

Special Issue

Integrated Energy Systems: Design and Operation Optimization

Message from the Guest Editors

Integrated energy systems interlink multiple energy carriers such as Power, Gas, and Heat over the traditional energy-economic sectors. This integration gives rise to unprecedented high overall energy system efficiency and flexibility. However, these highly integrated energy systems do not exist yet on a large scale and hence need to be designed and operated very carefully. This Special Issue aims to present and disseminate the most recent advances related to this regard. Topics of interests:

- Optimization-based integrated energy-system scenarios;
- (Multi-point) operation optimization in MES considering various (multi) target functions (cost-, energy-, or CO₂-minimization);
- Unit commitment problems;
- Assessment of energy storage and Demand-Side Management in low-carbon energy systems;
- Techno-economic analyses of technologies and services in integrated energy systems;
- Multi energy systems grid planning and design;
- Design and operation optimization of integrated energy systems in industry;
- Transition in transportation and its impact on integration energy systems
- Development of open-software tools for design and/or operation optimization of integrated energy systems.

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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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