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Modeling of Variable Renewable Generation: Wind and Solar Photovoltaic Power Plants

Guest Editors:

Dr. Emilio Gomez-Lazaro

Renewable Energy Research
Institute, Universidad de Castilla-
La Mancha (UCLM), 02071
Albacete, Spain

Dr. Sergio Martin-Martinez

Renewable Energy Research
Institute, Escuela de Ingenieros
Industriales de Albacete,
Department of Electrical
Engineering, Electronics, Control
Communications. Universidad de
Castilla-La Mancha, 02071
Albacete, Spain

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Message from the Guest Editors

Dear Colleagues,

This Special Issue aims to present solutions facing the challenges related to VRE modeling, specifically wind and solar PV generation. Topics include but are not limited to:

- Detailed VRE modeling (wind turbines, wind power plants, and solar PV power plants) for accurate response and design purposes;
- Simplified VRE modeling (wind turbines, wind power plants, and solar PV power plants) with application to power system studies; model assessment according to national and international standards, such as IEC 61400-27 or WECC;
- Modeling of new control strategies for wind power plants and solar PV power plants;
- Modeling of power system operation with large amounts of wind and solar power, including transnational or intercontinental studies; transient stability studies;
- Modeling of transmission planning and operation, taking into account VRE resource location and characteristics;
- Grid support and ancillary services provided by wind and solar PV generation; grid code requirements;
- Modeling of efficient electricity markets with large amounts of VREs;
- Model validation.



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Prof. Dr. Emilio Gomez-Lazaro

Dr. Sergio Martin-Martinez

Guest Editor

Special Issue



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Editor-in-Chief

Prof. Dr. Enrico Sciubba

Department of Mechanical and
Aerospace Engineering,
University of Roma Sapienza, Via
Eudossiana 18, 00184 Roma, Italy

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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Energies Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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