

Agenda

Reliability Issues Steering Committee

March 22, 2022 | 11:00 a.m.-12:30 p.m. Eastern
Virtual Meeting

Attendee WebEx Link: [Join Meeting](#)

Introductions and Chair's Remarks

NERC Antitrust Compliance Guidelines

Agenda Items

1. **Draft Minutes* - Approve**
 - a. November 12, 2021 Meeting
2. **Welcome New Members**
3. **RISC Overview* - Review**
4. **Reliability Leadership Summit - Review**
5. **Proposed 2022 Meeting Dates* - Review**
6. **Other Matters and Adjourn**

*Background materials included.

Antitrust Compliance Guidelines

I. General

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

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

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

II. Prohibited Activities

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

- Discussions involving pricing information, especially margin (profit) and internal cost information and participants' expectations as to their future prices or internal costs.
- Discussions of a participant's marketing strategies.
- Discussions regarding how customers and geographical areas are to be divided among competitors.
- Discussions concerning the exclusion of competitors from markets.
- Discussions concerning boycotting or group refusals to deal with competitors, vendors or suppliers.

- Any other matters that do not clearly fall within these guidelines should be reviewed with NERC's General Counsel before being discussed.

III. Activities That Are Permitted

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

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

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

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

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

- Reliability matters relating to the bulk power system, including operation and planning matters such as establishing or revising reliability standards, special operating procedures, operating transfer capabilities, and plans for new facilities.
- Matters relating to the impact of reliability standards for the bulk power system on electricity markets, and the impact of electricity market operations on the reliability of the bulk power system.
- Proposed filings or other communications with state or federal regulatory authorities or other governmental entities.
- Matters relating to the internal governance, management and operation of NERC, such as nominations for vacant committee positions, budgeting and assessments, and employment matters; and procedural matters such as planning and scheduling meetings.

DRAFT Minutes

Reliability Issues Steering Committee

November 12, 2021 | 12:00-1:30 p.m. Eastern

Chair Nelson Peeler convened the meeting at 12:00 p.m. Eastern on November 12, 2021 and thanked everyone for attending. Tina Buzzard, NERC Staff, reviewed the procedures for the meeting, reviewed the NERC Antitrust Compliance Guidelines and Public meeting notice, and confirmed quorum.

Introduction and Chair's Remarks

Mr. Peeler provided an overview of the agenda and the goals for the meeting.

Agenda Items

2021 GridSecCon Summary

Manny Cancel, senior vice president and chief executive officer, E-ISAC summarized the recent 2021 GridSecCon noting it was the 10th annual grid security conference and the first ever in a completely virtual environment. Mr. Cancel stated this year's conference was co-hosted by NERC, the E-ISAC, and Texas RE as part of the ERO Enterprise's collaborative efforts to support industry in security the North American bulk power system through information sharing, education, and collaboration. He noted the bad actors are not missing a beat as we have witnessed multiple headline-grabbing compromises from ransomware to major hacks and physical breaches and GridSecCon allows the ability to come together to discuss threats and solutions to help enhance security efforts.

Extreme Weather Preparedness

Findings of FERC/ERO Enterprise Joint Inquiry into 2021 Cold Weather Operations

Steve Noess and Kiel Lyons presented a summary on the findings of the FERC/ERO Enterprise joint inquiry into 2021 cold weather operations in Texas and the South Central United States. The report describes the severe cold weather event that occurred between February 8 and 20, 2021 and how it impacted the reliability of the bulk electric system in Texas and the South Central United States.

Cold Weather Activities

Soo Jin Kim presented a summary of the activities associated with the Level 2 NERC Alert that was issued on August 18, 2021 highlighting the Alert targeted Reliability Coordinators, Balancing Authorities, Transmission Operators, and Generator Owners, consisted of 5 recommendations, and provided specific recommended actions that NERC registered entities should consider in response to a particular issue. Ms. Kim then summarized the Alert takeaways.

John Moura presented a preview of the 2021-2022 Winter Reliability Assessment (WRA) highlighting the WRA's key findings, including NERC Level 2 Alert Key takeaway and concerns, and a review of the fuel availability noting natural gas storage is below average levels for the upcoming winter and generator owners should give special attention to supply chains, but there are no specific impacts identified.

Howard Gugel provided an update on the status of the Cold Weather Standards.

Status on Work Associated with the Framework to Address Known and Emerging Reliability and Security Risks

Ms. Kim and Mr. Richard Burt, MRO presented on the prioritization of reliability, resilience, and security risks. Ms. Kim and Mr. Burt noted the purpose of the risk framework is to have a consistent ERO-wide approach to identifying, prioritizing, and addressing known and emerging reliability and security risks, utilizing six steps: Risk identification and validation; Risk prioritization; Remediation mitigation identification and evaluation; Mitigation deployment; Measurement of success; and Monitoring residual risk. At the conclusion of the presentation, Mr. Burt stated the ERO is seeking RISC volunteers to assist with the formal process development, documentation, and socialization of this process. Volunteers can submit their interest to Tina Buzzard at tina.buzzard@nerc.net.

Ms. Kim provided an update on the Risk Registry noting future versions of the Risk Registry will be used as project/resource management tool and will include a consistent risk prioritization method that will be periodically reviewed with the RISC.

Stephen Crutchfield presented an update on the recently formed Reliability and Security Technical Committee (RSTC) Tiger Team stating the team was formed to identify current RSTC subgroup work plan items that address risks identified in the 2021 ERO Reliability Risk Priorities Report; develop draft risk mitigation activities and assignments for RSTC subgroups; and develop proposed subgroup work plan items, if appropriate, for full RSTC review and input in December 2021.

Membership Nomination Cycle

Ms. Buzzard summarized the upcoming membership nomination cycle highlighting the nomination cycle will occur November 17-December 15, 2021, then in early January 2022 the RISC Nominating Committee will meet to evaluate nominations and select proposed slate, and in February 2022 the proposed Membership slate will be submitted to the Board of Trustees for consideration and approval.

Other Matters

Mr. Peeler called for any other matters before the committee and adjourned the meeting.

Adjournment

The meeting concluded at 1:30 p.m. Eastern.



Tina M. Buzzard
Secretary

RISC Overview

Action

Review

Background

The Reliability and Security Committee (RISC) is governed by the [Committee Charter](#), last approved by the NERC Board of Trustees (Board) on August 20, 2020. This discussion is intended to provide information regarding the purpose and mission of the Reliability and Security Committee and other important considerations set forth in the Charter.

The main functions of the RISC include:

- Evaluating BPS reliability issues and risks;
- Providing an analysis of risks to the BPS, with a relative prioritization of the risks to guide planning activities of NERC and the standing committees; and
- Carrying out such other functions as assigned from time to time by the Board.

The main work product of the RISC is the biannual [ERO Reliability Risk Priorities Report](#). The RISC also hosts the biannual [Reliability Leadership Summit](#), which informs its report.

Summary

RISC Leadership and NERC staff will take an opportunity during the March 22 meeting to familiarize the new members, and re-familiarize current members with the charter, mission, objectives and activities of the RISC.

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Reliability Issues Steering Committee (RISC) Overview

RELIABILITY | RESILIENCE | SECURITY



- Assure the reliability, resilience, and security of the North American Bulk Power System (BPS)
 - Develops and Enforces Reliability Standards
 - Annually assesses seasonal and long-term reliability
 - Monitors the BPS through system awareness
 - Educates, trains, and certifies industry personnel

Critical Infrastructure
Interdependencies



Security Risks



Extreme Events



Grid Transformation



- NERC is the Electric Reliability Organization (ERO)
- Overseen by U.S. and Canadian regulatory authorities (FERC and the Canadian Provinces)
 - Responsible for developing/enforcing Reliability Standards
 - Independent of owners, operators, users
 - Adheres to rules governing standards development, compliance enforcement, and budgeting

- NERC delegates certain functions to the Regional Entities
 - Compliance monitoring and enforcement
 - Organization registration and certification
 - Reliability assessments and performance analysis
 - Event analysis and reliability improvement
 - Training and education
 - Situational awareness
 - Infrastructure security
- NERC oversees the Regional Entities to ensure transparency, predictability, and uniform outcomes

History

1965: Northeast blackout

1968: National Electric Reliability Council (NERC) established by the electric industry

2002: NERC operating policy and planning standards become mandatory and enforceable in Ontario, Canada

2003: August 14 blackout

2005: U.S. Energy Policy Act of 2005 creates the Electric Reliability Organization (ERO)

2006: Federal Energy Regulatory Commission (FERC) certifies NERC as the ERO; Memorandum of Understanding (MOUs) with some Canadian Provinces

2007: North American Electric Reliability Council becomes the North American Electric Reliability Corporation (still NERC); FERC issues Order 693 approving 83 of 107 proposed reliability standards; reliability standards become mandatory and enforceable

Recent

2012-2021: Hurricanes Sandy, Harvey, Irma, Michael, Ida

2020: California Heat Event, Solar Winds Attack, COVID-19 Pandemic

2021: Texas Cold Weather Event, Colonial Pipeline Attack

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RISC

RELIABILITY | RESILIENCE | SECURITY





The Reliability Issues Steering Committee (RISC or Committee) is an advisory committee to the NERC Board of Trustees. The RISC:

- Provides key insights, priorities, and high-level leadership for issues of strategic importance to BPS reliability.*
- Advises the Board, NERC committees, NERC staff, regulators, Regional Entities, and industry stakeholders to establish a common understanding of the scope, priority, and goals for the development of solutions to address emerging reliability issues.*
- Provides guidance to the ERO Enterprise and the industry to effectively focus resources on the critical issues to improve the reliability of the BPS.*

- Objectives:
 - Develop the scope, priority and goals to mitigate known and emerging risks to bulk power system reliability
 - Provide a framework to effectively focus NERC and industry resources to improve reliability
- Biennial Activities
 - Reliability Leadership Summit
 - Industry risk survey
 - Identify Priority Risks
 - Identify Mitigating Activities
- Document result in RISC Report

Four high level risk profiles:

Grid Transformation



- A. Bulk Power System Planning
- B. Resource Adequacy and Performance
- C. Increased Complexity in Protection and Control Systems
- D. Situational Awareness Challenges
- E. Human Performance and Skilled Workforce
- F. Changing Resource Mix

Security Risks



- A. Physical
- B. Cyber
- C. Electromagnetic Pulse

Extreme Natural Events

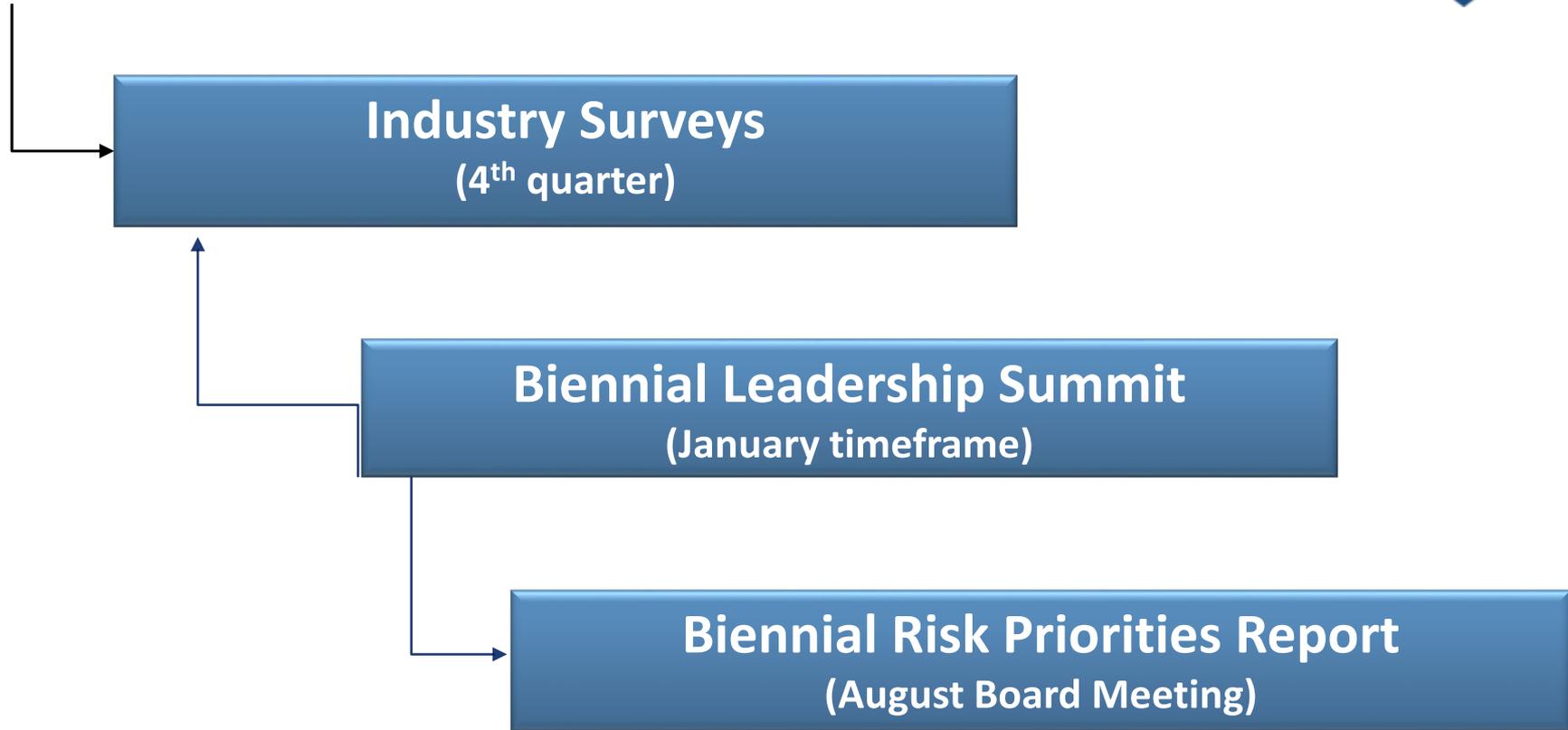


- A. Extreme Natural Events, Widespread Impact
 - GMD
- B. Other Extreme Natural Events

Critical Infrastructure Interdependencies



- A. Communications
- B. Water/Wastewater
- C. Oil
- D. Natural Gas



The primary objective of this *2021 ERO Risk Priorities Report* is to

- Report on key risks to the BPS that merit attention and to recommend mitigating actions that align with those risks
- The report differs from other ERO reports in that it is a forward-looking view to understand imminent risks and plan for their mitigation. It complements NERC's *Long-Term Reliability Assessment*
- This is in contrast to the *State of Reliability* report or event analysis reports, which review data from previous years or events to draw objective conclusions about events, emerging risks, and the appropriate monitoring for their mitigation

[2021 RISC ERO Risk Priorities Report](#)

- Analysis of mitigating activities and the effects on risk likelihood and impacts, enable biennial comparison/trending
- A larger emphasis on immediate and short-term actionable activities to reduce risk
- Differentiation between actively manage versus monitor
- Prospectively it will be important for the RISC to:
 - Collaborate with the identified owners of the mitigating activities recommendations to understand actions implemented, if any, to address the risk and recommendations
 - Coordinate with the annual business plan and budget and ERO Enterprise Long-Term Strategy to ensure alignment of priorities and strategic execution on a going-forward basis

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Reliability Assessments

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Three key assessments conducted annually:

Long-Term Assessment

Provide a technical platform for important policy discussions on technical challenges facing the interconnected North American bulk power system

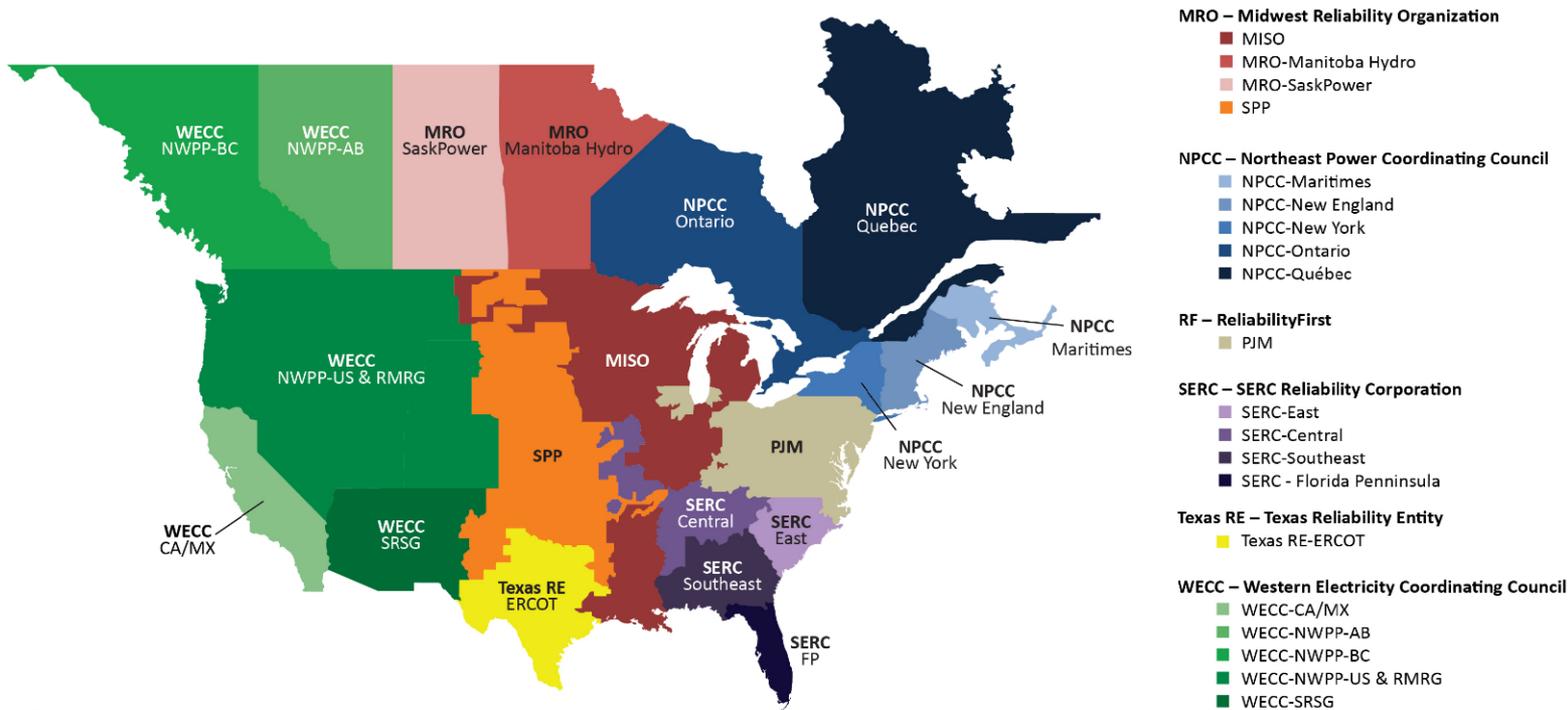
Seasonal Assessments

Identify and report on the electric industry's preparations to manage potential seasonal issues for both the winter and the summer

Special Assessments

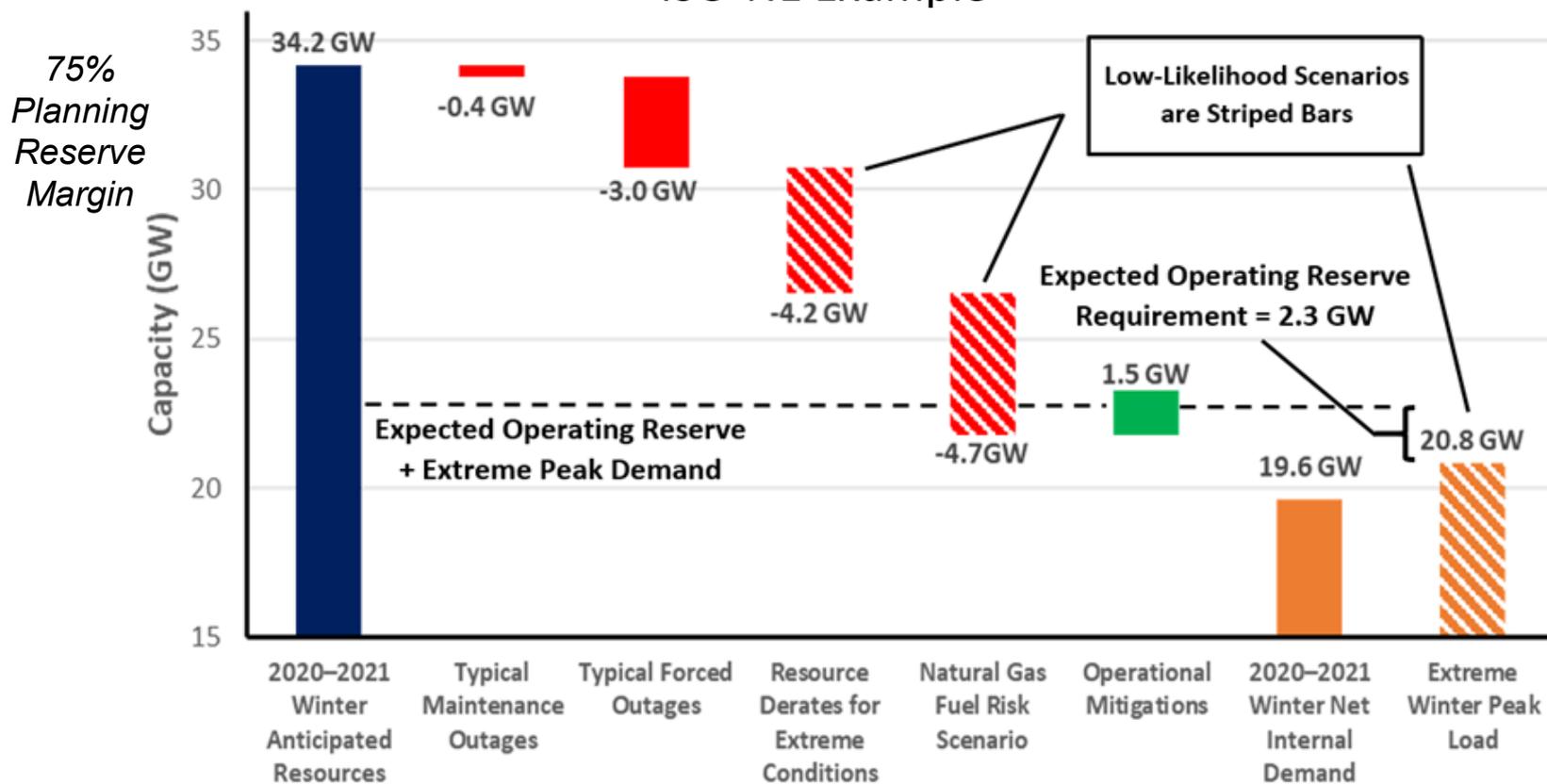
As emerging risks and potential impacts to reliability are identified, special assessments are performed to provide additional insights about the range and specific aspects of these challenges and make recommendations

- Top-level assessment of resource adequacy
- Demand, generation, and transmission projections
- Emerging issues
- Coordination and Review with Regional Entities and Stakeholder Groups

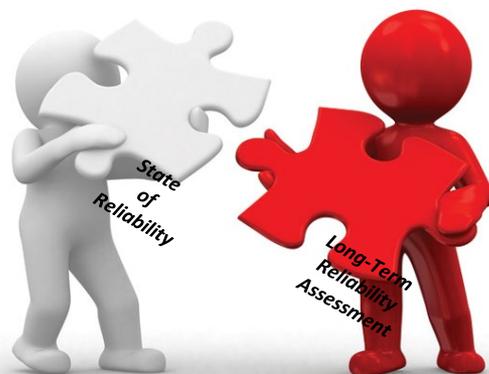


- Operational risk scenarios analyze the effects of extreme conditions on meeting operating reserve targets

ISO-NE Example



- Provide objective and concise information to policymakers, industry leaders, and the NERC Board of Trustees on issues affecting the reliability and resilience of the North American bulk power system (BPS)
 - Identify system performance trends and emerging reliability risks
 - Determine the relative health of the interconnected system
 - Measure the success of mitigation activities deployed





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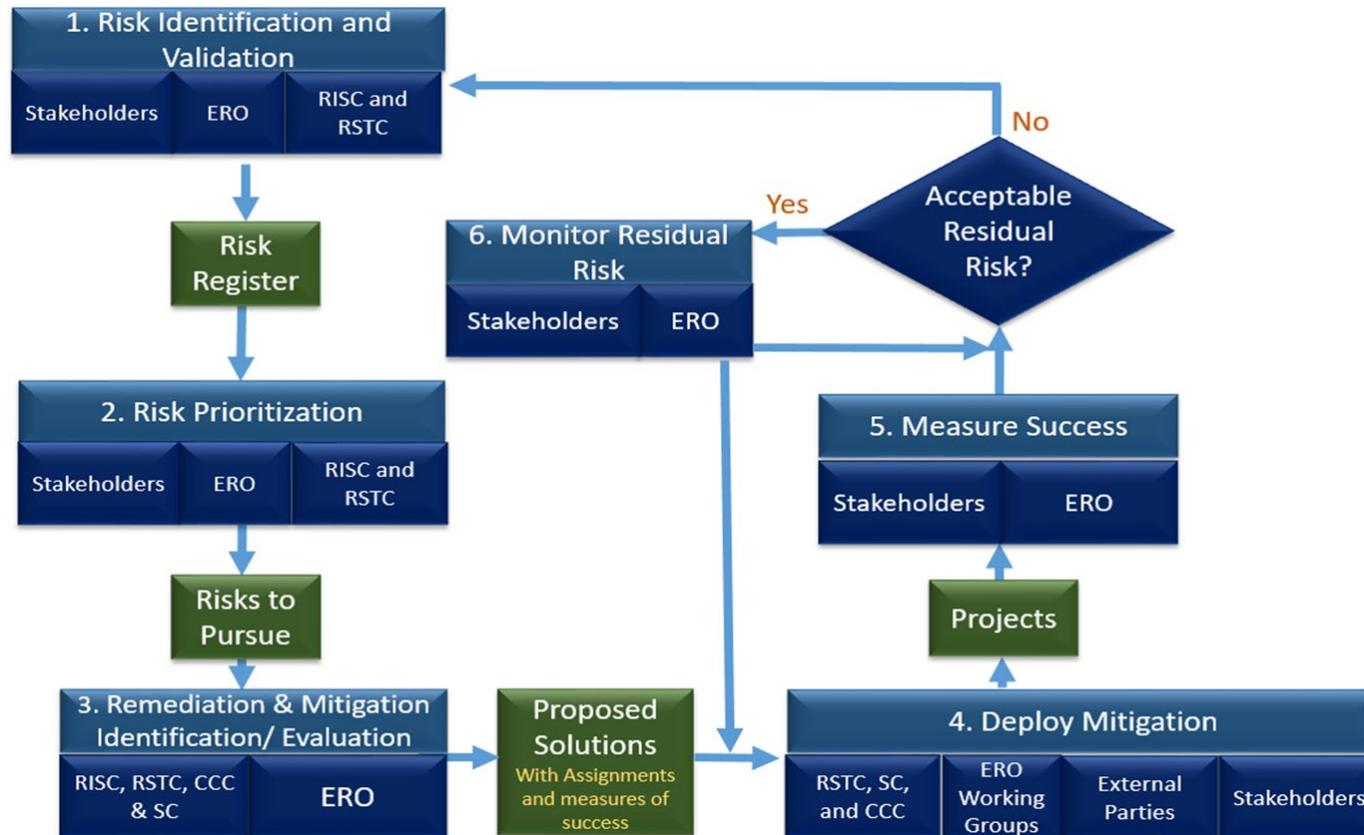
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Risk Framework/RSTC Coordination

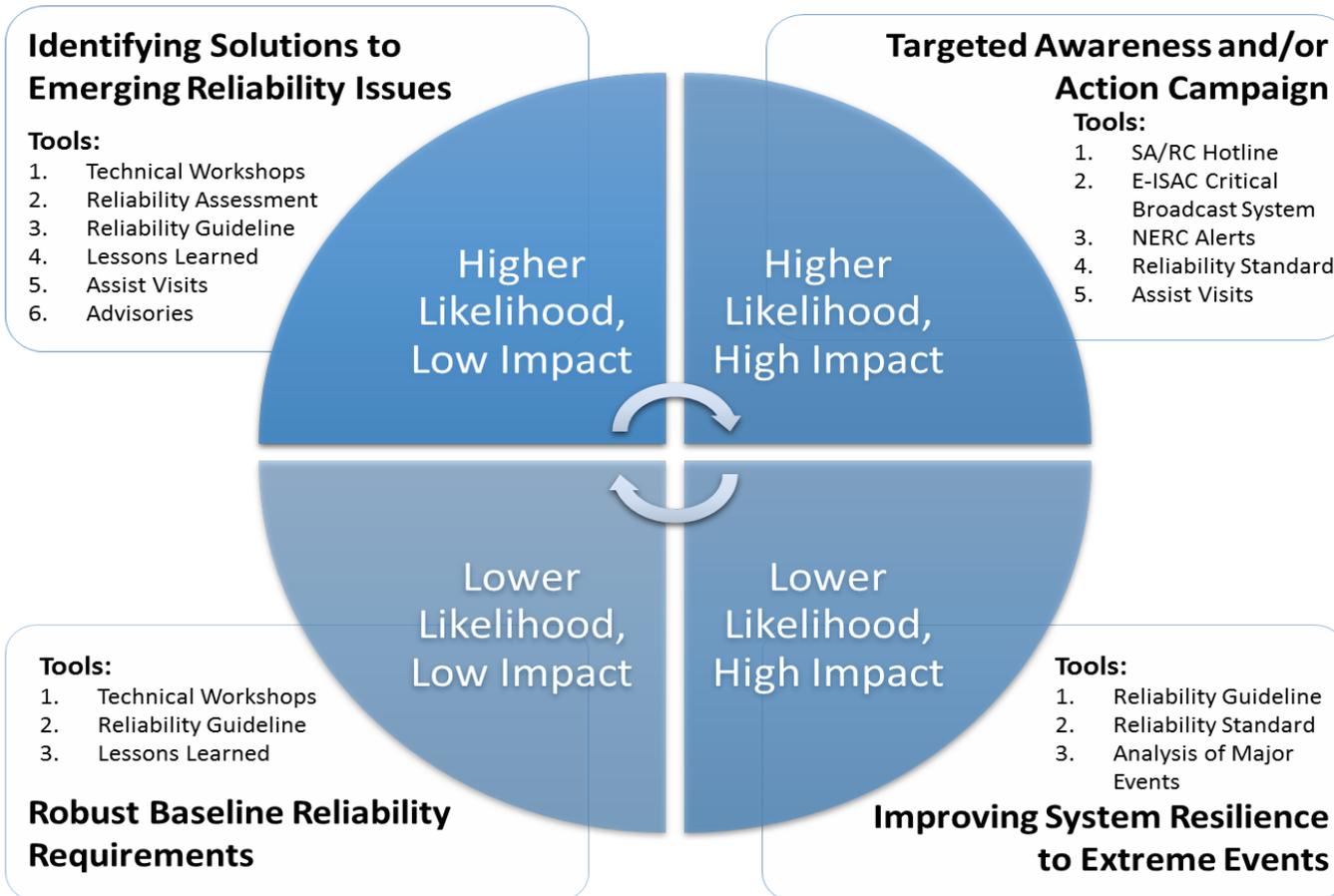
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- At the April meeting, the Committee will begin the work of the RISC, the review of the assessments discussed above into the work of the RISC this year, as well as a deeper dive into the [Reliability Risk Framework](#) and RISC/RSTC Coordination.



Electric Reliability Organization: Reliability Risk Mitigation Toolkit



*Likelihood is Likelihood of an "Adverse Reliability Impact"



Reliability Guideline

Suggested approaches or behavior in a given technical area for the purpose of improving reliability. Guidelines are not enforceable, but may be adopted by a responsible entity in accordance with its own policies, practices, and conditions.



NERC Alert: Level 2-3

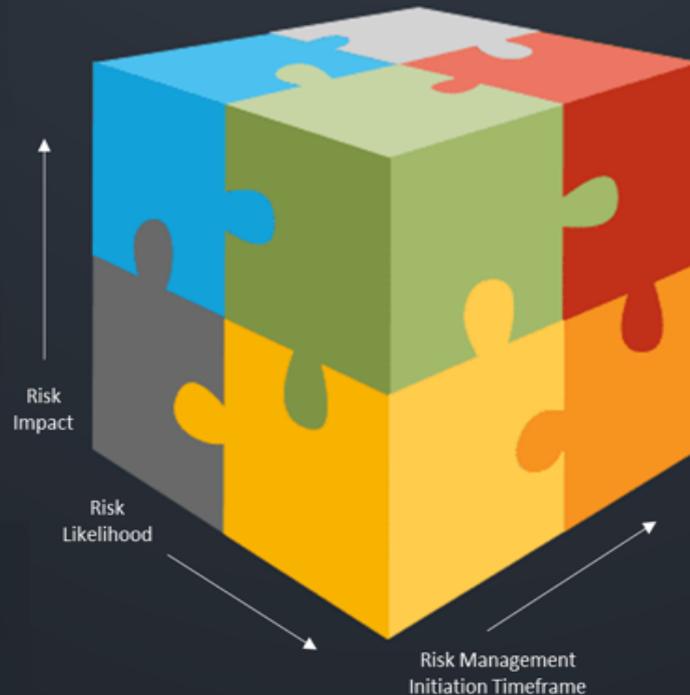
NERC alerts are divided into three distinct levels, 1) Industry Advisory, 2) Recommendation to Industry, and 3) Essential Action, which identifies actions to be taken and require the industry to respond to the ERO.



Technical Engagement

Technical Engagement is a catch-all for a variety of technical activity that is conducted between the ERO and entities. This includes, technical committee activities, technical reference documents, workshops and conferences, assist visits, joint and special studies, etc.

Electric Reliability Organization: Reliability Risk Mitigation Toolkit



Reliability Standards



NERC Reliability Standards define the mandatory reliability requirements for planning and operating the North American BPS and are developed using a results-based approach focusing on performance, risk management, and entity capabilities.

Reliability Assessment



NERC independently assesses and reports on the overall reliability, adequacy, and associated risks that could impact BPS reliability. Long-term assessments identify emerging reliability issues that support public policy input, improved planning and operations, and general public awareness.

NERC Alert: Level 1



NERC Alerts are divided into three distinct levels, 1) Industry Advisory, 2) Recommendation to Industry, and 3) Essential Action, which identifies actions to be taken and require the industry to respond to the ERO.

- The Tiger Team reviewed the RISC Report recommendations against the RSTC work plan to:
 - Determine if any RISC Report Recommendations are addressed by current RSTC Work Plan items.
 - Reviewed Preliminary Cold Weather Report Recommendations for applicability to RSTC groups.
 - For those RISC Report Recommendations or Cold Weather Report Recommendations that are not addressed or partially addressed by current RSTC Work Plan items, develop proposal for next steps and assignments to RSTC groups for specific mitigation identification.
 - Not all RISC Report Recommendations or Cold Weather Report recommendations will be included in the proposed assignments to the RSTC as they may not be applicable (e.g. recommendations to be addressed by the E-ISAC)

- 2021 RISC Report Recommendations Tab
 - Column A – Major RISC Report Profile
 - Column B – Recommendation from RISC Report
 - Column C – Current RSTC Work Plan items that partially address the recommendation (number corresponds to the row number in the “RSTC Work Plan” tab of the spreadsheet)
 - Column D – The group(s) assigned to take the lead for addressing the recommendation
 - Column E - – The group(s) assigned to potentially providing support to addressing the recommendation
 - Column F – Comments from NATF (further review is under way by NATF)
 - Columns G-I – Responses from lead and/or support groups regarding how they address the recommendation
 - Columns J- M – Initial thoughts/comments from Tiger Team members for some recommendations. Included here for reference.

ERO Reliability Risk Priorities Report (2021 RISC Report)						
Risk Mitigation Recommendations						
Risk Profile	Recommendations for Mitigating the Risk	Current RSTC Activities	Potential Lead Group Applicability	Potential Supporting Group Applicability	NATF	RAS Response
1. Grid Transformation	<p>1.1 Ensure sufficient operating flexibility at all stages of resource and grid transformation: System operators and planners should ensure that sufficiently flexible ramping/balancing capacity is available as a tool to meet the needs of changing patterns of variability and new characteristics of system performance. Traditional concepts of resource adequacy may need to evolve to consider adequacy and flexibility during all hours, including consideration of correlated outages, transmission availability, and common-mode fuel supply dependencies.</p>	2, 3, 12, 26, 27, 37, 39, 85, 96, 97, 99	RS	RTOS, ERATF, RAS, SPIDERWG; SOR metric?		
	<p>1.2 Update data, modeling, and assessment requirements to ensure valid and accurate results given resource and grid transformation (ongoing effort): The RSTC should identify the information and modeling capabilities needed to ensure the efficacy of assessments while taking into consideration the complex and interrelated aspects of the ongoing transformation, including the evolving nature of resource adequacy itself. The ERO should continue to pay attention to settings of controllable devices, remedial action schemes, and power electronics installed to stabilize the system.</p>	2, 3, 12, 37, 39, 42, 48, 57, 58, 90, 127, 128, 129, 132, 133, 135, 136, 139, 140, 141, 142, 144	RAS	PAWG, IRPWG, SPCWG, ERATF, SPIDERWG, LMWG		RAS will review existing long-term reliability assessment request materials to identify gaps and develop proposed narrative and/or data request items for ERO use in future LTRA beginning in 2023. Specific attention is directed to settings of controllable devices, remedial action schemes, and power electronics that stabilize the system. Development will be coordinated with necessary RSTC subgroups including SPCWG.

- The Tiger Team created a similar spreadsheet for the Cold Weather Report recommendations and followed a similar process to
 - Assess current activities being performed to mitigate the risk/recommendation
 - Assign RSTC groups to develop risk mitigations to address the recommendation
- It is anticipated that this work product will need to be reviewed in early 2023 for any potential gaps and to coordinate work plans.

- The RSTC and NERC Staff will collaborate with other organizations to develop risk mitigation strategies for RISC and CW recommendations:
 - ERO
 - NATF
 - NAGF
 - E-ISAC
 - EPRI
 - DOE
 - FERC
 - ESCC



Questions and Answers

Reliability Leadership Summit

Action

Review

Background

The purpose of the Reliability Leadership Summit is to gather industry leaders and keynote speakers to provide unique perspective into the key drivers of existing and emerging risks and use as a vehicle to prioritize identified risks as well as to potentially identify new and emerging risks. Panel sessions are put together to collaborate around key risks and mitigating strategies as well as to engage in meaningful debate about their relative importance and significance. The Reliability Leadership Summit serves as a key building block to the ultimate ERO Reliability Risk Priorities Report.

Summary

NERC Staff will seek the Committee's input and guidance into the platform and locale for the 2023 RISC Reliability Leadership Summit.

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RISC Reliability Leadership Summit

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- The purpose of the Reliability Leadership Summit is to:
 - Gather industry leaders and keynote speakers to provide unique perspective into the key drivers of existing and emerging risks
 - Use as a vehicle to prioritize identified risks as well as to potentially identify new and emerging risks
- Panel sessions are put together to collaborate around key risks and mitigating strategies as well as to engage in meaningful debate about their relative importance and significance
- The Reliability Leadership Summit serves as a key building block to the ultimate ERO Reliability Risk Priorities Report
- Typically held in late January and in the Washington, DC locale

- Platform: Return to in-person, continue in a virtual format?
- Dates for consideration: January 24/25 or January 25/26, 2022
- Locale if in-person: Washington, DC



Questions and Answers

Proposed 2022 Meeting Dates

Action

Review

Background

The RISC meets at least quarterly in person or by teleconference, with agendas developed and distributed in advance. Necessary actions are put to the committee for vote; proxies are not permitted.

The RISC may meet from time to time in confidential session to discuss sensitive information. Participants must agree to treat such information in accordance with Section 1500 of the NERC Rules of Procedure – Confidential Information and any applicable confidentiality agreements.

Summary

NERC Staff will review the following 2022 RISC meeting *proposed dates*:

- **1st Quarter**
 - March 22 | 11:00 a.m.-12:30 p.m. Eastern *(Virtual)*
- **2nd Quarter**
 - April 25 | 11:00 a.m.-12:30 p.m. Eastern *(Virtual)*
 - June 9 | 8:30 a.m.-12:30 p.m. TBD Location Considered – Mid-west/West *(Potential In-Person/Hybrid Meeting)*
- **3rd Quarter**
 - August 11 | 2:00-3:30 p.m. Eastern *(Virtual)*
 - September 1 | 2:00-3:30 p.m. Eastern *(Virtual)*
- **4th Quarter**
 - October 3 | 2:00-3:30 p.m. Eastern *(Virtual)*
 - November 9 | 11:00 a.m.-2:00 p.m. Eastern – Location Considered: Atlanta, NERC Offices *(Potential In-Person, Hybrid Meeting)*
 - December 15 | 1:00-2:30 p.m. Eastern *(Virtual)*