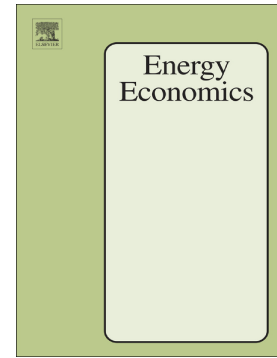


Accepted Manuscript

The Economics of Residential Solar Water Heaters in Emerging Economies: The Case of Turkey

Erdal Aydin, Piet Eichholtz, Erkan Yönder



PII: S0140-9883(18)30288-3
DOI: doi:[10.1016/j.eneco.2018.08.001](https://doi.org/10.1016/j.eneco.2018.08.001)
Reference: ENEECO 4114
To appear in: *Energy Economics*
Received date: 11 September 2017
Revised date: 21 June 2018
Accepted date: 1 August 2018

Please cite this article as: Erdal Aydin, Piet Eichholtz, Erkan Yönder , The Economics of Residential Solar Water Heaters in Emerging Economies: The Case of Turkey. *Energy Economics* (2018), doi:[10.1016/j.eneco.2018.08.001](https://doi.org/10.1016/j.eneco.2018.08.001)

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

The Economics of Residential Solar Water Heaters in Emerging Economies: The Case of Turkey

Erdal Aydin* Piet Eichholtz† Erkan Yönder‡§

August 8, 2018

Abstract

In many emerging economies, household consumption of polluting solid fuels is still very high. We study the economics of one specific clean energy appliance that has been an important alternative for solid fuels in many developing countries: solar water heaters. Using a dataset including detailed information for around 23,000 Turkish households, 61 percent of which still use solid-fuel stoves, we first examine the determinants of the adoption of solar water heaters. We document that income, education, geographical location and the type of space heating system are important factors driving the adoption of solar water heaters. Analyzing the energy consumption of households, we find that total household energy consumption is reduced by around 13 percent when a solar water heater is present. Relating their presence to housing market outcomes, we document that the perceived value of owner-occupied homes increases by six percent, and find a three percent rent premium in the rental housing market.

JEL Codes: D12, Q51, R21

Keywords: Solar water heating, solid fuels, green energy, residential sector, house prices

*Corresponding author; Sabanci University, Orta Mahalle, 34956 Tuzla, İstanbul, Turkey; erdalaydin@sabanciuniv.edu

†Maastricht University, The Netherlands; p.eichholtz@maastrichtuniversity.nl

‡Concordia University, Canada; erkan.yonder@concordia.ca

§We thank Siqi Zheng, whose invitation for the 2016 Green Cities in Asia workshop in Beijing was the catalyst for this paper. Furthermore, we thank Alpay Filiztekin, Pei Li and the attendees of the Green Cities in Asia workshop, as well as the Editor and the anonymous reviewers, for their helpful comments. Finally, we want to thank the Turkish Statistical Institute for graciously giving us access to the Turkish Household Budget Survey dataset.

Download English Version:

<https://daneshyari.com/en/article/10134501>

Download Persian Version:

<https://daneshyari.com/article/10134501>

[Daneshyari.com](https://daneshyari.com)