

**FEDERAL ENERGY REGULATORY COMMISSION
DOCKET NO. RR14-___**

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

DRAFT 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

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Citation to Order on the Three-Year Report	Areas for Improvement	Status Update / Reference in Statement of Activities and Accomplishments
100-102	Believes that NERC (<u>along with its stakeholders</u>) should prioritize those Reliability Standards projects that, in its expert judgment, are the most critical to the reliability of the Bulk-Power System.	<i>See</i> Section II.A
104	Reach out to registered entities to provide expert volunteers on Reliability Standards drafting teams and to continue streamlining its procedure to aid in reducing the strain on industry resources overall.	<i>See</i> Section II.A
108	NERC must clearly demonstrate that any proposed elimination of a requirement does not diminish the reliability and enforceability of the existing Reliability Standard.	<i>See</i> Section II.A
103	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.	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. 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:

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		<p>1) emergency planning for system restoration and blackstart; 2) data for steady state and dynamic system modeling; 3) transfer capability requirements; and 4) underfrequency Load-shedding programs.</p> <p>Revisions are in progress at this writing for Reliability Standards in five additional areas: 1) analysis and mitigation of protection system misoperations (two projects, one scheduled for completion in 2014 and one in 2015); 2) undervoltage load-shedding (scheduled for completion in early 2015); 3) facility connection requirements (scheduled for completion in 2014); 4) disturbance monitoring (scheduled for completion in 2014); and 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.</p>
85	<p>Renews the directive that NERC submit quarterly reports on standards development for additional three years, with additional detail of required analysis.</p> <p>The quarterly reports should include: (i) The time required to complete projects,</p>	<p>NERC has been filing quarterly analyses of reliability standards voting results in Docket RR06-1 since May 2007. NERC continued to file these quarterly reports through and including the fourth quarter of 2013.</p>

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	<p>(ii) The time required to complete projects initiated in response to NERC’s urgent action progress, and,</p> <p>(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>	
107-112	<p>The Commission provided guidance regarding NERC’s initiative to transition to Results-Based Standards.</p>	<p><i>See Section II.A</i></p>
102	<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><i>See Section II.A</i></p>
74	<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><i>See Section II.A</i></p>
152	<p>Encourages NERC to intensify its efforts to provide additional oversight and guidelines to assist registered entities in accurately</p>	<p><i>See Section II.A</i></p>

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	determining that an asset is critical to the Bulk-Power System. (critical cyber asset identification)	
154	<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 implementation, we are concerned whether “fast track” interpretations will provide the consistency, clarity and transparency for meaningful assistance to entities that must comply with the CIP Standards.</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 Procedures.</p>	<i>See Section II.A</i>
169	Directs NERC to establish criteria it will use to select a subset of events, which should focus	<i>See Section II.D</i>

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	<p>on those with the highest impact to reliability, to provide important “lessons learned” and submit the criteria in the informational report.</p>	
170-171, 173, 178	<p>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>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>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> <p>Directs NERC to include procedures to be used within its Operations and Engineering function relating to the communication and exchange of event analysis and investigative information, and procedures under which the Operations and Engineering function will communicate event analysis and investigative information to</p>	<p>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.</p> <p>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><i>See also Section II.D</i></p>

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	<p>the compliance staff of NERC or a Regional Entity.</p>	
<p>126</p>	<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 capability assessments of the Regions, reviews reports submitted by the Regions 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 regions 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 Regions. NERC reads each audit report submitted by the Regions prior to posting to FERC.</p> <p>Finally, 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</p>

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		<p>Group (ECEMG) on a monthly basis where we discuss audit activities and projects that improve audit processes and identify opportunities to drive consistency.</p> <p><i>See generally</i> Section II.C</p>
127	<p>Directs NERC and Regional Entities to have their staff, and Commission staff where applicable, discuss the appropriate role of observers during their pre-audit meetings or conferences.</p>	<p>Rule of Procedure 402 states that Applicable Governmental Authorities will be allowed to participate as an observer in any audit conducted by NERC of a Regional Entity’s Compliance Monitoring and Enforcement Program. A representative of the Regional Entity being audited will be allowed to participate in the audit as an observer.</p> <p>Section 3.1.5.3 of Appendix 4C to the Rules of Procedure also details the role of observers.</p>
220	<p>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>	<p><i>See</i> Section II.C</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</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 Enforcement</p>

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	<p>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 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.</p>	<p>and Compliance Executive Management Group (ECEMG) to discuss technical and policy CIP issues.</p> <p><i>See also</i> Section II.C for a discussion of the RAI Handbook and Audit checklist as well as auditor qualifications.</p>
118	<p>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.</p>	<p><i>See</i> Section II.C</p>
121	<p>Encourages NERC to continually review its RSAWs to improve their quality and usefulness.</p>	<p><i>See</i> Section II.C</p>
180	<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</p>	<p>The latest version of the NERC “Reliability Assessment Guidebook” is Version 3.1 (dated August 2012). This version was approved by the Planning Committee in June 2012. 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>

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	<p>and to file this update in the informational filing.</p>	<p>Since 2009, the following LTRAs include scenario analyses:</p> <ul style="list-style-type: none">2009 Long-Term Reliability Assessment2010 Long-Term Reliability Assessment2011 Long-Term Reliability Assessment2012 Long-Term Reliability Assessment <p>Additional scenarios completed as part of the Reliability Assessment program in support of the Long-Term Reliability Assessment:</p> <ul style="list-style-type: none">• <i>2013 Special Reliability Assessment: Accommodating an Increased Dependence on Natural Gas for Electric Power:</i> http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_PhaseII_FINAL.pdf• <i>2011 Potential Impacts of Future Environmental Regulations:</i> http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/EPA%20Section.pdf• <i>2010 Special Reliability Scenario Assessment: Resource Adequacy Impacts of Potential U.S. Environmental Regulations:</i> http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/EPA_Scenario_Final_v2.pdf• <i>2010 Special Reliability Scenario Assessment: Potential Reliability Impacts of Swift Demand Growth After a Long-Term Recession:</i> http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/EPA_Scenario_Final_v2.pdf
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		<p>essments%20DL/NERC_Swift_Scenario_Aug_2010.pdf</p> <ul style="list-style-type: none"> • <i>2010 Reliability Impacts of Climate Change Initiatives: Technology Assessment and Scenario Development:</i> http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/RICCI_2010.pdf
<p>183</p>	<p>Directs NERC to develop a plan to address capacity and energy in its reliability assessment methodology and a timeline for executing the plan, and submit the plan and timeline as part of the 2011 Long-Term Reliability Assessment and file its preliminary plan and timeline in the informational filing.</p>	<p>NERC will implement probabilistic assessments in the Long-Term Reliability Assessment (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> <ul style="list-style-type: none"> (i) Request for participation in voluntary trial period (March 2011) (ii) Draft methods due to NERC (May 2011) (iii) Results of 2011 study (October 2011) (iv) Trial view complete (March 2012) (v) 2011 trial results to be included in 2012 LTRA (October 2012) (vi) Request for full participation (March 2012) (vii) 2012 results to be included in 2013 LTRA (October 2013) <p>Additionally, appropriate modifications were made to NERC’s “Reliability Assessment Guidebook” to reflect these changes in the reliability assessment process.”</p> <p>NERC Completed the “Pilot” assessment in July of 2011: http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/2012_ProbA.pdf</p>

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		<p>NERC completed the first NERC-Wide probabilistic study using the 2012 LTRA reference case in July of 2013: http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_2012_Probabilistic_Assessment_Final.pdf</p> <p>These probabilistic assessments will be completed on a biannual basis.</p> <p>The 2013 Long-Term Reliability Assessment was published in December 2013. http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/2013_LTRA_FINAL.pdf</p>
185	<p>Directs NERC to consider establishing permanent databases that could be automatically populated with:</p> <p>(i) new 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><i>See Section II.D</i></p>

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57	NERC should continue to seek recognition in Canada and Mexico, as appropriate and keep the Commission informed about the status of those efforts.	<i>See Attachment 1</i>
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.	<i>See Section II.G</i>
138, 217	<p>Agrees that NERC should develop performance metrics that help to ensure consistent implementation of the compliance enforcement process across the Regional Entities.</p> <p>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. These efforts are concentrated in two projects managed by the NERC Enforcement Functional Group (EFG, formerly ESMWG), and the ERO Compliance and Enforcement Management Group (ECEMG).</p> <p>Through the EFG 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 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 five metrics that measure the performance of NERC and each of the Regional</p>

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		<p>Entities. These metrics are as follows: Caseload Index, Violations in Inventory, Violation Aging, Violation Aging by Disposition Method, and Mitigation Activity Aging.</p> <p>Future EFG 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>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 inventory or the ERO’s 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>The Violations in Inventory metric is related to the Caseload Index but is also reported separately. It shows how many violations are in the Regional Entities, NERC and the ERO caseload. Month to month comparisons of violations in inventory can show how each Regional Entity, NERC and ERO workload is changing.</p> <p>The third metric, Violation Aging, identifies where older violations, which have not been filed with FERC, are located. The Violation Aging chart, which represented graphically this metric, 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>The fourth metric, Violation Aging by Disposition Method, is used to monitor the effectiveness of efficiency process changes</p>
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		<p>by tracking the average turnaround time for each disposition method considering violations discovered within a specified time horizon. The metric computes the average process time for each disposition method from discovery to date filed with NERC, from date filed with NERC to date filed with FERC, and discovery to date filed with FERC for each Regional Entity, NERC and ERO metrics, respectively.</p> <p>NERC and the Regional Entities are working towards finalizing and presenting the Mitigation Activity Aging metric, which identifies the status of mitigation activity based upon the age of the violation, to the Board of Trustees Compliance Committee (BOTCC). Completion of this metric is included in the NERC's 2013 corporate goals.</p> <p>NERC's BOTCC receives quarterly updates on these enforcement metrics. The latest update was presented to the BOTCC in February 2014.</p> <p>In addition, the ECEMG is working on a metrics project designed to produce a set of metrics, displayed in a dashboard, which focus on key aspects of performance related to the NERC Compliance Monitoring and Enforcement Program (CMEP). The metrics will initially focus on the timely performance of key CMEP activities and the mitigation of violations that have the most significant impact on the reliability of the bulk power system. ECEMG's metrics project includes developing and implementing caseload and mitigation aging curves, identifying other key metrics, and developing an effective dashboard to present the metrics results.</p>
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		<p>ECEMG is developing ERO-wide and NERC-Region Specific Performance Measures and Dashboard for 2013 and beyond. The ERO Enterprise Strategic Plan 2014-2017 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 ERO Enterprise Strategic Plan, 2014-2017. There are four overarching metrics focused on overall effectiveness in addressing bulk power system risks and improving reliability.</p> <p>There are a number of supporting measures that assess the effectiveness of the key operational elements of the ERO Enterprise.</p> <p>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 regions. NERC and the Regional Entities are encouraged to further use relevant portions of these measures in their internal corporate performance management programs.</p>
215	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.	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 assessment under various FFTs, SNOPs and NOPs scenarios.

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		<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 available 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 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</p>
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		<p>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	<p>Support the suggestions of the Regional Entities for the NERC Board of Trustees Compliance Committee to increase communications with Regional Entities regarding its decisions.</p>	<p>NERC has increased communications with the Regional Entities by providing various forums and channels for communication.</p> <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 implantation process.</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</p>	<p><i>See Section II.C</i></p>

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	supplant existing processes for providing non-public data to the Commission.	
218-219	Provides that if NERC still wants to pursue a “warning ticket” mechanism, it must explain how the mechanism would work without running afoul of the concerns raised. NERC is free to provide that explanation in the informational filing or, if it chooses to take additional time to develop the mechanism, in a later filing. (PP 218-219)	<i>See Section II.B</i>
134	NERC should continue to encourage, and develop incentives for, registered entities to self-report potential violations to the Regional Entities. (P 134)	<i>See Section II.B</i>