



*energies*



an Open Access Journal by MDPI

## Ground Source Heat Pump

Guest Editor:

**Dr. Hessam Taherian**

School of Science, Engineering,  
and Technology, Penn State  
University Harrisburg,  
Middletown, PA 17507, USA

Deadline for manuscript  
submissions:

**closed (31 December 2020)**

### Message from the Guest Editor

Dear Colleagues,

The share of the building sector in the total energy use in the US is almost 48%. Providing thermal comfort in buildings is an energy-intensive task. Heat pumps have proven to be a reliable technology that can significantly reduce energy use by increasing the seasonal coefficient of performance (COP) compared to traditional heating systems. Ground-source heat pumps can further improve the COP by leveraging the thermal energy stored seasonally in the soil. The capital cost of implementing ground-source heat pump projects is the most important issue. This Special Issue aims to address two main issues. The first is research proposing methods for cutting the capital cost, and the second is research leading to methods that address the sustainability of the ground source by mitigating long-term soil thermal energy degradation.

Dr. Hessam Taherian

*Guest Editor*



[mdpi.com/si/37560](https://mdpi.com/si/37560)

**Special** Issue



# energies



an Open Access Journal by MDPI

## Editor-in-Chief

### **Prof. Dr. Enrico Sciubba**

Department of Mechanical and  
Aerospace Engineering,  
University of Roma Sapienza, Via  
Eudossiana 18, 00184 Roma, Italy

## Message from the Editor-in-Chief

*Energies* is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

## 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), Ei Compendex, RePEc, Inspec, CAPlus / SciFinder, and other databases.

**Journal Rank:** CiteScore - Q1 (Control and Optimization)

## Contact Us

---

*Energies* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/energies](http://mdpi.com/journal/energies)  
[energies@mdpi.com](mailto:energies@mdpi.com)  
[X@energies\\_mdpi](https://twitter.com/energies_mdpi)