

North American Transmission Forum External Newsletter

July 2018

Emerging Issues and NATF Actions

NATF staff and members strategically engage on relevant emerging risks and issues where we can have a positive impact for our membership, the electric industry, and the general public. Our efforts and solutions can be internal, through our various programs (e.g., misoperations analysis), or external, through the select posting of documents to our public site (e.g., operations absent EMS and SCADA) or specific coordination with industry and regulatory organizations (e.g., alignment on supply chain cyber security). The goal is to drive towards outcomes that increase reliability and resiliency and reduce duplication of effort.

The table below provides a high-level overview of some key industry issues and how the NATF is engaged.

Item	Issue/Risk	NATF Work
EMP/GMD	Threat of attack and damage to system; questions on how extensive damage would be	Part of resiliency efforts; internal information sharing; public reference papers to clarify issue and member actions; coordination with EPRI (summits, etc.)
Supplemental Operating Strategies (SOS), formerly "Spare Tire"	How grid would be operated absent all EMS and SCADA (due to event, sabotage)	Project team identifying capabilities and actions/preparations to implement; coordinating with EPRI; posting select documents to public site
Cyber Security Supply Chain	Supply chain risk management; NERC standard pending FERC approval with associated NERC BOT request for industry assistance (white papers)	Team created white paper and implementation guidance (posted to public site)
FAST Act (Grid Security Emergency)	Provision of act where DOE secretary can issue orders after president declares grid emergency	Coordination related to potential types of orders that may be issued
Distributed Energy Resources (DER)	Grid considerations due to increase of DER	Reference guide developed and posted to public site
Inverter-Based Resources	Increasing penetration creating modeling, planning, and operations challenges	Joint webinars with EPRI, NERC, and UVIG; discussion in practices groups
Misoperations	Improving system protection performance	Data collection and analysis to uncover extent of issue and identify potential improvements

Item	Issue/Risk	NATF Work
CIP-014	Assessments and identification of critical transmission stations and substations in response to requirements	Confidential surveys of members and internal sharing of summary results
NERC RISC Priorities	Report that defines/prioritizes BPS risks and associated recommendations and approach to manage risks	Will lead or coordinate, as appropriate, on select items applicable to NATF

Please see the “Distributed Energy Resources Document Posted for Industry,” “Cybersecurity Supply Chain Risk Management White Paper and Guidance,” and “Inverter-Based Resources Webinars” articles in this issue for more details on those particular topics.

Distributed Energy Resources Document Posted for Industry

The NATF has posted “NATF Reference Document: Distributed Energy Resource Modeling and Study Practices” to the NATF [public website](#).

The increasing penetration of distributed energy resources (DER) is producing new challenges for transmission planners. The reference document provides details to supplement existing documents authored by NERC and others that will help power system planners or study engineers prepare (1) DER models for interconnection-wide power flow cases and dynamic simulations and (2) DER impact assessments on the bulk power system.

Sharing this document with the broader industry will help improve power system modeling and studies being conducted to integrate DER into the Bulk Electric System.

Inverter-Based Resources Webinars

The NATF recently partnered with the Electric Power Research Institute (EPRI), the North American Electric Reliability Corporation (NERC), and the Utility Variable-Generation Integration Group (UVIG) to conduct a series of webinars on inverter-based resources.

As noted in the [webinar flyer](#), “the increasing penetration of inverter-based resources, including renewable energy resources, is creating new opportunities and challenges in planning and operating the bulk power system (BPS).” The series covered aspects of BPS-connected inverter-based resource and distributed energy resources (DERs), including fundamentals, system impacts, modeling, and performance recommendations.

Joint Modeling Workshop

American Electric Power hosted the [NERC-NATF-EPRI 2018 Power System Modeling Conference](#) on June 20-21, 2018. Organized jointly by NERC, the NATF, and EPRI, the conference brought together industry experts to discuss power system modeling and analysis. Topic areas included:

- Interconnection-Wide Model Improvements
- System Model Validation

- Modeling Distributed Energy Resources
- Modeling and Performance of BPS-Connected Inverter-Based Resources
- Electromagnetic Transient Modeling and Studies
- Geomagnetic Disturbance Modeling
- Modeling and Experience with Energy Storage Systems
- State Estimator and RTCA Model Data Quality
- General Transmission Planning Topics and Emerging Issues

Cybersecurity Supply Chain Risk Management White Paper and Guidance

A team of NATF members recently completed the “NATF Supply Chain Risk Management Guidance” and “NATF CIP-013-1 Implementation Guidance” documents, which have been posted to the NATF [public website](#) for industry use.

The “NATF Supply Chain Risk Management Guidance” document (white paper) describes practices for establishing and implementing a supply chain cyber security risk management plan. “NATF CIP-013-1 Implementation Guidance” is an associated document that the NATF has submitted to NERC for consideration as Implementation Guidance as an approach to comply with CIP-013.

As part of the development, the NATF team coordinated with representatives of specific industry organizations for alignment.

These documents are geared to benefit members and the industry and respond to the NERC board resolution of August 2017 where it asked for industry assistance via the drafting of white papers.

Redacted Operating Experience Reports

In our [April newsletter](#), we reported about a new product posted for industry benefit: redacted operating experience reports. Since then, we have posted five additional reports to our [public site](#) for members and other utilities to use internally and share with their contractors to help improve safety, reliability, and resiliency.

For more information about the NATF, please visit www.natf.net.