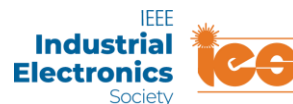




BHUBANESWAR
ICPEE 2025

**IEEE International
Conference on Power
Electronics and
Energy (ICPEE 2025)**



Special Session 04 (SS 04)

SS 04: Improving Smart Grid Climate Resilience with Sustainable Energy Technologies

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Call for Papers

Technical Outline of the Session:

Considerable research has been conducted in recent years with the goal of improving the efficiency and performance of energy networks at the transmission and distribution levels. At the same time, adaptation to climate change has emerged as a top priority for scholars everywhere. In order to mitigate the fluctuating power generation from various renewable sources, such as solar arrays, wind farms, wave energy converters, battery energy storage systems, and fuel cell installations, advanced technology and proactive adaptation tactics are essential.

The purpose of this planned special session is to discuss how future smart grids and microgrids might be developed and operated sustainably in light of changing climate circumstances. It will examine state-of-the-art renewable energy technology and how resilient they are to the effects of climate change. The session will also cover a wide range of important smart grid technologies, such as developments in energy storage, smart grid energy management, electric vehicle (EV) technology and grid integration, power quality enhancement, harmonic mitigation, and renewable energy integration. This session's ultimate goal is to present all-encompassing solutions and cutting-edge strategies for the development of intelligent and sustainable power grids.

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

- ✦ Climate change effect
- ✦ Sustainable Development
- ✦ Integration of renewable energy systems
- ✦ Control of distributed energy systems
- ✦ Efficient Power electronics converters
- ✦ Soft computing techniques for climate change adaptation

Important Dates:

Special Session Paper Submission Due Date: 15.08.2025

Notification of Paper Acceptance Date: 31.08.2025

Camera Ready Paper Submission Due : 15.10.2025

Author guidelines areas per regular paper submission.

IEEE Template

Submission Portal

<https://icpee.kiit.ac.in/special-sessions/>

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