Special Issue

Challenges in Renewable Energy Systems and Electricity Generation: Market, Economics, and Technology

Message from the Guest Editor

The world is undergoing a transition of electricity systems. In addition, there are plans in several countries for exporting renewable energy via cables or by producing hydrogen by the electrolysis of water, converting it into an energy carrier and then shipping it overseas. Industry is exploring the use of renewable energy and hydrogen. In order to avoid the worst impacts of climate change and to have a chance of limiting global warming to 1.5 °C, the world needs to continue the transition to renewable energy across all energy sectors and reach net zero emissions by 2050. There are varied interlinked technical, market, and economic challenges involved in this transition. One example is the challenge of hydrogen production, which requires domestic and international markets for hydrogen. Technical challenges include the rapid scale-up of the hydrogen value chain, and economic challenges include the cost and efficiency of electrolysis compared to the incumbent technology for hydrogen production and steam methane reformation. We are seeking submissions for this Special Issue that explore aspects of the renewable energy transition.

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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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