

## IEEE Power and Energy Society Entity Annual Report

2022

**Entity:** Intelligent Grid and Emerging Technologies Coordinating Committee (IGET)  
**Website:**  
**Chair:** Jim Follum, Pacific Northwest National Laboratory  
**Vice-Chair:** Theo Laughner, Lifescale Analytics  
**Secretary:** Daniel Molzahn, Georgia Institute of Technology  
**Immediate Past Chair:**

### 1. Significant Accomplishments:

IGET's first accomplishment of the year was completion of an Organization & Procedures Manual. Defining the purpose and scope of the committee has been critical in guiding IGET as we resume activities following several years of dormancy.

As part of this emergence from dormancy, the second significant accomplishment was resuming regular meetings. A series of monthly webinar series has been initiated to highlight emerging technologies. To foster coordination, targeted invitations are sent to multiple PES committees for each webinar. The webinars also play a role in the development of IGET's main work product: an annual emerging technologies white paper. Each webinar presenter has been asked to contribute a section to this white paper. Together, the webinars and white paper represent a coherent strategy for fulfilling the coordinating committee's purpose.

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

The webinars hosted by IGET increased awareness of emerging technologies among PES members participating in relevant committees. This awareness is crucial to ensuring that all aspects of these technologies, which tend to span the scopes of multiple committees, are considered. The webinars also foster dialog among committee members that otherwise may not have the chance to interact.

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

The presenters of IGET-sponsored webinars have benefited from visibility among PES committees that they are otherwise uninvolved with. Their contributions to the emerging technology white paper will also provide a publication for their resume and greater visibility. IGET's officers have benefited from the exposure to a broader set of technologies and an expanded network that comes from organizing presentations.

### 4. Recognition of Outstanding Performance:

Theo Laughner has served as a critical member of IGET by volunteering in several capacities. He serves as Vice-Chair, TCPC, and liaison to PSCC. He also volunteered to serve as the representative



for IGET on the PES Roadmap Task Force. For his consistent service in so many capacities, Theo deserves special recognition.

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

The October webinar was presented by members of the IEEE P2418.5 standards working group, and invitations were sent to the SBLC and PSOPE technical committees.

The December webinar was presented by a member of the Power Quality Data Analytics Working Group and invitations were sent to members of the BDA subcommittee.

IGET coordinated with the US Department of Energy’s North American Synchrophasor Initiative (NASPI) working group to co-host a webinar in February 2023.

Liaisons were assigned for PSCC and Switchgear’s Technology & Innovation Subcommittee.

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

**IEEE P2418.5 Blockchain for Energy:** Blockchain is emerging as a technology in power systems that will be used across the industry to support the smart grid, grid modernization, transactive energy, cybersecurity, and markets.

**Synchronized Waveforms:** Over the past few years, instrument manufacturers have made access to synchronized voltage and current waveform measurements possible. This emerging technology has the potential to enable a wide variety of applications, particularly those that support integration of inverter-based resources.

**Artificial Intelligence Resources for Power Systems:** Artificial intelligence is a technique where computer systems make decisions like the way a human would given the same input. As more data is acquired on the grid, the ability to automate the analysis of the data is paramount. There are several resources available to help the industry develop AI capabilities from disturbance libraries to publicly available AI platforms.

**1. Global Involvement & YP 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.

Please also provide information on the number of young professionals that are involved in your committee.

Total Number of committee members	Number of Young Professionals (under 35 years of age) – Including committee & subcommittee	Officers from regions 8,9 and 10	Subcommittee officers from regions 8, 9 and 10	Subcommittee members from regions 8,9, and 10
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36	1	1	NA (no subcommittees)	NA (no subcommittees)
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**2. Problems and Concerns:**

The committee is severely lacking in interest from its members. The Vice-Chair and Secretary have provided valuable contributions, but emails to our roster receive few replies. This was particularly troubling when we asked our members to volunteer to serve as liaisons.

**3. Significant Plans for the Next Period:**

Webinars are scheduled to continue on a monthly basis. The topics of these webinars will be summarized in an emerging technologies white paper to be completed by the General Meeting. In addition, we plan to begin hosting quarterly liaison meetings after reaching out to each Technical Committee to identify a more complete set of liaisons.

**Submitted by: Jim Follum, Chair**

**Date: 1/26/2023**