Special Issue

Emerging Modeling and Optimization Techniques for Low-Carbon Integrated Energy Systems

Message from the Guest Editors

Integrated energy systems (IESs) make it possible for heterogenous energy systems—such as power, natural gas, district heating, transportation systems—to cooperate with each other. Because of the high flexibility and complementarity, IESs have great potential for improving energy efficiency and promoting renewable energy consumption. Hence, IESs are held in high regard for the development of low-carbon energy systems. Although extensive research has been devoted to the modelling, planning, operation, control, and simulation of IESs, further studies are still required for the engineering applications of IESs. This Special Issue covers broad aspects of this topic, from scientific to engineering advancements, including, but not limited to, the following aspects: novel modelling techniques driven by physics or data for devices and networks in IESs; novel IESs planning, operation and control methods; simulation techniques for IESs; low-carbon techniques in IESs; carbon emission reduction potential analysis and evaluation of IESs; new application scenarios of IESs; and IESs engineering demonstrations. Both in the form of research or review articles, are invited.

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Deadline for manuscript submissions

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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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