Special Issue

Designing and Optimization of Net-Zero Energy Buildings and Communities

Message from the Guest Editor

Buildings are known as one of the world's largest energy end-user sectors. Moving towards a sustainable future requires the development of a path for transitioning to net zero energy buildings (NZEB). NZEBs are highly energy efficient buildings that can generate their own energy needs. From a building's architecture, materials and envelope to energy end-users including lighting, HVAC, plug loads, water heating and others must be properly selected, designed and optimized to yield the minimum energy consumption for a given climate zone and type of building. The design and integration of onsite renewable energy generation and storage must also be carefully addressed. Additionally, with the development of emerging concepts such as net-zero energy communities (NZEC), further studies in these areas are underway. A net zero-energy community (ZEC) features a significantly reduced energy need which is being covered by renewable sources. The purpose of this Special Issue is to collect research articles with a focus on the design and optimization of net-zero energy buildings (NZEB) and communities (NZEC).

Guest Editor

Dr. Hamidreza Najafi

Department of Mechanical and Civil Engineering, Florida Institute of Technology, Melbourne, FL 32901, United States

Deadline for manuscript submissions

closed (31 December 2021)

Sustainability

an Open Access Journal by MDPI

Impact Factor 3.3
CiteScore 7.7

mdpi.com/si/59971

Sustainability
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
sustainability@mdpi.com

mdpi.com/journal/sustainability

Sustainability

an Open Access Journal by MDPI

Impact Factor 3.3
CiteScore 7.7

mdpi.com/journal/sustainability

MDPI

About the Journal

Message from the Editor-in-Chief

I encourage you to contribute a research or comprehensive review article for consideration for publication in *Sustainability*, an international Open Access journal which provides an advanced forum for research findings in areas related to sustainability and sustainable development. *Sustainability* publishes original research articles, review articles and communications. I am confident you will find the journal contributes to enhancing understanding of sustainability and fostering initiatives and applications of sustainability-based measures and activities.

Editor-in-Chief

Prof. Dr. Marc A. Rosen
Faculty of Engineering and Applied Science, University of Ontario Institute of Technology, Oshawa, ON L1G 0C5, Canada

Author Benefits

Open Access:

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

High Visibility:

indexed within Scopus, SCIE and SSCI (Web of Science), GEOBASE, GeoRef, Inspec, RePEc, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Environmental Studies) / CiteScore - Q1 (Geography, Planning and Development)