

Special Issue

Advancing Sustainable Power Systems: Innovations in Planning, Operation, and Control

Message from the Guest Editors

This Special Issue, “Advancing Sustainable Power Systems: Innovations in Planning, Operation, and Control”, explores technologies, methodologies, and strategies that enhance the efficiency, reliability, and stability of modern power grids in the face of increasing renewable energy penetration.

Scope: Enhancing grid stability and flexibility in high-renewable power systems; Optimizing power system planning with demand-side management and operational security; Utilizing grid-forming inverters, HVDCs, and FACTSs for robust and reliable system control; Advancing real-time simulation and hardware-in-the-loop testing for system validation.

This Special Issue builds upon existing research by unifying power system planning, operation, and power electronics advancements. While previous studies have focused on specific technical challenges, this Special Issue takes a holistic approach by combining system-level strategies, real-time control techniques, and market-driven solutions for a sustainable power grid.

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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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