

NASPI

Operational Implementation Task Team

NASPI Vision

The vision of the North American Synchrophasor Initiative (NASPI) is to enhance electric power system reliability, efficiency and resilience through the use of synchrophasor technology for wide-area measurement, monitoring, analysis and control.

NASPI Mission

- NASPI provides a forum to accelerate the value of a robust, secure, widely-shared synchronized data measurement infrastructure to achieve greater reliability of the interconnected North American electric power system. NASPI will facilitate expanded synchrophasor monitoring, analysis and control of the bulk power electric system with collaborative information-sharing, problem-solving, and identification of best practices.

NASPI Mission

- Expand the use of synchrophasor data to identify and understand each interconnection's basic operational patterns, diagnose in real time grid conditions and precursors that could lead to disturbances, and identify and develop ways to mitigate or prevent adverse grid events;
- Provide coordinated focus for technical applications development and deployment broadly within the industry to enhance secure and reliable grid operations;
- Target wider applications of synchrophasor technology to increase grid asset utilization and system efficiency by expanding grid throughput and operating closer to the margin reliably and securely;
- Enable reliable and secure dynamic grid operation with changing resource mix, including integration of variable renewable resources, demand response, and variable load characteristics; and,
- Facilitate and enhance the exchange of phasor measurement unit (PMU) data among system operators in North America's respective interconnections

NASPI Scope

- NASPI collaborates across the synchrophasor community and enables resource contributions from the electric industry, the Department of Energy, NERC, and the Electric Power Research Institute (EPRI). NASPI will focus efforts for entities to provide tangible deliverables for industry application in the following areas:

NASPI Scope

- Assure security and reliability measures for existing and planned synchrophasor systems to support high-speed, high-quality data suitable to support real-time grid analytics and operations.
- Identify and undertake analytical needs and processes necessary to support more sophisticated synchrophasor data applications to provide decision support for real-time electric operations.

NASPI Scope

- Develop and share business processes and best practices that advance and institutionalize effective synchrophasor technology applications in real time operations and historical analytic environments.
- Working with appropriate standard-setting organizations to complete the development and adoption of PMU device and network standards and performance requirements to permit effective data exchange, and synchrophasor system and device interoperability and conformance.
- Provide a forum to coordinate and leverage diverse expertise among various industry groups, including IEEE PSRC, NERC Synchronized Measurement Subcommittee, WECC Joint Synchronized Information Subcommittee, Reliability Organization Committees, and others to stimulate effective technology deployment and use by utilities and grid operators.

Control Room Solutions Task Team

- Advance synchrophasor application in the control room
- To provide guidance on best practices
- Identify issues that impede implementations
- Ensure appropriate training is available for users of applications.
- Operational event analysis to demonstrate value (use cases)

Control Room Solutions Task Team

Goals

- Operational value added for synchrophasor data
- Defined relationship with North American Transmission Forum, or NERC Committees, Subcommittees, and Workgroups for continued
- “Video” Library of events – Jim Kleitch
- Top 10 list of operational synchrophasor applications to help manage the system
 - Linear state estimator – Matt Gardner
 - Hybrid state estimator (including synchronize measurements into existing state estimators) – Kevin Frankeny
 - Measurement validation – Anthony Johnson
 - Threshold values for operational limits – Mike Cassiadoro
 - Post contingency phase angle alarm – Mike Cassiadoro/Sam Chanoski
 - Oscillation detection- Jim Dyer/ Bill Blevins
 - GIC detection - Jim Kleitch
 - Islanding detection – Floyd Galvin/ Jim Kleitch
 - Sunburst event detection/impact - David Bogen/Jim Kleitch
 - Swings by human events - Sam Chanoski
 - Black start procedure – Anthony Johnson
 - Location of disturbance outside of SCADA visible region – Jim Dyer
 - Synchrophasor system as redundant backup to EMS - ALISON

Control Room Solutions Task Team

Goals

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