

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Reliability and Security Technical Committee Meeting

June 8, 2021

RELIABILITY | RESILIENCE | SECURITY



NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Security Guideline for the Electricity Sector: Assessing and Reducing Risk

Brent Sessions, SWG Co-Chair
Christine Hasha, Sponsor

RELIABILITY | RESILIENCE | SECURITY



Motion to approve the Security Guideline for the Electricity Sector: Assessing and Reducing Risk.

Deliverable: (COMPLETE)

- The development of an Assessing and Reducing Risk Security Guideline, Usage, and Tool

Recent Activity: (COMPLETE)

- Incorporated the 45 day comments
- Developed a survey and associated announcement for public participation

RSTC June 2021 Agenda:

- Requesting Approval of the Assessing and Reducing Risk Security Guideline, Usage, and Tool

Post Approval Activity:

- Post completed Assessing and Reducing Risk Security Guideline, Usage, and Tool
- Provide educational outreach
- Compile and review survey responses
 - As part of the survey, review and monitor industry interest for future state enhancements

RSTC September 2021 Agenda:

- Present survey metric results

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Implementation Guidance: Cloud Solutions and Encrypting BES Cyber System Information

Brent Sessions, SWG Co-Chair
Christine Hasha, Sponsor

RELIABILITY | RESILIENCE | SECURITY



Motion to endorse the Implementation Guidance: Cloud Solutions and Encrypting BES Cyber System Information.

Summary of the Compliance Implementation Guidance:

Purpose is to provide examples for how encryption can be utilized to secure and restrict access to BES Cyber System Information in various commonly used cloud services. (Microsoft 365, ServiceNow, Amazon Web Services, CommVault, IBM)

Development History:

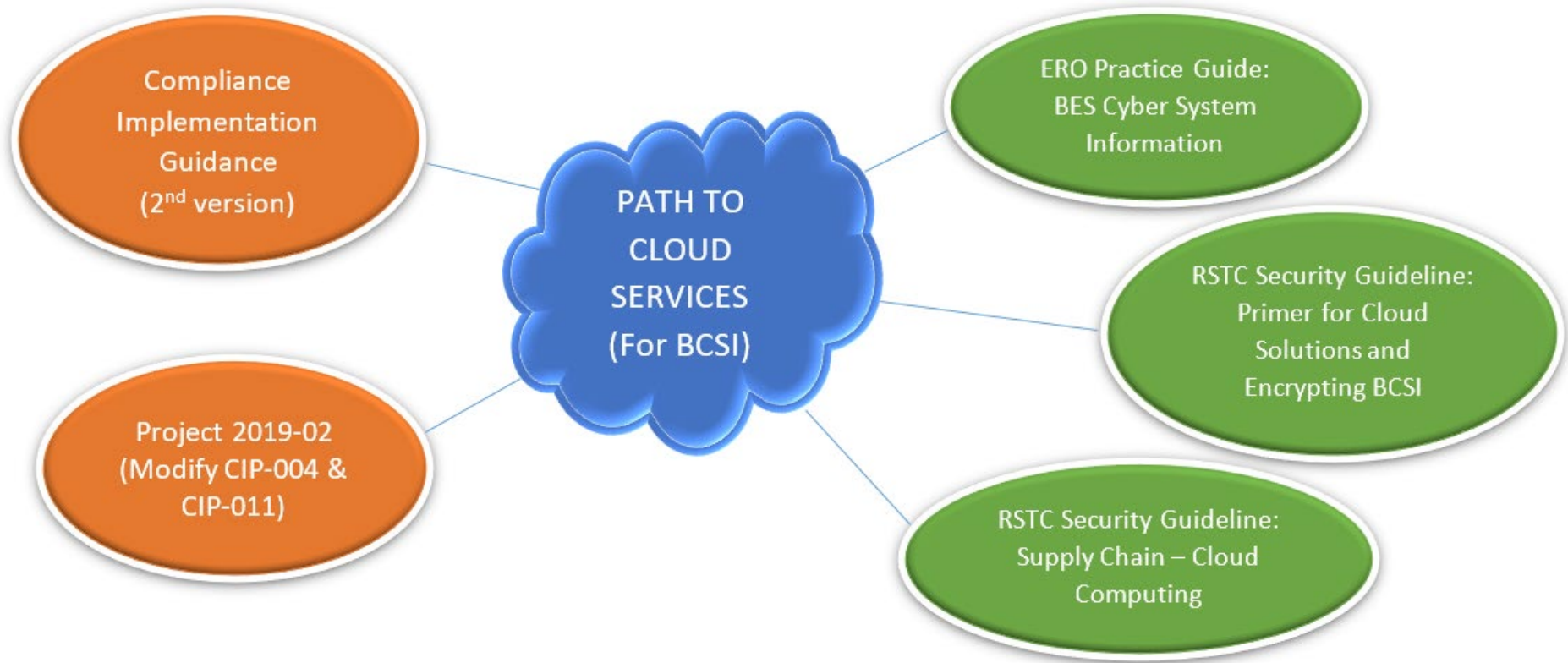
- June 2020 - First version was presented to the NERC CIPC/RSTC, and approved.
- June 2020 - First version was submitted to the ERO for endorsement.
- Oct. 2020 - ERO Enterprise did not endorse the document, but provided detailed feedback to SWG sub-team
- April 2021 - SWG sub-team modified the document to address ERO Enterprise feedback

June 2021:

- RSTC Agenda: Requesting Approval on version 2 of the Compliance Implementation Guidance document for submittal to the ERO for endorsement

In Progress:

Complete:



NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Section 1600 Data Request

For GADS Conventional, GADS Wind, and GADS Solar

Donna Pratt, Manager, Performance Analysis
Reliability and Security Technical Committee
June 8-9, 2021

RELIABILITY | RESILIENCE | SECURITY



- Motion to approve posting to begin the 45-day public comment period in mid to late June for changes to the GADS Section 1600 Data Request in order to seek NERC Board approval in November, 2021

- In 2017, the Planning Committee requested the GADS Working Group (now GADS User Group) determine the data reporting requirements for solar data reporting, with the goal of preparing a Section 1600 data request
- The Performance Analysis Subcommittee has reviewed and endorsed the proposed changes to the GADS Section 1600 Data Request
- RSTC Action Requested: Authorize posting to begin the 45-day public comment period in mid to late June for changes to the GADS Section 1600 Data Request in order to seek NERC Board approval in November, 2021

- 2015: GADS Section 1600 data request extended to include wind reporting
- 2018: the GADS Solar project team, made up of industry solar plant owners/operators and national/international industry organizations, began developing the data reporting requirements, providing monthly updates to the GADS Working Group
 - The draft reporting instructions were completed in early 2020
- During the development of the data reporting requirements for solar facilities, gaps in the reporting requirements for wind reporting and conventional units were identified:
 - Wind: event reporting and connected energy storage
 - Conventional: design/configuration data
- The GADS Working Group created sub-teams to prepare changes for GADS Wind and Conventional GADS

- NERC is seeking to update the GADS Section 1600 data request to add value by expanding GADS reporting to include:
 - Solar (new):
 - Inventory/configuration, event reporting, and performance data
 - Inventory/configuration of connected energy storage and performance data
 - GADS Wind extensions:
 - Event reporting and connected energy storage
 - Changes to configuration data to support event reporting, and
 - Expansion of mandatory data reporting fields
 - Conventional GADS extensions:
 - Unit design data that is comparable to the types of information being collected for wind and solar

Data Collection System	Who	Plant Criteria	Types of Data
New: GADS – PV / GADS Solar	NERC registered entities that are Generator Owners	Utility-scale photovoltaic facilities of 20 MW or greater, regardless of interconnection type Commissioned on or after January 1, 2010	Plant configuration, connected energy storage, performance and event reporting, mandatory equipment outage detail
Existing: GADS – W / GADS Wind	NERC registered entities that are Generator Owners	Wind facilities of 50 MW or greater Commissioned on or after January 1, 2000	Connected energy storage and event reporting, EIA code, component (equipment) outage detail becomes mandatory
Existing: GADS / GADS Conventional	NERC registered entities that are Generator Owners	Conventional facilities of 20 MW or greater	Relevant design data and enhanced event reporting, contributing condition code

- Review and Approval Process:
 - Proposed 45-day public comment period: mid-late June to mid-August
 - Review and disposition of comments with RSTC: September, 2020¹
 - Presentation to NERC Board: November 2021
- Proposed Reporting Timelines:
 - GADS Solar:
 - Late 2022*: Voluntary reporting
 - 1/1/2023: Mandatory reporting for plants 50 MW or greater
 - 1/1/2024: Mandatory reporting for plants 20 MW or greater
 - GADS Wind and GADS Conventional:
 - 1/1/2023: Reporting changes become effective

**Estimated dates, subject to organizational project priorities*

**Mid-year implementations may not begin until new calendar year*

[Reliability Assessments](#)

[Performance Analysis](#)

[Performance Analysis](#)

[Reliability Indicators](#)

[Section 1600 Data Requests](#)

[Demand Response Availability Data System \(DADS\)](#)

[Generating Availability Data System \(GADS\)](#)

[Transmission Availability Data System \(TADS\)](#)

[Protection System Misoperations \(MIDAS\)](#)

[Electricity Supply & Demand \(ES&D\)](#)

[Bulk Electric System \(BES\) Definition, Notification, and Exception Process Project](#)

[Committees](#)

[Operating Committee \(OC\)](#)

[Planning Committee \(PC\)](#)

[Webinars](#)

[Home](#) > [Program Areas & Departments](#) > [Reliability Assessment and Performance Analysis](#) > [Performance Analysis](#) > [Performance Analysis](#) > [Section 1600 Data Requests](#)

Section 1600 Data Requests

In accordance with Section 1600 of the North American Electric Reliability Corporation ("NERC") *Rules of Procedure*, NERC may request data or information ("Data Request") that is necessary to meet its obligations under section 215 of the Federal Power Act, as authorized by Section 39.2(d) of the Federal Energy Regulatory Commission's ("FERC" or "Commission") regulations.

Each Section 1600 data request specifies the data to be collected, the registered entity function(s) to which it applies, the criteria for reporting requirements, and how and when the data will be collected.

Under the Performance Analysis program, NERC currently collects data from registered entities that meet reporting requirements for demand response, generation, transmission, protection system operations and geomagnetic disturbances.

Section 1600 Data Requests in Effect

[Demand Response Availability Data System \(DADS\)](#)

[Generating Availability Data System \(GADS\)](#)

[GADS Wind \(GADS-W\)](#)

[Geomagnetic Disturbances \(GMD\)](#)

[Protection System Misoperations \(MIDAS\)](#)

[Transmission Availability Data System \(TADS\)](#)

Reference Materials for Section 1600 Data Requests in Progress

Type	Title	Comments Due
------	-------	--------------

+ GADS Conventional (#)

+ GADS Solar (#)

+ GADS Wind (#)

- NERC will collect, track, and review public comments
- GADS User Group and GADS Solar project team will review and provide feedback on public comments
- Section 1600 data request materials will be revised as needed in response to the comments
- NERC will:
 - Present to the RSTC the summary of public comments and actions taken
 - Seek endorsement from the RSTC to present the proposed GADS Section 1600 data request to NERC's Board of Trustees for approval
 - Prepare materials and presentation for the November Board of Trustees meeting



Questions and Answers

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

**DO NOT CITE OR USE THE DATA IN THIS
PRESENTATION – Preliminary Data and Results**

2021 State of Reliability Report

Preview

John Moura, Director of Reliability Assessment

Donna Pratt, Performance Analysis Manager

June 8, 2021

RELIABILITY | RESILIENCE | SECURITY



- Provide objective, credible, and concise information to policy makers, 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

- Unprecedented conditions in 2020 challenged BPS resilience:
 - COVID-19 Pandemic
 - Historic hurricane season
 - Extreme heat with load shed and wildfires in the West
 - October 2020 ice storm in Texas
 - December 2020 supply chain compromise
- Escalated resource adequacy risk and a wide-spread heatwave across the Western Interconnection led to substantial load shedding in August
- Cybersecurity attacks and vulnerabilities remain a significant concern
- Favorable Trends
 - Improving restoration times of transmission system outages after extreme weather
 - Continued reduction in the misoperations rate
- Unfavorable Trends:
 - Highest AC circuit unavailability due to extreme weather
 - Highest transmission-related events that resulted in load loss

4,588,062,000 MWh
2020 Actual Energy

1,048,944 MW
2020 Summer Peak Capacity

503,551 mi
Total Transmission Circuit Miles > 100kV/m

6,009
Number of Conventional Generating Units > 20MW

99.745%

Time with no operator-initiated firm load shedding associated with EEA-3 (13.8 GWh energy unserved or 0.0003% of total energy served)

0

Category 3, 4, or 5 Events (non-weather related)





The reliability indicators below represent four core aspects to system performance that are measurable and quantifiable:

- **Resource Adequacy** - Does the system have enough capacity, energy, and ancillary services?
- **Transmission Performance and Availability** - Is the transmission system adequate?
- **Generation Performance and Availability** - What is the outage performance of the generation fleet?
- **System Protection and Distribution Performance** - Can the system remain stable and withstand disturbances?

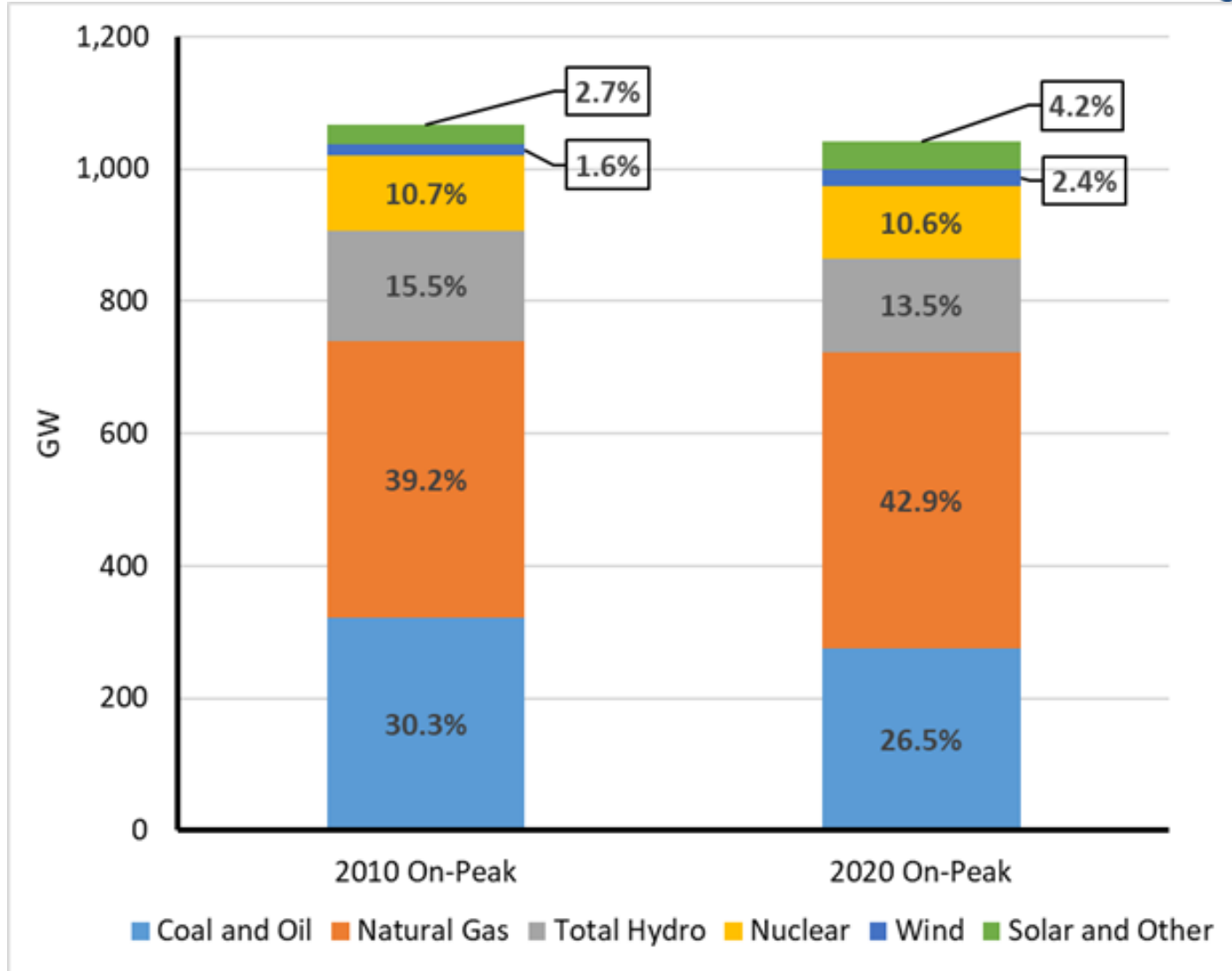
 Red – Actionable, key finding

 White – Stable or no change

 Yellow – Declining, heightened monitoring

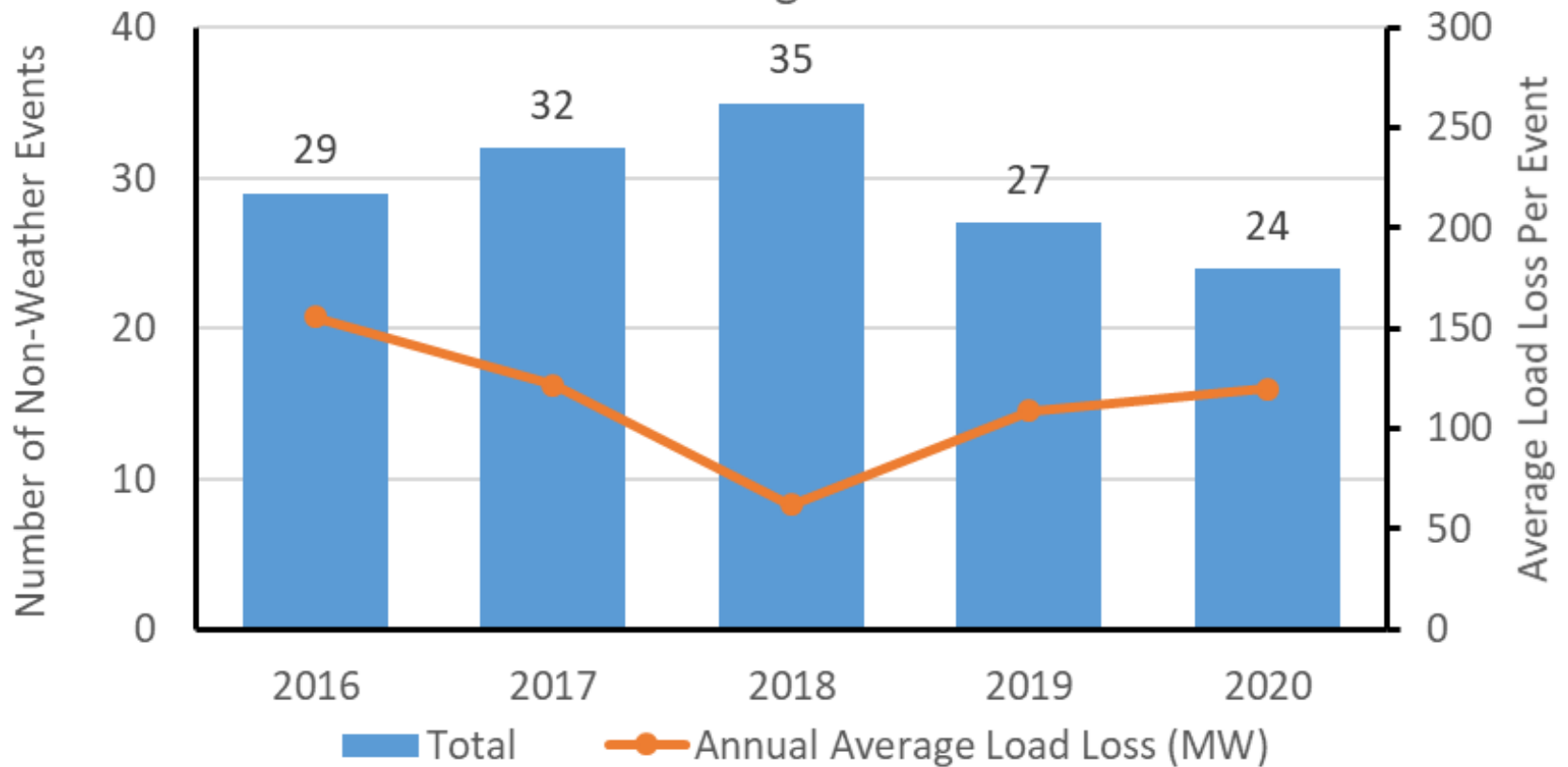
 Green – Improving

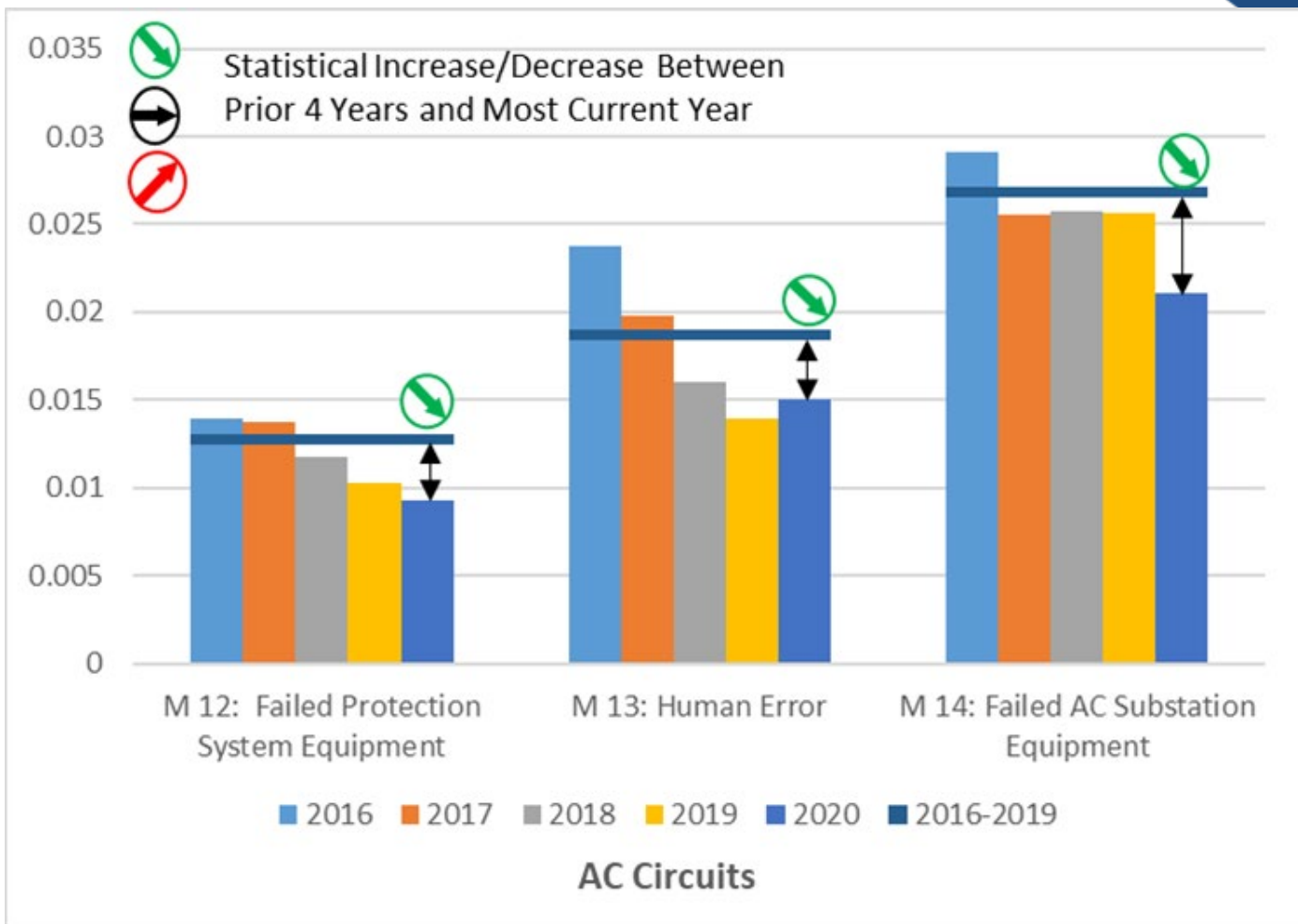
NERC-Wide Resource Mix On-Peak Capacity 10-Year Comparison



Transmission greater than 100kV

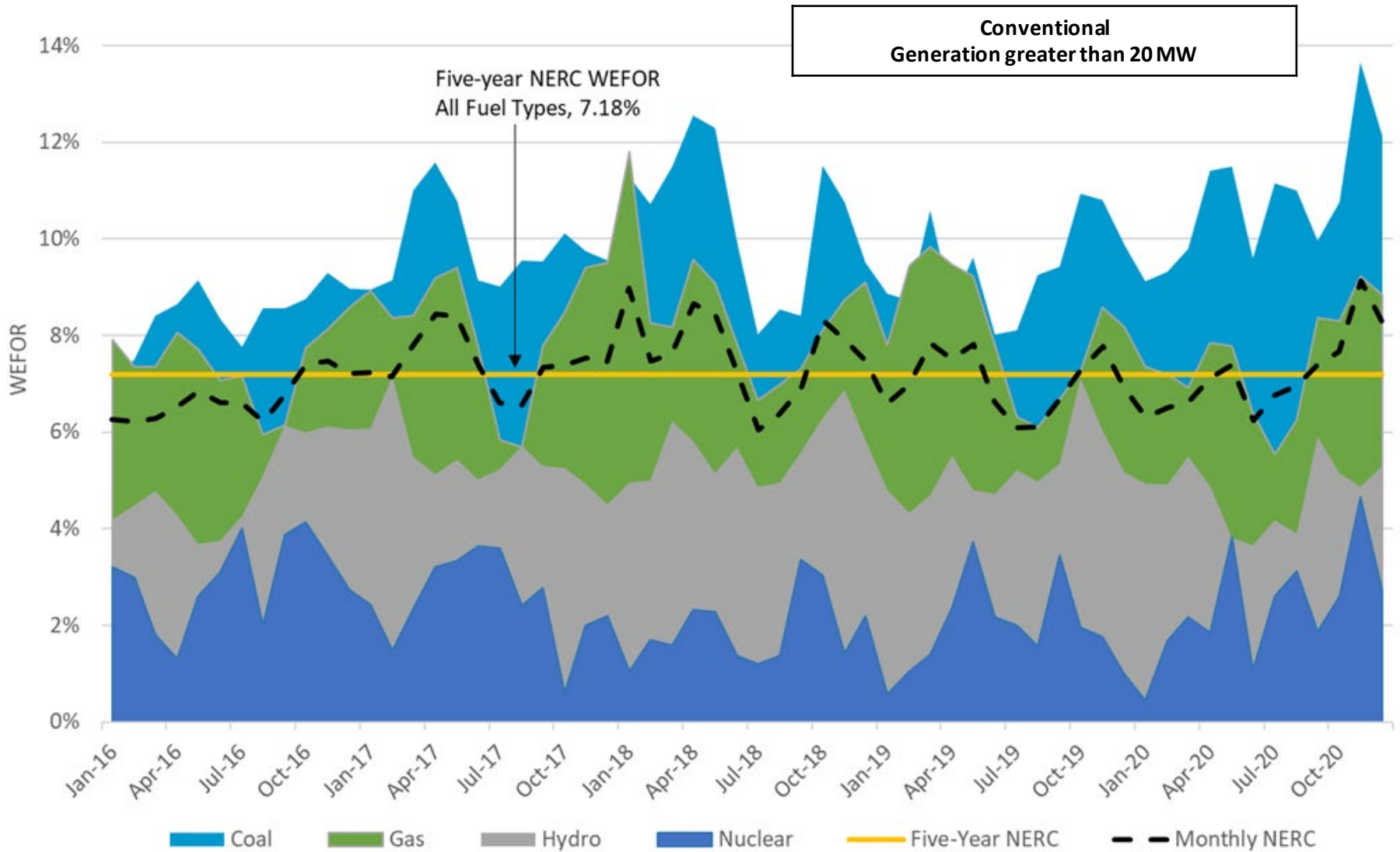
Number of Non-Weather Load Loss Events with Average Load Lost

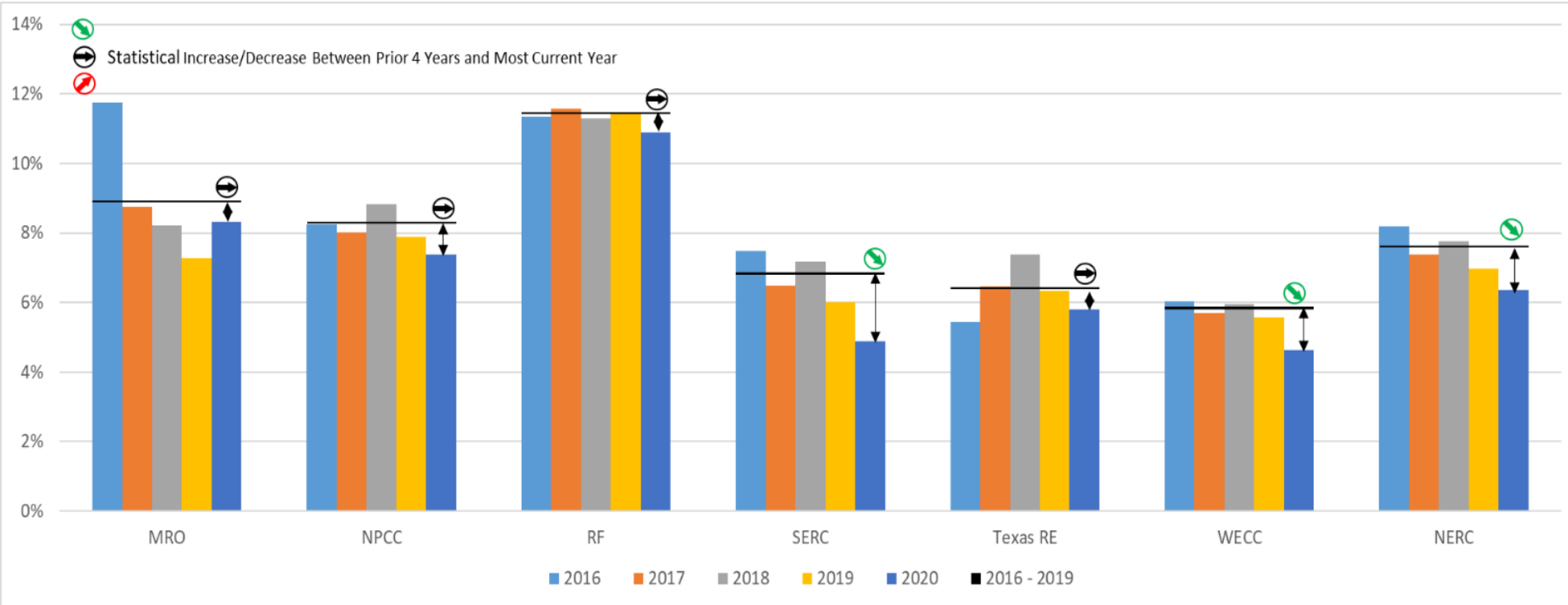




- Protection System
- Human Error
- AC Substation Equipment

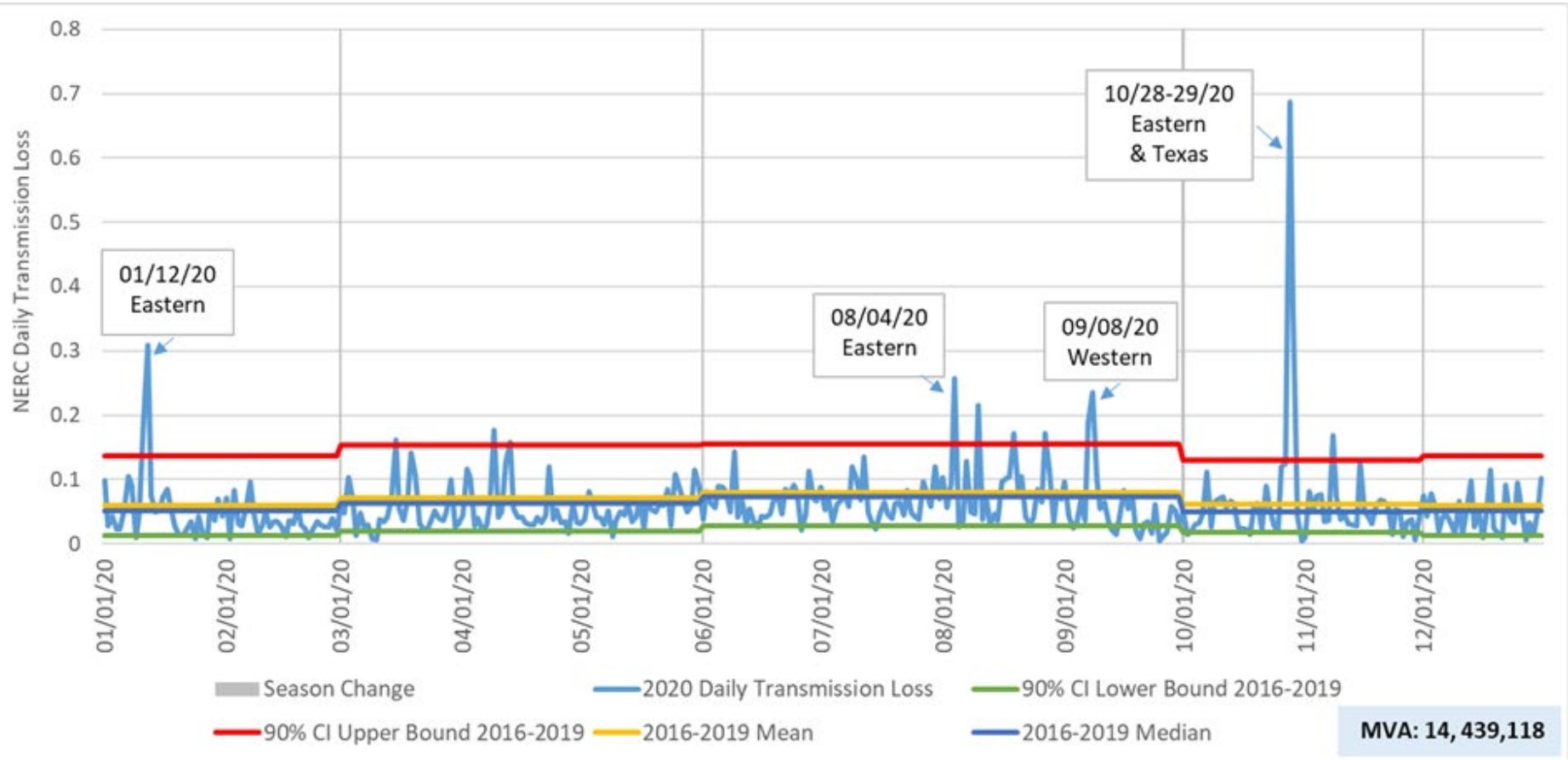
Conventional Generation Availability by Major Fuel Type



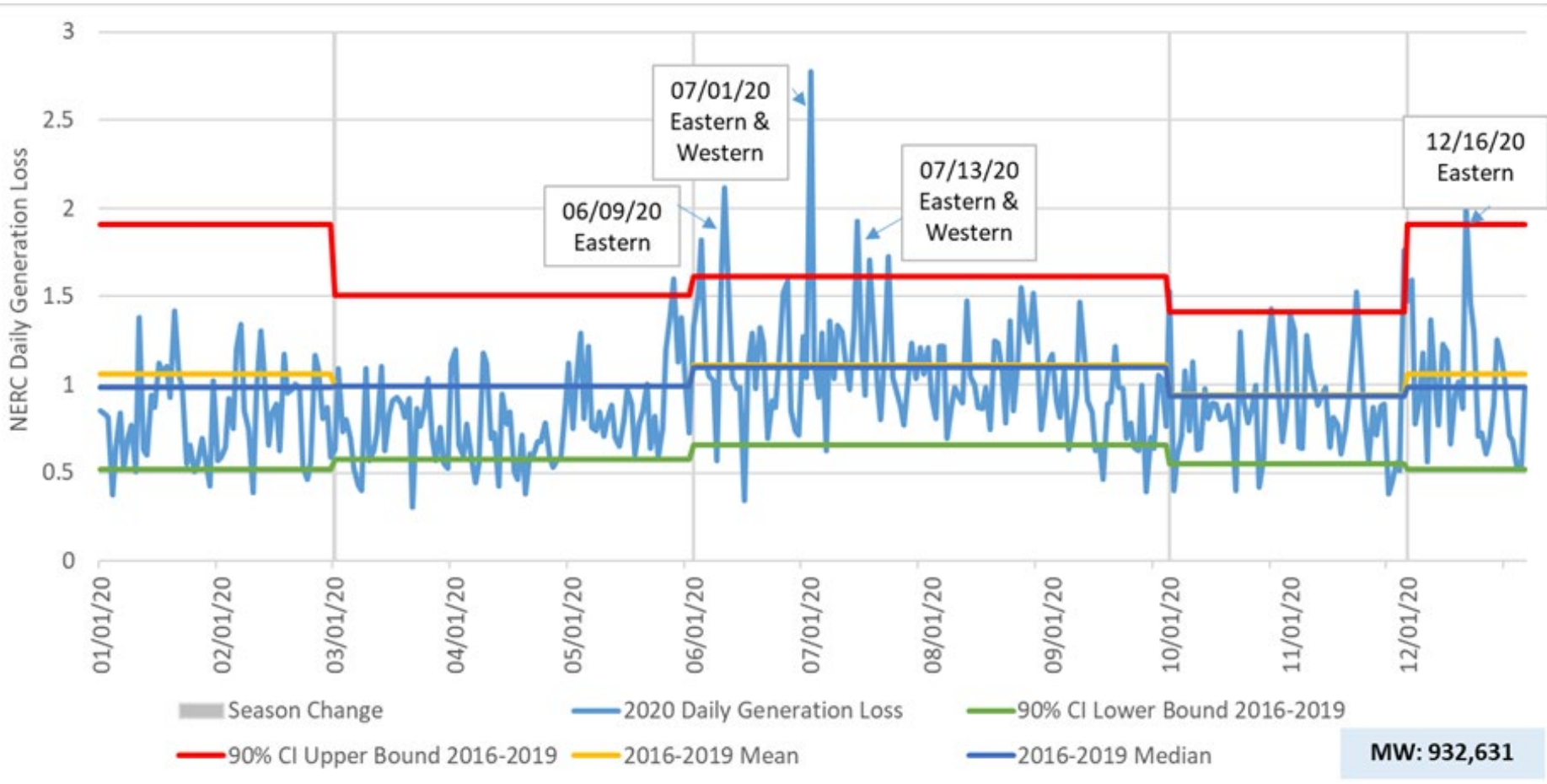


BES Protection Systems

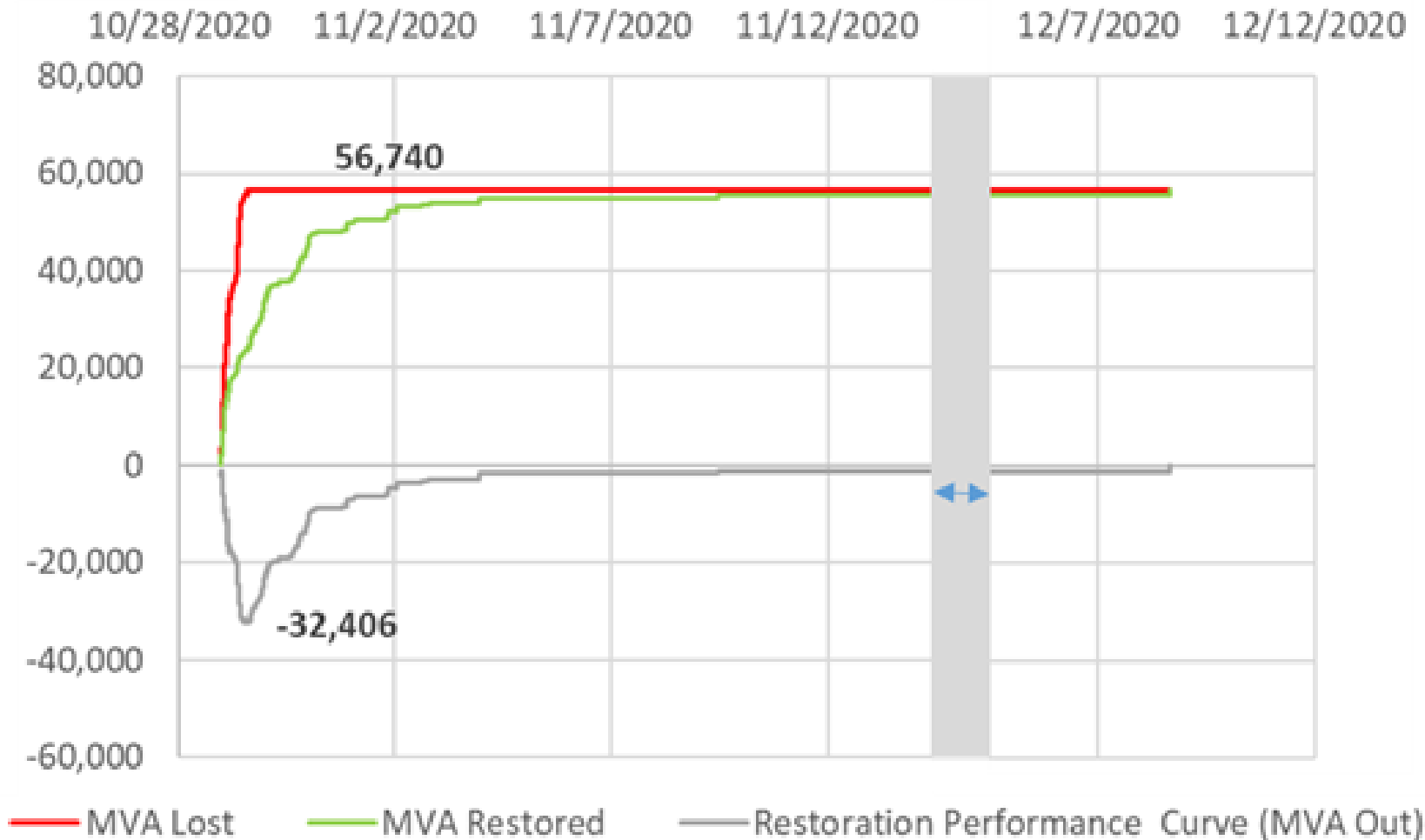
Priority Reliability Issues Example: Extreme Natural Events - Transmission



Priority Reliability Issues Example: Extreme Natural Events - Generation



Hurricane Zeta, October 28, 2020 56,740 MVA Affected, Eastern Interconnection



Date	Milestone
July 17	Electronic Voting Deadline for Report Endorsement by the Reliability Security and Technical Committee
July 23	NERC Board of Trustees Review
August 12	NERC Board of Trustees Acceptance
August 13	Target Release



Questions and Answers

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

RSTC Nominating Subcommittee Vice Chair Election

Jody Green – RSTC Nominating Subcommittee Member
Reliability and Security Technical Committee Meeting
June 8, 2021

RELIABILITY | RESILIENCE | SECURITY



Motion to approve the Nominating Subcommittee's presented candidate, Rich Hydzik as the RSTC Vice Chair.

- The RSTC NS consists of five members (the RSTC Vice Chair and four members drawing from different sectors and at-large representatives).
- NS members are nominated by the RSTC chair and approved by the full RSTC membership.
- The term for members of the Nominating Subcommittee is two years.
- In addition to recommending individuals for at-large representative seats, the NS manages the process to select the chair and/or vice chair of the RSTC.

- Nominating Subcommittee (NS) Members
 - David Zwergel – Vice Chair
 - Jodirah Green – Sector 7, 2022
 - Todd Lucas – At-Large, 2023 (recused)
 - Sandra Ellis – At-Large, 2023
 - Wayne Guttormson – At-Large, 2022

- From RSTC Charter - Officers shall be selected as follows:
 - The NS solicits nominations for chair and vice-chair through an open nomination process. Self-nominations are permitted.
 - The NS proposes a chair and/or a vice-chair candidate. ***The full RSTC will elect the chair and vice chair.***
 - The chair and vice chair shall ***not be from the same sector.*** The current Chair is in Sector 3.
 - The elected chair and vice-chair are ***approved by the NERC Board.***
 - Unless an exception is approved by the Board, no individual may serve more than one term as vice chair and one term as chair.

- Open nomination period April 30-May 14, 2021
 - RSTC members only
- Nominating Subcommittee met May 24 to review nominations and recommend a candidate
- June 8 – Full RSTC vote for Vice Chair
- June – Board Action Without a Meeting to appoint Vice Chair

- The Nominating Subcommittee presents candidate(s).
- Elections will be held as follows:
 - The Committee will vote on the Nominating Subcommittee's presented candidate. If the presented candidate is approved with a 2/3 majority, the presented candidate is elected and the election is closed.
 - Should the presented candidate not get elected the Chair will ask the NS to do the following:
 - Reconvene a review of the nominations already submitted;
 - Open for a second, shortened nomination process for additional submissions; and,
 - Convene a second meeting to evaluate the nominations and present a candidate to be considered at the next RSTC meeting.

- For the RSTC Vice Chair position, the Nominating Subcommittee nominates:
 - Rich Hydzik, Avista



Questions and Answers