

Special Issue

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

Message from the Guest Editors

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

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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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