

# WELCOME TO TECHNICAL TALK WITH RF

May 15, 2023



# TECHNICAL TALK WITH RF



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# TECHNICAL TALK WITH RF

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# TECH TALK REMINDERS

Please keep your information up-to-date

- CORES, Generation Verification Forms, Entity Profile Questionnaires (quarterly)

Following an event, send EOP-004 or OE-417 forms to [disturbance@rfirst.org](mailto:disturbance@rfirst.org)

CIP-008-6 incident reports are sent to the [E-ISAC](#) and the [DHS CISA](#)

Check our [monthly CMEP update](#) and [quarterly newsletter](#):

- [2023 ERO Periodic Data Submittal schedule](#)
- Timing of Standard effectiveness

BES Cyber System Categorization (CIP-002-5.1 a)

- Assess categorization (low, medium, or high) regularly and notify us of changes

CIP Evidence Request Tool V7.0 is online, see [website](#)



# TECH TALK ANNOUNCEMENT



The California Mobility Center (CMC), the North American Electric Reliability Corporation (NERC) and the Western Electricity Coordinating Council (WECC)

developed the joint report, "[Electric Vehicle Dynamic Charging Performance Characteristics during Bulk Power System Disturbances](#)"

to highlight the need for ongoing collaboration between electric utilities, electric vehicles (EVs), and electric vehicle equipment industries to ensure electric system reliability.

The report, undertaken as part of the joint EV Grid Reliability Working Group, focuses on EV charging behavior during infrequent disturbances that originate from the high-voltage bulk power system. These events last no more than a few seconds, but if left unchecked they have the potential to cause catastrophic consequences for electric system reliability such as cascading blackouts and widespread power interruptions.



## Electric Vehicle Dynamic Charging Performance Characteristics during Bulk Power System Disturbances

### Synopsis

The purpose of this document is to highlight the need for collaboration between electric utilities and the electric vehicle (EV)/electric vehicle supply equipment (EVSE) manufacturing industry to develop strategies that will help ensure bulk power system (BPS) reliability, resilience, and security.<sup>1</sup> This document focuses on an area that is relatively unexplored: EV charging behavior during infrequent grid disturbances that originate from the BPS. These events last no more than a few seconds but may have catastrophic consequences for grid reliability if left unchecked (i.e., cascading blackouts and widespread power interruptions). This document outlines the need for early engagement and information exchange between the electric utilities and the EV/EVSE manufacturing industry to facilitate anticipation and timely resolution of potential grid reliability issues. Toward this end, this document describes the BPS-related reliability concerns that electric utilities are studying in anticipation of the expected significant increase in EV charging loads. This document then outlines the electric utility's current recommendations to mitigate these concerns based on preliminary observations, including changing EV charger and EVSE operation during these infrequent, short-duration events. This document concludes by outlining a solution to meet the need for on-going information sharing between the two communities. This includes the need for future studies to refine these recommendations to become accepted industry practices and standards. This coordination will foster mutual understanding of the issues that must be addressed on both sides of the meter to ensure grid reliability, resilience, and security at the least cost to society as electrification of the transportation fleet grows.

### California Mobility Center Electric Vehicle Grid Reliability Working Group

In June 2022, the California Mobility Center (CMC)<sup>2</sup> formed an EV Grid Reliability Working Group (Working Group), an initiative of diverse EV and grid reliability stakeholders with an interest in advancing understanding and collaboration regarding EV charging demand and grid reliability issues.

The following are the goals of the Working Group:

- Develop a common baseline understanding of the relationship between both distribution and transmission grid reliability and EV charging

<sup>1</sup> For the purpose of this discussion, electric utilities refers to the segment of the electricity industry responsible for the reliability of the high-voltage BPS and EV/EVSE manufacturers refers to the segments of the automotive industry involved in either manufacturing EVs or EV supply equipment.

<sup>2</sup> The CMC is a not-for-profit public-private collaborative whose goal is to accelerate innovation and commercialization of new products, services, and technology in the clean mobility space. The CMC provides members and other stakeholders with opportunities to work together with thought leaders engaged on issues that are critical to advancing EV adoption and deployment, supporting state and national energy, and environmental goals.

# TECH TALK ANNOUNCEMENT



## Cyber-Informed Transmission Planning White Paper

### [Announcement](#)

The North American bulk power system is facing a rapidly evolving threat landscape that is characterized by increasingly sophisticated cyber attacks, emphasizing the need to strengthen the resilience of the grid against potentially catastrophic impacts. To address this, the ERO Enterprise – NERC and the six Regional Entities – developed a [white paper](#) that introduces a cyber-informed transmission planning framework and provides a roadmap for integrating cyber security into transmission planning activities.

Incorporating cyber-informed transmission planning approaches to mitigate reliability impacts that could result from cyber attacks is a key tenet of NERC's [Security Integration Strategy](#) and one of NERC's [2023 work plan priorities](#). By incorporating security where it has traditionally not been considered, industry will be able to better ensure the effective reduction of risks to the reliability and security of the bulk power system.



# TECH TALK ANNOUNCEMENT



## Electromagnetic Transient (EMT) Modeling for BPS-Connected Inverter-Based Resources Webinar

May 16, 1:00 - 2:00 PM Eastern

[Webinar Registration](#)

The cover page for the "Reliability Guideline" document. It features the NERC logo at the top left. The title "Reliability Guideline" is prominently displayed in a large, bold, blue font. Below the title, the subtitle "Electromagnetic Transient Modeling for BPS-Connected Inverter-Based Resources—Recommended Model Requirements and Verification Practices" is written in a smaller, blue font. The date "March 2023" is positioned below the subtitle. At the bottom of the page, there is a blue banner with the text "RELIABILITY | RESILIENCE | SECURITY" in white. Below this banner are four small images: a control room, a power plant, a transmission tower, and solar panels. At the very bottom, the NERC address and contact information are listed in white text on a dark blue background.

NERC  
NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

## Reliability Guideline

Electromagnetic Transient Modeling for BPS-  
Connected Inverter-Based Resources—  
Recommended Model Requirements and  
Verification Practices

March 2023

RELIABILITY | RESILIENCE | SECURITY

3353 Peachtree Road NE  
Suite 600, North Tower  
Atlanta, GA 30326  
404-446-2560 | www.nerc.com

# TECH TALK ANNOUNCEMENT



NATF / EPRI / NERC

## Transmission Resilience Summit

May 17-18, Tempe, AZ

[Event Registration](#)

[Agenda](#)







**NATF-EPRI-NERC**  
**2023 Transmission Resilience Summit**  
**May 17-18, 2023**  
**Theme: Climate Resilience**

**Planned Agenda**

**May 17 Open Session:**

- Climate Modeling
- Community Coordination
- Extreme Weather Preparedness
- Threat Landscape Discussion
- NOPRs and Policy Discussion
- EPRI's Climate READi

*Reception and networking opportunities*

**May 18 Closed Session:**  
 (NATF and EPRI Members only)

- NATF Activities
- EPRI R&D Update
- Member Experiences
- Roundtable Discussion

Hosted by Salt River Project


Delivering water and power\*



**Meeting Logistics**

**Dress:** Business Casual  
**May 17:** 8:00 a.m. to 5:00 p.m.  
**May 18:** 8:00 a.m. to 12:00 p.m.  
 Breakfast and sign-in begins at 7:00 a.m. each day.

**Salt River Project  
 PERA Training and Conference Center**  
 One E Continental Drive  
 Tempe, AZ 85281

For questions or more information about the summit contact one of the following:

- Jamie Carnes (NATF) [jcarnes@natf.net](mailto:jcarnes@natf.net)
- Kevin Berent (EPRI) [kberent@epri.com](mailto:kberent@epri.com)
- Soo Jin Kim (NERC) [soo.jin.kim@nerc.net](mailto:soo.jin.kim@nerc.net)

**Register to attend by April 21**  
 No registration fee to attend.  
 Limited spots available so sign up soon!





# TECH TALK ANNOUNCEMENT



ERO Enterprise

## Facility Rating Management Webinar

May 24, 1:00 - 4:30 PM Eastern

[Webinar Registration](#)

A graphic for a webinar announcement. At the top, it features logos for NERC (North American Electric Reliability Corporation), Midwest Reliability Organization (MRO), NERC, Inc., Reliability First (RF), SERC (Southwest Electric Reliability Corporation), TexasRE (Texas Reliability Entity), and WECC (Western Electricity Coordinating Council). Below the logos, the title "ERO Enterprise Themes and Best Practices for Sustaining Accurate Facility Ratings" is displayed in a large, bold, blue font. Underneath the title, the date "October 20, 2022" is shown in a smaller, blue font. At the bottom of the graphic is a photograph of a high-voltage electrical substation with numerous power lines and towers, set against a sunset or sunrise sky with orange and blue hues.

NERC  
NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

MIDWEST RELIABILITY  
ORGANIZATION

NERC, Inc.

RELIABILITY FIRST

SERC

TEXASRE  
Ensuring electric reliability for Texas

WECC

## ERO Enterprise Themes and Best Practices for Sustaining Accurate Facility Ratings

October 20, 2022

# TECH TALK ANNOUNCEMENT



Webinar Series:

## **Inverter-Based Resources**

June 6 - July 13, 4:00 - 5:00 PM Eastern

[Webinar Flyer](#)



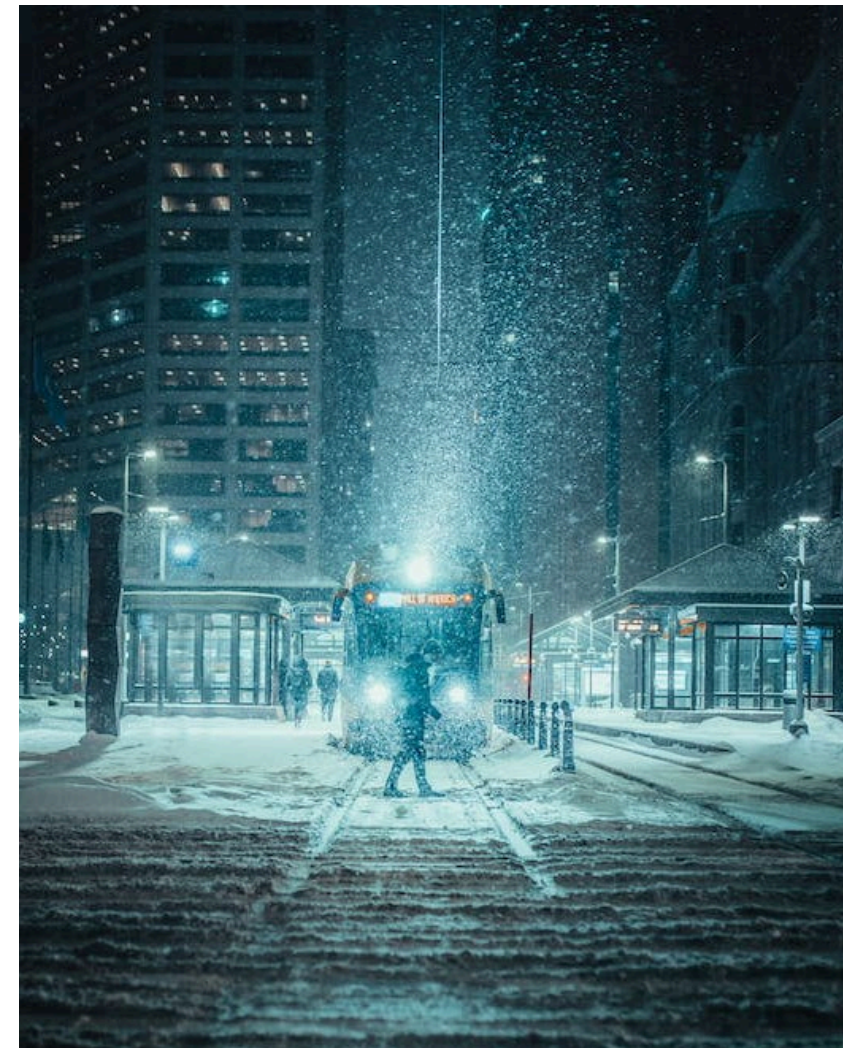
# TECH TALK ANNOUNCEMENT



## Winter Preparation for Severe Cold Weather Webinar

September 7, 1:00 – 3:00 PM Eastern

NERC will hold the Winter Preparation for Severe Cold Weather webinar on September 7, and is requesting abstracts from industry stakeholders on successful practices and lessons learned relating to severe cold weather preparation. Submission for presentations and panel discussions are welcome from all industry stakeholders, including asset owners and operators and OEMs who support the bulk power system. Abstracts are requested to be submitted to [Valerie Carter-Ridley](#) (via email) by May 15 (today).



# TECH TALK ANNOUNCEMENT



## Probabilistic Analysis Forum (PAF)

October 10-12, Salt Lake City, Utah (Hybrid)

Following the success of the NERC Probabilistic Analysis Forum (PAF) in 2019 and 2021, the NERC Probabilistic Assessment Working Group (PAWG) will host its third, biennial PAF on October 10 - 12, 2023, covering probabilistic assessments, approaches, and experiences. More details, including the event registration and successful submissions, will be made available on the NERC and WECC websites closer to the forum. Examples of Potential Topics include, but are not limited to:

- Additional metrics/measurements vs expanding the use of existing metrics
- Resource Accreditation methods
- Battery Modeling and performance
- Natural Gas Constraints and Operational Risks
- Development of synthetic load models
- Capturing widespread geographic risks
- Extreme weather impacts
- Techniques and modelling approaches for managing forced outages
- Energy and Capacity evaluation



# TECH TALK ANNOUNCEMENT



## GridSecCon 2023

October 17-20 Save the Dates

NERC, the E-ISAC, and Northeast Power Coordinating Council (NPCC) are co-hosting the 12th annual grid security conference on October 17-20, 2023 in Québec City, Canada.

GridSecCon brings together cyber and physical security leaders from industry and government to deliver expert training sessions, share best practices and effective threat mitigation programs, and present lessons learned. Conference and hotel registration will open in May and more details will be available on the E-ISAC, NERC and NPCC websites.



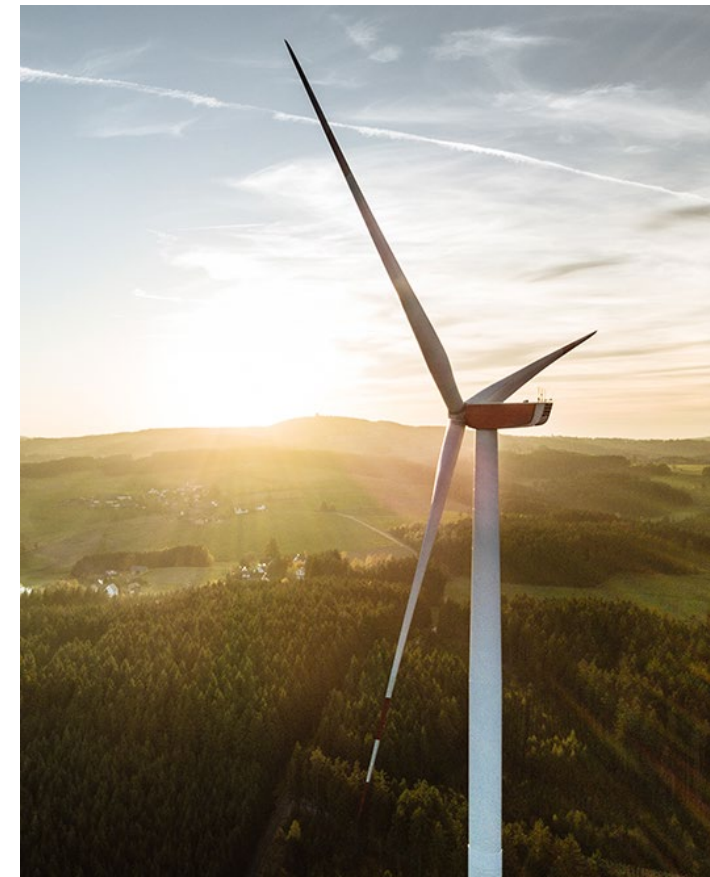
# TECH TALK ANNOUNCEMENT



## **NERC-NATF-EPRI Annual Transmission Planning and Modeling Workshop**

November 1-2, 1:00 – 5:00 PM Eastern

This year's seminar will focus on bulk power system load modeling, integrated system planning practices, IBR risk mitigation, and updates on the latest research and activities across the industry.



# LEVEL 3 NERC ALERT

- COLD WEATHER PREPARATIONS FOR EXTREME WEATHER EVENTS
- ESSENTIAL ACTION TO INDUSTRY FOR THE 2023-2024 WINTER SEASON AND BEYOND
- INITIAL DISTRIBUTION: **MAY 15**
- ACKNOWLEDGEMENT REQUIRED: **MAY 22**
- REPORTING REQUIRED: **OCTOBER 6**



## Talk with Texas RE

2022 Assessment of Reliability Performance

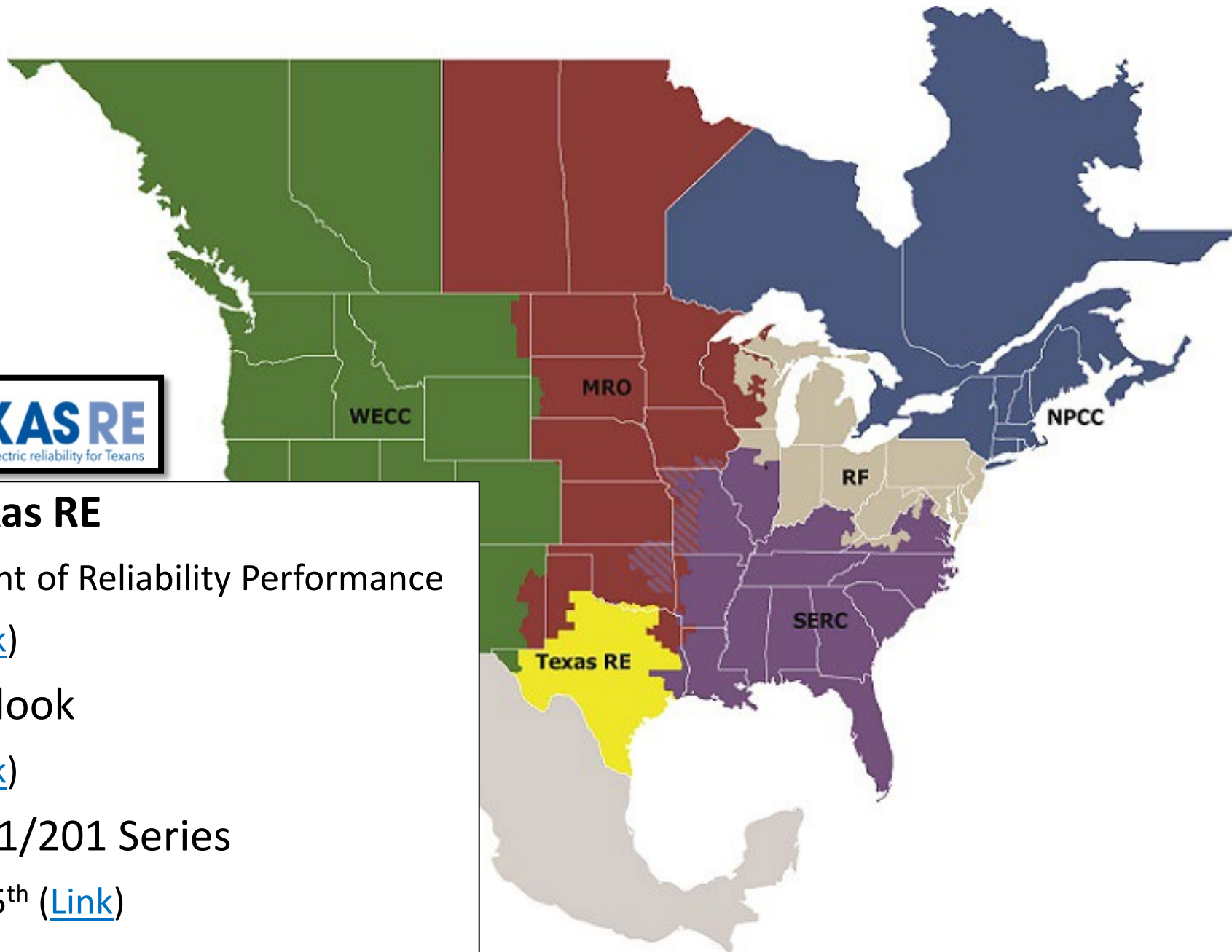
- May 23 ([Link](#))

Summer Outlook

- May 30 ([Link](#))

Reliability 101/201 Series

- Starts June 5<sup>th</sup> ([Link](#))







## Reliability and Security Monthly Update

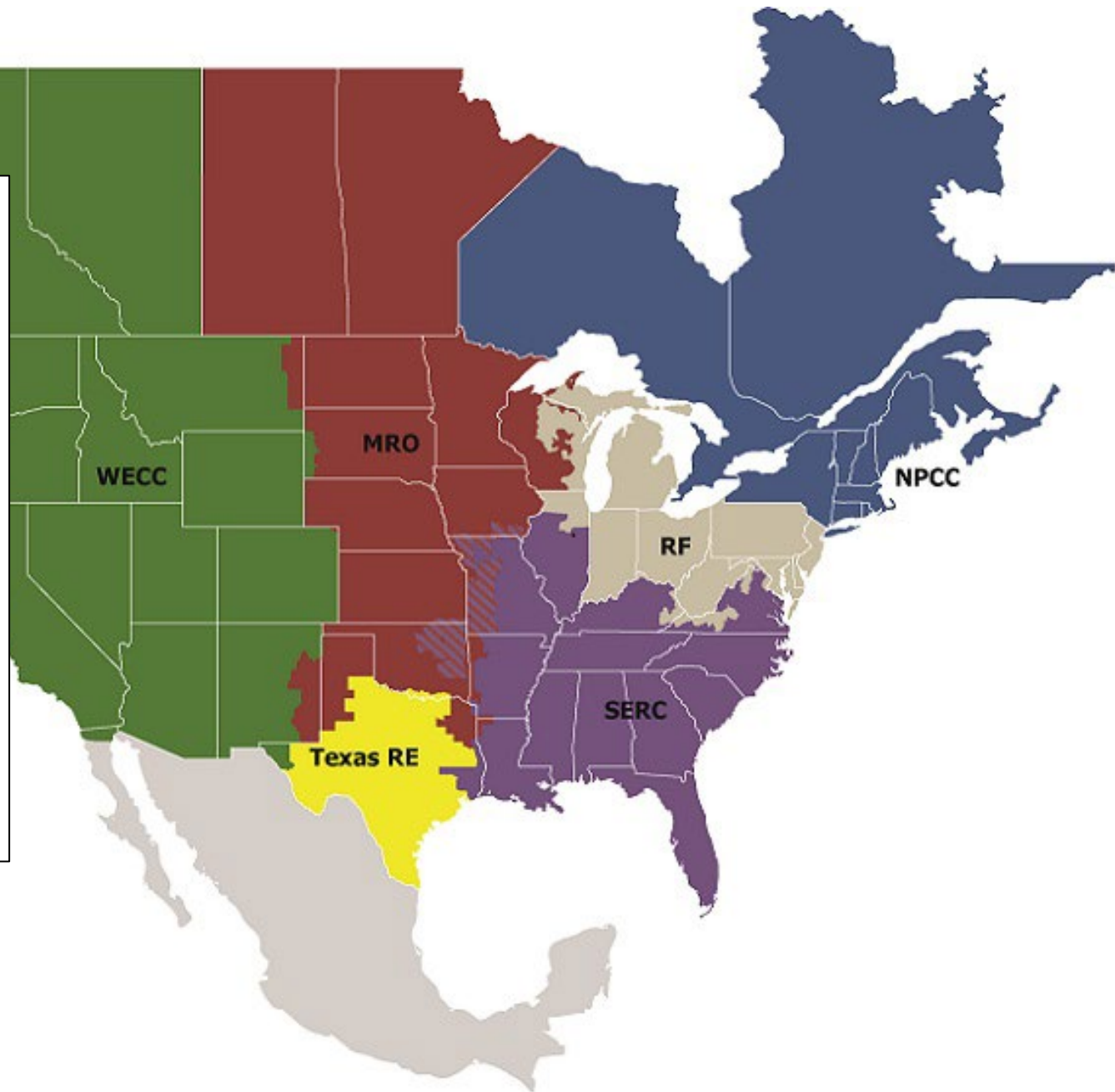
- May 18 ([link](#))
- Vegetation Management

## Resource Adequacy Discussion Series

- June 8 ([link](#))
- Past Webinars ([link](#))

## Power Systems Security Conference

- August 8-10 ([link](#))





## MRO Hybrid Reliability Conference

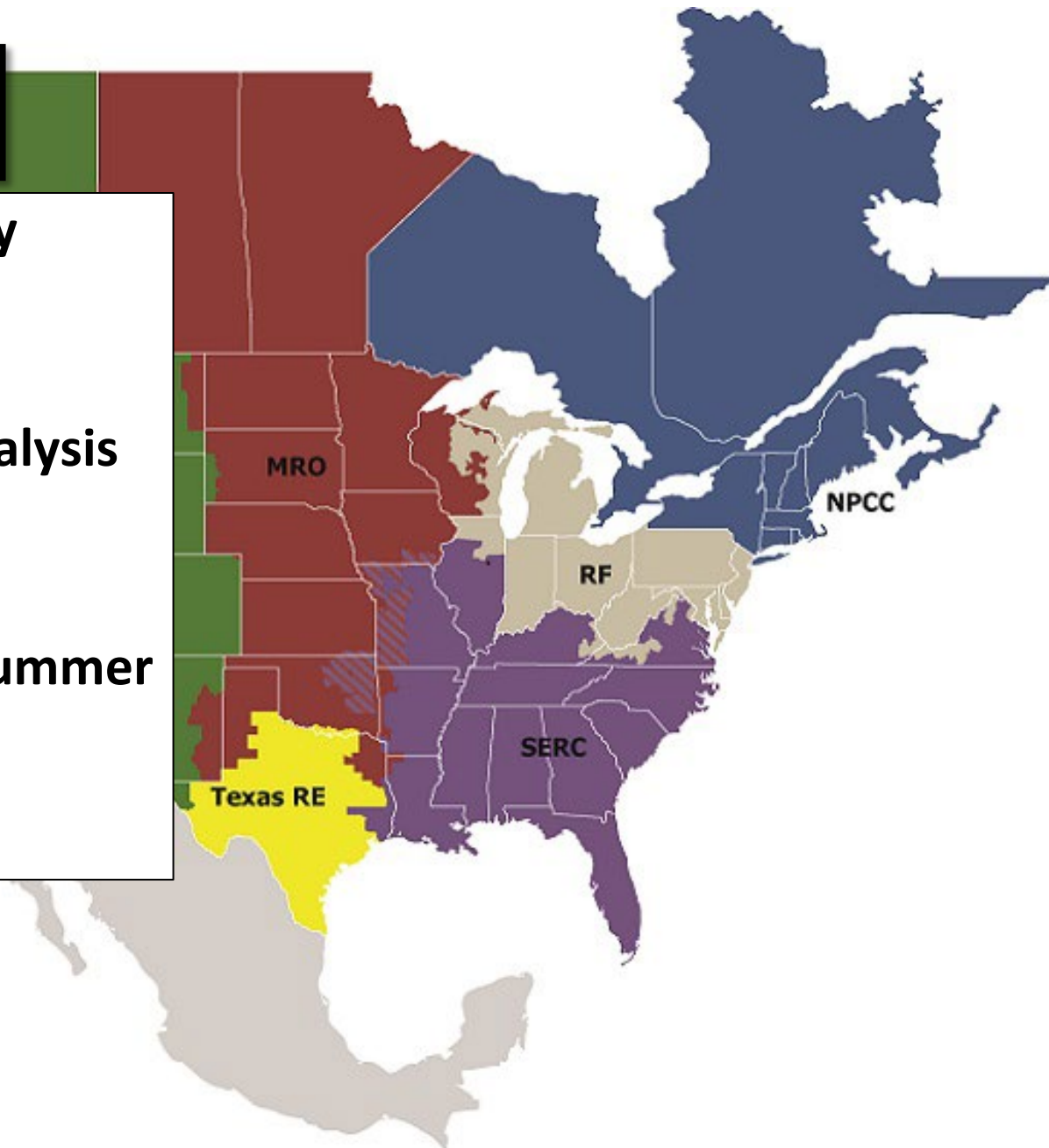
- May 17 ([Link](#))

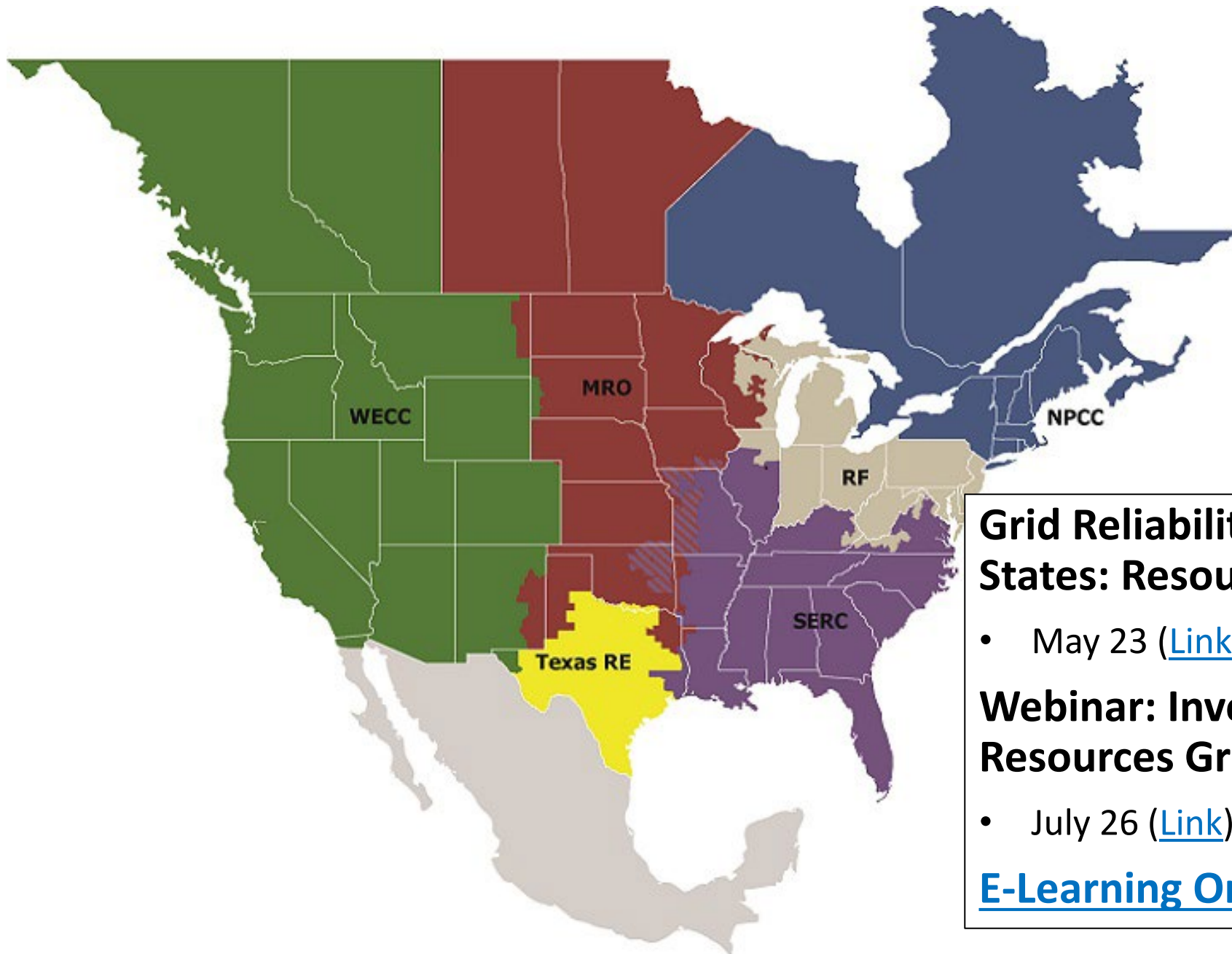
## Network Exposure Analysis Webinar

- June 8 ([Link](#))

## MRO 2023 Regional Summer Assessment Webinar

- June 29 ([Link](#))





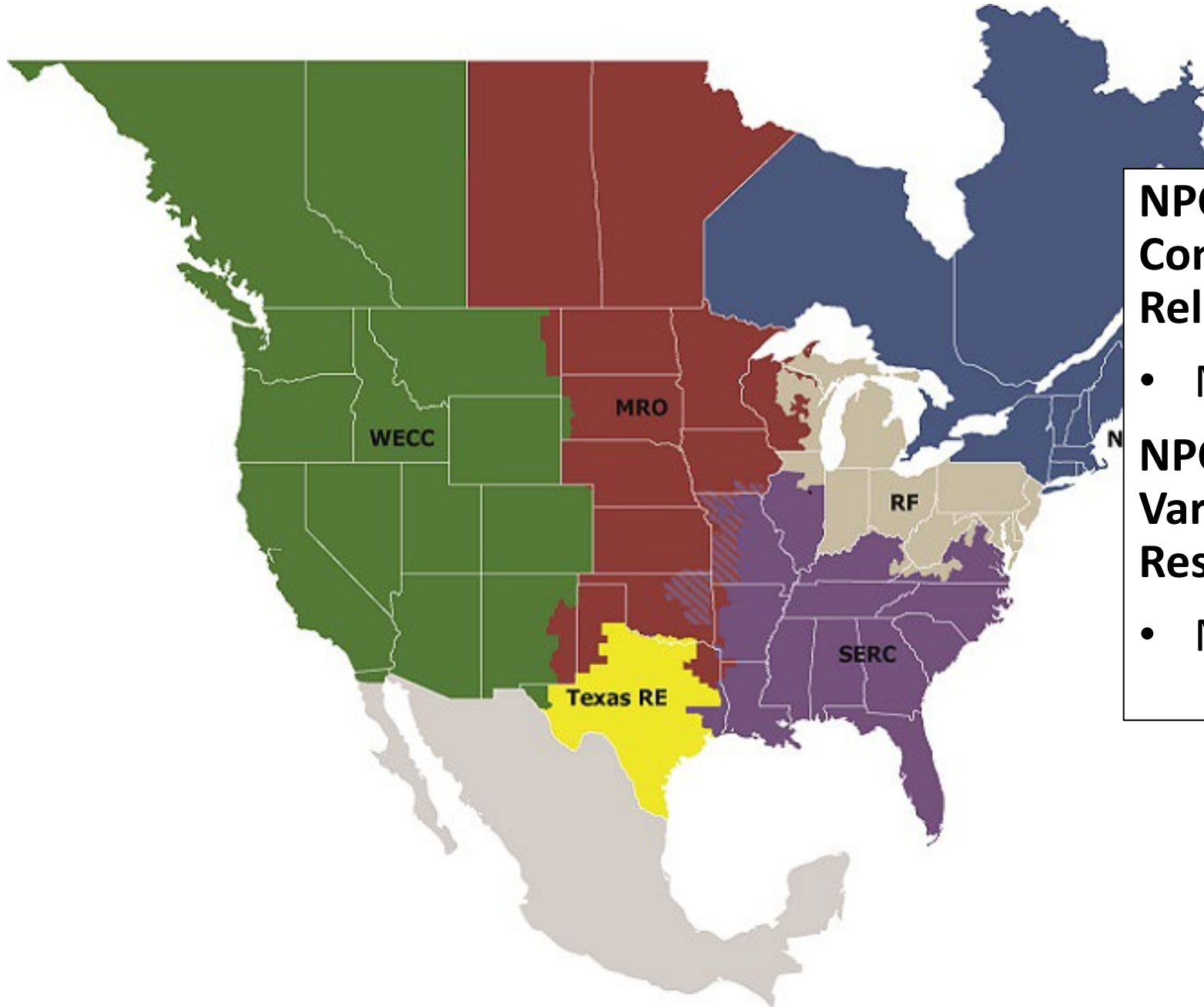
## Grid Reliability Update for States: Resource Adequacy

- May 23 ([Link](#))

## Webinar: Inverter-Based Resources Growth

- July 26 ([Link](#))

[E-Learning Online Courses](#)

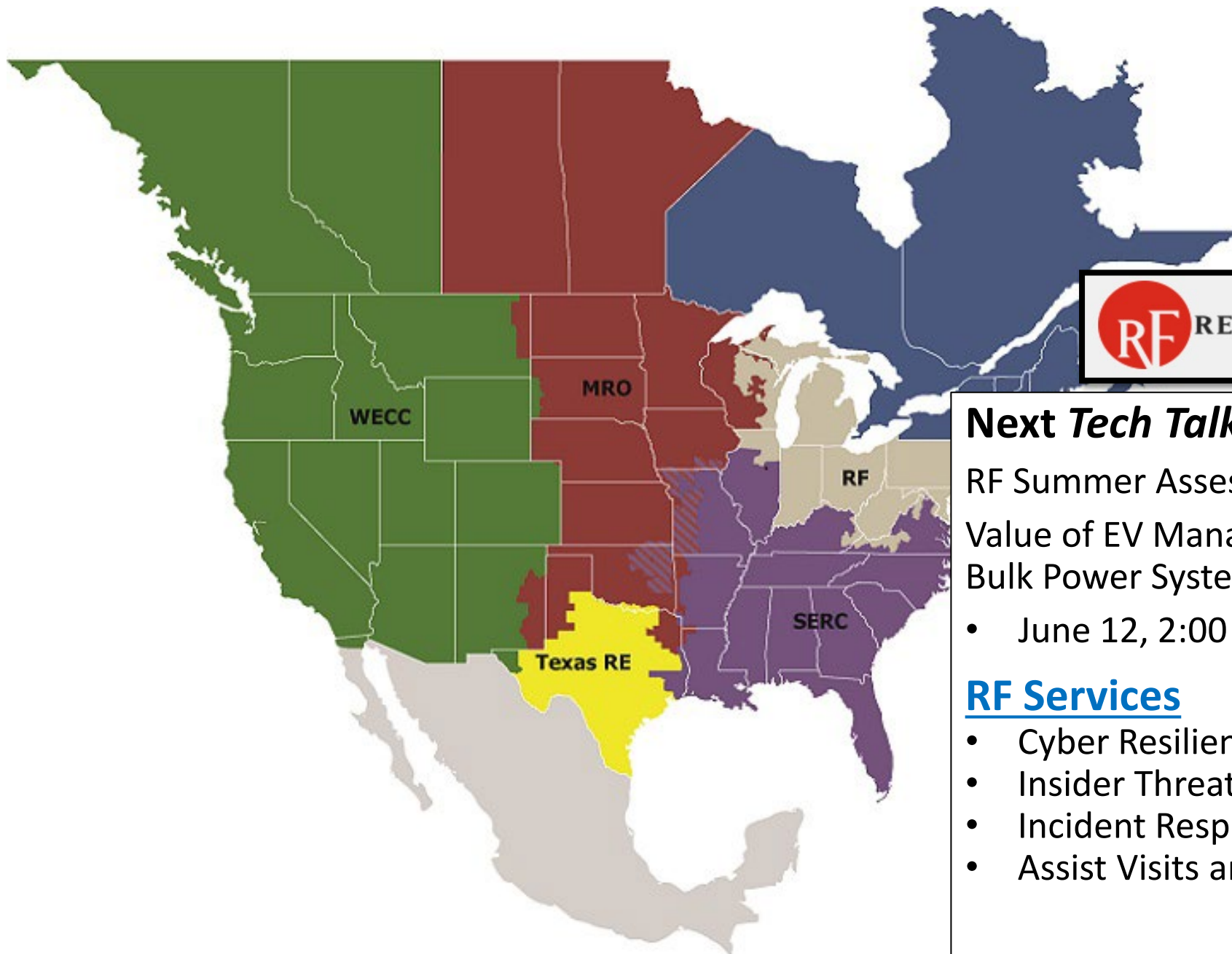


## NPCC Spring Compliance and Reliability Webinar

- May 18 ([Link](#))

## NPCC Distributed / Variable Energy Resources Forum

- May 25 ([Link](#))



## ***Next Tech Talk with RF***

RF Summer Assessment

Value of EV Managed Charging to Bulk Power Systems

- June 12, 2:00 – 3:30 PM

### **RF Services**

- Cyber Resilience Tool
- Insider Threat Assessment
- Incident Response Tabletops
- Assist Visits and Appraisals

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May 15, 2023



# TECHNICAL TALK WITH RF



Join the conversation at

[SLIDO.com](https://www.slido.com)

[#TechTalkRF](https://twitter.com/TechTalkRF)

# TECH TALK REMINDER

*Tech Talk with RF* announcements are posted on our calendar on [www.rfirst.org](http://www.rfirst.org) under UPCOMING EVENTS



UPCOMING EVENTS [VIEW ALL](#)

May 15, 2023

**Technical Talk with RF**

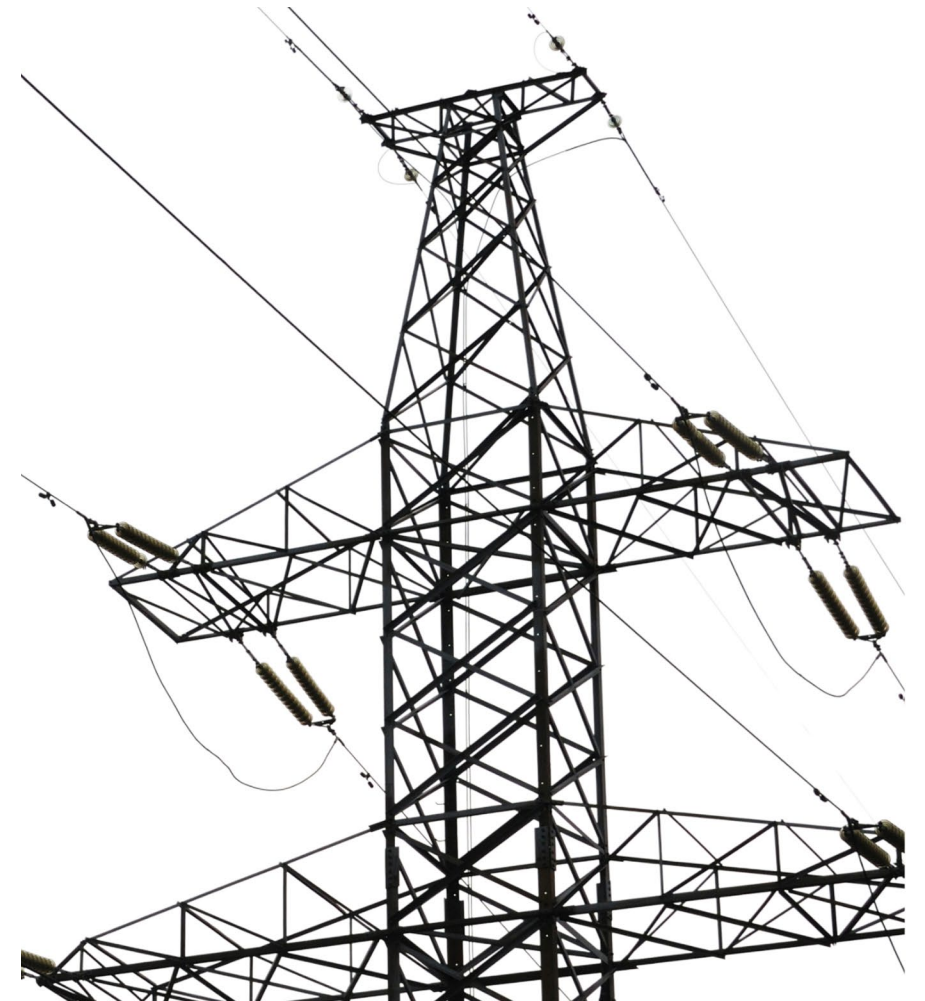




# Anti-Trust Statement

It is ReliabilityFirst'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 which violates, or which 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 ReliabilityFirst participant and employee who may in any way affect ReliabilityFirst's compliance with the antitrust laws to carry out this policy.



# AGENDA

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SOUTH AUSTRALIA CASE STUDY -

RENEWABLE INTEGRATION AND THE NOVEMBER 2022  
ISLANDING EVENT

- **JENNY RIESZ** (AEMO)
  - Manager - Operational DER Management
- **CATHRYN MCDONALD** (SA POWER NETWORKS)
  - Network Emergency Manager

# QUESTIONS & ANSWERS

FORWARD TOGETHER  RELIABILITYFIRST

