Special Issue

Power System Planning and Implementation

Message from the Guest Editors

The rapid deployment of renewables within the power grid is reshaping energy structures and impacting stability. On the supply side, wind and solar energy introduce volatility, while on the demand side, the rise of electric vehicle (EV) charging loads adds further unpredictability. This trend presents risks to high-renewable systems with large-scale EV integration. Thus, research is critical to meet future demand and ensure power system stability. This Special Issue covers renewable energy power systems modeling, planning, optimization, and stability. Topics include optimizing clean energy use, managing EV charging flexibility, and improving seasonal storage operation to balance demands of low carbon, economic viability, and safety in power systems. **Topics of interest:**

- Power system planning with distributed energy
- Integrated energy station planning
- Renewable energy system uncertainty optimization
- Economic dispatch with flexible loads
- Risk assessment for renewable systems
- Energy storage optimization for stability
- EV charging station network planning

Guest Editors

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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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