



IEEE PES

Technical Committees, Subcommittees, & Coordinating Committees



EXPLORE COMMITTEES FOCUSED ON YOUR PROFESSIONAL AREAS OF INTEREST

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“

Sustainable development requires human ingenuity. People are the most important resource.”

— DAN SHECHTMAN

The IEEE PES Technical Activities Committees and their Subcommittees lead the creation and maintain the standardization of technical documents related to the Committee's scope of activity, including Technical Reports, White Papers, and notably IEEE Standards.

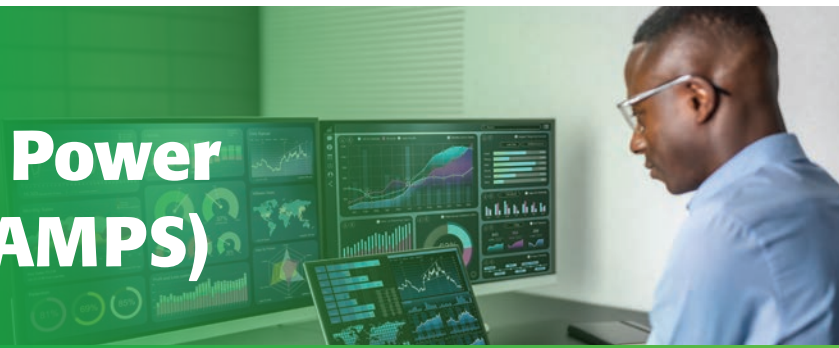
These working group committees have a major impact on the power and energy industry as they are pivotal in the development of IEEE Standards, producing nearly half of all IEEE Standards annually. As there is an IEEE PES Technical Committee for nearly every aspect of power engineering, we invite you to explore our technical committees and join a committee focused on your professional areas of interest.



ieee-pes.org/technical-activities

Learn more about the development of IEEE Standards here:
standards.ieee.org/develop

Analytic Methods for Power Systems Committee (AMPS)



Who We Are

The Analytic Methods for Power Systems Technical Committee is a standards developing committee of the IEEE Power & Energy Society. Our members are industry leaders, practitioners, students, and academics with a common professional interest in analytic and computational methods for electric power and energy. Before the IEEE Power & Energy Society Technical Committee reorganization, effective July 2016, AMPS Technical Committee and the majority of its subcommittees was referred to as the IEEE PES Technical Committee on Power System Analysis, Computing, and Economics.

Committee Scope

Investigative modeling, analysis and solution methodologies, computational tools and techniques, and the effective application of computing and intelligent systems in bulk power and distribution systems. Initiate and coordinate studies, symposia, panel discussions and tutorials related to the subjects of this area.

AMPS coordinates activities with other groups on analytical models which are used in the study of system dynamic performance, system planning, system operations, and distribution system analysis.

Subcommittees

- Big Data Analytics
- Computing & Analytical Methods
- Distribution System Analysis
- Intelligent Systems
- Reliability, Risk & Probability Applications
- Transient Analysis & Simulation

Join Us!

The AMPS Committee is composed of six subcommittees which function quite independently, and the Committee's role is to support them. Historically, we hold meetings at the PES General Meeting, where we approve such things as tutorial requests, standards initiatives, fellow endorsements, awards that require Committee level action, and negotiate for meeting rooms and paper quotas at PES conferences. AMPS has the largest number of General Meeting papers of any technical committee.



Electric Machinery Committee (EMC)



Who We Are

The Electric Machinery Committee is concerned with all matters related to the requirements, research, development, application, design, construction, operation, or supervision of electrical machinery. This machinery is associated with the generation of electric energy and its conversion into other forms of electric or mechanical energy. Members are experienced, well-qualified engineers active in all walks of industry where electrical machines constitute an integral element in successful operation and development.

Committee Scope

Included in the scope of the Committee is treatment of the following equipment and apparatus:

- Synchronous machines
- Induction machines
- DC and Permanent Magnet machines
- Motor generator sets
- Rotating frequency changers
- Electric couplings, brakes, and dynamometers

Subcommittees

- Renewable Energy and Integration
- Synchronous Condenser Design & Application
- Advanced Motor Designs & Condition Monitoring
- Insulation System Development, Characterization and Testing
- Adaptation of Large Synchronous Generators for an Evolving Grid
- Electric Machine Testing
- Standards for Turbo and Hydro Generators 10 MVA and above
- Guides for all aspects of electric machine testing and repair

Join Us!

Most working group, subcommittee, and committee business is conducted online. The committee meets once a year at the IEEE Power & Energy Society General Meeting - typically attended by some 40 of the nearly 100 members. Subcommittees and most active working groups meet concurrently. The committee hosts a variety of panel sessions.



Energy Development and Power Generation Committee (EDPG)



Who We Are

The Energy Development and Power Generation Committee operates within the IEEE Power & Energy Society. We focus on systems and facilities for conversion of energy sources such as solar, wind, hydro, nuclear, chemical, fossil, and others into electrical energy. We explore power generation impacts on the environment, conservation, regulation, economics, safety, and security. We look into the energy development opportunities of multi-energy systems and microgrids. We communicate about the interaction between power generation and society through standards, recommended practices, guidelines, policies, position papers, and technical conferences.

Committee Scope

Our subcommittees and working groups explore a wide range of topics including:

- International Practices on Power Source Integration
- Microgrid Implementation & Applications
- Global Laboratory Infrastructures for Distributed Energy Research
- Distributed Battery Systems
- Isolated & Remote Power Systems
- Standard Harmonization for Hydroelectric Power Plants
- Excitation Systems & Controls Standards (IEEE 421 Series Standards)
- Energy-Water Nexus

Subcommittees

- Distributed Energy Resources
- International Practices
- Renewable Technologies
- Wind and Solar Power Plant Interconnection & Design
- Hydroelectric Power
- Station Design, Operation & Control
- Excitation Systems & Controls
- Technologies for GHG Mitigation & Adaptation

Join Us!

Join us for a meeting and get involved! Anyone interested in learning more about power generation and helping advance the Committee's work is welcome to attend. Join industry and academic experts to discuss and develop the future of energy conversion into electric power. We welcome new perspectives and participation at the committee, subcommittee, and working group levels.



Energy Internet Coordinating Committee (EICC)



Who We Are

The Energy Internet Coordinating Committee (EICC) reports to the IEEE Power and Energy Society Technical Council on matters concerning membership, technical publications, and recognition.

EICC, with direction from the Technical Council, serves as a focal point within PES to identify issues related to energy internet, coordinates with Technical Committees and external organizations that deal with similar issues, seeks opportunities for exchange of experiences and knowledge, and identifies needs for guides, best practices and standards.

Objectives

The EICC serves as a focal point within IEEE PES for the identification of challenges associated with Energy Internet (EI).

The EICC also serves as the point of coordination for other organizations dealing with similar challenges (such as AWEA, CIGRE, DOE, ESIG, FERC, NERC, NREL, IEC, SEIA, and UN SDSN) and establishes liaisons to coordinate and help identify the appropriate technical resources within the PES and other IEEE societies to address the issues.

Committee Scope

EI is a deep combination of energy system and the Internet, including:

1. Internet thinking reshaping the energy networks, based on synergy of multi-energy systems, including heating, cooling, gas, transportation as well as electricity
2. New Internet and IT techniques applications, e.g., new generation communication technologies, ubiquitous decentralized control units, Internet of Things, blockchain.
3. New energy policies and energy market based on sharing economy, e.g., energy P2P trading

Attend a Meeting CTA

The EICC seeks opportunities to conduct jointly sponsored activities to promote the sharing of knowledge and experience among diverse organizations, e.g., annual onsite meeting at PES GM, IEEE E12 conference and some online seminars etc.

What's Next

With support from other TCs and liaisons, we'd like to

- 1) Recruit more members.
- 2) Organize some new Task Forces in EICC once some of current TFs are closed.
- 3) Organize some special issues in top journals.



Energy Storage and Stationary Battery Committee (ESSB)



Who We Are

The IEEE Energy Storage and Stationary Battery (ESSB) Committee is a reinvention of the former Stationary Battery Committee. In existence for over 45 years, the Committee has been involved in developing standards for the traditional standby dc power industry, and now engages in the same for the new energy storage arena. Members include developers manufacturers, testing and installation service people, consultants, academics, and users. Semi-annual technical symposiums provide members and guests with current technical developments in all areas of energy storage and standby power development. An invitation is extended to you to attend one of our general meetings.

Committee Scope

To develop new standards (11 presently in development) that supplement the existing 25 standards already maintained for energy storage, stationary batteries, and ancillary DC systems. A part of our mission is also educating industry people on the rapidly evolving aspects of energy storage systems. Recent examples include conducting full-day ESS tutorials for FERC, NextEra and the PES T&D Conference.

Subcommittees

- Standby Stationary Battery
- Electrochemical Energy Storage
- DC Power Equipment & Related Systems
- Energy Storage Collaboration Team

Join Us!

Membership is open to any person who wishes to join the IEEE Energy Storage and Stationary Battery Committee pursuant to the requirements as outlined in the IEEE ESSB Committee Operations and Procedures Manual. An application for Membership may be made by applying through an active Working Group Chair.



Insulated Conductors Committee (ICC)

Who We Are

Founded in 1947, the strength of the ICC is the meeting of expertise and collective technical knowledge to further the understanding of insulated wire and cable. The ICC promotes the effective application of these systems among members and guests including end users, manufacturers, research organizations, academic institutions, and other interested parties. ICC serves the international community as a committee within the PES of the IEEE through the coordinated development and publication of all IEEE standards that include technical matter relating to insulated conductors.

Committee Scope

Focused on the design, manufacturing, material science, testing, analysis, diagnostics, operation, and maintenance of insulated wire and cable used in commercial, industrial, and utility transmission and distribution systems, along with related accessories and subsystems. Within these technical areas, the ICC coordinates with other industry groups, and provides relevant oversight to IEEE activities, publications, and panel sessions.

Subcommittees

- Cable Construction and Design
- Cable Accessories
- Cable Systems
- Generating Station and Industrial
- Field Testing and Diagnostics

Join Us!

ICC meetings are focused on a variety of activities including: a multitude of presentations on relevant topics affecting insulated wire and cable, challenges for utility operation, maintenance and reliability, installation practices, manufacturing and material science, and work writing and maintaining relevant IEEE standards. Presently, the ICC initiatives are preparing updates to several standards that will otherwise become inactive, along with seeking to significantly enhance the participation of personnel from electric utilities in meetings.



Intelligent Grid & Emerging Technologies Coordinating Committee (iGET)

Who We Are

Intelligent Grid & Emerging Technologies (iGET) operates within IEEE Power and Energy Society to follow development of technologies related to fields covered by IEEE PES. Our main goal is to provide information on PES-related emerging technologies to IEEE PES leadership and members interested in any of the IEEE PES technical fields. This goal is achieved through organizing meetings, paper and panel sessions at IEEE PES events, communication with other Technical Committees, discussions with experts in particular fields of interest, and other activities.

Committee Scope

Emerging technologies, standards, and best practices in the following areas:

- Cybersecurity
- Electric Machinery
- Energy Development & Power Generation
- Insulated Conductors
- Power System Analysis, Computing and Economics
- Power System Communications
- Power System Resilience
- Power System Relaying
- Energy Storage
- Smart Grid
- Substations
- Switchgear
- Transformers
- Transmission & Distribution
- Power Systems Instrumentation and Measurement
- Other Technologies

Objectives

- Ensure that all key emerging technologies are considered within an appropriate PES technical committee
- Foster solutions to issues related to emerging technologies by informing experts within PES
- Support collaboration among PES technical committees by providing a forum for technologies influencing multiple areas

How You Can Get Involved!

- Update the Emerging Technologies White Paper
- Develop a virtual tutorial for a selected emerging technology
- Host a webinar series discussing the latest intelligent grid technologies

Join Us!

This committee meets periodically at the IEEE PES General Meeting and at the Joint Technical Committee Meeting. Please contact the committee chair (IGETCC Chair: Theo Laughner; Email: tloughner@lifescaleanalytics.com) for more information; Website: <https://cmte.ieee.org/iget/>



Marine Systems Coordinating Committee (MSCC)

Who We Are

The role of the MSCC is two-fold: (1) To ensure that the groups within PES address issues critical to the industry while minimizing overlap in their activities, and (2) to ensure work done in PES on marine applications of power at sea is coordinated with other relevant industry groups. The MSCC fulfills its responsibilities by providing a forum for the leaders of the marine power and energy groups within PES, as well as from other industry groups, to share progress of ongoing activities and to collaborate on plans to initiate new activities.

Committee Scope

The Committee scope is to coordinate with other Committees of the PES, other IEEE societies and committees, other technical organizations, and government agencies responsible for the application of power and energy at sea. The areas of coordination include:

- Ships, Vessels and Marine Platforms
- Marine Wind, Wave, and Tidal Systems
- Marine Transmission and Distribution
- Marine Grounding and Safety
- Related Environmental Impact areas

Subcommittees

- Ships, Vessels and Marine Platforms
- Marine Wind, Wave, and Tidal Systems
- Marine Transmission and Distribution
- Marine Grounding and Safety

What's Next

- Webinars on hot topics
- Announcements on our webpage
ewh.ieee.org/cmte/pes/msc/



Nuclear Power Engineering Committee (NPEC)



Who We Are

The Nuclear Power Engineering Committee is responsible for all nuclear power related technical and standards writing activities within the IEEE, including sponsorship of nuclear power related standards, research, development, and advancement of nuclear engineering with students and educational institutions. The Committee is comprised of an international group of technical experts from nuclear utilities, power plants, equipment vendors, engineering companies, and regulators representing a wide cross-section of the nuclear industry. NPEC has been proactive in developing many joint-logo standards with IEC.

Committee Scope

NPEC is generally responsible for:

- Participating in and supporting the goals and activities of PES
- Developing and maintaining IEEE nuclear power related standards
- Maintaining close liaison with other technical societies, groups, agencies and associations concerned with nuclear power, including coordination of matters relating to reliability, human factors, accreditation and similar subjects for nuclear facilities
- Development of coordinated responses to requests for comments from governmental agencies for regulatory guides and other rule-making documents

Subcommittees

- Equipment Qualification
- Operations, Maintenance, Aging, Testing, & Reliability
- Auxiliary Power Systems
- Human Factors and Human Reliability
- Safety-Related Systems

Join Us!

Anyone interested in learning more about our standards and other activities and helping to advance the work of the committee is welcome to participate. Please attend an upcoming NPEC meeting and its associated subcommittee and working group meetings.



Power System Communications and Cybersecurity Committee (PSCCC)

Who We Are

Formally established in 2016, the PSCCC is an interdisciplinary team with members representing electric utilities, manufacturers, consultants, researchers, and students who have a focused passion for addressing the unique communication and cybersecurity challenges of power systems. With over 30 active projects, our work products help the industry establish interoperable data flows and protocol architectures while ensuring the availability, integrity, and confidentiality of data, control devices, and communication equipment.

Committee Scope

The treatment of all matters in which the dominant factor is the electrical, wireless, and optical means for the transfer of information associated with the power system domain, including the investigation, education, and standards development activities related to the following:

- Integrated communications
- Cybersecurity
- Protocol definition & testing
- Communications circuit electrical protection & safety
- Communications equipment supporting the power system
- Communications & cybersecurity management
- Personnel & equipment safety

Join Us!

We meet three times per year in joint meetings with the Power System Relaying and Control Committee in January (PES JTCM), May, and September at locations throughout North America. Meetings are scheduled from Monday through Thursday, with attendees paying a meeting registration fee and a separate hotel room at the meeting hotel. Remote participation is possible.

Subcommittees

- Administrative
- Broadband PLC
- Cybersecurity
- Optical Fiber
- Power Line Carrier
- Protocols & Architecture
- Wireless
- Wire Line

Objectives

Address the evolving communications and cybersecurity challenges of electric power systems by:

- Offering a venue that brings together industry leaders and subject matter experts
- Developing reports, standards, guides and best practices for the industry
- Providing guidance to industry stakeholders and practitioners

What's Next

- Virtualization of Protection and Control Applications
- Guide for Securing GOOSE and SV in IEC-61850
- Use of Intrusion Detection and Prevention in Electric Power Systems
- Use of SBOM (software bill of materials) in the Energy Sector
- Application of Fiber in Aerial Cables as a Distributed Sensor
- Considerations for Power Line Carrier in Modern Transmission Networks



Power System Dynamic Performance Committee (PSDP)

Who We Are

PSDP is composed of numerous working groups and task forces concerning the dynamic performance of power systems. These WGs and TFs report to the Power System Stability Subcommittee and the Power System Stability Controls Subcommittee. The committee initiates and coordinates WGs, TFs, symposia, panel sessions and tutorials related to power system dynamic performance. The committee also cooperates with other interested groups in the development of standards that affect system dynamic performance, and where possible, with other groups on analytical models which affect system dynamic performance.

Committee Scope

Investigate various aspects of the dynamic performance of power systems at the level of a given machine, a company or area, or for the entire interconnected power system. This includes all aspects of power system stability, voltage and frequency regulation, and power system control that relate both to the assessment and enhancement of power system dynamic performance. This also includes control theory, modelling and computer simulation techniques that relate to the assessment and enhancement of power system dynamic performance.

Subcommittees

- Power System Stability
- Power System Stability Controls

Subject Areas

- Power system dynamic modeling: components and systems
- Power system stability: phenomena, analysis, and techniques
- Power system stability controls: design and applications
- Monitoring and measurement of power system dynamic performance (including synchrophasor measurements)
- Adjustable Speed Pump Storage Dynamic Modeling
- Power system dynamic performance of cyber-physical energy systems
- Modeling and dynamic performance of microgrids and distributed energy systems
- Power system restoration dynamics
- Dynamic security assessment: techniques and applications, risk-based methods
- Modeling and dynamic performance of renewable energy systems
- Simulation of large interconnected power systems: modeling issues and solution schemes
- Benchmark systems for power system dynamic analysis
- Integrating relay models with dynamic simulation
- Dynamic performance of large power systems with inverter-based generation



Power System Instrumentation and Measurements Committee (PSIM)

Who We Are

The Power System Instrumentation and Measurements Committee (PSIM) is the sponsor committee for the general measurement and testing standards for the power industry. One of the major standards sponsored by PSIM is IEEE Standard 4 which describes the procedures for high voltage testing of power system products. Currently, the following topics are being addressed: High Voltage Safety, Digital Recorders in HV Measurements, Partial Discharge, High Frequency Transient Measurement, Optical Sensors, Smart Grid Voltage and Current Sensors.

Committee Scope

Treatment of matters in which the manual or automatic instrumentation and measurement of the electrical parameters of equipment and systems for the generation, transmission, and distribution of electric power. As well as the measurement of current, voltage, power and power factor for various applications, the following are included in the Committee's purview:

- Digital Techniques In Electrical Measurements
- Electricity Metering
- Power Quality
- High Voltage Testing Techniques
- RLC Measurements

Subcommittees

- Administrative
- Digital Techniques in Electrical Measurements
- Electricity Metering
- High-Voltage Testing Techniques
- RLC Measurements
- Recognition and Awards
- Standards
- Sensors

Join Us!

Meet with metrology experts from around the world. Anyone performing high voltage and high current measurement on power system devices can benefit from attending our meetings. The committee meets in conjunction with other PES activities, including PES GM and PES JTCM, and rotates to the other apparatus committees. Meeting attendance by web conference is available for many of our meetings.



Power System Operation, Planning and Economics Committee (PSOPE)



Who We Are

PSOPE was established in 2016 and became fully operational in 2017. PSOPE covers issues related to power systems operation, planning, and economics of its technologies. PSOPE activities help to guide research and development, as well as serve as a bridge between academic research and practical applications to an evolving power system business environment. In addition, PSOPE shares information about industry experiences and key challenges of an industry in constant transformation. This is in order to provide feedback to the technical community regarding the effectiveness of state-of-the-art techniques and methodologies employed in power systems operation, planning, and economics.

Committee Scope

- Generation, transmission, and distribution expansion and operations planning
- Integration of renewables and distributed energy resources into power system planning and operations
- Methodologies, technologies, innovation, and tools for power system planning, operations, and markets
- Resource adequacy in electricity markets
- Designing and operating markets for electricity, including regulatory issues and interfaces between electricity and other commodities
- Training and workforce support for power system operations and planning personnel

Subcommittees

- Bulk Power System Operations
- Bulk Power System Planning
- Distribution System Planning and Operations
- Power System Economics
- Technologies and Innovations
- Awards

What's Next

- Promoting diversity and inclusion
- Enhancing industry engagement

Join Us!

PSOPE meets regularly at the General Meeting of the IEEE PES. The Committee holds a main meeting, open to all, and its many subcommittees and task-forces carry out their own meetings. Please check the conference program and join these meetings, as your participation is needed and very welcome.



Power System Relaying and Control Committee (PSRC)



Who We Are

Technical leaders from over 100 world-wide electric utilities; representatives from USA, Canada, EU, and Japanese suppliers; education leaders from universities with Power Programs; technical and managerial representatives from North American consulting engineering firms.

Committee Scope

Treatment of all matters in which the dominant factors are the principles, application, design, construction, testing, and operation of power system protection and control. Protection and control systems include one or more of the following functions: sensing, data acquisition and processing, fault detection, manual or automatic control, and auxiliary operation. The scope includes liaison and cooperation with other technical committees, societies, groups and associations concerned with various aspects of items herein.

Our committee website is pes-psrc.org.

We are working on ongoing and emerging problems associated with:

- Cybersecurity for power system infrastructure
- Wide area grid data collection with Synchrophasors
- Smart Grid Initiatives
- Grid stability under stressed conditions
- Inverter based resources
- Power Line induced wildfire ignitions
- Centralized Protection and Control Technology

Subcommittees

- System Protection
- Line Protection
- Relaying Communications and Control
- Protection and Control Practices
- Rotating Machinery
- Substation Protection

Join Us!

Anyone interested in learning more about protective relaying or helping with our work is welcome.

We meet three times per year. See when the next meeting is scheduled at pes-psrc.org/meetings. PSRC Committee meetings typically have around 250 of the world's experts gathered together. We have around 100+ working groups doing interesting projects at any one time so there is always something of interest to contribute your expertise and knowledge to.



Renewable Systems Integration Coordinating Committee (RSICC)

Who We Are

The RSICC serves as a focal point within the Power and Energy Society (PES) for the identification of challenges associated with the integration of renewable energy resources (such as wind, solar, hydro, and bioenergy,) related energy carriers (such as storage, fuels, and heat) and related electrification applications (transportation, buildings and industry.)

The RSICC serves as the point of coordination for other organizations dealing with similar challenges (such as AWEA, CIGRE, DOE, ESIG, FERC, NERC, NREL, IEC, SEIA, UN SDSN) and establishes liaisons to coordinate and help identify the appropriate technical resources within the PES and other IEEE societies to address the issues. The RSICC seeks opportunities to conduct jointly sponsored activities to promote the sharing of knowledge and experience among diverse organizations working on similar issues through the conduct of studies, symposia, workshops, panel discussions, and tutorials.

Committee Scope

- Serves as a focal point within PES to identify issues related to renewable systems
- Coordinate across Technical Committees and with external organizations on issues and activities related to renewable systems
- Seeks opportunities for exchange of experiences and knowledge
- Identifies needs for guides, best practices, and standards

Subcommittees

- Analytic Methods for Power Systems: Reliability, Risk & Probability
- Analytic Methods for Power Systems: Transient Analysis & Simulations
- Electric Machinery: Renewable Energy Machines & Systems
- Energy Development & Power Generation: Distributed Energy Resources
- Energy Development & Power Generation: Integration of Renewable Energy into T&D Grids
- Energy Development & Power Generation: Renewable Technologies
- Energy Development & Power Generation: Technologies for GHG Mitigation & Adaptation
- Energy Storage and Stationary Battery



Smart Buildings, Loads and Customer Systems Committee (SBLCS)

Who We Are

The Smart Buildings–Loads–Customer Systems Technical Committee is an IEEE Power & Energy Society (PES) entity that works to develop knowledge base and standards in the fast-growing area of consumer and prosumer energy services and systems behind the meter. We also seek to refine the processes and business models that expand and clarify the relationship between the grid and emerging distributed energy resources.

Committee Scope

- The integration of consumer-side and grid planning, dispatch operations, and transactive systems
- Customer-sited power and energy system functions and performance management
- Methods for communication integration with utility and other energy service provider business systems

Subcommittees

- Architecture Subcommittee
- Smart Buildings & Customer Systems Subcommittee
- Loads Subcommittee

Join Us!

Are you interested in working in one of the fastest evolving areas of grid systems? Please contact Committee Secretary (Dr. Sumit Paudyal, Florida International University, email: spaudyal@fiu.edu). PES-SBLC Technical Committee is seeking your input! We have committee activities structured in subcommittees, working groups and task forces, including four active standard oriented efforts.

Objectives

- To develop and maintain plans, concepts, and structural views related to architectural issues associated with the integration and coordinated operation of distributed energy resources (DER– responsive distributed generation, storage, and loads) related to consumer energy services.
- To study the integration of smart buildings and other customer systems with up-and down-stream energy processes and applications such as building energy management; energy facilities management; fire, safety, and security systems in regards to energy systems; microgrids and smart grid.
- To study the modeling, deployment, and operation of customer loads, and the technology and standards to support the functions of these consumer interests, including processes and models that may expand and clarify the relationship between the grid and load related energy resources and services behind the meter.

What's Next

- Continuation of effort on the development of IEEE and P2418.5 (Blockchain in Energy).
- Expanding our efforts on Grid-interactive Efficient Buildings; Connected Communities; and Estimation, Uncertainty Quantification, and Control of Behind-The-Meter Distributed Energy Resources, Demand Response in the DER Era.
- Active participation in organizing IEEE PES Transactive Energy Systems Conference in collaboration with GridWise® Architecture Council.



Substations Committee



Who We Are

The Substations Committee is the professional home for engineers involved in the design and operation of generation, transmission, and distribution substations. Committee activities include the development of industry standards, recommended practices, and guides; technical papers, panels, and tutorials; as well as, participation in the IEEE PES General Meeting, Joint Technical Committee Meeting, and T&D Conference and Exposition.

Committee Scope

The scope of the PES Substations Committee encompasses technical areas of responsibility, technical activities, and advocacy responsibilities.

Technical areas of responsibility include the treatment of matters related to the design, construction, testing, and maintenance of electric power transmission and distribution stations including switching stations, and substations.

Technical activities include the sponsorship and development of standards, recommended practices, and guidelines (either alone or jointly with other technical committees and/or organizations), as well as preparation of position papers, technical reports, and sessions at technical conferences on matters related to items within the technical areas above.

Advocacy responsibilities include liaising and cooperating with societies, groups, regulatory agencies, associations, and other IEEE PES Technical Committees associated with various aspects of items within the above technical areas i.e., Electric Machinery (EMC), Insulated Conductors (ICC), Power System Communications & Cybersecurity (PSCC), Power System Instrumentation and Measurements (PSIM), Power System Operation, Planning & Economics (PSOPE), Power System Relaying and Control (PSRC), Smart Buildings, Loads and Customer Systems (SBLCS), Surge Protective Devices (SPDC), Switchgear, Transformers, and Transmission & Distribution (T&D).

Subcommittees

- Electrical Subcommittee
- Physical Subcommittee
- Grounding and Lightning Subcommittee
- FACTS & HVDC Subcommittee
- Gas Insulated Subcommittee
- Technology and Innovation Subcommittee

Join Us!

The Substations Committee is continually open to new members from all countries who may be interested. Participation provides a unique opportunity to share knowledge and expertise through exchange of views, information, and practices with fellow engineers both nationwide and internationally. Those who do serve are truly rewarded by the enrichment they receive towards their professional background. The Substations Committee convenes annually during the spring in a North American city that is normally sponsored by the respective regional power utility.

Follow Us!

Follow us on LinkedIn for Committee and Industry updates and discussions:

[linkedin.com/company/ieee-pes-substations-committee/](https://www.linkedin.com/company/ieee-pes-substations-committee/)



Surge Protective Devices Committee (SPDC)

Who We Are

The SPDC is a very focused, nimble, and active technical committee of the IEEE PES. The Committee is comprised of technical experts representing utilities, manufacturers, consultants, test laboratories, vendors, users, and certification bodies in the area of SPDs. The scope of the committee includes the creation of test specifications, application guides, and recommended practices along with technical presentations and investigations related to the use of SPDs. The applications covered include SPDs for power generation, transmission and distribution, neutral grounding, rotating machines, low voltage AC power systems, DC power, communications, photovoltaics, wind power, electric vehicle service equipment, Smart Grid, and surge protective components.

Committee Scope

The SPDC is responsible for the treatment of all matters in which the dominant factors are the test, performance, application, design, construction, and operation of SPDs. Included is treatment of the following:

- SPDs employed in generation, transmission, distribution, communication, data, and utilization of electrical energy
- Treatment of the techniques and needs for coordination within, between, and among SPDs and their environment

Subcommittees

- Administration & Standards
- Bibliography & Definitions
- High Voltage Surge Protective Devices
- Low Voltage Surge Protective Devices
- Web & Electronic Documentation

Objectives

Maintenance of existing and development of new documents related to Surge Protection in:

- High Voltage AC/DC Power
- Low Voltage AC/DC Power
- Data, Communication & EV Charging

What's Next

- Issue latest revision of C62.22 (Arrester Application Guide)
- Issue C62.230 (Electric Vehicle Service Entrance Protection Guide)

Join Us!

We hope that you'll choose to attend an IEEE PES SPDC standards meeting, and would like to encourage your participation. All attendees bring their different skill sets to the meeting, allowing for a mutually beneficial learning experience. Active participation leads to efficient and timely development of standards, of which we can all be proud! Check the Committee Website below for meeting schedules and locations.



Switchgear Committee

Who We Are

One of the many standards developing technical committees of the IEEE Power & Energy Society. The Committee is comprised of technical and managerial representatives from manufacturers, consultants, vendors, and end-users of electrical switchgear and components. One of the Committee's responsibilities is to produce and maintain documents contained in the IEEE C37 Standards Collection. The Committee's standards work provides a crucial service to society's need for continuing development and maintenance of a reliable, safe and efficient power system infrastructure.

Committee Scope

Treatment of matters in which the dominant factors are the design, construction, and operation of devices or assembled gear to establish, interrupt, or change connections in any electric circuit under normal or abnormal conditions, including treatment of the following:

- Automatic reclosers & sectionalizers
- Current limiting devices
- Fuses & cutouts
- Gas-insulated switchgear
- Insulation, insulators, & hardware for switchgear
- Metal-enclosed buses & all buses included in switchgear assemblies
- Power circuit breakers
- Switches, including pad-mounted switches
- Switchgear assemblies
- Switchgear devices

Subcommittees

- Administrative
- Education Recognition & Publication
- High Voltage Circuit Breakers
- High Voltage Fuses
- High Voltage Switches
- Low Voltage Switchgear Devices
- Reclosers & Other Distribution Equipment
- Switchgear Assemblies
- Technology & Innovation

Join Us!

This is where it all happens! Anyone interested in learning more about Switchgear and helping advance the Committee's work is welcome to attend. Join industry leaders to discuss and develop standards and technical issues involving Switchgear. Volunteer and participate as much as possible. The Committee is comprised of volunteers and participation is highly encouraged!



Transformers Committee



Who We Are

One of the largest and most active technical committees within the IEEE Power & Energy Society. The Transformers Committee is comprised of technical experts from manufacturers, consultants, vendors and end users of electrical transformers and components. The continuing scope of the Committee is to develop and update standards and guidelines for the design, testing, repair, installation, operation and maintenance of transformers, reactors and associated components that are used within electric utility and industrial power systems.

Committee Scope

Included in the scope of the Committee is treatment of the following equipment and apparatus:

Generation, Transmission & Distribution Transformers

- Voltage Regulators (step & induction regulators)
- Reactors & Grounding Transformers
- HVDC Converter Transformers & Smoothing Reactors
- Dry Type & Power Semiconductor Rectifier Transformers
- Instrument Transformers (voltage & current transformers)
- Insulation & Dielectric Problems Relating to Transformers
- Outdoor Apparatus Bushings
- Insulating Fluids
- Phase Angle Regulating Transformers
- Subsurface Transformers & Network Protectors

Subcommittees

- Bushings
- Dielectric Tests
- Distribution Transformers
- Dry Type Transformers
- HVDC Converter Transformers & Reactors
- Instrument Transformers
- Insulating Fluids
- Insulation Life
- Meeting Planning
- Performance Characteristics
- Power Transformers
- Standards
- Subsurface Transformers & Network Protectors

Join Us!

Want to “brush shoulders” with the EXPERTS in transformers? Anyone interested in learning more about transformers and helping advance the work of the Committee is welcome to attend a meeting. Registration fee for meetings is approximately US\$500.



Transmission and Distribution Committee (T&D)



Who We Are

The Transmission & Distribution Committee is one of many Standards Developing Technical Committees of the IEEE Power & Energy Society. The T&D Committee is comprised of technical and managerial representatives from electric power transmission and distribution system providers, manufacturers, vendors, academics, consultants, and electric power end users. The Committee's products include IEEE Standards, recommended practices, and guides. We also organize panel sessions at PES conferences, publish working group papers in IEEE journals, and develop in-depth tutorials on emerging technologies and new standards. The Committee's standards work provides a crucial service to society's need for reliable, safe, and efficient power system infrastructure.

Committee Scope

- Overhead and underground AC and DC transmission and distribution systems
- Flexible AC transmission systems (FACTS)
- Overhead conductors
- Structural coordination and mechanical problems of transmission lines
- Towers, poles, insulators, and hardware
- Shunt and series capacitors
- Engineering in the safety, maintenance, and operation of lines
- Harmonics and power quality
- Integration of renewable energy resources into T&D systems
- Reliability of the electric transmission and distribution networks
- Transmission and distribution power system switching and voltage optimization

Subcommittees

- Capacitor
- Distribution
- Engineering in the Safety, Maintenance and Operation of Lines
- HVDC & FACTS
- Overhead Lines
- Power Quality
- Transmission
- PQ Standards Coordinating Subcommittee 22

Join Us!

This is where it all happens! Anyone interested in learning more about the T&D Committee and helping advance the Committee's work is welcome to attend. Join industry leaders to discuss and develop standards and technical issues involving electric power transmission and distribution. Volunteer and participate as much as possible. The T&D Committee is comprised of volunteers and participation is highly encouraged!



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