ERO Enterprise IT Projects
Update

Stan Hoptroff, Vice President, Chief Technology Officer and Director of Information Technology
Technology and Security Committee Meeting
November 6, 2018
• ERO IT Projects Update
  ▪ Compliance Monitoring and Enforcement Program (CMEP) Technology Project
  ▪ Entity Registration/Standards
  ▪ Situation Awareness for FERC, NERC and the Regional Entities (SAFNR)
• Priorities Looking Ahead
The CMEP Technology Project will provide deep and broad views of reliability across the ERO Enterprise, leading to new insights into data-informed reliability risk management.

This is essential to the achievement of our reliability mission.
Moving to a common platform will provide:

• Alignment of common CMEP business processes, ensuring consistent practices and data gathering
• A standardized interface for registered entities to interact with the ERO Enterprise
• Real-time access to information, eliminating delays and manual communications
• Consistent application of the CMEP
How is the ERO project team engaging stakeholders?

- Monthly meeting with Compliance and Certification Committee (CCC)-Alignment Working Group (AWG)
- Receiving feedback via Regional subject matter experts and Steering Committee
Full implementation scheduled for 2020

We are here
• Successes:
  ▪ Completed training for the core project team on BWise features
  ▪ Registered entities provided feedback on Self-Reports via the CCC-AWG
  ▪ Completed design and build for Self-Reports
  ▪ Completed Enforcement and Mitigation process work
  ▪ Completed Test Plan for Release 1 – Self-Reports, Enforcement, and Mitigation
  ▪ Began business process work for Periodic Data Submittals, Self-Certifications, and Technical Feasibility Exceptions
  ▪ Created a standard presentation for the upcoming Regional fall compliance workshops
• What’s next?
  ▪ Seek feedback on Enforcement and Mitigation process from CCC-AWG
  ▪ Complete design and build for Enforcement and Mitigation for Release 1
  ▪ Execute test plan for Release 1
  ▪ Begin process harmonization for Compliance Audit and Spot Checks, Compliance Investigations, and Complaints
  ▪ Complete strategic plan on data migration
  ▪ Execute communications plan via Regional compliance workshops
Key communication vehicles

• Dedicated project page on NERC.com: Click Here
• Upcoming CMEP Regional workshops
• Pertinent industry publications (Utility Analytics Institute article)
• Trades meetings, as appropriate
• Benefits
  ▪ One common registration tool for the ERO Enterprise
  ▪ Consistent registration experience for registered entities
  ▪ Ability to easily share registration data
  ▪ Integration with new CMEP Technology Tool

• Project Status
  ▪ Updates provided to CCC and sub-committees
  ▪ Requirements and Design completed
  ▪ Development underway
  ▪ Testing scheduled for Q2 2019
  ▪ Production launch scheduled for Q3 2019
• Key features for the new version of SAFNR
  ▪ Ability to control views for NERC, FERC, Regional Entities, and Reliability Coordinators (RCs)
  ▪ Static power infrastructure mapping
  ▪ Real-time data on facilities (>200kV and >500W)
  ▪ RC dashboard with drill-down capability into data
  ▪ Administrator tools
• Vendor selection via RFP in progress
• Business case being developed
Priorities Looking Ahead

• CMEP Technology Project Business Process Harmonization
• Business Case for SAFNR
• Additional functionality for the Electricity Information Sharing and Analysis Center (E-ISAC) portal
  ▪ Additional authentication enhancements
  ▪ Additional user interface/experience enhancements, content editing, and editorial management and digital asset management (Version 10 - 2019)
  ▪ New ability to track client actions and track engagement, target content, and deploy personalized content (Version 11 - 2020)
• Additional analytical capabilities for the E-ISAC, with a focus on the “analyst workbench/data warehousing”
• New outreach capability via a customer relationship management investment for the E-ISAC
Questions and Answers
Additional Information
Situation Awareness for FERC, NERC, and the Regional Entities, Version 3 (SAFNRv3)

SAFNRv3 will replace the existing application and provide a common operating picture tool to be used by FERC, NERC, E-ISAC, and the seven Regional Entities with the ability to include other organizations, as may be appropriate, in the future. SAFNRv3 will facilitate an expedited awareness of conditions on the Bulk Power System (BPS) which will allow accurate, timely and optimal decisions involving the status of the BPS and support the ERO Enterprise in its capacity to maintain situational awareness of the BPS.
Benefits:

• Presents current weather information onto the Graphical User Interface (GUI)

• Reveals hourly Balancing Authority actual load, forecasted load and net actual interchanges

• Allows collaboration by capturing and sharing notes within the GUI
Benefits:

- Shows a visual indicator to alert users of state changes
- Provides ability to perform Seven-Day Trending
- Potential to display customer outage data by state/county level or by utility company (common names not NERC registration)
System Features:

- **Base Maps**: Provides users with three overlay options to choose from (street map, imagery with and without labels, dark gray canvas); each option offers pan and zoom capability.

- **Static Power Infrastructure Mapping**: Displays visible elements with the ability to filter by voltage, attributes, and geolocation.

- **SAFNR Real-Time Data Superimposed**: Provides real-time data on facilities (>200kV and > 500MW) that includes generator icons signified by fuel type and substation icons signified by per-unit voltage.
System Features:

• **RC Status Dashboard:** Displays a status summary of all RCs and ability to drill down to individual screens for additional aggregated details

• **Administrative Tools:** Allows users with permissions to adjust constraints, update base maps and static power infrastructure mappings
E-ISAC Update
Long-Term Strategy Execution

Bill Lawrence, Vice President and CSO, NERC, and Director, E-ISAC
Technology and Security Committee Meeting
November 6, 2018
• Member Engagement
• Information Sharing
• Threat Analysis
• Technology Update
• Resource Planning
• Metrics
• MEC Working Group Initiative
• 2019 Key Initiatives
• 6,956 E-ISAC Members
  ▪ 16.5% increase in 2018 (Average of 22 added per week)

• Industry Engagement Program
  ▪ 21 analysts from 16 organizations

• Regional Industry Engagement – Key Initiatives
  ▪ Northeast – IESO 4th Annual Executive Brief on Cybersecurity
  ▪ Midwest – MRO Security Conference
  ▪ Southeast – SERC Joint Technical Committee Conference
  ▪ West- SCE Exercise, GridSecCon 2018
• Three Main Objectives
  ▪ Highlight the value of the E-ISAC through a discussion of increased capabilities
  ▪ Provide a deeper understanding of the benefits of E-ISAC membership
  ▪ Strengthen the E-ISAC’s relationship with Canadian members

• Recent Outreach Efforts

• Canadian Roadshow
  ▪ Q4 start
  ▪ Focused on outreach across all interconnected provinces

• GridSecCon 2018 Classified Briefing / GridEx V in 2019

• Measure Impact (membership, portal activity, surveys)
• Portal
  ▪ Approximately 17 percent increase YTD in registered users
  ▪ Increase in cyber and physical bulletins posted
    o Cyber-219 thru Q3 2018
    o Physical-134 thru Q3 2018
  ▪ Two private User Communities in soft-launch phase
• CRISP
  ▪ Expanding membership with DOE funding support
  ▪ Public power and cooperative utility pilots under development
• Unclassified Threat Briefings
  ▪ Will host 4 in 2018
  ▪ CRISP - 2 workshops

• Classified Threat Briefings
  ▪ Coordinated 3 non-CRISP classified briefings in 2018
    ◦ Securing the Grid V (May) – approximately 100 attendees
    ◦ GridSecCon 2018 (October) – approximately 45 attendees
    ◦ CIPC (December) – approximately 50 attendees
  ▪ CRISP- monthly briefings

• Increased Number of Physical and Cyber Bulletins
• Portal Enhancements
• Cyber Automated Information Sharing System
• Malware Analysis Repository and Threat Information Exchange
• Data Storage and Management System
• Customer Relationship Management System
• DHS Shared Resources HF Radio Disaster Recovery Capability
• 2018 Resource Additions (22 -> 32)
  ▪ Two watch officers (1 to go)
  ▪ Three cyber security analysts
  ▪ Two physical security analysts
  ▪ One executive assistant
  ▪ Two programs and engagement managers
  ▪ One chief of staff
• Evaluating current capabilities and resource needs
• Three main focus areas
  ▪ Monitoring 2018 department metrics
    o 9-6-18 Status Review with MEC
  ▪ Exploring benchmarking against other ISACs
  ▪ Development of 2019 department metrics
• MEC Working Group Task Group Initiative
  ▪ Moving towards creation of limited number of groups:
    o Focused on specific issues requiring support
    o Limited duration
    o Defined deliverables
    o Subject matter expertise
    o Oversight by MEC and MEC Working Group
  ▪ Developed Task Group charter template
  ▪ Proposed initial task force focus areas
    o Canadian Engagement Strategy and execution
    o Metrics
    o ERO Enterprise Effectiveness Survey Results
2019 Key Priorities

- Information Sharing
  - Enhance CRISP capabilities and participation
  - Establish two-way sharing of machine-readable cyber indicators

- Analysis
  - Hire/integrate planned resource additions
  - Develop data storage and management system
  - Develop and deploy analyst work bench
  - Enhancing CRISP analysis

- Engagement
  - GridEx V
  - Expand Industry Engagement Program
  - Execute Canadian Engagement Strategy
Questions and Answers