



2025 IEEE 4th International Conference

on

Smart Technologies for Power, Energy and Control (STPEC 2025)

December 10-13, 2025

Department of Electrical and Electronics Engineering,
National Institute of Technology Goa, Goa, India



Special Session 06 (SS06)

Future Technologies for Sustainable Energy and Transportation

Organized and co-chaired by:

- Dr. Saumendra Sarangi, MNNIT Allahabad, UP, India
- Dr. Indrajit Sarkar, NIT Rourkela, Odisha, India
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Call for Papers

• Technical Outline of the Session:

This special session aims to unite researchers and industry practitioners to explore advancements in sustainable energy generation and intelligent transportation technologies. Emphasizing modern innovations, the session focuses on driving a global shift toward a low-carbon, resilient, and efficient future. Topics include renewable energy integration, energy storage and management, smart grid optimization, and energy system digitalization. The convergence of energy and mobility—through technologies like vehicle-to-grid (V2G) and electric mobility—will also be highlighted. On the transportation front, the session will cover electric vehicles (EVs), fuel-cell mobility, autonomous systems, urban air mobility (UAM), and high-speed sustainable transport. Emphasis will be placed on scalable, efficient, and economically viable solutions that reduce emissions and support a sustainable future.

• Topic of the Session includes, but are not limited to:

- Advanced Renewable Energy Technologies
- Green Hydrogen and Energy Carriers
- Next-Generation Energy Storage
- Smart Grids and Decentralized Energy Systems
- Electric Vehicle (EV) Technologies and Infrastructure
- Hydrogen and Alternative Fuel Transportation
- Autonomous and Connected Transportation Systems
- Urban Air Mobility and Future Transit Systems
- Sustainability Assessment and Lifecycle Analysis
- Policy, Regulation, and Investment Models

• Important Dates:

- Special Session Paper Submission Due : June 15, 2025
- Notification of Paper Acceptance : July 31, 2025
- Camera Ready Paper Submission Due : August 31, 2025
- Regular Registration Due : October 30, 2025

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