



New Technologies and Designs in Reducing Building Energy Consumption While Improving the Market Value

Guest Editors:

Dr. Laura Gabrielli

Department of Architecture and
Arts, University IUAV of Venice,
Dorsoduro 2206, 30123 Venice,
Italy

Dr. Ruggeri Aurora Greta

Department of Architecture,
Università IUAV di Venezia,
Venice, Dorsoduro 2206, 30123
Venice, Italy

Deadline for manuscript
submissions:

31 October 2024

Message from the Guest Editors

Dear Colleagues,

How can **new and smart technologies** be integrated in the built environment to reduce energy consumption and reach widespread zero energy buildings (ZEB) standards? How may such interventions affect the **market value** of a property after a deep retrofit?

During the use of a building, multiple factors may hinder the achievement of ZEB goals, such as improperly scheduled HVAC systems, occupant behaviour and habits, or system failures. Additionally, during the **design process**, building energy simulations should be based on reliable assumptions. This is because incorrect boundary conditions can lead to systematic and significant overestimation/underestimation of the energy consumption and the cash-in/out flows.

The aim of This Special Issue is to explore assessment models, optimized calculation procedures, measurement devices, smart platforms, and software or guidelines for the building energy design and facility management with the aim of reaching ZEB quality and the optimal allocation of the available financial resources.

Professor. Laura Gabrielli

Dr. Ruggeri, Aurora Greta

Guest Editors



mdpi.com/si/177792

Special Issue

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.

Author Benefits

Open Access: free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility: indexed within Scopus, SCIE (Web of Science), Inspec, and other databases.

Journal Rank: JCR - Q2 (*Engineering, Civil*) / CiteScore - Q1 (*Architecture*)

Contact Us

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

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/buildings
buildings@mdpi.com
[X@Buildings_MDPI](https://twitter.com/Buildings_MDPI)