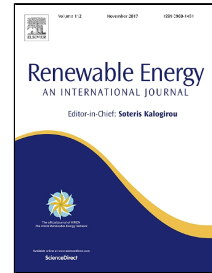


Accepted Manuscript

Residential Green Power Demand in the United States

Leila Dagher, Lori Bird, Jenny Heeter



PII: S0960-1481(17)30739-5
DOI: 10.1016/j.renene.2017.07.111
Reference: RENE 9086
To appear in: *Renewable Energy*
Received Date: 12 October 2016
Revised Date: 24 July 2017
Accepted Date: 27 July 2017

Please cite this article as: Leila Dagher, Lori Bird, Jenny Heeter, Residential Green Power Demand in the United States, *Renewable Energy* (2017), doi: 10.1016/j.renene.2017.07.111

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.

Residential Green Power Demand in the United States

Leila Dagher,^{a,b} Lori Bird,^c and Jenny Heeter^c

^a American University of Beirut, PO Box 11-0236, Riad El Solh 1107 2020, Beirut, Lebanon

^b Corresponding author

^c National Renewable Energy Laboratory, 15013 Denver West Parkway, Golden, CO 80401, USA

Abstract

This paper investigates the demand determinants of green power in the U.S. residential sector. The data employed were collected by the National Renewable Energy Laboratory and consist of a cross-section of seven utilities observed over 13 years. A series of tests are performed that resulted in estimating a demand equation using the one-way cross-section random effects model. As expected, we find that demand is highly price inelastic. More interestingly though, is that elasticity with respect to number of customers is 0.52 leading to the conclusion that new subscribers tend to purchase less green power on average than the existing customers. Another compelling finding is that obtaining accreditation will have a 28.5% positive impact on consumption. Knowing that gaining green accreditation is important to the success of programs, utilities may want to seek certification and highlight it in their advertising campaigns.

Keywords: green power; green tariff; voluntary market; renewable energy; price elasticity; panel data

JEL Classification: C33, C51, Q21, Q41

1. Introduction

Driven by a concern for the environment and the dependency on foreign oil supplies, many countries are considering renewable energy as a vital component for reducing greenhouse gas emissions (GHG) and increasing the security of supply. Compared to fossil fuels, renewable energy sources such as wind and solar emit little or no greenhouse gases, and hence benefit the environment by reducing pollution and harmful emissions. The approaches taken to promote renewable electricity have been typically either mandates, market-based incentives, or voluntary

Download English Version:

<https://daneshyari.com/en/article/4926221>

Download Persian Version:

<https://daneshyari.com/article/4926221>

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