CSEE Journal of
Power and Energy Systems

Call for Papers

Special Issue on "Emerging Energy Storage Technologies for Applications in Renewable Energy Systems"

Important Dates

Full Paper Submission: August 31, 2024

Final Decision Notification: November 30, 2024

Publication of Special Issue: January 31, 2025

To enhance the seamless integration of large-scale renewable energy sources, energy storage (ES) has emerged as a crucial component for improving the efficiency, reliability, and security of grid operations. With the significant deployment of inverter-based resources, various energy storage systems (ESSs) are required to operate across multiple time scales. ESSs play a pivotal role in enabling adaptive regulation and providing ancillary support to intricate power networks. Consequently, the planning, integration, and management of ESSs have become critical technical challenges. Given these considerations, there is an urgent need for innovative approaches to overcome obstacles related to system integration, service life extension, reliability enhancement, operational optimization, applicability assessment, and the formulation of market-driven operational paradigms for emerging ESS technologies.

To expedite the development of emerging energy storage technologies and their applications in grid systems, this special issue invites submissions from global experts and scholars specializing in various aspects of ES technologies. The scope of this issue encompasses integration, grid connection control, operational optimization, scheduling control, performance evaluation, business models, and beyond, all within the context of complex power systems. The subjects of this special edition are comprehensive but not limited to the following:

- Application and research review of ES
- Long-term ES and its strategic development
- Integration and application of electrochemical, hydrogen, and thermal ESS
- Business model and market-oriented operation mechanism of different types of ESSs
- Coordinated control, energy management, and security warning systems for ESSs
- Application of artificial intelligence and its large models in ES
- Development of the digital intelligence of ESs
- Planning and evaluation of various types of ES

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