Special Issue

Optimal Planning and Operation in RES-Rich Power Systems under Electricity and Carbon Emission Market Environment

Message from the Guest Editors

With the ever-increasing penetration of renewable energy sources (RESs), electric vehicles, and energy storage devices into a modern power system, power system planning and operation are facing new problems and challenges. The establishment of electricity markets and carbon emission markets makes planning and operation issues more complicated and more challenging. Given this background, this Special Issue will be devoted to research topics regarding optimal planning and operation in RES-rich power systems under electricity and a carbon emission market environment. The topics to be covered in this Special Issue include but are not limited to the following:

- Power system planning;
- Power system operation;
- Electricity market mechanism for power systems with high-penetration renewable energy generation;
- Local electricity market and peer-to-peer trading;
- Potential evaluation, aggregated control, coordinated operation, and market mechanism of flexible resources;
- Energy storage systems and electric vehicles in modern power systems;
- Artificial intelligence, big data, and blockchain applications.

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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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