

Rate Impacts

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How Efficiency Programs Affect Rates

Factor	Impact on Rates	
Program Spending	↑	
Avoided Capital Investment in New Generation (electric only)	↓	
Avoided Capital Investment in T&D	↓	
Avoided Credit & Collection Costs	↓	
Avoided Environmental Compliance Costs	↓	Possibly – depends on policy
Avoided Variable Energy Costs	none	
Impact on Market Clearing Prices for Energy/Capacity	↓	Where competitive markets
Spreading Cost Recovery Across Smaller Sales (lost revenue) <i>(note: this includes recovery of past/sunk costs)</i>	↑	

The “Bottom Line”?

- It’s complicated!
- Upward pressure caused by program spending often more than offset by other downward pressures
- So...any upward pressure typically due to lost revenue
- Should lost revenues drive EE investment decisions?
 - Revenue is lost even if savings are free – don’t want free savings?
 - Rates go down if customers become less efficient – but no one would suggest encouraging inefficiency to lower rates.

Rate Impacts \neq Cost-Effectiveness

- They include different things...
 - **Cost-effectiveness**: total new costs vs. total new cost savings
 - **Rate impacts**: include past/sunk costs, no value to avoided energy costs
- ...to answer very different questions:
 - **Cost-effectiveness**: Do total costs go down? By how much?
 - **Rate impacts**: Do rates go up? By how much?
- Costs can go down even if rates go up (and vice versa)
 - $1000 \text{ kWh} * \$0.10/\text{kWh} = \100
 - $800 \text{ kWh} * \$0.11/\text{kWh} = \$ 88$
- Bottom line: EE rate impacts are concern about equity, not cost
 - Equity between EE program participants and non-participants

Limitations of the RIM Test

- RIM Test is not appropriate of cost-effectiveness:
 - Includes sunk costs
 - It doesn't measure whether total costs go down or up
- RIM is a test of equity, but not even good for that purpose
 - Only tells you if rates go up or down – nothing about *magnitude*
 - Tells you nothing about how many customers see net bill increases
 - Tells you nothing about trade-offs between rate impacts and economic net benefits

Equity Effect of Rate Impacts

- A legitimate consideration for how much EE, which EE
 - Separate from (or in addition to) cost-effectiveness
- But should be quantified, considered in context
 - Magnitude of rate impact
 - % of customers with rate impact, but no offsetting savings (non-participants)
 - Magnitude of EE benefit
- Example: Synapse 2014 Study of Vermont EE Programs
 - 20 year time horizon for aggressive EE
 - 95% of Res customers participate, see ~7% avg. bill reduction
 - 5% of Res customers non-participants, 4-5% bill increase

Is this trade-off acceptable?
- Are trade-offs made for EE investments same as those made on supply investments? If different, why?
 - for substation upgrade, do all customers pay or just those driving the need?

The NSPM, and related materials from the NESP, are available at: nationalefficiencyscreening.org