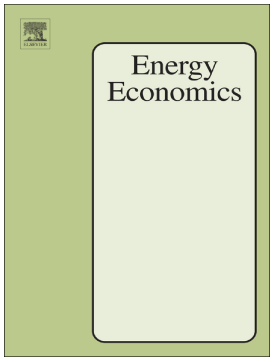

Policy Uncertainty and the Optimal Investment Decisions of Second-Generation Biofuel Producers

Evan Markel, Charles Sims, Burton C. English

PII: S0140-9883(18)30389-X
DOI: doi:10.1016/j.eneco.2018.09.017
Reference: ENEECO 4164

To appear in: *Energy Economics*

Received date: 29 January 2018
Revised date: 15 August 2018
Accepted date: 22 September 2018

Please cite this article as: Evan Markel, Charles Sims, Burton C. English , Policy Uncertainty and the Optimal Investment Decisions of Second-Generation Biofuel Producers. Eneeco (2018), doi:10.1016/j.eneco.2018.09.017

Policy Uncertainty and the Optimal Investment Decisions of Second-Generation Biofuel Producers

Evan Markel[1], Charles Sims[2*] and Burton C. English[3]

[1]Senior Associate, Ernst & Young LLP
[2]Associate Professor of Economics, Department of Economics & Faculty Fellow, Howard H. Baker Jr. Center for Public Policy, University of Tennessee, 1640 Cumberland Ave, Knoxville, TN 37996
[3]Professor, Department of Agricultural and Resource Economics, University of Tennessee
* corresponding author

Abstract: Uncertainty has been cited as one possible explanation for the lackluster performance of the Renewable Fuel Standard, which was enacted to encourage investment in the production of advanced biofuel. The unpredictability of conventional fuel markets makes the revenues and costs associated with biofuel production uncertain. In addition, policy uncertainty, in the form of annual revisions and adjustments to the program, make the cost of complying with the Renewable Fuel Standard uncertain. This paper is the first to decompose the aggregate uncertainty facing biofuel producers and isolate the effect of fuel market uncertainty and policy uncertainty on the decision to enter and exit the biofuel market. Results indicate that the uncertainty in the conventional fuel markets and the uncertainty in status of the Renewable Fuel Standard program influence incentives to enter and exit the biofuel market in different ways. Annual adjustments to the standard coupled with the unpredictable expiration and reinstatement of blender tax credits can work to discourage investment in biofuels and undermine effectiveness of the program.

Keywords: Option value, renewable identification numbers, renewable fuel standard, tax incentives

JEL codes: Q16, Q48, D81