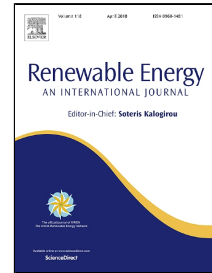


# Accepted Manuscript

On the Welfare Effects of Subsidy Game for Renewable Energy Investment:  
Toward a Dynamic Equilibrium Model

Yong-cong Yang, Pu-yan Nie, Hui-ting Liu, Ming-hao Shen



PII: S0960-1481(17)31301-0  
DOI: 10.1016/j.renene.2017.12.097  
Reference: RENE 9594  
To appear in: *Renewable Energy*  
Received Date: 16 June 2017  
Revised Date: 06 October 2017  
Accepted Date: 27 December 2017

Please cite this article as: Yong-cong Yang, Pu-yan Nie, Hui-ting Liu, Ming-hao Shen, On the Welfare Effects of Subsidy Game for Renewable Energy Investment: Toward a Dynamic Equilibrium Model, *Renewable Energy* (2017), doi: 10.1016/j.renene.2017.12.097

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 **On the Welfare Effects of Subsidy Game for Renewable Energy**  
2 **Investment: Toward a Dynamic Equilibrium Model**

3 Yong-cong Yang<sup>1</sup>, Pu-yan Nie<sup>2</sup>, Hui-ting Liu<sup>3</sup>, Ming-hao Shen<sup>1\*</sup>

4 1. Guangdong University of Foreign Studies, Guangzhou, 510006, P.R. China.

5 2. Guangdong University of Finance & Economics, Guangzhou, 510320, P.R. China.

6 3. South China Agricultural University, Guangzhou, 510640, P.R. China.

7 \* Corresponding author. E-mail: 309715431@qq.com

8

9 **Abstract:** This paper focuses on the welfare effects of subsidy game for renewable  
10 energy investment between two neighboring regions. By employing a dynamic  
11 control model, the stationary equilibrium is solved under various scenarios. The major  
12 findings indicate that, the optimal subsidy strategies for both regions depend on a  
13 series of factors, including social capital, emission intensity of traditional energy and  
14 production efficiency of renewable energy and so on. Meanwhile, neither competitive  
15 strategy nor cooperative strategy is necessarily better than the other in the bidding  
16 game. Furthermore, the effects of Pigouvian tax on subsidy intensity are negative,  
17 while the changes of the equilibrium investment of renewable energy are uncertain.

18 **Key words:** subsidy game; renewable energy; investment; dynamic model

19

20 **Funding**

21 This work was partially supported by National Natural Science Foundation of PRC  
22 (71703028), National Natural Science Foundation of PRC (71771057), Natural  
23 Science Foundation of Guangdong Province (2017A030310615), and Guangdong  
24 High-level University Project (2017).

25

26 **Declaration of interest**

27 The authors declare that there is no conflict of interests regarding the publication of  
28 this article.

29

Download English Version:

<https://daneshyari.com/en/article/6764767>

Download Persian Version:

<https://daneshyari.com/article/6764767>

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