

IEEE Synchrophasor Related Activities at Power System Relaying and Control Committee (PSRC) and Power System Communications and Cybersecurity Committee (PSCCC)

NASPI Work Group In-Person Meeting and Vendor Show

Minneapolis, MN

September 2025

Presented by: Yi Hu (Quanta Technology)

IEEE PSRC/PSCCC January 2025 Meeting Report

- Two in-person IEEE PES PSRC and PSCCC meeting were held since NASPI's April 2025 meeting
 - Portland, OR, May 12-15, 2025
 - Richmond, VA, September 8-11, 2025
- PSRC WG C23 (Coordination of Synchrophasor Related Activities) held working group meetings at both PSRC/PSCCC meetings
 - Reviewed NASPI current activities as of April 2025 at the meeting, and informed attendees about the upcoming September 2025 NASPI meeting
 - At the May and September PSRC/PSCCC meetings, attendees were informed about the new WG/TF activities at IEEE
 - C55, "Develop a Technical Report summarizing continuous streaming of synchronous point-on-wave technology for protection and control applications"
 - CTF57, "Investigate the need to revise IEEE Std C37.247"
 - CTF59, "Write a PAR to revise IEEE/IEC 60255-118-1"

Current Related Activities at IEEE PSCCC

Lead By	Activity Description	Status
PSCCC WG P1	Amend IEEE C37.238 “Standard Profile for Use of IEEE 1588 Precision Time Protocol in Power System Applications” – Adding a TLV to indicate the latest IERS-specified UTC Leap Second Event.	Amendment for C37.238-2017 has been published as C37.238a-2023 in December 2023.
PSCCC WG P10	TF: Report on P2664 – Standard for Streaming Telemetry Transport Protocol	Work on IEEE 2664 amendment to define a file-based format for transferring historical data that does not require a network.
PSCCC WG P19	P2030.103 IEEE Standard for Universal Utility Data Exchange (UUDEX)	Continued standard development. PNNL and GE work on commercialization & MISO demo.
PSCCC WG P20	Joint Revision of IEC 61850-9-3 for timing requirements	Review/discuss latest draft revision
PSCCC WG S8	Develop an “IEEE Guide P2658 for Cybersecurity Testing in Electric Power Systems”	To be balloted.
PSCCC WG S15	Develop an “IEEE Guide for Securing GOOSE and SV Protocols of IEC 61850 using IEC 62351-6 and IEC 62351-9”	Draft guide development.

Current Related Activities at IEEE PSRC

Lead By	Activity Description	Status
WG C23	Coordinate synchrophasor related activities at NASPI and IEEE	On-going
PSRC WG C40	Develop a tutorial for C37.247 “IEEE Standard for Phasor Data Concentrators for Power Systems”	Tutorial is ready. Looking for proper venue for it.
PSRC C55	Develop a Technical Report summarizing continuous streaming of synchronous point-on-wave technology for protection and control applications	Held the first meeting in September 2025
PSRC CTF57	Investigate the need to revise IEEE Std C37.247 “IEEE Standard for Phasor Data Concentrators for Power Systems”	Held the first meeting in September 2025
PSRC WG CTF59	Write a PAR to revise IEEE/IEC 60255-118-1 “Measuring relays and protection equipment – Part 118-1: Synchrophasor for power systems – Measurements”	Held the 1st meeting in September 2025. PAR drafted and submitted
PSRC WG H40	Develop an “IEEE Guide for Databases used in Utility Automation Systems” (C37.1.2) that has an annex on Synchrophasor Data Recording	Finished initial comment resolution in May 2025 meeting, and recirculated
PSRC WG H50	Develop a report to document requirements for time sources (clocks) in protection & control systems	Working on the draft in May and September 2025 meetings
PSRC WG H54	Revise IEEE C37.111-2013/IEC 60255-24:2013 Standard for Common Format for Transient Data Exchange (COMTRADE)	Held a meeting in September 2025.

Current Of-Interest Activities at IEEE PSRC

Lead By	Activity Description	Status
PSRC WG C43	Develop a report on “Practical Applications of Artificial Intelligence and Machine Learning in Power System Protection and Control”	1st version published 9/21/23, 2nd version collecting contributions
PSRC WG D45	Develop a report on “Protection Methods to Reduce Wildfire Risks due to Transmission and Distribution Lines”	Report completed in in May 2025.
PSRC WG H44	Develop C2030.100.1 “IEEE Guide for Monitoring and Diagnostics of IEC 61850 GOOSE and Sampled Values Based Systems”	Draft finished. Expect to start balloting in late 2025.
PSRC WG H45	Develop C37.300 “IEEE Guide for Centralized Protection and Control (CPC) Systems within a Substation”	The guide has been published in May 2025.
PSRC WG H52	Revise IEEE C37.232 “Standard for Common Format for Naming Time Sequence Data Files (COMNAME)”	Requested PAR extension at May meeting
PSRC WG I26	Recommend updating/expanding mathematical models of instrument transformers/transducers, including interface electronics such as merging units, for use in off-line and real time transient simulation.	Report has been published as IEEE PES Report TR-117 in November 2023.

Any NASPI Recommended Activities for IEEE?

- IEEE PSRC and PSCCC are responsible for developing IEEE standards, IEEE guides, and IEEE recommended practices.
 - If any need for potential IEEE standard development work has been identified, please reach out to me – Will be happy to coordinate
- IEEE PSRC also develop many technical reports accessible at IEEE PES Resource Center (<https://resourcecenter.ieee-pes.org/>)

Upcoming PSRC/PSCCC Meetings

Joint Technical Committee Meeting
January 11 – 15, 2026, Atlanta, Georgia, USA

PSRC/PSCCC Joint Meeting
May 11-14, 2026, Cleveland, Ohio, USA

<https://pesttechnical.org/>
<https://www.pes-psrc.org/meetings>

Questions?

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