Special Issue

Exploring Renewable Energy: Innovations in Wind and Tidal Energy Turbines

Message from the Guest Editors

Ocean renewable energy sources possess the potential to significantly contribute to this transition, with offshore wind farms and tidal current arrays offering substantial and predictable energy generation capacity. Significant research and development opportunities exist to advance ocean and tidal energy technologies toward commercial-scale deployment. Further research is necessary to achieve cost parity with established energy sources, as both offshore wind turbines and tidal hydrokinetic turbines exhibit considerable potential for cost reduction through technological innovation and economies of scale.

This Special Issue addresses critical aspects of offshore wind and tidal turbine technologies, presenting cutting-edge research findings that encompass the following:

- Ocean Wind and Tidal Resource Assessment
- Offshore Wind and Tidal Energy Converter Development and Testing
- Structural Integrity and Fatigue Analysis:
- Wind Farm and Tidal Array Optimization
- Environmental Impact Assessment
- Field Deployment and Performance Evaluation
- Microgrid Integration and Energy Storage

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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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