Special Issue

Planning, Operation, and Control of Renewable-Penetrated Power System in the Context of Building-Integrated Resources

Message from the Guest Editors

In recent years, there has been a progressive process of urbanization and modernization, accompanied by the growth of building-integrated resources via advanced information and communications technologies. Renewable-penetrated power systems incorporate a variety of innovative technologies, strategies, and concepts designed to transform traditional power grids into smarter, more efficient, and sustainable networks. As a result, there is an increasing demand for new planning, operation, and control strategies for renewable-penetrated power systems, especially within the context of building-integrated resources. This Special Issue welcomes contributions on topics such as renewable energy integration and next-generation power systems. The goal is to provide a platform for the dissemination of the latest research and developments in strategies related to renewable-penetrated power systems, particularly in the context of achieving “CO2 peaking and neutrality”.

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About the Journal

Message from the Editor-in-Chief

Current urban environments are home to multi-modal transit systems, extensive energy grids, a building stock, and integrated services. Sprawling neighborhoods are composed of buildings that accommodate living and working quarters. However, it is expected that the cities and communities of the future will face complex and enormous challenges, including maintenance, interconnectivity, resilience, energy efficiency, and sustainability issues, to name but a few. A smart city uses advanced technologies and a digital infrastructure to improve the outcomes in every aspect of a city's operations. A smart building optimizes the experience of occupants, staff, and management by using a modern and connected environment. Innovations in technology that can bring dramatic improvements to design, planning, and policy are critical in developing the cities and buildings of the future.

Editor-in-Chief

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