

Exploring Dynamics and Innovations in Electricity Markets: Bridging Sustainability and Technological Advancements

Introduction and Topics

Electricity power markets stand at the intersection of sustainability, innovation, and policy dynamics. The proposed special session aims to dissect the multifaceted realms of electricity power markets, focusing on diverse themes such as operational strategies, market integration of renewables, infrastructure development, evolving energy services, policy implications, and the burgeoning field of hydrogen energy technologies and strategies. Theme and Scope: The special session will provide a comprehensive platform for global experts, researchers, industry leaders, and policymakers to engage in dialogue and exchange insights on the following focal areas:

1. Operation, Modelling, Forecasting, and Simulation of Energy and Carbon Markets:

- Analyzing operational strategies and advancements in modelling, forecasting, and simulation techniques in energy and carbon markets.
- Evaluating the efficacy of market forecasts and their impact on decision-making processes.
- Examining innovative approaches for carbon market modelling and forecasting in a transitioning energy landscape.

2. Market Integration of Renewable Energy Sources:

- Assessing challenges and opportunities in integrating renewable energy sources into existing power markets.
- Exploring regulatory frameworks and market mechanisms facilitating the seamless integration of renewables.
- Analyzing market design strategies that promote the optimal utilization of renewable energy capacities.

3. Infrastructure Development and Management:

- Discussing strategies for efficient infrastructure development to support the evolving energy landscape.
- Addressing challenges related to grid modernization, transmission, and distribution for enhanced energy access and reliability.
- Exploring innovative approaches in infrastructure management for optimized energy delivery.

4. New Services in the Energy World:

- Examining the emergence of new energy services such as Energy Communities, E-mobility solutions, and advancements in storage technologies.
- Assessing the impact of these services on market dynamics, consumer behaviour, and sustainability.

5. Energy and Climate Policy:

- Deliberating on the intersections between energy policies and climate goals.
- Analyzing policy frameworks that encourage renewable energy adoption and mitigate climate change effects.

6. Hydrogen Energy - Technologies & Strategies:

- Discussing the technological advancements and strategies in harnessing hydrogen energy for diverse applications.
- Exploring the role of hydrogen in energy transition and its potential to decarbonize sectors like transport, industry, and heating.

Special Session Chair



Dr. Bo Jie
The University of Tokyo, Japan

IMPORTANT DATES

Submission Deadline
September 10, 2024

Notification Deadline
October 10, 2024

Camera-Ready Deadline
November 30, 2024

Publication

Submissions will be reviewed by the conference technical committees, and accepted papers will be published in ICSCGE 2024 International Conference Proceedings, which will be submitted for inclusion in the **IEEE Xplore Digital Library**, and submitted for indexing by EI compendex and Scopus.

PAPER SUBMISSION

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