

OPOWER

14.42 LECTURE PLAN 21: MAY 12, 2011

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Discussion Questions:

Q1: What are the channels through which OPOWER's treatment acts?

Q2: What are the welfare effects of OPOWER's program?

PASTURE 1: CHANNELS

Channels of HER effects:

- Altruism (conditional cooperation)
- Private optimization (social inference)
- New information
- Increased scrutiny/social pressure
- Temporarily increased motivation (attention)
- Competition

Data point: OPOWER seems to affect turning off lights, but not capital investments.

Question: What does that say about what the likely channel is?

Other potential businesses:

- Thermostats
- Giving people information right when they move in
- Home energy audits
- Discounts to retailers for energy efficient stuff.

PASTURE 2: WELFARE ANALYSIS

Channels:

- Letter costs
- Change in energy costs
- Change in carbon externality
- Change in consumer welfare.

Assumption: OPOWER acts only by changing the moral cost of energy use. Social pressure.

Perfectly informed world

Question: In a perfectly-informed world with no carbon externality, does OPOWER improve welfare?

Answer: No – the letters cost money, and they move consumers off of their optimum.

Carbon externality with perfect information

Under this assumption, OPOWER is essentially a substitute for the carbon price, by imposing a moral cost.

Magnitude of carbon externality:

Marginal carbon content of electricity: 0.34 metric tons/MWh

MD of carbon: \$20 per metric ton.

Change in consumer welfare:

See slides

Questions/extensions

Question: What if there are multiple types? The guys with high moral elasticity are not the high price elasticity guys? Then what happens?

Question: But what if OPOWER improves people's information? Then there could be larger welfare gains.

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14.42 / 14.420 Environmental Policy and Economics
Spring 2011

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