

Special Issue

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

Message from the Guest Editors

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.

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

Deadline for manuscript submissions



Energies

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 7.3



mdpi.com/si/26997

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

[mdpi.com/journal/
energies](https://mdpi.com/journal/energies)





Energies

an Open Access Journal
by MDPI

Impact Factor 3.2
CiteScore 7.3



[mdpi.com/journal/
energies](https://mdpi.com/journal/energies)



About the Journal

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

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

CiteScore - Q1 (Control and Optimization)