Special Issue

Planning, Operation, and Control of Regional Smart Energy Networks for Optimal Flexibility Extraction and Utilization

Message from the Guest Editors

This SI is to advance the field of smart energy networks and related technologies by focusing on the planning, operation, and control aspects from the user side. It seeks to promote research that enhances the flexibility of smart energy networks, enabling more efficient and resilient energy systems. Flexibility extraction involves optimizing the utilization of resources, such as renewable energy sources, energy storage, and demand-side management participation, to ensure reliable power supply while minimizing costs and environmental impacts. Secondly, it aims to explore innovative approaches and methodologies for managing smart energy networks. This includes topics like advanced control strategies, predictive analytics, and real-time monitoring systems, which are crucial for adapting to the dynamic nature of modern energy grids. Moreover, the SI addresses the importance of renewable energy integration and the electrification of sectors. As more renewable sources and electric vehicles come into play, the ability to extract and utilize flexibility becomes pivotal in balancing supply and demand.

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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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