

Chair: Murty Yalla

Vice-Chair: Michael Thompson

Secretary: Gene Henneberg

Standards Coordinator: Don Lukach

SIGNIFICANT ACCOMPLISHMENTS IN 2021

❖ Standards, Guides & Reports Approved by SA in 2021

- C37.91 IEEE Guide for Protecting Power Transformers (published).
- C37.235 IEEE Approved Draft Guide for the Application of Rogowski Coils Used Protective Relaying Purposes.
- C37.242 IEEE Guide for Synchronization, Calibration, Testing, and Installation of Phasor Measurement Units (PMUs) for Power System Protection and Control (published).
- C37.108 IEEE Guide for Protection of Secondary Network Systems (published).
- C37.234 IEEE Approved Draft Guide for Protective Relay Applications to Power System Buses.
- C37.120 IEEE Approved Draft Guide for Protection System Redundancy for Power System Reliability.
- C37.230 IEEE Guide for Protective Relay Application to Distribution Lines (published).

❖ Presentations made at PES General Meeting; JTCM; CIGRE; Western, Georgia Tech, and Texas A&M Protective Relay Conferences:

- Role of Protective Relaying in a SMART GRID.
- Improved Generator Ground Fault Protection.
- Review C37.250 Guide for Engineering, Implementation and Management of SIPS.

❖ Supported PES meetings

- PES Virtual General Meeting 12 papers given; PSRC sponsored 2 panel sessions.
- Transactions Paper: GMD Impact on Protective Systems, and Modeling Generator Controls.

❖ Pac World Magazine

- Cathy Dalton generated four articles.



BENEFITS TO INDUSTRY AND PES MEMBERS

- ❖ These activities keep our industry up to date with technology, improve power system reliability, and help solve the most common protective relaying problems.
 - We are working on cybersecurity and standards with NERC, PES and IEC.
 - We are addressing grid stability with guides and standards in protection, control, and communication.

- Our meetings allow significant interaction between the PSRC, NERC, CIGRE, IEC and PES to share our interest, knowledge, and accomplishments.

BENEFITS TO VOLUTEER PARTICIPANTS

- ❖ Working Groups and Task Forces provide fertile ground for participants to increase their personal knowledge. Their companies enjoy more personal productivity from their employees and contribute to the standards and practices of our industry.

OUTSTANDING PERFORMANCE RECOGNITION

- ❖ IEEE Fellows
 - Dr. Mukesh Nagpal, Burnaby, BC, Canada
- for contributions to economic and safe integration of distributed renewables in electric utility networks
 - Prof.Tianshu Bi, Beijing, China
- for contributions to synchrophasor technology and protective relay applications
 - Prof.Chul-HwanKim, Suwon,Gyeonggi-do, SouthKorea
- for contribution to protective relaying methods to reduce power system outages
- ❖ PSRC Award presentations are suspended until the next-face-to-face meeting. Proper recognition will then be enabled.

COORDINATION WITH OTHER ENTITIES

- ❖ IEEE Standards Association Board of Governors: Phil Winston serving.
- ❖ IEC TC 95: Murty Yalla serving as chair.
- ❖ IEC TC 95: Eric Udren is Technical Advisor and Normann Fischer is Deputy Technical Advisor to USNC.
- ❖ IEC TC 95, IEC standard 60255-187-3 supported by PSRC WG D34, Normann Fischer, chair.
- ❖ IEC TC 95: IEC Standard 60255-216-1. PSRC WG H47 has liaison.
- ❖ IEC TC 95, IEC Standard 60255-24/JWG w/PSRC dual logo, starting.
- ❖ IEC TC 95: Functional and Product Design Standards 60255-1, -26, and -27. PSRC WG's and experts now coordinate IEEE and IEC content and contribute to IEC drafts for consistent requirements.
- ❖ IEC TC 57: WG 10 continues to develop IEC 61850 Edition 2.1. Convenor is Christoph Brunner.
- ❖ CIGRE B5.69 Work in progress. Convenor is Alex Apostolov.
- ❖ CIGRE B5.53 Work in progress. Chairman is Alex Apostolov.



- ❖ CIGRE Technical Brochure 843: Life Cycle Testing of Synchrophasors Based Systems now available free to members.
- ❖ PSRC regularly met during 2021 with several subcommittees of the Substation and Power Systems Communications committees.
- ❖ PSRC participated in the PES JTCM for the 14th year.
- ❖ PSRC is in consistent liaison with NERC, IEC, EPRI, CIGRE and IAS.
- ❖ Joint Committee Standards that PSRC Supports:
 - P2800 Standard for Interconnection and Interoperability of Inverter Based Resources Interconnecting with Associated Transmission Electric Power Systems.
 - P2800.2 Recommended Practice for Test and Verification Procedures for Inverter-based Resources (IBRs) Interconnecting with Bulk Power Systems.
 - P1854 Guide for Smart Distribution Applications
 - P0018 Standard for Resilient Positioning, Navigation and Timing (PNT) End-User Equipment.
 - PC37.431.20 Guide for Modern Protection System for Static Var Compensators.

GLOBAL INVOLVEMENT

Regions 8,9 & 10	Total Number
Attendees	18
Main Committee Members	1
Officers	0
Subcommittee Officers	0
Subcommittee Members	1

NEW TECHNOLOGIES OF INTEREST

- ❖ Cybersecurity
- ❖ Wide range grid data collection with Synchrophasors
- ❖ Smart Grid Initiatives
- ❖ Grid stability under stressed conditions
- ❖ Inverter based resources

SIGNIFICANT PLANS FOR 2022

- ❖ JTCM January 10-13, Garden Grove, CA (Hybrid)
- ❖ Other PSRC meetings:
 - May 9-12, Reno, NV(Hybrid)
 - September, TBA.
- ❖ Joint meetings with subcommittees of Substations and Power System Communications Committees
- ❖ PSRC will continue to support the Power System Communications and Cybersecurity Committee and meet with them jointly



Submitted by: Murty Yalla

January 31, 2022