NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Synchronized Measurement Working Group Scope

Purpose

The purpose of the NERC Synchronized Measurement Working Group (SMWG) is to provide technical guidance and support for the use of synchronized and high-resolution measurements of the bulk power system (BPS) across North America.

Activities

The working group will support the development, implementation, and utilization of synchronized and high-resolution measurement systems. This includes engineering analysis techniques and real-time tools for improved planning, operation, and reliability of the North American BPS. This includes the following tasks:

1. Formulate and guide the NERC vision and activities to promote the advancement of wide-area time synchronized and high resolution measurement systems and applications, including standards where and when needed.
2. Support the development and use of standardized data sharing, data quality, and data cleaning protocols and practices for time synchronized and high resolution measurement data.
3. Support any data collection or analysis of power system performance following selected events and significant disturbances. Coordinate with other NERC groups such as the Event Analysis Subcommittee and the System Analysis and Modeling Subcommittee, as applicable.
4. Maintain recommendations, guidelines, technical reference documents, and training materials to help advance the use of applications driven by time synchronized and high resolution measurements across the industry.
5. Develop and maintain appropriate procedures and guidelines for base line power system performance analysis using time synchronized and high resolution measurement data.
6. Provide a forum for operating entities to discuss activities and experiences related to the development, deployment, and use of measurement data for the purposes of improving reliability of the bulk power system.
7. Coordinate with other industry organizations related to high resolution and synchronized measurement data, including the North American Synchrophasor Initiative (NASPI), WECC Joint Synchronized Information Subcommittee (JSIS), IEEE, and IEC, as applicable.
8. Review and coordinate proposed new synchrophasor applications with any appropriate NERC committees to support coordinated advancement of synchronized measurement technologies to assure effectiveness and to limit duplication of efforts.

Deliverables

SMWG will develop guidelines, technical reports, white papers, and recommendations to the NERC Real Time Operating Subcommittee (RTOS) on the following topics:

1. Ongoing review and analysis of existing and new BPS oscillation events; other technical assessments of power system reliability using time synchronized measurement data
2. Enhanced operating procedures using synchronized measurement data; improved operator and real-time tools and applications
3. Innovative engineering analysis tools and applications
4. Baselining power system performance
5. Effective and efficient data sharing, data quality, and data cleaning methods
6. Design and operation of time synchronized measurement network and data architectures, leveraging other technical groups such as IEEE and NASPI
7. Use of industry technology standards (IEEE, IEC, etc.) and NERC Reliability Standards
8. Other topics as prioritized by the NERC SMWG and NERC RTOS membership

Membership

SMWG will include industry members who have technical expertise in the following areas:

- Development and deployment of high-resolution, time-synchronized measurement systems
- Use of real-time and off-line advanced applications
- Analysis of high resolution disturbance data for event analysis

A NERC staff member will be assigned as a coordinator. The working group will consist of a chair and vice chair appointed by the RTOS leadership for one two-year term. The vice chair should be available to succeed the chair. Decisions will be consensus-based, led by the chair and staff coordinator. Minority views can be included in an addendum.

Reporting

The NERC SMWG administratively reports to the NERC RTOS. SMWG will coordinate with other subcommittees and working groups within the Reliability and Security Technical Committee (RSTC), as appropriate.

Meetings

Two to four open meetings per year, as needed. Meetings may be either in-person or remote.