Special Issue

Sustainable Energy Concepts for Energy Transition

Message from the Guest Editor

To accomplish energy transition effectively, the necessary measures must go beyond the substitution of fossil generation units by renewable ones, due to their fundamentally different operation characteristics. Seasonal and daily energy consumption patterns do not presently correspond to the availability of fluctuating renewables such as wind and solar power. We address this challenge in four ways: 1. Better predictability of the availability of wind and solar power to prepare load, storage, and back-up units. 2. Modification of wind and solar generation units to better adapt to consumption needs. 3. Adaptation of consumption to the availability of renewables statically (e.g. via adapted architecture) and dynamically (via controllable loads and demand side management). 4. Reduction of storage and back-up needs, by increasing the flexibility of the back-up and implementing adaptable, multi-stage storage.

Guest Editor

Prof. Dr. Stefan Krauter
Electrical Energy Technology—Sustainable Energy Concepts (EET-NEK), Paderborn University, 33095 Paderborn, Germany

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Energies
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
energies@mdpi.com

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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.

Editor-in-Chief

Prof. Dr. Enrico Sciubba
Department of Mechanical and Industrial Engineering, University Niccolò Cusano, 00166 Roma, Italy

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