

Special Issue

Challenges and Opportunities in Modern Active Distribution Networks

Message from the Guest Editor

We invite contributions that explore novel technologies, control strategies, and planning methodologies that facilitate the transition to a more sustainable, reliable, and efficient grid. Topics of interest include, but are not limited to, the following:

- Advanced control and operation of active distribution networks.
- Integration and impact of DERs and renewable energy sources.
- Smart grid technologies, automation, AI, and machine learning for distribution systems.
- Grid-interactive electric vehicles—V2X and smart charging infrastructure.
- Advanced protection schemes for networks with high DER penetration.
- Power quality analysis and mitigation in modern distribution grids.
- Resilience and reliability enhancement against extreme weather and cyber-physical threats.
- Advanced metering infrastructure, IoT, and communication technologies for grid management.
- Microgrids, islanding operation, and seamless grid reconnection.
- Planning and optimization of future distribution systems.
- Opportunities and challenges of DC distribution systems.

Guest Editor

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Message from the Editor-in-Chief

Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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