Special Issue

Energy Management and Optimization in Hybrid Power Systems

Message from the Guest Editor

This Special Issue aims to provide a dedicated platform for advanced research on energy management and optimization approaches designed to improve the performance, economic viability, and sustainability of hybrid energy systems. Contributions addressing the modeling, control, optimization, and system-level integration of hybrid energy systems are particularly encouraged. Topics of interest include, but are not limited to, the following:

- Energy management strategies for multi-source systems (renewables, storage, and conventional backup sources)
- Optimization methods (e.g., artificial intelligence, metaheuristics, model predictive control) for system design, sizing, and operation
- Smart grids and microgrids, including distributed and autonomous systems, as well as the integration of energy storage technologies (batteries, hydrogen, hybrid storage solutions)
- Techno-economic and environmental assessments, including life-cycle analysis and cost–reliability trade-offs
- Power electronics and control architectures for hybrid systems
- Real-time monitoring, diagnostics, and intelligent control of energy systems

Guest Editor

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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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