## Accepted Manuscript

Parametric analysis for cost-optimal renewable energy integration into residential buildings: Techno-economic model

Jin Ho Jo, Matt Aldeman, Han-Seung Lee, Yong Han Ahn

PII: S0960-1481(18)30330-6

DOI: 10.1016/j.renene.2018.03.025

Reference: RENE 9894

To appear in: Renewable Energy

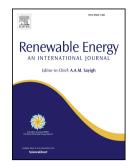
Received Date: 30 August 2017

Revised Date: 6 December 2017

Accepted Date: 12 March 2018

Please cite this article as: Jo JH, Aldeman M, Lee H-S, Ahn YH, Parametric analysis for cost-optimal renewable energy integration into residential buildings: Techno-economic model, *Renewable Energy* (2018), doi: 10.1016/j.renene.2018.03.025.

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.



## 1 Parametric Analysis for Cost-Optimal Renewable Energy Integration

- into Residential Buildings: Techno-Economic Model

## 6 Abstract

Determining the optimum penetration of renewable energy systems and their associated aggregated technical and economic benefits is a growing concern for both researchers and policy makers. The purpose of this paper is to evaluate the costoptimal pathways for a university campus in Illinois, USA to install solar PV systems by performing parametric analyses. Here we suggest cost-optimal solutions to deploy solar photovoltaic systems under two different finance scenarios: the Single Party economic model and the Two Party economic model. In addition, critical economic factors are highlighted by incorporating them into an energy performance model. This case study can be a replicable model for other academic institutions to actively implement renewable technologies and greatly support their decision-making processes.

## 20 Key Words: photovoltaic system; energy optimization; energy management;

- 21 parametric analysis; campus sustainability

Download English Version:

https://daneshyari.com/en/article/6764466

Download Persian Version:

https://daneshyari.com/article/6764466

Daneshyari.com