



Texas RE Fall Standards, Security, & Reliability Workshop



November 5, 2025

AGENDA

- Cybersecurity Threat Assessment
- Oil & Natural Gas Industry Coordination
- Texas Legislature Update
- Self-Certification Enhancements
- Modernization of Standards Process and Procedures Task Force
- Supply Chain Risk Management
- Self-Reporting Best Practices
- Artificial Intelligence
- 2026 CMEP IP
- Standards Effective in 2026

To submit questions during the workshop, please visit **slido.com** and enter today's participant code: **TXRE**



Q&A Polls

Type your question

160

Your name (optional)

Send

Welcome & Instructions



Matthew Barbour
Texas RE
Communications & Training Manager



Antitrust Admonition

Because this event brings together market participants who may be viewed as actual or potential competitors, we must be mindful to conduct it in a manner that is consistent with the antitrust and competition laws. Participants should not disclose non-public, proprietary, or competitively sensitive information.

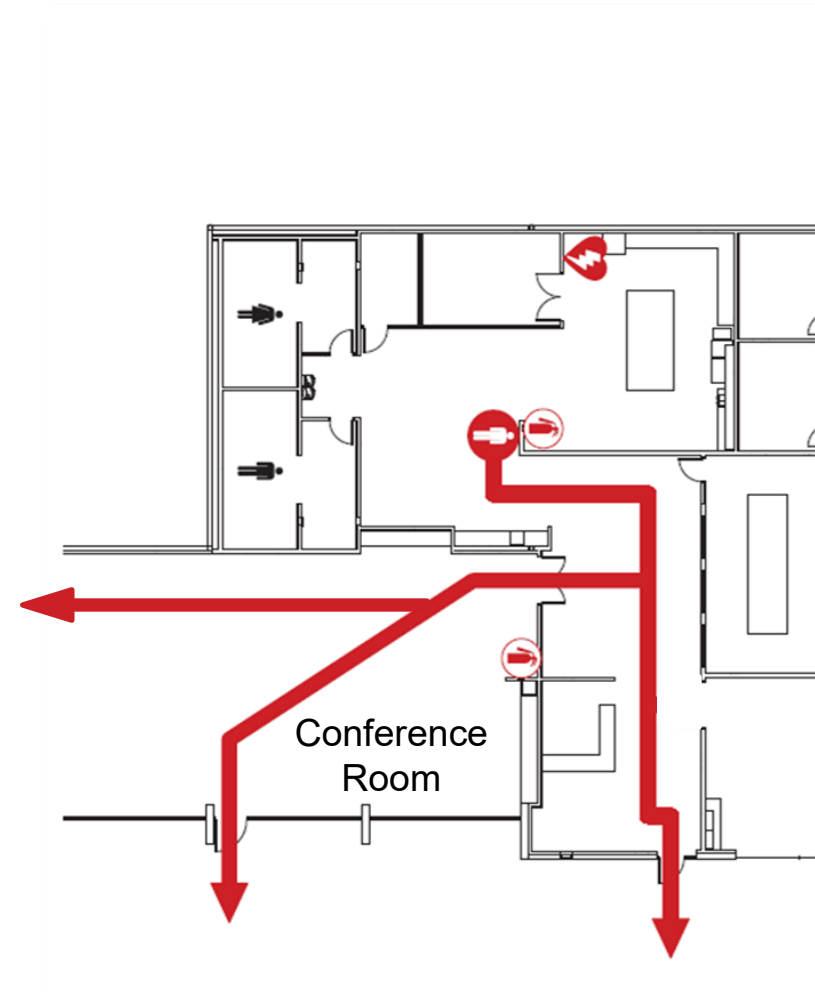
Attendees should exercise independent judgment and avoid even the appearance of discussions of agreements or concerted actions that may be viewed as restraining competition. Any questions on Texas RE's Antitrust Compliance Corporate Policy may be directed to Texas RE's General Counsel.



Safety Moment

**In case of
emergency,
evacuate through
the nearest door**

**Rally point is in
the front parking
lot**



Questions

To submit questions during the workshop, please visit **slido.com** and enter today's participant code: **TXRE**



Q&A

|| Polls

Type your question



160



Your name (optional)

Send



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Training

Texas RE offers training on a variety of compliance- and standards-related topics. Workshops and seminars are announced to subscribers of the Texas RE Information mailing list. To subscribe to our mailing list please visit [Texas RE Mailing Lists](#).

For questions about training, please contact [Texas RE Information](#).

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Workshops

[Women's Leadership in Grid Reliability and Security Conference](#) | [Recording](#)[Understanding New Generator Obligations](#) | [Recording](#)

Fall Standards, Security, and Reliability Workshop

[2025 Fall Standards, Security, and Reliability Workshop](#)

Spring Standards, Security, and Reliability Workshop

[2025 Spring Standards, Security, and Reliability Workshop](#) | [Recording](#)

Cyber and Physical Security Workshop

[2024 Cyber and Physical Security Workshop](#) | [Keynote](#) | Panels: [Critical Infrastructure](#), [Threat Assessment](#), [Grid Technologies](#), [Security Posture](#)

Evolving Grid Workshop

[2025 Evolving Grid Workshop](#) | [Keynote: Jim Robb](#) | [Keynote: Michael Webber](#)
Panels: [Large Loads](#), [Integrating Emerging Technologies](#), [Expanding Security Challenges](#), [Transmission Planning](#)

Winter Weatherization Workshop

[Winter Weatherization Workshop](#) | [Recording](#)

Reliability 101 & 201



MCLE Credit

This workshop is accredited for 5 Minimum Continuing Legal Education (MCLE hours). To receive credit you may either:

☐ **Self-report the MCLE course number**

■ 174300383

OR

☐ **Email Information@texasre.org your attendee information**

- Name
- Bar Card Number
- Hours Attended



Upcoming Texas RE Events



talk with
TEXASRE

November 13, 2025

TPL-008



talk with
TEXASRE

December 2, 2025

Securing Together:
ISAC and Industry
Collaboration for
National Resilience



December 10, 2025

Q4 MRC, AGR&F, and
Board Meetings &
Annual Membership
Meeting

Social Media



[/texas-reliability-entity-inc](#)



[@Texas_RE_Inc](#)



[/TexasReliabilityEntity](#)



Executive Welcome



Joseph Younger

Texas RE

Vice President & Chief Operating Officer





Safeguarding Civilization

A large teal graphic on the left side of the slide, consisting of several overlapping triangles and polygons of varying shades of teal, creating a dynamic, abstract shape.

Texas RE: General Threat Landscape

TLP:AMBER

Introduction

- Scott Bear II, Dragos Principal Threat Intelligence Analyst
- US Air Force Veteran
 - Initially 1N3x1, but Pashto is hard
 - 3D1x2 Cyber Transport – routers, switches, SONET, ISDN
 - 1B4x1 Cyber Warfare – interactive ops, election def. ops, host forensics
- 1~ year at Crowdstrike
 - SOC work isn't for this guy
- 3.5 years at Dragos supporting/facilitating info sharing for NA grid

TLP:AMBER

Introduction

- Education
 - A.S. in IT (YTI), A.S. Electronics Engineering (CCAF), A.S. Cybersecurity (CCAF)
 - B.S. in Cybersecurity (WGU)
 - *WiP*: B.A. in Philosophy (UTSA)
- Certifications
 - SANS GCFA
 - CompTIA A+/Net+/Linux+/Sec+
 - EC-Council Certified Encryption Specialist
 - ETA Fiber Optic Installer
 - SSCP
 - Something I'm sure I've forgotten



Overview

- DER/Microgrid landscape
- Geopolitics and OT
 - Russia-Ukraine and cascading effects
 - China and long-term strategies
 - Shift in hacktivism severity
 - Persistent engagement
- Domestic issues
 - Renewables and politics

TLP:AMBER



Distributed Energy Resources (DER)

Key Findings from Dragos DER Threat Perspective

- Reconnaissance takes little/no effort
- DoS are simple and can have cascading effects
- MitM & Packet Replay: moderate competence with significant impact
- Firmware Mod: difficult, effects range from annoying to severe
- Device-level attacks are disruptive and/or destructive
- Attacks on clusters: disruptive, expensive, dangerous

TLP:AMBER



Notable Events Impacting DER/Microgrids

- 2019: Utah-based solar/wind generation
 - Incidental, likely common scanners that found Cisco firewall vulns
- 2022: German wind generation control/management disruption
 - Incidental, sloppy targeting resulting in AcidRain malware (KAMACITE)
- 2024: SolarView used to conduct unauthorized bank transfers
 - Targeted, Chinese hacktivism relto Japan

TLP:AMBER



Geopolitical Impacts: Russia's Invasion of Ukraine

- Of the existing ICS malware, most came from Russia attacking Ukraine (and one in retaliation)
- TTPs for civilian impact being rewritten
 - Attacks on grid operations (Industroyer, BlackEnergy, Industroyer2)
 - Attacks on civilian infrastructure (FrostyGoop)
- Shift in priority targeting
 - As Russian gas imports are banned, US exports fill gaps

TLP:AMBER



Geopolitical Impacts: China & Long-Term Strategies

- Persistence in infrastructure globally
 - Enumeration, monitoring
 - Exfiltration
- VOLTZITE, SYLVANITE
 - SYLVANITE: opportunistic exploits, initial access broker
 - VOLTZITE: actions on objectives
- Significant investment in Global South, especially LATAM
 - Huawei dominates 5G infrastructure
 - China provides massive lines of credit for infrastructure
 - Most LATAM nations have switched stance on Taiwan

TLP:AMBER



Geopolitical Impacts: Shifts in Hacktivism

- Used to be annoying, but not serious
 - DoS or directory walk against a public website
- Multiple groups have gone from persona to named threat group
 - BAUXITE (CyberAv3ngers)
 - TAT25-47 (Infrastructure Destruction Squad)
- Host nations ignore or endorse activities
 - Tacit endorsement by strategically aligned governments
 - Sometimes “unofficially” working for intelligence agencies

TLP:AMBER



Geopolitical Impacts: Persistent Engagement

- Everyone's hands are in the cookie jar...are we okay with that?
 - CARR flooded water tanks in Texas
 - BAUXITE compromised Unitronics devices in facility near Pittsburgh
 - VOLTZITE is hiding under every keyboard
- Industry analysts have likened this to modern espionage. I disagree.
 - Operational Preparation of Battlespace (OPB)
 - Intelligence Preparation of Battlespace (IPB)

TLP:AMBER



Domestic Issues: Renewables Policy

- We're losing on renewables
 - Solar panels/inverters overwhelmingly produced in China
 - Increased security concerns across NAICS 2211
- Politicization issues
 - Stopping projects in progress
 - National Labs + "banned words" list



Questions?

intel@dragos.com

Texas RE Fall Standards, Security, & Reliability Workshop

Industry Coordination Activities

November 5, 2025



**NORTH AMERICAN ENERGY
STANDARDS BOARD**

Quick Facts

1994

GISB
Founded

2001

NAESB
Established

29

Years of Standards
Development

4,000+

Standards

American National
Standards Institute
(ANSI) Accreditation

**Oct.
2001**

Mission & Government Coordination

The North American Energy Standards Board serves as an industry forum for the development and promotion of standards to support the wholesale and retail natural gas and electricity markets

Department of
Energy

Federal Energy
Regulatory
Commission

National
Association of
Regulatory Utility
Commissioners

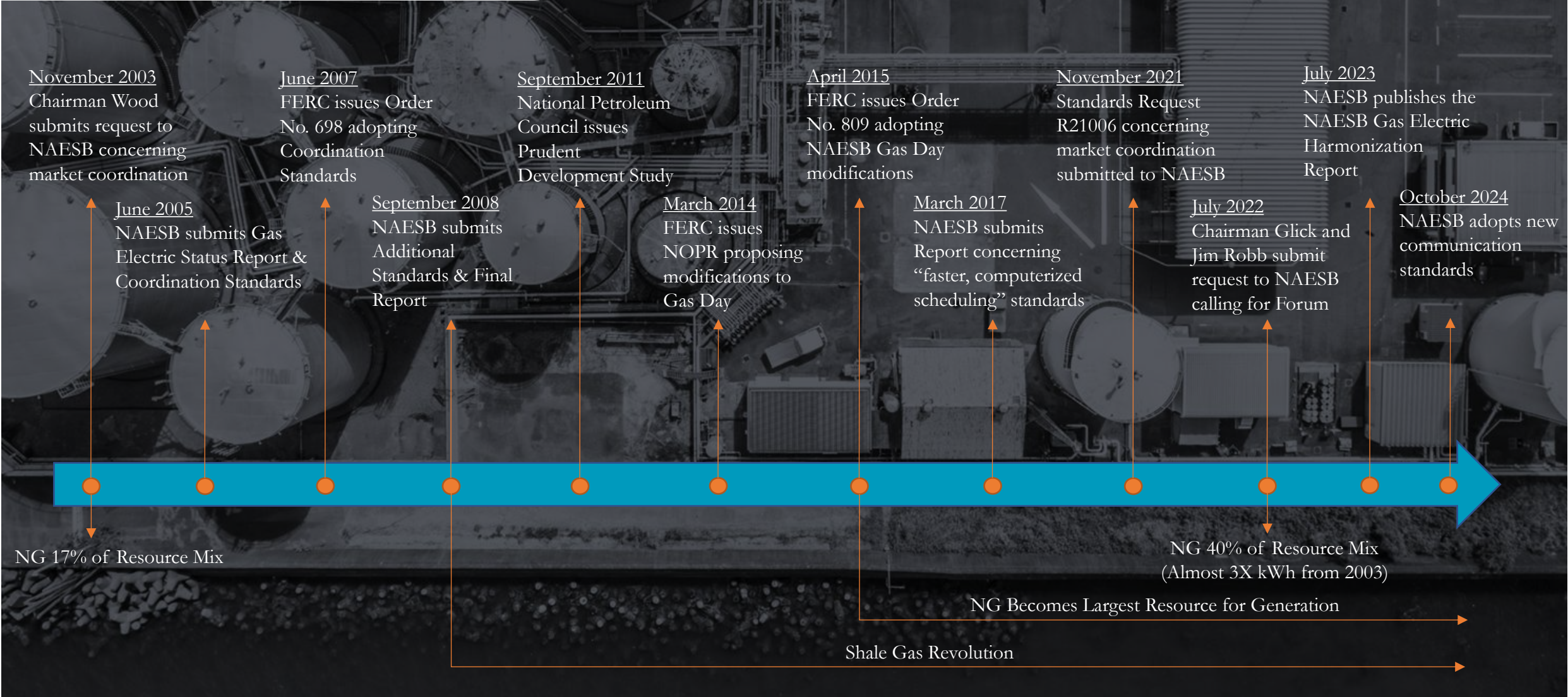
National Institute
of Standards and
Technology

North American
Electric Reliability
Corporation

National
Petroleum
Council

NAESB G-E Coordination

Timeline of Previous Activities



RECENT FERC ACTION NAESB GE Standards

NOPR on NAESB WGQ Standards



NORTH AMERICAN ENERGY
STANDARDS BOARD

193 FERC ¶ 61,041
DEPARTMENT OF ENERGY
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 284

Docket No. RM96-1-044

Standards for Business Practices of Interstate Natural Gas Pipelines

(Issued October 16, 2025)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Federal Energy Regulatory Commission (Commission) proposes to amend its regulations to incorporate by reference certain modifications to the latest version (Version 4.0) of Standards for Business Practices of Interstate Natural Gas Pipelines adopted by the Wholesale Gas Quadrant (WGQ) of the North American Energy Standards Board (NAESB). NAESB's revisions in Version 4.0 of the standards streamline the process for accessing publicly available gas-electric coordination data during extreme cold weather or emergency events.

DATES: Comments are due [60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Comments, identified by docket number, may be filed in the following ways. Electronic filing through <https://www.ferc.gov>, is preferred.

- Electronic Filing: Documents must be filed in acceptable native applications and print-to-PDF, but not in scanned or picture format.

NAESB WGQ Standard No. 4.3.23

New Category: Gas Electric Coordination (when applicable)

NAESB WGQ Standard No. 0.3.z1

New Requirement for Scheduled Quantity Information for Directly Connected Power Plants

- **Examples of Information that Could be Included**

NAESB WGQ Standard No. 5.3.z1

New Information in Critical Notices to include geographic information of impacted areas, locations, or pipeline facilities

FERC NOPR in Docket No. RM96-01-044

October 16, 2025



NORTH AMERICAN ENERGY
STANDARDS BOARD

Concurring Opinion from Commissioner Chang:

...I therefore encourage NAESB and industry stakeholders to continue this work and further enhance such information-sharing standards, potentially including providing information related to the natural gas scheduled by generators that are not directly connected to interstate pipelines.

...In addition to providing feedback on the NAESB standards proposed in this NOPR, I urge stakeholders to provide comments in this proceeding on areas where additional improvements on gas-electric coordination would be valuable, particularly regarding information-sharing along the chain of entities that physically control or have financial rights to natural gas deliveries, starting at the wellhead and ending at generators or the gas local distribution companies.

Industry Activities

Gas-Electric Coordination Through the End of the Year



NORTH AMERICAN ENERGY
STANDARDS BOARD

NARUC Task Force Gas-Electric Alignment for Reliability

MEMORANDUM On the Creation of the Gas-Electric Alignment for Reliability (GEAR)

On November 21, 2023, the NARUC Executive Committee approved a motion to permit NARUC President Julie Federlak, pursuant to Title 1, Section 19 of the Policies and Procedures of the National Association of Regulatory Utility Commissioners,^[1] to establish the Gas-Electric Alignment for Reliability (GEAR) working group and approved the Written Mission Statement/Charter outlined below for GEAR.

Charter/Mission Statement: Gas-Electric Alignment for Reliability (GEAR) is chartered for a period of fifteen (15) months, as of this 21st day of November 2023. GEAR is a working group that will bring together state regulators and industry representatives to develop solutions to better align the gas and electric industries to maintain and improve the reliability of the gas and electric energy systems on which our nation depends for power. GEAR intends to gather regulator and industry stakeholder feedback and recommend solutions to better harmonize communication protocols, operations and planning of the gas and electric systems and markets. Findings from the North American Energy Standards Board Gas-Electric Harmonization Forum, the Reliability Alliance Report developed by NCSA, INCAA and EPSA, and the analyses of Storms Uri and Elliott by the Federal Energy Regulatory Commission and the North American Electric Reliability Corporation, will serve as a starting point for the working group.

Background: Over the last two decades, the U.S. electric and gas industries have undergone significant transformation driven by new technologies, replacement of aging infrastructure, environmental regulations and state and federal policy goals. New technologies for renewable electricity generation combined with the significant increase in natural gas production and correlated decrease in gas prices have transformed the electric industry and increased dependence on gas for electricity generation. As a result, the electric industry is more reliant than ever on the gas industry to fuel electricity generation. However, since the gas industry was largely designed and constructed to deliver gas for home heating and industrial processes, gas infrastructure and markets are misaligned from electric markets. The lack of coordination between these two systems poses serious reliability concerns, as demonstrated during winter storms where dependence on gas in both systems is high. In February 2021, Winter Storm Uri caused numerous outages, derates or failures to start at electric generating plants scattered across the region. The Texas grid operator (Electric Reliability Council of Texas or ERCOT) ordered a total of 20,000 MW of rolling blackouts to prevent grid collapse; this represents the largest manually controlled load shedding event in U.S. history. More than 4.5 million people in Texas lost power – some for as long as four days. Not quite two years later, during Winter Storm Elliott, unprecedented electric generation outages coincided with winter peak electricity and gas demands. As a result, several Balancing Authorities in the Eastern U.S. declared Energy Emergencies to maintain electric grid reliability, ordering firm load shed exceeding 5,000 MW during the extreme cold weather event. Future trends and technologies indicate that gas and electric system interdependence will continue to grow. To support this transition while maintaining reliability and affordability for customers, and encouraging investments and growth in both industries, reforms are needed to address the areas of friction, disconnect and failure.

- Formed November 21, 2023
- Chaired by Commissioner Tricia Pridemore
- 6 State Commissioners
- 7 Industry Representatives
- 3 Recommendations to Date
 - Natural Gas Readiness Forum
 - Pipeline Infrastructure
 - Natural Gas Storage
- Final Report: November 10, 2025

Industry Activities

Gas-Electric Coordination
Through the End of the Year



NORTH AMERICAN ENERGY
STANDARDS BOARD

Natural Gas Readiness Forum Meetings



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[NATURAL GAS](#)[NEWSROOM](#)[RESEARCH & POLICY](#)[FUELING OUR COMMUNITIES](#)



 [EVENTS](#)

Natural Gas Readiness Forum Meeting

NOV 18, 2025 - NOV 19, 2025

 Atlanta, Ga

AGA in collaboration with other energy trade associations is presenting the inaugural Natural Gas Readiness Forum Meeting. This event is a product of the Natural Gas Readiness Forum recommended by the National Association of Regulatory Utility Commissioners (NARUC) Gas-Electric Alignment for Reliability (GEAR) Working Group. Presentations explore various topics related to the reliability of the energy system and how the natural gas system prepares for the high natural gas demand periods. Industry representatives and government will share practices that support winter readiness across the entirety of the U.S. natural gas value chain and critical end

- Initial Meetings Held December 16-17, 2024
- Foster Education, Situational Awareness, & Peer-to-Peer Connections
- Series of Regional Meetings
- Registration Open to Management Level Industry Representatives
- No Media
- Next Meeting: November 18-19, 2025

Industry Activities

Gas-Electric Coordination Through the End of the Year



NPC Study: Gas Electric Coordination



The Secretary of Energy
Washington, DC 20585

June 30, 2025

Mr. Alan Armstrong
Chair
National Petroleum Council
1625 K Street, NW
Washington, DC 20006-1656

Dear Mr. Armstrong:

Many of President Trump's directives, including Executive Order 14156, *Declaring a National Energy Emergency*, Executive Order 14154, *Unleashing American Energy*, and Executive Order 14213, *Establishing the National Energy Dominance Council*, underscore the critical role of domestic energy and natural resources in powering the Nation's economic prosperity and national security. Meeting future energy needs will require ingenuity, innovation, and market-based solutions.

Accordingly, I request that the National Petroleum Council (NPC) undertake a broad *Future Energy Systems* study with subcomponent deliverables designed to recognize and leverage the vast potential of domestic oil and natural gas resources and industry expertise to advance Administration goals for increasing the availability of affordable, reliable, and secure energy for American consumers and our allies. The scope of this study should be developed with key objectives, deliverables, and timelines mutually determined between the NPC and the Department. Please work with Deputy Assistant Secretary Ryan Peay from the Office of Fossil Energy and Carbon Management (FECM) to delineate the preliminary scope and subcomponent deliverables within the next 30 days.

For the initial deliverables within the *Future Energy Systems* study, I am requesting the NPC address two priority topics immediately, with reports delivered to me by December 2025. These topics are crucial to advancing the priorities outlined in President Trump's energy agenda and require prompt and focused attention:

Oil and Natural Gas Infrastructure Permitting. Streamlining and expediting permitting is essential for all parts of the energy value chain and for building infrastructure to meet future energy needs. Re-evaluating and updating the permitting section of the NPC's 2019 Dynamic Delivery study report with practical recommendations based on current legislation and regulations can provide meaningful input to support the effective redesign of government systems and siting of new energy infrastructure. The advice of the NPC on this topic will be particularly helpful in concert with the work of the National Energy Dominance Council. Important also will be insights regarding factors that affect industry's ability to attract and retain private sector investment or rapidly deploy new technologies that increase safety, integrity, or operational efficiency.

- Secretary Wright Requested June 30, 2025
- Broad Future of Energy Systems
 - Oil and Natural Gas Permitting
 - Gas and Electric Coordination
- Expedited Schedule for Subparts
- "The study will fill an important gap and complement ongoing gas electric reliability and coordination initiatives involving industry and/or government by specifically focusing on the energy reliability risk viewed from the perspective of natural gas infrastructure operations and capabilities."
- Expected Adoption December 3, 2025

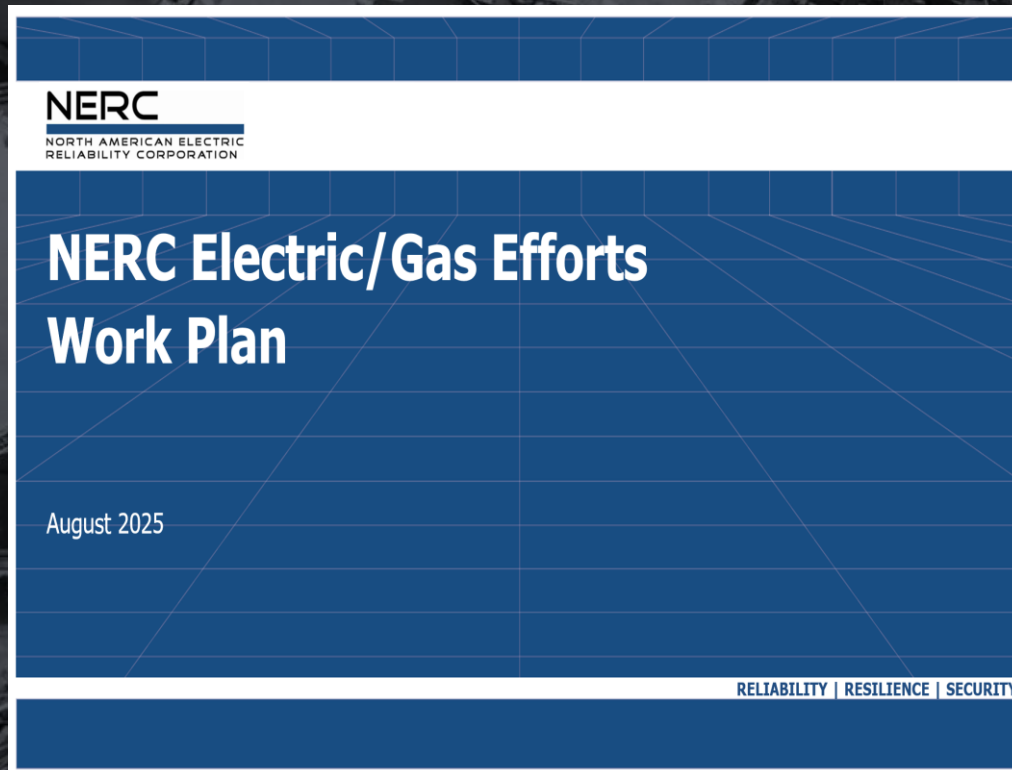
Industry Activities

Gas-Electric Coordination
Through the End of the Year



NORTH AMERICAN ENERGY
STANDARDS BOARD

NERC Activities



- Active Work Plan Underway
 - NERC Driven Initiatives
 - Study-Driven Initiatives
 - Engagement Driven Initiatives
- Future Website to Follow Activities
- Link to Long-Term Planning Energy Assessment Standards that are Under Development

NAESB GE Coordination Activities

What's Next?



NORTH AMERICAN ENERGY
STANDARDS BOARD

2026 WEQ/WGQ/RMQ Annual Plans

- Upon a request or as directed by NAESB Board or a relevant jurisdictional entity, consider developing and/or modifying business practice standards that reflect best practices that will provide stronger operating reliability from production/supply/transport during extreme weather conditions and more clear communications and business processes around force majeure declarations during critical operating periods

NAESB Contact Information

- Website: www.naesb@naesb.org
- Phone – 713-356-0060
- Fax – 713-356-0067
- Email – naesb@naesb.org



NORTH AMERICAN ENERGY
STANDARDS BOARD

Texas Legislature Update

Presented by: Jessie Horn



89TH LEGISLATURE – REGULAR SESSION



Regular session ended June 2, 2025



1,155 bills signed by Governor Abbott before the end of the veto period on June 22, 2025



Senate Bill 6 was signed into law by Governor Abbott on June 20, 2025, and took effect immediately



SENATE BILL 6

Focuses on four main objectives:

- (1) ensuring transmission costs are properly allocated,
- (2) establishing grid reliability protection measures,
- (3) increasing transparency and credibility to load forecasting, and
- (4) protecting residential customers from outages by requiring large loads to share the load shed obligation during times of shortage.



SENATE BILL 6 IMPLEMENTATION - ROADMAP

Project No.	Project Style	Scoping	PFP	RAO
58479	Rulemaking for Net Metering Arrangements Involving a Large Load Co-Located with an Existing Generation Resource Under PURA §39.169	6/2025 to 8/2025	9/2025	3/2026
58480	Rulemaking to Establish Large Load Forecasting Criteria Under PURA §37.0561	6/2025 to 8/2025	9/2025	3/2026
58481	Rulemaking to Implement Large Load Interconnection Standards Under PURA §37.0561	6/2025 to 12/2025	1/2026	7/2026
58482	Rulemaking to Develop a Reliability Service to Competitively Procure Demand Reductions from Large Loads Under PURA §39.170	6/2025 to 1/2026	2/2026	8/2026
58484	Evaluation of Transmission Cost Recovery	6/2025 to 3/2026	6/2026	12/2026



PURA §39.169

Co-Location of
Large Load
Customer with
Existing
Generation
Resource

PROJECT NO. 58479, RULEMAKING FOR NET
METERING ARRANGEMENTS INVOLVING A
LARGE LOAD CO-LOCATED WITH AN EXISTING
GENERATION RESOURCE UNDER PURA §39.169



Proposal for Publication approved at the September 18
open meeting



Initial comments were due October 17



Reply comments were due October 31



Recommended Adoption Order by March 2026



PURA §37.0561(m)

The commission must establish criteria by which ERCOT includes forecasted large load of any peak demand in the organization's transmission planning and resource adequacy models and reports

PROJECT NO. 58480, RULEMAKING TO ESTABLISH LARGE LOAD FORECASTING CRITERIA UNDER PURA §37.0561



Proposal for Publication approved at the September 18 open meeting



Initial comments were due October 17



Reply comments were due October 31



Recommended Adoption Order by March 2026

PURA §37.0561

PROJECT NO. 58481, RULEMAKING TO IMPLEMENT LARGE LOAD INTERCONNECTION STANDARDS UNDER PURA §37.0561

Planning for Interconnection of Large Loads



Proposal for Publication is anticipated in January



Initial comments will be due approximately 4 weeks later



Reply comments will be due approximately 2 weeks after initial comments



Recommended Adoption Order by July 2026



SENATE BILL 6 §6

PROJECT NO. 58484, EVALUATION OF TRANSMISSION COST RECOVERY



The commission must evaluate whether the current 4 Coincident Peak (CP) methodology used to calculate wholesale transmission rates ensures that all loads appropriately contribute to the recovery of an electric cooperative, electric utility, or municipally owned utility's costs to provide access to the transmission system



Report with analysis, findings, and recommendations for the Commission's consideration anticipated in Spring 2026



Based on feedback from the Commission, the necessary rulemakings will be initiated in June of 2026



PURA §39.170(b)

Large Load Demand Management Service

PROJECT NO. 58482, RULEMAKING TO DEVELOP A RELIABILITY SERVICE TO COMPETITIVELY PROCURE DEMAND REDUCTIONS FROM LARGE LOADS UNDER §39.170



Proposal for Publication is anticipated in February



Initial comments will be due approximately 4 weeks later



Reply comments will be due approximately 2 weeks after initial comments



Recommended Adoption Order by August 2026



MORE FROM THE 89TH



HB 14 – Requires a study identifying state regulatory functions related to nuclear energy generation facilities in Texas.



HB 144 - Requires electric cooperatives, electric utilities, and municipally owned utilities that distribute electricity to the public to submit and annually update a distribution pole management and inspection plan to the PUCT.



HB 912 - Adds requirements to the approval process for determining a method of compensation for owners of distributed renewable generation in certain areas outside of ERCOT.



HB 1584 - Requires electric utilities to create and maintain a list of priority facilities in their service areas. Utilities must create a mechanism on their website that allows for a facility to request to be added to the list.



HB 5247 - Relating to alternative capital recovery process for certain utilities.



HB 5323 - Creates the Texas Energy Waste Advisory Committee to coordinate and improve upon existing state programs that reduce energy waste and increase energy efficiency.



SB 75 - Creates the Texas Grid Security Commission under the direction of TDEM to evaluate hazards to the ERCOT grid and vulnerabilities of essential service systems for municipalities.



SB 231 - Establishes new requirements for the procurement of Temporary Emergency Electric Energy Facilities (mobile generation). (Project No. 58392)



SB 1697 - Requires the PUCT to develop a customer guide to home solar energy devices and make it available to the public.



SB 1789 - Establishes minimum standards for the design, construction and replacement of electric poles owned by electric utilities, municipally owned utilities, and electric cooperatives.



SB 1856 - Relating to a capacity cost recovery rider for certain electric utilities.



SB 2662 - Relating to the PUCT's enforcement of drought contingency plans submitted by water and sewer utilities.

ADDITIONAL RELIABILITY INITIATIVES UNDERWAY OR RECENTLY COMPLETED



Firming. Requires an owner or operator to demonstrate the ability to operate or be available to operate when called on for dispatch at or above the seasonal average generation capability during times of highest reliability risk due to low operation reserves. (Project No. 58198)



Transmission & Distribution Wildfire Mitigation. Requires electric utilities, municipally owned utilities, and electric cooperatives that own transmission or distribution facilities in a wildfire risk area of this state to file and gain commission approval of a wildfire mitigation plan. (Project No. 56789)



Firm Fuel Supply Service. Codifies the program used to procure resources that have firm fuel arrangements and can be deployed during extreme cold weather. (Project No. 58434)



Exemption Process for ERCOT Technical Standards. Establishes requirements for ERCOT's evaluation of exemption or extension requests to certain reliability requirements and modifies the process at the Commission for contesting ERCOT decisions on exemption and extension requests (Project No. 57374)



OTHER RULEMAKINGS IN PROGRESS



Small Fish. Review of §25.504 – Wholesale Market Power in the ERCOT Region. (Project No. 58379)



Directives. Framework for a commissioner to introduce and the Commission to adopt a directive requiring ERCOT to take an official action. (Project No. 57883)



Emergency Operations Plans. Requires entities with Emergency Operations Plans (EOPs) to file flood annexes for transmission and distribution facilities and generation resources, file annexes in their entirety, and comprehensively re-file their EOPs every three years. (Project No. 57928)



Thank You!

CONTACT

- Jessie Horn
- jessie.horn@puc.texas.gov

PUC.TEXAS.GOV





Texas RE Fall Standards, Security, & Reliability Workshop



Return at 10:55 a.m.

AGENDA

- Cybersecurity Threat Assessment
- Oil & Natural Gas Industry Coordination
- Texas Legislature Update
- Self-Certification Enhancements
- Modernization of Standards Process and Procedures Task Force
- Supply Chain Risk Management
- Self-Reporting Best Practices
- Artificial Intelligence
- 2026 CMEP IP
- Standards Effective in 2026

To submit questions during the workshop, please visit **slido.com** and enter today's participant code: **TXRE**



Q&A Polls

Type your question 😊

160

👤 Your name (optional) Send



Self-Certification Enhancements

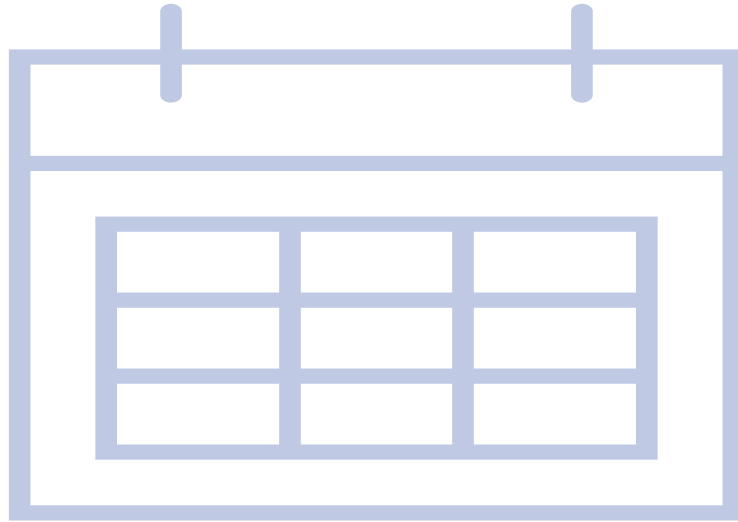
Blair Giffin
Manager, O&P Compliance Monitoring

Devin Ferris
Manager, CIP Compliance Monitoring

Process Workflow



Focused Question Strategy



**Request for Information
Schedule**

Traditional

Round 1

Round 2

Round 3

Round 4

Round 5

Enhanced

Round 1



Streamlined Risk Notification



Risk Notification

- Reduced time and resource burden
- Supports enhanced question strategy
- Transparent



Engagement Scope



Applicable Functions



Monitoring Period



Engagement Team Lead (ETL) Contact Information

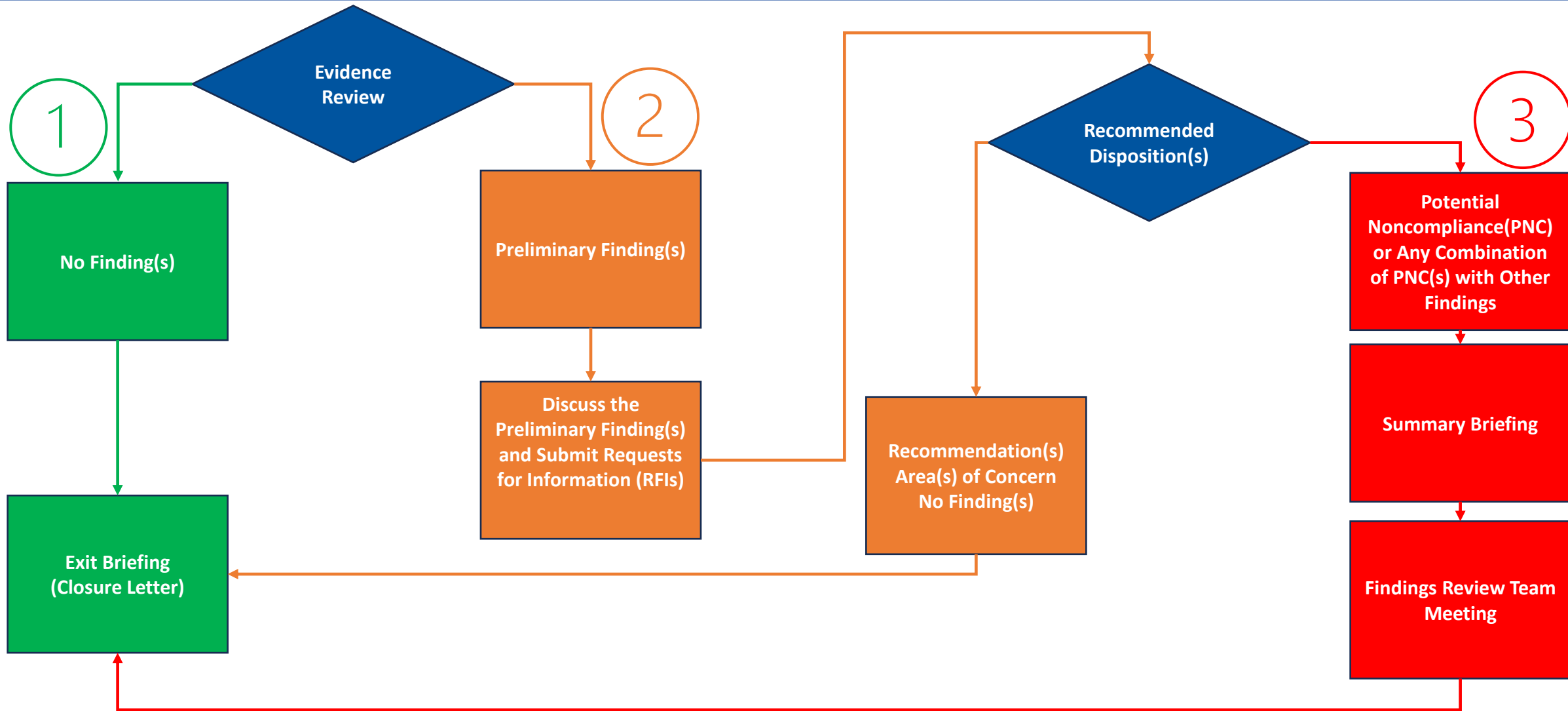


Risk Lead Contact Information



Align Visibility Date

Process Workflow Diagram



EOP-012 Question Strategy Example

R4 – Generator Cold weather plan(s) training



Dated Plan



Extreme Cold
Weather Temperature
(ECWT) Calculations



Checklists



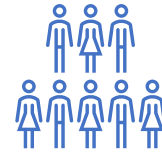
Work Orders



Internal Controls

EOP-012 Question Strategy Example Continued

R5 – Generator Owner cold weather preparedness plan



Responsible
Personnel



Dated Training



Training
Materials



Internal
Controls

Where to Locate the Engagement Common Questions



<https://www.texasre.org/compliance>

Entity Resources ▼

Texas RE has developed guidance and reference documents to help entities prepare for compliance engagements and complete data request forms. Below are links to the guidance and reference documents. Additional documents associated with specific compliance activities are included in the corresponding sections below.

Texas RE encourages registered entities to review the [Engagement \(CIP and O&P\) Common Questions](#). These questions provide insight on how Texas RE may approach a registered entity and are based on past experience monitoring the NERC Reliability Standards. The questions include internal control questions, which are critically important in understanding how a registered entity manages risk.

The [Protection System Operations and Misoperations Procedure and Form](#) reflects best practices that Texas RE has experienced reviewing PRC-004. The document provides a clear path for roles and responsibilities when determining what has occurred during an event and what should be done to support reliable operations. Some of the actions described reflect mitigation efforts noted as a result of compliance monitoring. With any best practice the outcome depends upon the personnel executing the actions and utilizing this form; the process *does not* guarantee compliance. This is simply being provided for registered entities who may not have a clearly documented process or want to compare their inhouse solution.

The [Generator Welcome Package](#) was designed to provide Generator Owner(s) (GO) and Generator Operator(s) (GOP) a framework to aid in preparing for compliance obligations and expectations. The Generator Welcome Package was developed based on Texas RE experiences with new GOs and GOPs and does not guarantee that compliance will be achieved. However, with proper planning and a framework for assessing the state of compliance, an entity is better prepared to be compliant on its registration date and beyond.

Documents



Process Improvements



Reduced time and resource burden



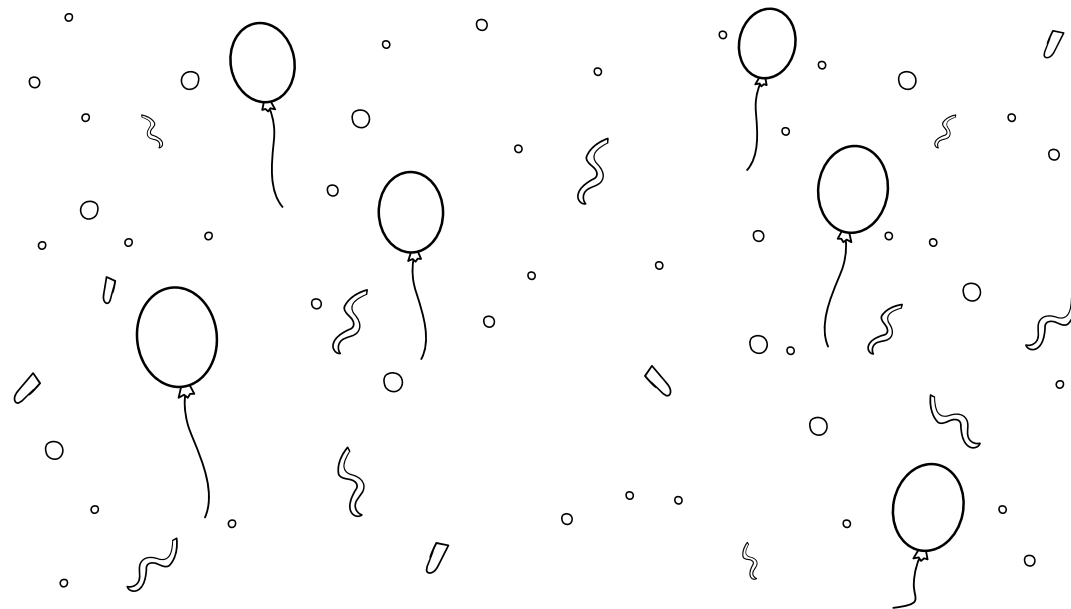
Streamlined process for initial evidence requests



Simplified process for engagement results



Increased Transparency



The background of the slide features a blurred image of the Texas state flag on the left and a close-up of a wind turbine's hub and blades on the right, set against a clear blue sky.

Questions?



TEXAS RE

Ensuring electric reliability for Texans

Modernization of Standards Processes and Procedures (MSPP) Task Force

Brett Kruse
Texas RE's Fall Standards, Security, & Reliability Workshop
November 5, 2025

Guiding Principles

Transform and Modernize the Process

Re-envision a modernized standard development process to address evolving risks.

Create Efficiencies

Identify areas of opportunity and recommendations to save time and remove redundant steps in the current process.

Develop a Trusted Process

Provide clear opportunities for stakeholder input, due process, openness, and balance of interests, remaining consistent with the requirements in Section 215 of the Federal Power Act.

Major Events Timeline (July through October)

July



White paper with
potential
improvement
opportunities
posted for
comment

August



Q&A webinar
sessions for each
of the Process
Steps

Stakeholder
engagement and
outreach

September



Stakeholder
feedback
analyzed

Draft
recommendations
developed

October



Draft
recommendations
posted for
comment

Standard Initiation Drivers for Change

DRIVING CHANGE

MSPPTF RECOMMENDATION



Standard Authorization Request submission process is unclear

Regularly scheduled submission period; single point of entry; simplified submission form



Prioritization and vetting is inconsistent

Established criteria and/or a risk model for consistent review and prioritization; RSTC conducts all technical vetting twice per year



Lack of focus on building early stakeholder support

New and early opportunities for upfront engagement and consensus building



Process for initiating a standard is inefficient

Streamlined, consistent, and structured process with early consensus building; anticipated to be completed in four to six months

Standard Drafting Drivers for Change

DRIVING CHANGE

MSPPTF RECOMMENDATION



Time consuming and requires considerable stakeholder resources

Dedicated Stakeholder SME Panel provides expertise; discontinue requirements for authorizing administrative actions



Repeated comment and ballot periods

Earlier stakeholder feedback with straw polls to gain consensus and minimize need for several comment periods; bifurcation of commenting and balloting



Roles and responsibilities are not always clear

Defined roles for the various bodies involved in the drafting process (RISC subcommittee, NERC, Stakeholder SME Panel, Project Team, etc.)

Standard Balloting Drivers for Change

DRIVING CHANGE

MSPPTF RECOMMENDATION



Conflicting votes and impact on process equity

Allow one voter to represent multiple segments



Insufficient accountability for ballot positions

Attestation or certification that balloting position is supported by voter's company being considered



Impediments to participate in the ballot body

Remove requirement for one-time ballot pool sign-up; Registered Ballot Body members automatically eligible to cast a ballot by participating in a comment period



Burdensome and time-consuming process resulting in "no" votes

More opportunities for industry engagement to drive consensus prior to balloting; balloting used as a tool to measure consensus



Lack of broad industry participation

Refine segments; more flexible voting rules; increased outreach



Standard Initiation

Semi-annual review and prioritization process leverages RSTC for all technical vetting

New RISC subcommittee determines path forward and develops term sheets based on enhanced stakeholder input mechanisms



Standard Drafting

RISC subcommittee coordinates drafting standards leveraging a new Stakeholder SME Panel and NERC staff

Enhanced public comment process drives consensus



Balloting

Individual entity balloting process to confirm consensus

Refined Registered Ballot Body composition and voting rules

Key Roles



RSTC

Centralized review of
all Standard
Authorization
Requests

Provides initial
technical vetting and
prioritization



RISC

Oversight of RISC
Subcommittee

Ultimate approval of
path forward for SIRs
(based on RISC
subcommittee
determination)

Visibility and
accountability



RISC Subcommittee

High-level, strategic
oversight and
management of
standard development
process

Includes subset of
RSTC and RISC
members and other
selected subject
matter experts



Stakeholder SME Panel

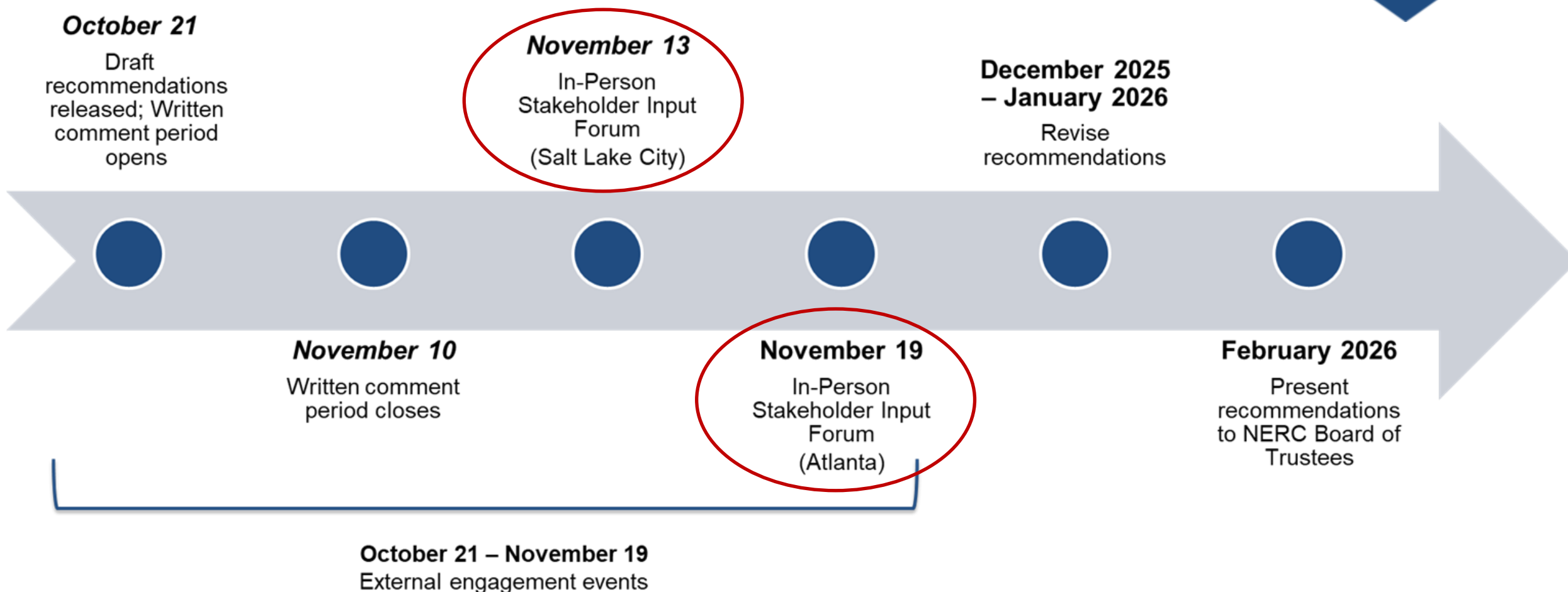
Dedicated technical
bench of experts that
could be called upon
to make up project
teams to advise and
assist with standard
development projects



Project Teams

Formed with a subset
from the Stakeholder
SME Panel when
needed to advise and
assist on a specific
standard project

Next Steps



Registration information for the forums can be found on the [MSPP webpage](#) and [NERC calendar](#)



Questions and Answers

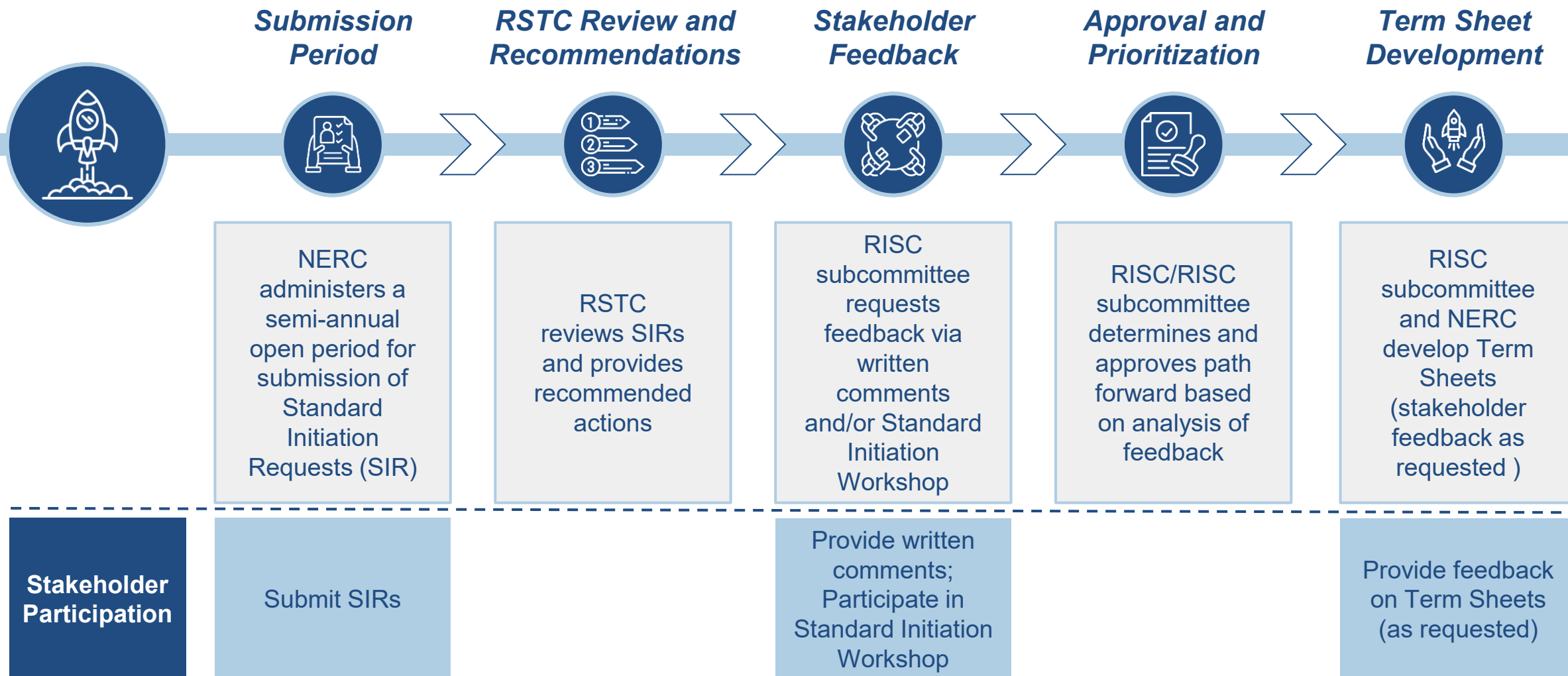
Visit [MSPPTF Webpage](#) for resources

Questions?

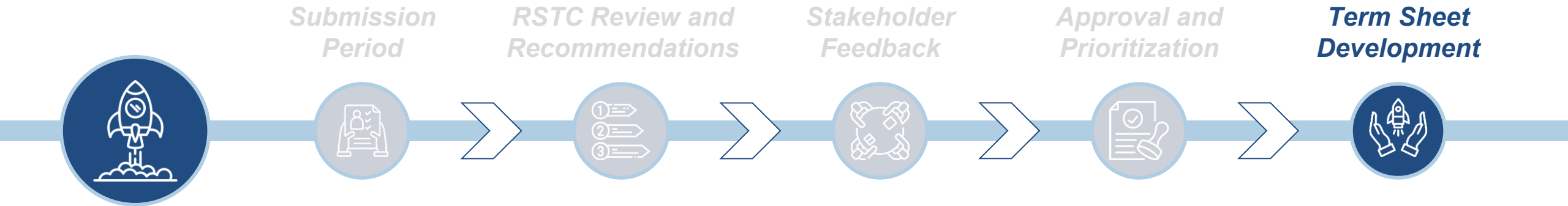
Email mspp@nerc.net

Appendix

Standard Initiation Process Overview



"Fast Track" Process



What	When	How
Expedited track for regulatory directives or urgent NERC Board initiatives	Following issuance of a FERC or NERC Board directive to develop a standard	Begin with Term Sheet development, bypassing general intake and review process (with stakeholder feedback as appropriate)

RISC Subcommittee



Creation (Why)

Leverage stakeholder expertise and the existing structure and strategic role of the RISC without overburdening the RSTC



Role (What)

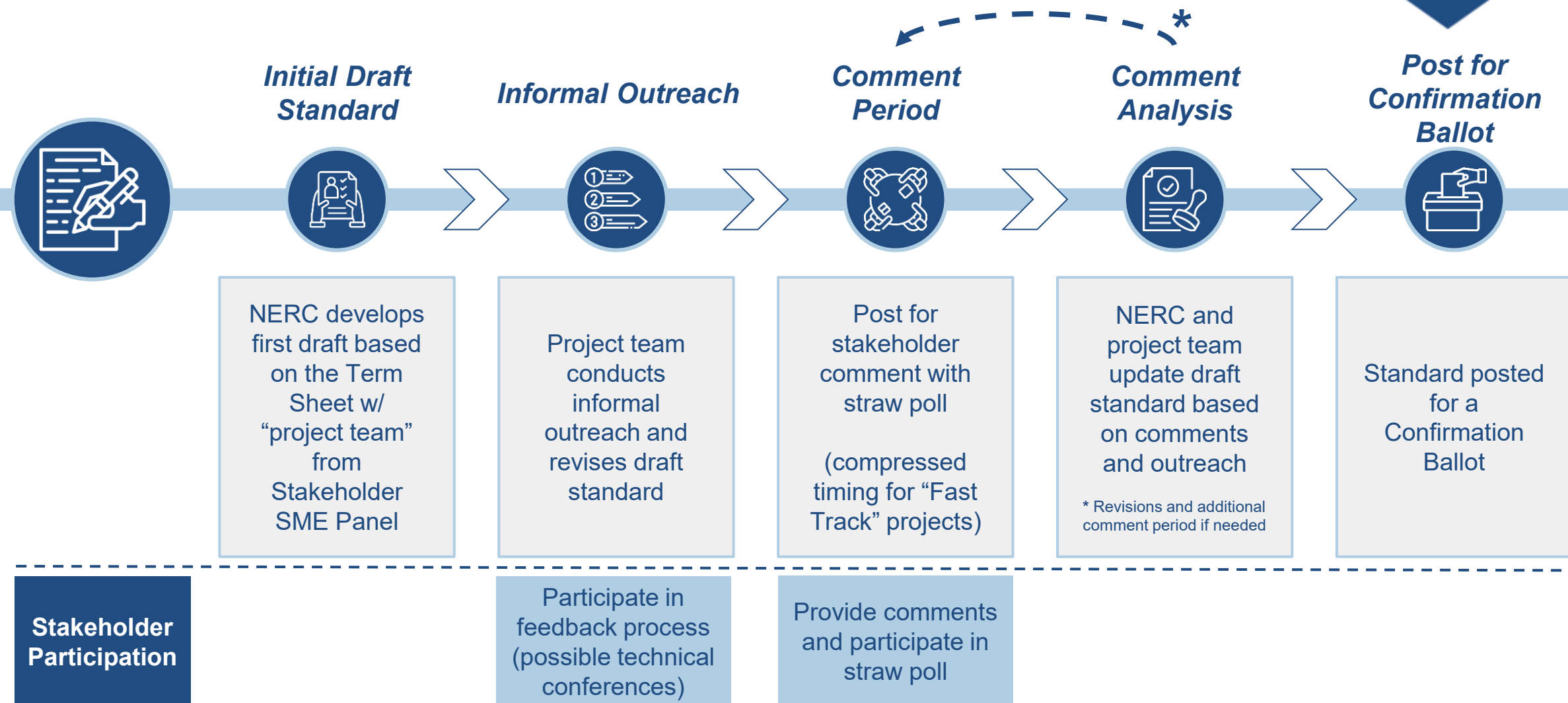
Provide high level, strategic oversight and management of standard initiation and standard drafting process



Composition (Who)

RISC members, RSTC members, and other individuals with appropriate expertise

Standard Drafting Process Overview



Stakeholder SME Panel



Creation (Why)

Dedicated technical bench to
provide expertise limits burden
on stakeholders



Role (What)

Advise and assist with standard
development projects



Composition (Who)

Experts in operations, near and
long-term planning, protection
and control settings,
generation, personnel training,
critical infrastructure risks, and
new and emerging risks

Standard Balloting Process Overview



Confirmation Ballot



Entities cast
their ballots
during the
posting period

(Compressed
period for “Fast
Track”)

Ballot Approval



Ballot confirms
stakeholder
consensus;
project team can
make non-
substantial
edits, if needed

Board Adoption



Standard
presented to
NERC Board for
adoption

Stakeholder Participation

Cast ballot
(must be in RBB
and have
participated in a
comment period)

Confirmation Ballot Does Not Pass

If the confirmation ballot does not pass, the project team shall review the ballot and present recommendations to the RISC Subcommittee, which will choose one of the following actions:



Option 1

Revise the standard and post
for extraordinary ballot



Option 2

Determine alternative action
(e.g., refer back to RSTC,
alternative term sheet, Section
321/322)



Option 3

End work on the standard

1

**Relax Ballot Pool
Rules**

RBB members
automatically eligible
to cast a ballot by
participating in a
comment period

2

**Ease Participation
Burdens**

One voter could
represent multiple
segments, rather than
requiring a distinct
voter for each
segment

3

**Flexibility for Voting
Representatives**

Corporate entities
would be allowed to
replace ballot body
voters at their
discretion

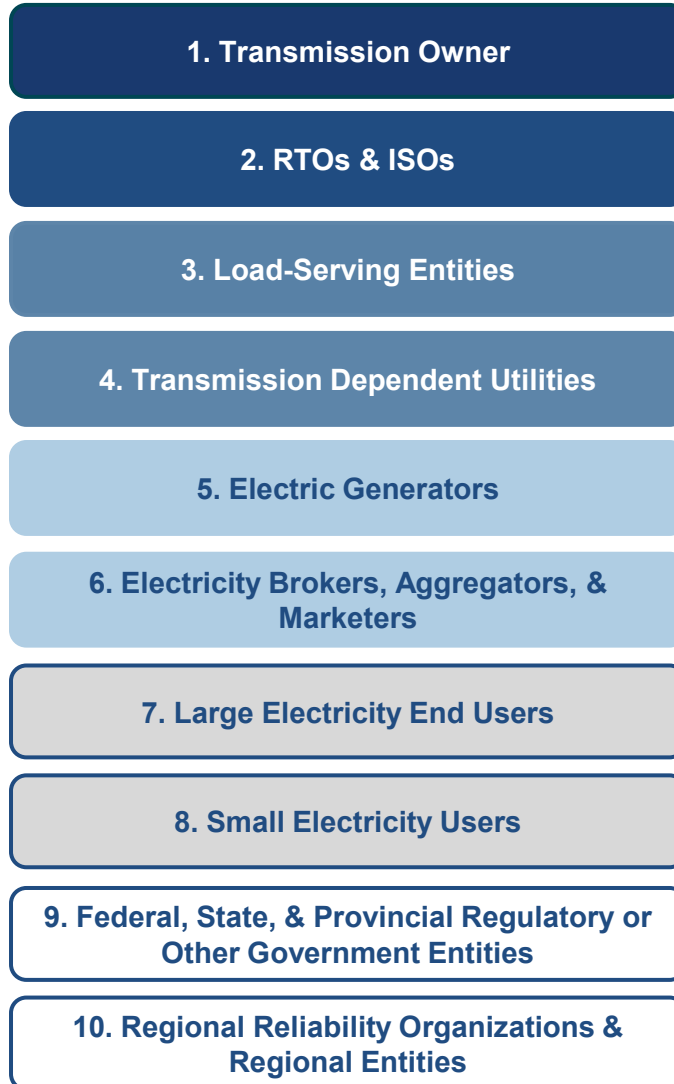
4

Voter/Entity Alignment

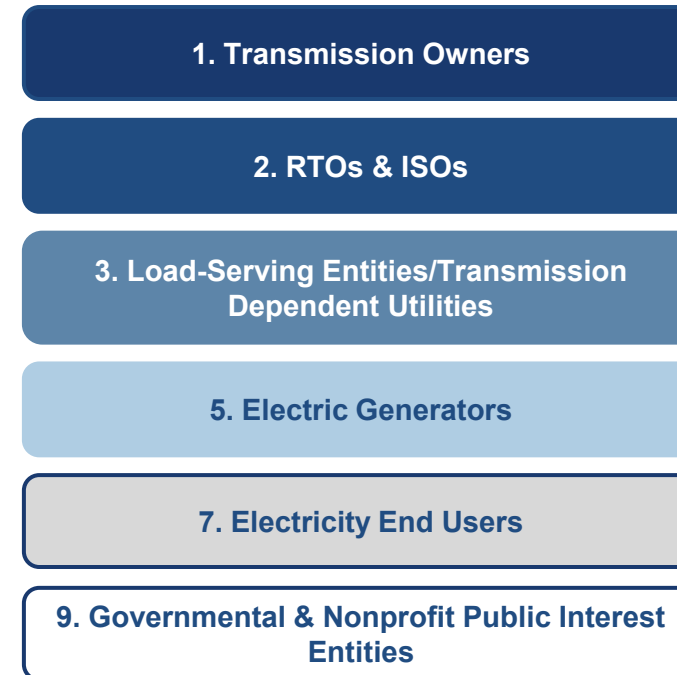
Considering requiring
attestation/certification
that balloting position
is supported by the
voter's company

Registered Ballot Body Structure Current vs. Recommendation

CURRENT RBB STRUCTURE



RECOMMENDED RBB STRUCTURE



Fall Engagement Dates

Date	Event	Event Time
October 21	Public Comment Period Opens	
October 29	SERC 2025 Fall Reliability and Security Seminar	4:00 – 4:30 pm ET
October 30	MRO MSPPTF Webinar	9:00 – 10:00 am CT
November 5	Texas RE 2025 Fall Standards, Security, and Reliability Workshop	12:25 – 12:55 pm ET
November 6	NPCC Fall 2025 Hybrid Compliance and Reliability Conference	11:25 – 11:55 pm ET
November 10	Member Representatives Committee (MRC) Virtual Meeting and Informational Session	1:00 – 3:00 pm ET
November 10	Public Comment Period Closes	

MSPPTF Stakeholder Input Forums

Salt Lake City, UT

November 13th
10:00 am – 2:00 pm MT
WECC Offices

Atlanta, GA

November 19th
10:00 am – 2:00 pm ET
Southern Company Offices

Registration information can be found on the [MSPP webpage](#) and [NERC calendar](#)



Cybersecurity – Supply Chain Risk Management

CIP-013-2 R1 & R2

Rebekah Barber

CIP Physical & Cyber Security Analyst

Kerrick Rosemond Jr.

CIP Physical & Cyber Security Analyst

Agenda



Why CIP-013?



CIP-013-2 Requirements 1 & 2



Internal Controls



Resources



ERO Enterprise Risk Element

CIP-013-2 R1 R2 Cyber Security-Supply Chain Risk Management

Rationale	Standard	REQ	Entities for Attention
Mitigate risks to the reliable operation of the Bulk Electric System (BES) by implementing sound Supply Chain policies and procedures.	CIP-013-2	R1 R2	Balancing Authority Distribution Provider Generator Operator Generator Owner Reliability Coordinator Transmission Operator Transmission Owner

Real World Scenarios



**CVE-2020-
10148**

**CVE-2021-
30116**

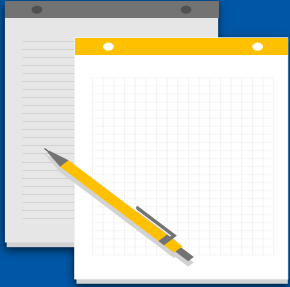

**Kaseya
Center**

 **Progress®
MOVEit®**

**CVE-2024-
5806**



CIP-013-2 Requirement 1 & Requirement 2



R1. Each Responsible Entity shall develop one or more documented supply chain cyber security risk management plan(s) for high and medium impact BES Cyber Systems and their associated Electronic Access Control or Monitoring Systems (EACMS) and Physical Access Control Systems (PACS).



R2. Each Responsible Entity shall implement its supply chain cyber security risk management plan(s) specified in Requirement R1.

CIP-013-2 Requirement 1 Part 1.1

1.1 One or more process(es) used in **planning** for the procurement of BES Cyber Systems and their associated EACMS and PACS to identify and assess cyber security risk(s) to the Bulk Electric System from vendor products or services resulting from:

- Procuring and installing vendor equipment and software; and
- Transitions from one vendor(s) to another vendor(s)



CIP-013-2 Requirement 1 Part 1.2 & Requirement 2

1.2: One or more process(es) used in procuring BES Cyber Systems, and their associated EACMS and PACS, that address the following: as applicable:

1.2.1

Notification by the vendor of vendor-identified incidents related to the products or services provided.

1.2.2

Coordination of responses to vendor-identified incidents related to the products or services.

1.2.3

Notification by vendors when remote or onsite access should no longer be granted to vendor representatives.



CIP-013-2 Requirement 1 Part 1.2 & Requirement 2 Cont.

1.2: One or more process(es) used in procuring BES Cyber Systems, and their associated EACMS and PACS, that address the following: as applicable:

1.2.4

Disclosure by vendors of known vulnerabilities related to the products or services provided to the Responsible Entity.

1.2.5

Verification of software integrity and authenticity of all software and patches provided by the vendor for use in the BES Cyber System and their associated EACMS and PACS.

1.2.6

Coordination of controls for vendor-initiated remote access.



Possible Evidence



Policy/Procedure

Procurement Forms

Vendor Questionnaires

Risk Assessments

Vendor Contracts

Internal Controls

Supplier Risk
Assessment

Security
Requirements
for Suppliers

Monitoring
Supplier
Compliance

Access Controls

Incident
Response Plan



Resources



NIST

NIST SP 800-161
Rev. 1



NERC
NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

2025 ERO Enterprise Compliance Monitoring and Enforcement Program Implementation Plan

October 2024

CMEP IP



North American Transmission
FORUM
Community Confidentiality Candor Commitment

ERO Enterprise Endorsed
Implementation Guidance

NATF CIP-013 Implementation Guidance:
Supply Chain Risk Management Plans



Implementation
Guidance



The background of the slide features a blurred image of the Texas state flag on the left and a close-up of a wind turbine's hub and blades on the right. The blades are white with red tips. A dark blue rounded rectangle with a thin light blue border is centered over the image.

Questions?



TEXAS RE

Ensuring electric reliability for Texans



Texas RE Fall Standards, Security, & Reliability Workshop



Return at 12:55 p.m.

AGENDA

- Cybersecurity Threat Assessment
- Oil & Natural Gas Industry Coordination
- Texas Legislature Update
- Self-Certification Enhancements
- Modernization of Standards Process and Procedures Task Force
- Supply Chain Risk Management
- Self-Reporting Best Practices
- Artificial Intelligence
- 2026 CMEP IP
- Standards Effective in 2026

To submit questions during the workshop, please visit **slido.com** and enter today's participant code: **TXRE**



Q&A Polls

Type your question

160

Your name (optional)

Send



Self-Reporting Best Practices

Shana Horton
Manager, Enforcement

Agenda

Why Is This Important to You?

#1 Issue: Mitigation

Extent of Condition (EOC) Reviews

Root Cause

Risk Analysis

Self-Logging



The Importance of Quality Self-Reports



**Less work with
fewer Requests
for Information
(RFIs)**



**Quicker off the
books**



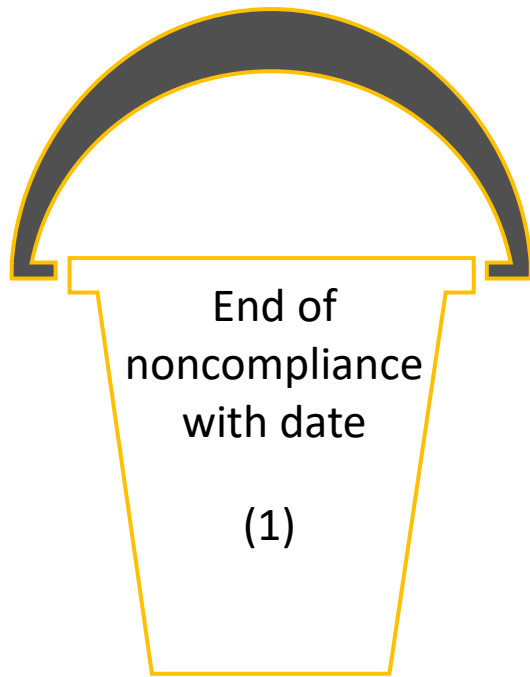
**Use your own
language**



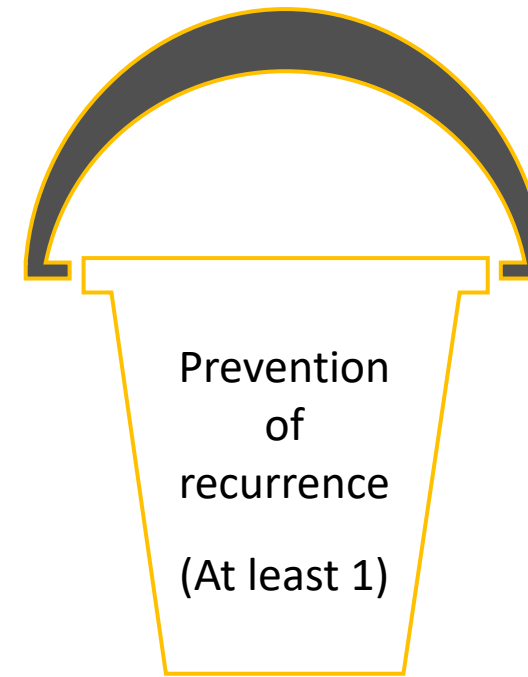
**Save time and
work with a
little effort on
the front end!**



#1 Issue: Mitigation



+



#1 Issue: Mitigation

RFI No. 1-2

What actions has (Entity) taken, or will take, **to end the noncompliance**?

As applicable please provide documentation that demonstrates the **date of implementation**. For actions that will be taken in the future please provide the estimated date of implementation.

Please provide the corresponding Mitigation Milestone IDs, as applicable.

RFI No. 1-3

What actions has (Entity) taken, or will take, **to prevent a similar noncompliance from reoccurring** in the future?

As applicable please provide documentation that demonstrates the **date of implementation**. For actions that will be taken in the future please provide the estimated date of implementation.

Please provide the corresponding Mitigation Milestone IDs, as applicable.



Mitigation Must Address Root Cause

Examples

- Root cause: No/inadequate procedures
- Mitigation: Procedure revised to include or emphasize relevant information
- Root cause: Employee did not understand requirements of Standard
- Mitigation: Provided additional training to employees
- Root Cause: Lack of preventative controls to ensure timely compliance
- Mitigation: Added calendar reminders ahead of due dates



#1 Issue: Mitigation

PRC 005-6: Entity failed to perform maintenance on schedule

- End of noncompliance: Maintenance performed on (DATE)
- Prevention of recurrence:
 - Added calendar reminders on (DATE)
 - Provided training to relevant employees on (DATE)

CIP 008-6: Entity performed Cyber Security Incident Response Plan (CSIRP), but not with a reportable incident

- End of noncompliance: Qualifying CSIRP exercise completed on (DATE)
- Prevention of recurrence:
 - Updated procedure to require management review of CSIRP exercise prior to performance



Mitigation Exercise

- ❑ **CIP 007-6 R2:** Entity did not at least once every 35 calendar days, evaluate security patches for applicability that have been released since the last evaluation from the source or sources identified in Part 2.1.
- ❑ **Root Cause:** Insufficient Internal Controls. The patch notification process was not set up to reach the responsible personnel within the required timeframes set forth in the Reliability Standards. A personnel change resulted in the patch notification email from the source not being directly received by the responsible personnel.
- ❑ **Corrective Action** (end of noncompliance): Evaluated security patches on (DATE).
- ❑ **Prevention of Recurrence:** Implementation of a notification system designated for receipt of these notifications. Instead of these notifications going to an individual's email, this centralized system will be accessible by staff responsible for evaluating and implementing security patches.



Extent of Condition Review

What did you do?

How many sites,
devices, or
components,
procedures, personnel?

Over what time period
(years, maintenance
intervals)?

Did you find additional
instances?

Goal: Demonstrate the issue was the only occurrence across the field of related sites, devices, components, procedures or personnel within that time period.



Extent of Condition Review

Example 1 (inadequate):

- EOC Performed: Yes
- Detailed description: *No additional instances found*

Example 2 (better):

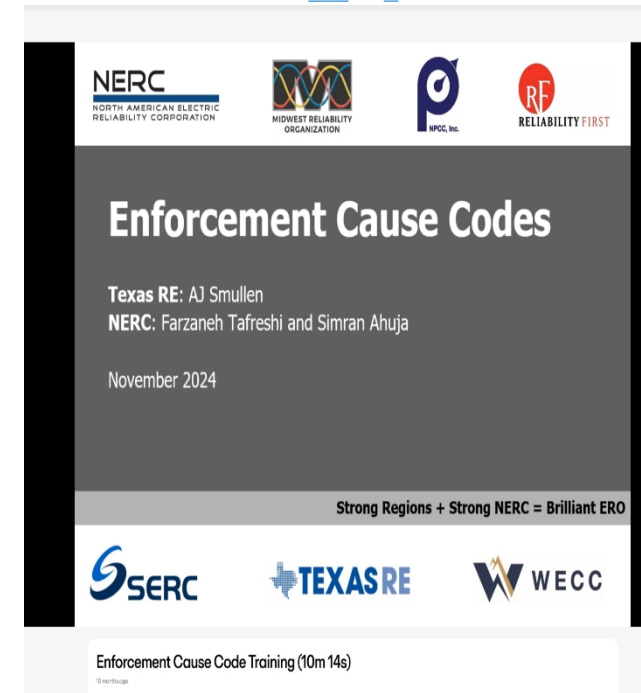
- EOC Performed: Yes
- Detailed description: *Entity reviewed all Transient Cyber Asset (TCA) checkout documentation prepared over the past year and a half (10 total incidences going back to (date)). When Entity adopted the TCA Authorization form, interviewed all relevant personnel and evaluated existing processes and policies. The review revealed seven additional instances.*



Root Cause

☐ Codes published by NERC this summer

☐ Entities can select the appropriate code



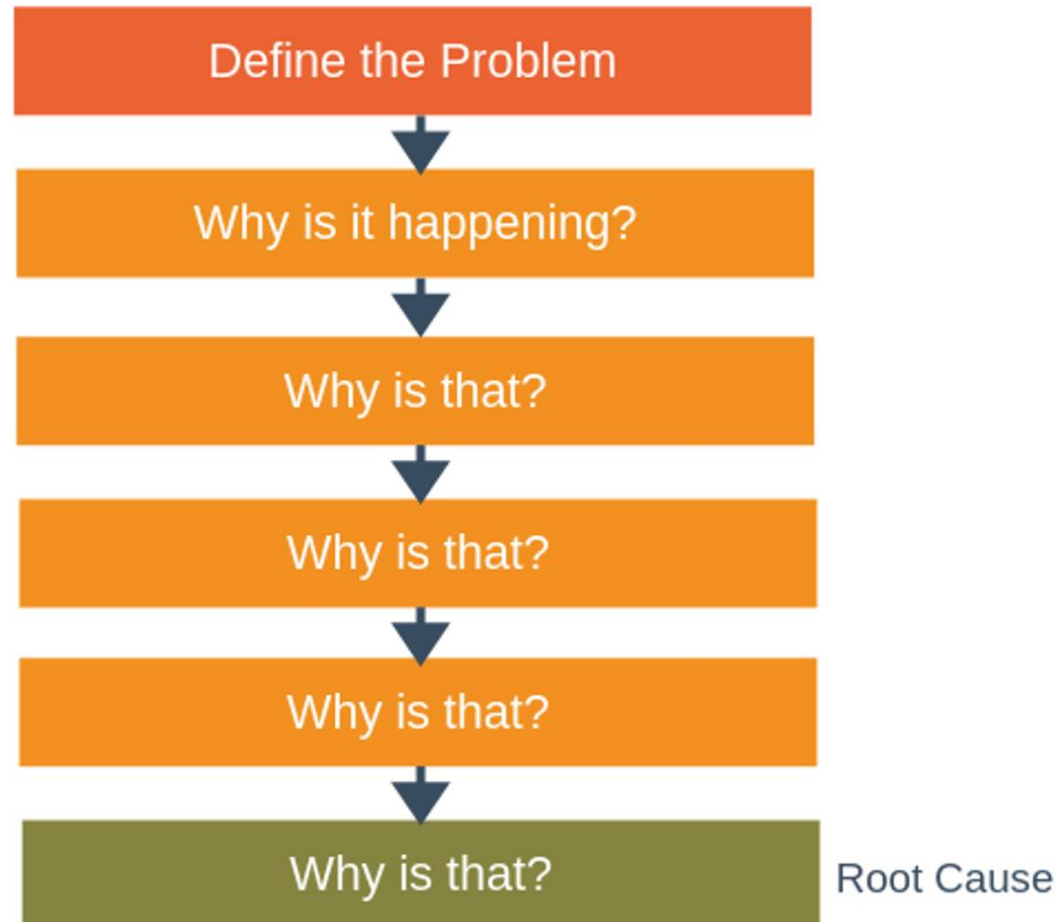
<https://www.nerc.com/pa/comp/CE/Pages/Enforcement-and-Mitigation.aspx>

“Enforcement Cause Code Training (Video)” (top right)



Root Cause: Five Whys

The 5 Whys



Root Cause

Root Cause: Commonly Cited Cause Codes

Code	Name and Description
1	Change Management Made changes without understanding the downstream impact of the change on other components of the system and its related processes
4	Design – Ineffective Process Flow or System Design or failure of system/technology Ineffective process or system design Items were missing from design, design-related documentation, or system or technology failure
7	Lack of/Deficient Policy/Procedure - Company Wide Ineffective management policy – high level, company-wide based Needs new policy/procedure/process (did not exist) or was deficient
8	Lack of/deficient policy/procedure - Department/Business Level Ineffective business-level procedure/process – Standard Operating Procedure, Instructions, department-based Needs new policy/procedure/process (did not exist) or was deficient
9	Ineffective Preventive Controls Lack of or ineffective internal controls designed to prevent noncompliance Detective controls were implemented but there was an ineffective or lack of a preventative control (e.g., checklist, secondary reviewer, workflow, or a backup or a redundant control)
10	Ineffective Validation/Detective Controls Lack of or an ineffective validation/detective control Preventative controls were implemented but there was an ineffective or lack of a validation/detective control after completion of the task



Root Cause: Common Cause Codes

Code	Name and Description
11	Additional Training Needed Training program is adequate but additional training needed The overall training program was adequate but training on a required task was not part of the employee's training requirements or frequency of the training was insufficient to maintain the required knowledge and skill to perform the job (e.g., did not consider the complexity of certain tasks or individual's skillset or experience). If the training design/content is adequate, but the entity failed to effectively deliver it to their employees or track the required training.
	Lack of/deficient training materials and content The quality of the training objective, or training content and/or material was incomplete or unclear such that it did not contain all the information necessary for staff to fully perform all the task requirements in the procedure.



Root Cause: Human Performance Error

Often the
first why

Rarely the
last why

Often results in a
Request for Information
(RFI)



Root Cause Exercise

- ☐ **Cascading analysis study completed after deadline**
- ☐ The planning sub-group that performs the analysis was in a transitional stage at the time of this issue, with the former manager changing groups and a new manager stepping in
- ☐ The engineers working on the analysis were not aware of the 12/31/2023 deadline for the formal cascading analysis
- ☐ What is the root cause?
 - A. Lack of detective controls
 - B. Change Management
 - C. Additional training needed

Slido Question



Root Cause Exercise

❑ Mitigation (Prevention of Recurrence)

- Provided additional verbal training and coaching to engineers tasked with performing the assessment to ensure deadlines are met
- Implemented a more robust checklist and tracking system for completing the annual assessment, including review by the manager before the end of the year
- What is the root cause?
 - A. Lack of detective controls
 - B. Change Management
 - C. Additional training needed

Slido Question



Risk Analysis: Objective

What circumstances surrounding the noncompliance existed so that the worst possible outcome did not and could not have occurred?



For Generators

- Small size of Facility
- Low capacity factor
- Not a Blackstart Resource and not relied upon for system restoration
- Not a unit generally relied upon for voltage/frequency support (Ancillary Services)
- The Facility's energy output or capacity was unaffected



For Transmission

- None of the Facilities affected involve Interconnection Reliability Operating Limits (IROL) or inter/intra-area interfaces
- No System Operating Limits (SOLs) were violated
- Deviation was well below capacity of Facility
- Low traffic on affected Facility
- No system issues occurred due to the noncompliance
- Had there been a loss of the Facility, there was sufficient capacity on other Facilities



Risk Analysis

General

- Low percentage of affected Facilities/assets/elements/equipment, etc.
- Small deviation from applicable requirement
- Short duration of the noncompliance
- After the required review was completed, no updates/settings changes were found to be needed and the equipment was working normally
- Other Facilities/devices operated as a backup to the affected noncompliant Facility/device
- No harm occurred, no relay operations at all, no impacts to neighboring Entities, etc.
- The required information was provided in an alternative manner or was partially provided
- There would have been an alarm had there been an issue with the affected equipment
- The staff members that missed the required periodic training had received the training during a previous periodic training event (not a first-timer)



Self-Logs

Info needed for Self-Log
=
Info needed for Self-
Report

Presumption of accuracy,
completeness

Texas RE will analyze as
usual, but use your
language if it addresses
all required elements
and tells the story clearly

Minimal risk ONLY!

Even faster than Self-
Reports!



Self-Logs: Approved Examples

Home > Program Areas & Departments > Compliance & Enforcement > > Enforcement and Mitigation

Enforcement and Mitigation

The Enforcement and Mitigation page provides a consolidated and sortable listing of monthly filings to the Federal and Regulatory Commission. This information is provided for informational purposes only. In the event of a conflict between information on this page and filings, the filings govern.

FERC, NERC Outline CIP Procedures in New White Paper - Published 9/23/2020

Under the *Second Joint Staff White Paper on Notices of Penalty Pertaining to Violations of Critical Infrastructure Protection Reliability Standards* (Docket No. AD19-18-000), NERC will no longer publicly post redacted versions of CIP noncompliance filings and submittals.

Additional Resources

- URS
- Enforcement Cause Code Training (Video)
- ERO Enterprise Enforcement Cause Coding User Guide
- Registered Entity Self-Report and Mitigation Plan User Guide
- Risk Based CHEP
- Self-Logging Program User Guide
- Violations Themes - CIP Violations (presentation)
- Violations Themes - CIP Violations (webinar)

Templates

Type	Title	Date
	Drafting Templates for CEs, FFTs, and SNOPs	8/1/2023
	Template Align Self-Report and Self-Log Form	10/16/2025

Individual NERC Noncompliance Filings to FERC

Click the year for individual NERC noncompliance filings to FERC. All regulatory file documents listed are posted in descending order by filing date.

2025 | 2024 | 2023 | 2022 | 2021 | 2020 | 2019 | 2018 | 2017

Enforcement and Mitigation - Current Year

Type	Title	Date
Compliance Exceptions (CEs) (1)	non-CIP CEs	9/30/2025 12:48 PM
Find, Fix, Track, and Reports (FFTs) (1)		
Searchable Spreadsheet (1)		
Spreadsheet Notice of Penalty (SNOPs) (1)		

Enforcement and Mitigation - Previous Years

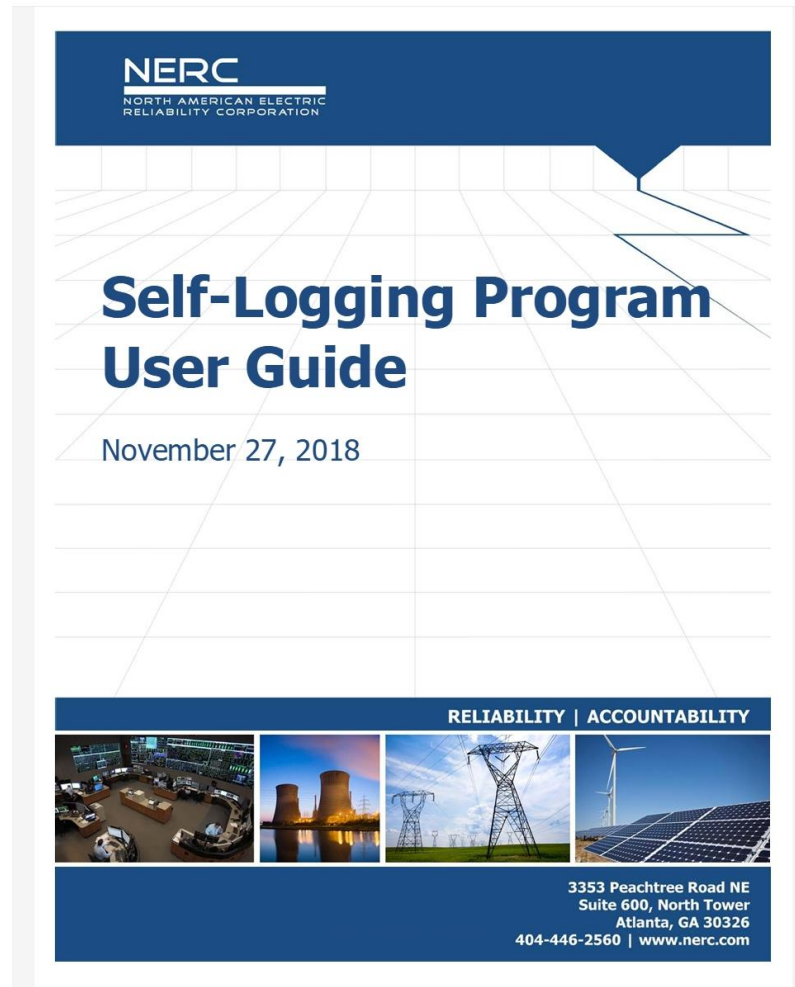
Type	Title	Date
Compliance Exceptions (CEs) (5)		
Find, Fix, Track, and Reports (FFTs) (5)		
General (1)		
Spreadsheet Notice of Penalty (SNOPs) (7)		

home | account log in/register | legal and privacy/trademark policy | site map | careers | contact us
Washington Office | 1401 H Street NW, Suite 410, Washington, DC 20005 | 202-400-3000
Group Health Plan Transparency in Coverage Files*

*This link leads to the machine-readable files that are made available in response to the Federal Transparency in Coverage Rule and includes negotiated service rates and out-of-network allowed amounts between health plans and healthcare providers. The machine-readable files are formatted to allow researchers, regulators, and application developers to more easily access and analyze data.
Copyright © 2025 North American Electric Reliability Corporation. All rights reserved.

<https://www.nerc.com/pa/comp/CE/Pages/Enforcement-and-Mitigation.aspx>

Self-Logging: Qualification



To satisfy the evaluation and become eligible for self-logging, a registered entity must demonstrate that it has sufficiently institutionalized processes in place to identify, categorize, prioritize, and mitigate operational risks to reliability.

It also must have sufficient internal processes to perform cause analysis to ensure successful corrective and preventive actions.

Mitigation Reminders

One to end noncompliance

One or more to prevent recurrence

Root cause and mitigation should “rhyme”

Provide dated evidence for end of noncompliance



The background of the slide features a blurred Texas state flag on the left and a close-up of a wind turbine's hub and blades on the right, all set against a clear blue sky.

Questions?



TEXAS RE

Ensuring electric reliability for Texans



NSF LEADERSHIP-CLASS
COMPUTING FACILITY

Datacenters and AI – the cause of, and potential solution to, most of your problems.

Dan Stanzione

Texas RE Fall Workshop

November, 2025



What is TACC?

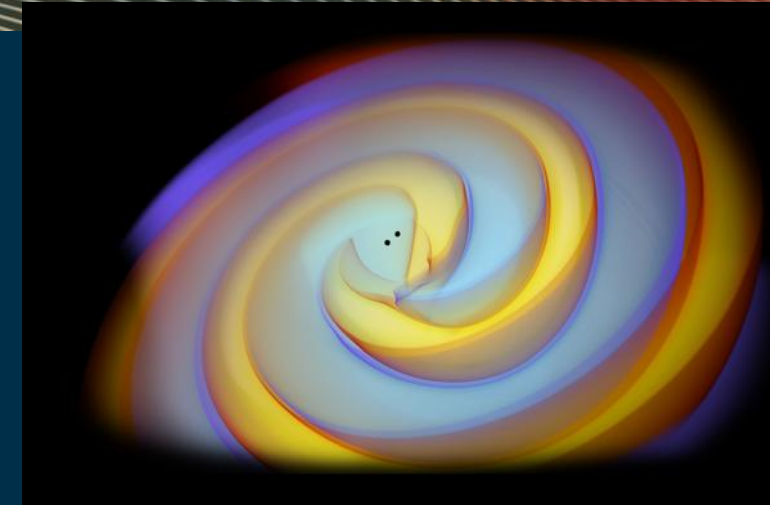
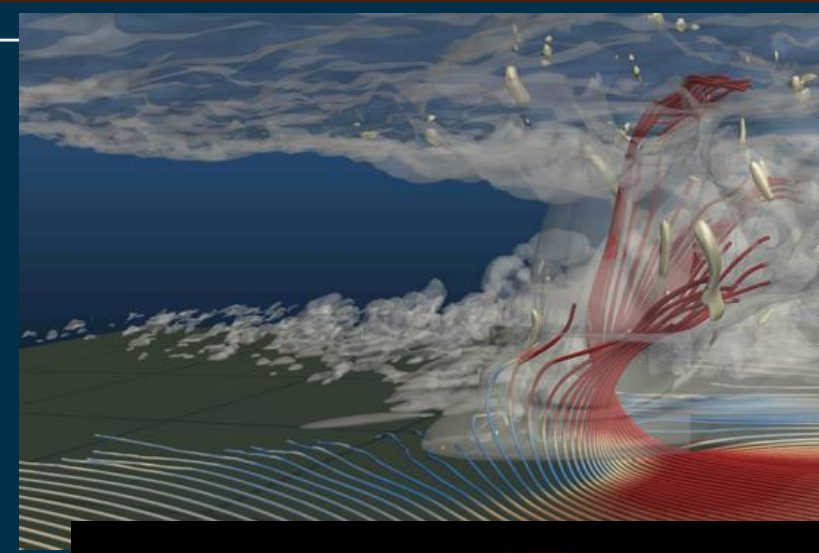
- We are the UT and UT System Research Computing Facility
- We are also the largest NSF-funded national computing center for open science
 - As well as NIST, NASA, NIH, DARPA, DOD, etc.
- 200+ Dedicated staff
- Altogether, ~20k servers, >1M CPU cores, 1k GPUs
- About seven billion core hours over several million jobs per year – for 3,000 projects and ~40,000 users per year.



Federal Investments in TACC are over \$1B in last 10 years; and over \$1B slated for next 10 years. While we are a national provider, we have *by far* the most computing resources of any University in the country (and often the world), and will continue to through the 2020s.

Who uses TACC?

- At UT, about 70% of NSF grant recipients, and >50% of NIH grant recipients, are TACC Users.
 - (~\$199M to UT Austin in 2024 *not* including awards directly to TACC).
- Around the country, users doing unclassified research at more than 400 institutions use TACC on over 3,000 projects for year.
 - Including a number of startups; large industry use us more for tech pathfinding.
- Since it's inception in 2001, TACC has had well over 100k users – 90k of which are students.
 - >30k use the resources in any given year.
- TACC users have 4 Nobel prizes, many Gordon Bell prizes, and countless “first of its kind” computational achievements.
- Access to TACC is provided through:
 - NSF ACCESS and NSF Leadership Computing Programs.
 - NAIRR Pilot (National AI Research Resource).
 - UT-Austin and UT-System programs.
 - Direct investment from partner institutions (Texas A&M, Texas Tech, North Texas).



TACC Compute hardware

The big systems in 2025

Resource	CPU type	#Nodes/Sockets/Cores	GPU Type	# GPUs
Frontera	Xeon (Cascade Lake)	8400/16800/470,400	RTX (Volta)	360
Lonestar-6	AMD Epyc	600/1200/76,800	NV A100	255
Stampede-3	Xeon (Sapphire Rapids)	2,024/4,048/150,080	Intel PVC	80
Vista	ARM/Grace	840/1080/77,760	NV H100	600
<i>Horizon</i>	<i>ARM/Grace-next</i>	<i>6750/11400/1.02M</i>	<i>Blackwell</i>	<i>4,000</i>

- Rough total peak power, 9.5MW
- Rough total average power, ~6MW
- Plus cooling power
- Horizon will add 13MW

Smaller NSF Platforms:
 Jetstream – Cloud
 Chameleon – CS Testbed

AI Inference endpoint hosting available very soon

Other Compute Platforms:
 Cyclone - Kubernetes

Storage Platforms:
 Ranch – Archive
 Corral – Published Collections
 Stockyard. -- Sitewide Work

The NSF Leadership Class Computing Facility

- A more capable follow-on to the current (aging) NSF leadership systems
- A more holistic and collaborative view of how we support “leadership applications”
- A long term investment to match the science missions we support.
- Adding a 20MW datacenter in Round Rock in a partnership with Sabey Datacenters – to be completed the end of 2025 (first racks in 51 days).



Large Systems are Dense and Power Hungry



- One of the first meetings I had when I joined UT in 2009 was about the main campus datacenter
 - They wanted to build for 8KW/cabinet.
 - I suggested 50KW/cabinet (they went with 8)
 - Our new build at Sabey is at **250KW/rack** 16 years later.
- TACC's Stampede, 2012 – 34KW /rack
- TACC's Frontera, 2019 – 60KW/rack
- Lonestar-6, 2021 - 70KW/rack
- Horizon, 2025 – 225KW/rack
- Why? Can't you just use more racks?

More Racks?

- In the year P.C. 2 (2019, two years pre-ChatGPT), commercial cloud datacenters often could, but we couldn't.
- Why? Latency.
 - Light travels one foot per nanosecond (or, for those from Texas, 30ns/First Down).
- If you are doing a lot of little problems (e.g. booking millions of e-commerce transactions), you don't really care.
- If you are doing one big problem across dozens of racks (e.g., simulating hurricane movements or training a large language model for AI) you care a lot, because latency means all the processors stop while waiting for data (and they need ~32 bytes more every three billionths of a second).

And Silicon Process Improvements Slowed Down at the Wrong Time

- Moore's Law *used* to mean we got twice the processing for roughly the same power every two years.
 - Hasn't been true the last few years.
 - (What Moore's Law *actually* says is we get twice the transistors in the same area, which has still been true).
- As we've gotten really small (the 3nm process means transistor features are *ten silicon atoms* wide), the transistors take more power, but they leak more current.
 - 2012 – Stampede – 130 Watts per socket
 - 2017 – Stampede2 – 145 Watts per socket
 - 2019 – Frontera – 210 Watts per socket
 - 2024 – Stampede3 – 350 Watts per socket
- The “free ride” from Physics is ending when we need it most.

AI is now the primary driver of datacenter power.

- Much like with simulation, with AI, and Generative AI/Large Language Models in particular – everything gets better with Scale.
 - The bigger the model, the better the quality of results.
 - More parameters
 - More training data.
- This means more hardware, both for training, and for inference.
- And it **is** a global race.

The Investment is Enormous

- Like nothing we've ever seen in the (already hype-cycle driven) tech market.
- Estimated investment in AI infrastructure this year is ~\$500B.
 - Datacenter construction + Datacenter hardware
- ~\$3T over this 5 year period.
 - For revenue that may or may not materialize at that scale.
- That much datacenter will consume 75 Gigawatts of power, all the time.
 - That is roughly the scale of Texas in August when it is over 100.
- And that is the *1 year* add to the power grid.

In The Last Month Alone. . .

- Oracle agreed to a deal to provide \$300B worth of GPU computing to OpenAI (roughly 4.5 GigaWatts of datacenter capacity).
- NVIDIA agreed to a \$100B investment in OpenAI.
- Those two deals alone represent more than the United States Government's investment in basic science (NSF) and biomedical research (NIH) combined for the last 6 years.
 - Things you should not pay attention to: OpenAI had \$5.5B in revenue in 2024. Nvidia is giving them \$100B to buy chips from Nvidia to put in the Oracle datacenters they otherwise could not afford to buy the equipment for, but the additional 5M projected GPU sales pushed up the value of Nvidia by \$150B which funds the \$100B investment to pay Oracle from the \$300B OpenAI doesn't have. This is in no way a circle or indicative of any kind of a bubble. Of course not. Everything is fine!
- Microsoft agreed to another \$40B in datacenter deals yesterday with another provider, despite spending \$80B/yr on in-house capability.
- AMD signed a deal for 4GW of chips (and 10% of the company) with OpenAI
- China announced discount power rates for large AI companies.
- Microsoft CEO warned about risk of buying GPUs, but no being able to turn them on.

Texas **should** be well-positioned to take advantage of this.

- Historically, the cost structure is good – but demand outstripping supply will change that rapidly.
 - New datacenters have added \$15/month to the average residential power bill in Ohio so far this year.
- We will need to add capacity – either at the datacenter, or to the Grid.
 - But there are complications.

Texas **should** be well-positioned to take advantage of this.

- We can produce more Natural Gas.
 - But we can't get more Natural Gas turbines – currently back-ordered 3-5 years from GE.
- We have an enormous opportunity for Nuclear power
 - But even with less regulation, it will not be synonymous with “fast”.
- There is no good reason we shouldn't be the leading state in wind and solar
 - And we can scale that fast.
- We should be doing all of these...
- Water may become our limiting factor.

For AI Datacenters

- Utilization is key to ROI, so the idea is to use power 24x365 at near full load.
- Large training jobs, however, mean large rapid swings in power consumption (10s of MW in a few seconds, with power for cooling lagging that a bit).
- On-site storage can minimize grid impact of this, but carries an extra cost. . .
 - Maybe something that can be done with regulation?
 - Right now, AI customers aren't particularly price sensitive – but residential electric customers are, and the backlash is building.

We could also do things more efficiently. . .

- In our datacenter we have evolved from under floor cooling, to in-row cooling with enclosed aisles, to Direct Liquid Cooling and Immersion Cooling.
- And we are now experimenting with two-phase cooling, alternate cooling fluids, negative pressure cooling, etc.
 - Working with six different companies in cooling experiments.
- We have a million gallon tank for thermal storage -- so that we can store chilled water and turn off the chillers on summer afternoons during peak grid demand.
- We have an experimental hydrogen fuel cell tied in, a few hundred kilowatts of solar in the parking lot, and buy about 20% wind credits.
- At this point, datacenters are pretty efficient – we can keep working on it and get a little more, but only changing the hardware and software will make a dramatic difference.

Two driving research questions going forward:

- Because they still need to happen, though there is more evidence now.
- We desperately need robust research activities in two areas:
 - **AI Hardware for Science:**
 - "Beowulf for AI" -- Exploit the chips being made for AI to do general scientific computing.
 - We won't survive if we don't
 - **AI Full Stack Efficiency:**
 - There are ways to scale up computation other than "throw billions of dollars at it", and our community, where we didn't have billions of dollars to throw, is pretty good at it.
 - We need to save the world from bankruptcy, rather financial or carbon.
 - I recently read an analysis that the average residential power bill in Ohio is \$15/month higher because of new datacenter demand.

AI Hardware for Science:

Why do I think this is Possible?

- Because we have done it before, and programmers in our community are generally pretty clever.
 - Without hacking in the molecular dynamics space in academia, it's possible GPUs would be doing (*gasp*) Graphics Processing.
 - If we let people know that INT8 operations are order 2k faster than 64 bit operations, don't you think they will figure something out?
 - See the Ozaki Scheme among other for emulation methods for FP64.
 - See a bunch of the Gordon Bell papers in the last few years for schemes exploiting mixed precision.

AI Stack Efficiency:

Why do I think this can be done?

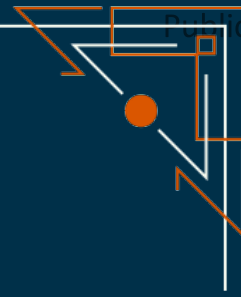
- It's mostly what DeepSeek did!
 - Nothing earth-shattering algorithmically, just pushing lots of techniques in both traditional optimization, and AI optimization (e.g. MoE) to the extremes.
- The huge focus on “biggest and first” has obviously left efficiency in the dust.
- When \$ become scarcer (or export controls cut off top chips), optimization will have time to catch up – at all levels of the stack.

AI Stack Efficiency:

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Improving the Software Stack



- If spending \$100M on software engineering improves the efficiency of your \$400B investment by even 10% each year....
 - That is the definition of a good return on investment.
- 10% is probably not that hard. 50% is doable. 1,000% is in the range of theoretically possible (we are using nowhere near 10% of available peak FLOPS today).





NSF LEADERSHIP-CLASS
COMPUTING FACILITY

Thanks!

dan@tacc.utexas.edu

TACC
TEXAS ADVANCED COMPUTING CENTER

 **TEXAS**
The University of Texas at Austin





Texas RE Fall Standards, Security, & Reliability Workshop



Return at 2:05 p.m.

AGENDA

- Cybersecurity Threat Assessment
- Oil & Natural Gas Industry Coordination
- Texas Legislature Update
- Self-Certification Enhancements
- Modernization of Standards Process and Procedures Task Force
- Supply Chain Risk Management
- Self-Reporting Best Practices
- Artificial Intelligence
- 2026 CMEP IP
- Standards Effective in 2026

To submit questions during the workshop, please visit **slido.com** and enter today's participant code: **TXRE**



Q&A Polls

Type your question 160

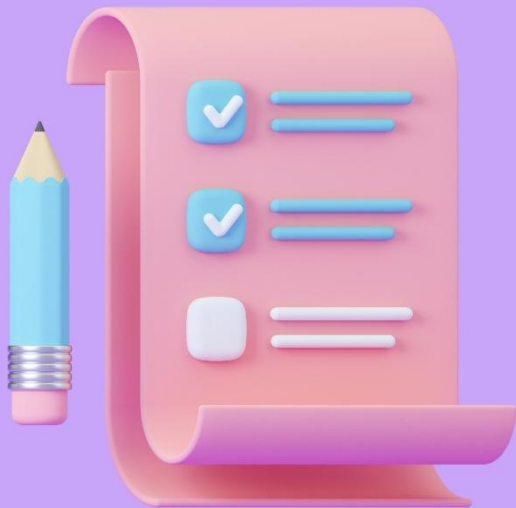
Your name (optional) Send



2026 ERO CMEP Implementation Plan (CMEP IP)

**Rashida Caraway
Manager, Risk Assessment**

Agenda



CMEP IP Purpose

CMEP IP Changes

Relation to Risk-Based
Monitoring

CMEP Implementation Plan (CMEP IP) Purpose

Reflects ERO and Regional Entity-specific risk elements that Regions prioritize for oversight of registered entities

Developed by NERC and the Regional Entities

Serves as an input in determining the appropriate monitoring of risks



CMEP IP Inputs

2025 ERO
Reliability Risk
Priorities Report

Long-Term
Reliability
Assessment

ERO Enterprise
Strategic Plan

2024 State of
Reliability
Report

Compliance
findings

Event analysis

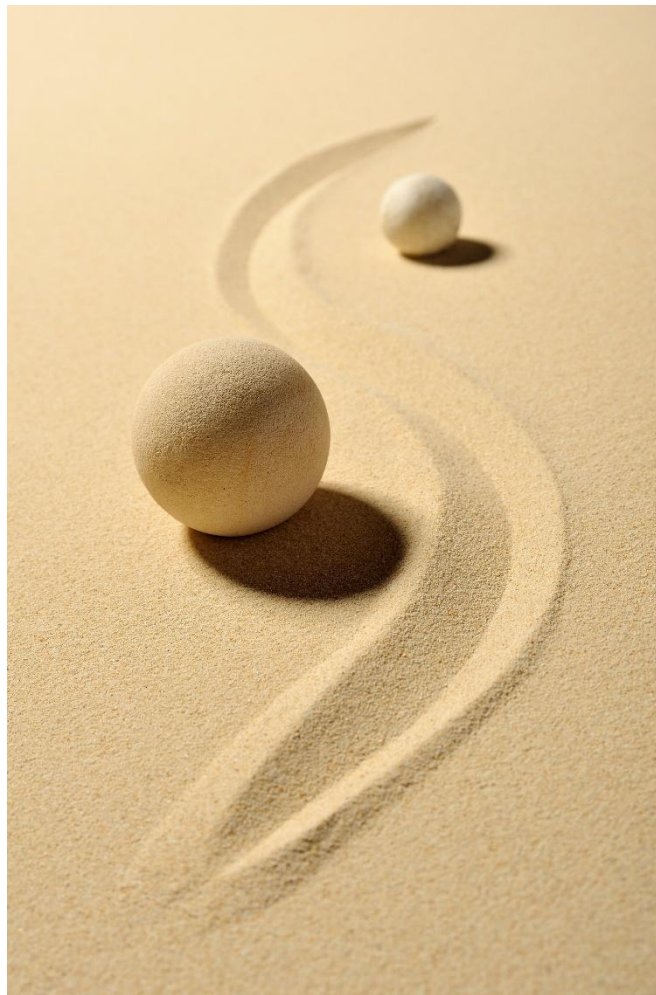


What's New with Risk Elements for 2026?

2025	2026
Remote Connectivity	Remote Connectivity
Supply Chain	Supply Chain
Physical Security	Physical Security
Transmission Planning and Modeling	Grid Transformation
Inverter-Based Resources	
Facility Ratings	Facility Ratings
Extreme Weather Response	Extreme Weather Response
Incident Response	



What Parts are Staying the Same?



Remote Connectivity

- ❑ Focuses on communication between control centers, security management controls
- ❑ Network communications potential attack vector
- ❑ Coordination efforts with service providers needed

Standard	Requirement
CIP-003-8 CIP-003-9	R2
CIP-005-7	R2, R3
CIP-012-1 CIP-012-2	R1



Facility Ratings

- ❑ Risk associated with ratings not being updated during projects or following severe weather
- ❑ Important to understand entity's controls in place to track Facility Ratings

Standard	Requirement
FAC-008-5	R6



Changes in the 2026 CMEP IP



Supply Chain

- ☐ New generation constrained by supply chain disruption
- ☐ Long lead times
- ☐ Removed CIP-013-2 R2
- ☐ Added CIP-013-2 R1
- ☐ Added CIP-007-6 R2

Standard	Requirement
CIP-010-4	R1
CIP-007-6	R2
CIP-013-2	R1



Physical Security

- ☐ Frequency of physical security incidents causing operational impacts remains consistent
- ☐ Continues to focus on low-impact BCS
- ☐ Added CIP-006-6 R1

Standard	Requirement
CIP-003-8 CIP-003-9	R2
CIP-006-6	R1
CIP-014-3	R4, R5



Extreme Weather Response

- ☐ Weather conditions can challenge operations
- ☐ ERO held additional Cold Weather Preparedness Small Group Advisory Sessions
- ☐ Includes new version of EOP-012
- ☐ Added FAC-003-5 R6

Standard	Requirement
EOP-011-4	R1, R2, R3, R6
EOP-012-3	R1, R3, R4, R5, R6, R7
FAC-003-5	R6



Grid Transformation

❑ Risk related to

- New large loads, increasing IBRs, resource adequacy

❑ Combines the risk related to IBRs and Transmission Planning/Modeling

❑ Adds CIP-002-5.1a R1, CIP-004-7 R6, and CIP-011-3 R1

Standard	Requirement
CIP-014-3	R1
TPL-001-5.1	R1, R2, R3, R4, R5, R6, R7
MOD-025-2	R1, R2, R3
MOD-026-1	R6
MOD-027-1	R5
MOD-031-3	R1, R2
MOD-032-1 (Applies to CAT 2 IBRs beginning May 15, 2026)	R1, R2, R3, R4
FAC-001-4	R1, R2
FAC-002-4	R1, R2
MOD-026-1	R2
PRC-005-6	R3, R5
PRC-024-3 (PRC-024-4 effective 10/1/2026)	R1, R2
PRC-027-1	R1, R2, R3
CIP-003-8 CIP-003-9 (effective 4/1/2026)	R2
CIP-002-5.1a	R1
CIP-004-7	R6
CIP-011-3	R1



Grid Transformation Risks

Resource Adequacy

Voltage and Frequency Fluctuations

Interconnection and Modeling

Workforce Adequacy

Aggregation of Control

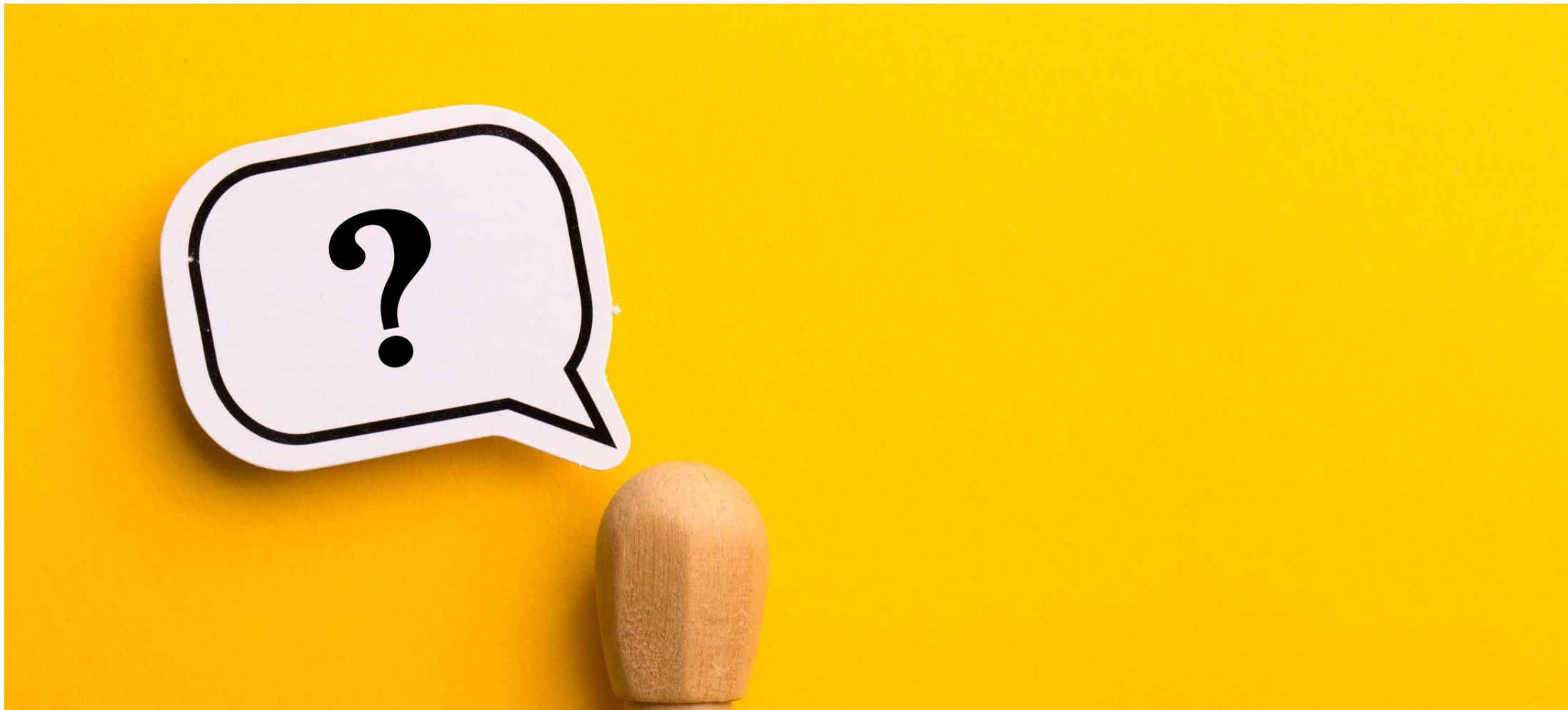


Slido Question

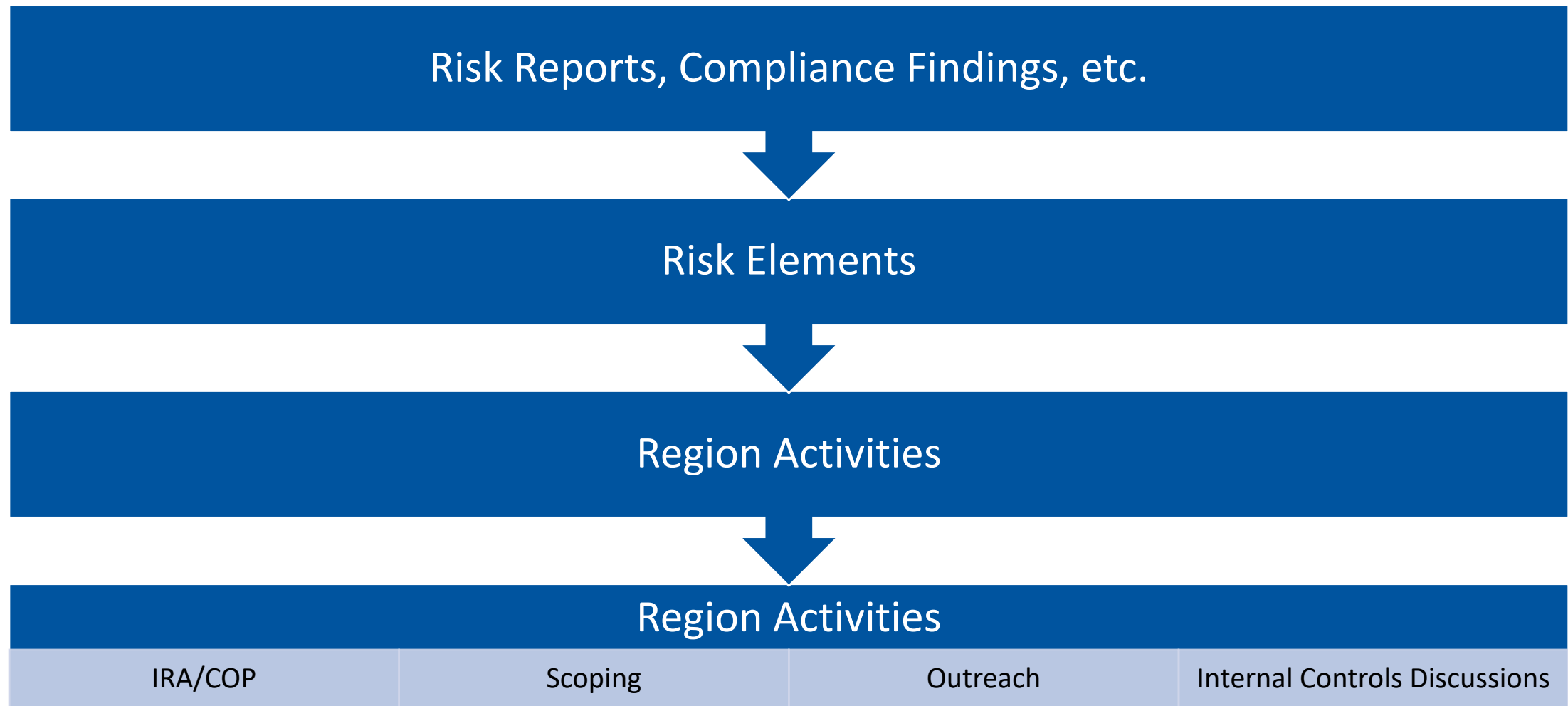
What outreach would you like to see related to Risk Elements?



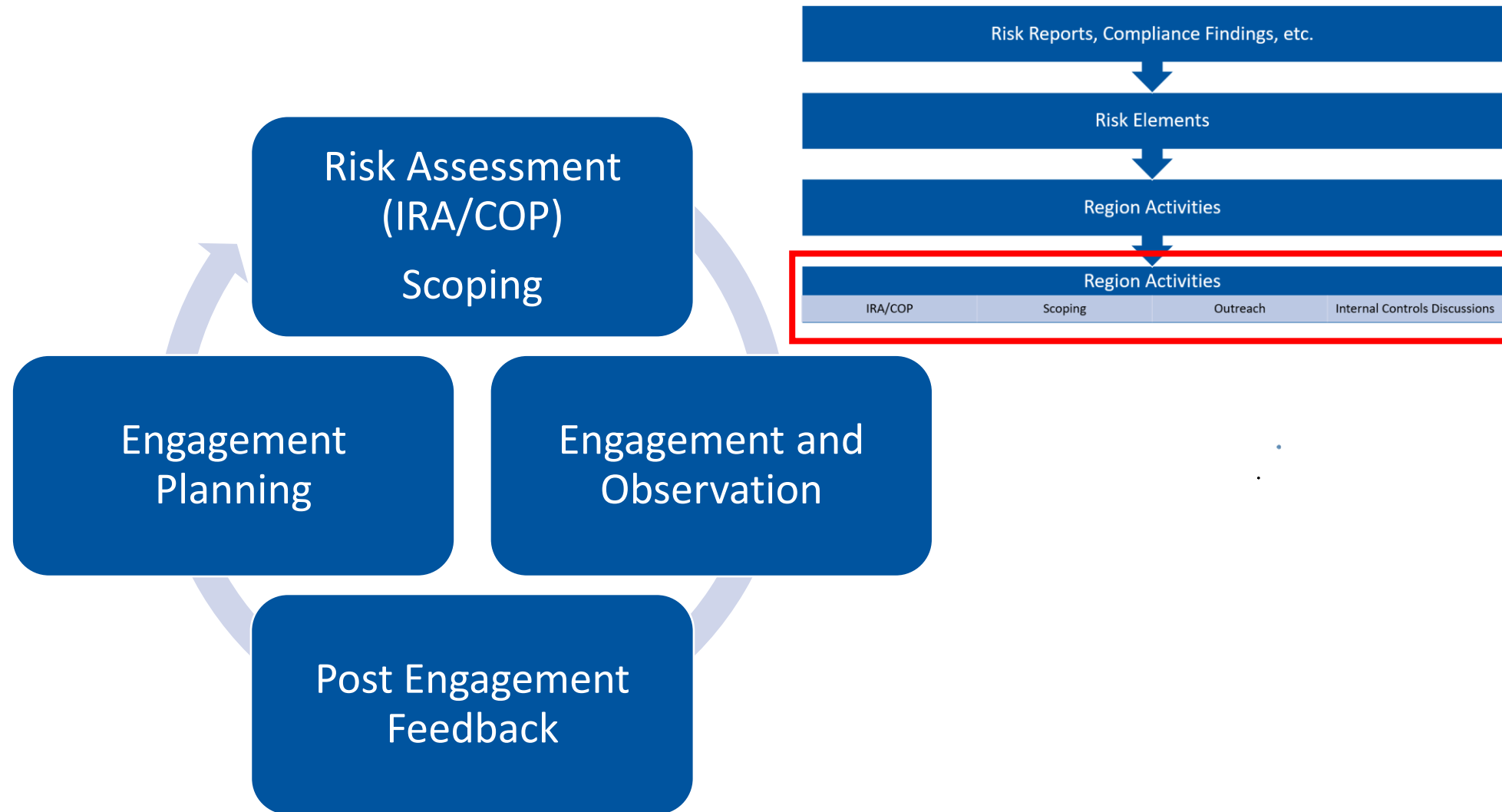
What Does This All Mean?



Risk Elements



Risk Elements – Risk Based Monitoring



Risk Based Monitoring Example



☐ **Physical Security Risk Element**

☐ **Complete risk assessment**

☐ **Audit Scope**

- Walk downs
- Internal controls review

☐ **Positive observations**

☐ **Scoping next engagement**



The background of the slide features a blurred image of the Texas state flag on the left and a close-up of a wind turbine's hub and blades on the right. The blades are white with red tips. A dark blue rounded rectangle is centered over the image.

Questions?



TEXAS RE

Ensuring electric reliability for Texans

The NERC logo consists of the letters "NERC" in a bold, black, sans-serif font. A horizontal blue bar is positioned directly beneath the letters.

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Standards Development

Texas RE Fall Standards, Security, & Reliability Workshop
Jamie Calderon, Director of Standards Development, NERC
November 5, 2025

RELIABILITY | RESILIENCE | SECURITY

Standards Effective 2026

Upcoming Areas of Focus

Modernization of Processes and Procedures Task Force

Outreach and Support



NERC facilitates the Standards Development process

The Drafting Team develops specifics

A strong Reliability Standard:

- Identifies responsible entity(ies) - WHO
- Specifies objectives – WHAT
- Specifies a periodicity – WHEN

A strong Reliability Standard does not specify the HOW

- Entity facts & circumstances must be considered
- Entities have flexibility in meeting objectives

Standards Effective in 2026

Reliability Standard Name	Standard #	Effective Date
Cyber Security – Security Management Controls	CIP-003-9	April 1 st
Transmission System Planning Performance Requirements for Extreme Temperature Events	TPL-008-1	April 1 st
Cyber Security – Communications between Control Centers	CIP-012-2	July 1 st
Frequency and Voltage Protection Settings for Synchronous Generators, Type 1 and Type 2 Wind Resources, and Synchronous Condensers	PRC-024-4	October 1 st
Frequency and Voltage Ride-through Requirements for Inverter-based Resources	PRC-029-1	October 1 st
Unexpected Inverter-Based Resource Event Mitigation	PRC-030-1	October 1 st
Transmission Operator and Balancing Authority Data and Information Specification and Collection	TOP-003-7	October 1 st

Order 901 – Milestone 4

- Planning and Operational Studies

Internal Network Security

Monitoring Standard Revision

Planning Energy Assurance

Risk Management for Third-party

Cloud Services



Draft Recommendations Posted: Focused on transforming Reliability Standards development in:

- Standard Initiation
- Standard Drafting
- Balloting

Feedback Deadline: Submit comments by Nov 10, 2025, 12:00 p.m. ET via standardized form (no character limit).

Forums for Input:

- Nov 13 – Salt Lake City
- Nov 19 – Atlanta
- Virtual option available (chat/Q&A only); in-person strongly encouraged.

Outreach Activities:

- Oct 20 webinar recording available on MSPPTF webpage.
- Presentations to NERC committees, trade groups, and Regional Entity events.

Next Steps: All input will inform final recommendations to be presented in early 2026.



New Website

More Technical Workshops

More concise and clear updates

- Standards Quarterly Video Updates
- Structured Project Webinars
- Summary Documents/Videos

More direct outreach to commenters

A map of North America, including the United States, Canada, and Mexico. A horizontal band of three shades of blue (light, medium, and dark) stretches across the middle of the map, passing through the United States. The text "Questions and Answers" is centered within this band.

Questions and Answers

Wrap-Up



Thank you for coming!

You will receive a short survey via e-mail. Please complete it to help Texas RE develop future outreach.

