

March 9, 2016

**VIA OVERNIGHT MAIL**

Sheri Young, Secretary of the Board  
National Energy Board  
517 – 10<sup>th</sup> Avenue SW  
Calgary, Alberta  
T2R 0A8

**Re: North American Electric Reliability Corporation Annual Compliance Monitoring and Enforcement Program Filing**

Dear Ms. Young:

The North American Electric Reliability Corporation submits this annual Compliance Monitoring and Enforcement Program filing.

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

Respectfully submitted,

/s/

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**BEFORE THE  
NATIONAL ENERGY BOARD**

**NORTH AMERICAN ELECTRIC )  
RELIABILITY CORPORATION )**

**NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION'S  
ANNUAL COMPLIANCE MONITORING AND ENFORCEMENT PROGRAM FILING**

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March 9, 2016

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ANNUAL COMPLIANCE MONITORING AND ENFORCEMENT FILING**

The North American Electric Reliability Corporation (“NERC”) submits this annual Compliance Monitoring and Enforcement Program (“CMEP”) filing for informational purposes. NERC prepared this filing in accordance with the Federal Energy Regulatory Commission’s (“FERC”) February 19, 2015, *Order on Electric Reliability Organization Reliability Assurance Initiative and Requiring Compliance Filing*<sup>1</sup> and its November 4, 2015, *Order Conditionally Accepting Compliance Filings*.<sup>2</sup>

This annual CMEP filing is organized as follows:

- **Section I – Executive Summary**
- **Section II – Risk-based CMEP Progress and Trends:** Describes the progress of the risk-based CMEP and discusses observed trends. Incorporates the attached [2015 ERO Enterprise Compliance Monitoring and Enforcement Program Annual Report](#) (“Annual

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<sup>1</sup> *North American Electric Reliability Corporation*, 150 FERC ¶ 61,108 (2015) (“February 19 Order”). In the February 19 Order, FERC conditionally approved the implementation of the risk-based CMEP, finding that the “overall goal of focusing ERO and industry compliance resources on higher-risk issues that matter more to reliability is reasonable.” *Id.* at P 2. FERC also directed NERC, among other things, to submit an annual informational filing, within one year from the date of the issuance of the order, to review the progress of the risk-based CMEP and to address a number of other specific topics regarding oversight processes and implementation assessment.

<sup>2</sup> *North American Electric Reliability Corporation*, 153 FERC ¶ 61,130 (2015) (“November 4 Order”). The November 4 Order conditionally accepted NERC’s May 20 and July 6 compliance filings and directed NERC to, among other things, include additional information in this filing addressing NERC’s risk-based CMEP oversight and the metrics designed to track risk-based CMEP performance.

Report”) and references relevant information contained in prior quarterly updates issued by NERC throughout 2015.

- **Section III – Interplay between Risk-based CMEP and Other Program Areas:** Discusses the interplay between the risk-based CMEP and other NERC program areas, including the feedback loop to the Reliability Standards development process.
- **Section IV – Internal Controls Evaluation:** Addresses FERC’s directive to discuss whether a baseline audit is needed to properly evaluate a registered entity’s internal controls when performing an Internal Control Evaluation (“ICE”).
- **Section V – Use of Learning Tools:** Addresses FERC’s directive to discuss how a Regional Entity assesses and factors into a registered entity’s risk assessment and audit scope that entity’s use of NERC Alerts, Lessons Learned, Reliability Guidelines, and other NERC learning tools.
- **Section VI – Oversight:** Describes NERC’s oversight processes and assessment of the implementation of the risk-based CMEP.
- **Section VII – Metrics:** Discusses the metrics NERC will track to measure the success of the risk-based CMEP.

## **I. EXECUTIVE SUMMARY**

In 2015, NERC and the eight Regional Entities made significant progress implementing the risk-based CMEP. This annual CMEP filing addresses the key activities that occurred in 2015, which are further discussed in the attached Annual Report. As indicated in the Annual Report, the risk-based CMEP has allowed the ERO Enterprise to focus on issues that matter more to reliability.

This filing also discusses how the interplay between CMEP and other program areas is being enhanced through the risk-based approach adopted by the ERO Enterprise.<sup>3</sup> As discussed further below, the risk-based CMEP promotes the information flow between compliance monitoring and enforcement activities to various ERO Enterprise programs and departments. This enhanced communication framework is central to identifying and managing Bulk Power System (“BPS”) risks, establishing ERO Enterprise priorities to focus compliance resources on higher-risk issues, and identifying and implementing lessons learned.

In 2015, NERC transitioned its oversight activities to align with the risk-based CMEP. Through oversight activities, NERC found that all eight Regional Entities are actively engaged in risk-based CMEP activities. Among other things, NERC found that compliance monitoring activities had a clear focus on reliability risks and minimal risk noncompliance categorized as Compliance Exceptions received consistent and appropriate treatment.

Lastly, the ERO Enterprise has begun to develop a number of ways to measure the effect of risk-based CMEP on BPS reliability and the success of the ERO Enterprise’s implementation of the risk-based CMEP. These metrics, which are described herein, will continue to be refined in collaboration with FERC staff.

## **II. RISK-BASED CMEP PROGRESS AND OBSERVED TRENDS**

In the February 19 Order, FERC accepted NERC’s commitment to submit an annual informational filing “reviewing the progress of the [risk-based CMEP] and considering any

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<sup>3</sup> The ERO Enterprise refers to the affiliation between NERC and the eight Regional Entities for the purpose of coordinating goals, objectives, metrics, methods, and practices across statutory activities. The operation of the ERO Enterprise does not conflict with obligations of each organization through statutes, regulations, and delegation agreements. The activities discussed in this report relate to compliance monitoring and enforcement performed in connection with United States registered entities. ERO Enterprise activities outside of the United States are not specifically addressed.

enhancements or expansions that may be necessary...[T]he informational filing would include observed trends by standard, region or other categories, as well as examples of matters treated as compliance exceptions.”<sup>4</sup>

**A. Progress**

The implementation of the risk-based CMEP and the progress made in 2015 are described in greater detail in the attached Annual Report. The Annual Report highlights key CMEP activities that occurred in 2015, provides information and statistics regarding those activities, and previews the ERO Enterprise’s 2016 CMEP priorities. The topics addressed in the Annual Report that are relevant to this filing are discussed here in summary form. The entire Annual Report is attached as Appendix A.

As noted in the Annual Report, the risk-based CMEP involves the use of an oversight plan framework<sup>5</sup> focused on identifying, prioritizing, and addressing risks to the BPS to enable the ERO Enterprise to allocate resources where they are most needed and likely to be the most effective. After completing the risk-based CMEP design in early 2015, the ERO Enterprise began initial implementation activities. Specifically, the ERO Enterprise (1) conducted **Inherent Risk Assessments** (“IRAs”) to review the inherent risks posed by individual registered entities to BPS reliability; (2) performed ICEs to evaluate whether registered entities have implemented effective internal controls; and (3) used various methods to process noncompliance based on risk (including the **Self-Logging** program and **Compliance Exceptions**). For example, during 2015, the ERO Enterprise conducted 331 IRAs and 51 ICEs. The ERO Enterprise resolved nearly 70% of minimal

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<sup>4</sup> February 19 Order at P 49.

<sup>5</sup> A visual representation of the risk-based framework is available at <http://www.nerc.com/pa/comp/Reliability%20Assurance%20Initiative/Risk-Based%20Compliance%20Monitoring%20and%20Enforcement%20Program%20Visual%20Overview.pdf>.

risk noncompliance in 2015 as Compliance Exceptions.<sup>6</sup> In addition, by the end of 2015, 42 registered entities had been approved to self-log. These registered entities represent nearly all of the reliability functions.

The ERO Enterprise also continued to maintain a consolidated Implementation Plan that provides guidance and implementation information common among NERC and the eight Regional Entities, including risks to the BPS (referred to as risk elements) to focus compliance monitoring. Overall, these activities supported compliance monitoring planning, focused the oversight of registered entities, and provided greater efficiency in enforcement activities. Other major milestones include training and educating ERO Enterprise staff regarding risk-based CMEP processes.

## **B. Observed Trends**

### **1. General Trends**

Over the course of 2015, NERC tracked noncompliance with the Reliability Standards at all risk levels to identify patterns, trends, and areas of focus. The review of this information helps to identify practices to assist in preventing similar noncompliance. As an example, in its [CMEP Quarterly Update for Q3 2015](#) (“Q3 2015 Update”), NERC reviewed serious risk violations occurring from 2007 on, and identified the Reliability Standards and Requirements most prevalent in such violations. In addition, NERC reviewed the non-Critical Infrastructure Protection (“CIP”) portion of the serious risk violations (93 violations) and identified high-level initial trends regarding common causes of such violations.

In the Q3 2015 Update, as well as in its Annual Report, NERC also reported on mitigation completion trends. NERC regularly tracks completion of mitigation associated with all

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<sup>6</sup> Additional detail on the use of various disposition tracks for noncompliance is also found in the Annual Report at pp. 13-16.



noncompliance to identify and understand any outstanding risks to the reliability of the BPS due to noncompliance with Reliability Standards. As indicated in those documents, registered entities continue to complete timely mitigation for the vast majority of noncompliance.<sup>7</sup>

Finally, NERC continues to track, in quarterly updates and in the Annual Report, levels of self-identification of noncompliance by registered entities. In 2015, registered entities self-identified 84% of the noncompliance.<sup>8</sup>

## **2. Compliance Exception Trends**

The use of Compliance Exceptions allows the ERO Enterprise to dispose of noncompliance posing a minimal risk to the reliability of the BPS efficiently, and enhance its focus on noncompliance posing a moderate or serious risk to BPS reliability. Throughout 2015, the ERO Enterprise has appropriately treated minimal risk noncompliance as Compliance Exceptions. Indeed, out of 741 instances of minimal risk noncompliance processed in 2015, the ERO Enterprise disposed of 514 as Compliance Exceptions. Other instances of noncompliance posing a minimal risk were processed through different disposition tracks based on the underlying facts and circumstances. For examples of instances of noncompliance posing a minimal risk that were not treated as Compliance Exceptions, please see the [CMEP Quarterly Update for Q1 2015](#) (“Q1 2015 Update”).<sup>9</sup> As a general matter, this resulted from the aggregated risk of the subject violations. The Q1 2015 Update also includes illustrative examples of matters treated as Compliance Exceptions involving CIP and Operations and Planning issues. As noted therein, and as can be

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<sup>7</sup> Annual Report at p. 34.

<sup>8</sup> *Id.* at p. 35.

<sup>9</sup> See also the CMEP Quarterly Update for Q2 2015 at <http://www.nerc.com/pa/comp/CE/Compliance%20Violation%20Statistics/Compliance%20Violation%20Statistics%20-%20Second%20Quarter%202015.pdf>. All of the quarterly updates published in 2015 can be found at <http://www.nerc.com/pa/comp/CE/Pages/Compliance-Violation-Statistics.aspx>.

seen in subsequently posted Compliance Exceptions, those matters posed a minimal risk to the reliability of the BPS.

### **C. Risk-based CMEP Enhancements**

There are no specific changes to the risk-based CMEP design or NERC Rules of Procedure being requested at this time. The ERO Enterprise continues to learn from its experience in implementing risk-based CMEP and may identify enhancements in a future filing. For example, it may be appropriate, in the future, to afford greater flexibility with respect to requirements applicable to monitoring of certain types of entities. It may also be appropriate to consider enhancements to the Self-Logging program that may be identified through the review process to be initiated in 2016.

### **III. INTERPLAY BETWEEN CMEP AND OTHER PROGRAM AREAS**

In the February 19 Order, FERC stated that “[t]he annual report should also address the interplay between the RAI program and other NERC program areas.”<sup>10</sup> FERC highlighted two areas of focus: (1) the feedback loop between the CMEP and the Reliability Standards development process, and (2) the analysis of BPS events. Below is a description of the relationship between the risk-based CMEP and the standard development process and Events Analysis.

Importantly, the interplay between the CMEP and other program areas, including Reliability Standards development and Events Analysis, is part of a broader ERO Enterprise-wide effort to promote the information flow between the various programs and departments in the ERO Enterprise. A robust communication framework throughout the ERO Enterprise is essential for, among other things, identifying and managing BPS risks, establishing ERO Enterprise priorities to ensure that the ERO Enterprise and industry focus their resources in the appropriate places, and

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<sup>10</sup> February 19 Order at P 50.

identifying and implementing lessons learned across ERO Enterprise programs and departments. Identified risks may be addressed through various means, including but not limited, to guidelines, Reliability Standards, or training.

There are a number of mechanisms or feedback loops across the ERO Enterprise that facilitate the exchange of information across programs. These feedback loops occur both at the strategic level as well as at the operational level. At the strategic level, for example, the Reliability Issues Steering Committee (“RISC”), an advisory committee of the NERC Board of Trustees (“Board”), uses data and information from ERO Enterprise programs to assist the Board by identifying risks. The RISC also sets priorities and goals for the development of solutions to address risks of strategic importance to BPS reliability. The RISC draws feedback from CMEP activities, and from the technical committees of the Board (e.g., the Operating Committee, the Planning Committee, and the Critical Infrastructure Protection Committee), as well as research and analysis conducted by NERC staff. The RISC also provides recommendations to the Board on the strategic approach that NERC should take to enhance reliability and manage identified risks.<sup>11</sup> The Board and NERC staff use the RISC’s recommendations to inform the setting of priorities throughout the ERO Enterprise. These reports are part of the strategic framework for steering, developing, formalizing, and organizing recommendations to help NERC and industry effectively focus their resources on the critical issues needed to best improve the reliability of the BPS.

As an example of how the feedback loops work at the operational level, the development of the annual ERO CMEP Implementation Plan is illustrative. To develop the CMEP

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<sup>11</sup> The most recent RISC report is available at [http://www.nerc.com/comm/RISC/Related%20Files%20DL/ERO\\_Reliability\\_Risk\\_Priorities\\_RISC\\_Recommendations\\_to\\_the\\_Board.pdf](http://www.nerc.com/comm/RISC/Related%20Files%20DL/ERO_Reliability_Risk_Priorities_RISC_Recommendations_to_the_Board.pdf).

Implementation Plan, NERC follows the Risk Elements Guide, which outlines the process by which the ERO Enterprise will identify and prioritize continent-wide risks to the reliability of the BPS, as well the Reliability Standards and registration functional categories related to those risks.<sup>12</sup> Under the Risk Elements Guide, NERC identifies and prioritizes risks to reliability of the BPS by taking into account data and information from other ERO Enterprise departments, such as the Reliability Assessment and System Analysis group and the Reliability Risk Management group, which includes NERC's Bulk Power System Awareness, Event Analysis, and Performance Analysis departments. NERC also uses the expert judgment of the ERO Enterprise staff and the associated technical committees and their subcommittees.

Specifically, in addition to using compliance and enforcement data to inform the CMEP Implementation Plan, NERC staff collects and analyzes the available ERO Enterprise data, reports and publications that identify reliability risks. These additional sources of data include: the State of Reliability Report; the Long-Term Reliability Assessment; publications from the RISC; special assessments or reports from NERC's Reliability Assessment and System Analysis group or NERC technical committees; the ERO Enterprise Strategic Plan; ERO Event Analysis process insights; significant occurrences noted by NERC and Regional Entity Situational Awareness and Event Analysis staff; and other relevant documents pertaining to risks to the reliability of the BPS. All of this information helps identify and prioritize risk and inform the development of the CMEP Implementation Plan.

These types of feedback loops also exist between CMEP and Reliability Standards development and Event Analysis, as discussed below.

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<sup>12</sup> The Risk Elements Guide is available at [http://www.nerc.com/pa/comp/Reliability%20Assurance%20Initiative/2016%20CMEP%20IP\\_v\\_2\\_11172015\\_ForPosting.pdf](http://www.nerc.com/pa/comp/Reliability%20Assurance%20Initiative/2016%20CMEP%20IP_v_2_11172015_ForPosting.pdf).

**A. Feedback Loop between CMEP and Reliability Standards Development**

The feedback loop between the CMEP and Reliability Standards development does not consist of a single process; instead, it consists of various mechanisms for ERO Enterprise compliance and enforcement staff to provide input into the Reliability Standards development process. Specifically, where ERO Enterprise compliance and enforcement staff identify a risk that should be addressed through a Reliability Standard, there are available mechanisms for the ERO Enterprise to initiate a Reliability Standard development project, or for NERC and Regional Entity compliance staff to provide input on Reliability Standards already in development. ERO Enterprise staff provide input to Standards under development through, among other things, participation during standard drafting team meetings and the development of Reliability Standard Audit Worksheets (“RSAWs”), as discussed further below.

The most direct feedback loop between the CMEP and the Reliability Standards development process is the mechanism for NERC and Regional Entities to propose a new Reliability Standard, modifications to an existing Reliability Standard, or the retirement of an existing Reliability Standard, based on, among other things, risks identified from their compliance monitoring and enforcement activities. The Regional Entity or NERC may submit a Standards Authorization Request (“SAR”) to propose a new or modified Reliability Standard or retire an existing Reliability Standard where staff concludes changes are necessary. This conclusion to submit a SAR may be based on a BPS risk not being adequately addressed in the Reliability Standards, an existing Reliability Standard being ambiguous, or an existing Reliability Standard providing little to no benefit to reliability, among other things.

A recent illustrative example of this feedback loop involves the flow of information from the Midwest Reliability Organization (“MRO”) IRA process, analyzed in conjunction with a

diverse group of registered entities, including a Transmission Owner/Operator, two Generator Owner/Operators, a Canadian entity, and a vertically integrated cooperative, to the NERC Reliability Standards development process. Specifically, in 2015, the MRO Board of Directors tasked the MRO Standards Committee with creating a sub-committee to review a list of Reliability Standard requirements identified as low risk through MRO's IRA process to determine whether such requirements were unnecessary for BPS reliability, consistent with FERC precedent.<sup>13</sup>

As a result of this analysis, a diverse group of MRO registered entities submitted a SAR to the NERC Standards Committee proposing the retirement of Requirement R3 of Reliability Standard VAR-001-4 (Voltage and Reactive Control) based on the results of IRAs performed within the MRO region. The analysis identified several other requirements that are candidates for retirement, but it was determined that the others were being addressed by existing standard development projects. The Standards Committee merged the SAR for the retirement of Reliability Standard VAR-001-4, Requirement R3 with the enhanced periodic review for Reliability Standards VAR-001 and VAR-002, NERC Project 2016-EPR-02 - Enhanced Periodic Review of Voltage and Reactive Standards. The enhanced periodic review team for Project 2016-EPR-02 will address the issues raised in the SAR.

The CIP V5 Transition Program is also an example of how compliance and enforcement matters inform and influence the Reliability Standards development process. Following the issuance of Order No. 791, which approved new and modified CIP Reliability Standards, referred to as the CIP Version 5 Reliability Standards (the "CIP V5 Standards"), the ERO Enterprise's compliance monitoring group initiated a program to support industry's transition to the CIP V5

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<sup>13</sup> In the February 19 Order, FERC noted that "[t]he adoption of the streamlined RAI programs to process lower risk compliance matters suggest that there may be provisions of Reliability Standards that provide little protection to the reliable operation of the Bulk Power System, and we support NERC's efforts to identify such provision for proposed retirement." February 19 Order at n. 47.

Standards. Among other things, NERC conducted an implementation study and formed a transition advisory group, consisting of representatives from NERC, Regional Entities, and registered entities,<sup>14</sup> to issue guidance regarding possible methods to achieve compliance to support industry's implementation activities. The guidance documents are intended to help entities implement the CIP V5 Standards effectively and mitigate risks associated with inadequate implementation approaches. Further, because certain issues identified during the implementation study and discussed with the transition advisory group could not be resolved through implementation guidance, the transition advisory group is referring certain issues to the NERC Standards department, the Standards Committee, and the existing CIP Standards drafting team for evaluation in future standards development. The transition advisory group is currently drafting a document outlining each of these issues for approval by the Standards Committee to provide to the CIP standard drafting team.

ERO Enterprise staff also provide feedback during the Reliability Standards development process. Regional Entities have, since the formation of the ERO, been able to vote and comment on proposed Reliability Standards, providing them a mechanism to influence standards development based on, among other things, data points from their compliance monitoring and enforcement activities. Further, NERC and Regional Entity staff participate in standard drafting team meetings and can use those venues to raise lessons learned from the CMEP. For example, compliance staff will continue to provide feedback into the development of the modifications to the CIP Standards referenced above during the standards process. The feedback will provide information to the standards drafting team regarding risks seen in the field, particularly as it relates to the guidance documents referenced above. ERO Enterprise CMEP staff will be able to provide

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<sup>14</sup> FERC staff attended certain in-person meetings and conference calls of the transition advisory group.

information on how current Standards address existing risks, as well as information regarding the impact of the guidance documents, to the drafting team.

Regional Entities have historically provided this type of in-development input from the perspective of individual Regional Entities. This opportunity is being enhanced in 2016 as the ERO Enterprise CMEP staff has set up mechanisms, through existing working groups, to provide an ERO Enterprise CMEP staff perspective to the drafting teams. Lastly, NERC and Regional Entity compliance staff draft and comment on RSAWs for each new or modified standard being developed, which provides another opportunity to identify CMEP-related issues.

As noted above, the CMEP and Reliability Standards development feedback loops are part of a larger communication framework at the ERO Enterprise. There are many other inputs into the Reliability Standards development process from other ERO Enterprise program areas. For instance, to identify any reliability issues not adequately addressed by NERC's existing Reliability Standards, the ERO Enterprise, through NERC's Reliability Risk Management department, performs an assessment of all Category 3 and above events to determine whether the Reliability Standards can be improved to help prevent similar events from occurring in the future. If the assessment indicates standard development is necessary, NERC will work through the proper procedures to initiate a project.

**B. Analysis of BPS Events**

As noted above, in the February 19 Order, FERC also focused on the relationship between the CMEP and events analysis. FERC stated, "NERC has previously stated that '[t]he anatomy of major disturbances, such as the August 2003 Blackout, reveals it is often a combination of relatively lesser mistakes and problems occurring simultaneously that precipitate a major



disturbance.”<sup>15</sup> The February 19 Order directed NERC to “address how [risk-based CMEP] enables NERC to focus attention on such events as indicators of this type of reliability risk and identify resulting actions taken to identify and mitigate the types of minor mistakes or problems known to be causal of major events.”<sup>16</sup>

One of the benefits of the risk-based CMEP is an enhanced ability for the ERO Enterprise to work with registered entities to identify and mitigate minimal risk noncompliance before potential escalation into a major event. To help identify such areas of focus for the CMEP, the ERO Enterprise compliance and enforcement staff look at data resulting from events analysis. Under NERC’s [Cause Code Assignment Process](#) (“CCAP”), the analysis of BPS events involves a systematic process to assign cause codes after an event based on the principle that many events can be avoided proactively by understanding the reasons mistakes occur and the active application of remedies and strategies to prevent them. A thorough event analysis is necessary to determine the cause sequence leading to a larger event and to recommend corrective actions, including active defenses, to prevent reoccurrence. The CCAP involves a three-step analysis by the event investigator: (1) investigation and analysis; (2) event analysis report; and (3) cause coding for trending and expanded analysis.<sup>17</sup>

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<sup>15</sup> February 19 Order at P 50.

<sup>16</sup> *Id.*

<sup>17</sup> The NERC Cause Code Assignment Process is available at [http://www.nerc.com/pa/rrm/ea/EA%20Program%20Document%20Library/CCAP\\_Manual\\_rev201503\\_Final\\_for\\_posting.pdf](http://www.nerc.com/pa/rrm/ea/EA%20Program%20Document%20Library/CCAP_Manual_rev201503_Final_for_posting.pdf). In 2015, NERC conducted an analysis of nearly 100 serious risk, non-CIP compliance violations using the CCAP (not for an event, but for the understanding of how the entity became noncompliant with the Reliability Standard). By using the CCAP, NERC identified five major trends in the causes of serious risk violations: (1) Management or Organization, (2) Individual Human Performance, (3) Equipment or Material Problems, (4) Communication, and (5) Training Deficiency. This analysis allows NERC to focus attention on such causes as indicators of this type of reliability risk and identify resulting actions taken to identify and mitigate the types of minor mistakes or problems known to be causal of major events.

As it relates to the risk-based CMEP, ERO Enterprise compliance and enforcement staff evaluate the results of the CCAP to help inform the scope of CMEP activities. If, for instance, the CCAP identifies a seemingly minimal risk issue as having the potential to have severe consequences if left unaddressed, the ERO Enterprise can appropriately focus their compliance monitoring resources on those issues by including it in the CMEP Implementation Plan. Further, if the risk is specific to a particular Regional Entity footprint, the Regional Entity can use the events analysis data in developing its Regional Risk Assessment (“RRA”). An RRA, which is based on an identification and analysis of trends within a specific Regional Entity footprint and a determination of how best to mitigate potential risks, informs the scope of compliance monitoring activities for that Regional Entity.

NERC also assesses all Category 3 and above events, as mentioned above. Following an event, the applicable registered entities and Regional Entities coordinate to capture all relevant data. The impacted entity(ies) then submits a draft Event Analysis Report to NERC that addresses the sequence of events as they happened, the identified causal factors, and the appropriate corrective actions. Next, selected technical groups and NERC staff review the drafts for completeness and appropriateness prior to publication to the industry. Lessons learned could include the adoption of operating procedures, the identification of generic equipment problems, or even the need for enhanced personnel training.

Further, NERC performs a gap analysis of all Category 3 and above events to identify gaps in Reliability Standards and compliance monitoring within 90 days of receipt of the impacted entity’s Event Analysis report and compliance self-assessment. Based on the lessons learned from the events analysis process, the Implementation Plan may be adjusted to account for those lessons learned and focus on any newly identified risks. In 2016, NERC will expand this gap analysis by

sampling five additional lower-level events that occurred between 2014 and 2016, and develop a program that will explore potential gaps in NERC's Reliability Standards and compliance monitoring activities. The purpose of this activity is to expand the current program to include more events, thus providing a feedback mechanism to assure compliance and standards are addressing the risks to reliability.

#### **IV. INTERNAL CONTROLS EVALUATION**

In the February 19 Order, FERC also directed that the annual report "address whether a baseline audit is needed to properly evaluate a registered entity's internal controls" when performing an ICE.<sup>18</sup> FERC stated that it was unclear "whether the review of internal controls under [the] ICE [process] is based only on a review of program documents, or whether the review also examines the effectiveness of the program, i.e., a baseline evaluation of actual compliance performance under the entity's internal controls."<sup>19</sup> Lastly, FERC noted, "a process that reviews both program documentation and the actual effectiveness of a program may be appropriate to ensure adequate compliance with the risk-based oversight under RAI."<sup>20</sup>

NERC and the Regional Entities agree that in evaluating a registered entity's internal controls under the ICE process, it is important to review both program design as well as the actual effectiveness of that program. Fundamentally, a review of internal controls under the ICE process consists of two primary elements:

- An evaluation of the design of a registered entity's compliance program (i.e., an evaluation of governance practices, policies, and procedures); and

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<sup>18</sup> February 19 Order at P 51.

<sup>19</sup> *Id.*

<sup>20</sup> *Id.*

- An analysis of the implementation and effectiveness of an entity’s internal controls (i.e., an evaluation of how well the registered entity self-monitors compliance by proactively identifying potential violations, assesses the risks posed by those potential violations, and takes corrective actions to prevent re-occurrence.)

As discussed below, however, requiring a baseline audit in addition to, or separate from, the other compliance monitoring activities the Regional Entities already perform is unnecessary to accomplish the objectives of the ICE process.

The goal of the ICE process is to evaluate whether an entity’s internal controls provide reasonable assurance of compliance with mandatory NERC Reliability Standards. The outcome of that evaluation helps to determine the appropriate depth of testing necessary during compliance monitoring activities. While reviewing program documentation is one step in the evaluation, Regional Entities do not rely solely on program documentation. Determining whether the registered entity has implemented the program and the controls are effective is essential to obtaining reasonable assurance of compliance.

As noted above, to start the ICE process, Regional Entities may request internal compliance program documentation and information about program design. The Regional Entity will evaluate the entity’s governance practices and its compliance program policies and procedures to determine whether the construct of the program will prevent, detect, or correct actions that could pose a risk for noncompliance. The Regional Entity will also test the implementation and efficacy of the entity’s program by looking at compliance with particular Reliability Standards, along with how well the registered entity prevents potential noncompliance, identifies potential noncompliance, and takes corrective actions to mitigate any potential risk and modify compliance processes or controls to prevent future occurrences of noncompliance. When conducting an ICE, Regional

Entities may use information from past work with the registered entity, such as past audits, mitigation plans, and previous internal compliance program reviews, or from doing an assessment of internal controls outside of the regular compliance monitoring activities, or a combination of the two.<sup>21</sup>

In performing ICEs during 2015, Regional Entities reviewed the effectiveness of specific internal controls in the following circumstances: (1) testing internal controls during compliance monitoring activities; (2) conducting periodic assessment of internal controls outside of compliance monitoring activity; and (3) working with entities on enforcement and mitigation matters.

For example, in performing an ICE of an entity, Texas Reliability Entity, Inc. (“Texas RE”) tested, among other things, the controls surrounding Reliability Standard EOP-005-2, Requirements R1 and R4 related to system restoration from Blackstart Resources. After reviewing the entity’s documented processes and practices, Texas RE sought to verify the registered entity’s implementation of those processes and practices. Texas RE confirmed that the registered entity implemented the documented controls, including:

- Actively tracking deadlines for Reliability Coordinator approval with planned communication milestones on restoration plan approval status;
- Conducting project meetings focused on determining if the restoration plan needs changes;

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<sup>21</sup> GAO-12-331G Government Auditing Standards, Chapter 6, Section 6.18, Internal Controls (December 2011): “Auditors may obtain an understanding of internal control through inquiries, observations, inspection of documents and records, review of other auditors’ reports, or direct tests. The nature and extent of procedures auditors perform to obtain an understanding of internal control may vary among audits based on audit objectives, audit risk, known or potential internal control deficiencies, and the auditors’ knowledge about internal control gained in prior audits.”

- Maintaining a project manager checklist that includes questioning restoration plan revisions in project (with subsequent notification efforts regarding noted changes in the project);
- Participation in the Regional Entity working group focused on collaboration and coordination of restoration plans;
- Using a document repository for restoration plan revision(s) and communications;
- Implementing procedural steps for updating and notification efforts if an unplanned change occurs; and
- Implementing a requirement for a compliance executive to approve any restoration plan revisions.

Texas RE rated the documented controls as “Largely Implemented” because the registered entity took sufficient action to demonstrate process and internal control implementation, which provided reasonable assurance of compliance with the requirements. As a result of the focused internal controls evaluation, Texas RE modified the scope of its audit of the entity.

Whether a Regional Entity performed an assessment of internal controls outside of compliance monitoring activities or used compliance monitoring and enforcement activities to measure the effectiveness of an internal compliance program, the outcome was the same: the Regional Entity obtained an understanding of the internal controls used by the registered entity and the effectiveness of those controls. Regional Entities should have the flexibility to use whatever processes to perform an ICE that best accomplish the goals of the ICE process efficiently and effectively, whether that is conducting a new, separate assessment or relying on compliance monitoring activities.

Importantly, the ICE program is a work in progress for the ERO Enterprise. Currently the ICE program is voluntary and, if a registered entity chooses to participate, the results factor into the development of the registered entity's compliance oversight plan. Specifically, the results of the internal controls assessment provide the Regional Entity with a level of confidence regarding the registered entity's ability to achieve and maintain compliance with Reliability Standards. Regional Entities will use this information to determine the depth of testing that is necessary for each Reliability Standard or requirement to provide a reasonable assurance of compliance, and projection of continued compliance. The ICEs performed in 2015 are in effect a snapshot in time to provide reasonable assurance of compliance. While the ICE program is voluntary, ERO Enterprise compliance monitoring staff will also obtain an understanding of registered entity internal controls that are significant within the context of the compliance monitoring objectives.<sup>22</sup> Entities that can demonstrate effective internal controls may derive benefit, specifically in regards to the depth of testing necessary for the Reliability Standards within the scope of its compliance monitoring activity. It is important to note that Reliability Standards vary; some are in and of themselves essentially internal controls, some have internal controls included within the requirements of the standard (e.g., FAC-003), and some require compliance activities for which registered entities can develop internal controls.

#### **V. USE OF LEARNING TOOLS**

FERC stated that the annual report should "address and provide examples of how a Regional Entity assesses and factors into a registered entity's risk assessment and audit scope that entity's use of NERC Alerts, Lessons Learned, Reliability Guidelines, and other NERC learning

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<sup>22</sup> GAO-12-331G Government Auditing Standards, Chapter 6, Section 6.16, Internal Controls (December 2011).

tools.”<sup>23</sup> The core of the IRA is a consideration of the entity’s assets, the nature of its systems, geography, interconnectivity, functions performed, prior compliance history, and overall culture of compliance. Other information about the registered entity, such as what risk management activities it conducts, the quality of the entity’s compliance program, the effectiveness of its internal controls, and its consideration of learning tools, may mitigate its inherent risks. Regional Entities may gather information on the use of these learning tools through various methods, including interviews with entity staff during on-site visits, informal conversations, and formal questions on this issue in the risk assessment survey. There may be situations where an entity, after review and consideration of a learning tool, determines not to use or apply it, for a variety of valid reliability-based reasons. Therefore, when a Regional Entity considers a registered entity’s use of NERC Alerts, Lessons Learned, Reliability Guidelines and other NERC learning tools in this context, the Regional Entity first seeks to understand whether the registered entity is aware of the learning tools and makes conscious determinations whether the learning tools provide pertinent or applicable information for its specific circumstances.

For example, Western Electricity Coordinating Council (“WECC”) considers the registered entities’ use of Lessons Learned and Reliability Guidelines on a case-by-case basis during the risk assessment and audit processes. Depending on the registered entity, its registered functions, previous events, and the potential applicability of Lessons Learned or other learning tools, WECC audit and risk staff may examine the entity’s use of learning tools. Any consideration of such learning tools is done in the context of the entity’s system design, configuration, and compliance program. In addition, WECC audit staff may consider the use of learning tools in a similar manner. One example is related to Energy Management System (“EMS”) outages. NERC

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<sup>23</sup> February 19 Order at P 52.



has issued two advisories on EMS outages that recommend actions involving an entity's loss of partial or full visibility of its systems. Where an entity has had EMS outages, auditors may ask if the entity is aware of the advisories and if so, how the entity improved its processes for managing these outages. Currently, this is an informal process, but WECC anticipates formalizing this as the relevant compliance processes are periodically reviewed and updated.

Consistent with WECC's case-by-case approach, as guidelines and lessons learned are identified, ReliabilityFirst will evaluate whether the entities within its footprint are aware of the information and appropriately disseminating it. After release of the winter preparedness reports in response to the polar vortex, ReliabilityFirst created its own cold weather analysis and then conducted on-site visits to ensure entities were reacting to the information.

Although it is important to understand whether and how an entity uses these learning tools, it is not necessarily a determinative factor in assessing risk and determining a compliance oversight plan. It is additional information for the Regional Entity to include in the overall assessment, and may be a factor to provide the Regional Entity confidence that the registered entity is managing its inherent risks.

## **VI. NERC OVERSIGHT**

FERC's February 19 Order directed NERC to "address and provide an update on NERC's oversight of the RAI Program."<sup>24</sup>

Throughout 2015, NERC began to transition its own oversight to align with a risk-based environment. This included engaging frequently with Regional Entities and developing an IRA analysis team, in addition to collecting and reviewing IRA and ICE summary reports, as discussed

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<sup>24</sup> February 19 Order at P 52.

below. Compliance monitoring oversight activities also included observing Regional Entity audits of registered entities and analyzing post-audit feedback.

Through these oversight activities, NERC confirmed that the Regional Entities made significant progress in developing processes and tools to implement risk-based compliance activities. By mid-year, all eight Regional Entities were generally in line with the IRA and ICE alignment criteria reviewed during the Phase 1 assessment activities referenced below. NERC staff also found that Regional Entity audits of registered entities were focused on high-risk areas and tailored to include Reliability Standards that specifically address the entity's characteristics. NERC staff did not identify any concerns relating to any Regional Entity evaluation of a registered entity's compliance with the NERC Reliability Standards. Further, NERC staff's review of registered entity post-audit feedback surveys indicated that most audits had a clear focus of monitoring efforts on reliability risk. As risk-based compliance monitoring continues to mature, specifically in the selection of tools and frequency of monitoring activities within compliance oversight plans, NERC will continue to transition oversight activities. At full maturity, NERC activities will oversee process as well as results—specifically whether compliance monitoring plans for individual entities address necessary risks.

NERC's oversight of Regional Entity enforcement processes found that the Regional Entities appropriately used streamlined enforcement disposition methods. NERC and FERC staff jointly reviewed the Find, Fix, Track, and Report ("FFT") program in 2015 and found no instance of inappropriate FFT treatment for noncompliance. The 2016 joint review, by NERC and FERC staff, of FFTs and Compliance Exceptions is underway. In addition, NERC found that minimal risk noncompliance categorized as Compliance Exceptions received consistent and appropriate treatment.

The following sections describe NERC's compliance monitoring and enforcement oversight activities and findings in more detail.

**A. Oversight of Compliance Monitoring Activities**

**1. Phase I Assessment**

NERC's May 20, 2015 compliance filing submitted to FERC described the Phase 1 assessment and the associated first quarter activities that were completed. In the November 4 Order, FERC directed "NERC to provide the results of that assessment, as well as future assessments, in its annual reports."<sup>25</sup> At the June 2015 conclusion of the Phase 1 oversight activities, NERC completed a Phase One NERC Oversight Closeout Report ("Closeout Report"), attached as Appendix B. The Closeout Report provides a summary of Phase 1 oversight activities, initial implementation accomplishments, current alignment efforts, and ERO Enterprise improvement recommendations, in addition to next steps and phase two NERC oversight.

**2. Other Oversight Activities**

In 2015, NERC began collecting summary reports of IRA results to monitor Regional Entity progress toward completing IRAs for registered entities, to gather data on risks being identified and associated NERC Reliability Standards and requirements monitored, and to understand how significant BPS reliability risks are being monitored. On a periodic basis, NERC samples IRA summary reports and requests supporting documentation of IRA activities. The purpose of sampling and reviewing supporting IRA documentation is to gain further understanding, on an ERO Enterprise-wide basis, of Regional Entity processes and procedures being used to complete implementation of risk-based compliance monitoring. Through this

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<sup>25</sup> November 4 Order at P 21.

activity, NERC can monitor progress and identify other opportunities for improved program consistency.

With 2015 being an implementation year, NERC's primary focus of this monitoring activity was on establishing a repeatable process for collection of IRA summary reports, creating mechanisms to maintain and track information contained within IRA summary reports, and identifying registered entities involved in initial IRAs. As the compliance monitoring program evolves in 2016, NERC staff will gather and analyze data to further assess how significant BPS reliability risks are being monitored across the ERO Enterprise.

NERC also samples a selection of ICE results and requests supporting documentation of ICE activities. The purpose of sampling and reviewing supporting ICE documentation is to enhance understanding of, on an ERO Enterprise-wide basis, Regional Entity processes and procedures being used to complete implementation of risk-based compliance monitoring. This monitoring activity allows NERC to identify opportunities for program consistency and improvement.

In addition, NERC samples a selection of Regional Entity audits of registered entities to observe and review. Through audit observations, NERC monitors both the audit process, including audit-scoping determinations, and assesses the Regional Entities' evaluations of registered entity compliance with NERC Reliability Standards. Audit observations also help NERC to assess the implementation of significant ERO Enterprise activities, such as risk-based compliance monitoring, CIP Version 5 transition, physical security implementation, and the Coordinated Oversight Program of multi-region registered entities ("MRREs"), and to identify program development needs, training, and outreach.

In 2015, NERC observed seven audits, including both CIP and Operations and Planning, and some involving registered entities within the Coordinated Oversight Program for MRREs. NERC staff identified positive observations, as well as lessons learned and opportunities for consistency and overall improvements.

For example, NERC staff noted that Regional Entity staff continues to provide registered entities updates on the audit status to keep the entity informed and hold open and timely discussions around possible areas of noncompliance. Registered entities also confirmed that their audits were focused on high-risk areas and tailored specifically to their entity characteristics. Opportunities for improvement involve the Coordinated Oversight Program for consistent and efficient processes are occurring, and continued improvements for identification, documentation, and incorporation of new or refined risk areas into the entity's IRA and overall compliance monitoring activities. For instance, NERC and the Regional Entities recognize that events or other triggers, including CMEP activities, may identify additional information that can help refine or affect IRAs. Incorporation of this information is an important component of understanding and properly assessing the entity's impact on the BPS in order to tailor and determine appropriate monitoring activities.

NERC's ultimate goal in connection with the oversight of compliance monitoring activities is to focus its oversight on the review of customized Compliance Oversight Plans ("COP") tailored to each registered entity's risks. As processes mature, the ERO Enterprise will continue to develop appropriate COPs through identification of the entity's specific areas of risk and its effective risk mitigation activities. Based on the identified risks and other relevant factors, the COP will identify Reliability Standards and requirements to be monitored, identify the monitoring tools that will be used, and detail monitoring frequency.

Further, following every audit, Regional Entities provide registered entities post-audit feedback surveys to complete and return to both NERC and the respective Regional Entity. Since transitioning to risk-based compliance monitoring, the feedback survey now includes questions relating to all steps within the risk-based compliance monitoring framework leading up to the actual audit. NERC collects and reviews the surveys to help consider industry stakeholder perception, as well as understanding of risk-based compliance monitoring activities. Post-audit feedback surveys also provide a feedback loop back to NERC and the Regional Entities by identifying successes and opportunities of program development, and education and training opportunities for ERO Enterprise staff.

In 2015, NERC and the Regional Entities collected 70 post-audit feedback surveys, which represents a 35% response rate of the total number of 2015 audits. Overall, survey respondents indicated a continued support by registered entities for the risk-based compliance monitoring approach, noting most audits had a clear focus of monitoring efforts on reliability risk.

NERC's ultimate goal in connection with the oversight of compliance monitoring activities is to focus its oversight on the review of customized Compliance Oversight Plans ("COP") tailored to each registered entity's risks. As processes mature, the ERO Enterprise will continue to develop appropriate COPs through risk identification activities, including IRAs, the Risk Elements Guide, among others, in addition to identifying effective risk mitigation activities. Based on the identified risks and other relevant factors, the COP will map to Reliability Standards and requirements, identify the monitoring tools that will be used, and detail monitoring frequency.

**B. Oversight of Enforcement Activities**

NERC engages in regular oversight of Regional Entity enforcement activities to evaluate the appropriateness of disposition methods, including assessment of a penalty or sanction,

particularly in comparison with previous resolutions of similar noncompliance involving like circumstances. The NERC Board of Trustees Compliance Committee considers the recommendations of NERC staff regarding approval of Full Notices of Penalty and monitors the handling of noncompliance through the streamlined disposition methods of Spreadsheet Notice of Penalties, FFTs, and Compliance Exceptions.

In 2015, NERC conducted a joint review with FERC staff of Regional Entities' use of the FFT program. The review indicated that the program remains successful. While there are opportunities for further streamlining in the areas of mitigation documentation and verification, the review indicated that the ERO Enterprise continues to implement the program appropriately. The full results of the review are available in the [Annual Report on the FFT Program](#). The information collection for a joint NERC-FERC staff review of the FFT and Compliance Exception programs is underway.

### **1. Self-Logging**

In the November 4 Order, FERC directed NERC to:

[P]rovide in its annual reports an analysis of self-logging data provided by each Regional Entity to measure the quality and consistency of self-logging across regions. This analysis should include information quantifying the number of applicants and successful applicants to receive self-logging authority, and information on the quality and disposition of self-logs, including whether they included all elements required by NERC's self-logging program.<sup>26</sup>

NERC will conduct a review of the self-logging program in 2016 to encompass 2015 activities to ensure they align with the self-logging program document, including the self-logging assessment methodology developed by the ERO Enterprise and approved by FERC in the November 4 Order. NERC will coordinate closely with FERC staff during this review.

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<sup>26</sup> November 4 Order at P 22.

There are currently 42 registered entities self-logging throughout the ERO Enterprise. Since FERC approval, in late 2015, of the self-logging assessment methodology, NERC expects greater interest in the program. The 2016 program review will address the areas required in the November 4 Order. NERC also expects to consider whether there are any barriers to increased levels of participation in the program. NERC understands that the self-logging program may not offer a significant efficiency gain for all entities. For example, entities with very few identified instances of noncompliance may find it is just as efficient to self-report the noncompliance without undergoing the required process to obtain approval to self-log. Nevertheless, NERC will seek to understand whether any other factors are affecting the growth of the program. Such considerations will be included in the analysis of self-logging across Regions to be conducted as part of the 2016 program review.

## **VII. METRICS**

In the February 19 Order, FERC directed NERC to provide details in a compliance filing on “how it intends to measure the success of the risk-based approach to compliance monitoring and enforcement, to include the types of data-driven metrics it will track as the RAI program develops.”<sup>27</sup> FERC also directed that “the annual report should address and provide an update on the metrics that NERC has or will employ to measure the effectiveness of the [risk-based CMEP].”<sup>28</sup> In the November 4 Order, FERC conditionally accepted NERC’s preliminary success factors and related metrics to measure the success of initial implementation of the risk-based CMEP during 2015, subject to NERC providing revised success factors and metrics in its annual report.<sup>29</sup>

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<sup>27</sup> February 19 Order at P 32.

<sup>28</sup> February 19 Order at P 52.

<sup>29</sup> November 4 Order at PP 32-34.



The ERO Enterprise continues to refine the metrics it uses to measure the success of the risk-based CMEP going forward.<sup>30</sup> The attached Annual Report discusses the preliminary success factors and metrics used to measure success of the risk-based CMEP during its initial implementation in 2015. As discussed therein, a review of the ERO Enterprise's CMEP implementation in relation to the preliminary success factors and metrics indicates that it was a successful year for the CMEP and the transition to a robust, risk-based approach to compliance monitoring and enforcement.

The metrics described below are designed to enable NERC and FERC to properly evaluate the success of the risk-based CMEP and identify whether there are areas for improvement. Conceptually, the metrics divide into two categories: (1) those used to measure the effect of the risk-based CMEP on the reliability of the BPS; and (2) those used to measure the ERO Enterprise's implementation of the risk-based CMEP. As the ERO Enterprise continues to implement the risk-based CMEP in 2016 and beyond, it may develop additional metrics to enhance its understanding of the effectiveness of the program and its impact on reliability.

It is important to recognize that the CMEP metrics represent only one component of the metrics that the ERO Enterprise evaluates to determine the overall success of the ERO Enterprise and its effect on BPS reliability. Among other things, the ERO Enterprise tracks the frequency and severity of events on the BPS, analyzes the comprehensiveness of its Reliability Standards following any Category 3 or above events, and measures the mitigation of identified risks.<sup>31</sup> As the implementation of risk-based CMEP matures, an array of metrics will communicate whether the ERO Enterprise is operating from a process framework to ensure non-discriminatory practices,

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<sup>30</sup> NERC staff held a brief, initial meeting with FERC staff on January 13, 2016. Additional meetings are being scheduled and NERC staff will continue to consult with FERC staff on enhancing the CMEP metrics.

<sup>31</sup> The 2016 ERO Enterprise and Corporate Metrics are available at <http://www.nerc.com/gov/Pages/default.aspx>.

whether compliance monitoring plans are addressing the appropriate risks for each registered entity, and whether reliability of the BPS is improving.

**A. Effect of Risk-Based CMEP on Reliability**

As previously discussed, a primary benefit of the risk-based CMEP is to create a compliance and enforcement program that properly focuses ERO Enterprise and industry resources to higher risk issues that matter more to reliability. The end goal is to create an oversight program that ultimately improves the reliability of the BPS by identifying, prioritizing, and addressing risks to the BPS to enable the ERO Enterprise and industry to allocate resources where they are most needed and likely to be the most effective in preventing and mitigating events on the BPS. To help measure the success of the risk-based CMEP in accomplishing that objective, the ERO Enterprise is tracking the following items:

- The number of new violations;
- The risk of those violations to the reliability of the BPS;
- The timeliness of mitigation of those violations; and
- The percentage of violations that are self-identified.<sup>32</sup>

By tracking these issues over time, the ERO Enterprise is developing a better understanding of whether the risk-based CMEP is having its intended effect. For instance, a trend towards fewer violations with lower risk to the BPS that are timely mitigated and self-identified suggests that the move to a risk-based CMEP is succeeding in identifying and addressing higher risk issues, properly focusing ERO Enterprise and industry resources on identifying and correcting instances of non-compliance, and, in turn, improving the reliability of the BPS. In contrast, if there is an increase

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<sup>32</sup> The most recent data for these four items was presented to the NERC Board of Trustees Compliance Committee at its February 10, 2016 meeting. The presentation is available at [http://www.nerc.com/gov/bot/BOTCC/Compliance%20Committee%202013/CC\\_Open\\_Presentations\\_Feb\\_2016.pdf](http://www.nerc.com/gov/bot/BOTCC/Compliance%20Committee%202013/CC_Open_Presentations_Feb_2016.pdf).

in violations that present severe risk to the BPS and entities are neither timely mitigating nor self-identifying these violations, it is an indication that the risk-based CMEP is not having its intended effect and needs improvement.

Importantly, in any given year, there may be factors unrelated to the implementation of the risk-based CMEP that may sway these numbers to one side or another. As such, evaluation of the success of the risk-based CMEP on reliability may not be apparent in any one-, two-, or even three-year period. The ERO Enterprise and FERC should have a long view in measuring the success of the risk-based CMEP. As the ERO Enterprise tracks these metrics over time, it will evaluate, in consultation with FERC staff, ways to assess the causal relationship between the various processes and procedures in the CMEP and improved reliability of the BPS.

**B. Implementation of Risk-Based CMEP**

To determine the success of the risk-based CMEP, it is also important to collect and analyze data on the implementation of the various risk-based processes and procedures. Such data enables the ERO Enterprise to understand how the various processes and procedures are being used, identify areas for improvement, understand trends, develop lessons learned, and begin to correlate the implementation of the risk-based CMEP with improvement to reliability, as measured by the four metrics tracked above. The following is a discussion of the metrics the ERO Enterprise will use to track the implementation of the CMEP, both the compliance monitoring components and the enforcement components.

To measure the ERO Enterprise's progress in implementing the compliance monitoring components of the risk-based CMEP, the ERO Enterprise has tracked the following on an annual and quarterly basis:

- The total number of IRAs conducted;<sup>33</sup>
- The total number of IRAs conducted for registered entities on the audit schedule for a particular year compared to the total number of registered entities on the audit schedule;
- The total number of IRAs conducted for registered entities not on the audit schedule;
- The total number of ICEs conducted as compared to the total number of registered entities that have requested an ICE;
- The total number of ICEs conducted for registered entities on the audit schedule for a particular year compared to the total number of registered entities on the audit schedule;
- and
- The total number of ICEs conducted for registered entities not on the audit schedule.

In 2016, the ERO Enterprise will also track those Reliability Standards (and requirements therein) that are the focus of compliance monitoring activities from year to year to analyze: (1) the manner in which the ERO Enterprise is identifying and evaluating BPS risks over time; and (2) the industry response to those areas of focus.

To measure the ERO Enterprise's progress in implementing the enforcement components of the risk-based CMEP, the ERO Enterprise has tracked the following on an annual and/or quarterly basis:

- The number of serious risk violations;
- The most commonly violated Reliability Standards, focusing on those associated with serious risk violations;

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<sup>33</sup> During 2016, the goal is to complete IRAs for all Reliability Coordinators, Balancing Authorities, and Transmission Operators.

- The number of instances of noncompliance discovered internally by the registered entity versus externally by the ERO Enterprise;<sup>34</sup>
- The average age of noncompliance (i.e., the age of a violation from discovery to closure);<sup>35</sup>
- The timeliness of mitigation of instances of noncompliance;
- Registered entities that are self-logging, including total number of registered entities self-logging by Regional Entity and by reliability function;
- Use of Compliance Exceptions for minimal risk issues, including the percentage of minimal risk issues processed under each disposition method by Regional Entities. This includes a review of trends in Compliance Exceptions.
- The percentage of Notices of Penalty approved by FERC; and
- The number of older violations in a Regional Entity's inventory.

Tracking the metrics outlined above will help measure the ERO Enterprise's success in rolling out the new processes and procedures (e.g., number of IRAs, use of Compliance Exceptions), whether registered entities are using risk-based tools (e.g., requesting an ICE, use of Self-Logging), and whether the registered entities are focusing resources appropriately (e.g., increase in self-identification of noncompliance, increased timeliness of mitigation, and decrease in serious risk violations).

As the ERO Enterprise continues to implement the risk-based CMEP, it may develop additional metrics to help determine the effectiveness of risk-based CMEP implementation.

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<sup>34</sup> The target for self-identification of noncompliance in 2016 is 75%.

<sup>35</sup> The target is for the average age of noncompliance in the ERO Enterprise's inventory not to exceed 12 months.

Respectfully submitted,

/s/

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## **APPENDIX A**

### **2015 CMEP Annual Report**

(Available on the NERC Website at

[http://www.nerc.com/FilingsOrders/ca/Canadian%20Filings%20and%20Orders%20DL/Attach\\_CMEP\\_Annual\\_Report.pdf](http://www.nerc.com/FilingsOrders/ca/Canadian%20Filings%20and%20Orders%20DL/Attach_CMEP_Annual_Report.pdf))