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## Towards Geothermal Power Plants with Zero Greenhouse and Pollutant Gases Emissions

Guest Editors:

**Dr. Daniele Fiaschi**

Sustainable Energy Research  
Group (Serg Group),  
Dipartimento di Ingegneria  
Industriale, Università degli Studi  
di Firenze, Viale Morgagni 44,  
50135 Firenze, Italy

**Dr. Marco Astolfi**

Dipartimento di Energia,  
Politecnico di Milano, Via  
Lambruschini 4, 20156 Milan, Italy

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### Message from the Guest Editors

The issue of avoiding emissions of greenhouse and pollutant gases is becoming a concern in the development of geothermal energy conversion and utilization projects (electricity and district heating).

The geothermal resource often contains relevant amounts of non-condensable gases (NCGs), mostly CO<sub>2</sub>, but with marginal fractions of CH<sub>4</sub>, NH<sub>3</sub>, H<sub>2</sub>S, H<sub>2</sub>, Hg and other undesirable substances. The objective of developing cleaner and more sustainable geothermal energy implies avoiding or largely reducing gas emissions to the atmosphere, thus developing technologies either to reinject NCGs into the reservoir or to direct them to mineral sequestration processes. The solutions can be applied to geothermal power plants of different type (direct steam, flash, or binary/ORC) and resource conditions (water or steam-dominated reservoirs of different temperatures).

The development of these solutions calls for expertise in widely multidisciplinary fields, ranging from geochemistry to reservoir and well engineering, two-phase flows including reactivity in fractured porous media (saline equilibria and kinetics), heat-mass transfer, and power engineering...



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# Special Issue



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### **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

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

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