Special Issue

Energy Efficiency and Carbon Neutrality in Buildings

Message from the Guest Editor

Climate change is the greatest environmental challenge of our time. A major source of this challenge is the buildings and construction sector, which represents an estimated 37% of global operational energy use and process-related carbon emissions. This Special Issue calls on topics of interest include, but are not limited to:

- Energy efficient and net zero carbon emissions focused planning, design, construction, operation, maintenance, renovation, and demolition of buildings
- Energy and carbon management and mitigation in buildings and construction
- Digital solutions to save energy and carbon in buildings and construction
- Assessing, monitoring, and reducing energy demand and consumption, and the carbon emissions of buildings and construction
- In-use energy consumption estimating, monitoring, and reduction
- Building energy modeling and simulation
- Carbon offsetting
- Energy efficient and net zero carbon building materials
- Building energy efficiency and net zero carbon policies and frameworks
- Occupant behavior, comfort, health, wellbeing, and quality of life
- Economic, environmental, and social aspects in energy efficiency and carbon neutrality

Guest Editor

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Deadline for manuscript submissions

closed (30 June 2025)

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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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JCR - Q2 (Construction and Building Technology) / CiteScore - Q1 (Architecture)

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 14.9 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).