# **Special Issue**

# Perspectives and Challenges: New Energy Power Generation and Power System Sustainability

### Message from the Guest Editors

The future of power generation is related to the ongoing energy transition from fossil-based systems toward a new regime featuring larger quantities of renewable energy. To facilitate this transition, many governments around the world are planning new green energy mix initiatives in order to reduce CO2 emissions. This new power generation often challenges load balance and grid stability because of the variability, intermittency, and unpredictability of renewable energy production. In this Special Issue, original research articles and reviews are welcome. Research areas may include (but are not limited to) the following:

- Concentrated solar power;
- Renewable-based district heating and cooling:
- Energy storage and their application;
- Energy mix;
- Distributed generation system, smart grids, microgrids and hybrid-system;
- Approaches and tools for modelling and simulation of energy systems;
- Cogeneration/Trigeneration and energy management;
- Combination and integration of several energy sources and storage solutions;
- Energy harvesting and recovery.

### **Guest Editors**

Dr. Giovanni Brumana

Department of Engineering and Applied Sciences, University of Bergamo, 24044 Dalmine, Italy

Dr. Elisa Ghirardi

Department of Engineering and Applied Sciences, University of Bergamo, 24044 Dalmine, Italy

### Deadline for manuscript submissions

30 November 2025



# Sustainability

an Open Access Journal by MDPI

Impact Factor 3.3 CiteScore 7.7



mdpi.com/si/189900

Sustainability
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
sustainability@mdpi.com

mdpi.com/journal/ sustainability





## Sustainability

an Open Access Journal by MDPI

Impact Factor 3.3 CiteScore 7.7



## **About the Journal**

### Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in Sustainability, an international open access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. The journal publishes original research articles, reviews, conference proceedings (peer reviewed full articles) and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

#### Editor-in-Chief

Prof. Dr. Steve W. Lyon

School of Environment and Natural Resources, Ohio State University, Columbus, OH 43210, USA

#### **Author Benefits**

### Open Access:

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

### **High Visibility:**

indexed within Scopus, SCIE and SSCI (Web of Science), GEOBASE, GeoRef, Inspec, RePEc, CAPlus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q2 (Environmental Studies) / CiteScore - Q1 (Geography, Planning and Development)

