

摘 要

在能源被最終消費之前，能源的開採、運輸或轉換過程都需另以能源為要素投入來源。現今再生能源生產技術尚處萌芽階段，許多技術之生產未能通過「能源分析」而尚處於研究發展階段，此時政府若以促進再生能源總產量為政策目標，並獎勵能源生產，可能導致不具生產效率的再生能源技術被使用，進而造成能源耗竭與環境問題的擴大。

本研究提出現今再生能源補貼基礎的錯誤，會導致能源浪費的情況發生，進而造成政策目標與執行結果不一致。針對這樣的問題，本研究以簡單的模型解釋問題發生的原因，更針對問題癥結提出有效的解決方法，並得到不錯的結果。避免能源浪費具體的解決方針為，改變舊有補貼「能源粗產出」的形式，政策目標應朝社會「能源淨產出」最適的方向發展，而這也是主要的研究重點所在。最後研究仍認為，讓所有能源價格反映其生產的社會成本，才是導正能源市場扭曲最佳的方法。

關鍵詞：能源補貼、能源淨產出、再生能源政策。

Abstract

The extraction, processing, transformation, and delivering of energy all need energy itself as an input. However, the technology for producing renewable energy seldom passes the energy analysis and is still in its infancy. If the government regards promoting the total output of renewable energy as a policy goal at this moment, it may induce inefficient technology to be used and may accelerate the exhaustion of natural resources and the degradation of environment.

This study found that subsidy for encouraging renewable energy production based on gross output fails to solve the problem of market failure. It will lead to a waste of energy, and then cause the policy goal to be inconsistent with social optimality. This study explicitly solved the problem with a net output model. The contribution of this study is to prove that policy goal for renewable energy production should base itself on net output instead of on gross output. The best policy for solving market failure is to let energy price reflect its social cost.

Keyword: energy subsidy, net energy output, renewable energy policy.