Special Issue

Maritime Microgrids: The Key Enabler to Decarbonize the Maritime Industry

Message from the Guest Editor

Microgrid technologies are the key to accelerating the decarbonization of the maritime sector. Maritime microgrids are localized, self-contained energy systems used in maritime environments, such as ships, ports, and offshore installations. Maritime microgrids, similarly to land-based microgrids, can also be categorized as either AC, DC, or hybrid AC/DC, depending on the specific case studies. Presently, approximately 80% of ships use a diesel electric transmission system in their onboard SPS. Hence, SPSs are transforming into highly dynamic shipboard microgrids. While SMGs have many similarities with the terrestrial microgrids, there are also many differences in the power generation, load dynamics, power system stability, spatial limitations, and the effect of wind and ocean currents, amongst others. Port microgrids refer to electricity distribution networks in ports that use the microgrid concept to support their operations. In ports, microgrids can improve the operational efficiency, increase renewable energy penetration, and provide flexibility by installing energy storage systems.

Guest Editor

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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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