

Special Issue

Innovative Strategies for Renewable Energy Communities: Planning, Management, and Grid Stability

Message from the Guest Editors

Planning and managing Renewable Energy Sources (RESs) requires a multidisciplinary approach that combines engineering, computer science, and economics. To address these challenges, innovative planning and management strategies are needed to enable RECs to operate across broader geographical areas, integrating distributed generation, storage, and flexible demand.

Topics of interest include, but are not limited to:

- Modeling and planning of renewable energy communities and their impact on the grid and the system.
- Strategies to overcome spatial and regulatory limitations in urban RECs.
- Advanced strategies for integrating storage systems into energy communities.
- Applications of artificial intelligence, machine learning, and big data for optimal energy management in communities.
- Planning demand response and demand-side management strategies for communities.
- Simulation of energy markets and economic models.
- Integration and management of microgrids and smart grids in the context of communities.
- Resilience and cybersecurity of energy community infrastructure.
- Forecasting renewable generation and load demand.
- Grid-forming inverter control models.

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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