

## Special Issue

# The Role of Battery Energy Storage in Electricity Markets

### Message from the Guest Editors

Battery energy storage systems (BESS) have emerged as a critical component in modern electricity markets, enabling grid stability, frequency regulation, voltage regulation, renewable integration, and peak load management. The growing demand for these technologies calls for comprehensive research into their technical, economic, and environmental impacts. This Special Issue invites original research articles, practical implementations, and review papers addressing the various facets of battery energy storage within electricity markets. Topics of interest include, but are not limited to:

- Economic and market mechanisms for integrating BESS;
- Technologies and advancements in battery energy storage systems;
- Optimal operation and control strategies for BESS in electricity markets;
- Modeling, simulation, and performance assessment of BESS;
- Lifecycle analysis and sustainability of battery systems;
- Grid services and ancillary support provided by BESS;
- Policy frameworks and regulatory challenges for energy storage integration;
- Case studies on deployment and real-world applications of BESS in electricity markets.

### Guest Editors

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Dr. João Lagarto

### Deadline for manuscript submissions

15 January 2026



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## About the Journal

### Message from the Editor-in-Chief

*Energies* is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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### Editor-in-Chief

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