Agenda

Compliance and Certification Committee

March 1, 2016 | 1:00 p.m. - 5:00 p.m. ET
March 2, 2016 | 8:00 a.m. - Noon ET

NERC Corporate Offices
3353 Peachtree Rd NE, Suite 600 North Tower
Atlanta, GA  30326

Introductions and Chair’s Remarks

NERC Executive Management Remarks

NERC Antitrust Compliance Guidelines and Public Announcement

Agenda Items

1. Administrative – Secretary and Patti Metro
   a. Compliance and Certification Committee (CCC) Roster [LINK]

2. Committee Business
   a. Consent Agenda
      i. Meeting Agenda (Approve)
      ii. CCC December 2015 Meeting Minutes* (Approve) - Patti Metro [LINK]
   b. Review of CCC action items * – Jennifer Flandermeyer
   c. NERC Board Enterprise-wide Risk Committee report – Patti Metro
   d. NERC Board and MRC Update from February 2016 meetings*– Jennifer Flandermeyer
   e. 2016 Work Plan Finalization and Tracking Document * - Jennifer Flandermeyer
   f. Independent Audits*
      i. Status Update on Independent Audit Schedule for NERC CMEP and ORCP – Matt Gibbons
      ii. Standards Committee activity update – Mat Bunch

3. Reliability Issues Steering Committee (RISC) Update * – Terry Bilke

4. Regional Consistency Tool Update – Carter Edge

5. Compliance Guidance Task Force (Approve) - Scott Tomashefsky
a. CCCPP-011* - Procedure for Entity Qualification for Implementation Guidance Submission (Approval)
b. Recommended List of Existing Documents for NERC to Endorse as Compliance Implementation Guidance – (Endorsement)
c. Recommendations Related to the ERO Endorsement Process – (Endorsement)

6. Subcommittee Updates
   a. Nominating Subcommittee * – Helen Nalley
   b. ERO Monitoring Subcommittee (EROMS) – Ted Hobson
      i. 2015/2016 Stakeholder Perception Survey and Next Steps
      ii. 2014 Self-Certifications for Standards Applicable to NERC (SAN) and Standard Processes Manual (SPM)
   c. Compliance Processes and Procedures Subcommittee (CPPS) – Matt Goldberg
      i. Quality Review update
      ii. RSAW coordination
      iii. CMEP Annual Report
      iv. CGTF coordination
   d. Organization Registration and Certification Subcommittee (ORCS) – Ben Engelby
      i. Update on NERC-led Reviews of Registration and Certification Programs
      ii. Emerging Issues
      iii. Proposed NERC Rules of Procedure (ROP) Changes

7. NERC Staff Reports Including Status of CCC Work Plan Deliverables
   a. Risk-based Compliance Monitoring and Enforcement (CMEP) – Sonia Mendonca
      i. NERC 2015 CMEP Annual Report
      ii. Enforcement update
   b. Compliance Monitoring Update – Adina Kruppa
   c. RSAW Development for New Standards – Kiel Lyons
   d. Future Outreach Events Update – Marisa Hecht
      i. 2016 Industry Outreach

8. BES Presentation – Amir Najafzadeh

9. Member Round Table – Patti Metro
10. **2017 Meeting Dates** – Jennifer Flandermeyer

11. **Review of Action Items** – Jennifer Flandermeyer

12. **Future Meeting Dates**
   a. June 15-16, 2016: Folsom, CA (CAISO offices)
   b. September 14-15, 2016: TBD – located with other standing committees
   c. November 29-30, 2016: Arlington, VA (NRECA offices)

13. **Adjourn CCC Meeting**

14. **Officer Elections** – Helen Nalley *Closed session*

*Background materials provided*
NERC Antitrust Compliance Guidelines

I. General
It is NERC’s policy and practice to obey the antitrust laws and to avoid all conduct that unreasonably restrains competition. This policy requires the avoidance of any conduct that violates, or that might appear to violate, the antitrust laws. Among other things, the antitrust laws forbid any agreement between or among competitors regarding prices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that unreasonably restrains competition.

It is the responsibility of every NERC participant and employee who may in any way affect NERC’s compliance with the antitrust laws to carry out this commitment.

Antitrust laws are complex and subject to court interpretation that can vary over time and from one court to another. The purpose of these guidelines is to alert NERC participants and employees to potential antitrust problems and to set forth policies to be followed with respect to activities that may involve antitrust considerations. In some instances, the NERC policy contained in these guidelines is stricter than the applicable antitrust laws. Any NERC participant or employee who is uncertain about the legal ramifications of a particular course of conduct or who has doubts or concerns about whether NERC’s antitrust compliance policy is implicated in any situation should consult NERC’s General Counsel immediately.

II. Prohibited Activities
Participants in NERC activities (including those of its committees and subgroups) should refrain from the following when acting in their capacity as participants in NERC activities (e.g., at NERC meetings, conference calls and in informal discussions):

- Discussions involving pricing information, especially margin (profit) and internal cost information and participants’ expectations as to their future prices or internal costs.
- Discussions of a participant’s marketing strategies.
- Discussions regarding how customers and geographical areas are to be divided among competitors.
- Discussions concerning the exclusion of competitors from markets.
- Discussions concerning boycotting or group refusals to deal with competitors, vendors or suppliers.
- Any other matters that do not clearly fall within these guidelines should be reviewed with NERC’s General Counsel before being discussed.

III. Activities That Are Permitted
From time to time decisions or actions of NERC (including those of its committees and subgroups) may have a negative impact on particular entities and thus in that sense adversely impact competition.
Decisions and actions by NERC (including its committees and subgroups) should only be undertaken for the purpose of promoting and maintaining the reliability and adequacy of the bulk power system. If you do not have a legitimate purpose consistent with this objective for discussing a matter, please refrain from discussing the matter during NERC meetings and in other NERC-related communications.

You should also ensure that NERC procedures, including those set forth in NERC’s Certificate of Incorporation, Bylaws, and Rules of Procedure are followed in conducting NERC business.

In addition, all discussions in NERC meetings and other NERC-related communications should be within the scope of the mandate for or assignment to the particular NERC committee or subgroup, as well as within the scope of the published agenda for the meeting.

No decisions should be made nor any actions taken in NERC activities for the purpose of giving an industry participant or group of participants a competitive advantage over other participants. In particular, decisions with respect to setting, revising, or assessing compliance with NERC reliability standards should not be influenced by anti-competitive motivations.

Subject to the foregoing restrictions, participants in NERC activities may discuss:

- Reliability matters relating to the bulk power system, including operation and planning matters such as establishing or revising reliability standards, special operating procedures, operating transfer capabilities, and plans for new facilities.
- Matters relating to the impact of reliability standards for the bulk power system on electricity markets, and the impact of electricity market operations on the reliability of the bulk power system.
- Proposed filings or other communications with state or federal regulatory authorities or other governmental entities.
- Matters relating to the internal governance, management and operation of NERC, such as nominations for vacant committee positions, budgeting and assessments, and employment matters; and procedural matters such as planning and scheduling meetings.
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<th>Responsible Parties</th>
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<th>Status</th>
<th>Comments and Next Steps</th>
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<td>1</td>
<td>Sep-14</td>
<td>CPPS</td>
<td>Sep-16</td>
<td>Open</td>
<td>Data Retention Project: CPPS will communicate with the Standards Committee to provide information on the results and recommendations. CPPS will report on the status at the December meeting. Adina Mineo will communicate all recommendations to appropriate parties</td>
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<td>2</td>
<td>May-15</td>
<td>Metro</td>
<td>Jun-16</td>
<td>Open</td>
<td>Compliance and Audit specific have been added to the manual. Balance with Standards group in progress. Jennifer to follow up with Victoria and Ryan.</td>
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<td>Follow up with Patti, Jennifer and Legal.</td>
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<td>6/4/2014</td>
<td>CCC Members, Metro, Mike Nalley, and Kevin Conway.</td>
<td>Closed</td>
<td>CCC asked Ms. Iwanechko to work with the advisory group to identify communication needs with industry to reflect updates to the NERC Standard on the CERTS Program. CCC will send revised CCC protocols (CCCPP-001 through 003) to NERC legal for review and comment.</td>
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### 2012 Interlocutor Perception Survey Results Follow-up and Improvement Plan:

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Information
For informational purposes only

Background
These notes are provided by CCC attendees at the aforementioned meetings. The notes are not provided to accurately represent all agenda topics in full.

The North American Electric Reliability Corporation (NERC) Members Representative Committee (MRC) and Board of Trustees (BOT) convened their quarterly meetings on February 10-11, 2016. The following are the most significant highlights from those meetings.

Board of Trustees Compliance Committee:

- Introductions and Chair’s Remarks
  - Board members still focused on outreach and plan to continue this approach.
  - Executive session conducted in early January for approval of Notice of Penalties, including Regional Executives in these discussions.
  - BOTCC held discussions with RE regarding common approach of mitigating factors in penalty assessment.
  - BOTCC developing effectiveness metrics of the CMEP.

- Compliance Committee Self-Assessment Results were reviewed with no substantive issues identified.

- Critical Infrastructure Protection Activity Update
  - Supply chain technical conference and debrief of content discussions.
  - FERC Order No. 822 directives (transient devices, communication networks between control centers, external routable connectivity).
  - Minimal number of TOPs will be notified that their control centers are low risk.
  - The existing CIP V5 Standards Drafting Team will be leveraged for FERC 882 directives and requests for interpretation, however, there will be vacancies thus there will be a call for nominations. There may be consideration given to consider using NERC’s new compliance guidance policy and process.

- CMEP Annual Report
o Trends spotted in 2015 but present an improvement in compliance (# of non-compliances).
o Only 2% of violations in the Enforcement processes are serious risk.
o Continued increase in self reported non-compliance from Registered Entities.
o For a review of the new Risk-Based CMEP processes, only an average of about 5 entities per Region have self logging privileges. This number seemed high compared to the statistics presented in the reports. There was significant discussion from the BOT about the adoption of the practice and range of use. The expectation is that it would be utilized more broadly. Further discussion will occur on this item and the BOTCC hopes to see more interest in logging for the future and discuss the associated barriers to use.
o 231 IRAs and 51 ICE completed in 2015 respectively.
o Mr. Cauley believes the control evaluation should be limited to those NERC focus areas. He would like to see ICE activities greatly increased in 2016.

Member Representatives Committee Meetings:

• DOE-NERC Coordination
  o Discussion regarding resiliency projects with DOE.
  o Budget information for 2017 and transparency efforts for NERC’s reallocation of resources based on current state (less standards activity, efficiencies in compliance).

• Responses to the Board’s Request for Policy Input
  o 2017 Business Plan and Budget Development
  o ERO Enterprise Strategic Planning Redesign
    ▪ Three primary documents for use in this process (long term considerations, 3 year strategic plan, and metrics).
    ▪ Metrics should drive outcomes and steer prioritization of budget dollars or funding.

• Cost Effectiveness Method and Pilot Proposal
  o Standards committee is supporting a cost effectiveness proposal.
  o TPL-001 will be a pilot. Cost assessment will be completed with posted results.
  o Cost should include the overhead in maintaining compliance documentation.
  o Many sectors or segments weighed in on the need for a method to support this type of analysis to help the industry prioritize efforts in standards drafting and truly focused on reliability improvements.

• Clean Power Plan: NERC Assessments Status Update
  o NERC building Phase II scenarios
    ▪ Many types of cases and injects considered: no CPP, limited interstate trading, full interstate trading, high renewables penetration, nuclear retirement acceleration, etc.
    ▪ Fair amount of discussion on the general value of the CPP assessment reports and the issues yet to be resolved.

• Compliance Guidance Implementation
  o Update was provided on the Compliance Guidance Task Force work and timeline for anticipated deliverables.
• NERC will be posting vetted compliance guidance (or guidance from pre-approved entities) on a common website.
• NERC is working with the Regional Entities on the internal ERO processes in support of the policy in addition.

**Board of Trustees Meetings:**

- Report on Mexico’s Electricity Reforms, Commissioner Marcelino Madrigal, CRE (materials were included with this report but the participation from Mexico marked a notable event at the BOT meetings).
  - Significant reforms occurring in Mexico.
  - Majority is gas, combined cycle.
  - Creating spot, medium and long term markets.
  - Created a separate system operator.
  - 2018 will create a clean energy certificate market.

- Board Actions: All items for Board approvals, adoptions or endorsement were passed affirmatively and unanimously.
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<th>Proj #</th>
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<th>Activities</th>
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<th>Status</th>
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<td>2016 ERO Effectiveness Survey</td>
<td>• Provide input to the development of the 2016 NERC annual ERO effectiveness survey, including development of questions.</td>
<td>CCC, EROMS, TalentQuest, NERC Mngmnt</td>
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<td>• Develop recommendations to address the least favorable scores identified by stakeholders.</td>
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<td>• Analyze 2015 Effectiveness Survey and suggest survey improvement action plans for consideration by the BOT.</td>
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<td>Independent Audit of CMEP and ORCP</td>
<td>• Participate and support.</td>
<td>CCC, Michelle Thomas (NERC)</td>
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<td>• Coordinate with NERC on criteria development, process and assessment of adherence to NERC RDP.</td>
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<tr>
<td>3</td>
<td>NERC Self-Certifications</td>
<td>• Participate and support.</td>
<td>CCC, Michelle Thomas (NERC)</td>
<td>X</td>
<td>X</td>
<td>IP</td>
<td></td>
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</tr>
<tr>
<td>4</td>
<td>Enterprise-wide Risk Committee (EWRC) 2016 Work Plan</td>
<td>• Provide input as requested by the EWRC Chair.</td>
<td>CCC Chair and Vice Chair, Mechelle Thomas (NERC), and EWRC/ CPPS, CCC, NERC and RE Mngmnt</td>
<td>X</td>
<td>X</td>
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<td>• Update CCC procedure(s) to revise criteria as necessary to appropriately reflect expected program improvements from Risk-based CMEP (e.g. CCCP-010).</td>
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<tr>
<td>5</td>
<td>Regional Consistency Tool (RCT) Monitoring</td>
<td>• Receive reports and monitor for issue resolution.</td>
<td>CCC, NERC Mngmt</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>IP</td>
<td></td>
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</tr>
<tr>
<td>6</td>
<td>Review and Update of CCC Programs and Procedures</td>
<td>• Continuous updates to CCC Procedures as changes occur in the ERO organization—specific items include confidentiality.</td>
<td>CCC, NERC Mngmt</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>IP</td>
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</tr>
<tr>
<td>7</td>
<td>Risk-based Registrations Advisory Group (RBRAAG)</td>
<td>• Participation and support.</td>
<td>CCC Chair and Vice Chair</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>C</td>
<td></td>
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</tr>
<tr>
<td>8</td>
<td>ERO Enterprise’s Risk-based Compliance Monitoring and Enforcement Program (CMEP)</td>
<td>• Participate in risk-based compliance oversight advisory group.</td>
<td>CCC, CPPS, NERC Mngmt</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td></td>
<td></td>
<td>• Support rollout of key activities.</td>
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<td>• Risk-based CMEP oversight for issue spotting and advice to NERC on possible solutions.</td>
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<tr>
<td>9</td>
<td>Communication Tools Review</td>
<td>• Support teams as subject matter experts to suggest improvement areas.</td>
<td>CCC, CCC Chair, CPPS, NERC Mngmt</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>NS</td>
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</tr>
<tr>
<td>10</td>
<td>ERO Enterprise Risk Input</td>
<td>• Provide stakeholder and subject matter expertise to NERC management in development of risk analysis and elements</td>
<td>CCC, CCC Chair, ROC, NERC Mngmt</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>IP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Risk Metrics Analysis</td>
<td>• Provide support for identification and recommendation of analytics tools for continuous improvement opportunities and trend spotting for response efforts to strengthen reliability and security.</td>
<td>Past CCC Chair, CCC, CPPS, ROC, NERC Mngmt</td>
<td>X</td>
<td>X</td>
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</tr>
<tr>
<td>12</td>
<td>Update 2016 CCC Work Plan</td>
<td>• Incorporate ERO 2016-2019 Strategic Goals.</td>
<td>CCC Exec Committee, CCC Vice Chair, NERC Mngmt</td>
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<td></td>
<td>• Review 2016 CCC Work Plan, if applicable.</td>
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<td></td>
<td>• Evaluate work plan timeline.</td>
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</tr>
<tr>
<td>13</td>
<td>2017 Work Plan</td>
<td>• Create 2017 Work Plan.</td>
<td>CCC Exec Committee, CCC Vice Chair, NERC Mngmt</td>
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<td></td>
<td>• Create work plan timeline and project plan.</td>
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<tr>
<td>14</td>
<td>Compliance Guidance Policy</td>
<td>• Process for qualification of entities.</td>
<td>CCC Compliance Policy Task Force</td>
<td>X</td>
<td>X</td>
<td>IP</td>
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</tbody>
</table>
Status of the CCC CMEP/ ORCP Audits as Of March 2016

Matt Gibbons, Manager of Internal Audit and Corporate Risk Management
Compliance and Certification Committee Meeting
March 1-2, 2016
Agenda Item 2f(i)
Status Update on Independent Audit Schedule for NERC CMEP and ORCP

Matt Gibbons, Manager of Internal Audit and Corporate Risk Management
Compliance and Certification Committee Meeting
March 1-2, 2016
Audit Objective:
• Ensure NERC’s compliance with Compliance Monitoring and Enforcement Program (CMEP) and Organizational Registration and Certification Program (ORCP)

Audit Scope:
• CMEP and ORCP activities for the time period of 2013-2015

Audit Team:
• Independent Auditor (serves as audit team lead)
• CCC Observers
• NERC Internal Audit
Completed Activities Reported at December CCC Meeting:

- CCC audit observers selected
- Auditor training for CCC observers
- Selection of independent auditor
- Scheduled dates for audit fieldwork

Completed Activities Since December CCC Meeting:

- Audit Kickoff Meeting
- Evidence requests by independent auditor and NERC responses
- Planning meeting with CCC observers and independent auditor
Timing of Next Steps:
• Interviews in Atlanta March 2-4
• Interviews in DC March 8-10
• Audit completion around April 15
• Audit report to be issued second or third quarter of 2016
Agenda Item 2f(ii)
Standards Committee Update

Mat Bunch, Reliability Standards Analyst
Compliance and Certification Committee Meeting
March 1-2, 2016

RELIABILITY | ACCOUNTABILITY
• Ballot Pool Clean Up
  ▪ Maintaining an effective ballot pool
    o Emails reminding users to vote or abstain
    o More educational and training resources available [here](#)
  ▪ Issue meeting quorum
    o Alleviated by the Standards Balloting and Commenting System

• Quality Review (QR) – CCC Involvement
  ▪ All formal Standards QRs include the CPPS as industry participants
Questions and Answers
March 2016 NERC RISC Update

The NERC Reliability Issues Steering Committee (RISC) has had one call since the last CCC meeting. Recent highlights include:

- Peter Brandien, ISONE, has been appointed RISC Chair by the NERC BOT.
- As noted at the last NERC BOT meeting, NERC will be seeking input from the RISC on NERC’s strategic planning metrics.
- The general process for creating the 2016 RISC report will be similar to 2015.

Upcoming RISC activity includes:

- March (date TBD): Conference call.
- April (date TBD): Face to face meeting, Atlanta.
- 10-May: Conference Call from 1:00 pm to 3:00 pm EST (discuss outcomes of pulse point interviews, RISC report enhancements, Reliability Leadership Summit).
- 29-Jun: Reliability Leadership Summit in Washington, DC at Renaissance Dupont Circle.
- 30-Jun: RISC face-to-face from 8:00 am to 1:00 pm EST meeting to summarize key take-aways from the Leadership Summit.
- 14-Jul: Conference Call to discuss draft RISC report to be presented to the Board.
- Aug (date TBD): Placeholder for RISC report work.
- 16-Sep: RISC report is complete in order to begin internal review.
- End of Nov/Early Dec: Face-to-face year end debrief; begin nomination processes for 2017.

A summary of last year’s identified risks are highlighted in the attached heat map. Additional information can be found on the RISC website.
Risk Mapping

Key
- View of Risk
- Mitigated Risk – After Recommended Actions
- Overall Risk Trend
- Stable Risk Trend

Group One: Regulatory
1. Regulatory Uncertainty

Group Two: Resources
2. Changing Resource Mix
3. Generation Unavailability
4. Ineffective Resource Planning
5. Inadequate Planning Coordination

Group Three: System Assets
6. Inadequate Maintenance/Asset Management
7. Protection System and SPF Failures
8. Loss of EMS Situational Awareness

Group Four: Resiliency
9. Cyber Security
10. Extreme Physical Natural Events
11. Extreme Physical Man-Made Events
12. Pandemic

Group Five: Human Role
13. Inadequate Human Performance

Group Six: Recovery Restoration
14. Inadequate Event Response or Recovery
Regional Consistency Tool (RCT)

- Assists the Regional Entities and NERC and in their efforts to improve consistency. It also aids in the quest for continuous improvement in day-to-day operations.
- Reports submitted by relevant industry stakeholders are entered directly on a secure server administered by a third-party provider, EthicsPoint.
  - The provider is under contract to maintain the anonymity of reporters.
Regional Consistency Tool (RCT)

- A link to the RCT is located on all Regional Entity websites and the NERC website.
Regional Consistency Tool (RCT)

Select “Make a Report” and enter your information.
Regional Consistency Tool (RCT)

- The posting spreadsheet downloaded from the “Findings” link provides a summary of the reported issue, findings and either an implemented solution, explanation of current state and rationale, or an explanation of what activities may be in play to address or mitigate the reported issue.

<table>
<thead>
<tr>
<th>Make a Report</th>
<th>Follow-up on a Report</th>
<th>Resources</th>
<th>FAQs</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>To Make a Report</td>
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<tr>
<td>Select the “Make a Report” link at the top of this web page.</td>
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<tr>
<td>After you complete your report you will be assigned a unique code called a “report key.”</td>
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<tr>
<td>Write down your report</td>
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</tbody>
</table>

**ATTENTION!** This webpage is hosted on EthicsPoint’s secure servers and is not part of any Regional Entity website or intranet.

**Our Commitment**

The eight Regional Entities: Florida Reliability Coordinating Council (FRCC); Midwest Reliability Organization (MRO); Northeast Power Coordinating Council (NPCC); ReliabilityFirst Corporation (RF); SERC Reliability Corporation (SERC); Southwest Power Pool (SPP); Texas Reliability Entity (TRE); and Western Electricity Coordinating Council (WECC), and NERC are committed to ensuring and promoting consistency among the Regional Entities.
Regional Consistency Tool (RCT)

Twenty cases have been submitted via the tool to date.

The ERO process areas identified as:

- Compliance audits (4)
- Self-Certification (3)
- Organization Registration (3)
- Mitigation Validation (2)
- Notice of Penalty and Completion of Enforcement Action (1)
- CMEP tools (2)
- Event Analysis (1)
- Periodic Data Submittals (1)
- Standards (3)
Compliance Audits

- Verification of mitigating activities for areas of concern
  - Areas of concern reviewed and incorporated into IRA
- RSAW’s are used differently by different regions
  - The uses of RSAWs are being examined
- IRA and ICE questionnaire timing
  - Implementation of Risk Based CMEP is being monitored
- General audit process timing
  - Process document review and revisions as part of MRRE and Risk Based CMEP implementation
Self Certification

- Different approaches to addressing previously identified non-compliances
  - Uncoordinated reporting periods and due dates
  - Status during the reporting period (compliant / non-compliant)
- CIPv5 and CIP-014 coordination
  - Schedule and methodology
Organization Registration

- I4 – Dispersed Power Producing Resources
  - Application of Definition
- Registration Practices
  - Implementation of risk based registration reforms
- Associate BES assets to a Registered Entity
  - Common Registration Form and future xRM Registration platform
Mitigation Validation

- Closing of Mitigation Plans in MRRE environment
  - Implementation of MRRE processes for LRE and ARE roles
Notice of Penalty and completion of Enforcement Action

- Documents required for FFT treatment settlement
- Common practice regarding FFT affidavits
CMEP Tools

- webCDMS administrator security roles
  - Consistent user administration
- Information replicated in multiple environments and not shared across regions
  - Coordinated oversight under MRRE program; future IT infrastructure
Event Analysis

- Use as a compliance/enforcement tool
  - Clarification around Categories
  - Clarification around activities
  - TEAMS platform
Periodic Data Submittals

- Collection of Relay Operations / Misoperations data
  - Standard PRC-003/4 revisions
  - Section 1600 data request
  - MIDAS platform
Standards

- Regional Standards
  - Ability to address specific reliability issues within a region or interconnection
  - Fill-in-the-blank standards
- Implementation details for new/revised standards
  - Communication / outreach
  - Coordination
Regional Consistency Tool (RCT)

- Some issues were known and are part of ongoing activities, others are newly identified and allowed the Regional Entities and NERC to collaborate on ready solutions.
- This reporting tool creates an open channel of communication to report perceived inconsistencies, and will augment efforts to ensure and promote consistency among the Regional Entities.
- The ERO Enterprise is better aware of the impact its processes have on registered entities through these reports.
Questions?
cedge@serc1.org
CCC Compliance Guidance
Task Force Activities
(1st Quarter Deliverables)

Scott Tomaszefsky, Compliance and Certification Committee
March 1, 2016
Compliance Guidance Policy Task Force Members

CCC Members
- Scott Tomashefsky – Chair
- Patti Metro
- Jennifer Flandermeyer
- Terry Bilke
- Matt Goldberg
- Barbara Kedrowski
- Leland McMillan
- Lisa Milanes
- Helen Nalley
- Patricia Robertson
- Clay Smith

Standards Committee Members
- Guy Zito - Lead
- Andrew Gallo
- Chris Gowder
- Scott Miller
- Randy Crissman

NERC Staff
- Kristin Iwanechko
- Steven Noess
• Compliance Policy Guidance Document approved by NERC BOT at November 2015 meeting

• Main Components
  - Implementation Guidance
    - Developed by industry
    - Examples for implementing a standard
  - Compliance Monitoring and Enforcement Program (CMEP) Practice Guides
    - Developed by the Electric Reliability Organization (ERO) Enterprise
    - Provide direction to ERO Enterprise CMEP staff on approaches to carry out compliance and enforcement activities
NERC BOT Directives to Stakeholders: Compliance Policy Guidance

• To CCC (with support from Standards Committee)
  ▪ Review list of existing documents to submit for endorsement
  ▪ Develop process to approve new organizations as pre-qualified organizations eligible to submit implementation guidance to ERO
  ▪ Timeline for Deliverable:   End of First Quarter 2016

• To CCC
  ▪ Review Measures and Reliability Standard Audit Worksheets
    o Will be coordinated through CPPS
  ▪ Timeline for Deliverable:   To be determined

• To Standards Committee
    o Being reviewed by the Standards Committee Process Subcommittee
  ▪ Timeline for Deliverable:   To be determined
• 18 organizations already pre-qualified by ERO to submit implementation guidance

• CCC tasked with adding or deleting other entities to the pre-authorized list

• Process
  - CPPS reviews pending applications during each quarterly CCC meeting and provide recommendation to CCC
  - CCC acts on CPPS recommendation
  - CCC notifies ERO to modify the pre-authorized list

Task Force will ask for CCC approval
Based on discussion during the CCC Meetings on 3/1/16, the following language has been drafted:

As noted above, any organization that is seeking to be pre-qualified to submit Implementation Guidance to the ERO will be evaluated based on the following criteria:

• Is a known entity on the list of NERC registered entities, or in the alternative, represents a group of registered entities
• Is actively involved in the various technical and policy operations of NERC
• Has methods to assure technical rigor in the development process
• Possesses the ability to vet content through its organization, providing a high level of confidence to the CCC that the Guidance has been fully vetted

The CCC will also take into consideration any characteristics and additional information of the Applicant.
List of Endorsement Documents

Starting Point for Document Review (NERC Website)

<table>
<thead>
<tr>
<th>Document</th>
<th>Purpose</th>
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<tbody>
<tr>
<td>Measures</td>
<td>Provides a non-exclusive list of evidence to demonstrate compliance</td>
</tr>
<tr>
<td>RSAWs</td>
<td>Worksheet used by CMEP auditors and may be used by entities to prepare for compliance monitoring</td>
</tr>
<tr>
<td>Guidelines</td>
<td>Provides the technical basis for the standard</td>
</tr>
<tr>
<td>White Papers</td>
<td>Provides a technical basis for the standard</td>
</tr>
<tr>
<td>Responses to Comments</td>
<td>Provides answers to industry questions or comments raised during standards development</td>
</tr>
<tr>
<td>FAQs</td>
<td>Provides answers to straightforward or simply industry questions</td>
</tr>
<tr>
<td>Webinars</td>
<td>Provides information related to the standards</td>
</tr>
<tr>
<td>Lessons Learned</td>
<td>Provides answers to complex industry questions</td>
</tr>
<tr>
<td>Reports</td>
<td>Provides historical information or trends</td>
</tr>
</tbody>
</table>
## Results of Review

<table>
<thead>
<tr>
<th>Document Type</th>
<th>Documents Available</th>
<th>Status</th>
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</thead>
</table>
| Standards Supporting Documents                    | 24                  | - 7 documents ready for ERO endorsement  
- 7 documents potential candidates  
- 10 rejected                                    |
| Compliance Training, Workshop Materials and Webinars | 15                  | Not relevant for ERO endorsement                                       |
| Compliance Process Bulletins                      | 23                  | Probably not relevant, not further review                               |
| Compliance Application Notices                     | 32                  | CANs related to CIP likely outdated with transition to CIP V5. Others pending further review |
| Compliance Analysis Reports (CIP Transition Page)  | 4                   | Need further review                                                     |
| Guidance Documents Developed by Technical Committees | Numerous (Undetermined) | Need to involve various technical committees to determine extent of documents to review |
| Other Documents ERO Case Studies                   | 1                   | Need further review                                                     |
| RSAWs                                             | 120                 | To be reviewed by CPPS as separate phase of review                      |
### List of Endorsement Documents

#### Seven Documents Ready for ERO Endorsement

<table>
<thead>
<tr>
<th>Standard Version</th>
<th>Title</th>
<th>Supporting Document</th>
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<tbody>
<tr>
<td>PER-005-1</td>
<td>System Personnel Training</td>
<td>PER-005 System Personnel Training Reference Document</td>
</tr>
<tr>
<td>TOP-001-3</td>
<td>Transmission Operations</td>
<td>System Operating Limit Definition and Exceedance Clarification</td>
</tr>
<tr>
<td>EOP-010-1</td>
<td>Geomagnetic Disturbance Operations</td>
<td>Transformer Thermal Impact Assessment White Paper</td>
</tr>
<tr>
<td>EOP-010-1</td>
<td>Geomagnetic Disturbance Operations</td>
<td>Screening Criterion for Transformer Thermal Impact Assessment</td>
</tr>
<tr>
<td>VAR-001-4.1</td>
<td>Voltage and Reactive Control</td>
<td>Compliance Operations Draft Reliability Standard - Compliance Guidance for VAR-001-4 and VAR-002-3</td>
</tr>
<tr>
<td>MOD-033-1</td>
<td>Steady State and Dynamic System Model Validation</td>
<td>Compliance Operations Draft Reliability Standard - Compliance Guidance for MOD-032-1 and MOD-033-1</td>
</tr>
</tbody>
</table>

*Task Force will ask for CCC endorsement*
## List of Endorsement Documents

### Seven Documents Potentially Ready for ERO Endorsement with Additional Work

<table>
<thead>
<tr>
<th>Standard Version</th>
<th>Title</th>
<th>Supporting Document</th>
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<tbody>
<tr>
<td>BAL-005-0.2b</td>
<td>Automatic Generation Control</td>
<td>Calculating and Using Reporting ACE in a Tie Line Bias Control Program (White Paper)</td>
</tr>
<tr>
<td>PRC-002-2</td>
<td>Disturbance Monitoring and Reporting Requirements</td>
<td>Median Method Excel Workbook</td>
</tr>
<tr>
<td>PRC-005-6</td>
<td>Protection System, Automatic Reclosing, and Sudden Pressure Relaying Maintenance</td>
<td>Supplementary Reference and FAQ PRC-005-6 Protection System, Automatic Reclosing, and Sudden Pressure Relaying Maintenance and Testing</td>
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<tr>
<td>PRC-010-2</td>
<td>Undervoltage Load Shedding</td>
<td>PRC-010-1 FAQ posted with PRC-006</td>
</tr>
<tr>
<td>PRC-012-2</td>
<td>Phase 3 of Protection Systems: Remedial Action Schemes (RAS)</td>
<td>Q&amp;A Document</td>
</tr>
<tr>
<td>PRC-025-1</td>
<td>Generator Relay Loadability</td>
<td>PRC-025-1 Guidelines and Technical Basis</td>
</tr>
</tbody>
</table>
CCC Compliance Guidance Task Force developed application form template

Pre-qualified organizations may submit vetted Implementation Guidance to complianceguidance@nerc.com

NERC-related Activities

- NERC website being updated to accommodate requests
- NERC developing internal process
  - Delegated to ERO Compliance Monitoring Group
  - Will include directors from each of the regions and NERC staff
• Move documents already referenced in the Compliance Guidance Policy document to NERC endorsement page

• Review set of documents CCC Compliance Task Force determined is ready for ERO enterprise endorsement

• Reach out to various technical committees and the list of pre-qualified organizations to encourage review of additional documents
  ▪ Task Force identified documents in need of further review
  ▪ Regional guidance documents not yet addressed
Next Steps and Additional Considerations for Task Force

- Additional calls to be scheduled in March
- Group will finalize end-of-March deliverables
  - Format of correspondence to NERC Board of Trustees
- Address future roles and responsibilities of Task Force
  - Should group continue beyond “end of first quarter”?
  - Board directives would be needed to extend efforts
• Approve
  ▪ Procedure to Become a Pre-Qualified Organization Eligible to Submit Implementation Guidance to ERO (CCCPP-011)

• Endorse
  ▪ Recommended list of existing documents for NERC to endorse as Compliance Implementation Guidance
  ▪ Recommendations related to the ERO Endorsement Process
Questions and Answers
Procedure to Become a Pre-Qualified Organization Eligible to Submit Implementation Guidance to ERO

CCC Monitoring Program – CCCPP-011-1
February 25, 2016 (Final Draft)
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Preface

NERC Compliance and Certification Committee | CCCPP-011-1
Title: Procedure to become a Pre-Qualified Organization Eligible to Submit Implementation Guidance to ERO
Version: 1.3 | Revision Date: 2/25/2016 | Effective Date: x/xx/2016

Summary

The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to ensure the reliability of the bulk power system (BPS) in North America. NERC develops and enforces Reliability Standards; annually assesses seasonal and long-term reliability; monitors the BPS through system awareness; and educates, trains, and certifies industry personnel. NERC’s area of responsibility spans the continental United States, Canada, and the northern portion of Baja California, Mexico. NERC is the electric reliability organization (ERO) for North America, subject to oversight by the Federal Energy Regulatory Commission (FERC) and governmental authorities in Canada. NERC’s jurisdiction includes users, owners, and operators of the BPS, which serves more than 334 million people.

The Compliance and Certification Committee (CCC) is a NERC Board-appointed stakeholder committee serving and reporting directly to the NERC Board of Trustees (Board) and is responsible for engaging with, supporting, and advising the NERC Board and NERC regarding all facets of the NERC Compliance Monitoring and Enforcement Program (CMEP), Organization Registration Program (Registration program), and Organization Certification Program (Certification program).

In accordance with action taken by the NERC Board on November 5, 2015, the CCC was asked to play a lead role in developing tools and/or procedures that will promote a common understanding among industry and ERO Enterprise Staff regarding how compliance can be achieved and demonstrated. Key to this effort is the development of Implementation Guidance, a stakeholder-driven means to develop examples of approaches to illustrate how registered entities could comply with a standard that are vetted by pre-qualified organizations and endorsed by the ERO Enterprise.

NERC will only consider requests for Implementation Guidance that have been vetted through one of several organizations that are “pre-qualified” to submit guidance for ERO Enterprise endorsement. Therefore, an organization that has not been pre-qualified can send a request to the CCC to be added to the pre-qualified list. This document outlines the process by which the CCC will receive and evaluate such requests.

Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Version Number</th>
<th>Comments</th>
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<td>January 25, 2016</td>
<td>1.1</td>
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<td>1.2</td>
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<td>1.3</td>
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1. Introduction

In the capacity of a NERC board-appointed stakeholder committee serving and reporting directly to the Board under a NERC board-approved charter,¹ and as approved by FERC,² and as set forth in the ROP, the CCC will engage with, support, and advise the Board and NERC Board of Trustees Compliance Committee (BOTCC) regarding all facets of the NERC CMEP, Registration program, and Certification program.

In accordance with action taken by the NERC Board on November 5, 2015, the CCC was asked to play a lead role in developing tools and/or procedures that will promote a common understanding among industry and ERO Enterprise Staff regarding how compliance can be achieved and demonstrated. Key to this effort is the development of Implementation Guidance, a stakeholder-driven means for registered entities to develop examples of approaches to illustrate how registered entities could comply with a standard that are vetted by pre-qualified organizations and endorsed by the ERO Enterprise.

NERC requires that Implementation Guidance be vetted through one of the following pre-qualified organizations prior to being submitted to the ERO Enterprise for endorsement:

- American Public Power Association (APPA)
- Canadian Electricity Association (CEA)
- Edison Electric Institute (EEI)
- Electricity Consumers Resource Council (ELCON)
- Electric Power Supply Association (EPSA)
- ISO/RTO Council
- Large Public Power Council (LPPC)
- National Association of Regulatory Utility Commissioners (NARUC)
- National Rural Electric Cooperative Association (NRECA)
- North American Generator Forum (NAGF)
- North American Transmission Forum (NATF)
- Northwest Public Power Association (NWPPA)
- Transmission Access Policy Study Group (TAPS)
- Western Interconnection Compliance Forum (WICF)
- NERC Planning Committee (PC)
- NERC Operating Committee (OC)
- NERC Critical Infrastructure Protection Committee (CIPC)
- Regional Entity Stakeholder Committees

NERC will post and maintain the list on the NERC website. In order to be added to the list of “pre-qualified” organizations that are eligible to serve as a potential submitter of Implementation Guidance, NERC requires an organization to submit a request to the CCC. Each of the pre-qualified organizations are comprised of stakeholders that: 1) are actively involved in the various technical and policy operations of NERC, 2) have methods to assure technical rigor in the development process, and 3) possess the ability to vet content through its members.

² http://www.nerc.com/files/Order_on_Comp_Filing_06.07.2007_CCC_VSL_Order.pdf
2. Scope

The CCC is responsible for reviewing and considering applications for organizations who desire to become a pre-qualified organization eligible to submit Implementation Guidance to the ERO Enterprise. The CCC Compliance Processes and Procedures Subcommittee (CPPS) will review and consider such applications.

3. Meetings

In the absence of specific provisions in this document or the CCC Charter, all CPPS subcommittee meetings will follow Robert’s Rules of Order, Newly Revised. Actions requiring a vote by the members of the CPPS will be approved upon receipt of the affirmative vote of the majority of the voting members of the CPPS present and voting, in person or by proxy at any meeting at which three (3) or more members are present.

3.1. Antitrust Guidelines
All persons attending or otherwise participating in the CPPS will act in accordance with NERC’s Antitrust Compliance Guidelines at all times during the meeting.

3.2. Open Meetings
NERC committee meetings will be open to the public, except as noted below under Confidential Sessions.

3.3. Types of Meetings
Meetings may be conducted in person, by conference call, or other means. The procedures contained in this scope document will apply to all meetings regardless of how they are conducted.

3.4. Majority and Minority Views
All members of the working group will be afforded the opportunity to provide alternative views on an issue. The results of the CPPS actions, including recorded minutes, will reflect the majority as well as any minority views of the working group members. The chair will communicate both the majority and any minority views in presenting results to the CCC.

3.5. Actions without a Meeting
Actions without a meeting are permitted in accordance with the provisions of the CCC Charter.

3.6 Quorum
A quorum for conducting business is 50 percent of the members listed on the current CPPS roster. If a quorum is not present, then the subcommittee may not take any actions requiring a vote of the CPPS. However, the chair may, with the consent of the members present, allow discussion of agenda items.

4. Criteria for Approval

As noted above, any organization that is seeking to be pre-qualified to submit Implementation Guidance to the ERO must provide the CPPS with the following information:

1) Explain how it includes stakeholders that possess the following characteristics:
- Must be a known entity on the list of NERC registered entities, or in the alternative, represent a group of registered entities
- Is actively involved in the various technical and policy operations of NERC
- Has methods to assure technical rigor in the development process
- Possess the ability to vet content through its members, providing a high level of confidence to the CCC that the Guidance has been fully vetted.

2) Explain why the entity did not use one of the existing pre-qualified organizations to vet its proposed Implementation Guidance.

The CCC is ultimately responsible for reviewing and considering any applications for organizations to become a pre-qualified organization. The CCC reserves the right to periodically review the list of pre-qualified entities and recommend to the ERO whether to have specific pre-qualified organizations removed. In doing so, the CCC will submit to the ERO a request to remove an organization, explaining the circumstances behind the request. Section 5 outlines the application and review process, which will subject to periodic review and modification as determined by the CCC. The CCC has the discretion to remove any organization added to the list of pre-qualified applicants through the action of the CCC.

5. Application and Review Process

5.1 Submit Application
An applicant must submit a completed application form (shown in Appendix A) to CPPS to begin the review process. CPPS will acknowledge receipt of the application within five business days of receipt, and notify the applicant by electronic mail.

5.2 Review Application
The CPPS will review applications at its regularly scheduled quarterly meetings. The CPPS will review an application at its next regularly scheduled meeting, if the application is submitted to CPPS within 20 business days of the next regularly scheduled CPPS meeting. The CPPS will make a formal recommendation to the CCC at that time, which will be followed by formal action taken by the CCC. The CPPS will evaluate the applications in accord with the criteria outlined in Section 4.

5.3 Notifying Applicant and ERO Enterprise
The CCC chair or his/her designated representative will notify the applicant of the CCC decision whether to add the applicant to the pre-qualified list. If the CCC approves the application, then the CCC will inform the ERO and request the ERO to modify the list of pre-qualified organizations and post on the ERO Enterprise website.
6. Administrative

6.1 Review Period
The Criteria for Approval in Section 4 will be reviewed by the CCC on an annual basis and modified as needed.

6.2 Retention Management
NERC’s records management policy will require that information and data generated or received pursuant to activities associated with this program be retained for a minimum of five years. If the information or data is material to the resolution of a controversy, the retention period for such data will not commence until after the controversy is resolved.

6.3 Confidentiality Management
NERC and the CCC will maintain confidentiality of all Confidential Information in accordance with Section 1500 of the ROP. Information deemed to be critical energy infrastructure information will be redacted and will not be released publicly.
APPLICATION TO BECOME A PRE-QUALIFIED ORGANIZATION ELIGIBLE TO SUBMIT IMPLEMENTATION GUIDANCE FOR POTENTIAL ENDORSEMENT BY NERC

The NERC Compliance and Certification Committee determines whether an organization will be pre-qualified to submit Implementation Guidance to NERC for endorsement.

### Contact person details

<table>
<thead>
<tr>
<th>Title/Employer</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>First name</td>
<td>Last Name</td>
</tr>
<tr>
<td>Address</td>
<td></td>
</tr>
<tr>
<td>City, State or Province</td>
<td>Zip Code or Postal Code</td>
</tr>
<tr>
<td>Phone (daytime)</td>
<td>Mobile</td>
</tr>
<tr>
<td>Email</td>
<td></td>
</tr>
</tbody>
</table>

### Name of Organization to be Applicant

Use this space to provide profile information to describe general structure of the organization.
Member Details

Use this space to provide information about the organization’s members and why the members are impactful to NERC.

Application

Use this space to provide detail as to why NERC should consider this organization as a pre-qualified organization to submit Implementation Guidance to the ERO.

Explain how this organization includes stakeholders that possess the following characteristics:

- Must be a known entity on the list of NERC registered entities, or in the alternative, represent a group of registered entities
- Is actively involved in the various technical and policy operations of NERC
- Has methods to assure technical rigor in the development process
- Possess the ability to vet content through its members, providing a high level of confidence to the CCC that an issue has been fully vetted

Explain how the entity is unable to have one of the pre-qualified organizations vet its proposed Implementation Guidance:

Please send this form to the following location:

Email: CPPS@nerc.com

or

Proceed to the following website: ?????????
Compliance Guidance Task Force 1st Quarter Deliverables

Action

- **Approve** - CCCPP-011 - Procedure to Become a Pre-Qualified Organization Eligible to Submit Implementation Guidance to ERO
- **Endorse** - Recommended List of Existing Documents for NERC to Endorse as Compliance Implementation Guidance
- **Endorse** - Recommendations Related to the ERO Endorsement Process

Highlights

- The CCC Compliance Guidance Task Force chaired by Scott Tomashefsky, Regulatory Affairs Manager, Northern California Power Agency, was formed in December. The Task Force is made up of volunteers from both the CCC and Standards Committee (SC) are finalizing a set of fast tracked Compliance Guidance Policy deliverables: 1) developing a process to evaluate and approve “non-prequalified” organizations to submit guidance for endorsement, and 2) conducting a review of existing documents to submit for ERO Enterprise endorsement. These deliverables are being presented to the CCC for action and will form the basis for a final package that will be transmitted to the NERC Board of Trustees at the end of March.
- The remaining Compliance Guidance Policy CCC deliverables will be absorbed by the Compliance Processes and Procedures Subcommittee (CPPS).
- Included in this agenda package are the following materials:
  - CCCPP-011-1: Procedure to Become a Pre-Qualified Organization Eligible to Submit Implementation Guidance to ERO
  - **Powerpoint Presentation**: CCC Compliance Guidance Task Force Activities (1st Quarter Deliverables)
  - **Application Template to Submit Implementation Guidance for ERO Endorsement**
  - **Excel Spreadsheet**: Recommended list of existing documents for NERC to endorse as compliance Implementation Guidance.
NERC welcomes suggestions to improve entity compliance with the Reliability Standards using the Compliance Guidance Policy process. Please use this form to submit your suggestions for compliance Application Guidance related to NERC’s Reliability Standards. The ERO Enterprise will consider all input received from previously approved Organizations which have been vetted through these Organizations respective processes. Entities wishing to submit compliance approaches through this process and have them considered for approval by the ERO Enterprise must first process them through these preapproved Organizations prior to submission to NERC.

Please return all completed forms via email to complianceguidance@nerc.com with the words

### Submitter Information

<table>
<thead>
<tr>
<th>Preapproved Organization Name:</th>
<th>☐ For a list of Organizations that have been preapproved to qualify to submit proposed Application Guidance see [insert link here]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submitter Name:</td>
<td>☐</td>
</tr>
<tr>
<td>Email:</td>
<td>☐</td>
</tr>
<tr>
<td>Telephone:</td>
<td>☐</td>
</tr>
<tr>
<td>Date Submitted:</td>
<td>☐</td>
</tr>
</tbody>
</table>

### Suggestion Detail

**Notes:**
1. Please be as specific as possible.
2. Where applicable, please identify the specific element(s) of the standard (e.g. Requirement R1.2, Section D1.1, Measure M1, etc.) to which the compliance Application Guidance pertains.
3. Where practical, please provide an example to clearly identify the issue.
4. Attach all pertinent documents to this completed form for the submission.

<table>
<thead>
<tr>
<th>Standard Number:</th>
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<tbody>
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<td>Standard Title:</td>
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<tr>
<td>Requirement Number(s):</td>
<td></td>
</tr>
<tr>
<td>Description of Problem or Concern:</td>
<td></td>
</tr>
<tr>
<td>Proposed Application Guidance describing the Proposal for a Compliance Approach:</td>
<td></td>
</tr>
<tr>
<td>Description of why this is approach remains consistent with the associated Standard:</td>
<td></td>
</tr>
<tr>
<td>Intended Outcome (e.g., describe how the suggestion would improve reliability, make the standard clearer for auditors, etc.):</td>
<td></td>
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</table>
Thank you for taking the time to submit your suggestion for improving the reliability of the bulk-power system through improved compliance with NERC’s Reliability Standards.

Version History

<table>
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<th>Version</th>
<th>Date</th>
<th>Owner</th>
<th>Change Tracking</th>
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<tr>
<td>1</td>
<td>February 5, 2016</td>
<td>Compliance Staff</td>
<td>Initial Version</td>
</tr>
</tbody>
</table>
• Risk Based Registration initiative is complete
  ▪ Regions have deactivated all LSE/PSE/IA functions from NCR
• BES definition that resulted in changes to registration status
  ▪ New functions or equipment need to be compliant by July 1, 2016
• ORCG (ERO Enterprise group)
  ▪ Continued collaboration with the ORCS
  ▪ Seeking feedback on certification requirement for backup control centers
• NERC and Regional Entity Executives are evaluating existing processes to determine if there is room for improvement

• Registration Program
  ▪ No additional changes to functions, RBR already did this
  ▪ Identify more efficient methods

• Certification Program
  ▪ Certification reviews focus on readiness
  ▪ Do audits handle these issues?
  ▪ Are certifications necessary?
• FERC Order No. 1000
  ▪ NERC is monitoring activity of new transmission projects

• Distributed Energy Resources (DER)
  ▪ DOE is studying changes to the resource mix
  ▪ NERC is reviewing impacts on Bulk Electric System
Proposed Rules of Procedure Changes

• ROP Section 500 and Appendix 5A
  ▪ CFR and JRO impacts of RBR, relating to IA, PSE, and LSE retirements

• ROP Section 501.1.4.3
  ▪ “Ensure that all transmission Facilities of the Bulk Power System are the responsibility and under the control of one and only one Transmission Planner, Planning Authority, and Transmission Operator.”
Questions and Answers
NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

2015 ERO Enterprise Compliance Monitoring and Enforcement Program Annual Report

February 10, 2016
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Preface

The North American Electric Reliability Corporation (NERC) is a not-for-profit international regulatory authority whose mission is to assure the reliability of the bulk power system (BPS) in North America. NERC develops and enforces Reliability Standards; annually assesses seasonal and long-term reliability; monitors the BPS through system awareness; and educates, trains, and certifies industry personnel. NERC’s area of responsibility spans the continental United States, Canada, and the northern portion of Baja California, Mexico. NERC is the electric reliability organization (ERO) for North America, subject to oversight by the Federal Energy Regulatory Commission (FERC) and governmental authorities in Canada. NERC’s jurisdiction includes users, owners, and operators of the BPS, which serves more than 334 million people.

The North American BPS is divided into several assessment areas within the eight Regional Entity boundaries, as shown in the map and corresponding table below.

The regional boundaries in this map are approximate. The highlighted area between SPP RE and SERC denotes overlap as some load-serving entities participate in one Region while associated transmission owners/operators participate in another.

<table>
<thead>
<tr>
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<td>FRCC</td>
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<td>Midwest Reliability Organization</td>
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<td>NPCC</td>
<td>Northeast Power Coordinating Council</td>
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<tr>
<td>RF</td>
<td>ReliabilityFirst</td>
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<td>SPP RE</td>
<td>Southwest Power Pool Regional Entity</td>
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<tr>
<td>Texas RE</td>
<td>Texas Reliability Entity</td>
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<tr>
<td>WECC</td>
<td>Western Electricity Coordinating Council</td>
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Executive Summary

This report highlights key ERO Enterprise Compliance Monitoring and Enforcement Program (CMEP) activities that occurred in 2015, provides information and statistics regarding those activities, and provides a look forward to the ERO Enterprise’s 2016 CMEP priorities.1 As discussed further below, 2015 was a demanding yet transformative and highly successful year for enhancing the efficiency and effectiveness of the ERO Enterprise’s CMEP. Most significantly, after a collaborative, multi-year effort among NERC, the Regional Entities, and industry stakeholders to identify and test risk-based compliance monitoring and enforcement concepts, processes, and programs; the ERO Enterprise successfully commenced implementation of a risk-based CMEP designed to focus ERO Enterprise and industry compliance resources on higher-risk issues that matter more to reliability. The ERO Enterprise also continued its commitment to enhance other features of the CMEP and work with stakeholders to help ensure a successful and effective implementation of new Critical Infrastructure Protection (CIP) Reliability Standards. The following is a brief overview of these activities and the factors and metrics the ERO Enterprise used to measure the success of the CMEP during 2015, which are discussed in greater detail throughout this report.

Key Activities

Risk-Based Compliance Monitoring and Enforcement Implementation Activities
A primary focus of the ERO Enterprise during 2015 was fully implementing the risk-based CMEP. The risk-based CMEP involves the use of an oversight plan framework2 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 began initial implementation activities. Specifically, the ERO Enterprise (1) conducted Inherent Risk Assessments (IRAs), which is a review of inherent risks posed by an individual registered entity to BPS reliability, (2) performed Internal Control Evaluations (ICEs) to evaluate whether the registered entity has implemented effective internal controls, and (3) used various methods to process noncompliance based on risk (including the Self-Logging program and Compliance Exceptions). In addition, the ERO Enterprise 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.

In 2015, the ERO Enterprise made a significant shift in how it conducts compliance monitoring activities. Previously, audit schedules primarily drove interactions with registered entities without emphasis on risk to reliability. In addition, the scope of compliance monitoring activities was driven by a relatively static list of Reliability Standards on the Actively Monitored List. The ERO Enterprise is now using the analysis of risks to drive interactions with registered entities and conduct compliance monitoring activities. Registered entities are not all similarly situated; there are numerous differences in technology, geographical location, voltages, and inter-ties that require a more risk-informed method. Recognizing the unique characteristics of registered entities and using the analysis of risks, Regional Entities tailor the monitoring activities to address the appropriate risks. The ERO Enterprise has also changed the manner in which it engages with certain registered entities. In some cases,

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1 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.

registered entities that historically were monitored through an audit are now being monitored through a spot check or even a self-certification because of the focused, tailored scope of risk-based monitoring.

In 2015, enforcement activities throughout the ERO Enterprise reflected the full implementation of the risk-based approach introduced in 2013 through the Reliability Assurance Initiative. The risk-based approach aligns the outcome of any noncompliance to the risk the particular noncompliance posed to the reliability of the BPS. In that sense, the outcome could range from a significant monetary penalty to a streamlined disposition outside of the enforcement process. This approach, and the high usage of streamlined methods described in this report, are predicated on a significant level of cooperation by registered entities. In this context, cooperation is evidenced in part by high levels of self-identification of noncompliance and prompt mitigation of issues. These historical trends regarding self-identification and mitigation continued in 2015, as discussed below. Maintaining trends of high self-identification and prompt mitigation is essential to the effectiveness of the risk-based program.

This report discusses the results achieved in 2015 with a focus on two streamlined programs in particular: Self-Logging and Compliance Exceptions. Included in the Appendix are processing efficiency results, which indicate how these programs have allowed the ERO Enterprise to operate more efficiently.

**Regional Entity Coordination of Multi-Region Registered Entities**
In June 2015, the ERO Enterprise opened the Coordinated Oversight Program of multi-region registered entities (MRREs) to all registered entities. This program is intended to make risk assessments, compliance monitoring and enforcement, and event analysis activities more efficient for the registered entities that use, own, or operate assets in areas covering more than one Regional Entity territory. Under the Coordinated Oversight Program for MRREs, Regional Entities coordinate their oversight responsibilities over MRREs by designating one or more Lead Regional Entity (LRE) to each MRRE or group of MRREs. By the end of 2015, 152 entities throughout the ERO Enterprise – by individual NERC Compliance Registry number – were participating in the program.

**Regional Consistency Reporting Tool**
To improve consistency among the Regional Entities and drive continuous improvement in day-to-day operations, the Regional Entities also developed the Regional Consistency Reporting Tool as an additional channel of communication for registered entities and relevant industry stakeholders. The tool allows the public to report any perceived inconsistencies among Regional Entities, including perceived inconsistencies with compliance monitoring and enforcement processes, procedures, or rules. In 2015, 20 reports of perceived inconsistencies were submitted through the Regional Consistency Reporting Tool. These 20 reports represent a diverse category of issues involving, among others, compliance monitoring, CMEP tools, event analysis, organization registration, and BES asset identification. The majority of these reports involve substantive issues—with a handful involving administrative issues, such as inconsistent data transmittal methods from registered entities to Regional Entities. Out of these 20 reports, 13 have been successfully investigated and resolved, three have been assigned to ERO staff working groups for longer-term tracking and resolution, and four cases are in-process.

**Transition to Version 5 of the Critical Infrastructure Protection Standards**
To support registered entities’ transition to the CIP Version 5 Reliability Standards, most of which become effective in the United States on April 1, 2016, NERC focused its 2015 efforts on three key areas: written guidance and Reliability Standard Audit Worksheets completion, stakeholder outreach, and ERO Enterprise CMEP staff training. The CIP Version 5 transition program involved significant stakeholder participation and helped address several challenging issues to enable an efficient and effective transition to the CIP Version 5 standards.

**Physical Security Reliability Standard**
The Physical Security Reliability Standard became effective on October 1, 2015. Throughout 2015, NERC and the Regional Entities focused on implementation readiness. At the start of 2015, NERC released formal guidance on implementation requirements. By the fall of 2015, the ERO Enterprise began engaging with registered entities
through a variety of outreach activities and coordinated site visits to discuss and understand their Physical Security Reliability Standard plans. NERC will continue to monitor compliance with this Reliability Standard with emphasis on assessing and supporting effective implementation.

**Success Factors and Metrics**

The ERO Enterprise identified the following preliminary factors and related metrics to measure the success of initial implementation of the risk-based CMEP during 2015:

1. **ERO Enterprise Staff Competency**: ERO Enterprise staff performing key activities are trained and competent in their areas of responsibility, such as risk assessment, audit, internal controls evaluation, and enforcement, and are regarded by registered entities as being well qualified in their roles.

2. **Information and Outreach**: Registered entities have the information they need—through outreach, program transparency, and sharing of best practices—to prepare for engaging with the Regional Entities and NERC in the risk-based compliance and enforcement activities.

3. **Consistency**: The common tools, processes, and templates used by Regional Entities for risk-based compliance activities with registered entities are consistent on matters where consistency is important, and NERC has adequate oversight of that interface.

4. **Balanced Transparency**: An appropriate level of transparency has been determined for various facets of risk-based compliance and enforcement, balancing efficiency, and the confidentiality needs of a registered entity with the needs of industry as a whole to learn from others.

5. **Preliminary Metrics**: Metrics were identified for key expected results from risk-based compliance and enforcement and benchmarked for 2015.

6. **Recognized Value**: The value of risk-based compliance and enforcement of registered entities is apparent to the public and can be clearly and publicly articulated.

This report identifies, throughout, the activities that were performed in 2015 in support of each of these success factors. This report also addresses how the implementation of the risk-based CMEP compared to the criteria proposed by the Compliance and Certification Committee (CCC) for evaluating Regional Entity CMEP effectiveness (referred to as the CCC Criteria). ³

As discussed below, while 2015 presented a number of challenges for the ERO Enterprise, a review of the ERO Enterprise’s CMEP implementation in relation to these 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. This report also describes lessons learned during 2015 for all CMEP activities and, based on those lessons learned, highlights the ERO Enterprise’s CMEP priorities for 2016 and expectations. Additional metrics are being developed to continue assessing the ERO Enterprise’s CMEP activities in 2016.

³ The CCC is a NERC Board-appointed stakeholder committee serving and reporting directly to the NERC Board of Trustees. In accordance with Section 402.1.2 of the NERC Rules of Procedure, the CCC is responsible for establishing criteria for NERC to use to evaluate annually the goals, tools, and procedures of each Regional Entity Compliance Monitoring and Enforcement Program to determine the effectiveness of each such program.
Risk-based Compliance Monitoring and Enforcement

Throughout 2015, the ERO Enterprise made significant progress in its evolution to a robust risk-based CMEP. Some highlights and accomplishments of the evolution to risk-based compliance monitoring and enforcement include the following: completing the design of the risk-based CMEP in early 2015, conducting IRAs of registered entities, performing ICEs, and using risk based methods to process noncompliance. These activities helped to support compliance monitoring planning, focus oversight for registered entities, and provide greater efficiency in enforcement activities.

Risk-based Compliance Monitoring

In 2015, the ERO Enterprise made a significant shift in how it conducts compliance monitoring activities. Previously, audit schedules primarily drove interactions with registered entities without emphasis on risk to reliability. In addition, the scope of compliance monitoring activities was driven by a relatively static list of Reliability Standards on the Actively Monitored List. The ERO Enterprise is now using the analysis of risks to drive interactions with registered entities and conduct compliance monitoring activities. Registered entities are not all similarly situated; there are numerous differences in technology, geographical location, voltages, and inter-ties that require a more risk-informed method. Recognizing the unique characteristics of registered entities and using the analysis of risks, Regional Entities tailor the monitoring activities to address the appropriate risks. The ERO Enterprise has also changed the manner in which it engages with certain registered entities. In some cases, registered entities that historically were monitored through an audit are now being monitored through a spot check or even a self-certification because of the focused, tailored scope of risk-based monitoring.

Risk-based compliance monitoring involves three main activities: the identification of BPS risk elements and associated areas of focus in the ERO Enterprise CMEP Implementation Plan, the assessment of a registered entity’s inherent risk through an IRA, and the determination of the appropriate scope, frequency, and tools to use for specific compliance monitoring of each registered entity. In support of success factor 4 (on balanced transparency), the ERO Enterprise publicly posted information on how the ERO Enterprise carries out these activities in the 2015 ERO Enterprise Implementation Plan, the IRA and ICE Guides, and documents associated with Regional Entities’ risk-based CMEP processes.

The following is an overview of risk-based compliance monitoring activities and the ERO Enterprise’s implementation progress during 2015.

2015 ERO Enterprise CMEP Implementation Plan

The first step of the risk-based framework is identification and prioritization of continent-wide risks, which results in an annual compilation of risk elements applicable across the ERO Enterprise. Through the identification of risk elements, NERC, with input from the Regional Entities, maps a preliminary list of applicable NERC Reliability Standards and responsible registration functional categories to the risk elements, known as areas of focus. The areas of focus represent an initial list of NERC Reliability Standards on which the ERO Enterprise focuses compliance monitoring efforts.

Next, Regional Entities further consider local risks when developing region-specific risk elements. These risk elements are included in the Implementation Plan as region-specific appendices. When developing the region-specific risk elements, Regional Entities consider the CCC Criteria on risk elements. In developing risk elements


5 CCC Criteria on Risk Elements: The Regional Entity takes into account Regional BES Risks. The Regional Entity has defined and accounted for Regional BES risks in its CMEP Implementation Plan. (1) The Regional Entity used a documented process and provided a justified basis for addition, deletion, or modification of NERC Risk Elements and Standards in Focus. (2) Identify the criteria (including, but not limited to information sources) the Regional Entity used to add/subtract from NERC’s Risk Elements and Standards in Focus for developing its Regional Implementation Plan. (3) The Regional Entity has provided a rationale for the removal of a NERC risk element identified by NERC in the NERC CMEP IP as not applicable to their Region.
during 2015, Regional Entities performed a Regional Risk Assessment, identifying risks specific to the region that could potentially impact the reliability of the BPS. As part of this assessment, Regional Entities gathered and reviewed Regional Entity-specific risk reports and operational information (e.g., interconnection points and critical paths, system geography, seasonal/ambient conditions, etc.) and prioritized potential Regional Entity-specific risks. Next, after determining region-specific risks, Regional Entities also identified the related Reliability Standards and requirements associated with those risks. These Reliability Standards and requirements become inputs into a registered entity’s IRA, and ultimately the compliance oversight plan, however, these Reliability Standards and requirements are not intended to be a static list that must be examined during all compliance monitoring activities. The Implementation Plan includes further detail on the Regional Entities’ risk element development process in the Regional Entity appendices.6

Further, in 2015, NERC and the Regional Entities collaborated to create NERC criteria for the development of 2016 Regional Entity Implementation Plans. NERC reviewed and approved the 2016 Regional Entity Implementation Plans for conformance to this established review criteria. Some example criteria considerations include the following: appropriate justification to explain the Regional risk elements and areas of focus for both expansions of ERO Enterprise risk elements and region-specific risk elements; and clarifications around 2016 compliance monitoring activities. The 2016 Regional Entity Implementation Plan reviews were the first time NERC and the Regional Entities considered the review criteria, which incorporates the CCC Criteria on risk element development. Through the review process, NERC and the Regional Entities identified opportunities for criteria improvements going into 2016 and beyond, and the ERO Enterprise will continue to improve and develop the review criteria in support of consistency and content. Ultimately, the Regional Entity Implementation Plans intend to reflect regional operations and provide insight regarding compliance monitoring to registered entities within their footprints; therefore, differences will exist within the Regional Entity Implementation Plans, and the ERO Enterprise does not intend to alleviate such differences.

The ERO Enterprise CMEP Implementation Plan (Implementation Plan) provides the foundation for the risk-based CMEP through its identification of BPS risk elements and areas of focus. The Implementation Plan includes risks to the overall BPS as well as regional risks. The 2015 Implementation Plan marks continued progress in implementing the risk-based CMEP. This Implementation Plan incorporated Regional Entity risk elements in appendices whereas before 2014, NERC and the Regional Entities had separate implementation plans. Previously, compliance monitoring, including audits, was performed in a prescriptive manner through the annual implementation plans. These annual implementation plans also included pre-set frequencies and scopes for compliance monitoring based on a global assessment of risks. The more precise risk-based approach used today is improved because, in addition to the risk elements, it considers more localized and regional risks posed to the broader interconnected system. It also provides greater flexibility in the deployment of resources allowing Regional Entities to engage with registered entities through risk-based, entity-specific compliance monitoring activities that better and more explicitly accommodate the differences in risks resulting from geography, technology, location, and other unique characteristics. Table 1 lists the 2015 continent-wide risk elements.7

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Table 1: 2015 ERO Enterprise Risk Elements

<table>
<thead>
<tr>
<th>Infrastructure Maintenance</th>
<th>Uncoordinated Protection Systems</th>
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<tr>
<td>Protection System Misoperations</td>
<td>Workforce Capability</td>
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<tr>
<td>Monitoring and Situational Awareness</td>
<td>Long Term Planning and System Analysis</td>
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<tr>
<td>Threats to Cyber Systems</td>
<td>Human Error</td>
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<tr>
<td>Extreme Physical Events</td>
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Inherent Risk Assessments and Internal Control Evaluations

Throughout 2015, the ERO Enterprise focused risk-based compliance monitoring implementation on refining the IRA and ICE processes and performing IRAs, and ICEs as requested, for registered entities on the 2015 audit schedule. The ERO Enterprise prioritized performing IRAs for registered entities on the audit schedule to ensure Regional Entities’ most time-intensive engagements incorporated risk-based concepts. During these engagements, the ERO Enterprise also learned from initial implementation to incorporate in processes and further promote consistency in IRAs across the ERO Enterprise.

Regional Entities perform an IRA of a registered entity to identify areas of focus and the level of effort needed to monitor compliance with NERC Reliability Standards for a particular registered entity. The IRA is a review of risks posed by an individual registered entity to the reliability of the BPS. An IRA considers factors such as assets, systems, geography, interconnectivity, functions performed, prior compliance history, and culture of compliance, among other inputs, and is performed on a periodic basis. The frequency of updating an IRA may vary based on occurrence of significant changes to reliability risks or emergence of new reliability risks.

In developing more specific monitoring plans for registered entities in their footprints, the Regional Entities also take into account any information obtained through the ICE process. Registered entities have an opportunity to do the following: provide, on a voluntary basis, information to their respective Regional Entity about their internal controls that address the risks applicable to the entity and for identifying, assessing, and correcting noncompliance with Reliability Standards; and demonstrate the effectiveness of such controls. As a result of the ICE, the Regional Entity may further focus the compliance assurance activities for a given registered entity. For example, the depth of any particular area of review may be modified. Registered entities may elect not to participate in an ICE. In that case, the Regional Entity would use the results of the IRA to determine the appropriate compliance oversight strategy, including frequency and tools within the scope. Regional Entities will also continue to review internal controls while conducting audits.

Registered entities are expected to maintain compliance with all requirements. The IRA and ICE processes are intended to appropriately scope compliance monitoring activities or engagements in method, range, frequency and depth. These rigorous processes may lead to either reduced or increased time on site. For example, one entity with an IRA and ICE may have 6% of the applicable requirements for its registered functions identified in its audit scope. While another entity with an IRA, but not an ICE, may have an audit scope that includes 42% of applicable requirements. In any event, the Regional Entity Audit Team Lead is authorized and obligated to expand scope if there are indications of further risk.

For example, if a registered entity demonstrates effective internal controls for a given Reliability Standard during the ICE, the Regional Entity may determine that it does not need to audit the Registered Entity's compliance with that Reliability Standard as frequently, or may select a different monitoring tool.
The entity-specific IRA is a living document, which results in the longer range compliance oversight plan. It is reviewed after engagements and then used to inform future compliance monitoring efforts, such as targeted self-certifications, spot checks, or data submittals.

Regional Entities completed 230 IRAs for registered entities on the 2015 audit schedule. Of those 230 IRAs, 31 registered entities elected to have an ICE. Regional Entities have completed 101 IRAs and 20 ICEs for registered entities that are not scheduled for an audit in 2015. Ongoing ICE-related activities also continue for registered entities who opt-in for an ICE or who are interested in having an ICE performed. To begin an ICE, Regional Entities may hold initial discussions with registered entities or send internal control questionnaires to registered entities to begin the ICE process.

Table 2 summarizes the overall IRA and ICE activities related to both the annual 2015 audit schedule and overall IRA and ICE activities.

<table>
<thead>
<tr>
<th>Table 2: Summary of Overall Risk-based Compliance Monitoring Activities</th>
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<tbody>
<tr>
<td><strong>Risk-based Compliance Activities</strong></td>
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<tr>
<td>IRA</td>
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<tr>
<td>IRAs Conducted for Registered Entities on 2015 Audit Schedule</td>
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<tr>
<td>IRAs Completed for Registered Entities not on 2015 Audit Schedule</td>
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<tr>
<td><strong>Total IRAs Completed within the ERO Enterprise</strong></td>
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<tr>
<td>IRAs Remain to be Completed for all Registered Entities within the ERO Enterprise</td>
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<tr>
<td>ICE</td>
</tr>
<tr>
<td>ICEs Conducted for Registered Entities on 2015 Audit Schedule</td>
</tr>
<tr>
<td>ICEs Completed for Registered Entities not on 2015 Audit Schedule</td>
</tr>
<tr>
<td><strong>Total ICEs Completed within the ERO Enterprise</strong></td>
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</table>
The above figure indicates the progress of the ERO Enterprise in support of consistency among the common tools, processes, and templates used by Regional Entities (success factor 3). Regional Entities performed IRAs on 97% of registered entities on the 2015 audit schedule. To support completion of these IRAs, the ERO Enterprise focused on collaboration, sharing of best practices, and incorporating refinements based on lessons learned during the first part of 2015.

The number of scheduled audits changed from earlier reports in 2015 due to the de-registration of a registered entity on the audit schedule and the rescheduling of some audits for logistical purposes.

WECC performed off-site audit activities for 21 registered entities identified on its annual audit schedule. WECC identified these off-site audits based on the regional risk assessment outlined in its 2015 CMEP Implementation Plan. Scope of the compliance monitoring activities for six out of the 21 registered entities was based on the regional risk assessment and WECC’s regional risk elements and areas of focus. For the remaining 33 audits, WECC performed IRAs or preliminary IRAs for scoping the audit.
In further efforts to promote consistency, the ERO Enterprise incorporated the CCC Criteria on IRAs\(^\text{11}\) and ICEs\(^\text{12}\) into its review of IRA and ICE processes. During NERC’s engagements with Regional Entities in Q1 of 2015, NERC and the Regional Entities reviewed the Regional Entities’ use of information and risk factors in the IRA process. In addition, NERC and the Regional Entities discussed the Regional Entities’ communication of IRA results to registered entities, registered entity feedback and understanding of IRA results, and the timing of the IRA development. Furthermore, NERC and the Regional Entities discussed initial activities involving internal controls and potential impacts these assessments may have on compliance monitoring activities. During these initial oversight engagements, there was very limited, if any, participation in ICE at the Regional Entities. These discussions informed NERC’s conclusion that the Regional Entities were conceptually aligned on risk-based concepts. The Risk-based Compliance Monitoring Oversight section of the instant report provides further detail on the NERC and Regional Entity engagements.

For 2016, the ERO Enterprise will shift from schedules driving IRA completion to risk-driving IRA completion. To that end, the ERO Enterprise will focus on completing IRAs for all entities registered as a Reliability Coordinator, Balancing Authority, or Transmission Operator by 2016. This will represent a significant milestone in the implementation of risk-based compliance monitoring. Additionally, the ERO Enterprise will focus on ensuring certain registered entities will have completed compliance oversight plans (COP) that allocate compliance monitoring resources based on risk. Ultimately, the Regional Entity will determine the type and frequency of the compliance monitoring tools (e.g., off-site or onsite audits, spot checks, or self-certifications) that are warranted for a particular registered entity based on reliability risks. Additionally, the Regional Entity may modify the scope of NERC Reliability Standards reviewed as part of a Compliance Audit or pursue compliance assurance through any monitoring considerations. For Compliance Audits, auditors are authorized and obligated to expand scope should there be indications of failed controls or noncompliance of one Reliability Standard that may link to another Reliability Standard.

**Regional Entity Compliance Monitoring**

For 2015, Regional Entities performed compliance monitoring activities using various methods outlined in the CMEP and according to their 2015 Annual CMEP Implementation Plans. As the ERO Enterprise progresses in the implementation of risk-based CMEP, stakeholders can expect a greater use of other compliance monitoring tools, in addition to audits and spot checks. Additionally, the traditional methods used to conduct compliance monitoring needed to be re-evaluated. For example, in some cases, more detailed and instructive self-certifications could be used instead of more costly audits. These self-certifications, while requiring more review

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\(^{11}\) CCC Criteria for IRAs: The RE’s Inherent Risk Assessment results in tailored approaches to monitoring compliance for similarly registered functional entities, based on differing profiles and operating characteristics. (For example, does the Regional Entity monitor all Transmission Owners within its footprint the same, or does the use of IRA criteria result in distinct monitoring plans?) (1) The Regional Entity’s IRA takes into consideration the relationship of an entity’s Information Attributes and Risk Factors, see IRA Program Module, in a manner that tracks regional BES risks. (2) In accordance with the IRA guide, the Regional Entity’s IRA process allows for sharing of already available IRA information, discussion with the registered entity in the event of the need to clarify or correct information, and feedback provided to the registered entity so that there is an understanding of the Regional Entity’s perception of the registered entity’s risk. (3) Through responses to the results of post-audit questionnaires, the registered entity indicates that it understands the results of the IRA. (4) The timing of the IRA allows for adjustment to the Audit scope before sending the 90-day detail letter. (5) What is the sequencing and timing between the Regional Entity’s administration of Risk-Based Compliance Monitoring and Enforcement Program Modules?

\(^{12}\) CCC Criteria for ICEs: When does the Regional Entity conduct the ICE and how does the Regional Entity take into account the results to adjust the scope of the monitoring approach? (1) ICE impacts the depth and focus of the monitoring scope determined after the IRA. (2) Does the Regional Entity conduct the Internal Controls Assessment after developing the scope of Standards to audit? When the Regional Entity administers the ICE, the scope of the ICE is related to Standards and Requirements that have a relationship to regional BES risks. If the scope of the ICE does not align with these Standards and Requirements, is the deviation adequately justified, including all supporting information and data? (3) What types of guidance, process, or templates does the Regional Entity provide registered entities in its footprint about the form and manner for providing information about internal controls? (4) How far in advance of compliance monitoring engagement (e.g., audit, spot check) does Regional Entity initiate ICE and how much time is the registered entity given to respond? (5) What are the use rates for ICE engagements? (5a) For RC/BA/TOPs, the percentage that agreed/declined ICE engagement. (5b) For each other type of Registered Entity, the percentage that agreed/declined ICE engagement.
by the ERO Enterprise, do not require the cost of travel and preparation by the registered entity. As part of risk-based CMEP, Regional Entities may choose to use self-certifications in lieu of an audit, for example, depending on the risk of the registered entity. As a result, the risk-based CMEP provides for more flexibility on the methods to be used in compliance monitoring. In 2015, the ERO Enterprise conducted approximately 250 compliance audits and spot checks.

**Risk-based Enforcement**

**Background**
The ERO Enterprise’s enforcement jurisdiction is drawn from the Energy Policy Act of 2005 (the Act), which added section 215 to the Federal Power Act (FPA). Section 215 made compliance with electric Reliability Standards mandatory, and authorized the creation of an ERO and Regional Entities to establish and enforce Reliability Standards. Under section 215(e)(1) of the FPA, NERC or a Regional Entity may impose a penalty on a user, owner, or operator of the BPS for a violation of a Reliability Standard approved by FERC. As the ERO, NERC has set forth Sanction Guidelines outlined in its Rules of Procedure that govern the ERO Enterprise’s penalties and non-monetary sanctions for Reliability Standard violations. This document provides information on the ERO Enterprise’s enforcement philosophy, i.e., the ERO Enterprise’s approach for assessing and resolving noncompliance while continuing to work to bring entities into compliance with applicable Reliability Standards.

**ERO Enterprise Core Values and Guiding Principles**
The ERO Enterprise’s 2016-2019 Strategic Plan promotes the ERO Enterprise’s core values and guiding principles, which are based on accountability and independence, responsiveness, fairness and inclusiveness, adaption and innovation, excellence, efficiency, and integrity. These core values and guiding principles support the four pillars of the ERO Enterprise’s efforts, namely, reliability, assurance, learning, and a risk-based approach.

**Strategic Goals Related to Enforcement**

Strategic goal 2 provides that the ERO Enterprise shall:

Be a strong enforcement authority that is independent, without conflict of interest, objective and fair, and promote a culture of reliability excellence through risk-informed compliance monitoring and enforcement. The ERO Enterprise retains and refines its ability to use standards enforcement when warranted and imposes penalties and sanctions commensurate with risk. The ERO Enterprise retains and refines its ability to use Reliability Standards enforcement when warranted and imposes penalties and sanctions commensurate with risk.

The risk-based enforcement approach allows for the appropriate allocation of resources to the issues that pose a higher level of risk to the reliability of the BPS.

**Guiding Enforcement Principles**
The following principles serve as guidelines for the conduct and behavior of all involved in the ERO Enterprise enforcement program to ensure alignment with strategic goal 2 and the ERO Enterprise’s core values.

**Compliance Enforcement Authorities are independent, without conflict of interest, objective, and fair.**
The ERO Enterprise strives to be a strong enforcement authority that is independent, without conflict of interest, objective, and fair. NERC and each of the Regional Entities has a code of conduct addressing the professional and ethical standards applicable to its personnel. Foremost among these standards is the requirement that no person work on a matter where that work may affect the person’s financial interest. The ERO Enterprise also expects its personnel to conduct themselves professionally and respectfully when engaging with registered entities or other

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stakeholders. Personnel who do not meet these standards are subject to discipline, up to and including termination.

**Enforcement program promotes culture of reliability excellence through a risk-based approach.**

The ERO Enterprise’s risk-based enforcement philosophy generally advocates reserving enforcement actions under section 5.0 of the Compliance Monitoring and Enforcement Program for those issues that pose a higher risk to the reliability of the BPS. The risk of a noncompliance is determined based on specific facts and circumstances, including any controls in place at the time of the noncompliance. The ERO Enterprise works with registered entities to ensure timely remediation of potential risks to the reliability of the BPS and prevent recurrence of noncompliance. The enforcement process allows parties to address risks collaboratively and promote increased compliance and reliability through improvement of programs and controls at the registered entities.

The ERO Enterprise applies a presumption of non-enforcement treatment of minimal risk noncompliance to entities with demonstrated internal controls who are permitted to self-log such minimal risk issues. Regarding other issues posing a minimal risk, NERC and the Regional Entities may exercise appropriate judgment whether to initiate a formal enforcement action or resolve the issue outside of the formal enforcement processes. The availability of streamlined treatment of minimal risk noncompliance outside of the formal enforcement process encourages self-inspection by registered entities. When self-identified minimal risk noncompliance is more than likely not going to be subject to a financial penalty, registered entities are encouraged to establish more robust internal controls for the detection and correction of noncompliance. This approach allows the ERO Enterprise to oversee the activities of registered entities in a more efficient manner and to focus resources where they result in the greatest benefit to reliability. In this context, efficiency does not necessarily mean less time or effort. Rather, it is using the requisite time, knowledge, and skills required for each circumstance. In addition, this approach allows the ERO Enterprise to continue to provide clear signals to registered entities about identified areas of concern and risk prioritization, while maintaining existing visibility into potential noncompliance and emerging areas of risk. Outcomes for noncompliance are based on the risk of a specific noncompliance and may range from streamlined, non-enforcement processes, to significant monetary penalties.

**Enforcement actions are used and penalties are imposed when warranted, commensurate with risk.**

An element of a risk-based approach to enforcement is accountability of registered entities for their noncompliance. No matter the risk of the noncompliance, the registered entity still bears the responsibility of mitigating that noncompliance. Based on the risk, facts, and circumstances associated with that noncompliance, the Regional Entity decides on an appropriate disposition track, inside or outside of an enforcement action, as described above and whether a penalty is appropriate for the noncompliance.

Penalties are generally warranted for serious risk violations (e.g., uncontrolled loss of load, CIP program failures) and for when repeated noncompliance constitutes an aggravating factor. In addition to the use of significant penalties to deter undesired behavior, the ERO Enterprise also incents desired behaviors. Specifically, Regional Entities may offset penalties to encourage valued behavior. Factors that may mitigate penalty amounts include registered entity cooperation, accountability (including admission of violations), culture of compliance, and self-identification of noncompliance.

Regional Entities may also grant credit in enforcement determinations for certain actions undertaken by registered entities for improvements in addition to mitigating factors. For example, Regional Entities may consider significant investments in reliability made by registered entities, beyond those otherwise planned and required.

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14 The Sanction Guidelines, Appendix 4B to the NERC Rules of Procedure, in alignment with Section 215, establish a general rule that penalties and sanctions imposed for the violation of a Reliability Standard shall bear a reasonable relation to the seriousness of the violation while also reflecting consideration of the other factors specified in the Sanction Guidelines. The Sanction Guidelines are available at http://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/Appendix_4B_SanctionGuidelines_20140701.pdf.
as an offset for proposed penalties in enforcement determinations. Regional Entities do not award credits or offsets for actions or investments undertaken by a registered entity that are required to mitigate noncompliance.

NERC engages in regular oversight of Regional Entity enforcement activities to confirm that the Regional Entities have followed the CMEP. This oversight evaluates the consistency of disposition methods, including assessment of a penalty or sanction, with previous resolutions of similar noncompliance involving similar circumstances. The NERC Board of Trustees Compliance Committee (the 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 NOPs, FFTs, and Compliance Exceptions.

**Actions are timely and transparent.**
The ERO Enterprise maintains an elevated level of transparency regarding enforcement matters. NERC’s Rules of Procedure (including the CMEP and Sanction Guidelines) and program documents are available to the public. NERC also posts information on enforcement actions on a monthly basis. Moreover, information on the efficiency of the enforcement program is available to the public on a quarterly basis.

**Noncompliance information is used as an input to other processes.**
When developing risk elements, NERC annually identifies and prioritizes risks to the reliability of the BPS, taking into account factors such as compliance findings, event analysis experiences, and data analysis. In addition, Regional Entities consider factors such as noncompliance information when conducting an IRA of a registered entity. The ERO Enterprise also uses noncompliance information as part of a feedback loop to the standards development process. This allows enhanced Reliability Standards through appropriate information flows from compliance monitoring and enforcement to the standards drafting process and other NERC programs. NERC regularly provides analysis and lessons learned from noncompliance information to the public.

**2015 Enforcement Results**
In 2015, enforcement activities throughout the ERO Enterprise reflected the full implementation of the risk-based approach introduced in 2013 through the Reliability Assurance Initiative. The risk-based approach used by the ERO Enterprise aligns the outcome of any noncompliance to the risk that particular noncompliance posed to the reliability of the BPS. In that sense, the outcome could range from a significant monetary penalty to a streamlined disposition outside of the enforcement process. This approach, and the high usage of streamlined methods shown below, are predicated on a significant level of cooperation by registered entities. In this context, cooperation is evidenced in part by high levels of self-identification of noncompliance and prompt mitigation of issues. These historic trends continued in 2015, as noted in the Appendix. Maintaining these trends of high self-identification and prompt mitigation is essential to the effectiveness of the risk-based program.

This report discusses the results achieved in 2015 with respect to two streamlined programs in particular: Self-Logging and Compliance Exceptions. Included in the Appendix are processing efficiency results, which indicate how these programs have allowed the ERO Enterprise to operate more efficiently.

These two processes allowed the ERO Enterprise to consolidate the efficiency gains obtained with the introduction of the Find, Fix, Track, and Report process in 2011.

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17 Quarterly enforcement program information is available at [http://www.nerc.com/gov/bot/BOTCC/Pages/ComplianceCommittee(BOTCC).aspx](http://www.nerc.com/gov/bot/BOTCC/Pages/ComplianceCommittee(BOTCC).aspx).
18 For example, NERC posts quarterly compliance reports at [http://www.nerc.com/gov/bot/BOTCC/Pages/ComplianceCommittee(BOTCC).aspx](http://www.nerc.com/gov/bot/BOTCC/Pages/ComplianceCommittee(BOTCC).aspx).
19 See the Appendix for information regarding processing efficiency.
As noted below, the ERO Enterprise continues to process violations that require the imposition of monetary penalties when those are warranted. Consistent with the risk-based approach that happens when violations pose a serious or significant risk to the reliability of the BPS (either individually considered or in the aggregate). Serious risk violations generally involve uncontrolled loss of load, outages from vegetation contacts, or programmatic failures, particularly on the CIP side.

The ERO Enterprise also continues to analyze the minimal risk noncompliance that is resolved as compliance exceptions to look for trends and emerging risks.

For 2016, the ERO Enterprise expects to continue to grow both programs as well as look for opportunities for enhancement. NERC regularly reviews Regional Entity enforcement processes and samples outcomes to ensure that the implementation is consistent with the requirements of the programs. NERC will continue to do so in 2016. NERC will also continue to monitor mitigation completion, self-reports, and the level of risk posed by noncompliance with Reliability Standards.

Historically, these metrics have shown that very few instances of noncompliance pose a serious or significant risk to the reliability of the BPS, which most noncompliance is self-identified by registered entities, and that mitigation is promptly done. The continuation of these trends help demonstrate the effectiveness of the ERO Enterprise enforcement program.

Disposition of Noncompliance in 2015
Below are summaries of the four methods used to process noncompliance in 2015. Additional information regarding ERO Enterprise 2015 processing-related goals and metrics and other relevant trends are also found in the Appendix.

Compliance Exceptions
Compliance exceptions are a disposition track used for noncompliance posing a minimal risk to the reliability of the BPS that does not warrant a penalty and is not pursued through an enforcement action. Compliance exceptions must be mitigated within 12 months of the time of the notification to the registered entity of compliance exception treatment. In 2015, this disposition track became available to all registered entities throughout the ERO Enterprise. Use of compliance exceptions as a disposition track in 2015 is shown in Figure 2.

In 2015, the ERO Enterprise fully implemented the compliance exception disposition track. Throughout 2015, the ERO Enterprise has been aligned with CCC Criteria regarding compliance exceptions by regularly using compliance exceptions and consistently exercising appropriate judgment in treating noncompliance matters as compliance exceptions when they posed a minimal risk to the reliability of the BPS. Because compliance exceptions may come from any of the Reliability Standards, the exercise of appropriate judgment is informed by the facts and circumstances of the noncompliance, the risk posed by the noncompliance to BPS reliability, and the potentially deterrent effect of an enforcement action or penalty, among other things.

In 2015, out of 741 instances of noncompliance posing a minimal risk, the ERO Enterprise disposed of 514 (69.4%) as compliance exceptions. This allowed the Regional Entities to dispose of minimal risk noncompliance efficiently.

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20 Enforcement actions are contemplated in Section 5 of the CMEP; alternative disposition methods are contemplated in Section 3A.0 of the CMEP.

21 CCC Criteria D.3: Minimal risk violations are consistently and appropriately treated as compliance exceptions. For minimal risk issues not processed as compliance exceptions, the evaluation and determination for enforcement treatment is properly documented.
and focus resources on moderate to serious risk noncompliance.\textsuperscript{22} Information on processing efficiencies in 2015 is found in the Appendix.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{minimal_risk_noncompliance.png}
\caption{Minimal Risk Noncompliance Filed in 2015}
\end{figure}

\textbf{Find, Fix, Track, and Report (FFT)}

The FFT program—the first, significant step in implementing a risk-based approach to enforcement implemented by the ERO Enterprise in 2011—is a process that the ERO Enterprise uses primarily to resolve moderate risk issues that are suitable for streamlined treatment (as opposed to through a Notice of Penalty). Under the FFT program, moderate risk issues are fixed, tracked, and reported to Regional Entities and NERC. This noncompliance is not subject to penalties. FFTs also may be used to dispose of minimal risk noncompliance that is related to a moderate issue being resolved as an FFT. In 2015, compliance exceptions have superseded the FFT program for resolving minimal risk noncompliance.\textsuperscript{23} In 2015, out of 980 instances of minimal or moderate risk noncompliance, the ERO Enterprise disposed of 8% as FFTs.

\textbf{Spreadsheet Notice of Penalty (SNOP)}

SNOPs include noncompliance posing a minimal or moderate risk to the reliability of the BPS. Once Regional Entities have entered into Settlement Agreements with, or have issued Notices of Confirmed Violations (NOCVs) to the registered entities, that information is reported to NERC for oversight review and approval. NERC then files that information with FERC in a spreadsheet format for review and approval. The SNOP identifies the following: the Regional Entity, the registered entity, disposition as a NOCV or Settlement Agreement, the violation, Reliability Standard, Violation Risk Factor and Severity Level, total penalty or non-monetary sanction, method of discovery, mitigation activity, mitigation completion date, date Regional Entity verified mitigation completion, an admission, denial, or no contest to violation, and other factors affecting the penalty determination, such as

\begin{itemize}
\item\textsuperscript{22} In addition to increasing Regional Entity efficiencies, this also creates efficiencies for registered entities and allows them to focus resources on reliability and compliance.
\item\textsuperscript{23} FFT treatment will only apply to minimal risk noncompliance if that noncompliance is associated with a moderate risk noncompliance receiving FFT treatment.
\end{itemize}
compliance history, internal compliance program, and compliance culture. In 2015, out of 980 instances of minimal or moderate risk noncompliance, the ERO Enterprise disposed of 18% as SNOPs.

**Full Notices of Penalty (NOP)**

Full NOPs generally include noncompliance that poses a serious or substantial risk to the reliability of the BPS. Full NOPs may also be appropriate for a registered entity that has a large number of minimal or moderate risk violations that could be indicative of a systemic issue, dispositions involving higher than typical penalty amounts, or those with extensive mitigation or above and beyond actions taken by the registered entity. Similar to SNOPs, once the Regional Entity has resolved the violation, NERC receives the information for oversight review and approval. NERC then files the Full NOP with FERC for review and approval. Full NOPs generally are violations resulting in the following: extended outages, uncontrolled loss of load, cascading blackouts, vegetation contacts, systemic or significant performance failures, intentional or willful acts or omissions, and gross negligence. In 2015, out of 1025 instances of noncompliance posing various levels of risk, the ERO Enterprise disposed of 256 (25%) as Full NOPs.

![Figure 3: All Noncompliance Filed in 2015](image)
In 2013, the ERO Enterprise selected certain registered entities to self-log minimal risk noncompliance. At the start of 2015, self-logging became open to all registered entities that met the program qualifications based on Regional Entity evaluation and approval. Through the self-logging program, the ERO Enterprise seeks to encourage registered entities to detect, accurately assess the risk of, and adequately mitigate minimal risk noncompliance with the Reliability Standards. Specifically, in evaluating whether a registered entity is eligible for the program, the Regional Entities will conduct a formal evaluation of the registered entity’s controls associated with the registered entity’s ability to identify, assess, and correct noncompliance.

Once a registered entity is approved to self-log, that log is periodically reviewed by the Regional Entity. Properly logged items are entitled to the presumption of being resolved as compliance exceptions unless there are additional risks involved. This is consistent with the notion that noncompliance that is self-identified through internal controls, corrected through a strong compliance culture, and documented by the entity, should not be resolved through the enforcement process or incur a penalty, absent a higher risk to the reliability of the BPS.

Since self-logging became available to all registered entities that met the program qualifications at the start of 2015, 42 registered entities have been approved by Regional Entities to self-log as of December 31, 2015. These registered entities represent nearly all of the reliability functions. To help benchmark the effectiveness of the self-logging program, the CCC proposed that the ERO Enterprise monitor the percentage of registered entities within a Functional Model category authorized to self-log minimal risk violations. Figures 5 and 6, respectively, represent the registered entities by reliability function that are self-logging and the Regional Entities use of the self-logging program.

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25 Currently, no registered entities are self-logging at FRCC, and FRCC has no formal requests from entities to date.
Figure 5: Total Registered Entities Self-Logging by Regional Entity

Figure 6: Self-Logging Breakdown by Reliability Function
ERO Enterprise Staff Training and Education
To address success factor 1 on ERO Enterprise staff competency during 2015, NERC Compliance Assurance and Compliance Enforcement departments, supported by the Regional Entities, developed and provided ongoing education and training on the transformation of compliance monitoring and enforcement for the ERO Enterprise staff. In particular, the training focused heavily on continuing education for implementing the IRA and ICE components of the risk-based CMEP to support successful implementation and consistency. In addition, NERC hosted one workshop for all CMEP staff in March 2015, which included education on Regional Entity IRA and ICE processes and another workshop in October 2015 specifically for enforcement staff.

During the initial risk-based CMEP implementation stage, the ERO Enterprise conducted training on the foundational IRA and ICE concepts using real-life scenarios and examples. Current training provides further depth and incorporates lessons learned from examples obtained throughout actual application of risk-based CMEP. For example, in July 2015, NERC sponsored an instructor-led training for scoping and performing audits and assessing internal controls. Over 30 ERO Enterprise staff responsible for conducting audits and performing ICE activities attended one or both of the 16-hour courses offered. Additionally, NERC recommended online training available through the ERO Enterprise learning management system, including Auditing for Internal Control and Risk Assessment for staff responsible for IRA and ICE activities. NERC continues to identify relevant and available online courses to include as part of the overall ERO Enterprise risk-based training curriculum within the learning management system. Figure 7 below identifies the number of hours of training by competency area.

Following each of the training and education events, a survey was distributed to obtain information on the general satisfaction, delivery method, content, and overall value participants felt they gained from the sessions. ERO Enterprise staff used this input for future training activities.

![Figure 7: 2015 Regional Entity-led Training Hours of by Competency Type](image-url)
Further, NERC engaged a vendor to perform a compliance monitoring personnel competency analysis to assist with long-term curriculum development for the risk-based compliance monitoring portion of the CMEP. The product deliverables for this effort will include a well-defined task listing by role and a recommended training and education plan to inform the qualification program for the risk-based CMEP. The ERO Enterprise will use these deliverables to refine and update the exiting ERO Enterprise competency guide, which outlines role and competency expectations for compliance monitoring staff. Similarly, the ERO Enforcement Group is developing a competency guide that will identify the combination of skills, attributes, and behaviors that are directly related to successful performance of enforcement positions. This guide will also inform the training needs of ERO Enterprise enforcement staff.

Industry Stakeholder Information and Outreach

During the broad implementation of risk-based design, NERC and the Regional Entities have taken advantage of several outreach opportunities to identify lessons learned and gather input into how to best implement the risk-based design. The ERO Enterprise continues to collaborate to identify common processes and opportunities to improve consistency in implementation through industry advisory groups, discussion with various trade organizations, and ongoing webinars and workshops. In addition, NERC and the Regional Entities performed outreach on the CIP Version 5 transition to support industry stakeholder readiness.

NERC focused on success factor 2 (relating to industry stakeholder information and outreach for risk-based CMEP) through various events, such as workshops and webinars. During Q4 of 2014 and Q1 of 2015, the ERO Enterprise hosted a series of three outreach events. The three outreach events included ERO Enterprise staff and industry panelists presenting on risk-based topics. The outreach events provided continued communication and education to industry stakeholders on the ERO Enterprise’s transformation to risk-based compliance monitoring and enforcement activities. During these events, presentations were given by panels of industry stakeholders and ERO Enterprise staff. In support of success factor 6 (regarding recognized value), the ERO Enterprise solicited feedback from participants in these events. Based on this feedback, participants noted that the events provided an opportunity for industry stakeholders to share examples, tips, and techniques for how registered entities can prepare for future interactions with risk-based CMEP activities. Stakeholders also found that the industry panels addressed some areas of concern regarding expectations for participating in IRA and ICE processes and allowed industry to hear different viewpoints from various involvement in on-going risk-based CMEP activities. NERC staff also presented at the spring and fall Standards and Compliance Workshops in Atlanta, GA, and San Diego, CA, respectively. The Spring Standards and Compliance Workshop featured a joint industry and Regional Entity session on risk-based CMEP to facilitate further mutual understanding of risk-based concepts.

Additionally, the ERO Enterprise hosted a series of webinars on each risk element outlined in the 2015 CMEP Implementation Plan. Each monthly webinar focused on one risk element and included guidance and discussion on the areas of focus identified in the 2015 CMEP Implementation Plan. Figure 8 demonstrates the number of participants on the webinars and the level of satisfaction.
EROMC Training, Education, and Outreach

Each Regional Entity also conducted meetings, conference calls, webinars, and workshops to address the industry’s questions and concerns over risk-based CMEP. All key elements and region-specific subjects of compliance monitoring and enforcement were discussed during a risk-based CMEP workshop in early 2015 and at the semi-annual Standards & Compliance workshops, with attendance ranging from 80 to 200 participants. The workshops provided a platform to discuss specific risk-based subjects such as self-logging, the IRA and ICE processes, and other components of the risk-based CMEP.

Although there was a continued focus of outreach activities on the risk-based CMEP approach, Regional Entities also conducted outreach for other areas such as new Reliability Standards and the CIP Version 5 transition through face-to-face meetings and conferences with industry. In addition, NERC and the Regional Entities coordinated with a group of industry stakeholders for an educational exercise in February 2015. The purpose of that exercise was to discuss how the ERO Enterprise scales ICE processes for smaller, low-risk registered entities, and to help NERC and the Regional Entities obtain a better understanding of how small entities identify, evaluate, and document internal controls. During the exercise, NERC and the Regional Entities explained that they appropriately scale the internal control evaluation to take into account entity size and risk characteristics. This exercise supported success factor 6 in demonstrating recognized value of the risk-based CMEP for entities of all sized. Figure 9 illustrates the total number of industry outreach events and Figure 10 illustrates stakeholder participation in Regional Entity 2015 industry outreach events, which included topics on risk-based CMEP and CIP.

Figure 8: Risk Elements Webinars Participants and Satisfaction

![Risk Elements Webinars Participants and Satisfaction](image.png)
Figure 9: Regional Entity 2015 Industry Outreach Events

Figure 10: Regional Entity 2015 Industry Participation in Outreach Events
In 2016, NERC and the Regional Entities will continue to conduct outreach activities that focus on self-logging, compliance exceptions, risk elements, frequently asked questions, and examples of completed IRAs and ICEs. NERC plans to use existing industry events, like the Standards and Compliance workshops, to provide information on risk-based activities.
NERC Oversight of the Regional Entities

Risk-based Compliance Monitoring Oversight
At the end of 2014, the ERO Enterprise finalized IRA and ICE Guides in support of success factors 3 and 4 on consistency and balanced transparency. During the first half of 2015, NERC Compliance Assurance staff assessed each Region’s processes and degree of alignment with the criteria from these guides. This review established conceptual consistency in the application of risk-based compliance monitoring among all eight Regional Entities. At the end of these reviews, NERC provided reports that included feedback and recommendations to the Regional Entities on their processes. Overall, NERC concluded that Regional Entities were conceptually aligned on the major components of the risk-based compliance monitoring framework.

During the remainder of 2015, NERC oversight focused on further refinement of the risk-based CMEP in support of implementation. Such oversight included frequent engagements with Regional Entities and development of an IRA analysis team to ensure consistency across Regional Entities in areas where consistency is most important. In addition, NERC engaged in observations of audits of registered entities conducted by Regional Entities, collected IRA results, and reviewed Regional Entities’ post-audit feedback surveys. The following sections describe these oversight activities in more detail. Going forward in 2016, NERC will review lessons learned from implementation in 2015 to inform its risk-based approach to oversight of the Regional Entities.

Oversight of Initial Implementation of Risk-based Compliance Monitoring
Although all Regional Entities were conceptually aligned on the major components, there were cases, due to timing and the initial implementation status of IRA and ICE, the Regional Entity’s IRA or ICE processes as documented and described may not have yet been fully implemented. Accordingly, some Regional Entities were assessed on conceptual alignment as documented or described and not on whether such practices were actually fully implemented or documented. In addition to assessing alignment with the IRA and ICE Guides, oversight activities revealed other opportunities for IRA and ICE process improvements, enhanced IRA and ICE tools, guidance, and training across the ERO Enterprise.

Recognizing that 2015 was an implementation year, initial oversight activities revealed that Regional Entities made meaningful strides in transitioning to risk-based compliance activities. Overall, all eight Regional Entities were generally aligned with the IRA and ICE alignment criteria reviewed. As part of these oversight activities, NERC and Regional Entity staff also identified some general improvement opportunities to assist in successful implementation throughout 2015.

After closing out initial implementation oversight activities in June 2015, NERC and the Regional Entities continued to collaborate to identify program opportunities and refinement needs. Further, NERC continued conducting risk-based compliance monitoring oversight through a variety of methods described in the sections below.

Registered Entity Audit Observations and Reviews
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. Further, audit observations help NERC to assess the overall implementation of ERO Enterprise activities, such as risk-based compliance monitoring, CIP Version 5 transition, Physical Security Reliability Standard implementation, and the Coordinated Oversight Program of MRREs, and to identify program development needs, training, and outreach. In 2015, NERC observed a total of seven audits with audit scopes including both CIP and Operations and Planning and with registered entities within the Coordinated Oversight Program for MRREs. NERC did not identify any concerns relating to any Regional Entity evaluation of a registered entity’s compliance with the NERC Reliability Standards.
NERC’s involvement in the audit observations provided a better understanding of the ERO Enterprise audit process applied in a risk-based environment. NERC will also use lessons learned to help shape the compliance monitoring observation program for 2016. For example, starting in 2016, NERC staff will participate in other aspects of compliance monitoring activities in addition to audit observations. As recommended and noted by Regional Entity staff, NERC observations of Regional Entity IRA and ICE processes, as well as off-site, pre-audit evidence reviews, will provide NERC staff more line of sight to how Regional Entities are implementing risk-based compliance monitoring. Further, the 2016 audit observation approach will include a NERC staff development opportunity that invites NERC staff outside of Compliance Assurance to participate as observers in the Regional Entity audits of registered entities.

From the observations of these seven audits, NERC identified some positive observations, as well as lessons learned and opportunities for consistency and overall improvements to compliance monitoring. For example, NERC noted that Regional Entity staff continue to provide registered entities updates on the audit status to keep the entities informed and hold open and timely discussions around possible areas of noncompliance. Further, registered entities stated that they felt the audit(s) were focused on high-risk areas and were tailored specifically to their entity characteristics. Improvement opportunities exist in the areas of the Coordinated Oversight Program for MRREs to help ensure that consistent and efficient processes are occurring, as well as the identification, documentation, and feedback of new or refined risk areas identified during compliance monitoring activities. This feedback can help refine or impact initial IRAs. This feedback loop is an important component of understanding a registered entity and properly assessing its risks to tailor monitoring activities.

IRA Results Summary Collection
During Q4 of 2015, NERC began collecting IRA summary reports to do the following: (1) monitor Regional Entity progress toward completing initial IRAs for registered entities; (2) gather data on risks being identified and associated NERC Reliability Standards and requirements monitored; and (3) understand how significant BPS reliability risks are being monitored. Going forward, and on a periodic basis, NERC will sample IRA summary reports and request supporting documentation of IRA activities. The purpose of sampling and reviewing supporting documentation is to help further understand, on a total ERO Enterprise basis, Regional Entity processes and procedures being used to complete implementation of risk-based compliance monitoring and drive toward oversight that is monitoring the necessary risks for each entity. Through this monitoring activity, NERC can assist in identifying good practices, lessons learned, and other opportunities for program consistency and improvement.

Being an implementation year, NERC’s primary focus of review in Q4 of 2015 has been on establishing a repeatable process for collection of IRA results summaries, creating mechanisms to maintain and track information contained within the IRA results summaries, and identifying registered entities involved in initial IRAs. As the monitoring program evolves in 2016, NERC will gather and analyze data to further understand how significant BPS reliability risks are being monitored across the ERO Enterprise.

Review of Registered Entity Post-Audit Feedback Surveys
Following every audit, registered entities have an opportunity to complete post-audit feedback surveys. Since transitioning to risk-based compliance monitoring, the feedback survey now includes questions relating to all steps within the risk-based compliance monitoring framework. During 2015, NERC and the Regional Entities updated the post-audit feedback survey to reflect risk-based activities, which is now electronically available to the registered entities.

Both NERC and the Regional Entities review the surveys to help gauge industry stakeholder perception, as well as to enhance understanding of risk-based compliance monitoring activities. Post-audit feedback surveys aim to provide a feedback loop to NERC and the Regional Entities by identifying successes and opportunities of program development, as well as possible education and training opportunities for ERO Enterprise staff. In 2015, NERC and the Regional Entities collected 70 post-audit feedback surveys, which is a response rate of about 35% of the total
number of audits conducted in 2015. Overall, survey responses indicated continued support by registered entities of the risk-based compliance monitoring approach, noting that most audits had a clear focus of monitoring efforts on reliability risk. Further, registered entities noted their appreciation for the CIP Version 5 outreach provided by the audit teams, as well as the audit team’s flexibility to audit scheduling, clear and transparent communication during the audit, and the professional demeanor of the audit team. Registered entities also commended the audit teams’ review of large volumes of work during the off-site pre-audit portion. In addition, feedback surveys indicated an opportunity for the ERO Enterprise to improve communication regarding the IRA and ICE results and impact on compliance oversight plans.

Risk-based Enforcement Oversight
NERC oversight of the Regional Entity enforcement processes is performed, among other activities, through the review of the supporting evidence, and other information provided by the Regional Entities over the course of focused engagements scheduled throughout the year. NERC communicates the recommendations and findings to the Regional Entities to help the ERO Enterprise develop responsive strategies and solutions to potential issues and ensure consistent implementation of the risk-based CMEP. Such recommendations and findings also helped to identify priority areas for training of ERO Enterprise staff throughout 2015.

These reviews complement the analysis by NERC of enforcement data and calculation of metrics\(^\text{26}\) and provides input to the development of feedback, guidance, and training.\(^\text{27}\)

Annual Reviews Conducted in 2015
NERC reviews specific enforcement-related processes throughout the year. Subjects that have been reviewed include mitigation plans, dismissals, settlement practices, and FFTs. As a result of the reviews, NERC provides feedback to the Regional Entities on areas and activities to enhance consistency and effectiveness of processes.

In September 2015, NERC filed its annual report of the FFT program. During Q1 of 2015, NERC and FERC jointly performed the annual sampling and process review of the Regional Entities’ FFT programs. The purpose of the review was to gather information on the implementation and effectiveness of the FFT program across all eight Regional Entities. NERC and FERC’s 2015 review involved a coordinated sample of 100 processed FFTs for the period of October 2013 through September 2014. NERC’s and FERC’s review of the record included evaluation of the methods used by the Regional Entities to process Possible Violations as FFTs. NERC and FERC reviewed Regional Entity internal documents, including enforcement process diagrams, procedure manuals, step-by-step internal processes, checklists, and FFT Notice Letters.

Of the 100 FFTs reviewed, NERC and FERC did not identify any noncompliance that was inappropriate for FFT treatment. The results of the review indicate that the program remains successful and continues to be properly implemented.

A combined review of Compliance Exceptions and FFTs began, in coordination with FERC, in Q4 of 2015. NERC will also conduct a review of the self-logging program in 2016 to encompass 2015 activities.

\(^{26}\) NERC analyzes enforcement data to calculate the rates of use of enforcement processes and to help identify trends that may affect BPS reliability. Performance indices are also computed on a regular basis to quantify the performance of the Regional Entities and NERC in processing violations and mitigation, as well as to provide insight in determining the effectiveness of Regional Entity programs and adequacy of Regional Entity and NERC resources.

\(^{27}\) NERC provides feedback, guidance, and training to the Regional Entities. In 2015, the ERO Enterprise provided training to Regional Entity staff and the industry on areas such as compliance exceptions and the self-logging program. NERC developed this training based on early experience with implementing the programs, in addition to observations from the various reviews.
Other Significant 2015 Activities

Managing the Transition to Version 5 of the CIP Standards

The ERO Enterprise recognized 2015 as a critical year in ensuring registered entity preparation for the April 1, 2016, effective date of certain CIP Version 5 Reliability Standards requirements. To support implementation readiness during 2015, NERC focused its efforts in three key areas: written guidance and Reliability Standard Audit Worksheets (RSAWs) completion, stakeholder outreach, and ERO Enterprise staff workshops.

NERC worked with the Regional Entities and industry stakeholders through the transition advisory group\(^ {28}\) to finalize and issue documents that provide guidance to the industry on the implementation of various CIP Version 5 requirements. The ERO Enterprise and the transition advisory group have finalized eight lessons learned documents and 40 Frequently Asked Questions (FAQs). Table 3 below lists the completed lessons learned and FAQs.

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<td>FAQ #3-2014: Scoping UPS, HVAC and building control systems*</td>
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<td>Lesson Learned: External Routable Connectivity</td>
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Table 3: Completed CIP Version 5 Transition Lessons Learned and FAQs

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<td>CIP-007-6 Requirement R3</td>
<td>FAQ #1-2014: Malicious code and detective controls*</td>
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<td>CIP-010-2 Requirement R1</td>
<td>FAQ #107: Baseline testing</td>
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<td>FAQ #114: New requirements for testing of BCAs</td>
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<td>CIP-010-2 Requirement R3</td>
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<td></td>
<td>FAQ #130: Destruction of data practices</td>
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*The FAQ numbering convention changed after these FAQs were identified by date.

On March 13, 2015, NERC issued revised RSAWs for CIP Version 5 and incorporated any new revisions to the standards as a result of standards development completed in 2015. ERO Enterprise CIP compliance monitoring staff and the standards drafting team for the CIP V5 revisions project regularly met during Q1 of 2015 to comprehensively review and update the CIP RSAWs to increase clarity and improve the industry’s understanding of compliance expectations for both newly modified requirements and previously approved language.

In addition to developing written guidance for registered entities during the transition period, NERC and the Regional Entities focused heavily on information outreach and training during 2015. Specifically, 2015 events included Regional Entity workshops for registered entities, more individualized outreach through Small Group Advisory Sessions, and visits through the Security Reliability Program, in addition to several CIP-focused CMEP training activities for Regional Entity staff. Figure 9, in the previous section “Industry Stakeholder Information and Outreach” includes Regional Entity outreach events on the CIP Version 5 transition.

While NERC has continued its efforts to accomplish the goals of the CIP Version 5 Transition Program and entered its final stage of completing remaining guidance for outstanding topics in 2015, a focused effort has been underway to design an ERO Enterprise-wide oversight plan for 2016. NERC understands that the implementation of CIP Version 5 represents a significant shift in addressing cybersecurity. As the industry gains implementation experience with this new set of Reliability Standards, NERC’s oversight of CIP Version 5 will rely on risk-based compliance monitoring and enforcement concepts. In particular, focus in 2016 will be on key areas to determine how well security risk is being managed, with emphasis on effective collaboration across the ERO Enterprise and
industry to address security and compliance. NERC and the Regional Entities will incorporate that focus in phased approaches based on function and risk throughout 2016 and beyond. NERC’s oversight plan for CIP Version 5 in 2016 includes three primary components.

The first component includes on-site audit engagements in each Region at certain registered entities that could have a significant impact on the reliable operation of the Bulk Electric System (BES), identified through risk assessment and as otherwise required to occur on a three-year cycle under the NERC Rules of Procedure. Second, through the risk-informed application of risk-based compliance monitoring tools (e.g., spot checks and guided self-certifications), NERC and the Regional Entities will seek to understand from applicable registered entities the quantities of facilities that possess high- and medium-impact BES Cyber Systems in CIP-002. The third component of the CIP Oversight Program may involve oversight of certain responsible entities’ CIP programs by NERC in conjunction with staff from Applicable Governmental Authorities.

**Physical Security Reliability Standard Implementation**

The ERO Enterprise and industry have always made the reliability and security of the BPS a key priority. Industry stakeholders have decades of experience working to protect our shared infrastructure and are constantly reevaluating threats and taking steps to protect the system. Standards are one piece of this complex, dynamic endeavor of providing a comprehensive approach to reliability.

With CIP-014-2 becoming effective on October 1, 2015, NERC and the Regional Entities focused on implementation readiness for applicable registered entities during 2015. NERC released a guidance communication to the Regional Entities and industry in February 2015 on implementation of Requirements R1 and R2. That communication included a link to a guidance document developed by the North American Transmission Forum (NATF) for Requirement R1. Importantly, NERC recognizes that there may be more than one approach to achieving compliance with CIP-014-2’s requirements, so NERC is neither “adopting” nor “endorsing” a specific approach as the only way to comply with the standard. Initially, NERC provided guidance for each requirement. In response to suggestions received in response to the NERC Board of Trustees request for policy input on CIP-014-1 for the May 7, 2015, NERC recognized the importance of limiting and coordinating any additional guidance. NERC thus limited its initiation of formal guidance communication though it will continue to coordinate with other industry groups, such as the NATF, on their efforts.

ERO Enterprise staff began in 2015 to engage with registered entities through a variety of outreach activities and coordinated site visits to discuss and understand their implementation of CIP-014-2. Based on initial observations from both NERC and Regional Entity staff, the industry made significant progress towards effective CIP-014-2 implementation and compliance. Physical security plans appeared to be focused on mitigating risk from specific threats to the critical stations or substations, and NERC was encouraged by the industry’s initial progress and continued focus on a successful CIP-014-2 implementation.

The ERO Enterprise will monitor compliance to the standard in a manner that emphasizes assessing and supporting effective implementation. The focus areas through the end of 2015 and during early 2016 relate to CIP-014-2’s requirements to identify critical stations and substations and ensuring that such identifications are appropriate and risk-informed. NERC, in collaboration with the Regional Entities, plans to confirm who the Reliability Standard applies to, whether each of those applicable registered entities performed a required risk assessment to

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31 Prior guidance from February 9, 2015, related to the risk assessment and third party verifications required by the Reliability Standard also emphasized that compliance assurance activities will expect registered entities to be able to demonstrate that they implemented the requirement effectively. That guidance is available at [http://www.nerc.com/pa/CI/PhysicalSecurityStandardImplementationDL/CIP-014%20Memo%20to%20the%20ERO%20021015.pdf](http://www.nerc.com/pa/CI/PhysicalSecurityStandardImplementationDL/CIP-014%20Memo%20to%20the%20ERO%20021015.pdf).
determine whether they have critical facilities, and whether that required risk assessment resulted in the identification of critical facilities.\textsuperscript{32}

In Q2 of 2016, NERC and the Regional Entities will prioritize understanding of effective application of the first three requirements related to critical facility identification.\textsuperscript{33} This approach is described in the 2016 ERO Enterprise CMEP Implementation Plan with formal notices to applicable registered entities expected to be provided by Regional Entities in Q1 of 2016.

\textbf{Regional Entity Coordinated Oversight of Multi-region Registered Entities}

In 2014, the ERO Enterprise developed a comprehensive coordinated oversight program. The program is designed to streamline risk assessment, compliance monitoring, and enforcement for the registered entities that use, own, or operate assets in areas covering more than one Regional Entity’s territory.

Under the program, Regional Entities coordinate their oversight responsibilities over MRREs by designating one or more LREs to each MRRE or a group of MRREs. The LRE is selected based on reliability considerations and the registered entity’s operational characteristics. The selected LRE works collaboratively with the remaining Regional Entities, known as AREs, and informs NERC of activities as appropriate.

The program was implemented in phases to facilitate learning and process development by the ERO Enterprise. During Q2 of 2014, notice was provided to select MRREs of the opportunity to request coordinated oversight. This initial phase resulted in approximately 74 registered entities (24 MRRE groups) participating in coordinated oversight. In Q2 of 2015 a full implementation phase of the program began with a broad notice to registered entities that any MRRE could request to participate in coordinated oversight. In response, registered entities demonstrated significant interest in the efficiency and consistency benefits of the program. In Q3 of 2015, the participation level increased to 152 registered entities (39 MRRE groups), over twofold from the initial phase of the program. The ERO Enterprise has selected the LREs for each participating MRRE group, and the LREs and AREs have already signed memoranda of understanding outlining their respective responsibilities. Figure 11 represents the distribution, including number and percentage of the total, of 152 MRREs by LRE, and Figure 12 represents the distribution of MRREs by registered function. The registered entities that opted to join the program are registered for various reliability functions in multiple regions.

NERC and the Regional Entities held several outreach events on coordinated oversight before and during the full implementation period including an industry webinar in Q2 of 2015. Additional outreach to non-participating MRREs was also provided. Finally, Program overview, contact information, and other documents are posted on NERC’s website and updated regularly.\textsuperscript{34} This program requires ongoing and timely communication, full sharing of information, and opportunity for ARE input and involvement concerning implementation of the CMEP for those MRREs involved in the program. Detailed procedures between LREs and AREs for implementing the program are key to the success of the program.

\textsuperscript{32}These confirmations are also intended to address quarterly reporting expectations to the Board of Trustees in support of its monitoring of the standard’s implementation. NERC management, per the Board of Trustee’s instruction when adopting the Physical Security Reliability Standard, will monitor and assess implementation of CIP-014-2. This monitoring includes the general number and characteristics of assets identified as critical and the scope of security plans developed to meet the requirements in CIP-014-2, including the timelines provided for implementation of the various security and resiliency measures included in the plan.

\textsuperscript{33}The obligations of those requirements become effective through staggered enforcement dates beginning on October 1, 2015, through Q1 of 2016.

\textsuperscript{34}Information on the Coordinated Oversight of MRREs Program is available at \url{http://www.nerc.com/pa/comp/Reliability%20Assurance%20Initiative/MRRE%20FAQ%20with%20Notice%201-12-15.pdf}.
In support of CCC Criteria, during 2016, the ERO Enterprise will continue to consider opportunities to refine the coordinated oversight program and to improve associated efficiency and consistency while also fulfilling obligations for implementation of the CMEP. Also, there will be organized efforts to continue to provide outreach on the coordinated oversight program and in particular to seek feedback from registered entities involved in the coordinated oversight program concerning any process improvements.

**Figure 11: Number of MRRE NCRs by LRE and Regional Percentage of Total MRRE NCRs**
Regional Consistency Tool

The ERO Enterprise is committed to ensuring and promoting consistency among the Regional Entities and with applicable published processes, procedures, and rules. To assist the ERO Enterprise in its efforts to improve consistency among the Regional Entities and drive continuous improvement in day-to-day operations, the Regional Entities created the Regional Consistency Reporting Tool. This reporting tool allows registered entities or other relevant industry stakeholders to report any perceived inconsistency in the methods, practices, or tools of two or more Regional Entities.

The Regional Consistency Reporting Tool does not function as an appeal of a Regional Entity action or decision, and it does not replace the NERC or Regional Entity Compliance Hotlines for complaint reporting.

The Regional Consistency Reporting Tool is hosted on a secure, third-party server. Reports are submitted only to those personnel at each Regional Entity who have specific permissions and training based on the issue.

Once a report is received, the Regional Entity will assess and evaluate the report. The evaluation reports will then be incorporated into a public findings spreadsheet. The identity of the reporter, if provided, will always remain protected. The reporter has the option to remain anonymous when making the report.

To improve consistency among the Regional Entities and drive continuous improvement in day-to-day operations, the Regional Entities also developed the Regional Consistency Reporting Tool as an additional channel of communication for registered entities and relevant industry stakeholders. The tool allows the public to report any
perceived inconsistencies among Regional Entities, including perceived inconsistencies with compliance monitoring and enforcement processes, procedures or rules. In 2015, 20 reports of perceived inconsistencies were submitted through the Regional Consistency Reporting Tool. 35 These 20 reports represent a diverse category of issues involving, among others, compliance monitoring, CMEP tools, event analysis, organization registration and BES asset identification. The majority of these reports involve substantive issues—with a handful involving administrative issues, such as inconsistent data transmittal methods from registered entities to Regional Entities. Out of these 20 reports, 13 have been successfully investigated and resolved; 3 have been assigned to ERO staff working groups for longer-term tracking and resolution; and 4 cases are in-process.

35 Detailed information on the reported issues and findings is located on the NERC website, available at https://secure.ethicspoint.com/domain/media/en/gui/38901/index.html. In addition, this information is also posted on the Regional Entities websites.
Looking Ahead to 2016

To refine and align risk-based CMEP with the lessons learned from the implementation year, the ERO Enterprise identified three areas of focus going forward. The ERO Enterprise will focus on the following: (1) collaborating through NERC and Regional Entity working groups to share best practices to achieve successful implementation; (2) sharing best practices for risk assessments of registered entities to enhance consistency and common approaches; and (3) continuing emphasis on stakeholder understanding and perceptions.

To guide compliance monitoring and enforcement 2016 activities, NERC has identified the following priorities for the ERO Enterprise:

- Regional entity completion of initial IRAs for all BAs, TOPs, and RCs during 2016;
- ERO Enterprise completion of a plan for conducting initial IRA activities of all remaining registered entities by Q2 of 2016;
- Continued NERC and Regional Entity coordination on risk-based compliance monitoring, specifically:
  - Refining of risk elements and risk factor considerations to better prioritize risks and identify registered entity specific risks;
  - Evaluating ERO Enterprise IRA and ICE business rules;
  - Promoting consistency in ERO Enterprise IRA and ICE tools and processes; and
  - Improving training on IRA and ICE performance for ERO Enterprise staff.
- ERO Enterprise support of CIP Version 5 transition and Physical Security implementation through an ERO Enterprise monitoring approach, as outlined in the 2016 ERO Enterprise CMEP Implementation Plan;
- NERC coordinated review of compliance exceptions and FFTs with FERC; and
- ERO Enterprise review of self-logging program.
Appendix

This appendix includes an update on the ERO Enterprise processing-related goals and metrics in 2015 and other relevant trends.

Mitigation Completion Status
The ERO Enterprise actively tracks mitigation of noncompliance through Mitigation Plans and mitigation activities. NERC also conducts oversight of the Mitigation Plan processes and procedures to identify deficiencies and establish best practices.

During Q4 of 2014, NERC conducted a review of 120 Mitigation Plans submitted to FERC in 2013. The purpose of the Mitigation Plan review was to evaluate the Regional Entities’ internal procedures and practices related to Mitigation Plan review and acceptance, certification, and verification. The review was a supplement to NERC’s ongoing review of all Mitigation Plans, which are accepted by the Regional Entities and submitted to NERC for approval before they are submitted to FERC.

Based on its analysis of the review results, NERC concluded that the Regional Entities follow the procedural and content requirements of the CMEP as they relate to mitigation activities associated with noncompliance with the NERC Reliability Standards. During 2015, NERC observed improvement across the ERO Enterprise related to the description of interim risk mitigation and cause analysis in Mitigation Plans.

NERC is closely monitoring noncompliance for which mitigation has not been completed. The ERO Enterprise encourages all registered entities to submit timely and detailed certifications of completion of Mitigation Plans or mitigation activities.

![Figure 13: Mitigation Completion Status for Pre-2015 Cases](image)

Figure 13: Mitigation Completion Status by Discovery Year
The outstanding mitigation activities from 2010 and before largely involve federal entities that have had limited interaction with their Regional Entities during the pendency of federal litigation related to NERC’s ability to assess financial penalties against federal entities. Since the litigation has been resolved in 2014, the Regional Entities have made significant progress in working with the federal registered entities to resolve their noncompliance and associated mitigation.

As of Q4 of 2015, mitigation has been completed for 80.39% of the instances of noncompliance discovered in 2014, which is an increase from 67.90% in Q3 of 2015. NERC met its target of 80% completion of noncompliance discovered in 2014.

The table below shows the ERO Enterprise’s targets and thresholds for mitigation activity completion by discovery year of the noncompliance.

<table>
<thead>
<tr>
<th>Time frame</th>
<th>Required Mitigation</th>
<th>On going</th>
<th>Progress toward the goal</th>
<th>Threshold</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 and older</td>
<td>4182</td>
<td>3</td>
<td>99.93%</td>
<td>98%</td>
<td>100%</td>
</tr>
<tr>
<td>2011</td>
<td>1742</td>
<td>6</td>
<td>99.66%</td>
<td>95%</td>
<td>98%</td>
</tr>
<tr>
<td>2012</td>
<td>1461</td>
<td>40</td>
<td>97.26%</td>
<td>90%</td>
<td>95%</td>
</tr>
<tr>
<td>2013</td>
<td>1157</td>
<td>75</td>
<td>93.52%</td>
<td>75%</td>
<td>80%</td>
</tr>
<tr>
<td>2014</td>
<td>964</td>
<td>189</td>
<td>80.39%</td>
<td>75%</td>
<td>80%</td>
</tr>
</tbody>
</table>

**Self-Assessment and Identification of Noncompliance**

The ERO Enterprise monitors noncompliance discovery trends and promotes self-identification of noncompliance. The ERO Enterprise has set a target that the registered entities should discover 75% of noncompliance in 2015 through internal discovery methods. In 2015, registered entities self-identified 84% of the instances of noncompliance, resulting in an 8% increase over 2014. Typically, registered entities identify a higher percentage of noncompliance in the first quarter of each year when they conduct internal compliance evaluations and submit self-certification forms to the Regional Entities. In all quarters of 2015, the percentage of internally discovered instances of noncompliance was higher compared to the same periods in 2014. In Q4 of 2015, the registered entities self-identified 86.8% of noncompliance internally, compared to less than 72% in Q4 of 2014. All four quarters of 2015 identified more internally discovered noncompliance than any other compared year.36

Registered entities’ ability to self-identify noncompliance allows for timely mitigation of such noncompliance, which results in a more timely reduction of risk to the BPS. The ERO Enterprise continues to encourage all registered entities to develop internal processes that would allow them to promptly self-identify and mitigate instances of noncompliance.

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36 Consistent with a decline in the overall number of instances of noncompliance, self-identified or not, the number of reported instances of noncompliance has been on the decline since 2011. In 2011, there were 2,618 total violations discovered; in 2014, there were 1,190; and in 2015, there were 840 violations discovered.
Noncompliance Processing Metrics

ERO Enterprise’s Pre-2014 Caseload
The ERO Enterprise monitors several measures that relate to the processing of open violations from prior years. Older pre-2014 violations have been a priority for both the Regions and NERC. In 2015, this increased focus continued to be successful as the non-federal entity pre-2014 noncompliance inventory continued to decline, dropping to 44, which is less than the threshold of 65 that was set for 2015.
The inventory for instances of noncompliance related to federal entities is also declining mainly because Regional Entities are currently processing these cases, which were on hold for several years. In Q4 2015, there were no federal entity noncompliance processed but this number is expected to decline dramatically in 2016, starting with a high number of violations scheduled for Q1 2016. The majority of federal entity noncompliance relates to large agreement that should be resolved in Q1 2016. Once completed, NERC anticipates a more substantial decrease in the federal entity inventory.

Figure 15: Non-federal Pre-2014 Noncompliance in Inventory Continues to Decline
Appendix

Figure 16: Federal Pre-2014 Noncompliance in Inventory Started Declining in 2015

Average Age of Noncompliance in the ERO Enterprise by Month
The average age of noncompliance continues to fluctuate but remains well below the threshold.

Figure 17: Average Age of Noncompliance in ERO Enterprise's Inventory
* Excludes violations that are held by appeal, a regulator, or a court

Figure 17: Average Age of Noncompliance in ERO Enterprise's Inventory
Since all Regional Entities began applying the Compliance Exception and FFT disposition tracks to qualifying minimal and moderate risk violations, the average processing time has declined. As shown in Figure 19 below, more than 60% of the inventory of noncompliance for the ERO Enterprise is less than one year old, and only 6% is over two years old.

**Figure 18: Age of Noncompliance in ERO Enterprise’s Inventory**
• **Two types of Exception Requests**
  ▪ Inclusion
  ▪ Exclusion

• **Basis for Approval of an Exception**
  ▪ “Not necessary for the Reliable Operation of the interconnected bulk-power transmission system” (Appendix 5C at Section 3.0)

• **Roles**
  ▪ Submitting Entities or Owners
  ▪ Regional Entities
  ▪ North American Electric Reliability Corporation (NERC)
  ▪ Others with a Scope of Responsibility
    ▪ Planning Authority, Reliability Coordinator, Transmission Operator, Transmission Planner and Balancing Authority
• **NERC Review Panel (NRP)**
  - A minimum of 3 Subject Matter Experts (SME)
  - Proposed decision provided to NERC President and CEO, or a designee
    - Occurs within 90 days of issuance of the Regional Entity Recommendation
    - Considers entire record and may conduct additional studies and analysis
  - Minority dissenting opinion, if applicable

• **NERC President and CEO, or a designee**
  - Final NERC decision
    - May adopt or modify the NRP’s proposed decision
    - May reach a different conclusion than the NRP’s proposed decision
    - Occurs within 30 days of issuance of the NRP proposed decision
• **Elements to date**
  - Generation and Dispersed Power-Producing Resources
  - Substation Shunt Devices
  - Circuit – Transformers
  - Circuit – Lines
  - Radial Systems
  - Networks
• Record information
• Additional analyses and studies performed by NRP
• Case-by-case determination
• Individual and aggregate considerations
• Nature of the system
• Regional criteria, if any
• Protection Systems
• Not precedent
• Reactive support or BES voltage control
  ▪ Voltage magnitude and drop test
• System inertia and frequency response
• Restoration plan Blackstart resource
• Off-site power to nuclear plant
• Generator shift factor
• Capacity factor
  ▪ Historical data for the past two years and future plans
• System contingencies and load shedding
• Capacity resource
• Aggregate impact of similar generation
Substation Shunt Devices

- Reactive support or BES voltage control
  - Voltage magnitude and drop test (for dynamic devices)
- Voltage stability
  - Import capability test
- Power quality issues
  - Power factor correction
  - Flicker control
  - Harmonic filtering
• Real Power flow control
  ▪ Phase-shifting or variable frequency transformers
• System Operating Limit (SOL)
• Interconnected Reliability Operating Limit (IROL)
• Basis for the limit
  ▪ Thermal
  ▪ Voltage stability
• Blackstart cranking path
• Distribution factor
• Outage simulation and BES impacts
• SOL
• IROL
• Basis for the limit
  ▪ Thermal
  ▪ Voltage stability
• Blackstart cranking path
• Distribution factor
• Outage simulation and BES impacts
• Parallel path for BES flow considerations
• Additional elements that comprise the Facility, where applicable
  ▪ Series capacitors
  ▪ Series reactors
  ▪ Shunt reactors
• Maximum power flow
  ▪ All lines in service
  ▪ First contingency conditions
  ▪ Contingency and system conditions under which the flow may occur

• Parallel flow to BES

• Import capability test
  ▪ Serve load in network and monitor the BES impacts

• Topology change effects
  ▪ Unavailability of generation or reactive devices
• Reactive support to control BES voltage
  ▪ Voltage magnitude and drop test (for dynamic devices)
• Location of interrupting devices on the network
• Coordination of Protection Systems on the network and on the BES
• Proximity to nuclear generation and associated reactive and offsite power requirements
• Gross nameplate MVA rating
• Interconnection voltage of any BES resources connected to the radial system
• Effect of disconnecting the radial system from the BES in whole, or in part
• Reactive support or BES voltage control
  - Voltage magnitude and drop test (for dynamic devices)
• Import capability test
  ▪ Serve load in network and monitor the impacts on BES
• Location of interrupting devices on the radial system
• Coordination of Protection Systems on the radial system and on the BES
• Proximity to nuclear generation and associated reactive and offsite power requirements
Protection System Assessment

• Uncleared fault evaluation, including
  ▪ Generator loss of synchronism
  ▪ Overloads on BES facilities
  ▪ Low voltage on critical BES facilities

• NERC Reliability Standard compliance
  ▪ Entity remains subject to NERC Reliability Standards applicable to Protection Systems if uncleared faults pose a risk to BES reliability
• Apply a three-phase fault on the system at applicable locations for which the entity is requesting exclusion
  
  ▪ Observe system performance:
    o Voltages at the terminals of generators should be reasonable, above 90% of nominal operating voltage
    o There should be no excessive overloads on BES Elements (transmission lines and transformers)
    o No generating units should go out-of-step (lose synchronism)
      – Is there a critical clearing time?
    o Inter-area and local mode oscillations will be positively damped
Questions and Answers