DECOUPLING FOR ELECTRIC AND GAS UTILITIES FREQUENTLY ASKED QUESTIONS (FAQ)

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State Public Utility Commissions around the country are expressing increasing interest in energy efficiency as an energy resource. However, traditional regulation may lead to unintended disincentives for the utility promotion of end-use efficiency because revenues are directly tied to the throughput of electricity and gas sold. To counter this "throughput disincentive," a number of States are considering alternative approaches intended to align their utilities' financial interests with the delivery of cost-effective energy efficiency programs. "Decoupling" is a term more are hearing as a mechanism that may remove throughput disincentives for utilities to promote energy efficiency without adversely affecting their revenues.

In its July 14, 2004, resolution supporting efficiency for gas and electric utilities, the National Association of Regulatory Utility Commissioners (NARUC) resolved "to address regulatory incentives to address inefficient use of gas and electricity" (NARUC, 2004). In doing so, NARUC found that regulators are confronted with questions about what ratemaking mechanisms would be most effective in achieving commission objectives, satisfying the needs of utilities, and providing the greatest benefit to ratepayers. Decoupling represents a departure from common regulatory practice, and States that are considering decoupling should approach this with appropriate care. **For States considering decoupling, this paper is intended to provide an introduction and answer some of the most frequently asked questions, and to help determine if and how decoupling might be used.**

1. What is decoupling?

In the electricity and gas sectors, "decoupling" (or "revenue decoupling") is a generic term for a rate adjustment mechanism that **separates (decouples) an electric or gas utility's fixed cost[1] recovery from the amount of electricity or gas it sells.** Under decoupling, utilities collect revenues based the regulatory determined revenue requirement, most often on a per customer basis. On a periodic basis revenues are "trued-up" to the predetermined revenue requirement using an automatic rate adjustment.

The result is that **the actual utility revenues should more closely track its projected revenue requirements, and should not increase or decrease with changes in sales.** Since utilities will be protected if their sales decline because of efficiency, proponents of decoupling contend that they are more likely to invest in this resource, or may be less likely to resist deployment of otherwise economically beneficial efficiency.[2]

Decoupling is also being explored in the water utility sector, though this paper focuses on the electricity and natural gas sectors.

[1] For our purposes "fixed costs" are those costs incurred to render service, which remain relatively constant between rate cases. These typically include investment costs, including interest on debt and return on equity, and unavoidable maintenance costs for power plants, transmission lines, gas pipelines, and other infrastructure, as well as employee payroll. Variable costs are those which vary with the level of electric or gas output and include fuel expenses, purchased power, and costs that vary broadly from month to month and are not included in decoupling mechanisms. These are often addressed through fuel or other adjustment clauses under existing regulatory practice.

[2] Decoupling advocates note that it removes a financial disincentive to energy efficiency, but may not create an incentive. Some decoupling advocates also argue that decoupling can help remove barriers to the integration of demand response and distributed resources.

2. How does decoupling work?

Decoupling begins with the same rate case process as current regulatory models use, so it is useful to review traditional ratemaking to understand how decoupling works.

How are rates are set under traditional regulation? With traditional regulation, the rates utilities can charge are determined in a **rate case**, using the "**cost of service" theory of regulation**.[3] Rates are set at a level sufficient to allow the utility to recover costs incurred in providing service to its customers based on the operating experience of a typical 12 month period (referred to as a "**test year**"). Test year expenses include the commission-determined or -allowed rate of return on investments. The utility's **revenue requirement** is determined by adding the total of these expenses and the allowed return on investment. The revenue requirement is divided by the amount of sales in the test year to derive throughput based rates. In a rate case, test-year sales and operating costs are typically adjusted to reflect "normal" weather. This can be based on a model of future years, or it can be based on past years: test years based on forecasted experience are known as future test years, while test years based on prior financial performance are referred as historical test years. Regardless of the type of test year used, the resulting prices are what customers pay per unit of electricity or gas that they use until rates are reset with next rate case.

How does traditional rate regulation create a throughput incentive? While prices are based on test year information, after a rate case actual sales will almost always differ because the exact patterns of customer use are complex to predict: weather, changes in the economy, demographic shifts, new end-use technologies, additions or reductions in the number of customers, and many other factors can affect actual sales. As a result, it is highly likely that the utility will sell more or less electricity or gas than had been assumed for the test year during the rate case. However, fixed costs are likely to be predictable. In the energy sector, the cost of service tends to have a large component of fixed costs associated with investments like power plants, gas pipelines, and electric transmission lines. This makes it difficult, but not impossible, for the utility to increase profits by cutting costs[4]. Revenues are much easier to increase, which means that utilities have a strong incentive to increase revenues by increasing sales. For existing customers, sales growth may not require a great deal of new infrastructure and in these cases, the utility's fixed costs would not go up with increased sales[5]. In these cases, increases in sales volumes translate into increased revenues which in turn directly lead into increased profits. **In fact, some observers have noted that because of the link between profits and sales, a 1% increase in sales might lead to a 5% increase in profits (with corresponding decreases in profits when efficiency reduces sales)** (Harrington, 2007, 1994). Because the utility makes more money and profit by selling more electricity or gas, this structure could theoretically create a significant **disincentive for utilities to encourage their customers to lower consumption through energy efficiency**.

[3] Why are utilities prices set by regulation and based on their cost of service? Electricity and natural gas are considered to be essential services, and it is in the interest of society to ensure that the businesses that provide these services can pay for the costs of their operations and capital. Because these services are provided by monopoly utilities, customers could be vulnerable to price exploitation. As a result, for over a century, prices have been regulated by State PUCs to recover the utilities' costs, while utilities have assumed an obligation to provide service to the public.

[4] What about variable costs? Even though utilities' fixed costs are high, they also see fluctuations in variable items such as purchased power and the cost of fuels like coal or natural gas. These items are, in part, covered in the rate set in a rate case, but unexpected costs are also covered through surcharges that are temporary in nature and do not involve going through a whole rate case. Fuel Adjustment Clauses are an important variable cost that is passed through directly to customers in most states. Decoupling is not applied to these variable components.

[5] For new customers, infrastructure costs may reflect regional patterns. In some regions of the country, adding new customers may require high additional infrastructure costs: connecting a building full of new gas customers in the urban areas of the Northeast may require a short new addition of pipe in an area with an existing distribution system. In other areas, adding new customers means adding costly new infrastructure, such as building long system additions to provide new gas service to rapidly-growing areas of the Southwest.

3. How is decoupling different?

Decoupling does not change the traditional rate case procedure but, in its simplest form, adds an automatic "true-up" mechanism that adjusts rates between rate cases based upon the over- or under-recovery of target revenues. As in the traditional rate case, a rate is set by determining the revenue requirement and dividing it by expected sales[6]. Then, on a regular basis, prices are re-computed to collect a target revenue based on actual sales volumes[7]. Decoupling mechanisms can be designed to be adjusted on a monthly or quarterly basis, or some other regular interval.

> **A hypothetical example of how decoupling might work:**
>
> During its rate case, Utility A determines it will have a $1 million revenue requirement to provide electricity service 25 million kilowatt hours (kWh) of electricity in a test year. Under the existing system, this means Utility A will charge $.04 per kWh[1].
>
> If a successful energy efficiency program helped customers reduce overall consumption in by 1.5%, the utility would sell 375,000 fewer kWh, and its revenues would decline by $15,000. Under decoupling, prices would be adjusted to $.0406 per kWh to maintain the $1 million dollar allowed revenue recovery.
>
> If a customer's rate goes up, their bill won't necessarily follow, as will be discussed later in the FAQ: the bill-reduction benefits of consuming less significantly outweigh the reduction in those benefits that is caused by rates being adjusted.

The end result is that utilities should no longer have an incentive to maximize their sales because the rate of return does not change within the revenue requirement. Nor is there a disincentive to promote efficiency.

Decoupling should have the effect of stabilizing the revenue stream of a utility because its revenues are no longer dependent on sales. If sales increase, rates drop in the next period; if sales decrease, rates increase to compensate. Under traditional rate regulation, there is little oversight of earnings between rate cases, and it may be years before rates are re-aligned with actual revenue requirements. Since decoupling adjusts actual revenues to align them with revenue requirements, its proponents argue that it **reduces regulatory lag.**

4. What is the relationship between decoupling and incentives for energy efficiency?

If utilities are required to promote energy efficiency programs, their revenues may be affected through a variety of mechanisms. Commissions can address these new costs by providing program cost recovery and shareholder incentives, as well as by addressing the throughput issue.

A great deal has been written about incentives for energy efficiency, which is a related but different discussion. **While it can remove disincentives for utilities to promote efficiency, decoupling is not designed to create an incentive for energy efficiency.** Furthermore, as discussed above, there are other methods that remove the throughput disincentive, although revenue decoupling may best balance the removal of utility disincentives to energy efficiency while preserving customer incentives to deploy energy efficiency.

Some decoupling proponents have argued that removing disincentives is not enough. They contend that the cost of efficiency programs should be included as part of the cost of service. Moreover, in order to make efficiency investments profitable when compared to other possible investments that the utility could make, such as power plants or transmission, performance incentives for efficiency would reward utilities that invest in successful programs by allowing them to earn an equivalent rate of return on those investments. **Conversely, some argue that incentives alone, without decoupling, are a better approach to driving energy efficiency.** They note that many utilities are doing little to promote additional sales of electricity and the increases are customer-driven.

[6] In decoupling's simplest form, prices are adjusted to maintain a constant target revenue; however, in most applications of decoupling the target revenue is adjusted for changes in the customer base so that the revenue target varies with the number of customers, but not on the basis of how much electricity or gas the utility sells.

[7] The target revenue can be the same as that used in the last rate case, or it too can be adjusted over time by increasing or decreasing the average revenue per customer value. More information on alternatives to the Per-Customer method is included later in the FAQ.

Furthermore, some who have investigated decoupling note that in many cases utility spending on efficiency is already effective, cost-effective and well-managed. (Connecticut DPUC, 2006, NASUCA 2007 Resolution). In addition, large customers have argued that they may already possess the means and incentives to enact energy efficiency measures, and that decoupling does little to create new opportunities for efficiency in these markets (ELCON 2006).

Finally, **some argue that utilities are not the best providers of energy efficiency.** In this argument, utilities are organizations designed to deliver kilowatt hours and therms to their customers, and are ill-suited to champion products that "unsell" electricity or gas. Arguments have been made that taking utilities out of the efficiency businesses and having that function played by a State, quasi-State, or private sector entity is a preferable alternative to removing disincentives to their promoting efficiency (ELCON, 2006). In fact, numerous examples exist of successful efficiency programs being delivered by non-utility providers. However, some make the case that if utilities are required to examine efficiency as a resource comparable to supply (generation) and delivery (transmission) resources, this may create a perverse tension between the utility's least-cost resource planning processes and the financial interest of its shareholders (Costello, 2006) **In situations where the utility is recast as a provider of energy *services*, rather than a strict provider of kilowatt hours or therms, decoupling may help remove this tension** (Costello 2006, NAPEE, 2006).

Some proponents of decoupling also note that even if a the utility is taken out of the efficiency business and that function is played by a State, quasi-State, or the private sector, the problem of the effect of decreased sales on utility revenues due to energy efficiency and the consequent decreased likelihood of the utility receiving its authorized revenue requirement does not go away. In this argument, even if other entities are responsible for providing energy efficiency services, the same need for decoupling still exists.

Whether decoupling will in itself result in increased efficiency is still the subject of debate. While no major studies have been undertaken linking decoupling directly to increased efficiency activities at utilities, anecdotally energy efficiency advocates point to strong increases in efficiency spending concurrent with decoupling undertaken by utilities, in particular in the electricity sector, with examples such as Puget Energy and PacifiCorp increasing activity and spending under decoupling and experiencing drop-offs in efficiency spending when decoupling was rescinded (NRDC, 2001). However, a closer look at Consolidated Edison's efficiency spending while using decoupling (1993-1997) tells a different story: in this time period, efficiency spending increased by all the regulated utilities in New York, whether they used decoupling or not.

<u>Decoupling is one of three major approaches for dealing with the throughput issue:</u>

1. Full or Per-Customer Adjustment Revenue Decoupling. This is the mechanism that has been discussed so far. It adjusts utility revenues for any deviation between expected and actual sales regardless of the reason for the deviation. A variation of the full sales adjustment clause is the per-customer method, which sets a per-customer revenue target. In the years following a rate case, allowed revenues are adjusted for increases or decreases in the number of customers. In addition to Sales-Revenue Decoupling, another variation called "Sales-Margin Decoupling" separates margin recovery from sales by setting a margin-per-customer target. Any of these can use a forecast of revenue or use historical years to create a test year from which to derive the revenue target.

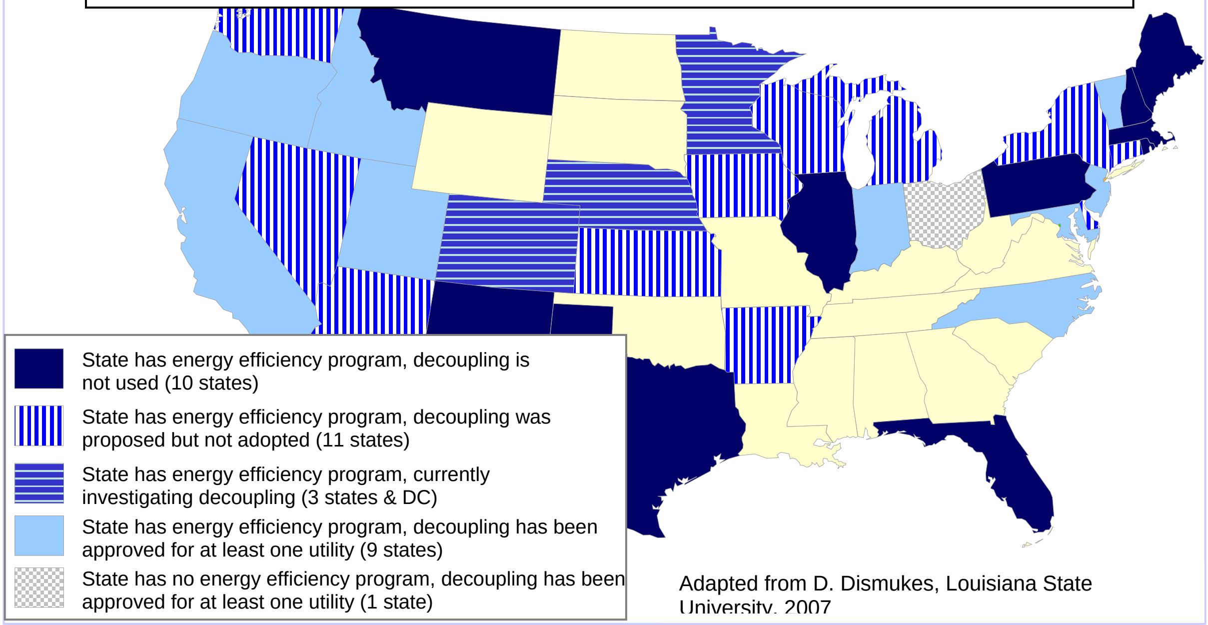
2. Net Lost Revenue Recovery, Lost Revenue Adjustments, or Conservation and Load Management Adjustment Clauses. This mechanism adjusts net changes in revenues only for sales deviations that can be proven or demonstrated to have resulted from conservation and load- management programs. Revenues continue to be susceptible to variations in sales from all other causes. While favored by some observers, this mechanism has also been criticized as being less effective than decoupling because it does not remove the sales incentive, can require much more sophisticated monitoring and evaluation, and could allow utilities to recover costs for expenditures on programs that do not result in increased efficiency.

3. Straight-Fixed Variable Rate Design. This mechanism eliminates all variable distribution charges and costs are recovered through a fixed delivery services charge or an increase in the fixed customer charge alone. With this approach, it is assumed that a utility's revenues would be unaffected by changes in sales levels if all its overhead or fixed costs are recovered in the fixed portion of customers' bills. This approach has been criticized for having the unintended effect of reducing customers' incentive to use less electricity or gas by eliminating their volumetric charges and billing a fixed monthly rate, regardless of how much customers consume.

5. Is decoupling new? What States have implemented a decoupling mechanism?

Although only a few States have adopted it, decoupling itself is not a new idea; in fact, it has been implemented in some parts of the country for decades. California has the most experience with decoupling, having operated such a mechanism in the electricity sector from 1981 through 1996, and just recently restarting the system in the State. Others that have implemented decoupling are detailed on the map below.

Ill. 1: States That Have Considered Electricity or Gas Decoupling



Note that some of these States have recently adopted decoupling (like Idaho), others have been using it for some time (e.g. Maryland), some have considered and rejected it (e.g. Connecticut and Arizona), some have discontinued using it (e.g. Maine) and others have discontinued, and then returned to using decoupling (e.g. California).

6. Will decoupling raise customer bills?

Because of the adjustment mechanism, some designs of decoupling could potentially result **in more frequent up-and-down changes in rates** for consumers. However, by increasing the frequency with which rates are brought into alignment with the PUC-approved revenue requirement, the changes should be smaller, and the likelihood of a sharp hike or decline in rates (common in traditional rate cases) may be reduced.

Decoupling could create higher bills for customers who do not participate in efficiency programs, although proponents of decoupling argue that these reductions would be diluted across a wide enough customer base to render any increases nearly unnoticeable. This may not occur, however, if decoupling is applied to a small customer class, where the effect of conservation in rates may be more pronounced.

Of special concern is the impact on low-income users, who would be least able to respond to changes in bills. Decoupling proponents note that this heightens the profile of targeted energy efficiency programs that serve these customers, lowering their bills without impacting utility revenues.

Others with concerns about decoupling comment that **unless it is designed to avoid doing so, decoupling could create unfair transfers between customer classes.** For example, if transfers between classes are allowed, commercial and industrial customers who are ineligible to participate in residential efficiency programs might see higher rates resulting from those programs.

Will rates go up for customers who implement energy efficiency? **Because they are consuming less, these customers' bills will go down.** Rates for all customers under a decoupling mechanism may increase in the short run when efficiency reduces sales because the utilities have to cover their costs and necessary returns on investments. In the example above, if the utility is selling fewer kWh of electricity, but its revenue requirement remains the same, each kWh will need to cover a greater share of the cost of service and will need to be priced higher. However, **any rate increases would be small, particularly when compared to the benefits for customers engaging in conservation**, and some analysis suggests the systemwide benefits from increased efficiency may outweigh costs for all customers[8]. Moreover, if efficiency programs cut sales without lessening fixed costs, under traditional regulation rate calculations would reflect that in the next rate case anyway.

Will decoupling result in rampant rate instability? In the experience of some States, such as New York, California, and Oregon, fluctuations in rates under decoupling were less than 1% for ratepayers in most years, and never exceeded 4%. **Customers may already see significantly greater rate variability through surcharges for fuel and purchased power.** Moreover, rate variability under decoupling may depend on a number of factors, including the program design, but also including other factors, like economic and weather variability. These examples and issues are discussed more in the section on "Does Decoupling Transfer Risk to Customers" section, later in the FAQ.

In theory, decoupling adjusts rates to more closely maintain the underlying relationship between prices and revenue requirements over time. **This should lessen the likelihood of large-scale "rate shocks" in the next rate case** (though this may vary based on the frequency of the reconciliation.) There are other mechanisms that can be put into place to reduce the frequency of large rate adjustments, including using a balancing account, applying a "Rate-Adjustment Band," or including a course-correction mechanism. These are also discussed in more detail in the "Off-Ramps & Adjustments" section later in the FAQ.

How is decoupling different from having more frequent rate cases? Decoupling does not change the rate base and rate of return decided in a rate case. It is also worth remembering that **decoupling affects revenue only between rate cases**: at the next rate case, the base rates are reset, using the mechanisms familiar to regulators in traditional cost of service regulation. Some have argued that a utility would not need decoupling if it regularly entered into rate cases. Decoupling proponents have replied that it is a mechanism used to make utilities indifferent to sales as a function of profits, and that regular rate cases remain essential but are not the same thing. Moreover, **rate cases are expensive and time consuming, and most consider it impractical to revise base rates with the frequency proposed for adjustments under decoupling.** In the 1990s, Wisconsin revised its base rates each year but discarded this approach because of the effort involved and the less-predictable incentive structure created for utilities by the short period between rate cases.[9]

7. Does decoupling transfer risk from the utilities to customers?

Efficiency is not the only variable that can affect sales. For example, an unexpectedly hot summer can increase sales, or an economic

[8] Rates may go up to restore the lost distribution revenue, but utility bills could also drop as cost-effective efficiency offsets the need to purchase more expensive kilowatt-hours or therms. In this case, the utility would be able to sell less electricity or gas with no corresponding loss of revenue, while customers would benefit by avoiding the costs of the electricity or gas that is not needed.

[9] Some commenters have raised an objection to decoupling, making the case that **it violates a regulatory principle against single-issue ratemaking.** They note that decoupling focuses on efficiency and ignores other sources of costs increases & decreases that are considered in a traditional rate case that may counterbalance changes in rates from efficiency. Decoupling proponents argue that with normalization mechanisms, these other factors are taken into account and that decoupling simply raises the profile of demand-side management's effect on revenue. On a regulatory theory level, they assert that decoupling meets the requirements for a "tracker", a ratemaking instrument designed to take into account specific issues that have effects on rates.

downturn can drive commercial customers out of business and reduce sales. Under traditional regulation, risk is borne by utilities (and shared with customers via rate pass-throughs) for a number of factors that can affect sales that are beyond the utility's control. In both cases, the utility's fixed costs would remain the same, and changes in revenues would not be related to changes in underlying costs for the utility to provide service. Some argue that because decoupling constrains the utility's revenues to "normal weather" levels and economic trends, theoretically the utility's business and weather risk conveyed in rates for fixed costs is eliminated entirely. They have raised a concern that this represents a shift of risk from the utility to customers.

One of the main reasons some Public Utility Commissions are reluctant to explore decoupling is **the concern that revenues could remain stable for utilities even if weather or business factors cause customer rates to increase** or to incur large balances in deferral accounts, illustrated by Maine's experience in the 1990's (see box, this page.)

Maine's decoupling experience

If the impact of energy efficiency is not adequately anticipated during the rate case, sales will be lower than expected and rates will go up. But rates could also go up if sales are lower because of a mild summer or an economic downturn. This created a crisis in Maine, which had pioneered a decoupled rate design with Central Maine Power in 1991 but faced a recession in the early 1990s. The recession resulted in lower electricity sales, and the decoupling adjustments kicked in to reflect pre-recession target revenues, causing rates to go up when customers were least prepared to pay them. This sudden and sharp downturn in the Maine economy reduced consumption to a much greater degree than the utility's efficiency efforts, and decoupling became increasingly viewed as a mechanism that was shifting the economic impact of the recession from the utility to consumers, rather than providing the intended energy efficiency and conservation incentive impact. By 1993, deferrals accumulated by the adjustment mechanism had reached $52 million, and the PUC and the utility agreed to end the experiment. (Maine PUC, 2004) It should be noted that while decoupling is often cited as the culprit here, in fact the economic downturn was the problem. Traditional regulation would have eventually yielded rate changes through a traditional rate case and the resulting price increases would have reflected the same economic circumstances.

Proponents assert that decoupling can use normalization mechanisms to eliminate these risks or assign them appropriately, and some State experiences suggest that decoupling may not shift any risk to consumers. California's Electric Rate Adjustment Mechanism (or ERAM, which operated between 1981 and 1996) adjusted the target revenue based on factors affecting the cost of service which were beyond the utility's control, such as inflation or weather. A 1994 analysis of California's program found that "the record in California indicates that the risk-shifting accounted for by ERAM is small or non-existent and, in any case, ERAM has **contributed far less to rate volatility than have other adjustments to rates, such as the fuel-adjustment clause.**" The analysis concluded that California's decoupling created lower risks for consumers (that they could be faced with unexpected bill increases) and profit risk reductions to utilities (who could be assured of fixed cost recovery, even in the face of efficiency improvements) (Eto et al, 1994).

The authors went further, undertaking a statistical analysis to calculate the dollar value of risk from shifts in weather and economic activity under decoupling in a hypothetical case. Based on these estimates, the authors concluded that with the normalization procedures used in this decoupling structure, the quantitative risk burden transferred to consumers would be one-fifth of one percent of electricity revenues from each of those customers – **a $2 risk-shifting burden on a $1200 annual bill.** (Eto et al, 1994)

Consolidated Edison in New York had a similar mechanism in place from 1993 to 1997. The rate variability under this system suggests that rate impacts were minimal here as well. In 1993, a shortfall with just under 3% effect on rates was collected from customers, and rates went up. For the next four years, over-collections occurred, and rates went down just under 1% per year. (NRDC, 2001)

Under some decoupling mechanisms (such as some of those implemented in the Pacific Northwest) **the revenue target can be adjusted to accommodate unexpected weather patterns**. Northwest Natural Gas in Oregon, for example, subtracts an estimated sales impact for weather from its periodic adjustment. A more complex, but comprehensive, approach is called "statistical recoupling," in which weather, fuel costs, economic changes, and the number of customers is modeled, and that model is used to determine the revenue target. (Eric Hirst, 1993)

Some have raised a concern about statistical recoupling and about other economic and weather normalization methods, commenting that **adding these systems makes decoupling so complicated that its administrative and accounting burdens can outweigh its benefits, or that it can be manipulated to allow "over-earning" by utilities.** Some proponents of decoupling respond that weather and economic risk is already shared with consumers through rates, and that the traditional rate case structure simply delays accounting for these costs (or revenues) until the next rate case. Moreover, weather normalization computations of some type are universally included in the determination of the revenue requirement in each rate case, with about half of the States allowing normalization adjustments between rate cases.

8. Will decoupling discourage utility companies from cutting their costs?

No. Concerns have been raised that to the extent that utilities become isolated from possible changes in revenues, they have little motivation to lower their costs in order to meet their revenue requirement. However, **because decoupling affects only revenues, the utility remains at risk for any changes in costs.** Decoupling proponents argue that the rate case mechanism underlying decoupling continues to ensure that utilities strive to control fixed costs that cannot easily be reduced to the greatest degree possible. They note that performance indicators can also be included to identify when cost reductions have arisen from a decreased level of service rather than from gains in efficiency.

One solution pioneered by New Jersey in its Conservation Incentive Program allows gas utilities to adjust their rates to account for changes in consumption resulting from efficiency efforts, but **the adjustment is capped at the amount of verifiable supply cost reductions achieved by the utility.** (Fox et al, 2007)

9. Can a utility increase its profitability with decoupling?

Yes. With a per-customer form of decoupling, utilities receive their revenue from customers that cover the fixed costs of service, and that cost of service includes a rate of return that contributes to profits. In other words, instead of making more money by selling more kilowatt hours or therms, utilities would make more money when they increase their customer base, regardless of whether there is a corresponding increase in sales. Alternatively, **if the utility can find a way to improve its efficiency and thereby lower its cost of service without decreasing its number of customers, it has an opportunity to improve its bottom line.** Under decoupling, the primary driver for profitability growth is the addition of new customers, especially in areas where the addition of new customers does not carry high infrastructure addition costs. In these cases, the customers who would bring the greatest potential profitability to a utility are those who are the most energy efficient, since they can be added with the lowest incremental addition to the utility's cost of service[10].

As noted before, decoupling can reduce risk for the utility by ensuring that its revenues and return on investment remain stable. **A lower risk-profile should make the cost of capital lower for the utility[11].** For investors, this can be realized through an increase in the utility's debt/equity ratio, a decrease in the return on equity, improved debt ratings and credit requirements.

10. Is decoupling different for gas than it is for electricity?

Decoupling is fundamentally the same for both gas and electric utilities. They both share similar cost structures which are dominated by high fixed costs. However, the two industries are facing different underlying trends in customer revenues. While the gas industry generally faces declining average revenues per customer over time, the electric industry is experiencing increasing average revenues per customer. As a result, gas utilities tend to face revenue and profit erosion between rate cases, while electric utilities garner increasing revenue and profits between rate cases. Decoupling

[10] Again, this may reflect differences between regions and sectors: where unexpectedly adding new customers brings significant new operating costs not anticipated in the rate case, the outcome may be different and, as would occur in traditional ratemaking, could trigger a rate case.
[11] Illustrating this, one utility has proposed a lower target return as part of its decoupling proposals in MD and DC.

has the effect of eliminating most of these effects. As a result, gas utilities have tended to be more open to implementing decoupling than have electric utilities. However, a small but growing number of electric utilities have either implemented, requested or are investigating decoupling. Some have suggested that this could be partly in response to longer-term expectation about capital expenditures and environmental costs. Energy efficiency may be a cost-effective way to avoid potential future risks such as carbon regulation. In addition, recent policy initiatives at both the federal and State level have embraced energy efficiency as a high priority resource[12]. If energy efficiency is deployed more widely in the future, electric utilities may become more interested in decoupling.

What off-ramps and adjustments are possible?

Decoupling is a substantial departure from traditional rate-making, and may be new to States and utilities. Therefore it makes sense to approach implementation with caution, considering corrective mechanisms to ensure that the change in structure has the intended effects and avoids harmful unintended consequences. Some of the mechanisms that have been considered are:

Balancing Accounts: Depending on the frequency of adjustments, a separate account can be established and used to track and accumulate over- or under-collections, in order to defer the adjustment and "smooth out" unusual spikes in rates. Typically this kind of account is used when adjustments are scheduled to occur less frequently.

Rate banding: As discussed above, this triggers the periodic adjustment to rates when the changes in revenue would result in a change within a certain percentage. If the rate band were set to 10% over or under the target rate, only changes less than 10% would trigger the adjustment. Outside the band, a new rate case would be triggered.

Revenue banding / shared earnings: In order to prevent unintended windfalls or shortfalls by the utility, earnings greater or less than certain limits can be shared with customers. For example, if an earnings band is set to 5% of return on equity compared to the allowed return found in the most recent rate case, earnings or shortfalls greater than 5% would be shared with consumers on a proportional basis though rates. This can also be computed on the basis of revenue changes, which avoids the complication (and potential litigation) of computing returns on equity.

Course corrections for single events, changes in industrial customers or activity: The addition of a new customer among large users, such as an industrial customer, or large change in the activity of a customer--a factory adding a new shift, for example--can have a disproportionate effect on rates for other customers in that class. In these cases, language allowing for adjustments that take special circumstances into account can help avoid unexpected rate shifts.

11. Would decoupling work the same for regulated and deregulated States?

Broadly speaking, utilities in deregulated markets appear to be more vulnerable to revenue losses incurred by decreased sales from efficiency than utilities in vertically-integrated markets. In the 2006 report on the National Action Plan For Energy Efficiency, the authors note that "once divested of a generation plant, the distribution utility is a smaller company (in terms of total rate base and capitalization), and fluctuations in throughput and earnings have a relatively larger impact on return." (NAPEE, 2006)

In States where distribution utilities purchase most or all of their commodities from a wholesale market, decoupling would be integrated into the largely-fixed cost structure of the distribution utilities. In States with vertically integrated utilities, decoupling can also be applied, but care must be taken in the rate case context to accurately separate fixed costs from variable costs, applying the decoupling adjustments only to the fixed costs. In all other respects, decoupling is applied in the same manner in both types of situations.

12. Where can I find out more?

This FAQ was authored by NARUC's Grants & Research staff with funding from the U.S. Environmental Protection Agency. It was developed through research, interviews, and input from a number of parties, including the staffs of the New Jersey Board of Public Utilities, Massachusetts Department of Public Utilities, Arizona Corporation Commission, US Environmental Protection Agency, North Carolina Attorney General's Office, and Public Service Commission of the District of Columbia. Oversight was provided by Commissioner Rick Morgan of the District of Columbia PSC, and technical assistance came from Wayne Shirley of the Regulatory Assistance Project. *More resources on decoupling are included below.*

[12] For more on energy efficiency as a high priority resource, see the National Council on Electricity Policy's study for DOE's Section 139 Report To Congress (2006) and the National Action Plan on Energy Efficiency, (2006).

RESOURCES

1. NARUC Resolution on Gas & Electric Energy Efficiency, July 2004. http://www.naruc.org/associations/1773/files/gaselectriceff0704.pdf
2. The US Department of Energy EPAct Section 139 Report to Congress, Appendix A, "A Study by the National Council on Electricity Policy on State And Regional Policies That Promote Electric & Gas Utility Programs To Reduce Energy Consumption, March 2007 http://www.ncouncil.org/pdfs/139_Rpt.pdf
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