Special Issue

Managing the Low-Carbon Energy Transformation: Strategies and Prospects for 2050

Message from the Guest Editor

The global transition to a low-carbon energy system is a critical step toward achieving climate neutrality and sustainable development. As nations strive to meet their decarbonization targets by 2050, effective management strategies, policy frameworks, and technological advancements are essential to ensuring a smooth and efficient transformation. This Special Issue aims to explore innovative approaches to managing the low-carbon energy transition, addressing key challenges such as energy security, grid stability, policy integration, and economic feasibility. We invite original research and review articles covering topics including, but not limited to, renewable energy integration, energy storage solutions, smart grids, carbon capture technologies, and the role of digitalization in energy management. Contributions analyzing policy instruments, economic models, and sector-specific case studies are also welcome. By bringing together insights from academia, industry, and policymakers, this Special Issue seeks to advance knowledge on optimizing the energy transition while balancing sustainability, efficiency, and economic viability.

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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