Special Issue

Strategies and Algorithms for Energy Management Optimization of Renewable Energy Based Microgrids

Message from the Guest Editors

Energy transition to future power systems can improve energy efficiency and reduce environmental problems but may cause difficulties in system operation. Microgrids can be one of the essential part for future power system by providing engineering solutions under the proliferation of renewable energy resources. There are many successful cases of microgrid field demonstration, but techniques to cope with high penetration level of renewable energy sources are still necessary. The scope of includes (but is not limited to) the following: -Application and analysis of energy management system of AC, DC, and hybrid AC/DC microgrids. -Energy management system of campus, factory, military, and building microgrids for islanded mode and grid-connected mode. -Optimization techniques for handling uncertainty in renewable energy sources: design, operation, and control method using energy storage systems, demand-side response, virtual power plant, electric vehicle, etc.; -Algorithm design and mathematical formulation for optimal operation and control of renewable energy-based microgrids. -Distributed and decentralized energy management between distributed energy resources or microgrids.

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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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