



Renewable Energy-Enabled Power System: Realizing Low-Carbon Transformation of Electricity

Guest Editors:

Dr. Jiajia Yang

School of Electrical Engineering
and Telecommunications,
University of New South Wales,
Sydney, NSW 2052, Australia

Dr. Yue Zhou

School of Engineering, Cardiff
University, Cardiff CF24 3AA,
Wales, UK

Prof. Dr. Fushuan Wen

School of Electrical Engineering,
Zhejiang University, Hangzhou
310027, China

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Message from the Guest Editors

To combat climate global change, more than 100 countries have pledged to achieve net-zero emissions, which is also known as carbon neutralization, by 2050. Renewable energy generation (REG) technology with low carbon mission potential has long been recognized as one of the most promising solutions for achieving carbon neutralization. In order to realize the transition towards a low-carbon power system, research efforts have been devoted to the planning and operation of power systems with high REG potential in the context of carbon neutrality, as well as the design of supportive electricity wholesale market mechanisms for enhancing the accommodation capability for REG. In addition, at the distribution system level, endeavors have also been devoted to research on virtual power plants, industrial/business park energy management, smart home energy management, and community energy storage systems, so as to increase the integration of renewable distributed energy resources (DERs) through demand-side management solutions.





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Faculty of Engineering and
Applied Science, University of
Ontario Institute of Technology,
Oshawa, ON L1G 0C5, Canada

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Sustainability Editorial Office
MDPI, St. Alban-Anlage 66
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