Special Issue

New Insight into Operational Optimization of Integrated Energy Systems

Message from the Guest Editor

Integrated energy systems can integrate multiple energy resources in a region and realize coordinated planning, optimized operation, collaborative management, and interactive responses and complementary mutual benefits among multiple heterogeneous energy subsystems, as well as effectively improve energy utilization efficiency while meeting the diversified energy demand, and thus promote sustainable energy development. However, the operation optimization of integrated energy systems involves multiple heterogeneous energy synergies and multiple energy subjects, and its operation optimization and scheduling control is difficult. The time scales and scheduling principles of each energy subsystem differ greatly in terms of actual operation and scheduling, so it is difficult to conduct simulation analysis and coordinate control under the same time scale and unified scheduling principles. At the same time, the randomness of various types of energy loads and renewable energy output on the customer side present a challenge for the operation optimization of the integrated energy systems.

Guest Editor

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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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