IECON 2026

Doha, Qatar | 18-21 October

The 52nd Annual Conference of the IEEE Industrial Electronics Society

Call for Papers for the Special Session on

SMART GRID AND SUSTAINABLE POWER SYSTEMS USING AI-BASED WAMS WITH ELECTRIC VEHICLE INTEGRATION

Organized and co-chaired by

Dr. Satyendra Pratap Singh, Poornima University, Jaipur, India — satyendra.singh@poornima.edu.in

Dr. Sandeep Ghosh, IIT (BHU) Varanasi, India — sghosh.eee@iitbhu.ac.in

Dr Dhivya Sampath Kumar, Singapore Institute of Technology, Singapore — dhivya.sampathkumar@singaporetech.edu.sg

Technical Outline of the Session and Topics

The special session "Smart and Sustainable Power Systems: AI-Enabled WAMS and Electric Vehicles" aligns with the theme of IECON 2026, focusing on intelligent technologies and sustainable energy solutions. It explores the transformation of power systems into resilient and efficient networks through the integration of AI, WAMS, and Electric Vehicles (EVs). Unlike broader tracks such as Smart Grids, IoT, and Advanced Computing, this session provides a focused interdisciplinary approach by emphasizing AI-driven monitoring, predictive maintenance, IoT-enabled grid observability, and EV-grid coordination (V2G).

Overall, it complements existing tracks while offering a platform for innovative AI-based solutions to enhance grid resilience, efficiency, and sustainable power systems.

Topics of the session include, but are not limited to:

o Electric Vehicle (EV) Integration, Charging Optimization, and V2G Technologies
o AI-Based Wide Area Monitoring and Control for Power Systems
o Real-Time Load Forecasting and Renewable Energy Management
o Intelligent Microgrids and Distributed Energy Resources Coordination
o Cybersecurity and Data Privacy in AI-Enabled Smart Grids
o Decentralized Control and Multi-Agent Systems in EV-Integrated Grids
o Advanced Fault Detection, Self-Healing, and Adaptive Protection Schemes
o Energy Storage Management and Optimization in EV-Integrated Networks

Timeline for Authors

All the instructions for paper submission are available on the conference website. Please visit www.iecon2026.org or scan the QR code for the timeline.