

A DIVISION OF NERC



# E-ISAC

ELECTRICITY  
INFORMATION SHARING AND ANALYSIS CENTER

## E-ISAC Update

Manny Cancel, Senior Vice President, Chief Executive Officer E-ISAC  
Technology and Security Committee Meeting  
February 5, 2020

**TLP:GREEN**

**RELIABILITY | RESILIENCE | SECURITY**





- Recap Member Executive Committee (MEC) Conference Call held on January 23, 2020
- E-ISAC Strategic Plan Update - Key Elements and Schedule
- Next Steps



- Member Information Sharing Initiatives
- Security Operations Staffing
- Year End Performance Metrics
- Strategic Partnerships Update
- Government Engagement
- Strategic Plan Update



- Strategic plan put in place three years ago
- Opportunity to assess plan now to:
  - Confirm strategic and operational focus for both near and long term initiatives
  - Evaluate and refine products and services
  - Sharpen focus on resource allocation
  - Identify areas to provide additional value for members



- **Key Functions**

- Identify and analyze the security vulnerabilities, threats, and risks pervasive across the industry
- Gather and sanitize physical and cyber security information and disseminate this information to industry and between government and industry
- Provide platform(s) for rapid, secure information sharing and collaboration
- Facilitate meaningful industry events, exercises, and forums

- **Stakeholders**

- The *entire* electric industry: large, small; private, public
- U.S. and Canadian governments



- **Operational - Near Term (1-3 Years):** Focus the majority of our time and resources on improving the efficiency and quality of our current product, platform, and service offerings
- **Strategic - Longer Term (3-5 years):** Enhance intelligence and analysis capabilities with a focus on mitigating operational technology risk due to cyber threats

*Continuous improvement...*

### Analysis

White Papers / Reports

CRISP

E-ISAC Data Platform /  
Technology

Partnerships

- Increase frequency of valuable, in-depth analysis papers
- Improve quality and timeliness of periodic reports
- Expand CRISP coverage and data for analysis
- Leverage technology and partnerships



*Continuous improvement...*

### Information Sharing

Member / Partner  
Shares

News

Watch / CBP / APB

Portal / ESP

CAISS (TIP) / ESP

- Establish 24x7 staffing
- Increase span, quality, and volume of voluntary shares
- Enhance the information sharing portal
- Improve and expand the automated information sharing capability



*Continuous improvement...*

### Engagement

Exercise(s)

Conference(s)

Industry Engagement  
Program

Workshops

Seminars

- Evaluate sourcing options for GridSecCon and GridEx
- Continue expansion of membership
- Increase use of products and services across segments



*Industry input gathering*

*MEC Meeting Apr 14*

*Draft plan/ draft  
2021 budget*

*Feedback*

*MEC Meeting  
Jul 21*

*Final plan / final  
2021 budget,  
2020,2023  
projections*



- Establish 24/7 security operations staffing
- Maximize and leverage the CRM/Salesforce tool
- Improve the value and delivery of products and services
- Continue to strengthen relationships with government and strategic partners
- Use metrics to improve our focus and execution
- Coordinate with MEC on Strategic Plan Update
- Develop 2021 budget

A map of North America is shown in a light blue color. A darker blue horizontal band is superimposed across the middle of the map, passing through the United States. The text 'Questions and Answers' is centered within this band.

## Questions and Answers

# NERC

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# ERO Enterprise Information Technology Projects Update

Stan Hoptroff, Vice President, Chief Technology Officer and Director of  
Information Technology  
Technology and Security Committee Meeting  
February 5, 2020

RELIABILITY | RESILIENCE | SECURITY



- ERO Information Technology (IT) Projects Update
  - Align Project Update
  - Situation Awareness for FERC, NERC and the Regional Entities (SAFNRv3)
  - Entity Registration (CORES)
- Electricity Information Sharing and Analysis Center (E-ISAC) Technology Projects
  - Salesforce customer relationship management (CRM)
  - E-ISAC Portal
  - Data Analysis Platform
- Priorities Looking Ahead

- Drive alignment and consistency in Regional Entity Compliance Monitoring and Enforcement Program (CMEP) practices to ensure more equity in outcomes for registered entities
- Improve the security of handling highly sensitive information
- Capture productivity gains

- All evidence will go into the registered entity or ERO Enterprise locker (any registered entity locker must meet certain criteria the ERO Enterprise develops for functionality, access, etc.).
- ERO Enterprise workflow and work products will be in the ERO Enterprise Align tool.
- The ERO Enterprise will enhance ERO Enterprise work products (e.g., working papers) to support conclusions without the need to store data for extended periods, avoiding a data protection risk.

**NOTE:** Achieving this will occur via training, guidance, oversight activities and other outreach.

- Consistent with cybersecurity Standards and Frameworks - National Institute of Standards and Technology (NIST), Federal Risk and Authorization Management Program (FEDRAMP), NERC CIP
- Data identification, classification, management, and destruction
- Aggressive management of role-based credentials
- Evidence and data separation and isolation
- Control processes and auditing

- Application, patch release, and network cyber testing
- Multi-factor authentication for user access
- 24x7 monitoring and activity logging
- Cyber Risk Information Sharing Program (CRISP) monitoring for CRISP participants and NERC
- Isolated Virtual Network

- Logical Boundary Controls
- Encryption at-rest and in-transit
- Controlled encryption key management
- Integrity monitoring
- Login and Access Monitoring

- A highly secure, isolated environment
  - Purpose-built to collect and protect evidence
  - Enables submission by authorized and authenticated entity users
  - Provides compartmentalized analysis of evidence in temporary, isolated, disposable environments
  - No interfaces with any other systems
- Evidence
  - Is encrypted upon submission
  - Is securely isolated per entity
  - Is never extracted
  - Is subject to proactive and disciplined destruction policy

- Adherence to NIST security frameworks
- Outbound communications limited
  - No ability to extract evidence
- Analysis environment destruction upon log out
- No direct access to the evidence
- File level permissions applied to evidence

ERO Enterprise  
Data Analysis  
Locker



## Secure Storage and Access

- Entity specific lockers
- Data Loss Prevention
- Regional Encryption
- Unidirectional Data Flow

Entity Provided  
Data Analysis  
Locker



## No Transfer of Possession

- Entity controls access
- Entity selects level of security
- Entity must provide defined capabilities to the ERO

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
- **More secure** method of managing and storing CMEP data

## Stakeholder Group

### Registered Entities

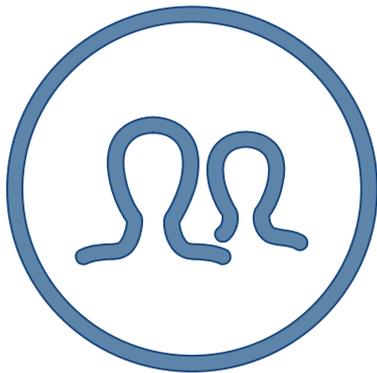


## Release 1 Functionality

- Create and submit Self-Reports and Self-Logs
- Create and manage mitigating activities (informal) and Mitigation Plans (formal)
- View and track Open Enforcement Actions (EAs) resulting from all monitoring methods
- Receive and respond to Requests for Information (RFIs)
- Receive notifications and view dashboards on new/open action items
- Generate report of Standards and Requirements applicable to your entity
- Manage user access for your specific entity

## Stakeholder Group

### Regional Entities

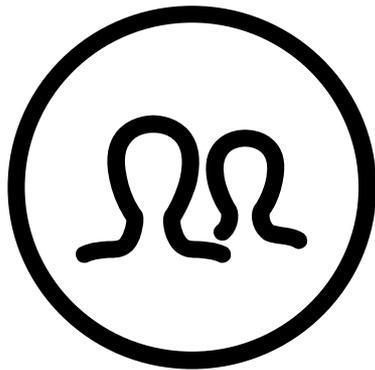


## Release 1 Functionality

- Receive Self-Reports and Self-Logs from entities
- Manually create findings that result from any monitoring method (Audits, Spot Checks, Investigations, PDSs, Self-Certifications, Complaints)
- Perform Preliminary Screens, Potential Noncompliance Reviews, and disposition determinations for each PNC/EA
- Send and received responses to RFIs
- Trigger notifications such as Notice of Alleged Violation(s) and Proposed Penalty or Sanction, Notices of Confirmed Violation(s), Compliance Exception Letter(s), Find, Fix, Track & Report Letter(s), and Settlement Agreements
- Receive, review, and approve mitigating activities (informal) and Mitigation Plans (formal)
- Receive notifications and view dashboards on new/open action items
- Generate report of Standards and Requirements applicable to a registered entity

## Stakeholder Group

*NERC Users*



## Release 1 Functionality

- Perform oversight of the Regional Entities' activities
- View dashboards on new/open action items
- Create reports required by FERC related to Enforcement and Mitigation activities
- Generate report of Standards and Requirements applicable to a registered entity

## Key communication vehicles

- Align newsletter for Regions and registered entities
- Regional Change Agent Network
- Dedicated project page on NERC.com: [Click Here](#)
- Upcoming CMEP Regional workshops
- Trades meetings, as appropriate

- Key Features include:
  - Situational Awareness for FERC, NERC and Regions (SAFNR) v3 will deploy improved underlying technologies to increase system robustness
  - Ability to control views for ERO Enterprise, FERC, and Reliability Coordinators
  - Leverages the same real-time data on facilities (>200kV and >500W)
  - User dashboard with drill-down capability into data
  - Administrator tools that facilitate system updates, topology changes and control access levels
  - Visualization of environmental conditions impacting reliability, such as weather, fires, and space weather.
  - Overlays of GeoMAC wildfire data to aid in tracking wildfires and associated threats to Bulk Power System facilities.

- Benefits
  - One common registration tool for the ERO Enterprise
  - Consistent registration experience for registered entities
  - Ability to easily share registration data
  - Data integration with Align

# What to expect as a registered entity?

## Registered Entity



## Functionality

- Create and submit new registration requests
- Receive notifications when new registrations are submitted
- After Regional and NERC approval, manage the newly submitted registration record
- Manage existing registration records (those that exist today in CITS, CDMS, and CRATS)
- Manage contacts for their entity
- Receive notifications when registration changes (including new registrations) are approved
- View Coordinated Oversight Information related to their entity

- New customer-relationship management tool (Salesforce) in production supporting post GridEx activities along with tracking member and stakeholder contacts
- E-ISAC Portal – additional refinements underway. Focus on content publication (actionable information)
- E-ISAC Data Platform build out occurring with a heavy focus on data interfaces and data sharing. Which will enable additional improved analytics and information sharing

- Go-Live for Align Project Release 1 - 2020
- E-ISAC portal platform upgrade
- Analytical capabilities for the E-ISAC
- Accelerated adoption of Salesforce capabilities for the E-ISAC
- Development of the Geomagnetic Disturbance application
- Implementation of additional collaboration capabilities, e.g. Microsoft Teams
- Various software/hardware upgrades to NERC infrastructure



# Questions and Answers



# Additional Slides

## Release 2 Functionality Est. 2021

- Technical Feasibility Exceptions
- Periodic Data Submittals
- Self-Certifications

*Note: A strategy is being developed for how these monitoring methods will be managed in the gap between Releases*

## Release 3 Functionality Est. 2021

- Compliance Planning (Risk, CMEP Implementation Plan, Inherent Risk Assessment, Internal Controls Evaluation, Compliance Oversight Plan)
- Compliance Audit
- Spot Check
- Compliance Investigations
- Complaints

Standards Management ▾
Align for NERC ▾

Standard Management
Requirement Management
Part Management
Andy Rodriguez ↻

EDIT A REQUIREMENT
ADD A NEW REQUIREMENT TO A STANDARD

STANDARD	REQUIREM...	REQUIREMENT LANGUAGE	EFFECTIVE...	INACTIVE...	STANDARD	TITLE	ADD NEW
BAL-005-1	R4.	The Balancing Authority shall make available to the operator information associated with Reporting ACE including, but not limited to, quality flags indicating missing or invalid data.	01/01/2019		COM-001-3	Communications	+
BAL-005-1	R5.	Each Balancing Authority's system used to calculate Reporting ACE shall be available a minimum of 99.5% of each calendar year.	01/01/2019		COM-002-2	Communication and Coordination	+
BAL-005-1	R6.	Each Balancing Authority that is within a multiple Balancing Authority interconnection shall implement an Operating Process to identify and mitigate errors affecting the accuracy of scan rate	01/01/2019		COM-002-2a	Communication and Coordination	+
BAL-005-1	R7.	Each Balancing Authority shall ensure that each Tie-Line, Pseudo-Tie, and Dynamic Schedule with an Adjacent Balancing Authority is equipped with:	01/01/2019		COM-002-3	Communication and Coordination	+
BAL-006-2	R1.	Each Balancing Authority shall calculate and record hourly Inadvertent Interchange.	04/01/2011	01/01/2019	COM-002-4	Operating Personnel Communications Protocols	+
BAL-006-2	R2.	Each Balancing Authority shall include all AC tie lines that connect to its Adjacent Balancing Authority Areas in its Inadvertent Interchange account. The Balancing Authority shall take into	04/01/2011	01/01/2019	EOP-001-2.1b	Emergency Operations Planning	+
BAL-006-2	R3.	Each Balancing Authority shall ensure all of its Balancing Authority Area interconnection points are equipped with common megawatt-hour meters, with readings provided hourly to the control	04/01/2011	12/31/2018	EOP-002-3.1	Capacity and Energy Emergencies	+
BAL-006-2	R4.	Adjacent Balancing Authority Areas shall operate to a common Net Interchange Schedule and Actual Net Interchange value and shall record these hourly quantities, with like values but	04/01/2011	01/01/2019	EOP-003-2	Load Shedding Plans	+
BAL-006-2	R5.	Adjacent Balancing Authorities that cannot mutually agree upon their respective Net Actual Interchange or Net Scheduled Interchange quantities by the 15th calendar day of the following	04/01/2011	01/01/2019	EOP-004-2	Event Reporting	+
BAL-502-RFC-02	R1.	The Planning Coordinator shall perform and document a Resource Adequacy analysis annually. The Resource Adequacy analysis shall. [See Standard pdf for requirements of the Resource	05/23/2011	12/31/2017	EOP-004-3	Event Reporting	+
BAL-502-RFC-02	R2.	The Planning Coordinator shall annually document the projected Load and resource capability, for each area or Transmission constrained sub-area identified in the Resource Adequacy analysis.	05/23/2011	12/31/2017	EOP-004-4	Event Reporting	+
BAL-502-RF-03	R1.	The Planning Coordinator shall perform and document a Resource Adequacy analysis annually. The Resource Adequacy analysis shall	01/01/2018		EOP-005-2	System Restoration from Blackstart Resources	+
BAL-502-RF-03	R2.	The Planning Coordinator shall annually document the projected Load and resource capability, for each area or Transmission constrained sub-area identified in the Resource Adequacy analysis	01/01/2018		EOP-005-3	System Restoration from Blackstart Resources	+
BAL-502-RF-03	R3.	The Planning Coordinator shall identify any gaps between the needed amount of planning reserves defined in Requirement R1, Part 1.1 and the projected planning reserves documented in	01/01/2018		EOP-006-2	System Restoration Coordination	+

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Home
PNC Processing
Align for Regions

Preliminary Screening
PNC Review
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**POTENTIAL NONCOMPLIANCES IN REVIEW**

MONITO... METHOD	UNIQUE ID	NCR	ENTITY	REGION AND JURISDICTION	STANDARD	REQ	RECEIVED	VIOLATION START DATE	REVIEW STATUS	RECOMME... DISPOSITION	ASSIGNED TO
Self-Report	2019-00579	NCR99999	Test Entity	WECC-US	CIP-002-3b	R1.	08/13/20...	08/09/2019	IN PROGRESS		
Self-Report	2019-00583	NCR99999	Test Entity	WECC-US	CIP-002-3	R2.	08/14/20...	08/14/2019	IN PROGRESS		
Self-Report	2019-00602	NCR99999	Test Entity	WECC-US	VAR-002-4.1	R1.	08/19/20...		COMPLETE	Dismissal	
Self-Report	2019-00606	NCR99999	Test Entity	WECC-US	COM-001-2.1	R11.	08/20/20...	08/19/2019	IN PROGRESS		
Audit	2019-00629	NCR99999	Test Entity	WECC-US	CIP-002-5.1a	R1.	08/23/20...	08/20/2019	IN PROGRESS		

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**CONSOLIDATE A PNC UNDER AN OPEN ENFORCEMENT ACTION**

TY...	UNIQUE ID	NCR	ENTITY	REGION AND JURISDICTION	STAND...	REQ	VIOLATI... START DA'
EA	2019-00499	NCR99999	Test Entity	WECC-US	MOD-025-2	R3.	
EA	2019-00581	NCR99999	Test Entity	WECC-US	CIP-002-5.1a	R1.	
EA	2019-00402	NCR99999	Test Entity	WECC-US	CIP-002-3(i)	R1.	
EA	2019-00609	NCR99999	Test Entity	WECC-US	CIP-007-6	R1.	
EA	2019-00700	NCR99999	Test Entity	WECC-US	CIP-009-6	R1.	

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**INSTRUCTIONS**

This is the PNC Review Dashboard. Form the top pane, you can open a PNC, review the submitted information and update it as needed.

When completed, the PNC may be processed in one of two ways:

- 1,) It can be handled as an **Enforcement Action**. To do this, open the PNC from the top pane and choose "Save and Action."
- 2,) It can be **consolidated** under an existing Open Enforcement Action. To do this, open the Enforcement Action from the bottom pane, link the PNC to the EA, and save the EA.

Enforcement Processing ▾
Align for Regions ▾

Active Dispositions
Dispositions Pending Close
EAs Pending Disposition Close
Closed Enforcement Actions
Andy Rodriguez

### ACTIVE DISPOSITIONS

DISPOSITION TYPE	UNIQUE ID ▲	NCR	ENTITY	CASE FILE ID	NERC NOC#	SEND NOTIFICATION
Dismissal	2019-00887	NCR99999	Test Entity	sdfsadfsadfasdfs	dxsdfsdf	<a href="#">Send Dismissal Letter</a>
Dismissal	2019-00885	NCR99999	Test Entity			<a href="#">Send Dismissal Letter</a>
Compliance Exception	2019-00881	NCR99999	Test Entity	Aaron Test Dec 3		CE Letter Sent
Compliance Exception	2019-00879	NCR99999	Test Entity	sss		<a href="#">Send CE Letter</a>
Pending	2019-00868	NCR99999	Test Entity	test NAVAPS to CE		NAVAPS Sent

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Instructions and Help text will be provided in this area. Language still in development.

### ENFORCEMENT ACTIONS RELATED TO DISPOSITION

TYPE	UNIQUE ID	NCR	ENTITY	STANDARD	R...	REGION_...	VIOLATION START DATE	STATUS	TYPE	DUE DATE
Self-Report	2019-00881	NCR99999	Test Entity	CIP-002-5.1a	R1	NPCC-US	01/01/2019	CEA Processing	<a href="#">Compliance Exception Letter</a>	12/13/2019

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### ASSOCIATED NOTIFICATIONS

TYPE	UNIQUE ID	NCR	ENTITY	STANDARD	R...	REGION_...	VIOLATION START DATE	STATUS	TYPE	DUE DATE
Self-Report	2019-00881	NCR99999	Test Entity	CIP-002-5.1a	R1	NPCC-US	01/01/2019	CEA Processing	<a href="#">Compliance Exception Letter</a>	12/13/2019

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Home
Mitigation Management ▾
Align For Entities ▾

My Draft Mitigations
My Active Mitigations
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**MY MITIGATING ACTIVITIES AND MITIGATION PLANS**

TYPE	UNIQUE ID	REGION OR LRE	REGISTRATION	DATE SUBMITTED	STANDARD	REQ	REGION AND JURISDICTION	START DATE	STATUS
Mitigating Activities	2019-00858	WECC	NCR99999 Test Entity	11/27/2019	CIP-010-2	R1	WECC-US	11/01/2019	Active
Mitigating Activities	2019-00859	WECC	NCR99999 Test Entity	11/27/2019	CIP-010-2	R4	WECC-US	11/01/2019	Active
Mitigation Plan	2019-00877	WECC	NCR99999 Test Entity	12/03/2019	CIP-005-5	R2	WECC-US	11/13/2019	Incomplete Returned as Incomplete
Mitigating Activities	2019-00481	WECC	NCR99999 Test Entity	08/07/2019	CIP-002-3(i)b	R2			Active
Mitigating Activities	2019-00678	WECC	NCR99999 Test Entity	09/18/2019	EOP-004-4	R1	WECC-US	05/10/2018	CEA Processing Due 01/24/2020
Mitigating Activities	2019-00851	WECC	NCR99999 Test Entity	11/26/2019	CIP-002-5-1a	R2	WECC-US		CEA Processing

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**RELATED MILESTONES**

TYPE OF MILESTONE	UNIQUE ID	NAME	DUE DATE	COMPLETION DATE	REQUEST EXTENSION	DUE DATE	ID	COMMENT
Remediating Action	2019-00858 2019-000509	Remediation	11/26/2019	11/26/2019		09/06/2...	19-000060-R 2019-00424 19-000062-R	UAT LS 8/7
Preventative Control	2019-00858 2019-000570	Address Root Cause	12/27/2019		+	09/06/2...	2019-00424 19-000063-R	
						09/06/2...	2019-00481 19-000068-R	Testing - 8/7 - LS
						09/07/2...	2019-00436 19-000091-R	need info
						09/07/2...	2019-00530 19-000062-R	for Scenario 5 RF1001 attached

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# Findings and Enforcement Actions Interface for Registered Entities

Enforcement Processing
Align For Entities

My Findings
Andy Rodriguez

MONITORING METHOD	UNIQUE ID	REGION OR LRE	DATE SUBMITTED	REGISTRATION	STANDARD	REQ	START DATE	FINDING STATUS	SEND UPDATE	MITIGATION
Self-Report	2019-00552	TXRE	08/08/2019	NCR99999 Test Entity	CIP-002-5.1	R1.		Preliminary Screening	+	Mitigating Activities Draft
Self-Report	2019-00557	TXRE	08/08/2019	NCR99999 Test Entity	CIP-002-3(i)b	R2		PNC Review	+	Mitigating Activities Draft
Self-Report	2019-00726	TXRE	10/07/2019	NCR99999 Test Entity	CIP-002-5.1a	R2		PNC Review	+	Mitigating Activities CEA Processing
Self-Report	2019-00825	TXRE	10/30/2019	NCR99999 Test Entity	BAL-001-TRE-1	R6.	06/06/2019	Enforcement Processing	+	Mitigating Activities Draft
Audit	2019-00827	TXRE	10/31/2019	NCR99999 Test Entity	BAL-001-TRE-1	R9.	10/01/2019	Preliminary Screening	+	Mitigating Activities Draft
Audit	2019-00580	SERC	08/16/2019	NCR99999 Test Entity	CIP-002-5.1a	R2.	08/14/2018	Preliminary Screening	+	Mitigating Activities Draft
Self-Report	2019-00490	WECC	08/07/2019	NCR99999 Test Entity	CIP-007-6	R2.	07/01/2019	Enforcement Processing	+	Mitigating Activities Active
Self-Report	2019-00448	WECC	08/07/2019	NCR99999 Test Entity	CIP-004-6	R4.	07/04/2019	Enforcement Processing	+	Mitigating Activities Complete
Self-Report	2019-00464	WECC	08/07/2019	NCR99999 Test Entity	CIP-004-6	R4.	07/01/2019	Enforcement Processing	+	Mitigation Plan Complete
Self-Report	2019-00510	WECC	08/07/2019	NCR99999 Test Entity	VAR-001-4.2	E.A.15.	07/02/2019	PNC Review	+	Mitigating Activities Active

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**INSTRUCTIONS**

This is your Findings dashboard. From here, you can see the status of all the potential noncompliances associated with your Registration(s). You can view those findings, and you can send a Finding Update to provide your Region with more information. You can also access your Mitigation from this screen. A summary of the process a Finding goes through is shown on the right.

```

graph LR
    Finding --> Preliminary_Screening[Preliminary Screening]
    Preliminary_Screening --> Failed_Screen[Failed Screen]
    Preliminary_Screening --> PNC_Review[PNC Review]
    PNC_Review --> RFIs[RFIs]
    RFIs --> PNC_Review
    PNC_Review --> Enforcement_Processing[Enforcement Processing]
    Enforcement_Processing --> Dismissal[Dismissal]
    Enforcement_Processing --> Compliance_Exception[Compliance Exception]
    Enforcement_Processing --> Find_Fix_Track[Find, Fix, Track]
    Enforcement_Processing --> Settlement[Settlement]
    Enforcement_Processing --> Confirmed_Violation[Confirmed Violation]
    Dismissal --> Processing_Complete[Processing Complete]
    Compliance_Exception --> Processing_Complete
    Find_Fix_Track --> Processing_Complete
    Settlement --> Processing_Complete
    Confirmed_Violation --> Processing_Complete
    Processing_Complete --> Closed
    
```

# NERC

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# ERO Enterprise Security Initiatives

Bill Lawrence, Vice President, ERO Enterprise Security Initiatives  
Technology and Security Committee Meeting  
February 5, 2020

RELIABILITY | RESILIENCE | SECURITY



- Support Region external-facing initiatives in cyber and physical security programs and awareness for registered entities, including sharing of best practices and security training
- Work with Stan Hoptroff, NERC CTO, and the Information Technology Security Group (ITSG) to set the “gold standard” of protection for ERO systems and data

- Address cyber and physical security priorities identified in the Reliability Issues Steering Committee (RISC) report with the ERO Enterprise and industry groups, including the North American Transmission Forum and North American Generator Forum
- Provide executive leadership on NERC's EMP efforts and deliver insights on the current state-of-the-art mitigation approaches, including latest scientific reports and literature
- Engage with the RISC, ITSG, and the new Reliability and Security Technical Committee (RSTC) for coordinated ERO Enterprise action on security initiatives

- Strengthen the situation awareness and infrastructure security coordination and activities of NERC and the Regions to respond to a major grid crisis, either an operational event or in a grid security emergency
- Review NERC's Crisis Action Plan for improvements and build an ERO Enterprise CAP, with business continuity considerations
- Design and lead drills of the CAP with the ERO Enterprise, building up to major industry and government exercises



# Questions and Answers