IEEE EI²
2024

THE 8TH IEEE CONFERENCE ON ENERGY INTERNET AND ENERGY SYSTEM INTEGRATION

NOV. 29 - DEC. 02, 2024 | SHENYANG, CHINA

Special Session 10

Key Technologies for Energy Storage Applications in New Electric Power Systems

○ INTRODUCTION AND TOPICS ○

Energy storage (ES) technology is a crucial support for the optimization of the energy structure in power systems and the transformation of electricity production and consumption. It can alter the traditional model where electricity production, transmission, and consumption must be completed synchronously and is an essential component of new types of power systems. With the rapid development of renewable energy sources such as wind and solar power, the large-scale integration of these intermittent and fluctuating energies poses a series of unprecedented challenges to the secure and stable operation of the power grid. ES, which enhances the flexibility, economy, and security of traditional power systems, can provide peak load regulation, frequency regulation, voltage adjustment, backup, black start, and demand response support. It improves the level of renewable energy absorption and promotes the transition from fossil fuels to renewable energy as the main source of energy. It is considered the core foundation for building an energy internet and promoting the development of new energy forms. It is a key technology for supporting the construction of a clean, low-carbon, secure, and efficient energy system and high-quality energy development.

To showcase the latest research achievements in the field of ES, this session will explore the technical challenges, policy frameworks, and economic models necessary to scale ES solutions effectively. This includes research on ES station-level modeling and simulation technology, long-term ES technology, ES materials, ES planning and scheduling, hydrogen energy system modeling and control technology, new business models for shared energy storage, exploration of pricing methode, and ES participation in the power market mechanisms. The aim is to provide a reference for experts and scholars engaged in related research and to help the ES industry further develop with high quality and scale innovation.

○ SPECIAL SESSION CHAIRS ○

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○ PUBLICATION & SUBMISSION ○

Submissions will be reviewed by the conference technical committees, and accepted papers will be published in IEEE EI² 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**.

Scan the QR code on the left or open the submission link to submit your paper.
‣ Submission link: https://easychair.org/conferences/?conf=ei22024

Submission Deadline: 31 October, 2024

ORGANIZATIONS

IEEE PES Power & Energy Society®

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沈阳工业大学 SHENYANG UNIVERSITY OF TECHNOLOGY

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