

[Home](#) [Environmental Science and Pollution Research](#) [Article](#)

# Energy, exergy, environmental impact, and economic analyses of evacuated tube compound parabolic concentrator–powered solar thermal domestic water heating system

Research Article Published: 25 June 2022 29,82390–82410 (2022)



Environmental Science and  
Pollution Research

[Aims and scope](#)[Submit manuscript](#)

Dinesh Kumar Sharma , Dilip Sharma & Ahmed Hamza H. Ali

 272 Accesses  7 Citations [Explore all metrics](#) →

[Cite this article](#)

## Abstract

In the reported study, a dynamic analytical model is developed to propose the energy, exergy, environmental impact, and economic analyses of the water heating system at Jaipur (India) with an evacuated tube compound parabolic concentrator field of a total area of 81 m<sup>2</sup>. Consequently, the model is used to perform parametric studies to report the effect of