



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

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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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