

Welcome to



**April 17, 2023
2:00 – 3:30 p.m.**

PUBLIC

Technical Talk with RF

April 17, 2:00 – 3:30 p.m.

Join the
conversation at
Slido.com
#TechTalkRF



Technical Talk with RF

April 17, 2:00 – 3:30 p.m.

Follow us on



[linkedin.com/company/reliabilityfirst-corporation](https://www.linkedin.com/company/reliabilityfirst-corporation)



Follow us on
twitter
[@rfirst_corp](https://twitter.com/rfirst_corp)



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

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

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

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

- 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

Certification Reminder

This reminder is to ensure Entities registered as a **Balancing Authority (BA)**, **Reliability Coordinator (RC)**, and/or **Transmission Operator (TOP)** are aware of the Organization Certification Review and Readiness Evaluation processes. Readiness Evaluations may be required for Entities taking on responsibilities for certified Entities (e.g., **Transmission Owners (TO-LCCs)** in the PJM footprint).

The decision to certify and evaluate changes to an already operating and certified Registered Entity is a collaborative decision between the affected Regional Entity and NERC. Items that are to be considered in this decision include one or more of the following:

- Changes to Registered Entity's footprint (including de-certification changes to existing JRO/CFR assignments or subset list of requirements):
- Relocation of the Control Center:
- Modification of the Energy Management System (EMS) which is expected to materially affect CIP security perimeters or the System Operator's: 1) situational awareness tools, 2) functionality, or 3) machine interfaces.

If you are planning a change that falls into one of these categories, an Organizational Certification Review or Readiness Evaluation may need to be performed. Please complete the form titled "RF Certification Notification and Preliminary Questionnaire" that is located [here](#).

In order to allow for time in scheduling, it is requested, if possible, that you **provide 12 months advance notice** of your changes to allow sufficient time for RF to review the changes and begin the process.



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.

NERC
NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

CMC
CALIFORNIA
MOBILITY CENTER

WECC

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.¹ 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)² 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

¹ 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.
² 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.

Electric Vehicle Dynamic Charging Performance Characteristics during BPS Disturbances
1



Tech Talk Announcement



Security Working Group: CIP-002 Categorization Practices to Build on Lessons Learned

Technical Reference Document

NERC
NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Technical Reference Document

CIP-002 Categorization Practices to Build on Lessons Learned

2020 FERC Report on CIP Audits | February 23, 2023

Purpose
The purpose of this document is to provide considerations related to categorization practices. This document expands on CIP-002 lessons learned from *FERC Staff Report Lessons Learned from Commission-Led CIP Reliability Audits* ("FERC Report").¹ It is not intended to establish new requirements under NERC's Reliability Standards, modify the requirements in any existing reliability standards, or provide an interpretation under Section 7 of the Standard Processes Manual. Additionally, there may be other legitimate ways to fulfill the obligations of the requirements that are not expressed within this supporting document. Compliance will continue to be determined based on language in the NERC Reliability Standards as they may be amended from time to time. Implementation of this lesson learned is not a substitute for compliance with requirements in NERC's Reliability Standards.

Introduction
This document provides background for considerations of CIP-002 categorizations resulting from the FERC Report. Additional information was gathered from an August 2021 meeting with FERC, NERC, and Security Working Group (SWG) participants, where discussions focused on the scope, observations, and frequency of occurrence noted by FERC regarding entity categorization, processes used for categorization, defined systems, and risk potential within the CIP-002 categorization process. Specifically, the focus was related to the following report information:

While entities generally categorized the impact rating of Bulk Electric System (BES) Cyber Systems associated with substations effectively and accurately, in some cases entities did not properly consider the interdependency of relay schematics and configurations between control houses containing separate voltage levels. This can lead to the misidentification of a BES Cyber System located at a substation as low impact instead of medium impact. For example, 138 kV breaker failure relays can trip 345 kV buses, and as a result can impact 345 kV BES Cyber Systems classified as medium impact. In such circumstances, consider whether the Cyber Assets associated with the 138 kV breaker failure relays are also medium impact BES Cyber Systems.²

CIP-002 Categorization

¹ See 2020 Staff Report Lessons Learned from Commission-Led CIP Reliability Audits (Oct. 2, 2020), <https://cms.ferc.gov/sites/default/files/2020-10/2020%20CIP%20Audits%20Report.pdf>

² <https://cms.ferc.gov/sites/default/files/2020-10/2020%20CIP%20Audits%20Report.pdf>, page 9

RELIABILITY | RESILIENCE | SECURITY



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 of a NERC document titled "Reliability Guideline". At the top left is the NERC logo. The title "Reliability Guideline" is in large blue font, followed by the subtitle "Electromagnetic Transient Modeling for BPS-Connected Inverter-Based Resources—Recommended Model Requirements and Verification Practices" in a smaller blue font. The date "March 2023" is below the subtitle. At the bottom, there is a blue banner with the text "RELIABILITY | RESILIENCE | SECURITY" and a row of four images: a control room, a power plant, a transmission tower, and solar panels. Below the images is the NERC address and contact information.

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](#)

The flyer features logos for North American Transmission Forum, EPRI, and NERC at the top. The main title is 'NATF-EPRI-NERC 2023 Transmission Resilience Summit' with dates 'May 17-18, 2023' and theme 'Climate Resilience'. It lists a 'Planned Agenda' for May 17 (Open Session) and May 18 (Closed Session). Meeting logistics include dress code, times, and location. Contact information and a QR code are provided at the bottom.

North American Transmission FORUM **EPRI** **NERC**
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

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

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
- Kevin Berent (EPRI) kberent@epri.com
- Soo Jin Kim (NERC) 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](#)



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.





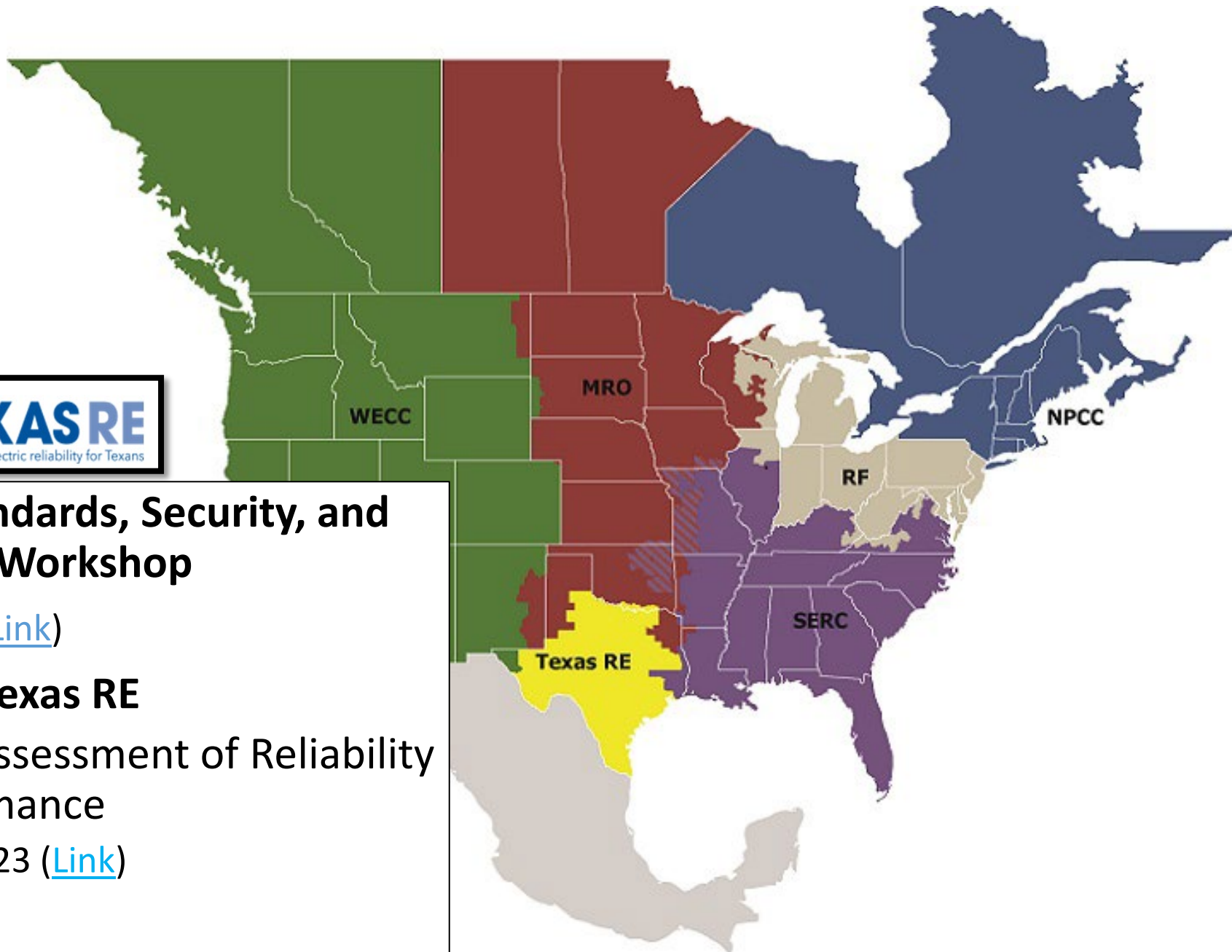
Spring Standards, Security, and Reliability Workshop

- April 27 ([Link](#))

Talk with Texas RE

2022 Assessment of Reliability Performance

- May 23 ([Link](#))



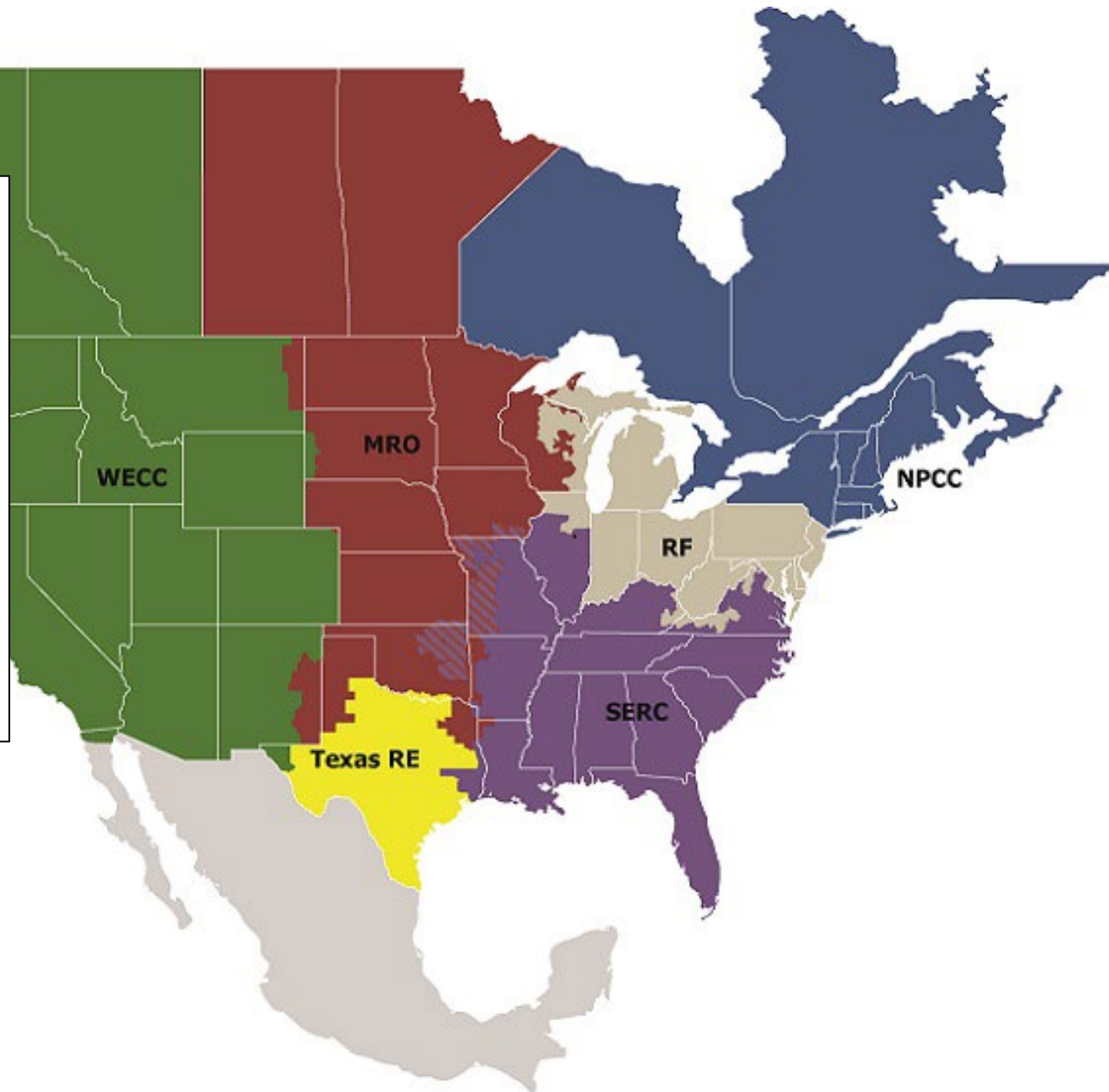


WECC Summer Outlook

- April 26-27 ([link](#))
 - Summer conditions overview, system overviews, microgrid spotlight, and wildfire preparation discussion

Resource Adequacy Discussion Series

- May 4 ([link](#))



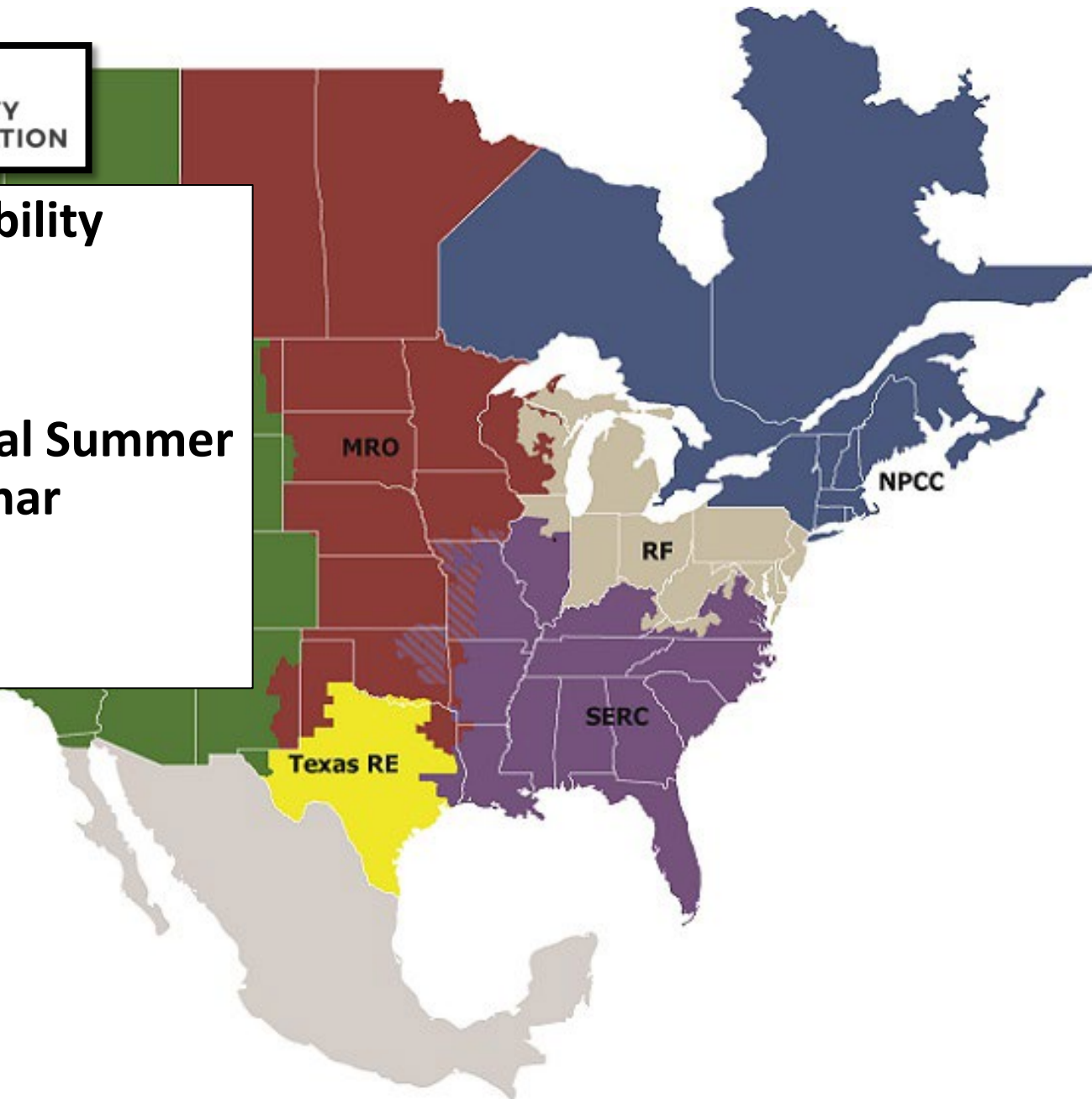


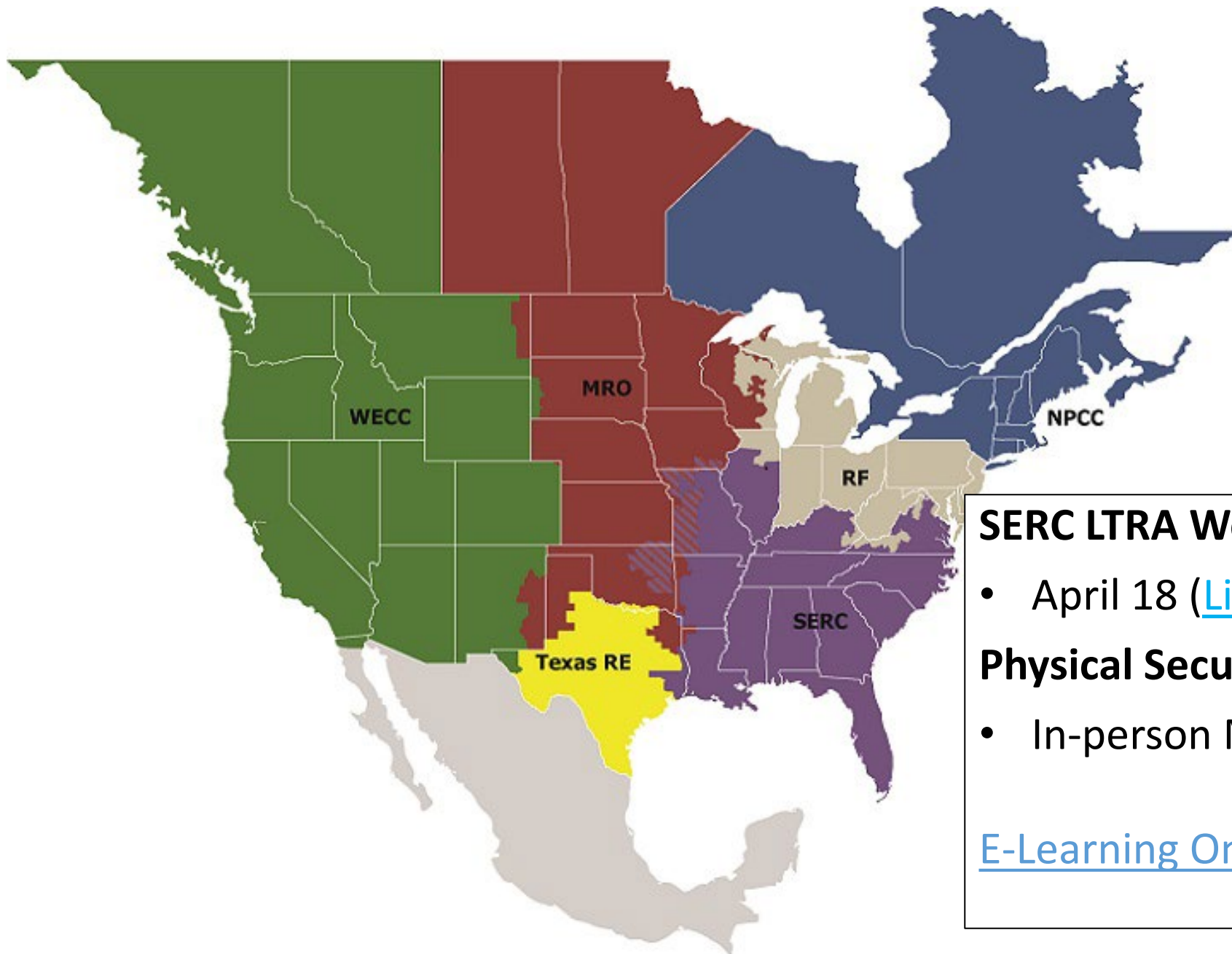
MRO Hybrid Reliability Conference

- May 17 ([Link](#))

MRO 2023 Regional Summer Assessment Webinar

- June 29 ([Link](#))





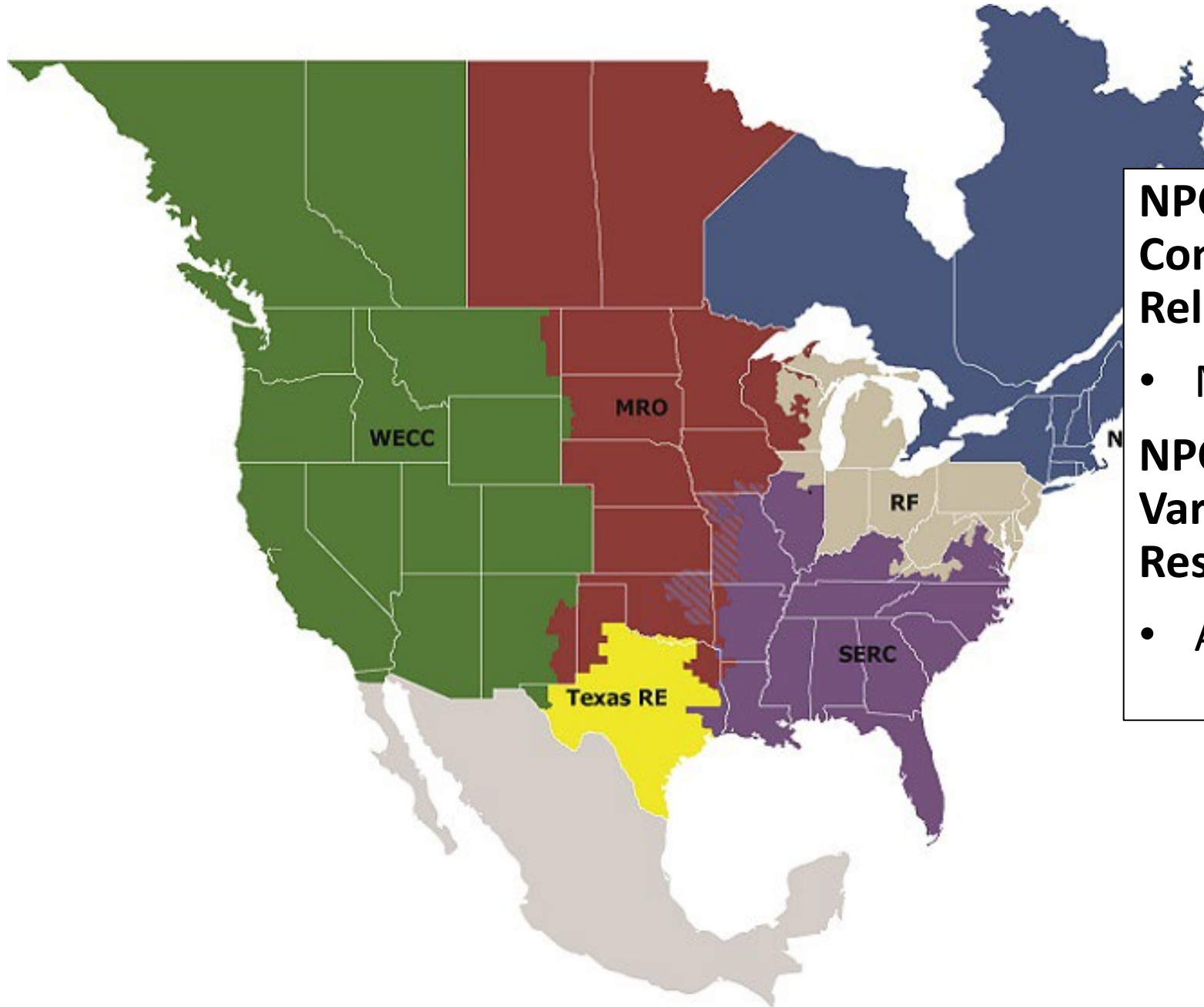
SERC LTRA Webinar

- April 18 ([Link](#))

Physical Security Workshop

- In-person May 1-2 ([Link](#))

[E-Learning Online Courses](#)

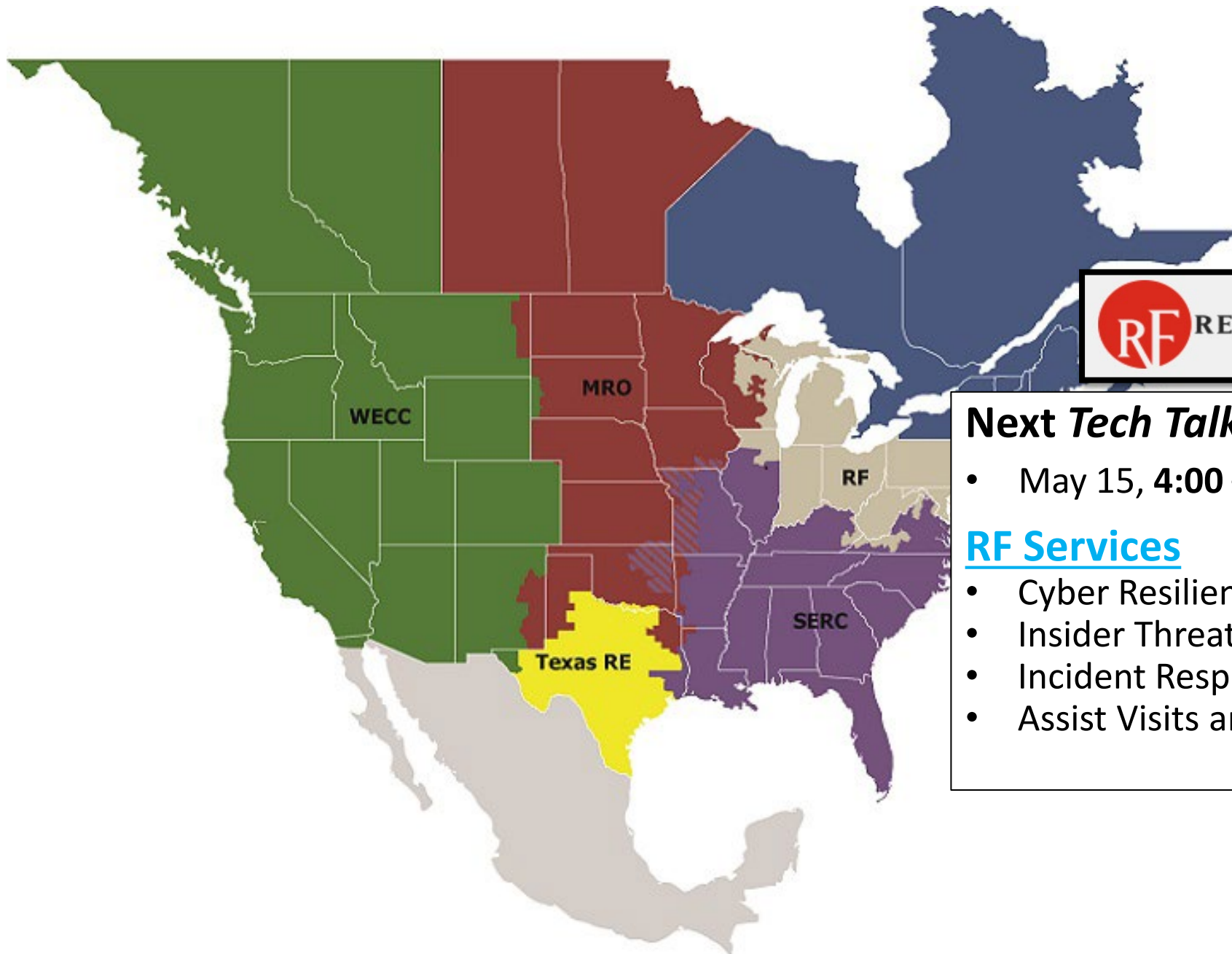


NPCC Spring Compliance and Reliability Webinar

- May 18 ([Link](#))

NPCC Distributed / Variable Energy Resources Forum

- April 27 ([Link](#))



Next Tech Talk with RF

- **May 15, 4:00 – 5:00 PM**

RF Services

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

Tech Talk Announcement

No Registration Required

- [Calendar Link](#)
- [Webex Link](#)



Tech Talk for May is our regularly scheduled date (third Monday of the month) **however**, we are starting at **4:00 PM Eastern** with a special guest presentation from our friends in Southern Australia talking about their transition to renewable energy.



Welcome to Tech Talk with RF

Monday, April 17, 2023

2:00 – 3:30 p.m.



Technical Talk with RF

April 17, 2:00 – 3:30 p.m.

Join the
conversation at
Slido.com
#TechTalkRF



Tech Talk Reminders

Tech Talk with RF announcements are posted on our calendar on www.rfirst.org under **Upcoming Events**



UPCOMING EVENTS [VIEW ALL](#)

April 17, 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.



Tech Talk Agenda

Substation Physical Security

- **Mike Hughes** – Manager, Entity Engagement

Physical Security Common Failure Points

- **Mike Hattery** – Counsel, Enforcement

