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

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Deadline for manuscript submissions:
closed (31 May 2021)

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.

Prof. Dr. Emilio Gomez-Lazaro
Dr. Sergio Martin-Martinez
Guest Editor

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Special Issue

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Message from the Editor-in-Chief

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