

**IEEE Power and Energy Society
PSRC Annual Report 2014**

January 6, 2015

Power System Relaying Committee

Chair: Roger Hedding

Vice-Chair: Mike McDonald

Secretary: Pratap Mysore

1. Significant Accomplishments in 2014:

a. Standards, Guides & Reports:

(1) Standards and Guides Approved and Published:

C37.95 Guide for Protective Relaying of Utility-Consumer Interconnections.

C37.114 Guide for Determining Fault Location on AC Transmission and Distribution Lines.

C37.118.1 Amendment. Standard for Synchrophasor Measurements for Power Systems.

C37.240 Standard for Cyber Security Requirements for Substation Automation, Protection and Control Systems.

C57.13.3 Guide for Grounding of Instrument Transformer Secondary Circuits and Cases.

(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:

Use of Synchrophasor Measurements in Protective Relay Applications.

Effect of Distribution Automation on Protective Relaying.

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

Distance Element Response to Distorted Waveforms.

Design and Testing of Selected System Integrity Protection Systems (SIPS).

Power System Relaying Committee.

IEEE C37.240 Standard which Establishes a Baseline for Cyber Security in Electric Utility Substations.

PES Webinar on "What is PSRC"

c. PSRC Publications completed & posted on web site:

"Transmission Line Applications in Directional Ground Overcurrent Relays"

"AC Transmission Line Model Parameter Validation"

"Considerations in Choosing Directional Polarizing Methods for Ground Overcurrent Elements in Line Protection Applications"

"Distance Element Response to Distorted Waveforms"

"Relay Functional Type Testing"

"Effect of GIC on Transformers and Power Systems"

"Sudden Pressure Protection of Transformers"

d. Supported PES meeting:

2014 PES General Meeting: 8 papers presented; chaired one Session.

2014 T&D Conference 18 papers reviewed, 10 accepted

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

4. Outstanding Performance Recognition:

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IEEE Fellow: Solveig Ward.

2014 IEEE-SA Standards Medallion: Philip B. Winston, Ken Martin

IEEE PES/PSRC Working Group Recognition Award: “Effect of Distribution Automation on Relaying”, Fred Friend, chair.

**IEEE/PES/PSRC Distinguished Individual Service Award –Solveig Ward
Certificates of Appreciation were awarded to the following SC chairs:
Solveig Ward and Russ Patterson.**

**Certificates of Appreciation were awarded to the following WG chairs:
Gary Kobet, Fred Friend, Alex Apostolov, Tom Wiedman, Mark Simon,
Galina Antonova, Brian Mugalian, Tom Beckwith, Phil Waudby, Prem
Kumar, Pratap Mysore, Jerry Jodice.**

5. Coordination with Other entities:

- a. IEC TC 95, Maintenance Team 4, convener is Dr. Murty Yalla. Team 4 has published IEC 60255-149; and IEC 60255-121, which was coordinated by Alex Apostolov and Alla Deronja.
- b. IEC TC 95: Murty Yalla has been nominated to chair.
- c. TC 57: WG 10 continues to develop Edition 2.1. Convenor is Christoph Brunner.
- d. CIGRE B5.53 Work in progress. Chairman is Alex Apostolov.
- e. CIGRE B5.54 Work in progress. Coordinator is Mark Adamiak.
- f. PSRC regularly meets with several subcommittees of the Substation and Power Systems Communications committees.
- g. PSRC participated in the PES JTCM for the seventh year.
- h. 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 2015:

- a. January 12-15: JTCM in Garden Grove, CA
- b. Other PSRC meetings: May in San Antonio; September in La Jolla.
- c. Joint meetings with subcommittees of Substations and Communications Committees.

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- d. PSRC will participate in paper sessions and session sponsorships at PES meetings in 2015.**
- e. PSRC is also working with the Technical Council on the proposed new Technical Committee formation.**

Submitted by: Roger Hedding

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