

State Policies
to Promote
Energy Efficiency Businesses
(and why it won't break the bank)

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Who am I?

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Market Failure

- Old Joke:
 - An Economist is a person who would leave a \$20 bill lying in the street
 - In an efficient market, someone else would have already picked it up.



Energy Efficiency is like Money Lying on the Street

- Why hasn't someone picked it up already?

Barriers to Energy Efficiency

Source: *Electric Utilities and Energy Efficiency*. Eric Hirst, ORNL

- **Structural Barriers**

- Distortions in Energy Pricing
- Limited Supply Infrastructure

- **Behavioral Barriers**

- Attitudes & Awareness
- Perceived risk
- Limited capital
- Misplaced incentives
- Inconvenience, loss of amenities

The Role of Government

- Market failures lead to untapped energy efficiency.
- Government should intervene to help fix these market failures



Regulated Markets

- Tell the Utility Regulator that increased energy efficiency is in the public interest.
- Consider Utility disincentives to promoting EE.
 - Decoupled rate structures
 - Consider Non-Energy Benefits in resource planning
 - Econ Growth, Energy Price stability, Environment, Health, Comfort.

Utility Regulator Has Broad Powers to Promote EE

- Legislature should to pass laws to make it a priority
- Colorado HB 07-1037: Directs the Public Utilities Commission to
 - Establish a cost recovery mechanism to allow the utility to recover prudent expenditures on EE (both electric and gas)
 - Provide a financial incentive for such programs.

All Markets: Broken Feedback Loops

- Barriers:
 - Distortions in Energy Pricing
 - Misplaced Incentives
- Most consumers don't know when they are wasting energy, and even if they do, they don't pay enough that it's worth their time to care

Better Feedback Loops

- Laws to encourage smart grid technology
- Devices to increase awareness of current energy usage and cost
- Information is empowering



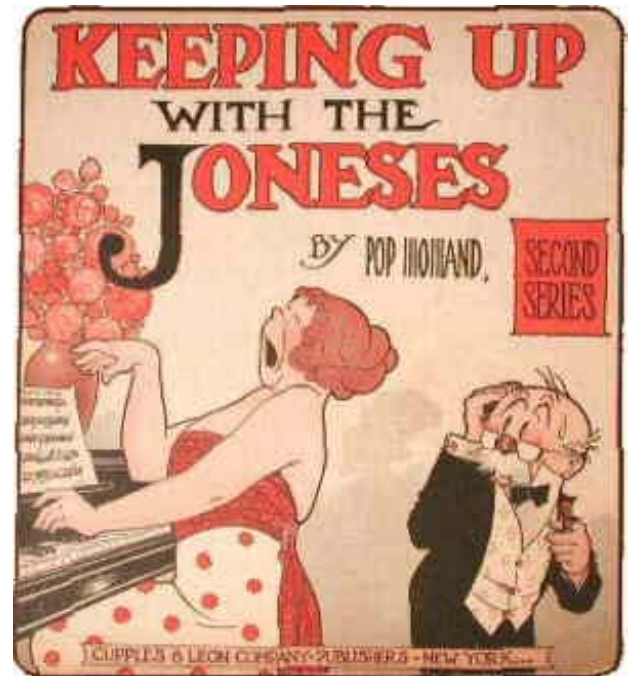
“Joule meter” from ConsumerPowerline

Information Empowers

- In 1989, Woodstock Hydro gave customers at risk of not paying their bill pre-payment meters.
- The meters displayed rate of consumption, as well as \$ and Power remaining.
- Electricity usage in these households dropped 15% immediately.

The Culture of Energy Inefficiency

- Barriers:
 - Attitudes and Awareness
 - Perceived Risk
 - Inconvenience, Perceived Loss of Amenities
- If Energy Efficiency...
 - Makes you more comfortable
 - Makes for a safer home
 - Saves Money
- Why isn't everybody doing it?



Instilling a Culture of Energy Efficiency

- Use the Bully Pulpit
- Use Bureaucracy to distribute information about energy efficiency
 - Safer, More Comfortable, More reliable
- Elementary School Programs

Instilling A Culture of Energy Efficiency

- Name & Shame
- Publication of power usage on Internet
- Infrared Photos
- Energy Efficiency in Building Codes
- School curriculum



Infrared map of Haringey, UK

Conclusions

- Energy usage is not an Efficient Market
 - There are \$20 bills on the side walk
- Energy Efficiency will pay for itself AND bring benefits to your state
- The role of government should be to
 - Utility regulator should provide incentives for EE.
 - Provide information and encouragement
 - Remove structural and regulatory barriers