

Fallacies, Facts, and the Future of Revenue Decoupling for Energy Efficiency, Conservation, and Demand-side Management

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Presentation Outline

- Definition of revenue decoupling
- Rationales for revenue decoupling
- Methods of revenue decoupling in the US context
- Issues with one-part tariffs (price/kWh or price per therm) and revenue decoupling
- Future of revenue decoupling: two-part tariff as the most logical revenue decoupling mechanism
- Why are two-part tariffs and revenue decoupling seen as different mechanisms?
- Fallacies and Facts
- Conclusion

Defining Revenue Decoupling

- Revenue Decoupling:
 - The separation of the collection of required revenues, including fixed costs, from sales by the utility.
- Revenue decoupling implicitly imposes a revenue cap on the utility
 - Fixed costs are generally independent from sales/output
 - Sales variations from year to year are seen largely out of the utility's control

Rationales for Revenue Decoupling

- Environmentalists like revenue decoupling because it separates fixed cost recovery from sales which removes the disincentive to promote energy efficiency, conservation, and DSM programs.
 - RIM test and the TRC test become equivalent
- Utilities with declining revenues per customer who use one-part (price/kWh or price/therm) which makes it difficult to recover fixed costs independent of energy efficiency, conservation, and DSM considerations
 - Utilities with increasing revenues per customer dislike this mechanism as it prevents them from earning higher returns!

US Methods for Revenue Decoupling

- Given that utilities recover most, if not all, fixed costs through per unit charges, a tracking or true-up type mechanism is used.
- If revenues are greater than allowed, prices going forward are reduced to make up for the excess revenues
- If revenues are less than allowed, prices going forward are increased to make the utility whole.
- Being used more for natural gas utilities than electric utilities.
 - California and New York have electricity programs

Issues with Revenue Decoupling under One-part Tariffs

- Tracking/true-up mechanisms may be quite messy and contentious regulatory proceedings
- Some perceive the possibility of price increases/decreases as creating more price volatility than is necessary
- Does not explicitly recognize the two services that are provided
 - Fixed infrastructure provides an option to consume
 - Price per unit recognizes variable costs of consumption
- Other misconceptions...fallacies that arise from thinking only in the one-part tariff context.

Two-part Tariffs as the Future of Revenue Decoupling

- A two-part tariff with the fixed charge covering all fixed costs and a variable charge covering the variable costs seems a logical choice
- Does not require potentially contentious true-up or tracking mechanisms that require proceedings
- Shows consumers the true cost of variable consumption plus the cost of providing the option to consume in a transparent manner
- Shows how many statements regarding revenue decoupling are fallacious.

Why are Two-part Tariffs and Revenue Decoupling Seen as Different Alternatives

- In the National Action Plan for Energy Efficiency, drafted by the USEPA and USDOE, shifting more fixed costs into fixed charges is called “an alternative to decoupling” (p. 2-4)
- This same view is also expressed in “Revenue Decoupling for Natural Gas Utilities” by Ken Costello and published by NRRI (p. 19)
- Why is this the viewpoint taken?
- Perhaps it has to do with many of the perceived problems and some legitimate concerns that consumers may not understand the rationale for two-part tariffs.

Fallacies and Facts

How Markets Work

- Fallacy:
 - Some observers argue making the utility “disinterested” in sales volumes is contrary to how markets work and firms make money
- Fact:
 - Utility service consists of two goods: (1) the option to consume and (2) the actual commodity (gas or electricity) consumed.
 - Two-part tariffs explicitly recognize this fact.

Environmental Results

- Fallacy:
 - Two-part tariffs will encourage consumption which does not benefit the environment
 - One-part tariffs result in higher prices that reduce consumption
- Fact:
 - If no income effects are assumed from the fixed charge, then the above argument is correct.
 - However, if there is an income effect (the fixed charge essentially reduces income) there may be a reduction in consumption.

Equity Issues

- Fallacy:
 - One-part rates are more equitable because large users will pay more of the fixed costs than small users and that is why they are preferred to two-part tariffs
 - Moving to two-part tariffs would increase bills and fixed cost burden on small users, and reduce bills and fixed cost burden on large users
- Fact:
 - Fixed charges on two-part tariffs so that small users pay a smaller portion of fixed costs and large users pay a larger portion
 - Charge based on peak usage and/or some cross-subsidies through fixed charges can be used.

Utility Earnings Issues

- Fallacy:
 - Revenue decoupling in any fashion guarantees the utilities earnings
- Fact:
 - Revenue decoupling does not guarantee earnings, but the utility has an incentive to cut costs to increase earnings and faces risk of decreased earning if costs increase

Risk Burden and Volatility Issues

- Fallacy:
 - Revenue decoupling “shifts normal business risk from utilities to consumers”.
 - Revenue decoupling leads to more price volatility for consumers due to sales forecast errors
- Fact:
 - Ignores the nature of option provided by the infrastructure as one service and usage as another service.
 - With a two-part tariff price and bill volatility is minimized as commodity volatility (gas or electricity) is only transmitted through the variable charge.
 - No need for forecasts and true-ups for forecast errors which leads to greater volatility as fixed costs are recovered through the fixed charge.

Economic Efficiency Issues

- Fallacy:

- Revenue decoupling will lead to increased economic inefficiencies as consumption declines.
- Two-part tariffs are inefficient because it reduces the variable, per unit charge encouraging consumption...made by environmentalists

- Fact:

- Two-part tariff as envisioned is economically efficient and results in price equal marginal (average variable as a proxy) cost.
- One-part tariff system is inefficiently charging customers for services...not all energy efficiency or conservation is economically efficient.
- If the fixed charge is based on peak usage, there is an incentive to reduce the peak

Who Benefits More?

- Fallacy:
 - Utilities obviously benefit more because they face less risk of recovering fixed costs, whereas consumers may face higher prices and greater volatility.
- Fact:
 - Moving to a two-part tariffs also benefits consumers in an economic sense by creating more surplus while reducing risk to the utility.
 - See also previous arguments of volatility and risk

The Future of Two-part Tariffs for Revenue Decoupling

- Two-part tariffs have many advantages over one-part tariffs with tracker and true-up mechanisms
- However, there must be more done to overcome customer objections to two-part tariffs.
 - Explain the benefits
 - Explain the nature of services better
 - Understanding two-part tariffs is another revenue decoupling mechanism.