



Sustainable and Smart Energy Systems in the Built Environment

Guest Editors:

Dr. Daniele Groppi

Department DEIM, Tuscia
University, 01100 Viterbo, Italy

Dr. Felipe Feijoo

Escuela de Ingenierías Industrial,
Pontificia Universidad Católica
de Valparaíso, Valparaíso
2340000, Chile

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Message from the Guest Editors

Dear Colleagues,

Society and energy systems are changing more rapidly than ever, and yet more is still to come. This transition, led by renewable energy sources and technologies, is affecting all sectors of our society. Energy systems are becoming more interconnected and complex, and it is of the utmost importance to be able to properly analyse and exploit all the potential synergies offered by such interconnection towards a smart energy system, so as to maximize the use of renewable energy while minimizing the overall system cost and emissions.

The built environment is a central part of today's energy systems and as such requires a specific attention, and this is why it represents the main topic of this Special Issue; however, such complexity requires a multi-level analysis, so research at different scales that is able to underline the centrality of buildings and the built environment is welcomed for submission.





Editor-in-Chief

Prof. Dr. David Arditi

Construction Engineering and Management Program,
Department of Civil,
Architectural, and Environmental
Engineering, Illinois Institute of
Technology, 3201 South
Dearborn Street, Chicago, IL
60616, USA

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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Buildings Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

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