

**IEEE Power and Energy Society
Entity Annual Report 2013**

Entity: Power System Relaying Committee

Chair: Roger Hedding

Vice-Chair: Mike McDonald

Secretary: Pratap Mysore

1. Significant Accomplishments in 2013:

a. Standards, Guides & Reports:

(1) Standards and Guides Approved and Published:

C37.96 Guide for AC Motor Protection

C37.98 Standard Seismic Testing of Relays

C37.99 Guide for the Protection of Shunt Capacitor Banks

C37.102 Guide for AC Generator Protection

C37.111 Standard for Common Format for Transient Data Exchange (COMTRADE) for Power Systems

C37.236 Guide for Power System Protective Relay Applications over Digital Communication Channels

C37.242 Guide for Synchronization, Calibration, Testing, and Installation of Phasor Measurement Units (PMU) for Power System Protection and Control

C 37.244 Guide for Functional Requirements for Phasor data Concentrator.

(2) New Standards for Smart Grid Initiative:

C37.118.1 and C37.118.2; C37.232; C37.236, PC 37.238; PC37.239, C 37.242, C 37.244 all Published.

C37.237 Recommended Practice For Time Tagging of Power System Protection Events.

C37.243 Guide for Application of Digital Line Current Differential Relays.

b. Presentations made at PES General Meeting; JTCM; Western, Georgia Tech, and Texas A & M Protective Relay Conferences; and WA State Hands On Relay School:

IEEE C37.242 Guide For Synchronization, Calibration, Testing and Installation of PMU for Power System P & C.

IEEE C37.118.1 and .2 Standards for Synchrophasor Measurements and Data Transfer for Power Systems.

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IEEE C37.244 Guide for Functional Requirements for Phasor data Concentrator.

History of Phasor Measurements.

Real Time Data Mediation.

Standard Profile for Use of IEEE Standard 1588-2008 Precision Time Protocol (PTP) in Power System Applications.

Use of Synchrophasor Measurements in Protective Relay Applications.

Fault Current Contributions from Wind Plants.

Effect of Distribution Automation on Protective Relaying.

What's Happening at the Power System Relaying Committee? What is it and why is it important to you?

c. PSRC Publications completed & posted on web site:

"Fault Current Contributions from Wind Plants"

"Use of Synchrophasor Measurements in Protective Relaying Applications."

"Effect of Distribution Automation on Protective Relaying"

"EMTP Reference Models for Transmission Line Relay Testing"

"Common format for IED Configuration Data Relay Functional Type Testing"

"Cyber Security Standards V4-V5 Update"

"Design and Testing of System Integrity Protection Schemes (SIPS)"

d. Supported PES meeting:

2013 PES General Meeting: 75 papers presented; co-hosted one Panel Session, and chaired one Super Session.

2. 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.

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

PSRC contributed \$1000 to each US and Canada IEEE Scholarship Plus Initiatives.

3. Benefits to Volunteer Participants:

Approximately 70 Working Groups and task forces provide fertile ground for participants to increase their personal knowledge. Their companies

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enjoy more personal productivity from their employees, and contribute to the standards and practices of our industry.

4. Outstanding Performance Recognition:

2013 Charles Proteus Steinmetz Award to Dr. Mohindar Sachdev.

IEEE PES Outstanding Technical Report: "IEEE Tutorial for Protection of Synchronous Generators, Second Edition." Michael Thompson, chair.

IEEE PES Prize Paper Award: "IEEE PSRC Report on Global Industry Experiences with System Integrity Protection Schemes (SIPS)." Vahid Madani, chair.

Distinguished Service Award – Bob Pettigrew

Certificates of Appreciation were awarded to the following SC chair: Bob Beresh, Pratap Mysore.

Certificates of Appreciation were awarded to the following WG chair: Mark Adamiak, Amir Makki, Jerry Jodice.

PSRC Special Recognition – Mal Swanson - In recognition of his Dedicated and Enthusiastic Service in numerous ongoing activities promoting the Power System Relaying Committee

2013 Honorary Members – John Appleyard, Al Darlington, George Nail - In recognition of their Steadfast Dedication to the Power System Relaying Committee

PSRC Certificate of Appreciation – Mark Simon - In recognition of his Valuable Service to the Power System Relaying Committee

5. Coordination with Other entities:

a. IEC TC 95, Maintenance Team 4 has published one new functional protective relay standard, and is developing three more standards. Convener is Dr. Murty Yalla.

b. TC 57: PSRC is coordinating efforts on a power systems management and associated information exchange.

c. PSRC and IEC are actively working on Dual Logos for these standards: C37.118.1 and C37.118.2, Standards for Synchrophasor Measurements and Data Transfer for Power Systems. Work is just starting. C37.239, Standard Common Format for Event Data Exchange for Power Systems.

d. PSRC regularly meets with several subcommittees of the Substation and Power Systems Communications committees.

e. PSRC participated in the PES JTCM for the sixth year.

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- f. PSRC is in consistent liaison with NERC, EPRI, CIGRE and IAS.
- 6. **New Technologies of Interest:**
 - a. Cyber security.
 - b. Wide range grid data collection with Synchrophasors.
 - c. Smart Grid Initiatives.
 - d. Grid stability under stressed conditions.
- 7. **Problems and Concerns:**

None
- 8. **Significant Plans for 2014:**
 - a. January 12-16: JTCM in New Orleans
 - b. Other PSRC meetings: May in Ft. Lauderdale; September in Milwaukee.
 - c. Joint meetings with subcommittees of Substations and Communications Committees.
 - d. PSRC will participate in paper sessions and session sponsorships at PES meetings in 2014.
 - e. PSRC is considering reorganizing to meet future needs by expanding to combine protection and control as the industry progresses in this direction.
 - f. PSRC will give a tutorial session at Texas A & M, "Understanding Communication Technology for Protection Systems". Also, our chair, Roger Hedding, will give a session paper on "What's Happening at the Power System Relaying Committee"
 - g. Roger Hedding also will be the keynote speaker at GA Tech.

Submitted by: Roger Hedding

December 30, 2013