

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Standards Process Stakeholder Engagement Policy Input

Howard Gugel, Vice President of Engineering and Standards
MRC Meeting
November 15, 2022

RELIABILITY | RESILIENCE | SECURITY



- Proposal
- Questions and responses
- Next steps

- Amy Casuscelli, SC
- Paul Choudhury, MRC
- Jennifer Flandermeyer, MRC
- Greg Ford, RSTC
- Rich Hydzik, RSTC
- Roy Jones, MRC
- Commissioner Matt Schuerger, MRC
- Brian Allen Slocum, RISC
- Scott Tomashefsky, CCC
- Sue Kelly, NERC Board
- Rob Manning, NERC Board
- Roy Thilly, NERC Board

- Stakeholder group met to develop recommendations
- Posted recommendations for policy input
- Recommendations in four areas
 - Rules of Procedure
 - Standard Processes Manual
 - Standing Committees
 - Registered Ballot Body

- Remove American National Standards Institute (ANSI) accreditation requirement
 - Broad support – stay consistent with ANSI Essential Principles
- Board authority to direct standards
 - Concern with consistency with ANSI principles
 - Concern with impact on stakeholder engagement
 - Suggest guardrails be put in place
 - Consider other tools (Alert level 3, technical workshops)
 - Note past lost language from Section 321 filing
 - Add “security” to “reliability”
 - Ensure consensus building in process

- Last sentence of 309.2:

“If the Board of Trustees determines that the **standards** process did not result in a Reliability Standard that **adequately** addresses a specific matter that is identified in a directive issued by an Applicable Governmental Authority, then Rule 321 of these Rules of Procedure shall apply.”

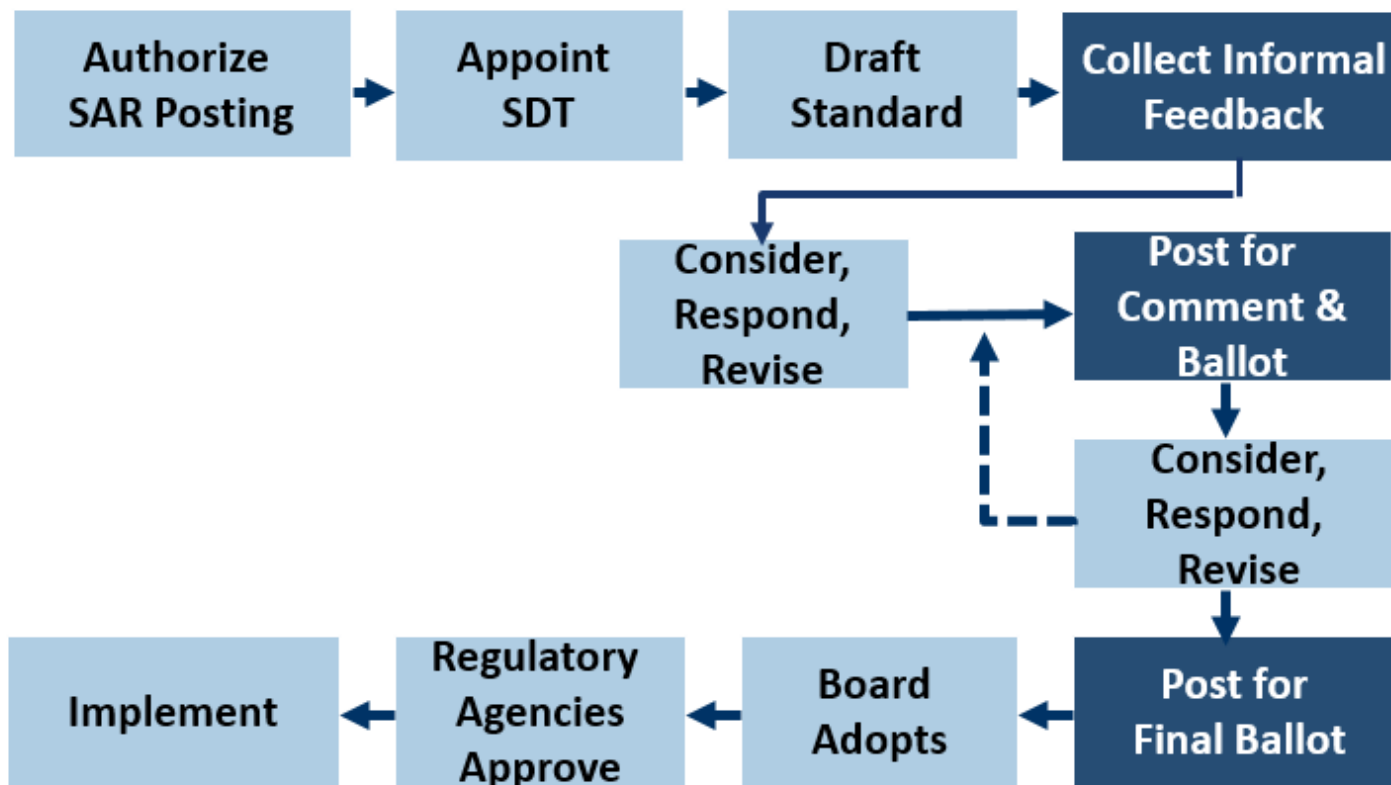
- Last sentence of 309.3:

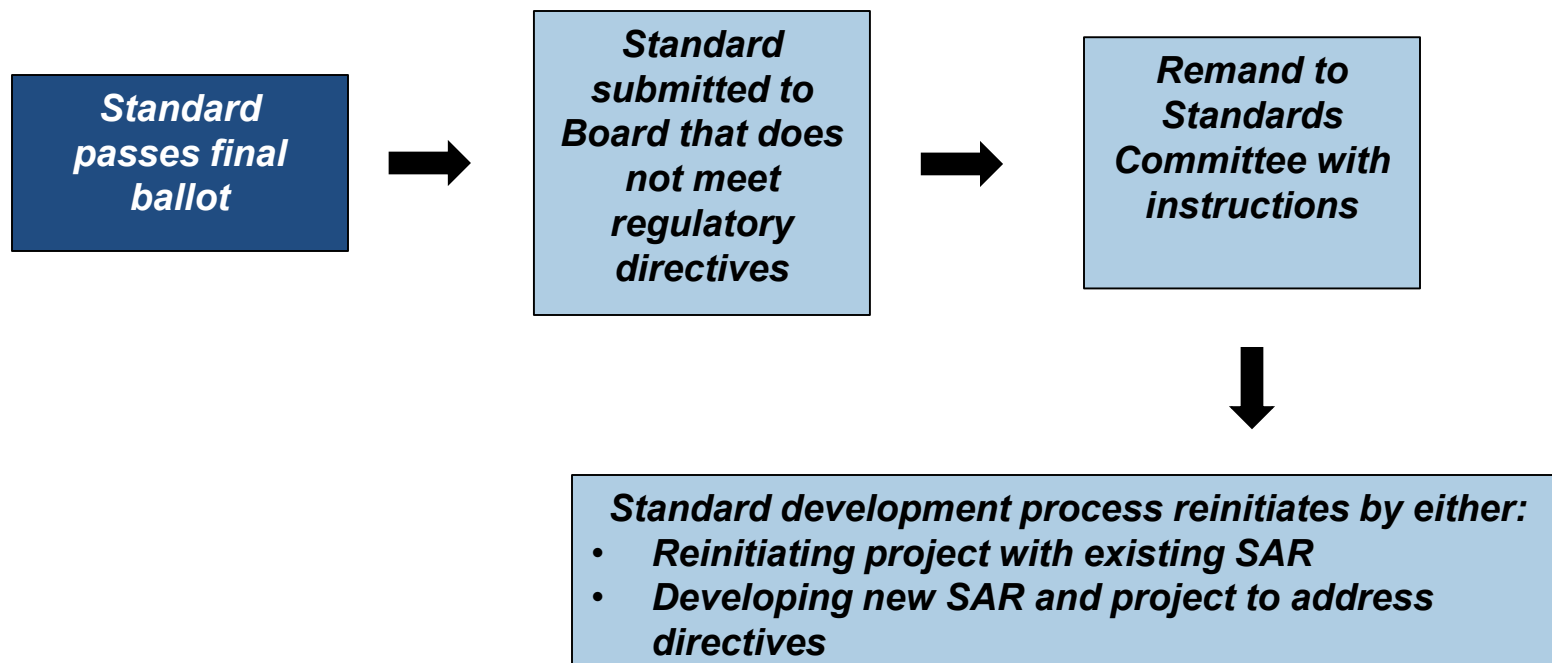
“If the Board of Trustees determines that the **standards** process did not result in a Reliability Standard that **adequately** addresses a specific matter that is identified in a directive issued by an Applicable Governmental Authority, then Rule 321 of these Rules of Procedure shall apply, with appropriate modification of the timeline.”

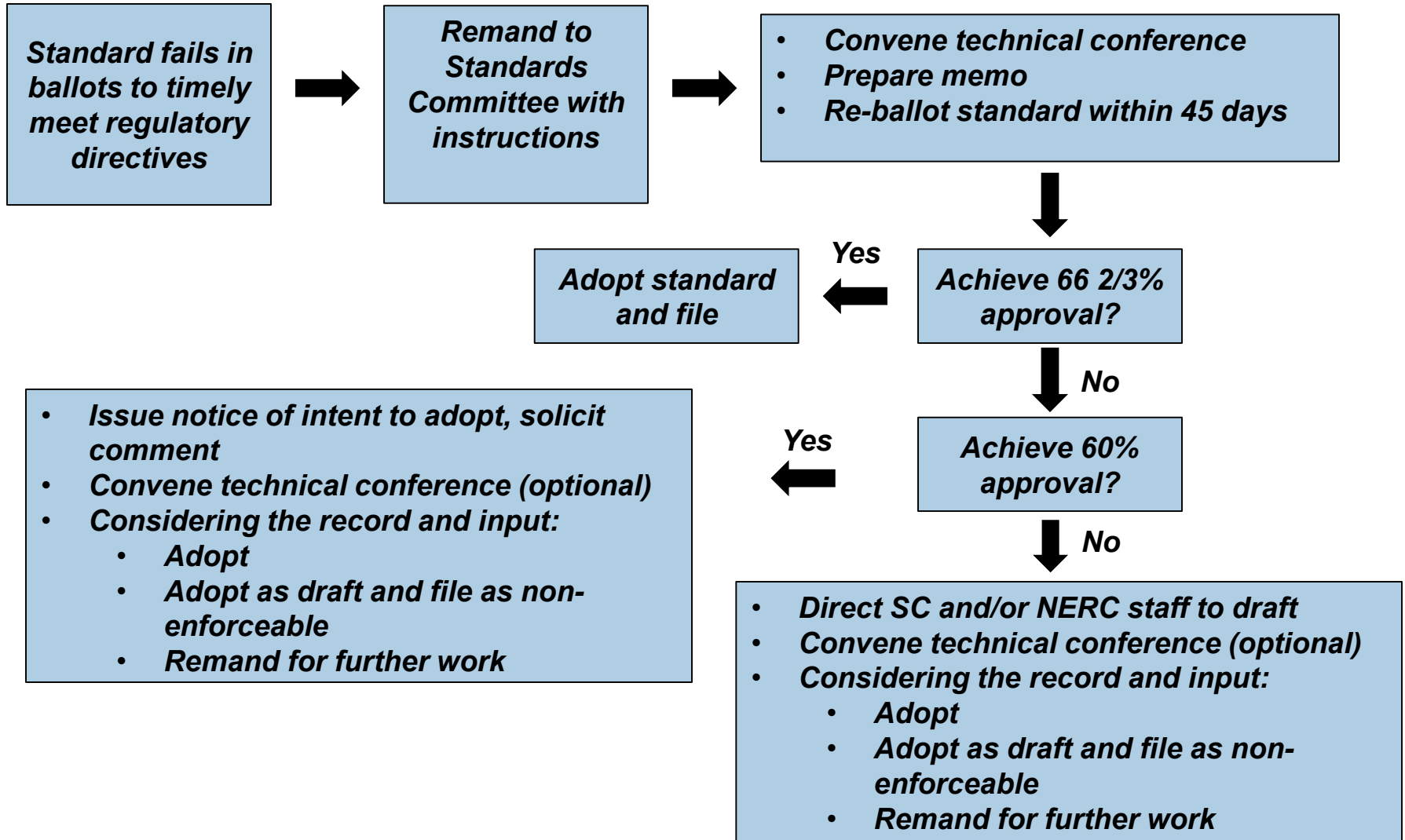
- Introduction to 321:

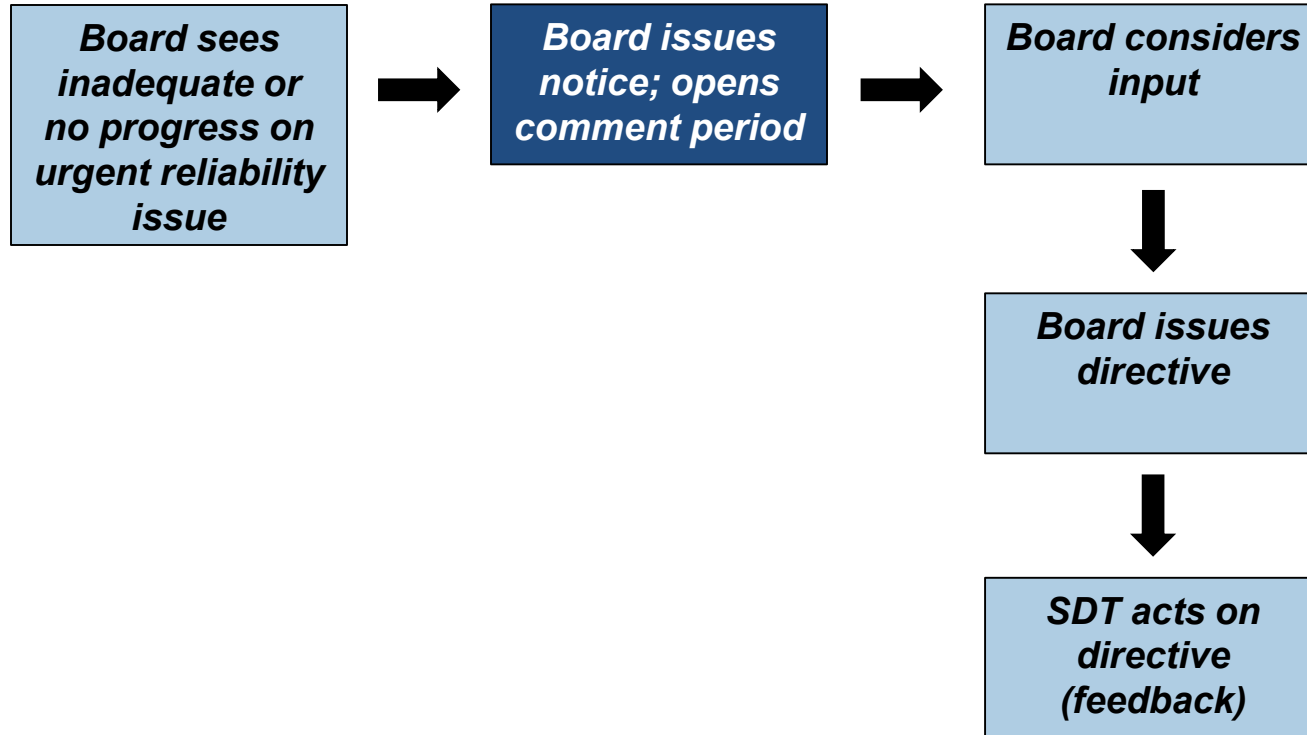
“In circumstances where this Rule 321 applies, the Board of Trustees shall have the authority to take one or more of the actions set out below. The Board of Trustees shall have the authority to choose which one or more of the actions are appropriate to the circumstances and need not take these actions in sequential steps; **provided that the Board of Trustees shall, to the extent feasible and consistent with its obligations and established deadlines, choose actions that seek to maximize stakeholder participation.**”

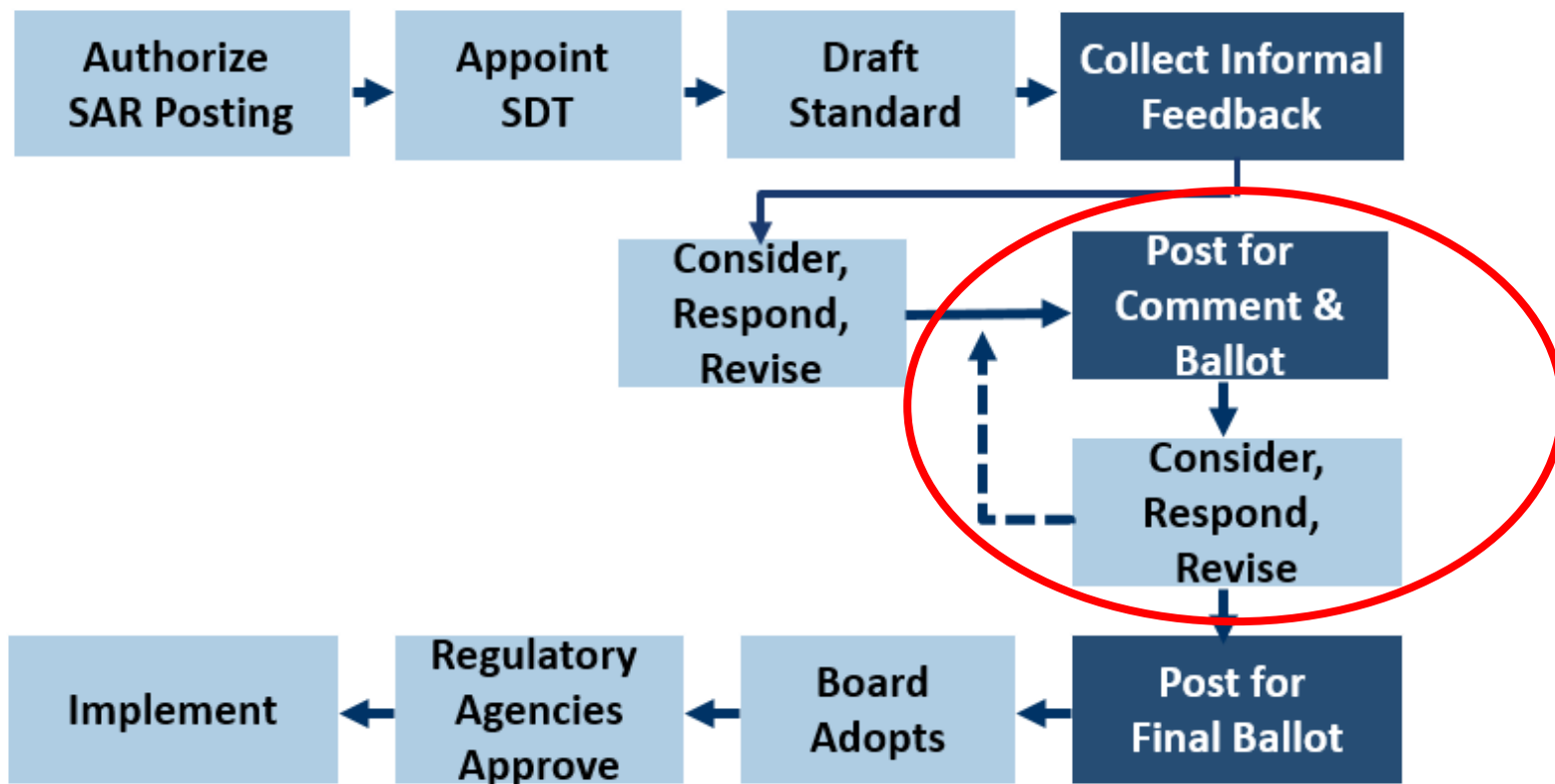
- Rules 321.1 and 321.2 would refer to the process producing Reliability Standards that do not **adequately** address directives
- Rule 321.2, add requirement to **“use the input from the technical conference to revise the proposed Reliability Standard, as appropriate.”**

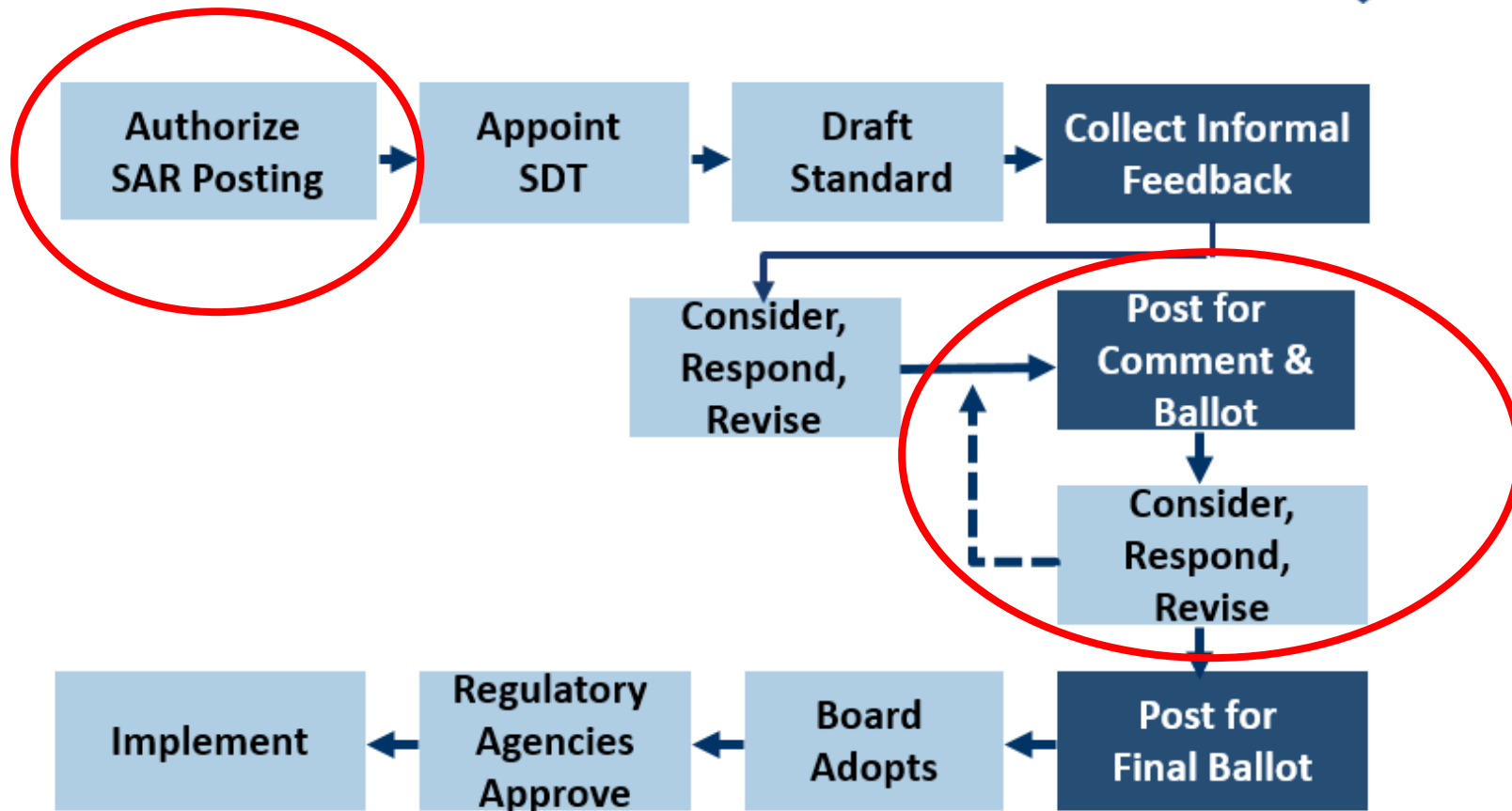


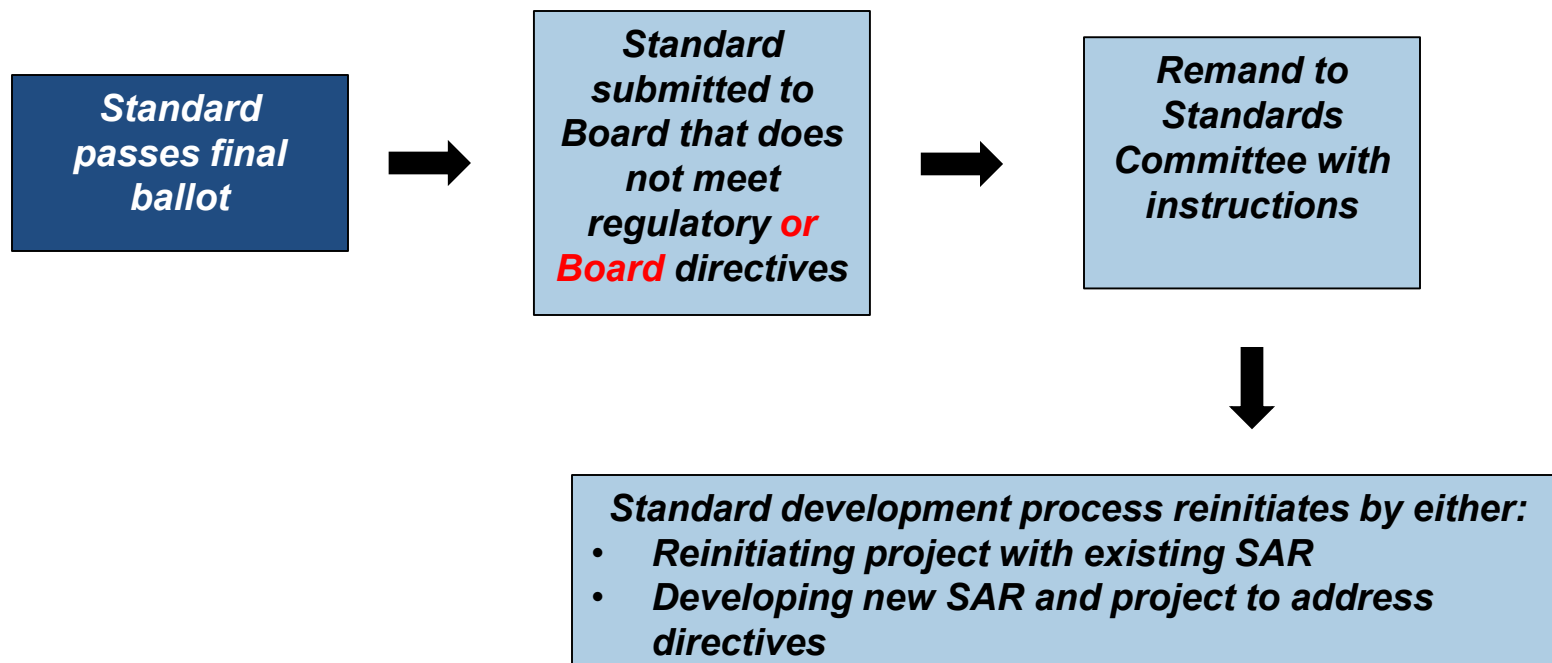


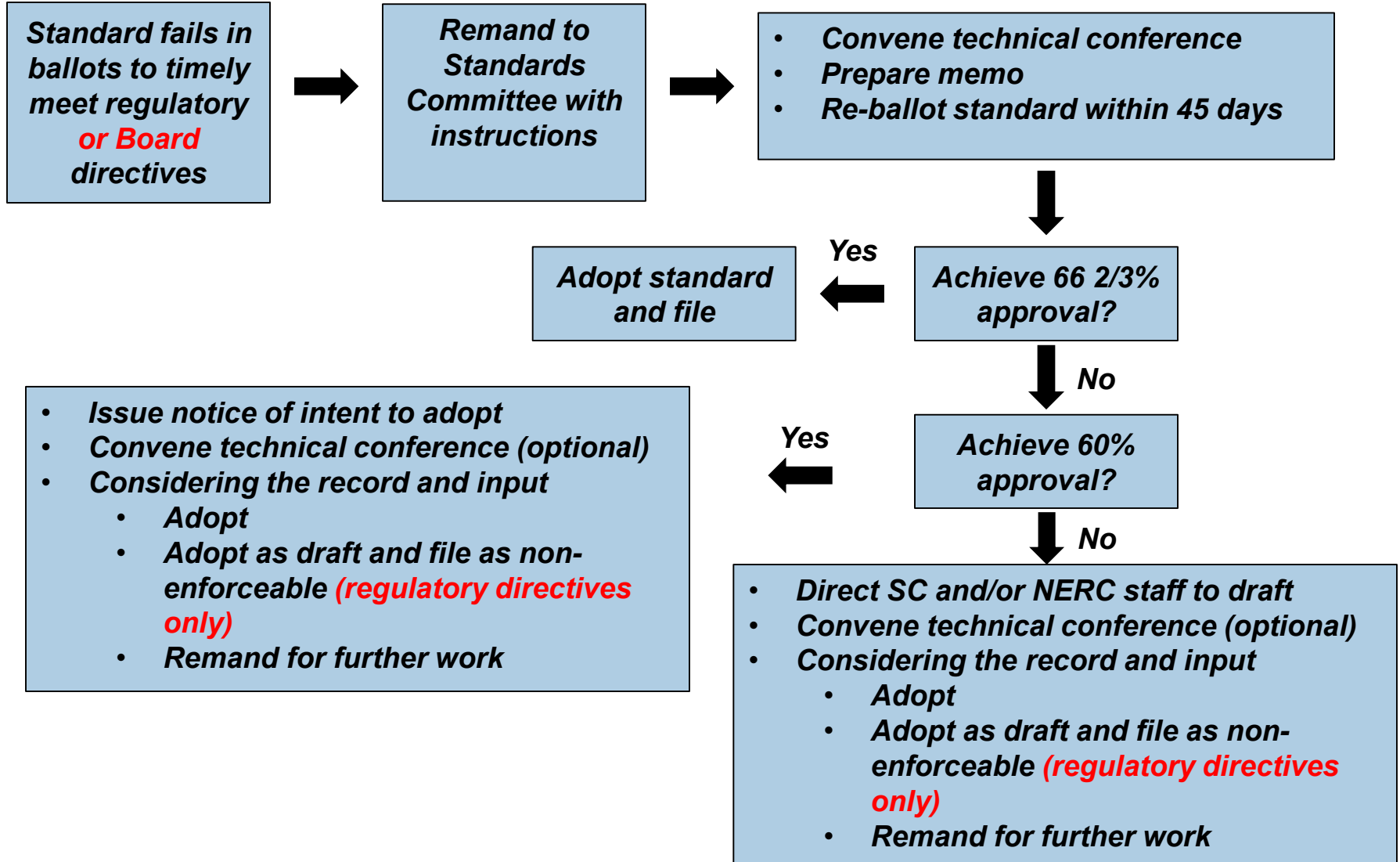












- Broad support – stay consistent with ANSI Essential Principles
- Concerns about elimination of final ballot
- Concerns about only NERC staff on interpretation drafting teams
- Risk-based review of standards
- Support Standards Committee (SC) rejection of Standard Authorization Request (SAR) with no industry consensus
- Concerns about tiered commenting
- Suggests “early adaption” period to voluntarily accelerate migration to new standards without penalty

- Support for recommendations
- Upfront investment in Reliability and Security Technical Committee (RSTC) will pay off in standards process
- Concerns about expanding Standards Committee Executive Committee (SCEC) authority
- Standard Drafting Teams (SDTs) develop implementation guidance prior to ballot process

- Support for review
- Concern about elimination of segments based on participation
- Do not reduce stakeholder engagement

- More technical expertise on drafting teams
- Focus on Inverter-based Resource (IBR)/ Distributed Energy Resource (DER)
- Focus on entities that can address the risks, rather than those with no direct control
- Consider more front-end outreach before posting any additional changes for formal comment
- Do not sacrifice quality for expediency



Questions and Answers



Update on FERC Activities

Kal Ayoub, Deputy Director, Division of Cyber Security

November 15, 2022

The views expressed in this presentation are my own and do not represent those of the Commission or any individual Commissioner.

FERC Reliability-Related Activity (August – November 2022)

- Implementing Recommendations of FERC-NERC Inquiry on 2021 Cold Weather Event
- Cybersecurity Incentives Proposed Rule and Other Reliability Orders
- 2022 Report on Lessons Learned from the FERC-led Cybersecurity Audits
- FERC Technical Conferences
- Joint Federal–State Task Force on Electric Transmission



FERC-NERC Cold Weather Inquiry: NAESB Gas-Electric Forum

- **July 29, 2022** Chairman Glick and Mr. Robb recommended that NAESB convene a forum to address Recommendation 5.
- **Recommendation 5:** FERC should consider establishing a forum. . . .to identify concrete actions (consistent with the forum participants' jurisdiction) to improve the reliability of the natural gas infrastructure system necessary to support bulk-power system reliability.
- **Goals:**
 - ✓ Concrete actions to increase reliability of the natural gas infrastructure system necessary to support [the] Bulk Electric System;
 - ✓ Plans for implementing actions;
 - ✓ Deadlines for implementing actions; and
 - ✓ Identifying entities responsible for implementing actions.
- **[NAESB Gas-Electric Forum meetings](#):** September 23, 2022; October 21, 2022; November 8, 2022; and December 1, 2022. Meetings are open to the public.



2021 FERC-NERC Cold Weather Inquiry: Cold Weather Reliability Standards

- October 28, 2022 – NERC filed Extreme Cold Weather Grid Operations, Preparedness, and Coordination Reliability Standards for approval in Docket No. RD23-1. Comments are due December 1.
- Revisions address the reliability-related findings of the Joint Inquiry into the February 2021 Cold Weather Outages in Texas and South-Central United States and five of the recommendations for new or enhanced Reliability Standards proposed in the [Joint Report](#).
- Represents the first phase of a two-phase effort to implement Recommendation 1 of the 2021 inquiry.
- The proposal:
 - Revised Reliability Standards EOP-011-3 Emergency Operations and adds a new EOP-012-1 Extreme Cold Weather Preparedness and Operations;
 - Adds three definitions; and
 - Retires EOP-011-2 Emergency Preparedness and Operations.



Security and Reliability-Related Issuances

- **Order accepting FY2023 Business Plans and Budgets and directing a Compliance filing**, issued November 2, 2022 (Docket No. RR22-4-000).
- **NOPR on Incentives for Advanced Cybersecurity Investment**, issued September 22, 2022 (Docket Nos. RR22-19-000 and RM21-3-000).
 - NOPR proposes to revise its regulations to provide incentive-based rate treatments for investments by utilities in advanced cybersecurity technology and participation by utilities in cybersecurity threat information sharing programs, as directed by the Infrastructure Investment and Jobs Act of 2021.
 - NOPR terminates the NOPR proceeding in Docket No. RM21-3-000 (December 2020 Cybersecurity Incentives NOPR), in which NERC and the Regional Entities filed joint comments on April 6, 2021.
- **Order approving revisions to the Rules of Procedure**, issued August 25, 2022 (Docket No. RR21-8-000). Order approves revisions to:
 - development of Reliability Standards;
 - election of Standard Committee members; and
 - development of the Registered Ballot Body.



Lessons Learned from CIP Reliability Audits

- FERC staff issued its [annual report](#) on lessons learned from the non-public CIP audits of registered entities. It found that most cybersecurity protection measures adopted by entities met the mandatory requirements of the CIP reliability standards.
- The report recommends cybersecurity practices that include processes, procedures and technical controls to mitigate risks.
 - Re-evaluate policies, procedures, and controls for low-impact cyber systems and associated cyber assets (CIP-003);
 - Address risks posed by bulk electric system cyber assets that have reached the manufacturer-determined end of life or service and no longer are supported by vendors (CIP-007);
 - Deploy a comprehensive malicious code prevention program for all cyber assets within a bulk electric system cyber system (CIP-007);
 - Implement comprehensive vulnerability assessment processes for applicable cyber assets (CIP-010); and
 - Review and validate controls used to mitigate software vulnerabilities and malicious code on transient cyber assets managed by a third party (CIP-010).



Technical Conferences

- [*Transmission Planning and Cost Management Technical Conference*](#) was held on October 6, 2022. AD22-8-000. The technical conference explored measures to ensure sufficient transparency into and cost effectiveness of local and regional transmission planning decisions.
- [*New England Winter Gas-Electric Forum*](#) was held on September 8, 2022. AD22-9-000. The Commissioner-led forum discussed the electricity and natural gas challenges facing the New England Region.
- [*Annual Commissioner-led Reliability Technical Conference*](#) will be held on November 10, 2022. AD22-10-000. The conference will discuss policy issues related to the reliability and security of the Bulk-Power System. Panel I will explore Managing the Electric Grid to Advance Reliability; and Panel II will explore Managing Cyber Security Threats, CIP Reliability Standards and best practices for the Bulk-Power System.
- [*Establishing Interregional Transfer Capability Transmission Planning and Cost Allocation Requirements Workshop*](#) will be held on December 5-6, 2022. AD23-3-000. The workshop will discuss whether and how the Commission could establish a minimum requirement for interregional transfer capability for public utility transmission providers in transmission planning and cost allocation processes.
- [*Supply Chain Risk Management Technical Conference*](#) will be held on December 7, 2022. AD22-12-000. DOE's Office of Cyber Security, Energy Security, and Emergency Response (CESER) and FERC's Office of Electric Reliability will hold a technical conference to discuss supply chain security challenges related to the Bulk-Power System, ongoing supply chain-related activities, and potential measures to secure the supply chain for the grid's hardware, software, computer, and networking equipment.



Joint Federal-State Task Force on Electric Transmission

- **Announced** (June 17, 2021, in Docket No. AD21-15). The purpose is to encourage cooperation and communication between federal and state regulators on electric transmission related issues.
- **The First meeting** (November 10, 2021) focused on incorporating state perspectives into regional transmission planning.
- **The Second meeting** (February 16, 2022) focused on categories and types of transmission benefits that should be considered in transmission planning and cost allocation and its principles.
- **The Third meeting** (May 6, 2022) focused on examining barriers to the efficient, expeditious, and reliable interconnection of new resources through the FERC-jurisdictional interconnection processes.
- **The Fourth meeting** (July 20, 2022) focused on Interregional Transmission Planning and Project Development
- **The Fifth meeting** (November 15, 2022) will focus on addressing regulatory gaps and challenges in oversight of transmission development.

Recordings of these meetings are available at [Joint Federal-State Task Force on Electric Transmission](#).



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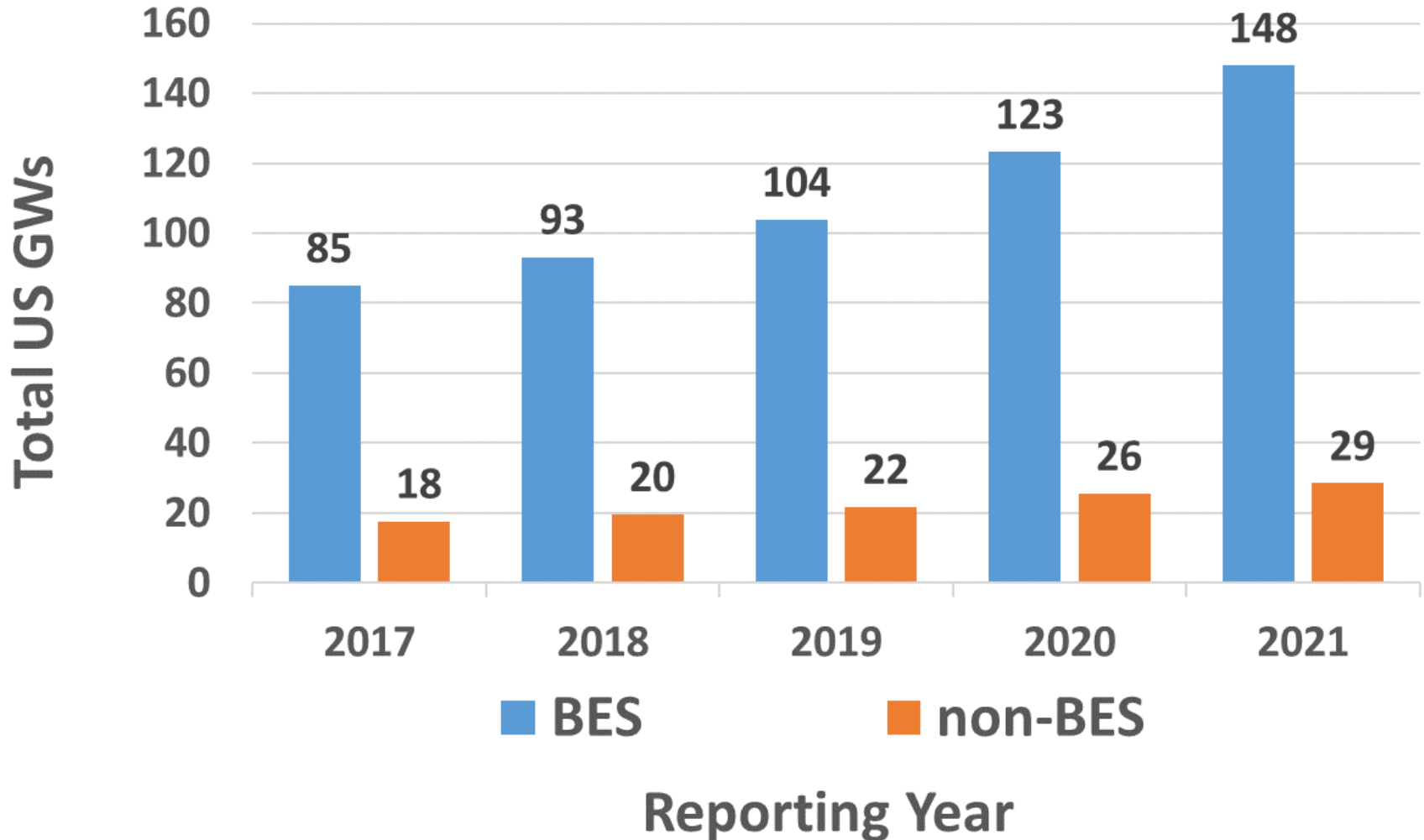
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Bulk Electric System Generation Mix Projections

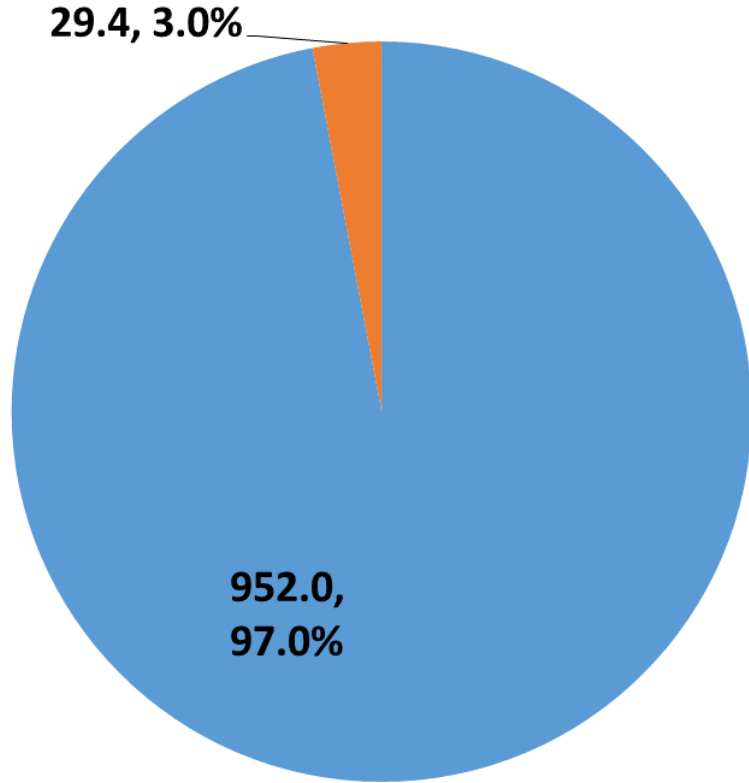
Soo Jin Kim, Director, Power Risk Issues and Strategy Management
Member Representatives Committee Meeting
November 15, 2022

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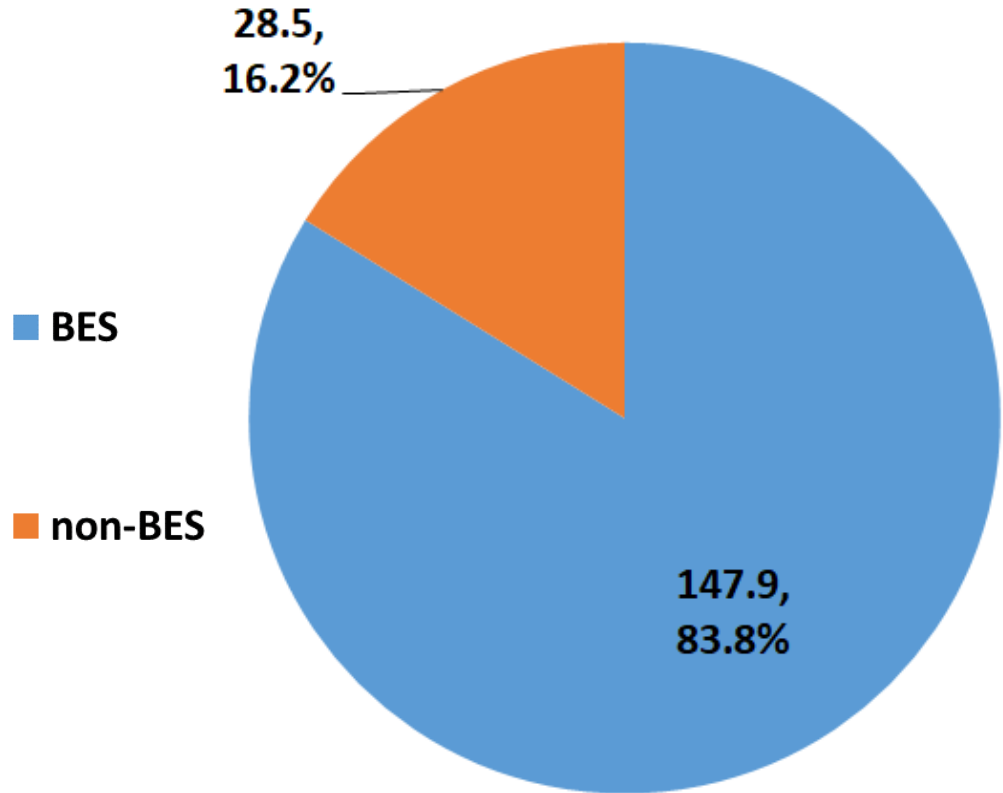




2021 Non-BES Gap - Asynchronous



BPS Synchronous GW, % Share



BPS Asynchronous GW, % Share

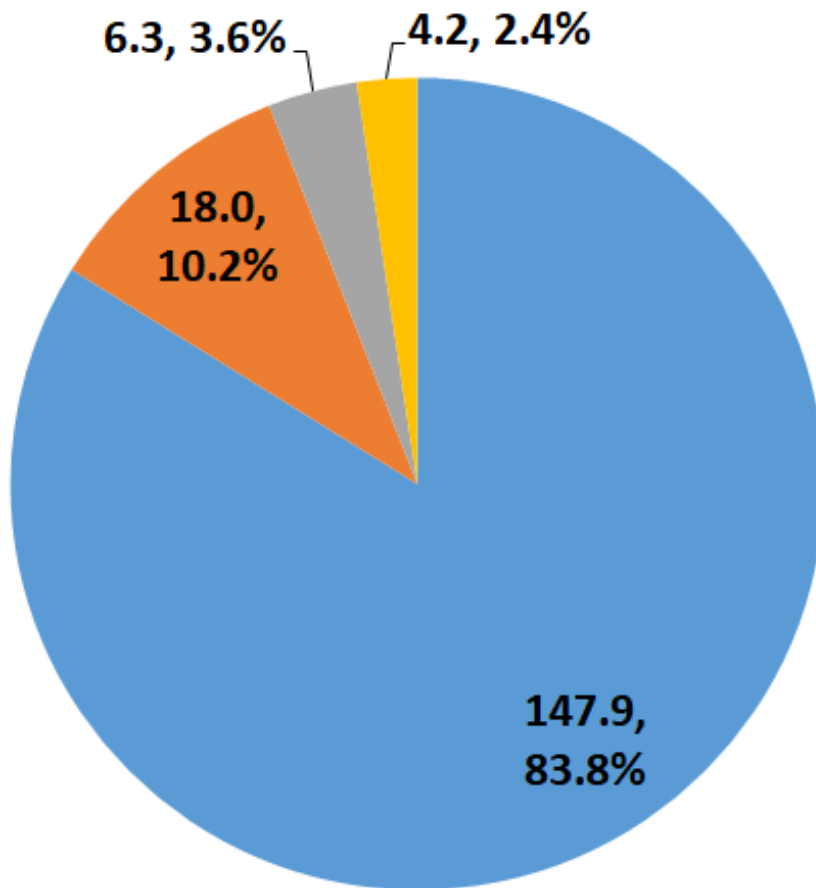
■ BES
■ non-BES

- **BES**

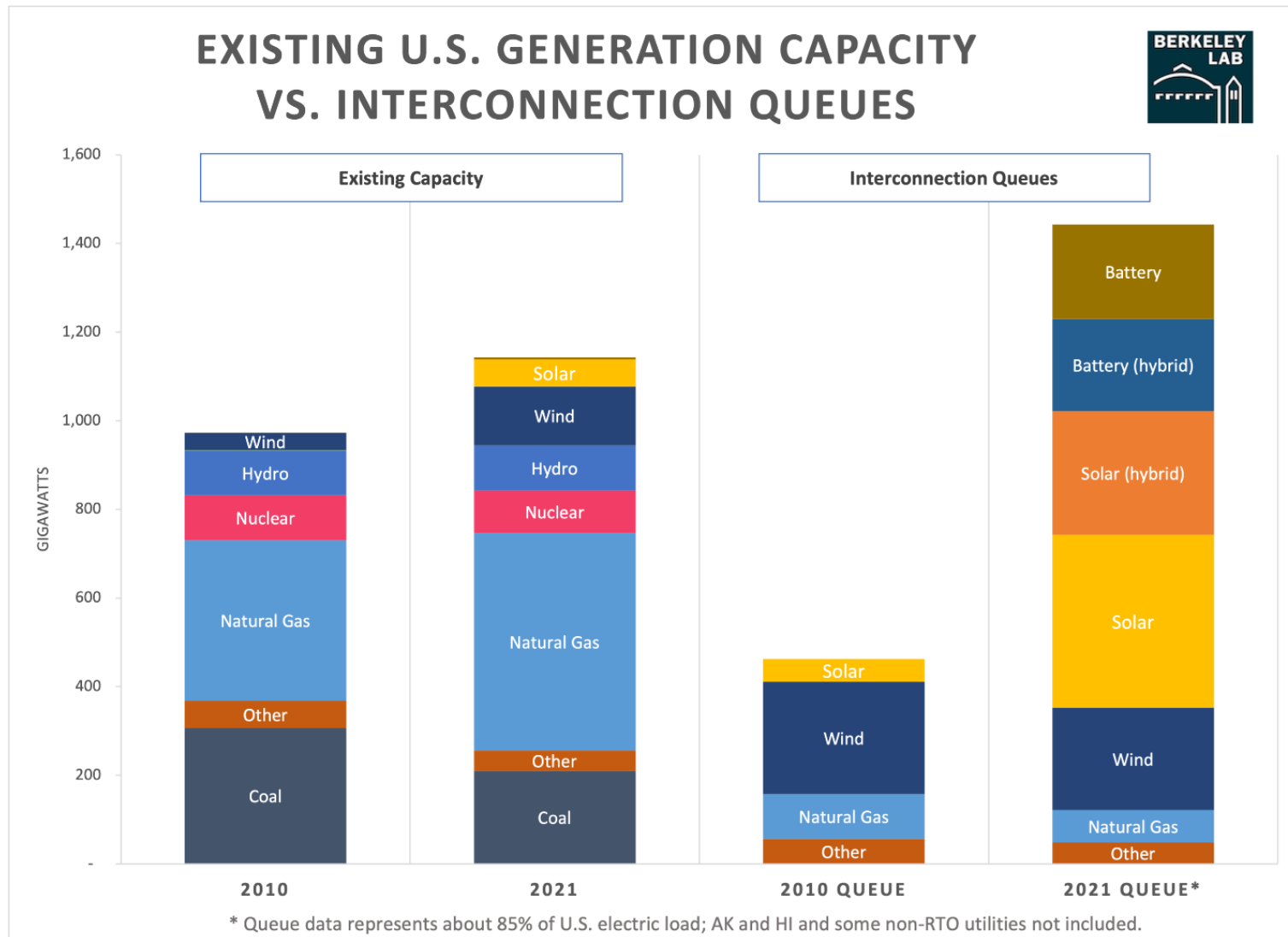
- 148 GWs (84%)
 - >75 MW
 - Connected ≥ 100 kV

- **Non-BES**

- 18 GWs (10%)
 - >20 MW & ≤ 75 MW
 - Connected at ≥ 100 kV
- 6 GW (4%)
 - >20 MW & ≤ 75 MW
 - Connected at <100 kV
- 4 GW (2%)
 - ≤ 20 MW
 - Connected at any voltage



BPS Asynchronous GW, % Share



- An executive advisory group has been formed
 - An ERO task force will provide input
- The RSTC has formed a strategic group to look at inverters generally



Questions and Answers

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Bulk Power System Awareness and 2022/2023 Winter Preparations

Situational Awareness 2022

Darrell Moore, Director, Bulk Power System Awareness and Personnel
Certification

Member Representatives Committee Meeting

November 15, 2022

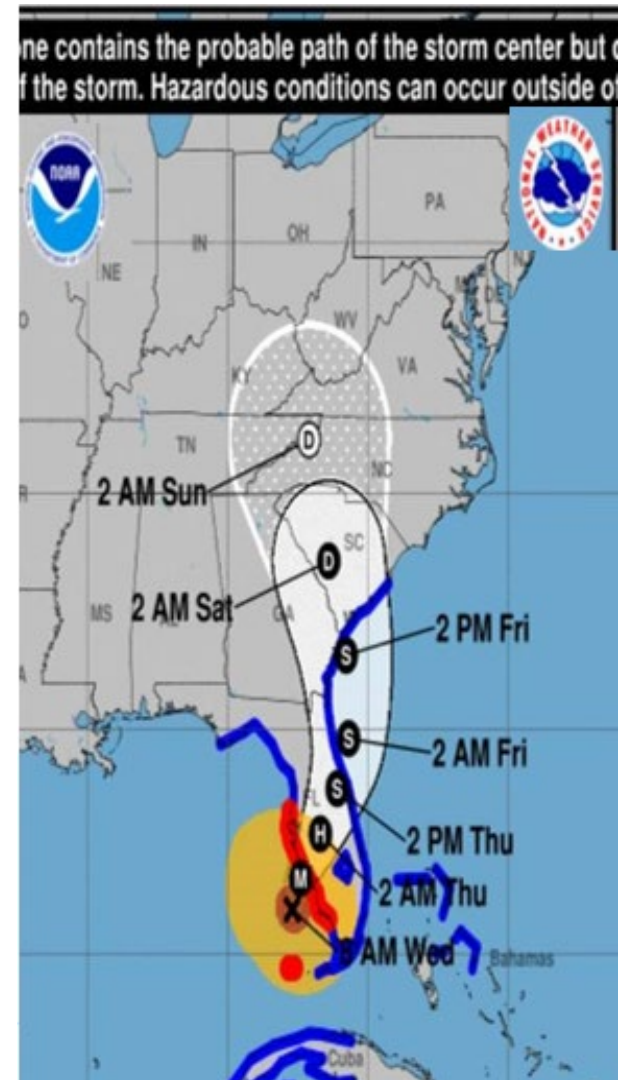
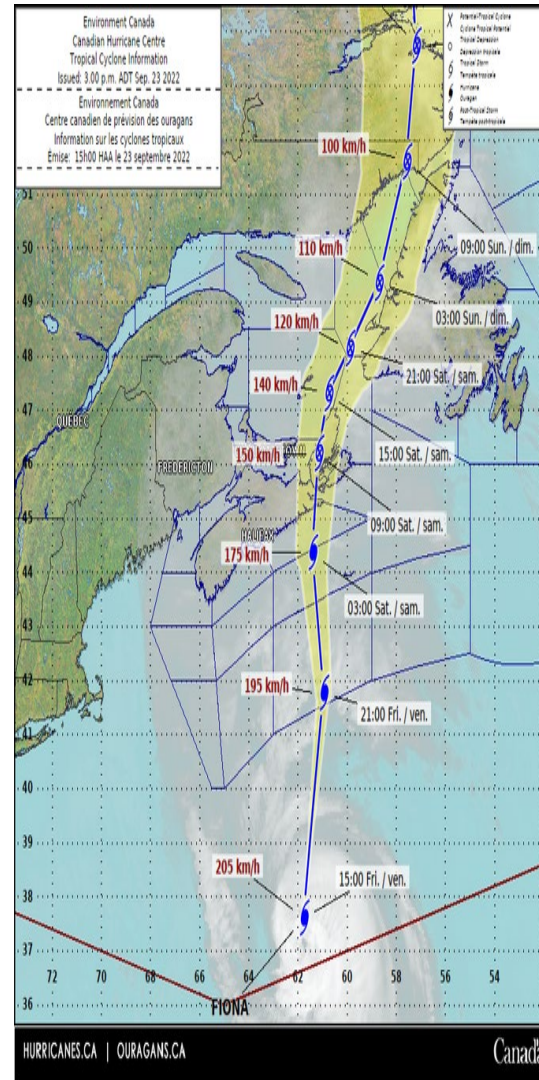
RELIABILITY | RESILIENCE | SECURITY

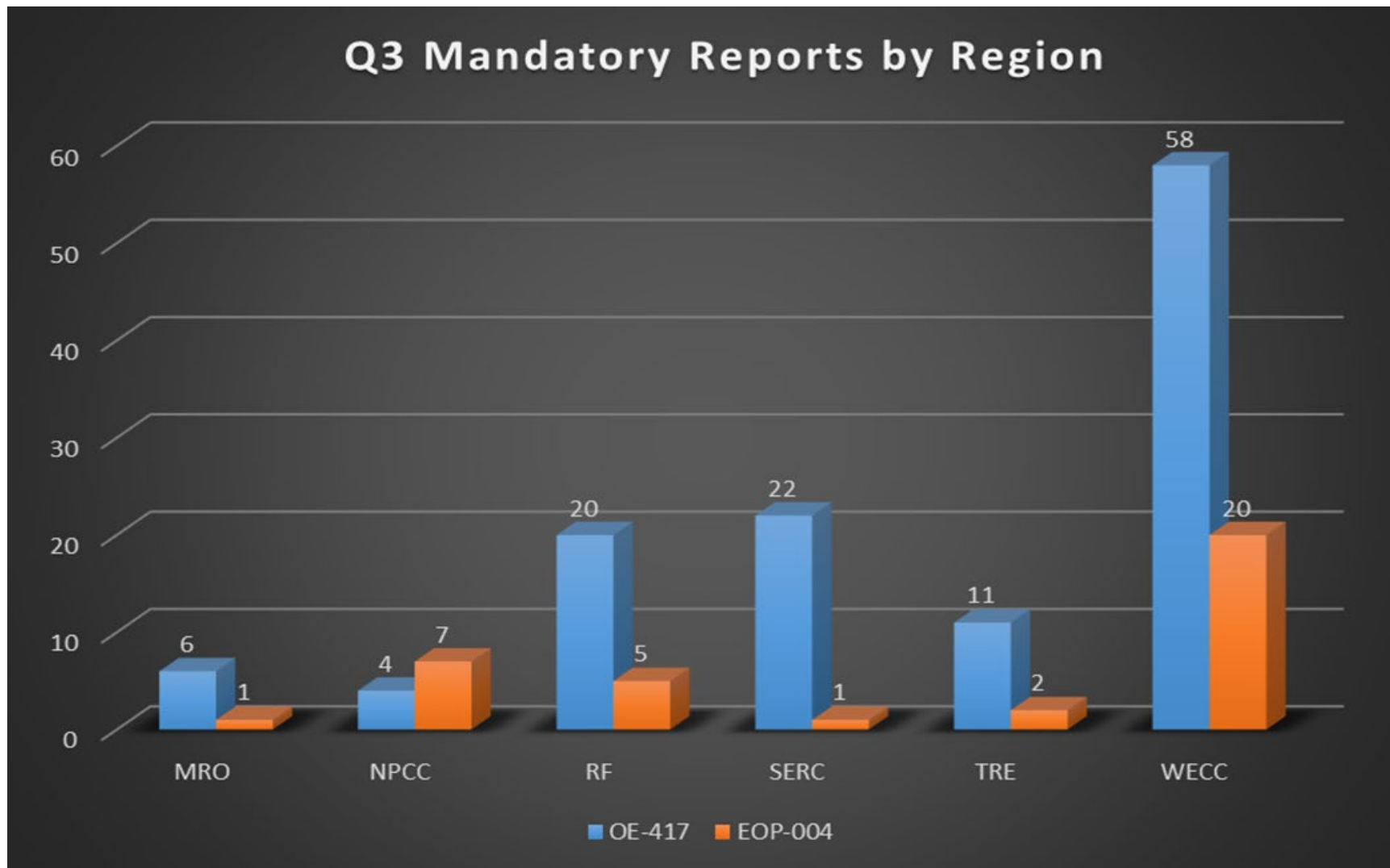


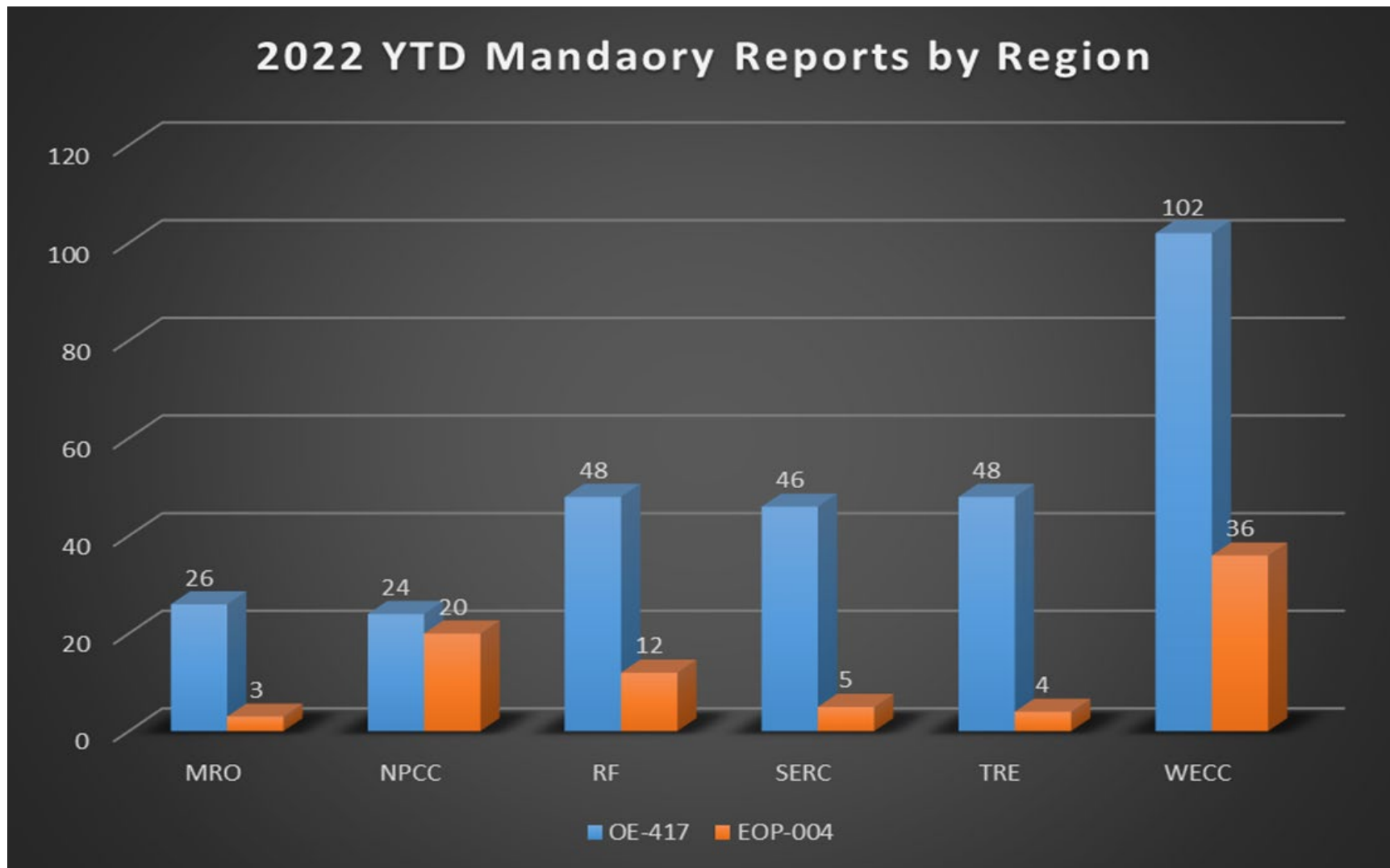
For the Third Quarter of 2022, there were several significant events that impacted the North American bulk power system.

- The August 28-September 5 Western Interconnection heat wave.
- Hurricane Fiona made landfall in Nova Scotia on Saturday September 24 2022 as a category 1 hurricane.
- Hurricane Ian made landfall in Florida on Wednesday September 28, 2022 as a category 4 hurricane.

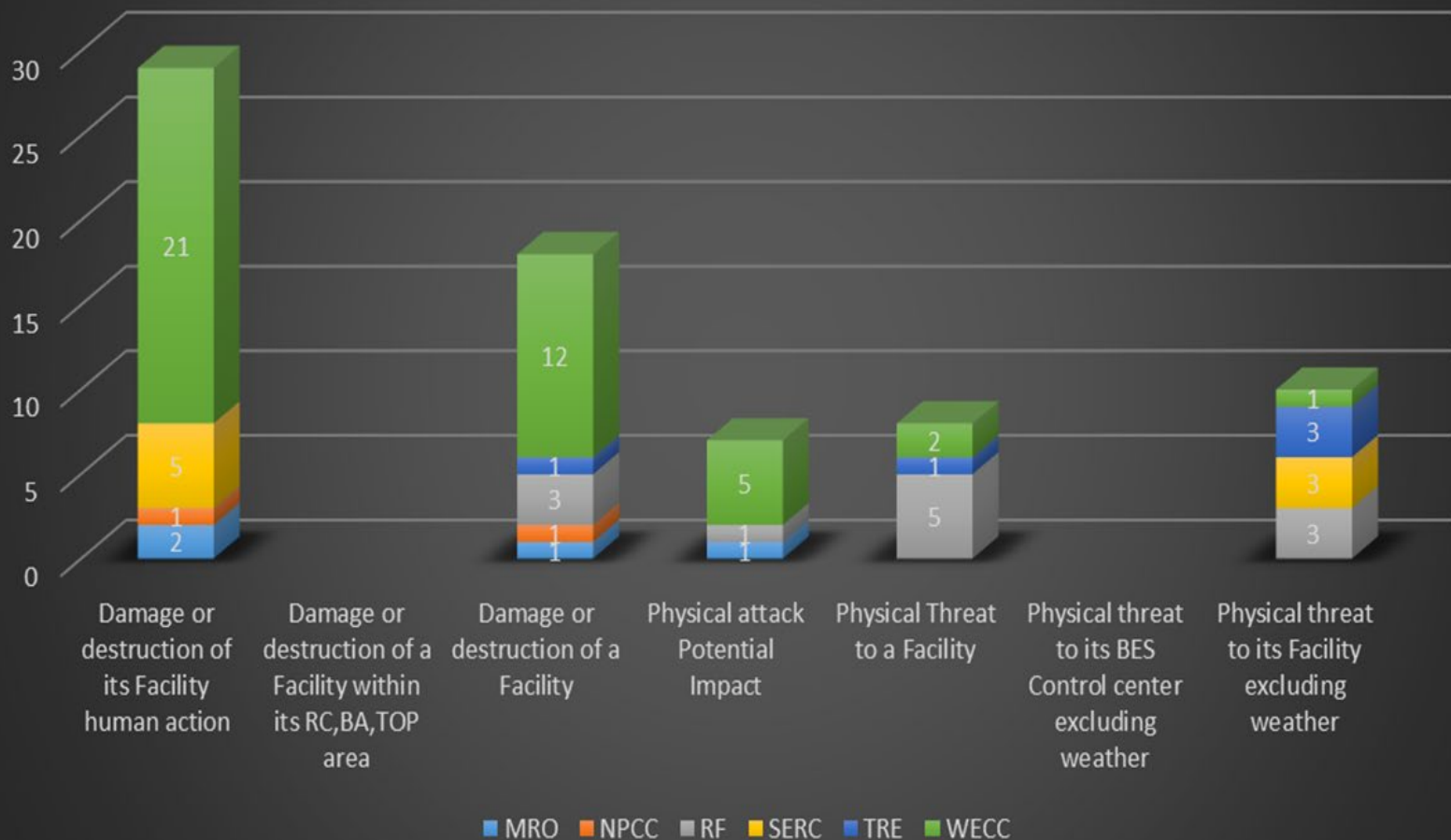
Western Interconnection Heat Wave, Hurricanes Fiona and Ian

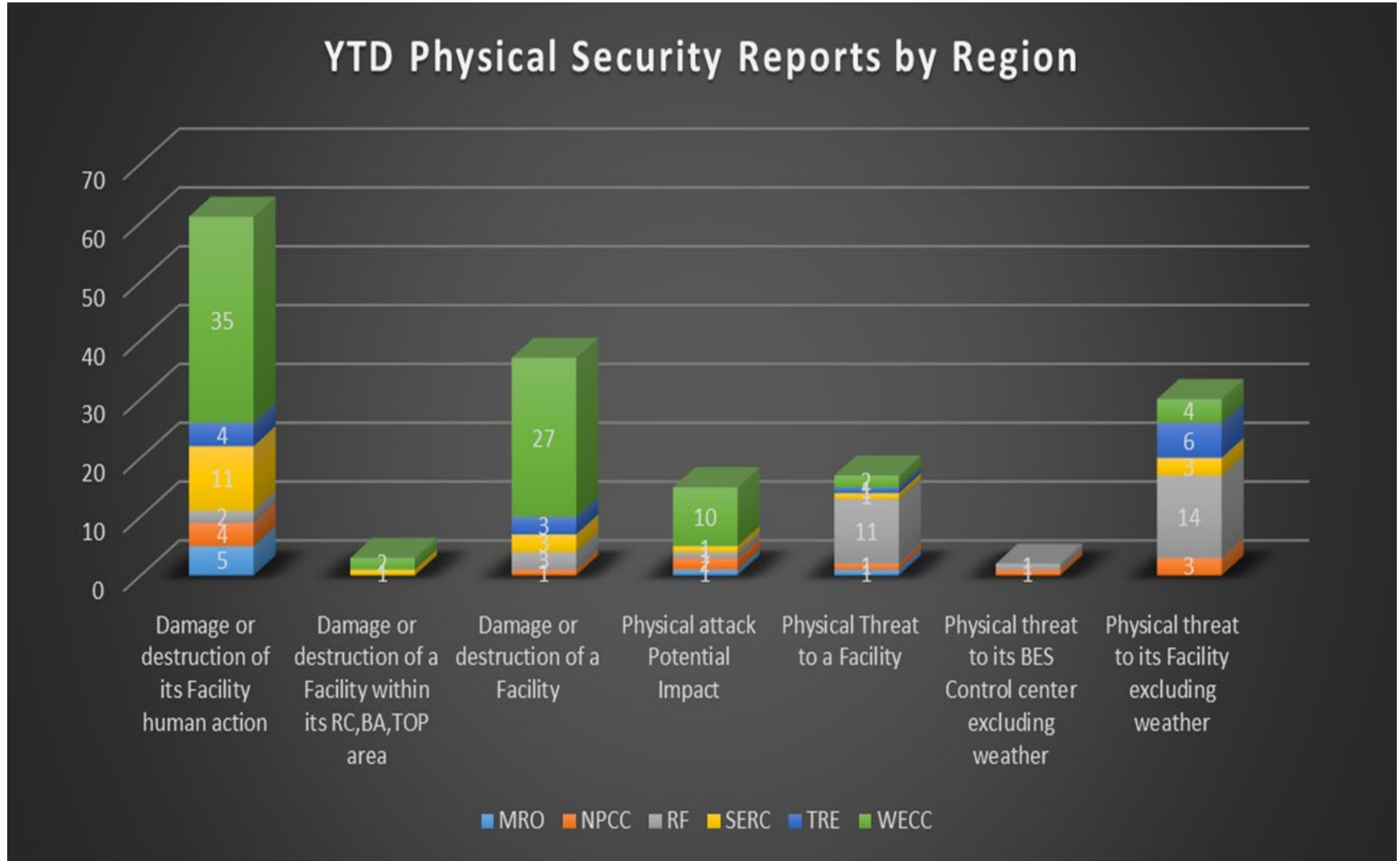




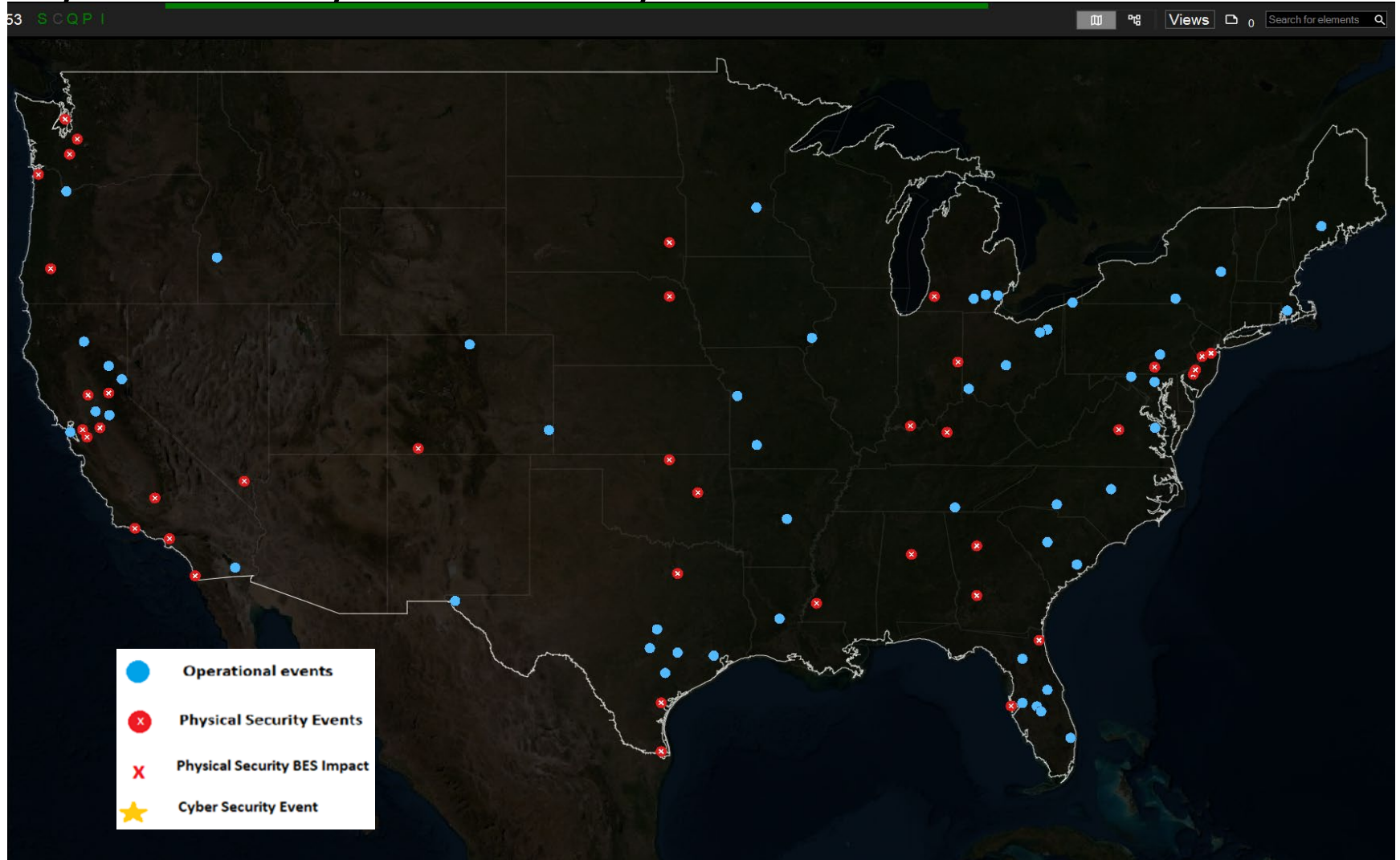


Q3 2022 Physical Security Reports by Region

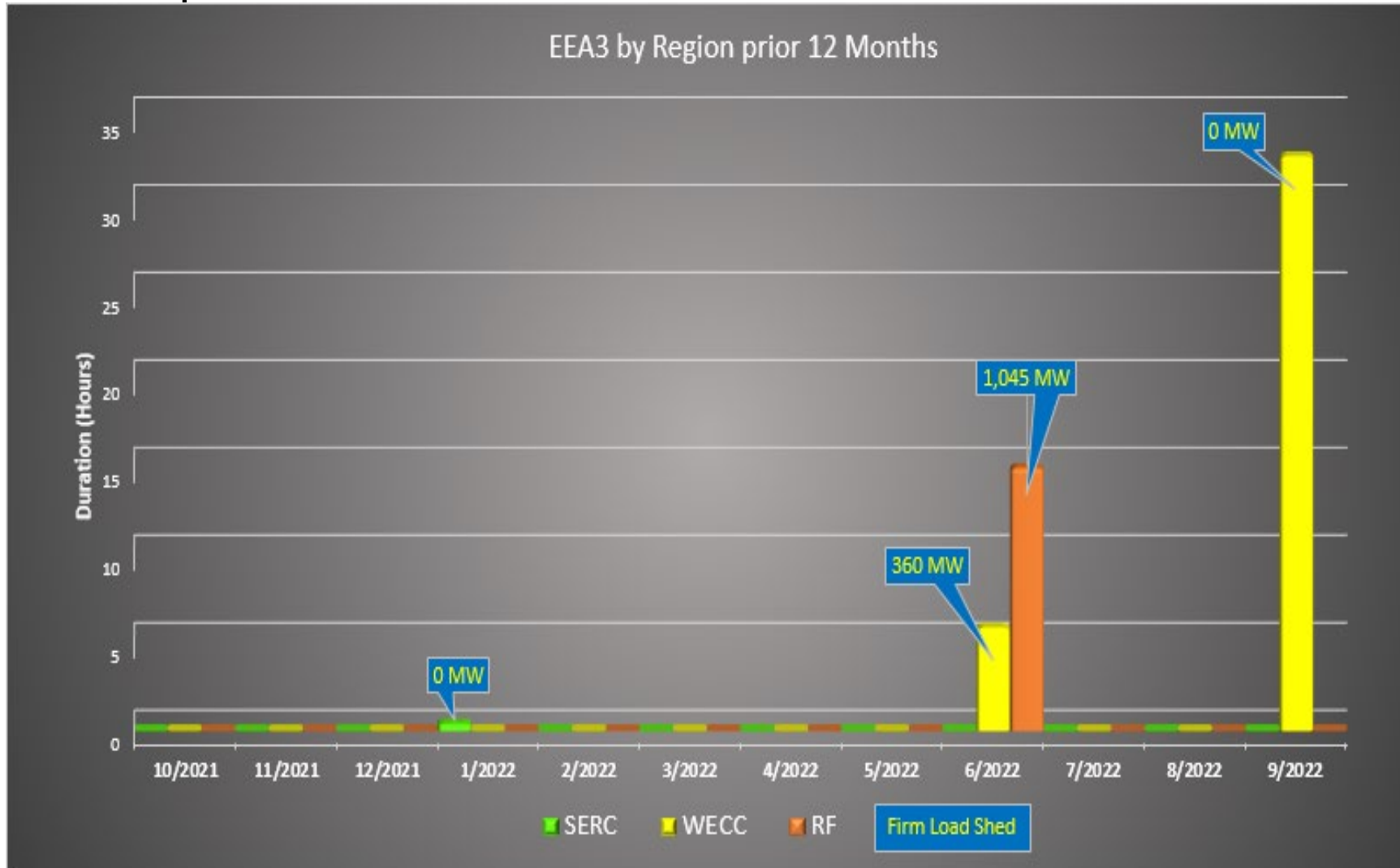




Physical Security and Reliability Events



EEA3 Reports – 12 month view

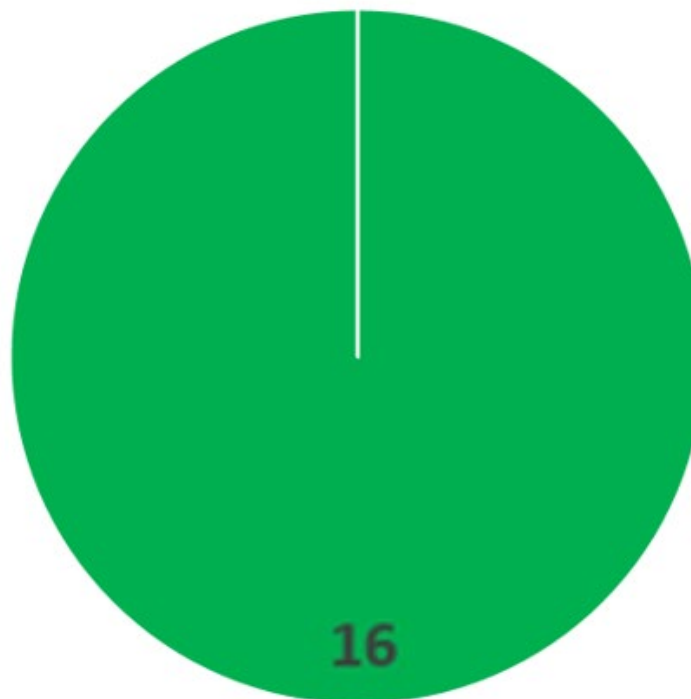


Cold Weather Events II Report

- Do your Operating Plans account for situational awareness of GO Fuel (Supply and transportation) and unit availability?

RC-1 United States

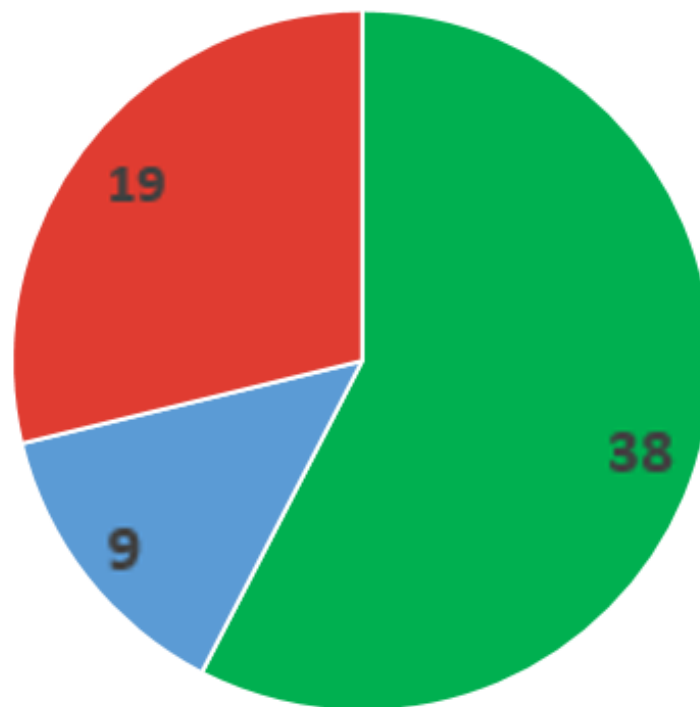
- A.Yes
- B.No, and we have no plans to modify our plans
- C.Not applicable, we are not registered as a RC



- Do you conduct a seasonal energy and capacity assessment for extreme winter weather scenarios at least two months prior to the winter season?

BA-1 United States

- A.Yes
- B.No, however we plan to conduct such an assessment
- C.No, and we have no plans to conduct such an assessment



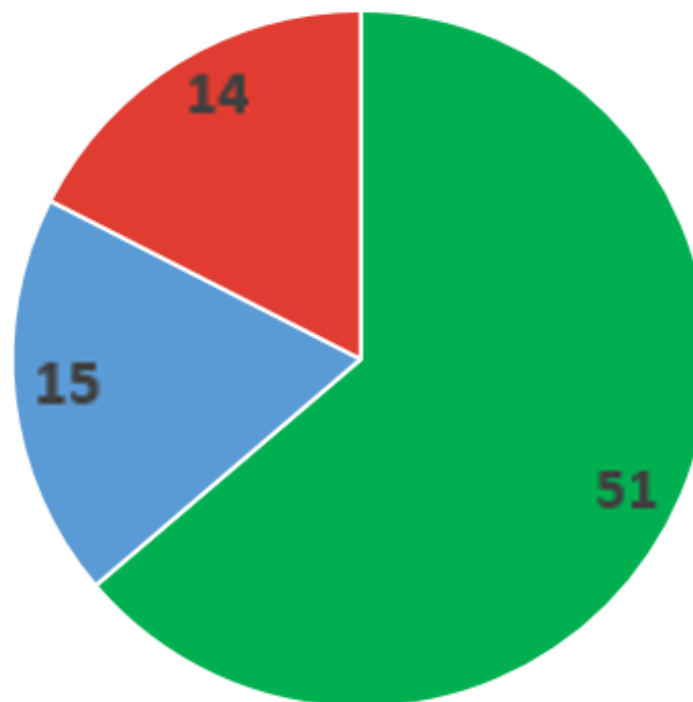
- Do you provide training to your System Operators on extreme winter weather preparedness?

BA-3 United States

■ A.Yes

■ B.No, however, we plan to develop and provide such training

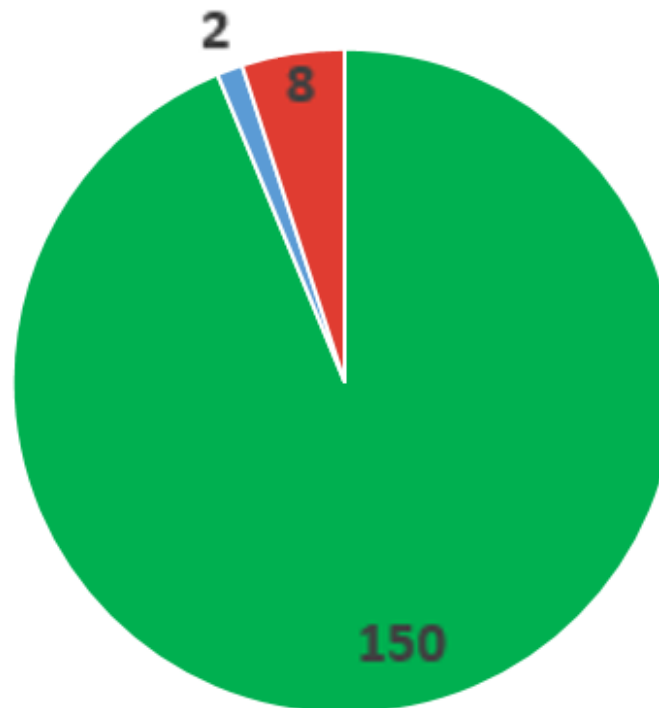
■ C.No, and we have no plans to conduct the training



- Do you perform operator training of firm load shed and operations scenarios, to train system operators to administer rotating load shed, avoid cascading outages and system collapse?

- A. Yes, we have conducted operator training on load shedding and restoration scenarios**
- B. No, however, we intend to conduct operator training on load shedding and restoration scenarios prior to winter**
- C. No**

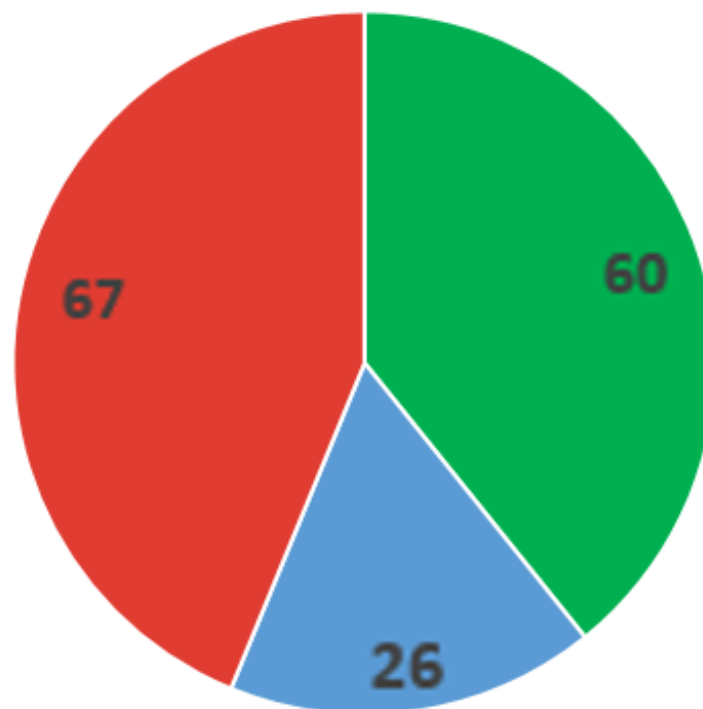
TOP-4 United States



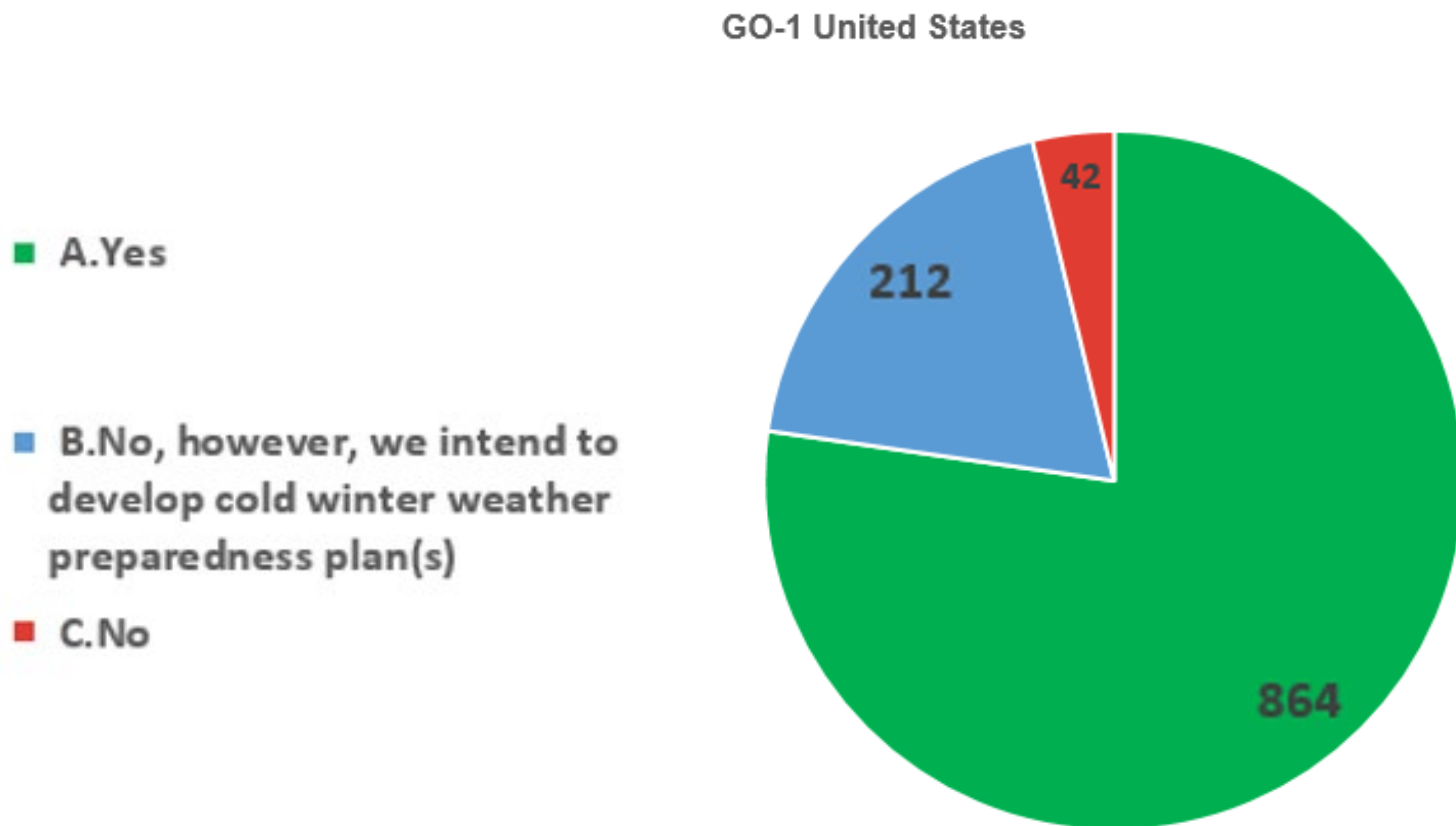
- Do you perform operator training of firm load shed scenarios to protect critical natural gas infrastructure customers?

TOP-5 United States

- A. Yes, we have conducted operator training on load shed scenarios for protecting critical natural gas infrastructure customers**
- B. No, however, we intend to conduct operator training on load shed scenarios for protecting critical natural gas infrastructure customers**
- C. No**



- Do you have one or more cold winter weather preparedness plan(s) for your generating units?



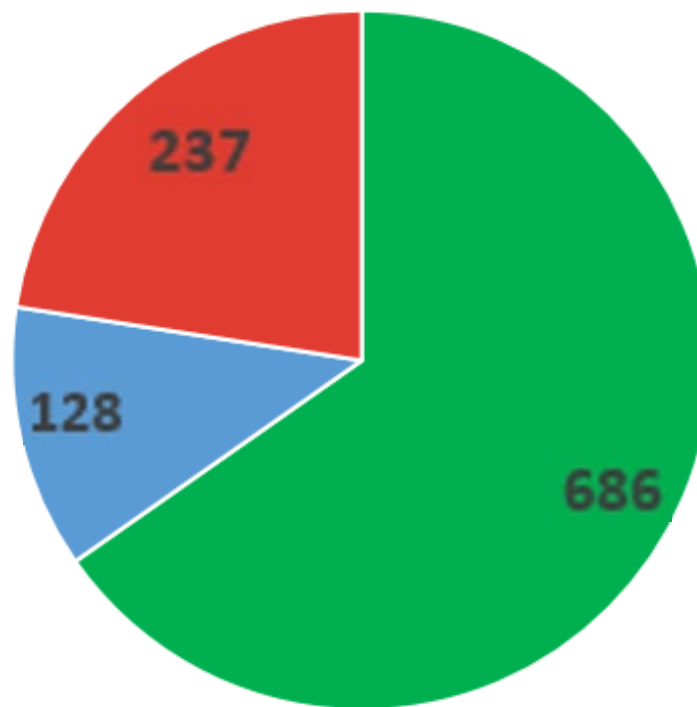
- Does your winter weather preparedness plan inspection of heat tracing components, thermal insulation, and wind breaks prior forecasted extreme winter weather?

GO-3 United States

■ A.Yes

■ B.No, however we plan to include these points

■ C.No





Questions and Answers