Special Issue

Advances in District Heating and Cooling

Message from the Guest Editors

This Special Issue seeks scientific contributions on district heating and cooling systems, with a focus on modelling and optimization to support decision-making while minimizing physical infrastructure changes. Topics include (but are not limited to): optimization at both component and system levels; integration of renewables (solar thermal, geothermal, biomass) and waste heat; bidirectional substations; thermal prosumers; seasonal and short-term thermal storage; digitalization and advanced control; IoT, SCADA, and sensors for real-time monitoring; AI and machine learning for fault detection, predictive maintenance, and control; smart grids, sector coupling, and flexibility services; energy communities and local energy sharing; multi-objective optimization (cost, emissions, efficiency); decision-support tools for urban DHC integration; supportive policy frameworks; socio-economic analyses; and lessons from decarbonization efforts across varied contexts.

Guest Editors

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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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