



# Making Energy Efficiency Real for the People

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# Public Utility Research Center

## Research

Expanding the body of knowledge in public utility regulation, market reform, and infrastructure operations (e.g. benchmarking studies of Peru, Uganda, Brazil and Central America)

## Education

Teaching the principles and practices that support effective utility policy and regulation (e.g. PURC/World Bank International Training Program on Utility Regulation and Strategy offered each January and June)

## Service

Engaging in outreach activities that provide ongoing professional development and promote improved regulatory policy and infrastructure management (e.g. in-country training and university collaborations)





# The Body of Knowledge on Infrastructure Regulation

<p><b>NEW</b></p> <p>LEADERSHIP IN REGULATION</p>	<p><b>NEW</b></p> <p>TRANSLATED GLOSSARIES</p>	<p><b>NEW</b></p> <p>RENEWABLE ENERGY AND ENERGY EFFICIENCY</p>	<p><b>RECENT ADDITION</b></p> <p>REGULATION OF STATE-OWNED ENTERPRISES</p>

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# Outline

- Motivation for energy efficiency
- Three types of barriers for implementing energy efficiency
  - Costs
  - Benefits
  - Opportunities
- Strategies can address any or all barriers, and there are many lessons to learn



# Why Do We Need Energy Efficiency?

- Think of another business where we encourage producers to expend resources to discourage consumption
- Energy efficiency programs address electricity market failures
  - The inability or unwillingness to align costs with benefits
  - The inability or unwillingness to respond to incentives



# Barriers to Energy Efficiency

- Recognition that energy efficiency imposes different types of costs
  - Effectively paying for a portion of electricity usage in advance
  - Comfort and convenience
  - Security (or perception of security?)
- Policy treatments
  - Energy efficiency treated differently than supply side resources



# Energy Efficiency Benefits

- Prices paid by consumers may be less than or greater than costs required to produce electricity at any given time
  - Environmental externalities
  - Time-varying production costs
- This results in cross-subsidies among groups of electricity consumers or general society



# Aligning Benefits with Costs

- Real time pricing requires sophisticated consumers
- Consumers must understand risks of any program
- Advanced metering systems allow for more flexibility in rate design (e.g. demand charges for residential customers)





# Responding to Incentives

- The cost for most residential customers to respond to short-term incentives is prohibitively high
- Critical peak pricing or rebates (with day-ahead notification) has influenced residential customers
- Customers hesitant to cede control of their electricity consumption
- More effective as level of sophistication grows



# Conclusions

- Energy efficiency provides opportunities to correct market failures and provide benefits to society
- Communication should come from many perspectives
- Effective policies should address costs, benefits, or opportunities
- Many different strategies, but all impart different responsibilities to all stakeholders



# Thank You!

- Ted Kury

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