Special Issue

Studies on the Development of Smart Grids, Power Systems and Energy-Efficient Cities

Message from the Guest Editor

The urban power supply is evolving in response to increasing demands and technological advancements. Modern information technology is being utilized to construct a more reliable, safe, economical, and environmentally friendly power grid system. However, the construction of intelligent power systems still faces challenges including unclear equipment and network topology, inconsistent communication standard protocols, and difficulty in real-time operation data analysis and fault diagnosis. Digital, automatic, and intelligent technologies, such as artificial intelligence, big data, and the Internet of Things, are expected to help in monitoring, controlling, and optimizing the power system process, providing new approaches for sustainable development. This Special Issue invites papers on innovative research related to power grid construction, including topics such as applications of artificial intelligence and image processing in intelligent cities, smart cities data processing, energy-saving urban development, new energy systems, and machine learning technologies for smart buildings.

Guest Editor

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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.

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