



Challenges and Issues of the Smart Grid Technologies Implementation: Targeting Grid Resilience with Digitalization

Guest Editors:

Prof. Dr. Lambros Ekonomou

UBITECH Energy Sprl, Koningin Astridlaan 59b, 1780 Wemmel, Belgium

Dr. Georgios Fotis

Department of Electrical and Electronic Engineering Educators, ASPETE—School of Pedagogical and Technological Education, 14121 N. Heraklion, Greece

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Message from the Guest Editors

The aim of power system development is the transformation of conventional power systems, which are based on centralized power generation and automation for supervision and control, to decentralized and flexible systems with dispersed power generation and the expansion of automation at the power distribution level. In this way, both the production of electricity from distributed energy sources and its consumption at Medium-Voltage (MV) and High-Voltage (HV) levels can be managed efficiently.

The most important requirement for decarbonization process is a grid that is robust, resilient, reliable, and capable of withstanding internal effects from a continuously changing demand and supply patterns and bidirectional power flows as well as external effects from extreme weather events. The "digital grid", with digitalization at its core, grew with the emergence of OT and IT solutions and a growing knowledge of the effects on utility operations.

This Special Issue focuses on the analysis, design, and implementation of smart grid systems and to cutting-edge digital solutions for the transformation of electricity distribution networks.





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MDPI, St. Alban-Anlage 66
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