

Comments for “The Cost Effectiveness of Biofuels Given Multiple Objectives”

by Constant Tra

Summary

- Objective:
 - Evaluate cost-effectiveness of biofuel policies for reducing (i) fossil-fuel use and (ii) greenhouse gas emissions
- Methodology
 - Analytical framework
 - Estimation/calibration
 - Compare cost-effectiveness of biofuels with that of gas tax

Summary

- Key finding
 - biofuels are 8 times as costly as a gas tax for achieving both fossil fuel and greenhouse gas reductions.

Comments

1. Analytical framework

- No discussion of the relevance of assumptions: shapes of cost curves, carbon emission rates (β_p vs. β_b), fossil fuel input requirements (δ_p vs. δ_b)
- Social cost of dependence on fossil fuels:

$$\text{social cost} = -\gamma(\beta_p q_p + \beta_b q_b)$$

How does the framework capture benefits of reduced dependence on foreign oil? Current setup seems to suggest that both biofuels and petroleum-based fuels increase social cost of fossil fuel dependence. What is the sign of β_p , β_b and γ ?

Comments

2. Estimation

- Is this a calibration or estimation? If estimation, what is the estimation strategy?

3. General comment:

- This is a partial equilibrium analysis
- Both policies have general equilibrium implications
- Higher gas prices from gas tax may have adverse affect on production costs
- Increased use of corn ethanol may affect food prices
- How does this affect the cost effectiveness of gas tax policy relative to biofuels policy?

Comments

- Other comparisons:
 - Gas tax may not be politically feasible
 - Biofuels vs. wind energy
 - Biofuels vs. solar energy