

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

White Paper

Possible Misunderstandings of the Term "Load Loss"

JP Skeath, Engineer II
March RSTC Meeting
March 03, 2021

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- Depending on interpretation, outcome of the study, report, or document can be altered
 - Possible Perspective – load that experiences a loss-of-service
 - Possible Perspective – load that is reduced in an event is “lost” and not the long-term reduction creating an over reporting of events
 - Possible Perspectives – load in predictive models that is reduced is considered “load loss”, even when system planning criteria are met

- Standards Changes
 - EOP-004 to clarify “loss of firm load” with customer-initiated load reduction
 - TPL standards to include customer-initiated load reduction
- TPs and PCs should have their respective Transmission Operators be aware of areas with significant levels of customer-initiated load reduction with BPS disturbances.
- Discussion with states and other regulators to be aware of areas with significant levels of customer-initiated load reduction with BPS disturbances.
- Discussion with DOE for the recommendations to be included in their relevant documents that refer to loss of load

- Editorial comments throughout
 - Grammatical changes
 - Sentence clarity
- Two categories received
 - Recommended standards changes
 - Low priority and can be handled in normal review cycles
 - Clarifying acceptable performance
 - Voltage Criteria
 - “Customer-Initiated Load Reduction”
- Additionally, one RSTC commenter provided possible resources for any team to consider on any standards revision.

- Requested by PC for SAMS to develop memo on the subject
- SAMS development altered to white paper and approved at subcommittee in Q2 2020
- Requested RSTC review in Q3 2020. At this same time, SAMS was voted to be disbanded
- RSTC attempted to resolve comments at inter-quarterly meetings.
- Ad hoc team formed from previous SAMS members for comment resolution.

- The ad hoc team restates the original SAMS request to approve the White Paper: Possible Misunderstandings of the term “Load Loss” per the old SAMS work plan.



Questions and Answers

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Standing Committees Coordinating Group Scope Document

Endorse

David Zwergel, RSTC Vice Chair

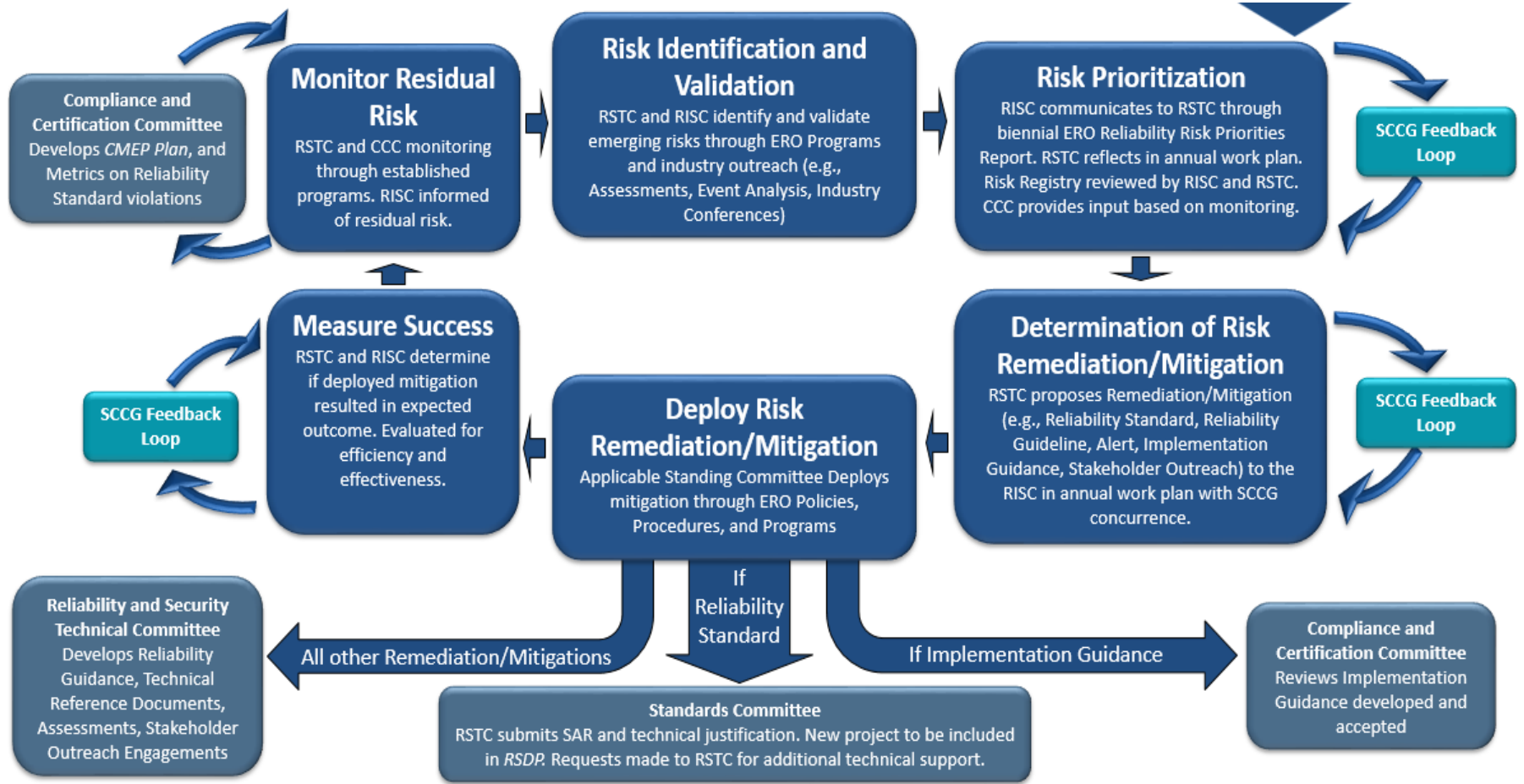
NERC Reliability and Security Technical Committee Meeting

March 2021

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- The Standing Committee Coordination Group (SCCG) is an advisory committee that supports coordination between the North American Electric Reliability Corporation (NERC) standing committees on cross-cutting matters of importance to bulk power system (BPS) reliability, security and resilience.
- The SCCG has been in existence for years but in an informal capacity.
- The SCCG is putting forth a scope document for formal approval and adoption by the NERC Board of Trustees.



- The SCCG performs two primary functions for the standing committees.
 - The first function of the SCCG is to evaluate the manner in which standing committee address risks to the reliability, security and resilience of the BPS by providing a cross-cutting mitigations in a coordinated fashion.
 - The SCCG provides strategic advice to the standing committees and others on the ERO Enterprise's holistic efforts to triage key reliability, security and resilience risks and propose solutions to manage those risks.

- Second, the SCCG provides an annual analysis of NERC initiatives to address risks to the BPS. The comparison of initiatives to ERO Enterprise priorities is designed to support the following activities:
 - Support a BPS risk registry:
 - Identification and description of risks
 - Prioritization of risks
 - Work plan to address risks
 - Status of the work plan
 - Status of risk management or monitoring
 - Feedback on mitigation activities, risk prioritization and measurement of success when addressing risks identified in the risk registry
 - Annual standing committee work plan planning and quarterly coordination

- The SCCG shall be comprised of the Chairs and Vice-Chairs of the following NERC Standing Committees:
 - Reliability Issues Steering Committee
 - Reliability and Security Technical Committee
 - Standards Committee
 - Compliance and Certification Committee
 - Personnel Certification Governance Committee

- The SCCG requests that the Reliability and Security Technical Committee **endorse** the scope document.



Questions and Answers

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Reliability Guideline: Model Verification of Aggregate DER Models used in Planning Studies

Kun Zhu, Chair, SPIDERWG
RSTC
March 3, 2021

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- Focuses on enhancing model fidelity of Interconnection-wide Base Cases.
 - Measurement vs. non-measurement methods
 - Focus on collaborative effort to transfer data and recordings.
 - Contains examples, both hypothetical and realistic
- Previously posted for 45 day comment period
 - Many were requests for clarity
 - Addition of Preamble
 - Technical experts in SPIDERWG reached consensus on responses
- First Reliability Guideline to pioneer metrics
- Request for approval of the Reliability Guideline



Questions and Answers

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IRPWG Reliability Guideline: Performance, Modeling, and Simulations of BPS-Connected Battery Energy Storage Systems and Hybrid Power Plants

Approve the Reliability Guideline

Julia Matevosyan, IRPWG Vice Chair

NERC Reliability and Security Technical Committee Meeting

March 2021

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- Interconnection queues across North America are seeing a rapid influx of battery energy storage systems (BESSs) and hybrid power plants
- In 2018 IRPWG (IRPTF) published the BPS-Connected Inverter-Based Resource Performance Reliability Guideline¹
- BESSs and hybrid power plants have similarities but also unique characteristics when compared to other inverter-based resources

¹ https://www.nerc.com/comm/PC_Reliability_Guidelines_DL/Inverter-Based_Resource_Performance_Guideline.pdf

- IRPWG reviewed BESS and hybrid power plant technology and applications
- The draft reliability guideline covers:
 - Performance
 - Modeling
 - Steady State
 - Dynamics
 - Short Circuit
 - Studies
 - Interconnection Studies
 - Transmission Planning Assessment Studies
 - Other Considerations

- 12/15/2020 – Reliability and Security Technical Committee accepted the document for a 45-day industry comment period
- 12/18/2020 – The Reliability Guideline posted for comments
- 2/2/2021 – Comment period concluded
- 2/2/2021 - 2/10/2021 – IRPWG made conforming changes to the Reliability Guideline and responded to comments in the comment matrix
- 2/10/2021 – Comment matrix redline and final version of the Reliability Guideline included in the RSTC agenda packet

- The IRPWG requests that the Reliability and Security Technical Committee approve the IRPWG Reliability Guideline: Performance, Modeling, and Simulations of BPS-Connected Battery Energy Storage Systems and Hybrid Power Plants



Questions and Answers

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Wildfire Mitigation Reference Guide

Al McMeekin, Senior Technical Advisor, NERC
Reliability and Security Technical Committee
March 2, 2021

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- Who
- What
- When
- Where
- Why

- Wildfire and Bushfire Mitigation Plans
- Organizations
 - State and Federal Agencies
 - Associations, Forums, Councils
- Websites and Publications
- Webinars and Conferences
- Research and Development
 - EPRI
 - Texas A&M University
 - Department of Energy (DOE) National Laboratories

- [Wildfire Mitigation Reference Guide](#)
- Al McMeekin, Senior Technical Advisor
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Questions and Answers



North American Generator Forum RSTC Update

Allen D. Schriver, P.E.
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NextEra Energy

and

COO North American Generator Forum

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March 2, 2021

NAGF Mission



The NAGF mission is to promote the safe, reliable operation of the generator segment of the bulk electric system through generator owner and operator collaboration with grid operators and regulators.

Agenda



- **NAGF Annual Meeting**
- **NERC Standard Projects**
- **Supply Chain**
- **NAGF Website**
- **IRPWG/IEEE P2800**

NERC Standard Drafting Teams



➤ NAGF Annual Meeting

- The NAGF 10th Annual Meeting was conducted virtually over October 13, 14 and 15, 2020. Attendance averaged about 90 participants per day and the speaker line up was robust and diverse. Mark Lauby and Jason Blake provided Keynote addresses, Manny Cancel provided an E-ISAC update and representatives from NERC, SERC, ReliabilityFirst, and member companies provided presentations on topics relevant to the generator community

➤ NERC Standards Projects

- The NAGF is actively engaged in the following NERC Projects to help ensure the generator sector perspective is heard and understood:
 - NERC Project 2019-04: Modifications to PRC-005-6
 - NERC Project 2019-06: Cold Weather

NAGF Collaboration With NATF



➤ Supply Chain

- On December 22, 2020, the NAGF participated in the NERC conference call for Trade Organizations/Forum regarding the NERC Level 2 Alert – Supply Chain compromises by Advances Persistent Threat Actor. The NAGF shared this information with membership accordingly.

➤ NAGF Website

- The NAGF is moving forward with the redesign of its existing NAGF public and members-only websites to provide a single website with the capabilities to support and sustain the future growth of the organization. The public section of the new website is 90% complete; workflow design, discussion board functionality, and content layout for the members-only section along with event registration/on-line payment functions are currently under development. It is anticipated that beta testing will commence in January 2021.

➤ IRPWG/IEEE P2800

- Reliability Guideline: EMT Modeling and Simulations
 - Goal: Provide industry with clear guidance and recommendations for use of EMT models and performing EMT simulations.
- Reliability Guideline: BESS and Hybrid Plant Performance, Modeling, Studies
 - Goal: Provide industry with clear guidance and recommendations for BESS and hybrid plant performance, modeling, and studies.
- Working on Whitepaper: Using BPS-Connected Inverter-Based Resources and Hybrid Plant Capabilities for Frequency Response

Q & A



Thank you!

www.GeneratorForum.org