

## IEEE Power and Energy Society Entity Annual Report 2023

**Entity: Power System Instrumentation and Measurements (PSIM) Committee**

**Website:** [www.psimcommittee.org](http://www.psimcommittee.org)

**Chair: Jeffrey Britton**

**Vice-Chair: David Wallace**

**Secretary: Jeffrey Hildreth**

**Immediate Past Chair: Ernst Hanique**

### **1. Significant Accomplishments:**

- IEEE P120 has successfully completed the individual ballot process, under the supervision of the Electricity Metering Subcommittee. The document is currently in final editorial review by IEEE SA RevCom, where a few editorial issues and some copyright permission questions are being investigated and resolved. PSIM expects all issues to be resolved within the 1<sup>st</sup> quarter of 2024, and the final document to be published by mid-year 2024.
- IEEE P2960 successfully passed the final editorial review by IEEE SA RevCom, and was published on February 15<sup>th</sup>, 2023. The document is now available for purchase through IEEE SA.
- IEEE P2426 Part 1 has successfully completed the entity ballot process, under supervision of the High-Voltage Testing Techniques Subcommittee. The document is currently in final editorial review by IEEE SA RevCom. PSIM expected the final document to be published in 2024.
- The Sensors Subcommittee formed 2 Task Forces in 2023:
  - Task Force 1 was formed to collect data and write a PES Technical Report on medium voltage sensor and sensor system applications and associated requirements. The Task force will begin its work in early 2024 by circulating a survey questionnaire to users of these devices in order to establish common user requirements.
  - Task Force 2 was formed to investigate feasibility and need for creating a sensors device standard which would focus on standardizing electrical, mechanical, and measurement performance requirements for medium voltage smart grid sensors and sensor systems. The content of the standard would be based on the output of Task Force 1.
- Organization and presentation of 1 successful Panel Sessions at PESGM 2023.
- Ongoing review of numerous entity based PAR submissions through the PES EPM Committee.

### **2. Benefits to Industry and PES Members from the Committee Work:**

- PSIM Standards, Guides, Technical Reports and Panel Sessions help keep industry informed on various topics related to high-voltage tests and measurements, electricity metering and voltage and current sensor systems.

- PSIM focuses heavily on specifying the performance requirements of systems designed to measure electrical quantities, identifying and mitigating potential sources of error in measurements, and recommending procedures for quantifying the overall measurement performance based on internationally recognized method of uncertainty evaluation.
- The Standards and Guides produced and maintained by the PSIM HVTT Subcommittee serve as the definitive horizontal test and measurement Standards for all IEEE PES Technical Committees relating to specific power system apparatus (Transformers, Insulated Conductors, Switchgear, Machinery and Surge Protective Devices).

### **3. Benefits to Volunteer Participants from the Committee Work:**

- PSIM Committee volunteers benefit primarily through the sharing of knowledge and experience that comes from working together to develop the various publications and presentations produced by its various Subcommittees, Working Groups and Task Forces.

### **4. Recognition of Outstanding Performance:**

- The PSIM Committee acknowledges the significant contribution of Committee Member Angelo Rometo, who is now serving as PSIM liaison to the PES EPM Committee. Angelo has done an outstanding job over the course of 2023 in getting the PSIM caught up and on track with a number of entity PAR review requests which were backlogged for review by the PSIM Administrative Subcommittee.
- Upon final publication of IEEE 120 and IEEE 2426, The PSIM Committee will seek recognition awards to be given to the WG officers and members for their efforts in completing these significant documents.

### **5. Coordination with Other Entities (PES Committees, CIGRE, standards, etc.):**

- IEC Technical Committee 42 (High-Voltage and High-Current Test Techniques)
- CIGRE
  - WG D1.60 (Atmospheric Pressure and Altitude Correction Factors used in High-Voltage Tests and Measurements)
- IEEE PES Transformers Committee
  - Dielectric Tests Subcommittee
  - Instrument Transformers Subcommittee
- IEEE PES Transmission and Distribution Committee
  - Distribution Subcommittee
- IEEE PES Switchgear Committee
- IEEE PES Insulated Conductors Committee
- IEEE PES Power System Relaying and Control Committee
- IEEE PES Surge Protective Devices Committee
- IEEE PES Machinery Committee
  - Insulating Materials Subcommittee
- IEEE Dielectrics and Electrical Insulation Society (DEIS)

## 6. New Technologies of Interest to the Committee:

- UHV AC Transmission Systems, related equipment, tests and measurement systems
- UHV DC Transmission Systems, related equipment, tests and measurement systems
- Non-conventional (non-instrument transformer based) Smart Grid Sensor Systems
- Measurement of fast and very fast transient voltages in the Power System
- Measurement of harmonics in the Power System
- Measurement of supraharmonics (2 kHz to 150 kHz) in the Power System
- DC Energy Metering

## 7. Global Involvement

PES is looking to increase involvement with members from Regions 8, 9 and 10 (Africa, Europe, Middle East, Latin America, Asia and Pacific). Please provide the following information.

Total Number of committee members	Officers from regions 8,9 and 10	Subcommittee officers from regions 8, 9 and 10	Subcommittee members from regions 8,9, and 10
22	0	1	9

## 8. Problems and Concerns:

At the 2024 JTCM, the PSIM Committee continued to have some problems achieving quorum in some meetings, and also with some of its Subcommittees and Working Groups declining to schedule meetings at the JTCM because of the virtual participation registration fees.

The PSIM Administrative Subcommittee has spoken about this problem, and about the overall problem PES (and IEEE) are facing when it comes to managing large meetings in today's world. We do understand and accept the position taken by the JTCM Steering Committee that requiring a virtual participation fee is a reasonable requirement for virtual participation in large meetings, and that some measure like this is needed in order to protect the traditional IEEE in-person meeting model. A virtual participation fee is one way of doing this, as it gives some incentive to attend the meetings in person, while still giving a reasonable cost alternative to those who cannot attend in person. The income from the virtual participation fees also provides PES with some funds that can be used to defray the higher facility costs that come with lower physical attendance, specifically the negative impact on guest room bookings, which is important when it comes to negotiating reduced costs for use of the hotel meeting facilities.

One idea that PSIM feels would be a beneficial overall compromise would be if each Committee were provided with a specified number of virtual participation exemptions (or vouchers) which would permit a small number of key participants who lack sponsorship to join virtually for free. If available, PSIM would use these vouchers mostly to enable participation of retired subject matter experts or Subcommittee and Working Group Officers who would like to remotely participate in events like the JTCM, but who lack the sponsorship of an employer. PSIM feels that this would likely result in an overall increase in paid meeting registrations, and would enable it to hold more Subcommittee and Working Group meetings at the JTCM.

## **9. Significant Plans for the Next Period:**

- Completion of revision of IEEE 1122
- Completion of revision of IEEE 510
- Completion of revision of IEEE 1459
- Completion of IEEE P2985
- Submission of a PAR and formation of a Working Group for the revision of IEEE Std 4
- Formation of a Working Group to revise IEEE 1601 (PAR already submitted)
- Completion of Revision of PES PSIM Committee O&P Manual
- Completion of Revision of IEEE SA P&P for Standards Development (draft submitted in 2023)
- Revision of IEEE SA Working Group P&Ps as required
- Organization and presentation of a Panel Session at PESGM 2024 on Medium Voltage Smart Grid Sensor and Sensor System Applications
- Committee officer rotation planned prior to JTCM 2025

**Submitted by: Jeffrey A. Britton**

**Date: 1/26/2024**