

Special Issue

Grid Resilience, Modernization, and the Interplay of Distributed Energy Resources Towards Sustainability

Message from the Guest Editors

This special issue is to rethink the ways we generate, deliver, and consume electricity in light of the unpredictable climate volatility, aging infrastructure, and the continually rising power demand. This special issue invites innovative research and practice-oriented articles on how digital technologies, improved controls, and distributed energy resources (DERs) might be coordinated to produce resilient, flexible, low-carbon power systems. The special issue focuses on real-world deployments and high-fidelity simulations. This special issue invites contributions to explore technical, economic, and social aspects of improving electric-power networks via digitalization and DER integration. The topics include but are not limited to: (1) Distributed Energy Resources (DER), (2) Digital Twin and AI-Driven Operations, (3) Resilience Frameworks, (4) Blockchain and Cybersecurity, and (5) Economic and Sustainability Impacts. The high-impact contributions from this issue will strengthen, upgrade, and sustain electric grids.

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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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