

# Special Issue

## Renewable Hybrid Microgrids

### Message from the Guest Editors

Microgrids, i.e., locally controlled energy systems that can operate grid-connected or as electrical islands, such as remote power systems, can manage themselves without being connected to the grid. They can help deploy more zero-emission energy sources, make use of waste heat, reduce energy lost, help power supply and demand, and improve grid resilience to extreme weather. Renewable hybrid microgrid systems founded on solar, wind, biomass, or hydraulic energy, however, encounter challenges related to intermittency and the variability of renewable sources. The integration significantly increases the coupling and interactions between sources and between supply and end-use at various scales in multinational, national, community, intra-building, and intra-process. Energy storage and charge management, as well as flexible demand, are among the technology solutions used to increase the penetration of renewable energy and improve performance and the business case.

This Special Issue focuses on recent advances in the policy, design, optimization, operation, and test cases of renewable hybrid microgrids.

---

### Guest Editors

Prof. Dr. Chun-Lien Su  
Dr. Tung-Sheng Zhan  
Dr. Kuo-Yuan Lo

---

### Deadline for manuscript submissions

closed (20 April 2023)



## Energies

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 7.3



[mdpi.com/si/110802](https://mdpi.com/si/110802)

*Energies*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[energies@mdpi.com](mailto:energies@mdpi.com)

[mdpi.com/journal/  
energies](https://mdpi.com/journal/energies)





# Energies

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.2  
CiteScore 7.3



[mdpi.com/journal/  
energies](https://mdpi.com/journal/energies)



## About the Journal

### 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.

---

### Editor-in-Chief

Prof. Dr. Enrico Sciubba  
Department of Mechanical and Industrial Engineering, University  
Niccolò Cusano, 00166 Roma, Italy

---

### Author Benefits

#### Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

#### Journal Rank:

CiteScore - Q1 (Control and Optimization)