

Accepted Manuscript

Assessment of the economic impacts of continuous energy intensity target constraint in China: Based on an analytical general equilibrium model

Feng Wang, Xiyang Liu



PII: S0959-6526(18)31085-0

DOI: [10.1016/j.jclepro.2018.04.066](https://doi.org/10.1016/j.jclepro.2018.04.066)

Reference: JCLP 12647

To appear in: *Journal of Cleaner Production*

Received Date: 20 December 2017

Revised Date: 28 March 2018

Accepted Date: 7 April 2018

Please cite this article as: Wang F, Liu X, Assessment of the economic impacts of continuous energy intensity target constraint in China: Based on an analytical general equilibrium model, *Journal of Cleaner Production* (2018), doi: 10.1016/j.jclepro.2018.04.066.

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.

Assessment of the economic impacts of continuous energy intensity target constraint in China: Based on an Analytical General Equilibrium Model

Feng Wang^{a, b*}, Xiying Liu^c

^a*School of Economics and Finance, Xi'an Jiaotong University, Xi'an, Shaanxi Province 710061, PR China*

^b*Energy Policy Research Group, Judge Business School, University of Cambridge, Cambridgeshire, CB2 1AG, United Kingdom*

^c*Independent Energy Economist, Baarerstrasse 59, 6300 Zug, Switzerland*

ABSTRACT

Based on the framework of analytical general equilibrium model, this study builds an energy intensity target (EIT) constraint model, and simulates the impacts of continuous EIT constraint policy on the fossil fuel production (FFP) sector, non-fossil-fuel production (NFFP) sector, household sector and price system in China. The main findings of this paper are, firstly, the EIT constraint can change the marginal products and the cross-price elasticities of input factors. Secondly, stricter EIT constraint can transfer capital and labor inputs from the FFP sector to the NFFP sector, and lead to a “contractionary effect” in the FFP sector – shown as declining inputs and output. The “contractionary effect” will decline gradually or even fade away if the EIT constraint is gradually reduced. Thirdly, if the total capital and labor inputs in the whole economy continue to grow at certain rates, along with the weakening of the EIT constraint, the reduction in energy input and the growth of capital and labor inputs in the NFFP sector will slow down, however, the growth rates of output and intermediate input will increase continuously. Fourthly, the EIT constraint has negative impacts on the NFFP sector, price system and

* Corresponding author.

E-mail addresses: wangfeng123@xjtu.edu.cn (F. Wang), xiyliu@gmail.com (X. Liu)

Download English Version:

<https://daneshyari.com/en/article/8095084>

Download Persian Version:

<https://daneshyari.com/article/8095084>

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