Special Issue

Development and Modeling of Energy Storage Systems for Future Power Grids

Message from the Guest Editors

This Special Issue focuses on the latest developments in energy storage technologies, emphasizing their integration into renewable-based grids. It highlights advances in the modelling, control, and application of energy storage systems that support renewable-based electric grids. Topics include, but are not limited to, innovative energy storage solutions for microgrids, advanced modelling approaches, transient stability analysis, and power smoothing techniques. Our goal is to foster research that supports the integration of energy storage systems into renewable-based power grids, providing more reliable, efficient, and sustainable energy solutions. This Special Issue will advance our shared understanding of energy storage technologies, paving the way for their widespread adoption and contributing to the future of clean energy systems.

- energy storage systems
- renewables
- grid services
- power and energy management
- control strategies
- electric vehicles
- microgrids

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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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