

## 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 CO<sub>2</sub> 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.

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### Guest Editors

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### Deadline for manuscript submissions

closed (30 November 2025)



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## 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.

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## Editor-in-Chief

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