

Call for Papers
IEEE Power & Energy Society
2010 General Meeting
July 25-29, 2010
Minneapolis, Minnesota, USA

Power Systems Engineering in Challenging Times

The IEEE Power & Energy Society General Meeting brings together an international group of practicing engineers, operators, planners, policy makers, economists, academics and others with interest in the field of electric power and energy. It thus provides an exceptional venue for learning about the latest developments in all aspects of electrical power and energy, and to discuss issues with experts in related fields from all over the world.

This conference will include a timely and valuable plenary session, along with tutorials on a number of up-to-date topics addressing current and emerging industry issues. Paper, panel and poster sessions will be scheduled, with top papers drawn from all committees to be featured in **Super Sessions** and a **Late Breaking New Session**.

Papers are invited on all topics related to electric power and energy, and especially for the **Super Sessions topics** with the following focus:

1. Wind and Solar Energy: Challenges in furthering its penetration

- Inadequacy of the Transmission Network: Need for New Transmission Lines and increased power flow on existing rights-of-way – HVAC, HVDC and UHV
- Performance Characteristics and Economic Value of balancing resources to enable Renewables, including Storage Technologies (compressed air energy storage, batteries, pumped hydro), Demand Response, fast-responding CT's and others
- Planning, Design and Operational Challenges with Increased Variability and Uncertainty
- Using Wind, Solar and Load Forecasts to Manage Operating Reserves including wind and isolation forecasting techniques
- Technologies Available and Enhancements Required to Enable Integration
- Improvements in Wind Turbines: Electric Generation Systems
- Offshore Wind
- New hydro and kinetic technologies
- Photovoltaic and Solar-Thermal Power Plants

2. Governmental Policies Impact on Industry Decision Making

- Green House Gases and Climate Change Initiatives
- Renewable Portfolio Standards
- Regulatory Compliance Issues
- International Coordination/Cooperation
- Demand-side Management and Energy Efficiency Potential

- End-Use Energy-Efficient Technologies (Air and Ground Source Heat Pumps, Heat Pump Water Heaters, Industrial Electro-technologies, etc.)

3. Nuclear for Low-Carbon Generation

4. Power Electronics based Applications in Power Systems

- New Topologies, Control and Strategies in Integrating Renewables - Wind and Solar at the building, micro-grid, distribution and bulk power system levels
- Storage Systems – both distributed and central
- Regulating Power Flow on Transmission and Distribution Lines to avoid Power Flow Congestion
- HVDC Systems and Flexible AC Transmission Systems (FACTS)
- Power Electronic Transformers

5. Major Challenges and Commercial Applications of New and Emerging Technologies

- Aging Infrastructure; Asset Management
- Workforce Needs and Approaches
- Smart Grid Technology Integration: Home Area Networks; Deployment of Advanced Sensors for Diagnostics; Synchronized Measurements for Wide Area Monitoring, Protection, and Control; Advanced Metering Infrastructure; Time-of-Use Pricing; Cyber Security Considerations
- Micro-grids: Control Challenges and Storage
- Plug-in Hybrid Electric Vehicles (PHEVs) and Electric Vehicles (EVs)
- Large Scale Integration of Demand Response for both day-ahead markets and as a real time balancing resource
- Energy Storage
- Nanotechnology
- Others

Manuscript Submission: Papers (maximum length 8 pages) must be prepared in accordance with the procedures outlined in the *PES Publications Guide*, which is part of the PES Authors Kit available at the IEEE PES web site (<http://www.ieee-pes.org/meetings-and-conferences/calls-for-papers/pes-authors-kit>). Complete manuscripts are to be submitted electronically via the PES 2010 GM paper submission web site, which will be accessible from the PES web site above.

The submission site will be available for paper submissions beginning Oct. 2, 2009 through Nov. 26, 2009. If revisions are required, authors will be given the chance to respond to reviewers' comments. **The final version of the paper must be submitted by February 8, 2010.**

At least one author of each paper must register for the meeting, pay the correct fee, and be present at the appropriate session before an accepted paper will be released for publication in the *PES 2010 General Meeting Proceedings* or scheduled for presentation during a Super Session, or panel/paper/poster sessions. Presentation of an accepted paper is a requirement of publication. Any paper that is not presented at the conference will not be included in IEEE Xplore. Additional information about the meeting will be posted on the website as it becomes available.

Note: Registration deadline for authors may be earlier than the general registration deadline.

Summary of Important Dates:

Paper Submission Website Opens: October 26, 2009

Paper Submission Website Closes: November 26, 2009

Authors Notified (Accept, Reject or Revise): January 21, 2010

Revised Papers Due: February 8, 2010

Final Decision (Accept or Reject only): February 24, 2010