analyzing, and improving the reliability performance of the BPS. Regional Entity staff work with NERC staff to ensure the data submitted by entities is timely, complete, and accurate.</p> <p><i>See Attachment 3, pages 143, 145.</i></p>
<p>57</p>	<p>NERC should continue to seek recognition in Canada and Mexico, as appropriate and keep the Commission informed about the status of those efforts.</p>	<p>NERC continues to engage in substantial efforts to gain and maintain recognition as the ERO in Canada and Mexico.</p> <p>In Canada, where by its constitution the regulation of electricity is primarily within the jurisdiction of each province rather than the national government, NERC’s activities to obtain and maintain recognition are conducted on a province-by-province basis. Depending on the particular circumstances of each province, NERC has gained recognition through statutes or other provisions of provincial law, or through a memorandum of understanding with appropriate entities in the province.</p>

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		<p>With respect to Mexico, the Comisión Federal de Electricidad (CFE), through the Centro Nacional de Control de Energia (CENACE), and the Area de Control Baja California (ACBC), have entered into a membership and operating agreement (MOA) with WECC. The MOA provides for WECC to assist CENACE and ACBC in monitoring compliance by “Designated Entities” (the Mexican equivalent of U.S. registered entities) with Mexico Reliability Standards for Baja California, Mexico. CENACE has approved a total of ten Mexico Reliability Standards. Pursuant to the MOA, WECC monitors compliance with Mexico Reliability Standards, but does not have enforcement or registration (designation) authority for CFE. WECC provides compliance monitoring, reviews proposed and completed mitigation plans, and provides assessment recommendations with respect to alleged violations.</p> <p><i>See Overview of NERC Activities and Accomplishments in the Five-Year Period, pages 90-91.</i></p> <p><i>See Attachment 1, pages 34-52.</i></p>
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.	<p>NERC and the Regional Entities jointly develop a three-year rolling <i>ERO Enterprise Strategic Plan</i> which includes goals, objectives and deliverables over the planning period and is used in the development of each entity’s business plan and budget. The development and implementation of these common formats and methodologies has helped to continuously improve the efficiency of the business plan and budget preparation process and enabled NERC and Regional Entity financial and accounting staffs and senior management to devote greater attention to more substantive budget issues.</p>

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		<p><i>See Attachment 3, pages 155-156.</i></p>
<p>138, 217</p>	<p>138: Agrees that NERC should develop performance metrics that help to ensure consistent implementation of the compliance enforcement process across the Regional Entities.</p> <p>217: Agree that the 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 effectively, timely handling of Regional Entity caseloads, and furnish important data for the next Performance Assessment.</p>	<p>NERC and the Regional Entities continue to focus efforts on the development of a comprehensive and interrelated suite of metrics.</p> <p>Through the Enforcement Functional Group (EFG, formerly ESMWG) forum, NERC and the Regional Entities have worked together to develop a set of enforcement metrics for tracking of the ERO key compliance enforcement activities. A list of final metrics was agreed upon and a set of common parameters (i.e. business rules) was developed to ensure that metric measurements by NERC and the Regional Entities remained consistent. Parameters agreed upon included violation start date, dismissal date, violations active and in inventory among the Regional Entities and NERC.</p> <p>NERC and the Regional Entities developed four metrics that measure the performance of NERC and each of the Regional Entities with respect to enforcement processing. These metrics are as follows: (i) Caseload Index; (ii) Violations in Inventory; (iii) Violation Aging; and (iv) Mitigation Activity Aging.</p> <p>Future initiatives can take up discussion of additional metrics to add to this initial set, particularly in the areas of measuring enforcement quality and effectiveness.</p> <p>(1) The Caseload Index is a metric that computes the number of months that it would take to clear the violations that are either in the Regional Entity’s inventory, NERC’s</p>

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		<p>inventory based upon the respective average monthly processing rate over the preceding twelve-month period. This metric is useful in evaluating the efficiency of processing violations over time.</p> <p>(2) The Violations in Inventory metric is related to the Caseload Index but is also reported separately. It shows how many violations are in the ERO caseload. Month to month comparisons of violations in inventory can show how the workload of each Regional Entity, NERC, and ERO is changing.</p> <p>(3) The Aging metric identifies where older violations, which have not been filed with FERC or otherwise resolved, are located. The Violation Aging chart, which represents this metric graphically, takes all violations in the ERO inventory and shows by region how many violations were discovered in each year from 2007 to 2013.</p> <p>(4) The fourth metric, Mitigation Activity Aging, identifies the status of mitigation activity based upon the age of violations.</p> <p>NERC’s BOTCC receives quarterly updates on these enforcement metrics. The latest update was presented to the BOTCC in May 2014.</p> <p>The <i>ERO Enterprise Strategic Plan 2014-2017</i> includes ERO Enterprise performance metrics that will be initially used in 2014. These metrics are intended as indicators of the overall effectiveness of the ERO Enterprise in achieving its mission and the goals and objectives outlined in the <i>ERO Enterprise</i></p>
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		<p><i>Strategic Plan 2014-2017.</i> There are four overarching metrics focused on overall effectiveness in addressing BPS risks and improving reliability. In addition, there are a number of supporting measures that assess the effectiveness of the key operational elements of the ERO Enterprise. The Caseload Index and the Mitigation Activity Aging are included in these supporting measures.</p> <p>NERC reports the results of these metrics on an ERO Enterprise-wide basis, and also, as applicable, distinguishes results for NERC and individual Regional Entities.</p>
215	<p>NERC must provide training to Regional Entities and disseminate to each Regional Entity information and direction resulting from its review of proposed violations and penalties from all eight Regional Entities.</p>	<p>NERC conducts separate workshops for Regional Entity staff and industry members. The workshops are offered in February and September of each year. The workshop includes instructions and practical examples and exercises on compliance and enforcement issues including risk assessments under various Find, Fix, Track and Report (FFT), Spreadsheet Notice of Penalty, and Notice of Penalty scenarios.</p> <p>On August 29, 2013, NERC provided training to industry and Regional Entities on finding and analyzing available public NERC enforcement data in order to identify pertinent reliability issues and trends. The training described the raw and analyzed data available on the NERC website. It also showed where NERC’s compliance and enforcement trends documents, annual reports and directives could be found.</p> <p>NERC provides feedback and training to the Regional Entities on a monthly basis during its review of the proposed violations and penalties. This ongoing process allows NERC</p>

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		<p>and the Regional Entities to target specific issues applicable to each specific Regional Entity.</p> <p>NERC disseminates to each Regional Entity information and directions on pressing compliance and enforcement matters. For example, in 2013, NERC provided guidance on the FFT process twice. The first guidance document was disseminated in March and explained how to address risk in FFT situations. The document included an updated template and requirements for FFT filings. The second guidance was issued in July, following the Commission’s order approving NERC’s proposed enhancements to the FFT process. The guidance included a detailed description of the updated FFT process and associated FFT templates.</p> <p>Furthermore, NERC conducts periodic spot checks on various aspects of the Regional Entities’ processes and outcomes. For example, NERC conducted a spot check of letters of dismissals from the eight Regional Entities and disseminated issues identified during the spot check, and the potential areas of improvement. NERC developed standardized templates for letters of dismissals and distributed them to the Regional Entities along with its findings. NERC has also scheduled spot checks of mitigation plans and settlements agreements issued by the Regional Entities and will distribute appropriate guidelines based on its findings.</p>
216	Support the suggestions of the Regional Entities for the NERC Board of Trustees Compliance Committee to increase communications with Regional Entities regarding its decisions.	NERC has increased communications with the Regional Entities by providing various forums and channels for communication.

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		<p>NERC disseminates compliance information and guidance to the eight Regional Entities mainly through the Enforcement Functional Group (EFG) and the Compliance Monitoring Process Working Group (CMPWG), both of which include representatives from each Regional Entity. The groups meet regularly to discuss compliance issues with NERC, and receive written guidance directives, as appropriate.</p> <p>Furthermore, NERC Enforcement staff is available to answer questions and respond to inquiries from the Regional Entities. For example, in addition to the written guidance on the enhanced FFT process, staff has provided the Regional Entities with additional guidance and assistance throughout the new FFT implementation process.</p> <p><i>See also Attachment 3, pages 66-69.</i></p>
217	<p>Directs NERC to report 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.</p>	<p>The Regional Entities have implemented compliance data systems to collect and track violation data. These systems interface with NERC’s centralized database. At the Regional Entity level, these systems have enabled substantial enforcement processing efficiencies. At the NERC level, these systems have enhanced NERC’s ability to identify compliance and enforcement trends and compile accurate metrics.</p> <p><i>See Attachment 3, page 69.</i></p>

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<p>218-219</p>	<p>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.</p>	<p>NERC has not pursued a “warning ticket” mechanism. FFTs, for example, are remediated issues, are recorded, and can be used in a subsequent penalty matter.</p> <p><i>See generally</i> Attachment 3, pages 66-69.</p>
<p>134</p>	<p>NERC should continue to encourage, and develop incentives for, registered entities to self-report potential violations to the Regional Entities.</p>	<p>Whether or not the registered entity self-reported is a factor considered under the NERC <i>Sanction Guidelines</i>.</p> <p><i>See</i> Section 3.3.3 of the <i>Sanction Guidelines</i>, Appendix 4B to the NERC Rules of Procedure; and <i>Overview of NERC Activities and Accomplishments in the Five-Year Period</i>, pages 50-51, 55-56.</p> <p><i>See also</i> Attachment 1, page 29.</p>

**FEDERAL ENERGY REGULATORY COMMISSION  
DOCKET NO. RR14-\_\_\_**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION**

**ATTACHMENT 6**

**TO**

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

**NERC'S PLAN AND INITIATIVE FOR IMPROVING COORDINATED OPERATIONS  
ACROSS THE ERO ENTERPRISE**

**JULY 21, 2014**

# Improving Coordinated Operations Across The Electric Reliability Organization (ERO) Enterprise

February 2014

## **Purpose**

The purpose of this paper is to describe a vision and path forward to achieving a highly effective and efficient Electric Reliability Organization (ERO) Enterprise. The North American Electric Reliability Corporation (NERC) and eight associated Regional Entities<sup>1</sup> comprise the ERO Enterprise<sup>2</sup>. Part I provides background on why the ERO Enterprise was created in its current form, the unique aspects of the regulatory and delegation models applied, the relationship with the regulated industry and governance, benefits and successes of the ERO Enterprise approach thus far, and remaining opportunities.

Part II lays out a vision for a successful end state, and identifies changes needed to get there, including:

- Refining roles and responsibilities
- Coordinating strategic planning
- Coordinating operational decision-making
- Achieving consistency
- Sharing tools and infrastructure for delegated functions
- Coordinating communications

## **PART I – BACKGROUND**

### **Creation of the ERO Enterprise**

The mission of the ERO Enterprise is to ensure the reliability of the bulk power system in North America, including the continental United States and Canada, and the northern portion of Baja California, Mexico. Entities under the jurisdiction of the ERO Enterprise are the approximately 1,900 registered users, owners, and operators of the North American bulk power system – a system that serves the needs of over 334 million people, includes installed electricity production capacity of approximately 1,200 gigawatts, and operates 211,000 miles of high voltage transmission.

In the face of increasing competition and industry restructuring, and in the context of the August 2003 Northeast Blackout, the U.S. Congress added §215 to the Federal Power Act as part of the Energy Policy Act of 2005 to create the regime of mandatory reliability standards, to be developed and enforced in the U.S. by an Electric Reliability Organization (ERO) certified by, and operating under the oversight of, the Federal Energy Regulatory Commission. NERC was certified as the ERO in July 2006 and thereafter delegation agreements were established with the eight Regional Entities.

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<sup>1</sup> The Regional Entities are: Florida Reliability Coordinating Council (FRCC), Midwest Reliability Organization (MRO), Northeast Power Coordinating Council (NPCC), Reliability First Corporation (RFC), SERC Reliability Corporation (SERC), Southwest Power Pool Regional Entity (SPP RE), Texas Reliability Entity (TRE), and Western Electricity Coordinating Council (WECC).

<sup>2</sup> As used here, “ERO Enterprise” refers to the informal affiliation of NERC and the eight Regional Entities for the purpose of coordinating goals, objectives, metrics, methods and practices across statutory activities. The ERO Enterprise does not supplant obligations of each organization through statutes, regulations, and delegation agreements, but rather enhances coordination through collaborative decision-making and communications.

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Equivalent relationships have been sought and for the most part realized in Canada and Mexico. Prior to adoption of §215 in the U.S., the provinces of Ontario (in 2002) and New Brunswick (in 2004) adopted all reliability standards that were approved by the NERC Board as mandatory and enforceable within their respective jurisdictions through market rules. NERC presently has legislation in place or memoranda of understanding with governmental authorities in Ontario, New Brunswick, Nova Scotia, Québec, Manitoba, Saskatchewan, and Alberta, and with the National Energy Board of Canada<sup>3</sup>.

### Regulatory Model

When enacting legal authority for mandatory and enforceable reliability standards, Congress chose the model of audited self-regulation<sup>4</sup>, as reflected in the consensus legislative discussions. Audited self-regulation means congressional or agency (in this case FERC) delegation of power to a private organization to implement or enforce laws or agency regulations with respect to the regulated entities, with powers of independent action and review retained by the delegating agency. The advantage of the audited self-regulatory model is that the statute and agency rules are supplemented and enforced by those entities most directly involved in the regulated activity, which may provide more detailed knowledge of the operational or technical aspects of the regulated activities.

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<sup>3</sup> NERC standards are mandatory and enforceable in Ontario and New Brunswick as a matter of provincial law. The provincial law now provides for mandatory compliance and enforcement with Reliability Standards. Manitoba has adopted legislation setting out a framework for standards to become mandatory for users, owners, and operators in the province. In addition, NERC has been designated as the “electric reliability organization” under Alberta’s Transportation Regulation, and certain reliability standards have been approved in that jurisdiction; others are pending. NERC and the Northeast Power Coordinating Council (NPCC) have been recognized as standards setting bodies by the Régie de l’énergie of Québec, and Québec has the framework in place for reliability standards to become mandatory. NERC standards are now mandatory in British Columbia and Nova Scotia.

<sup>4</sup> U.S. Code of Federal Regulations, Title 1, Chapter III, Part 305.94-1: “Audited self-regulation is defined as congressional or agency delegation of power to a private self-regulatory organization to implement and enforce laws or agency regulations with respect to the regulated entities, with powers of independent action and review retained by the agency. This self-regulatory organization is often an association of regulated entities formed for the explicit purpose of self-regulation. Audited self-regulation is an alternative for Congress to consider in legislating any regulatory program. Properly implemented and monitored, a program of audited self-regulation may effectively advance the statutory objectives consistent with the public interest and the interests of the regulated entities. In certain circumstances, this approach may result in better regulation because the agency’s statute and rules are supplemented and enforced by those entities directly involved in the regulated activity, which may have more detailed knowledge of the operational or technical aspects of that activity. The regulatory program also may be more effective because it can be tailored to the individual industry or group. In addition, the agency’s regulatory enforcement costs may be reduced by this approach, although such cost reductions should be considered only if they can be achieved without eroding the effectiveness of enforcement. On the other hand, audited self-regulation may present the significant risks of uneven enforcement, capture of the regulators by the regulated industry, and creating barriers to entry or competition. Where the potential for institutional self-interest is too great, self-regulation is undesirable. Other risks can be lessened by requiring the self-regulatory organization to establish and follow procedures similar to those that would be applicable if the self-regulatory organization were an agency. For these procedures to work, effective interest groups must exist, and must have access to the agency, to raise concerns about the conduct of the self-regulatory organization. And of course, the agency itself must vigilantly oversee the activities of the self-regulatory organization and of the regulated entities themselves.”

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As the international, multi-jurisdictional ERO, NERC is authorized to:

- Propose, monitor compliance with, and enforce mandatory reliability standards for the North American bulk power system, subject to regulatory oversight and approvals of FERC in the U.S. and applicable authorities in Canada;
- Conduct near-term and long-term assessments of the reliability and future adequacy of the North American bulk power system;
- Certify bulk power system operators as having and maintaining the necessary knowledge and skills to perform their reliability responsibilities;
- Maintain situational awareness of events and conditions that may threaten the reliability of the bulk power system;
- Coordinate efforts to improve physical and cyber security for the bulk power system of North America;
- Conduct detailed analyses and investigations of system disturbances and unusual events to determine root causes, uncover lessons learned, and issue relevant findings as advisories, recommendations, and essential actions to the industry; and
- Based on lessons learned identify the potential need for new or modified reliability standards, improved compliance, or other initiatives.

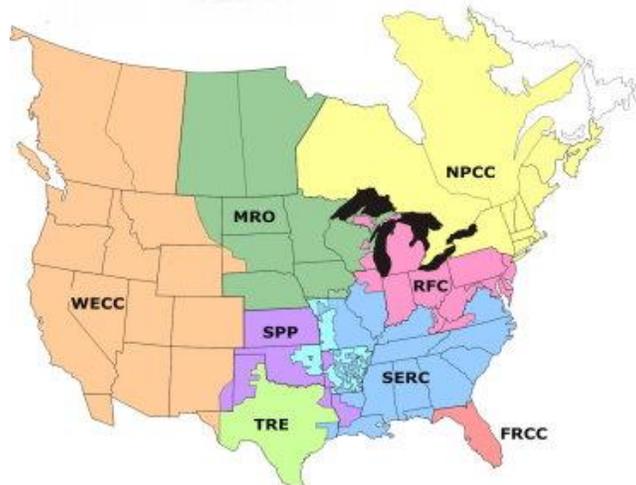
In executing its responsibilities, NERC delegates certain authorities to eight organizations, the Regional Entities. Under NERC's oversight, the Regional Entities perform certain aspects of the ERO functions through delegation agreements, which are approved by FERC in the U.S. The delegation agreements with each Regional Entity address, among other things: (i) development of regional reliability standards, (ii) monitoring compliance with and enforcing mandatory reliability standards (both North American wide and regional), certification of registered entities, registration of owners, operators and users of the BPS, (iii) reliability assessment and performance analysis, (iv) training and education, (v) event analysis and reliability improvement and (vi) situation awareness and infrastructure security.

The current regional delegation model was first adopted in 2006, with a January 1, 2007 effective date for the initial delegation agreements between NERC and the Regional Entities. It was at this time that NERC began approving regional business plans and budgets, and funding the statutory activities of the Regional Entities through revenues collected from Load-Serving Entities. NERC's oversight role and the obligations of the regions are addressed in NERC Rules of Procedure and the delegation agreements.

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As shown in Figure 1, the international ERO footprint covers North America and is comprised of eight reliability regions.



**Figure 1 – Map of Regional Entities within NERC**

The audited self-regulation model adopted by Congress and the further delegation of statutory functions to Regional Entities present some important benefits and opportunities, but also some challenges. Audited self-regulation results in better regulation because, “[t]he agency’s statute and rules are supplemented and enforced by those entities directly involved in the regulated activity, which may have more detailed knowledge of the operational or technical aspects of that activity.”<sup>5</sup> This has been the experience with NERC and the Regional Entities since the inception of the ERO in 2006.

The ERO Enterprise is able to directly engage and leverage local and regional technical expertise regarding reliability matters, drafting and commenting on reliability standards, reviewing system events and determining lessons learned, assessing reliability performance and future reliability impacts of emerging issues, just to name a few activities. There exist complex risks, with numerous interdependencies at both the regional and international level, and the regional structure allows us to leverage the expertise across this entire footprint. The regional structure brings greater input from industry experts than could be accommodated in a single ERO organization, and encourages senior utility executive involvement on Regional Entity boards. Experts participate in regional technical committees, providing local and regional system knowledge and experience essential in maintaining a strong technical understanding of the reliability of the interconnected bulk power system. Industry engagement in NERC and the Regional Entities builds commitment, or buy-in, from industry in successful reliability outcomes. The current model can foster reliability excellence whereas a traditional top down regulatory model would tend to enforce reliability adequacy.

Bulk power system risks are dispersed, interdependent and can be asymmetrical across North America. Combining centralized and regional activities is well-suited to identifying and addressing these risks. Given the highly technical and intricate complexities of planning and operating the bulk power system – and given that an interconnected system is a “system of systems” - the concept of local, regional and wide-area views

<sup>5</sup> U.S. Code of Federal Regulations, Title 1, Chapter III, Part 305.94-1

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on risk is necessary and has been long accepted.<sup>6</sup> It follows that a “top-down” view of interconnected system risks and a “bottom-up” view of individual system risks is most effective at triangulating the priority risks to be addressed at both a local and interconnection-wide level.

With active engagement of industry experts in the ERO Enterprise technical committees and activities, it is important to maintain effective governance to ensure entities that are regulated do not unduly influence the determination and/or conclusions of the ERO Enterprise. Balance is achieved through governance controls including, but not limited to: an independent board at NERC and segregation of responsibilities and decision-making, especially on compliance and enforcement matters; governance measures at the regions, such as legal and operational separation from registered entities and in some regions the inclusion of independent directors; and, maintaining compliance and enforcement matters as confidential and separate from direct stakeholder participation. Independence and objectivity of NERC and the Regional Entities are further enhanced by government authority oversight, including periodic audits. This layered delegation approach – government to NERC, and NERC to Regional Entities – allows much more active participation by industry participants at the regional level, while maintaining independent oversight by NERC and applicable government agencies.

The distributed governance structure of the ERO Enterprise, with NERC and each Regional Entity having its own board, understandably presents challenges in coordinating ERO Enterprise activities and priorities. At the same time, this distributed governance provides an opportunity to create reliance and trust of the overall enterprise through greater transparency and accountability among all nine entities – the nine entities are mutually interdependent and must be transparently accountable to each other and their respective stakeholders to ensure overall success.

It is also significant that the North American bulk power system is an interconnected, international grid. A single integrated forum – the ERO Enterprise working at the North American and regional levels – ensures that the interests of multiple governmental jurisdictions and their stakeholders can be considered and addressed. Outcomes that are mutually satisfactory across all of North America can then be taken by NERC to the applicable regulatory authorities for approval, without concerns over intrusions by governmental agencies in one country over another country’s sovereignty.

### **ERO Enterprise Progress and Accomplishments Through 2013**

The ERO Enterprise has been effective in mitigating a number of important risks to the reliability of the bulk power system since 2006. Results do matter and the achievements since 2006 support the notion that the delegation model works. Using the ground-up approach, the ERO Enterprise has taken advantage of the ability of the Regional Entities to uncover trends and leading indicators of potential reliability problems, such as protection system misoperations and transmission facility right-of-way clearances. The ERO Enterprise was able to use this information to craft strategies to prevent these potential risks from causing actual harm to the bulk electric system. The ERO Enterprise has developed a system of bulk power system reliability metrics based on actual measured performance of the grid. This system of metrics is driven by analysis of event reports, transmission and generator outage data, and relay misoperations. The most recent annual *State of Reliability 2013* report indicates the bulk power system remains reliable and that certain risks have been reduced. Excluding weather-related events, the number of significant system events

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<sup>6</sup> For example, over forty years ago, regional reliability organizations were formed; over fifteen years ago, regional reliability coordinators were formed.

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resulting in loss of firm load decreased from nine per year on average from 2008 to 2011 down to two events in 2012, and a similar trend is continued through 2013.

Transmission outages caused by grow-in of vegetation, a major cause of the 2003 and several preceding large blackouts, have been virtually eliminated in recent years. NERC introduced a new mandatory standard in 2007 requiring transmission owners to implement vegetation management programs to maintain safe clearances. Strong enforcement actions by NERC and Regional Entities were effective in eliminating grow-ins and reducing the risk of cascading failures initiated from vegetation contacts as seen in the past. Industry experts helped to shape the standard, including a recent update to focus on reliability performance outcomes and risk management while maintaining practicality.

Working with industry system protection experts, NERC developed new relay-loadability requirements for transmission line relays. In the August 2003 Northeast Blackout, over 300 high voltage transmission lines tripped in a high speed cascade due to a previously little understood issue with the relay settings, even though no fault conditions existed on those lines. Industry experts were able to determine that the settings could be modified to prevent a similar future cascade and the requirements were included in new reliability standards. The risk of repeating this mode of uncontrolled high speed cascade of transmission lines has been substantively mitigated.

Industry experts have worked with NERC and the Regional Entities to develop new standards for frequency response to address decades of gradual decline in resources available to respond to frequency disturbances. Experts are currently developing technical methods and tools to mitigate the risks and potential consequences of solar magnetic disturbances. Guidelines have been developed and training implemented to prevent a repeat of a February 2011 loss of generation and firm load in Texas due to extreme cold weather. These are but a few examples of how direct engagement of industry experts through the ERO Enterprise can result in reliability improvements that benefit the public.

The compliance monitoring and enforcement program implemented by NERC and the Regional Entities has been effective in ensuring that compliance violations are identified and mitigated, thereby reducing reliability risk. The ERO Enterprise processed 5,115 confirmed violations of Reliability Standards through 2012 year end. Of these, 85% were deemed to present minimal risk to bulk power system reliability, 13% presented moderate risk, and 2% high risk. The *State of Reliability 2013* report indicates that risks due to noncompliance have trended significantly lower in recent years. NERC and Regional Entities have encouraged self-reporting of violations and timely mitigation – to date, more than 70% of all violations are self-identified by registered entities.

The ERO Enterprise has implemented uniform procedures for compliance monitoring and enforcement, including penalty guidelines, and continues to focus on improving consistency of implementation. FERC has approved the vast majority of notices of penalty without comment since 2008. In recent years, the ERO Enterprise developed greater efficiencies in processing enforcement issues through the find, fix and track (FFT) and spreadsheet notice of penalty (SNOP) initiatives. Work is now continuing to develop the Reliability Assurance Initiative (RAI) to ensure risks are effectively and efficiently addressed through the compliance monitoring and enforcement programs. RAI specifically seeks to improve the reliability of the BPS due to enhanced focus on high reliability risks and registered entities' internal controls relative to those risks, performance of self-assessments and corrective actions, and enhancement of the enforcement processes to process violations in accordance with risk.

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The ERO Enterprise has implemented registration criteria to identify entities that can have an impact on bulk power system reliability. There are approximately 1,900 entities registered and an even greater number of entities engaged in reliability activities through the ERO Enterprise. Industry engagement is significantly greater than the number of entities that historically were engaged in NERC during the voluntary era.

The ERO Enterprise has developed a systematic approach to capturing and analyzing bulk power system events. Industry has been very responsive to a program established in 2011 for the voluntary reporting of system events, including sequence of events, root causes, and mitigating actions. Though voluntary, the ERO Enterprise is experiencing nearly 100% participation by industry. The information arising from this program is valuable in identifying reliability risks and trends and in developing lessons learned and mitigating actions for industry.

Since the initiation of the ERO model, major progress has been made in securing critical infrastructure in the bulk power system. Mandatory cyber security standards have been established, and the ERO Enterprise has actively monitored compliance with these standards, noting significant numbers of compliance gaps mitigated by registered entities.

Finally, NERC and the Regional Entities have developed electronic tools, forms, and templates to support information management across the ERO Enterprise, and NERC and Regional Entities are looking to standardize these tools to drive more efficiencies

The outcomes outlined above are a sampling of the positive results that have been developed within the current ERO Enterprise framework, demonstrating that the ERO Enterprise model based on the principles of audited self-regulation and delegation to Regional Entities can be and has been effective in improving reliability and serving the public interest.

### **PART II – VISION FOR A SUCCESSFUL END STATE**

#### **A Vision for the ERO Enterprise**

Despite the successes outlined above, the current nine-entity model is not without challenges and risks. The formative years, identified as 2006 through 2013, were focused mainly on achieving the substantial work at hand, guided by the rules of procedure, delegation agreements, and extensive amounts of coordination of activities. With the experience gained and the maturation of the ERO Enterprise, however, it is clear that substantial benefits can be envisioned for an end state.

At its core, the ERO Enterprise must exercise effective and well-coordinated reliability oversight that mitigates reliability risks to the bulk power system. The ERO Enterprise programs must be effective at the mission of ensuring risks are addressed to maintain reliable operations of the bulk power system.

The end state should include more clarity around the roles and responsibilities between NERC and the Regional Entities which will lead to better coordination of goals, more uniform work processes/tools, and performance measures across the enterprise, along with an understanding that all parties comprising the ERO Enterprise must be vested in each other's success. These improvements will create a framework for higher levels of productivity, less duplication, and greater efficiency through more standardization.

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The ERO Enterprise must adhere to certain principles. The ERO Enterprise must:

- Apply technical expertise that is focused on risks to the bulk power system and important reliability outcomes;
- Achieve results and methods across the enterprise that are predictable, consistent and timely;
- Share common goals, objectives and measures of success;
- Build relationships that are founded on candor and mutual trust, openness and cooperation;
- Apply collaborative decision-making;
- Ensure efficiencies, minimize duplication and any activities not affecting reliability outcomes;
- Avoid undue burden, discrimination, or capriciousness affecting regulated entities.

The remainder of this paper identifies a path forward to achieving excellence in the oversight and execution of statutory functions and mitigation of bulk power system reliability risks. This discussion is organized in the following areas:

- Clarifying and refining roles and responsibilities
- Coordinating strategic planning
- Coordinating operational decision-making
- Achieving consistency
- Sharing tools and infrastructure for delegated functions
- Coordinating communications

Each section describes the key goals that must be achieved to implement the ERO Enterprise vision for effective, coordinated operations across the enterprise.

### **Clarifying and Refining Roles and Responsibilities**

Achieving the vision requires a clear understanding of the roles and responsibilities of both NERC and the Regional Entities and a clear set of expectations in the execution of the activities performed across the ERO Enterprise.

As the single ERO certified in the U.S. and sanctioned in Canada, NERC has unique responsibilities within the nine-entity ERO Enterprise. NERC is accountable to be the program designer and architect for statutory functions, setting necessary qualifications and expectations for the performance of delegated activities. NERC should respect and be responsive to the expertise and views of Regional Entities, whose staffs have a technical understanding of regional operations, are experienced in the direct interactions with registered entities, and promote the entire ERO Enterprise as one collective thought leader in setting direction and expectations. NERC should also set expectations, provide necessary training and coaching and assess performance of delegated statutory functions.

These roles suggest different qualifications and activities for NERC staff than in the past. Rather than observing regional activities and providing feedback or reviewing and approving final results submitted to

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NERC, the emphasis needs to shift toward a different set of skills involving program design and setting management controls to ensure effectiveness. Essential capabilities at NERC include identifying personnel qualifications for program implementation, which itself suggests senior and experienced qualifications, and being able to determine when program adjustments are needed to address bulk power system risks or program risks.

All of this suggests NERC should design its oversight of program areas to encompass program design and development, operational oversight and leadership, coaching and support, and ongoing assessment with feedback to the corresponding regional programs. The goal is to add value and ensure the successful performance of the enterprise. The NERC program staffs must be experts in their field and competent program designers and managers, and teachers and coaches for the regional program staffs. The NERC staff needs to be able to recognize risks, to guide the program and introduce necessary adjustments along the way.

Furthermore, given the distributed and regional nature of the risks being managed and the external environment of a diverse industry across North America, this leadership role must be conducted in a consultative fashion. While NERC has overall responsibility for program design, the goal is to leverage the expertise across the ERO Enterprise in developing future program enhancements. Once designed, the program must be implemented by all Regional Entities consistently in accordance with the approved design. Any variations that do exist must be planned and coordinated for the overall betterment of the ERO Enterprise, within existing fiduciary responsibilities.

NERC is positioned to review data and information from all of the Regional Entities to identify trends and leading indicators of potential reliability risks, develop responsive strategies, and communicate this information to all of the Regional Entities to ensure a uniform, consistent manner of implementation. As the ERO Enterprise matures, process controls should be well established and routinely monitored, allowing greater emphasis on identifying and addressing threats and risks to reliability of the bulk power system.

Implementation of the oversight role must include well-defined and transparent procedures and controls so that all parties understand the qualifications and expectations surrounding execution of delegated functions and how results will be measured. Just as the delegated activities should apply consistent methods, practices, procedures, and tools, the oversight layer should also not be ad hoc, arbitrary, or opaque. It must be known and documented in advance, complete with reporting requirements and performance measures. NERC should be providing ongoing feedback to Regional Entities on patterns and trends, affecting both bulk power system risks and enterprise risks.

ERO Enterprise program oversight should include the following ***essential oversight elements*** to be provided by NERC in consultation with Regional Entities:

- An overall program design indicating the program purpose and goals, and design of controls to manage risks;
- Documentation of common methods, practices and procedures to be applied in the program and performance expectations for each;
- Statements of necessary qualifications of key positions within the regions for conducting certain statutory activities (*e.g.*, for auditors and investigators), and identification of any standards for critical positions;

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- Training of NERC and Regional Entity staff for select positions in the conduct of delegated functions;
- A documented and transparent set of process controls and measures to assure delegated responsibilities are properly completed, and to assess the effectiveness of the delegated activities in assess effectiveness of delegated activities in managing bulk power system and enterprise risk; and
- Periodic reporting of results and feedback to Regional Entities on trends and providing opportunities to enhance consistency and effectiveness of results.

The objective is to integrate these elements into the ERO Enterprise operating model on a consistent basis across all the program areas. This is also an area where NERC executive management needs further work on a best design for managing functional area relationships with the regions.

The success of the ERO Enterprise requires NERC and the Regional Entities to recognize that each delegated activity is part of a single overall ERO Enterprise program, such as compliance assurance, enforcement, reliability assessment, or event analysis.

While NERC is responsible for the program design, the Regional Entities are responsible for providing insight and input into the overall design and development of each program area. In support of this, NERC should ensure there are mechanisms for the Regional Entities to provide meaningful insight and direction for incorporation into program design. Regional Entities should adopt conforming methods, practices, and procedures identified in the program design, with exceptions limited to those areas identified in coordinated plans for the purpose of promoting innovation or addressing material regional variations. Regional Entities need to report results using the tools provided, and consistent with reporting requirements identified in the program. Regional Entities should be receptive to feedback from NERC and making responsive adjustments. Regional Entities should ensure staffs are provided the training and development necessary to meet the qualifications required to implement the ERO Enterprise programs.

Regional Entity and NERC staff have an obligation to meet the highest ethical and professional standards in conducting ERO Enterprise work, including independence, objectivity, and providing the best available expertise for addressing bulk power system risks. Regional Entity staff should operate as part of the broader ERO Enterprise and communicate solidarity with the overall enterprise-wide program objectives, methods, and practices.

The ERO Enterprise is aimed at achieving the following goals:

***Action item 1 – NERC includes in its review of Regional Entity business plans adequacy of resources and alignment of the plans for achieving delegated function objectives and outcomes described in the three-year plan.***

***Action item 2 – NERC, in collaboration with Regional Entities:***

- a) develops a comprehensive overarching design and set of controls, reporting requirements, and feedback mechanisms for each delegated statutory function, including the essential oversight elements listed above;***
- b) reevaluates its organizational structure and leadership qualifications necessary to provide effective design and oversight of statutory activities;***

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- c) identifies functional qualifications for select delegated activities, such as auditors and investigators; and,*
- d) adopts risk-based approaches to monitoring performance of delegated functions and providing effective feedback and coaching to continuously improve overall ERO Enterprise performance;*

### **Action item 3 – Regional Entities:**

- a) work in a coordinated fashion to support NERC in the development of comprehensive functional program designs and controls;*
- b) adapt existing regional programs for delegated functions to conform with emerging program designs provided by NERC; and*
- c) ensure Regional Entity staffs meet qualification and training requirements.*

To improve the delegation process, NERC and the Regional Entities should work together to update and refine the delegation agreements, which are due for renewal in May 2015, to provide a clearer division of responsibilities, both related to the division of performance of statutory functions and oversight of those functions, and to provide effective mechanisms to resolve routine differences.

### **Coordinated Strategic and Business Planning**

There has been significant progress, achieved through collaboration among senior executives of NERC and the regions, in developing a shared, rolling three-year strategic plan for the ERO Enterprise. Adoption of the ERO Enterprise goals and objectives into business plans across all of the regions has been varied and incomplete. Common performance measures are just emerging and have not yet been adopted into performance management systems across the ERO Enterprise.

The end state for enabling excellence in the execution of statutory reliability activities is that NERC and the eight Regional Entities must work from a common strategic plan, with success measured by a shared set of performance metrics. A common strategic plan and measures does not suggest performing every activity in lock step, but every activity must be coordinated across the enterprise and must be performed consistently. For example, several regions have been working on pilot programs to develop and demonstrate RAI methods as well as the transition to the CIP Version 5 standards.

***Action item 4 – NERC and Regional Entities develop and maintain a joint three-year strategic plan for the ERO Enterprise describing the goals and deliverables for statutory functions and this plan should guide the development of each Regional Entity’s annual business plans. Additional goals and deliverables that are complimentary or supplemental to the strategic plan may be developed at the Regional Entity level.***

***Action item 5 – NERC and Regional Entities develop and transparently report results based on a common set of performance measures focused on bulk power system reliability outcomes and effectiveness of the statutory programs. These measures are considered in the performance management program at each entity.***

### **Coordinated Operational Decision-Making**

The current model allows and depends on successful delegation of activities. Although statutory functions are delegated, there remains substantial need to coordinate operational decisions that arise in the execution of these duties.

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NERC and the Regional Entities have institutionalized a number of mechanisms to coordinate operational decisions across the enterprise. Note that this discussion and the ensuing recommendations focus on operational decisions that need to be made regarding implementation of statutory functions across the ERO Enterprise and is not intended to reach into the internal management decisions of each organization.

For policy and directional decisions, NERC and Regional Entity CEOs have been meeting periodically for most of the lifetime of the ERO Enterprise although more sporadically in the beginning. In the most recent two years, coordination meetings have been at least monthly, including 6-8 face to face meetings annually. There is an agreed upon protocol for reaching consensus decisions. Although this process has seen partial success, it is still a work in progress. The group is still working on issues such as what level of decisions should be brought to the CEO group for consensus decisions.

In addition to senior leadership coordination, there are approximately two dozen working groups collaborating across various functional areas of the ERO Enterprise. There are groups coordinating compliance monitoring and audits, enforcement, legal, finance, registration, and reliability assessments, just to name a few. Generally these groups are effective in working out common templates for information sharing and resolving common practices and methods at the working level. As with the senior leadership group, most of these groups have achieved good results and are effective in coordinating practices, methods and formats, but there remain opportunities for improvement. One challenge is shifting these working groups from being mainly self-directed problem solvers to being more focused on the strategic plan objectives and having accountability to the CEO leadership team. Also there are concerns that need to be addressed regarding the magnitude of the staff resource commitments stemming from these coordinating activities.

The preferred approach is to proactively establish a more collaborative model and recognize that regional staffs for most functions typically have valuable first-hand experience in implementing the activities on the front lines with registered entities. However, success depends on collaboration that results in timely and effective decisions that all entities in the enterprise agree to implement, and the avoidance of unilateral decision-making that steers portions of the ERO Enterprise off into alternative methods and practices for delegated functions.

***Action item 6 – ERO Enterprise senior leadership (ERO-Executive Management Group or “ERO-EMG”) continues maturing the collaborative decision-making process and setting the direction and policy for the enterprise as well as driving this collaboration throughout the ERO Enterprise organizations.***

***Action item 7 – All nine ERO entities abide by the joint enterprise decisions of the ERO-EMG, and the NERC CEO should make final determinations if consensus is otherwise not achievable for an action that is required.***

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### Achieving Consistency

Consistency of methods, practices, procedures, and tools has been a challenge since the onset of the ERO Enterprise. Consistency is defined by the ERO Enterprise as the use of common methods, practices and tools. The principle initial challenge was that the majority of processes were new and NERC did not foresee the importance of developing common processes and procedures in effective oversight. Instead NERC relied on the Rules of Procedure and the Delegation Agreement to deliver a basic level of consistency which has failed to meet the expectations of industry. Therefore, given the lack of common processes and procedures from NERC, Regional Entities developed their own methods, practices, procedures and tools. While there has been significant progress in working out substantive differences through the leadership and working group processes described previously, there also remain significant variations in methods, practices, procedures, and tools across all nine entities. Today, the biggest challenge in addressing consistency is gaining common agreement on processes and procedures with the backdrop of years of institutionalized differences among NERC and the Regions. Over the past few years there has been significant work toward converging disparate practices across the enterprise. The recent RAI activity, for example, has resulted in some convergence of methods and practices in compliance. In 2013, joint projects saw the completion of a common auditor checklist and an auditor handbook.. A common business process has been developed for managing exceptions to the Bulk Electric System definition. Regions are implementing a common event analysis program and root cause analysis tools.

Some convergence has also been initiated through the use of common electronic tools. Early in the formative years of the ERO Enterprise some of the regions began to deploy common portals to manage compliance information. While these tools helped drive more consistent reporting of results from the regions, even today all nine entities are not using the same information management tools. Tools and infrastructure are covered in more detail in the next section.

Therefore, progress has been made but if common methods, practices, procedures and tools are the yardstick, the enterprise remains very immature. The ultimate success of the ERO Enterprise depends on there being one compliance program, one enforcement program, one event analysis program, etc. Regulated entities will have greater confidence and trust in the ERO Enterprise if they believe their regulatory oversight is not subject to arbitrary variations and possible discrimination from one region to the next. Outcomes will be more predictable and consistent if each statutory function is operated in a unified fashion across the ERO Enterprise. Outcomes will also be more readily measurable to demonstrate the reliability impacts and benefits of the enterprise programs. In the long term, getting past the transition from legacy approaches, there will be significant efficiencies. Such a transition requires the development of a core set of common methods, practices, procedures, and tools, which are principally the responsibility of NERC to produce, but in collaboration with Regional Entities.

Achieving consistency in the end state does not necessarily require identical internal procedures at each Regional Entity, although efficiency would dictate there should be more commonality than exists today. Consistency does not require that each Regional Entity produce identical outcomes given a particular set of circumstances. However, consistency does mean that the approach, methods and practices are the same across the ERO Enterprise and that outcomes produced from the application of local and regional expertise and judgment of the Regional Entity staff are fair, reasonable, and without bias. The goal is consistent methods, practices, procedures and tools that deliver fair and reasonable outcomes.

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While consistency is desired, the ERO Enterprise must be flexible to permit progress through innovation. Therefore, some variations may be necessary in the interest of progress. However, Regional Entity and NERC leadership need to be prepared to adapt to new approaches, methods, and practices. Some regional variations can actually have value, when implemented on a planned and coordinated basis. Differences for the purpose of testing new approaches, such as during the current RAI pilots and CIP Version 5 pilots, can be helpful in advancing innovation and experimenting with alternative methods. There may also be appropriate variations due to regional differences. An example would be the unique framework in Texas for involving the utility commission in review of enforcement actions. The drive to consistent methods, practices, procedures and tools should not inhibit innovation and the emergence of continuous learning and adaptation. However, managing the balance between consistent approaches and regional differences driven by necessity or creative adaptation should not succumb to the tendency to hold tightly to legacy methods. This shift must remain under the close scrutiny of the ERO-EMG, with accountability for progress to the respective boards, and all entities must be prepared to adopt changes to drive to more consistent methods, practices, procedures, and tools.

***Action item 8 – With NERC leading, the ERO Enterprise develops a core set of methods, practices, procedures, and tools to support unified implementation of the major statutory functions of NERC. In doing so, the ERO Enterprise commits to put the best talent available throughout the collective organizations to achieve this goal.***

### **Sharing Tools and Infrastructure for Delegated Functions**

As previously described, the infrastructure and electronic tools used by NERC and the eight Regional Entities to implement delegated functions began the ERO era as nine islands. In 2008, the Regional Entities started collaborating on the sharing of portals in an effort to converge onto best practices and provide efficiencies. From this effort emerged two primary platforms for the management of information to support delegated functions. There are two systems which support regional CMEP work:

- OATI webCDMS. The Compliance Data Management System (CDMS) was internally developed by MRO and SPP during the voluntary compliance era of standards. The system was transferred to OATI, a Minneapolis-based software company, in 2008 and became webCDMS. The OATI webCDMS is used by MRO, RFC, WECC, TRE and SPP.
- Guidance. A portal system initially developed by SERC through Guidance a software company in Southern California. SERC, FRCC, and NPCC use the Guidance system.

These early implements were principally focused on compliance information management.

Beginning in 2009, NERC became engaged and built the Compliance Reporting and Tracking System (CRATS) as a further development of the Guidance portal solution. An interface was built to allow data from the CDMS solution to flow into CRATS. Since this time a majority of the regions use the CDMS solution, further emphasizing the importance of this data interface. For several years the flow of compliance information was subject to breakdowns and was very labor intensive for NERC and regional staffs to find the disconnects blocking the consistent flow of compliance information. In late 2012 and 2013 NERC contracted with OATI to manage the CRATS system and staffs across the enterprise were able to resolve the vast majority of information disconnects so that the compliance information flow today is reasonably satisfactory and consistent, albeit built on a patchwork underlying system.

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During this evolution, each entity of the enterprise developed other tools as needed to implement activities. For example, NERC developed a tool for maintaining records of the standards registered ballot body and for the conduct of ballots on reliability standards. There are portals at NERC and some of the regions for issuing alerts and tracking recommendations. For the most part, these various applications were developed in isolation from other applications, using various contractors or using in-house resources. Many of these applications are running to the end of their lives and becoming increasingly difficult to maintain at an expected level of functionality.

In 2011 a shift started to take place from the top. The senior leadership across the ERO Enterprise began to articulate a common vision in support of unifying and modernizing the infrastructure and applications needed to support NERC statutory functions. Arriving at an integrated set of applications for management of information in each of the principle delegation areas would enable the enterprise to leverage future efficiencies and eliminate manual data manipulation and validation that is prevalent in the existing tools. Integrated applications across the enterprise would also lead to greater consistency and trust in the NERC processes, and registered entities would see a more seamless interface on which to manage all of its interactions with the ERO Enterprise. Another benefit, lacking today, would be the sharing of information across functional activities, such as information from event analysis and compliance providing useful feedback to standards development.

As part of this shift, NERC hired a contractor in 2011 to conduct a comprehensive study of the ERO Enterprise functional processes and needs. The final report at the end of 2011 led to the formation of an ERO Enterprise Project Management Organization (PMO) that was staffed by NERC but focused on enterprise-wide applications and enabling infrastructure and support services. A first application, the bulk electric system (BES) exception management tool, has been developed and tested ready to handle the expected flow of industry requests in response to the new BES definition. Plans and projects are underway for enterprise-wide applications to manage reliability assessments, event analysis, and establish a common database for information sharing.

In parallel NERC is developing several applications that are uniquely tied to NERC's responsibilities, such as standards information management and balloting tools. The path forward is that, where appropriate, enterprise-wide tools are being developed by NERC through the PMO under the oversight of the ERO-EMG and NERC is developing compatible applications on the same platform for NERC-only activities.

The vision of a comprehensive set of integrated and seamless applications to support the core delegated functions of the ERO Enterprise is essential for the future success of the entire enterprise. The necessary sharing of information between Regional Entities and NERC is essential and the efficiencies and consistencies in methods and practices will be unachievable without the infrastructure to manage extraordinarily large volumes of data that need to be converted into useful information for the purpose of identifying and managing bulk power system risks. However, any enterprise-wide systems approach presents significant risk itself and requires that the projects be executed well and the resulting applications fully meet the needs of the enterprise. A usable, uniform set of tools will drive consistency and lower costs across the ERO Enterprise.

***Action item 9 - The ERO EMG develops ERO Enterprise IT Applications, where appropriate, to support common processes, to enhance the efficiency and effectiveness of Regional Entities' practices, to increase the consistency of the interface with registered entities, and to facilitate NERC's oversight function.***

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### **Coordinating External and Cross – ERO Enterprise Communications**

Communications are important to the effectiveness of the ERO Enterprise. Communications can help set expectations for registered entities and stakeholders and demonstrate a common and consistent approach for regulators and the public.

Starting in May 2013, the NERC Board of Trustees initiated a practice of meeting twice yearly as a group with all of the chairs and vice chairs of the Regional Entities. A portion of the meeting is conducted with the NERC and regional CEOs present, followed by a session in-camera. This high level outreach among the nine boards holds significant promise in communicating common purpose and direction, and sharing any concerns among the boards of the ERO Enterprise. These meetings will further help to ensure the mutual accountability previously described that is essential to the successful operation of an enterprise comprised of nine distinct organizations.

A communications working group has been active for several years, coordinating consistent messaging across the ERO Enterprise, particularly with regard to media relations, incident response, and external branding.

NERC and Regional Entities have also coordinated outreach to FERC Commissioners and staff, and Canadian governments. These efforts are typically coordinated through the NERC Office of External Affairs.

The more challenging aspect of coordinating communications is around the operations of the enterprise and key initiatives, such as RAI. Although recent efforts to coordinate key messages and direction have been successful, there remain too many instances of disjointed communications across the entire spectrum of the enterprise. This creates confusion and anxiety with stakeholders and rather than gaining support for necessary initiatives, it creates concern and pushback over the uncertainty of direction.

***Action item 10 – All parties of the ERO Enterprise, including leadership and staffs, convey shared and consistent messages from the enterprise perspective and communicate together to minimize messages emphasizing self-importance or uniqueness.***

***Action item 11 – NERC and Regional Entities continue the joint board coordination to ensure oversight and accountability of all elements of the enterprise, and should continue to refine and expand coordinated outreach to government entities in the U.S. and Canada, stakeholders, and media.***