Synapse
Energy Economics, Inc.

Why Consumer Advocates Should Support Decoupling

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Main Take-Away Points

1. Decoupling mechanisms can be designed many ways.
   - Some beneficial to customers, some not.
2. Decoupling mechanisms can and should be designed to both protect consumers and support efficiency.
3. In the context of addressing climate change, decoupling will be beneficial to consumers,
   - If properly designed.

Traditional Ratemaking

- Traditional ratemaking has many goals, including:
  - Provide utility with sufficient revenues to cover their costs, and the opportunity to earn a reasonable return.
  - Provide utility with proper incentives to provide reliable, low-cost electricity services.
- Traditional ratemaking does not necessarily achieve these goals very well. Depends upon how it is applied.
- One key problem: it encourages utilities to increase sales in order to increase profits.
  - The throughput incentive.
- But there is much more than that…

Traditional Ratemaking and Regulatory Lag

- One of the key elements of traditional regulation is that it generally allows utilities to recover increased costs over time.
- Base rates are set in Year 1, using test year sales and revenue requirements.
- Typically, in Year 2 and beyond the sales increase above the test year.
  - This leads to increased revenues to the utility in all years after a rate case.
    - Referred to as regulatory lag.

Traditional Ratemaking; Theory and Practice

- In theory, the increased revenues over time are meant to offset increases in cost over time.
  - Increased costs due to inflation, new customers on the system, upgrades to system, etc.
  - Increases due to fuel costs are typically dealt with outside of base rates, in a reconciling charge.
- In practice, it is not clear how well revenues track costs.
- Utility has an advantage:
  - If a utility over-earns, it avoids rate cases.
  - If a utility under-earns it comes in for a rate case.
- Main point: traditional ratemaking does not necessarily lead to ideal rates, or the best deal, for customers.

Decoupling Defined Very Generally

- Base rates are adjusted on a periodic basis (e.g., each year) , so that utility's revenues are not dependent upon sales levels.
- In general, a target revenue requirement (RR) is set in a rate case, and that target RR is matched periodically by reconciling actual revenues to the target.
- Under decoupling: revenues are held fixed and prices are allowed to fluctuate.
- Under traditional regulation; prices are held fixed and revenues fluctuate (typically upward if sales increase).

Decoupling Implications (Overly Simplified)

- In the context of increasing sales, electricity prices would decline each year under decoupling.
  - This occurs because the utility no longer recovers higher revenues each year as a result of regulatory lag.
- This is true even with aggressive energy efficiency, as long as net sales are increasing.
  - The introduction of energy efficiency means that the prices decline less than they would in the absence of those resources.
- Prices only increase, relative to traditional ratemaking, once net sales start to decline.

Decoupling Implications (Overly Simplified)

Changes in prices from year to year, under different load conditions

	Sales	Revenues Recovered	Price
Net Sales Growth - No EE	---	---	---
Traditional Regulation	increase	increased	fixed
Decoupling	increase	fixed	decrease
Net Sales Growth - With EE	---	---	---
Traditional Regulation	increase	increased	fixed
Decoupling	increase	fixed	decrease
Sales Constant	---	---	---
Traditional Regulation	flat	flat	fixed
Decoupling	flat	fixed	flat
Net Sales Decline	---	---	---
Traditional Regulation	decrease	decrease	fixed
Decoupling	decrease	fixed	increase

Decoupling Mechanisms to Address Increasing Costs

- However, decoupling mechanisms are not this simple.
  - Utilities may need increased revenues over time to pay for increased costs over time.
- This leads to decoupling adjustments over time:
  - For increased customers (e.g., revenue-per-customer).
  - For inflation.
  - For increasing O&M costs.
  - For increasing capital costs.
- Some of these may be valid and appropriate. Some may not. It depends upon the utility and the conditions.
- Main point: the impact of decoupling on customers depends upon how it is designed.

Decoupling Measures to Protect Consumers

- Reduced allowed return on equity. Very important.
  - Decoupling reduces volatility of revenues.
  - Significantly reduces financial risk to the utility shareholders.
- A fixed cap on the periodic, decoupling price adjustment.
- Limit or disallow adjustments for costs over time:
  - Limited or no adjustment for new customers.
  - Limited or no adjustment for inflation.
  - Limited or no adjustment for increased O&M.
  - Limited or no adjustment for capital cost.
- Fixed, short period between rate cases (e.g., 3-5 years).

Other Options to Help Consumers

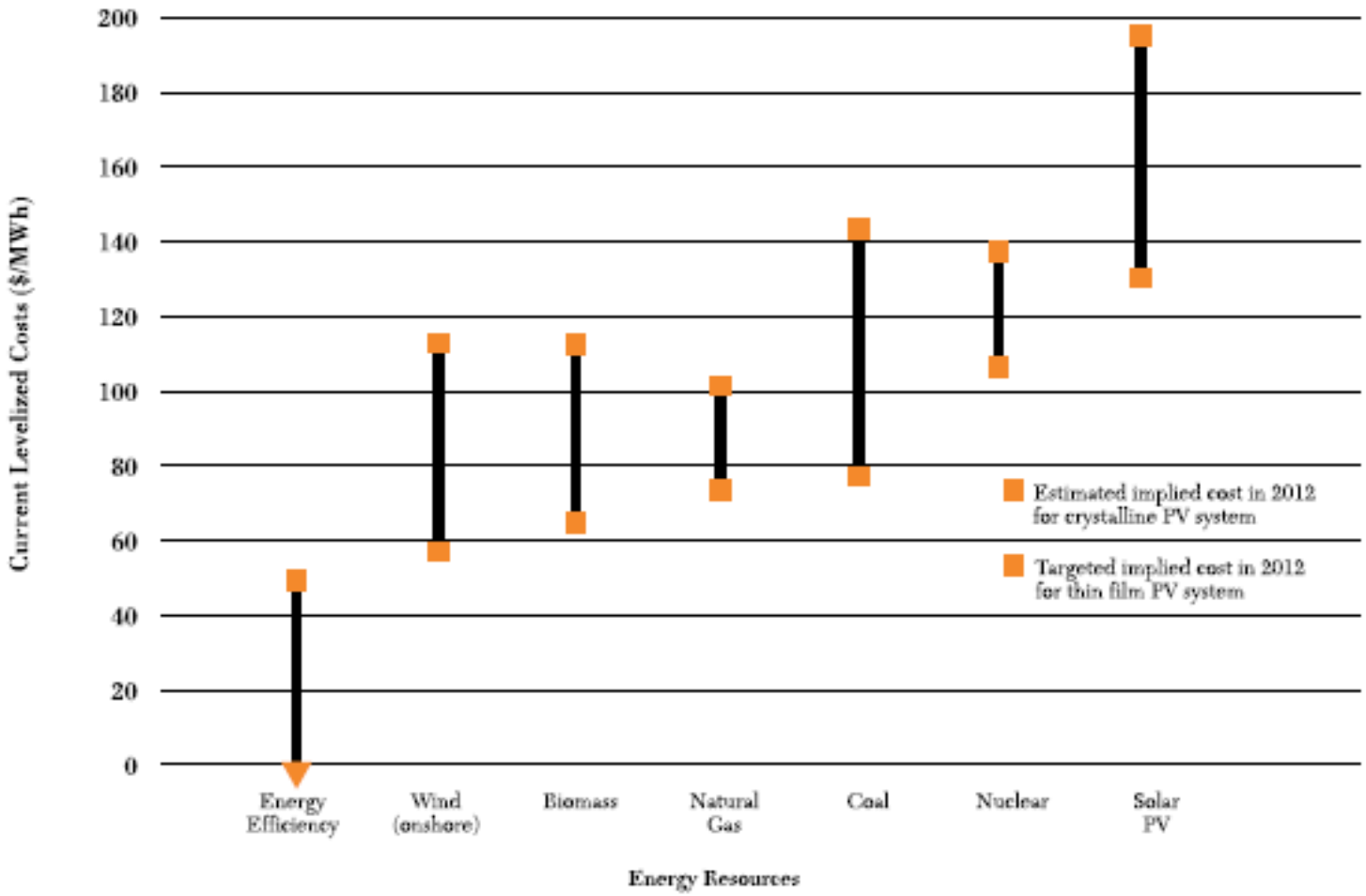
Require a quid pro quo from the utility, e.g.:

- Commitment to expand energy efficiency activities:
  - Increased efficiency program budgets.
  - Expanded programs to address more measures and customer types.
  - Expanded programs to serve more participants.
- Commitment to support building codes and appliance standards.
- Commitment to support energy efficiency RD&D.
- Others.

Impact of Decoupling on Prices

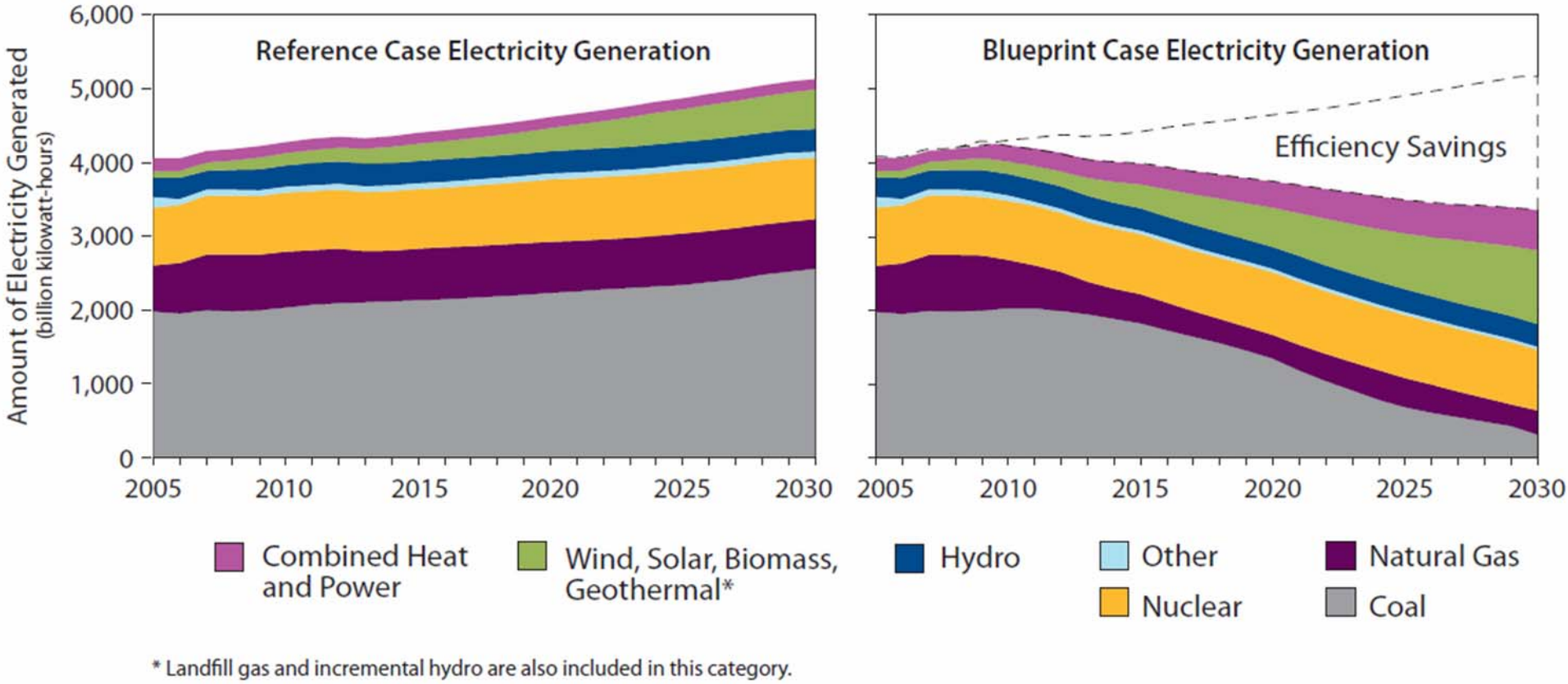
- Prices will not necessarily increase.
- Will depend upon how it is designed, as well as other impacts of energy efficiency programs.
- In Massachusetts, with some of the most aggressive EE programs in the country:
  - Estimate of decoupling adjustment for EE: 0.14 ¢/kWh
  - Estimate of price suppression benefits from EE: 0.17 ¢/kWh
  - Estimate of avoided T&D benefits from EE: 0.05 ¢/kWh
  - Net effect: the recovery of lost revenues through decoupling is more than offset by other EE impacts that lower prices.
    - These price impacts affect all customers.

Energy Efficiency is the Lowest Cost Option to Address Climate Change



Source: World Resources Institute

Addressing Climate Change Will Require Load Reductions



Source: Union of Concerned Scientists, *Climate 2030: A National Blueprint for a Clean Energy Economy*, May 2009.

Climate Change, Load Growth and Rate Cases

- The electric sector is not going to be able to meet long-term carbon goals with load growing each year.
  - 80% reduction by 2050!
  - Loads will have to decline, preferably soon and consistently.
- Traditional ratemaking will not work under these conditions:
  - Utilities will not be able to recover their costs. Unless they have a rate case every one or two years.
  - Utilities will have a disincentive to implement sufficient EE.
  - Utilities will have the incentive to build more expensive supply-side resources to reduce carbon emissions.
  - Consequently, customers will see higher rates and higher bills.

Ratemaking for the "Utility of the Future"

- Utility of the future: able to meet aggressive carbon constraints & provide reliable, low-cost energy services.
- Ratemaking will need to provide different incentives:
  - Utility support for all cost-effective energy efficiency.
  - Utility support for building codes, appliance standards, RD&D.
  - Utility support for low-cost, low-carbon supply-side resources.
  - A different business model for delivering energy services?
- Decoupling is a necessary step in this direction, by removing the negative incentive for EE, and allowing utilities to recover appropriate costs.
- Decoupling addresses half of the issue.

Recommendations to Consumer Advocates

- Embrace energy efficiency as the lowest-cost option to
  - Serve customers in general, and
  - Address climate change over the long-term.
- Embrace decoupling in order to support all cost-effective energy efficiency.
- Develop and advocate for decoupling mechanisms that are designed to be in customers' best interest.

Appendix: Decoupling vs. Lost Revenues

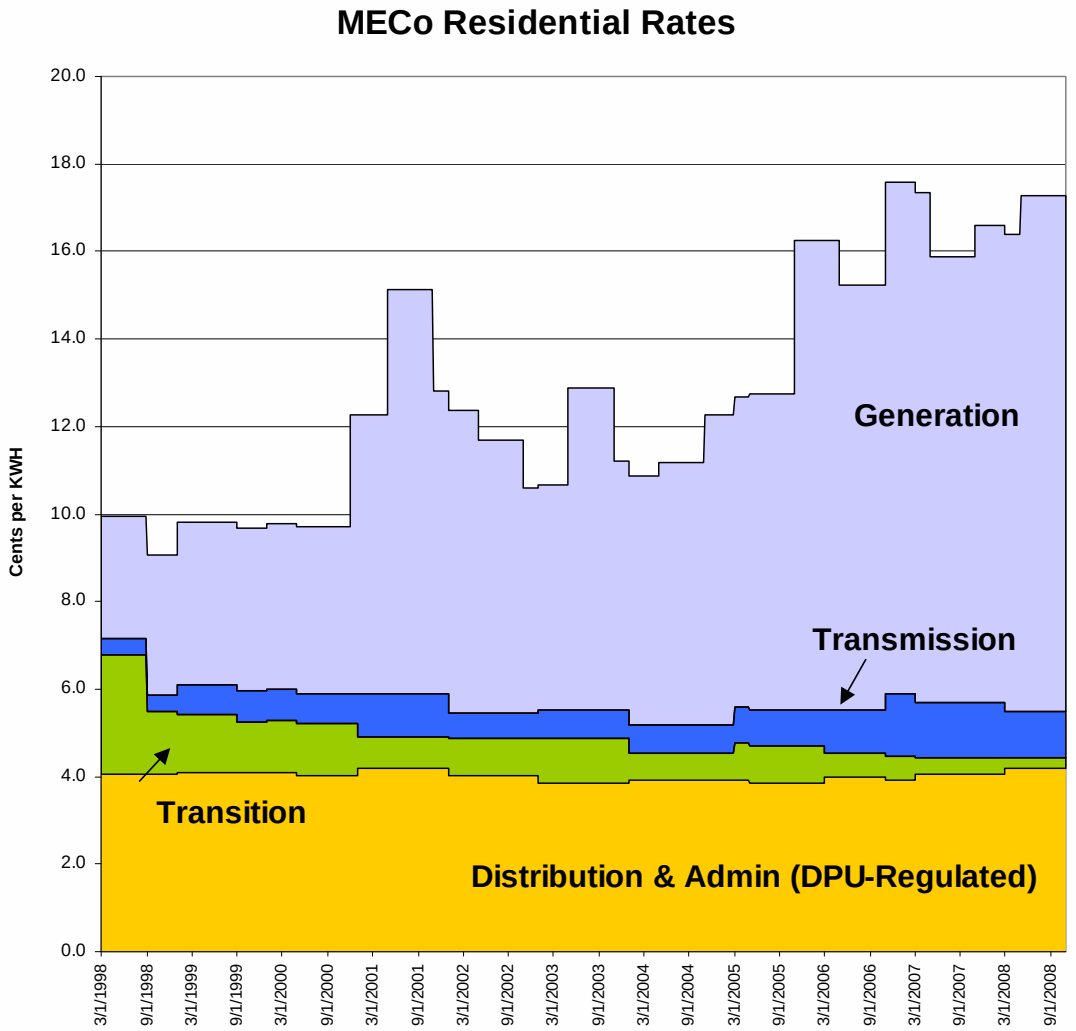
Direct recovery of lost revenues is sometimes proposed as an alternative to decoupling.

- They have very different implications for energy efficiency and customers.
- Decoupling can work for consumers benefit, if properly designed.
- Recovery of lost revenues typically:
  - works against consumers;
  - does not help support demand resources in general; and
  - will not help meet long-term climate change goals.

Problems With Lost Revenue Recovery

- It requires precise estimates of EE savings.
  - Make M&V much more contentious.
- It typically does not compensate utilities for DG.
- It does not compensate utilities for efficiency from appliance standards or building codes.
- It does not necessarily allow utilities revenues that are aligned with their costs.
  - Risk of over-compensation.
- It is not practical for when utilities start to significantly reduce load growth to address climate change.

Components of a Typical Residential Bill



41% of total

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