

# Are Sustainability Policies Always Good for Sustainability Companies:

Lessons from the US energy efficiency industry

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# Introduction

**Will examine the impact on sustainability companies of policies designed to promote sustainability actions**

- Note: Not discussing policies primarily intended to support businesses; rather discussion policies intended to promote actions

**It is generally assumed that policies promoting sustainability actions help sustainability businesses.**

- Is that always the case?
- Do some types of policies help more than others?
- How do these issues relate to incentives for innovation and to customer decision making?

**Will use Massachusetts energy efficiency policies and programs as a case study**



# Massachusetts Energy Efficiency Policy and Programs

**Policy:** Utilities must buy energy efficiency wherever it costs less to save energy than to supply it.

**Programs resulting from the policy:** energy audits, financing, and financial incentives for the installation of energy efficient equipment, such as lighting, insulation, controls, motors, etc.

## Spending

- US\$ 675 million per year. Over US\$ 4 billion since 2008, and another US\$ 2 billion being planned for 2016 – 2018.
- Higher spending per capita than any other US state. More than twice the spending per capita of California.

**Energy efficiency companies participating:** Over 7,000



# Issues to consider

**Types of companies that benefit.** Does the policy:

- Support energy efficiency specialty companies; OR
- Make energy efficiency mainstream

**Customer decision making.** Does the policy:

- Encourage customers to make good decisions; OR
- Remove the need to make any decisions (by eliminating the bad choices)

**Innovation.** Does the policy:

- Encourage innovation by creating a market for a new technology; OR
- Discourage innovation by monopolizing the market



# Financing Program

## Program summary

- 0% interest loans to finance energy efficiency measures
- Since 2006, over 38,000 loans totaling over \$US 200 million
- 77 participating banks

## Impact on energy efficiency businesses

- Since any company can access the financing, many companies benefit
  - Energy efficiency not limited to specialty companies
- By reducing upfront capital requirements, the program enables companies to sell more and bigger projects
  - Selling energy efficiency based on the monthly payment rather than the total cost
  - Selling energy efficiency the way Americans sell cars



# Incentives for Energy Efficient Products

## Program summary

- Utility pays a portion of the cost of energy efficient products and equipment.
- This is the most common program type. Massachusetts has spent US\$ billions on programs of this type.
- There are 3 program models with very different impacts on efficiency companies.

## Model 1: Installation-based, closed market

- The incentive is paid upon installation of product. The utility picks a set of companies to implement the program. Only these companies can offer the incentives to customers.
- This model is good for energy efficiency specialty firms; other firms are shut out.



# Incentives for Energy Efficient Products

## Model 2. Installation-based, open market

- The incentive is paid upon installation of product. The utility does not designate installation companies. Any company that installs the product can make the incentive available to customers.
- This model is less good for energy efficiency specialty firms, but better for the broader market. Moving to this model can increase the number of participating firms from the teens to the thousands.

## Model 3. Upstream

- The incentive is paid to wholesale distributors. As a result, they sell efficient equipment at the same cost as standard equipment.
- This model can boost sales of efficient equipment. However, it makes efficiency largely invisible to customers and the companies that sell to them.



# Residential Behavioral Program

## Program summary

- Customers receive monthly reports comparing their energy use to that of their neighbors and recommending actions to reduce energy use.
- On average, produces 1% to 2.5% energy savings through improved energy behavior.

## Impact on energy efficiency businesses

- One company, Opower, delivers the program
- For that company, the program has fueled growth and encouraged innovation.
- Other companies may benefit indirectly insofar as customers are encouraged to think about energy efficiency to purchase more efficient products.



# Home Energy Audits

## Program summary

- The utility hires firms to provide energy audits for residential customers.
- The audits must be performed to the utility's specifications, which include a detailed, in-person inspection of the home.
- The audits are available to customers for free.

## Impact on energy efficiency businesses

- Two firms have developed an innovative approach to performing audits that uses drive-by thermal imaging.
- The cost to provide an audit using this method is much lower than in the utility model.
- Because the utility audit is available for free, it is very difficult for these firms to find customers in Massachusetts.



# Conclusions

**On the whole, the energy efficiency programs have been very good for energy efficiency businesses**

- However, the impacts vary based on the specific program model.

**Policy makers should consider these questions. Does the policy or program:**

- Support specialty companies OR make energy efficiency mainstream OR make energy efficiency invisible
- Encourage customers to make good decisions OR remove the need to make any decisions (by eliminating the bad choices)
- Encourage innovation by creating a market for a new technology OR discourage innovation by monopolizing the market

