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

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Deadline for manuscript submissions: 7 September 2024



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.



mdpi.com/si/189900





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