Report on Revenue Decoupling for Transmission & Distribution Utilities

Presented to the Utilities & Energy Committee by the MPUC, OPA and OEIS

January 31, 2008

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I. INTRODUCTION

In the 1st Regular Session of the 123rd Legislature, the Utilities and Energy Committee (Committee) considered LD 1836, An Act to Save Money for Maine Energy Consumers through Enhanced Energy Efficiency. The Committee voted "Ought Not to Pass" on the bill. However, during the work session on LD 1836, some Committee members indicated that they remain concerned about the financial incentives for Maine's transmission and distribution (T&D) utilities to encourage increased electricity consumption over energy efficiency and conservation.

In separate letters to the Office of Energy Independence and Security (OEIS), Office of the Public Advocate (OPA) and Public Utilities Commission (Commission) (collectively, the Agencies) dated June 14, 2007, the Committee Chairs requested the Agencies to jointly convene a stakeholder group to discuss the Committee's ongoing concern and to explore rate design options, including decoupling mechanisms, to reduce current regulatory incentives to T&D utilities to promote consumption. The June 14th letters requested the Agencies to report back to the Committee by January 15, 2008 on the results of the stakeholder discussions.

This report is being submitted jointly by the Commission, OPA and OEIS and is intended to respond to the Committee Chairs' June 14th letters.

II. BACKGROUND

Representatives of the Agencies met in June and July to discuss the stakeholder group process and potential participants. During our preliminary meetings, the Agencies agreed to a four-part stakeholder group process and tentative schedule for completing the required report. By letter dated July 27, 2007, the Commission provided a summary of the proposed process to the Committee Chairs. That proposed process and schedule was ultimately implemented and is outlined below.

- **Pre-Meeting (August 1st through September 13th)**. During the pre-meeting phase, the Agencies contacted potentially interested persons and identified people who wanted to participate in the stakeholder group process. During this phase, the Agencies solicited relevant documents from interested persons and distributed those documents to the evolving stakeholder group.

- **Stakeholder Group Meeting (September 14th).**

- **Post-Meeting (September 15th through October 15th).** During this part of the process, the Agencies distributed, and invited comments on, the meeting notes that were prepared by the OPA.

During this phase, the Agencies also distributed additional decoupling documents.

- **Report Drafting (October 15th through January 15th).** During the final phase of the process, the Agencies distributed a draft outline of the report and solicited input. The Agencies then issued a draft report, invited and incorporated comments and recommendations, finalized the report and submitted the final report to the Committee.

A. Composition of Stakeholder Group

On August 13th, the State Planning Office (SPO), on behalf of OEIS, sent a letter to prospective participants notifying them of the formation of the stakeholder group and inviting them to participate. Shortly thereafter, SPO sent a second letter to participants notifying them that the stakeholder group would meet on September 14th and inviting them to attend.

The following people indicated that they would like to be members of the stakeholder group. The people/organizations underlined in the following list attended the September 14th stakeholder group meeting.

<u>David Allen - Central Maine Power Company</u>
Newell Augur – Bangor Hydro Electric Company
Senator Phil Bartlett
<u>Representative Seth Berry</u>
Representative Larry Bliss
<u>Brent Boyles - Maine Public Service Company</u>
<u>David Bragdon – Energy Matters to Maine</u>
Tony Buxton – Industrial Energy Consumer Group
<u>Representative Stacey Fitts</u>
<u>Representative Jon Hinck</u>
Senator Barry Hobbins
<u>Jeff Jones - Bangor Hydro-Electric Company</u>
Linda Lockhart - Industrial Energy Consumer Group
<u>Calvin Luther – Bangor Hydro-Electric Company</u>
<u>Sharon Staz – Kennebunk Light and Power District and Dirigo</u>
<u>Michael Stoddard - Environment Northeast</u>
<u>Dylan Voorhees - Natural Resources Council of Maine</u>

In addition to the stakeholders listed above, representatives from several state agencies participated in the process. The Agencies also invited the Regulatory Assistance Project (RAP) to participate in the process. The following people participated on behalf of state agencies and RAP. Those underlined in the following list attended the September 14th stakeholder group meeting.

Dick Davies – OPA
Sue Inches – State Planning Office
John Kerry – OEIS
Lucia Nixon - Office of Policy and Legal Analysis
Chris Simpson – PUC
Mitch Tannenbaum - PUC
Vendean Vafiades – PUC
Suzanne Watson - Department of Environmental Protection
Rick Weston – RAP

B. Document Exchange

The Agencies determined that two of the primary objectives of the stakeholder group process are to (1) conduct a search of current literature on decoupling and related issues and (2) facilitate the exchange of relevant documents among the stakeholders. To accomplish these objectives, the Agencies actively solicited relevant documents from stakeholders. In our initial memo to stakeholders, the Agencies noted that:

> In our report to the Committee, the Agencies need to identify current trends regarding decoupling and summarize what other states are doing regarding decoupling. We invite stakeholders to share with the Agencies and the group any other documents that they think may be worthy of discussion by the group and/or useful to the Agencies in drafting the report to the Committee.

Several stakeholders submitted a variety of useful and informative documents to the Agencies that were, in turn, distributed to the full stakeholder group by memos dated September 5, 2007, September 12, 2007, and October 2, 2007. Relevant documents were also exchanged during the September 14th stakeholder group meeting. Some of these documents are discussed in this report and are included as attachments to the report.

C. September 14th Meeting

The Agencies agreed that the meeting should include an educational component. To help satisfy this objective and to expand the scope of the discussion, the Agencies invited Rick Weston of RAP to attend the September 14th meeting and provide the group with a description of various decoupling mechanisms and a summary of decoupling activities in other jurisdictions.

To help stakeholders prepare for the meeting, the Agencies emailed a draft agenda to stakeholders two days before the meeting. To provide a status report to interested persons who were not able to attend the September 14th meeting, the Agencies emailed a summary of the meeting to all persons on the stakeholder group distribution list. A copy of the September 14th meeting summary is included as Attachment A to this report.

D. Report Drafting Process

On October 22, 2007, the Commission emailed an outline of the draft report to stakeholders and invited comments. We received comments from seven stakeholders and attempted to incorporate the suggestions into the draft report.

On November 21st, the Commission emailed the draft report to all stakeholders and invited comments and suggested edits by December 10th. In addition, the Commission invited stakeholders to submit specific comments and recommendations regarding the implementation of a decoupling mechanism in Maine and noted that we would attach a compilation of stakeholder comments/recommendations to the report. We received comments/recommendations from three[1] stakeholders and have included those comments/recommendations as Attachment B to this report.[2]

E. Scope of the Report

During the September 14th meeting, the group briefly discussed the scope of this report. Commission representatives noted there are a variety of regulatory mechanisms that are designed to promote energy efficiency.[3] The group agreed that the primary focus of the report should be on revenue decoupling mechanisms. However, there was some discussion during the September 14th meeting about fixed charge rate design as a way to eliminate a

[1] The Agencies received comments on the draft report from RAP, the Natural Resources Council of Maine and Environment Northeast.

[2] We thank the stakeholders for their comments and have incorporated many of their suggestions in the text of the final report. We have attached stakeholder comments in their entirety because (1) in early process discussions we indicated to stakeholders that we would do so and (2) we wanted to make sure the Committee had the opportunity to see the comments in their entirety. We note, however, that some of the comments in Attachment B include references to page and paragraph numbers from an earlier draft of the report. In some instances, this makes it difficult to compare the comments with the final report.

[3] Some of these mechanisms are discussed in the Commission's February 1, 2004 report to the Committee titled *Report on Utility Incentive Mechanisms for the Promotion of Energy Efficiency and System Reliability,* Maine Public Utilities Commission (*MPUC 2004 Incentives Report*). (See pages 27-36.) The MPUC 2004 Incentives Report can be viewed on the Commission's webpage at http://www.maine.gov/mpuc/staying_informed/legislative/2004legislation/Eff-Rel%20Report-final.htm.

T&D utility's incentive to promote sales.[4] In post-meeting comments, Sharon Staz provided information to the Agencies about the Fox Island Electric Cooperative's (FIEC) ongoing consideration of a fixed charge rate design. While the Agencies consider a detailed discussion of fixed charge rate design beyond the scope of this report, we wanted to remind the Committee that there are a variety of alternative regulatory mechanisms that can be used to remove a utility's incentive to promote sales and that FIEC is currently considering the merits of a fixed charge rate design.

F. Decoupling Mechanism Design Considerations

During the September 14th meeting, the Agencies noted that there is significant disagreement about the relative merits of revenue decoupling and that they were not attempting to reach consensus through the stakeholder process. The Agencies did note that they would identify some decoupling mechanism design considerations in this report to highlight key issues for the Committee. These design considerations are included in section VII of this report.

The Agencies further noted that they did not intend to include specific recommendations about the whether a decoupling mechanism should or should not be adopted in Maine. They further noted that stakeholders would be invited to submit written recommendations regarding the implementation of revenue decoupling and that stakeholders' written recommendations would be appended to the report for the Committee's consideration. As noted above, stakeholder recommendations are contained in Attachment B to this report.

III. DESCRIPTION OF REVENUE DECOUPLING

Revenue decoupling is a form of utility[5] ratemaking in which the corporate earnings of a utility are made independent of its level of sales.[6] The purpose of

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[4] The more a utility's costs are recovered through fixed charges (as opposed to usage sensitive charges) the less financial incentive the utility will have to promote sales or discourage energy efficiency. See pages 32- 35 of the *MPUC 2004 Incentives Report* for a discussion of fixed charge rate design.

[5] This report focuses on the application of decoupling mechanisms to T&D utility ratemaking. The Agencies adopted this focus because the June 14th letters from the Committee Chairs indicated that the Committee's concerns related specifically to the financial incentives of T&D utilities. We note that much of the discussion regarding revenue decoupling applies with equal force to gas utilities as is reflected in several of the attached documents.

[6] This does not mean that decoupling "guarantees" a specified amount of earnings for the utility. Under decoupling, only the level of revenues is predetermined. The utility's ultimate earnings will continue to be a function of the utilities managerial and operational performance.

this form of ratemaking is to remove the financial incentive that utilities have to discourage energy efficiency and conservation activities, and to promote electricity sales.[7] This financial incentive is inherent in both traditional ratemaking and multi-year rate cap plans.[8] Under such regulatory paradigms, a utility's revenues (and therefore earnings) are linked directly to sales volumes. Thus, any activity that lowers sales volumes, such as energy efficiency or conservation, will have a negative impact on the utility's bottom line. Conversely, any activity that increases sales will have a positive impact on the utility's earnings.

Revenue decoupling works by severing the link between a utility's sales and its earnings. This is accomplished by pre-establishing a utility's "allowed" revenues, which would typically occur in a traditional rate case proceeding. These allowed revenues are periodically compared to the utility's actual revenues and the difference is tracked for ratemaking purposes in a deferred account. In the event actual revenues are greater than allowed revenues, the difference is returned to ratepayers through a rate reduction. Conversely, if actual revenues are below allowed revenues, the difference is collected by the utility through a surcharge on rates. By establishing a ratemaking process in which the revenue a utility ultimately obtains is independent of sales levels, the financial disincentive that exists under traditional and rate cap regulation to promote energy efficiency and conservation, as well as the incentive to promote increased consumption, is removed because profits are no longer a function of sales volume.

Revenue decoupling does not, however, provide any positive incentive for utilities to promote or support energy efficiency or conservation programs. The mechanism only makes a utility financially neutral to such activities.[9]

The concept of revenue decoupling is not new. It was developed in the late 1980s and early 1990s to address the utility financial incentive problem. During this time, T&D utilities generally were required to take an expanded role with respect to designing and delivering energy efficiency and demand-side management programs. Because of this expanded role, it became important to attempt to align the financial interests of utilities with their obligations to conduct efficiency programs. Without a change in ratemaking approach, utilities would

[7] Decoupling would also remove a utility's financial incentive to discourage on-site generation.

[8] Over the past 15 years, Maine's T&D utilities have operated under both traditional regulation and multi-year rate cap plans.

[9] There are mechanisms that would create a positive incentive for a utility to engage in efficiency and conservation activities. In effect, all such mechanisms involve ratepayer payments to utilities associated with efficiency programs that enhance their earnings. Such mechanisms are beyond the scope of this report.

have the incentive to design programs that appeared to conserve electricity, but were actually ineffective in doing so.

Maine attempted to address the incentive problem in the early 1990s by adopting a revenue decoupling mechanism known as "ERAM per customer." As discussed in section V, below, Maine quickly abandoned its experiment with decoupling. Other states also adopted decoupling mechanisms that were later discontinued.[10] In section VI below, we note the recent renewed interest in revenue decoupling and the various states that have either adopted a decoupling mechanism or are considering the adoption of such a mechanism.

With the restructuring of the State's electric industry, Maine greatly diminished the financial incentive problem by eliminating the utility obligation to conduct efficiency and conservation programs and placing that obligation first with the State Planning Office and later with the Commission. As a result, Maine utilities no longer have an obligation to conduct programs whose success would be contrary to their financial interest. Thus, the need to address the financial incentives of utilities through changes in the ratemaking structure is significantly less in Maine than in other states in which utilities are required to conduct efficiency programs.

However, Maine's utilities continue to have an incentive to promote sales and act in ways that can be viewed as contrary to State policies regarding energy efficiency and conservation. This continuing financial incentive has lead to utility efforts to enhance sales (or reduce the erosion of sales) through such activities as use of bill inserts to encourage usage by promoting air conditioners, space heaters or increased lighting,[11] opposing legislation that would increase efficiency spending through increases in electricity rates, and resisting the installation of on-site generation (generally on the grounds that purchases from the grid are more cost-effective).

IV. ATTRIBUTES OF REVENUE DECOUPLING

All utility ratemaking paradigms have both positive and negative attributes. The same is true for revenue decoupling. Revenue decoupling mechanisms can be designed to effectively sever the link between utility sales and utility earnings. However, the impact of revenue decoupling is not specific to revenue losses from efficiency or conservation activities. Revenue decoupling results in utilities being

[10] The *MPUC 2004 Incentives Report* contains a table (page 38) that lists states that had adopted decoupling mechanism in the past, but were no longer operating under the mechanism. At the time of that report, no state was utilizing a decoupling mechanism.

[11] Although Central Maine Power Company (CMP) uses bill inserts in this manner, the inserts do promote the use of energy efficient appliances.

financially neutral to the impact on sales levels (either sales decreases or increases) from any cause, most notably economic conditions and the weather. Revenue decoupling would also reimburse a utility for revenue loses that result from price-induced conservation that does not result from any type of conservation program. Although decoupling does render a utility financially neutral to sales volume, it does not guarantee that the utility will earn its allowed return on equity. Thus, a utility retains its financial incentive to minimize its costs under decoupling.

By severing the link between utility sales and earnings, revenue decoupling has the effect of eliminating a utility's risks of revenue fluctuations deriving from economic cycles and weather variation. Under a decoupling regime, a utility would automatically be kept financially neutral (through future ratepayer surcharges) if an economic downturn or an unexpectedly warm winter results in decreased revenues. Conversely, ratepayers would automatically benefit (through ratepayer refunds) in the event there is higher than expected revenues from economic expansion or colder winter weather. The elimination of a utility's sales level risk that occurs with revenue decoupling should be offset to some degree by a lower cost of capital for the utility that could translate into some level of lower rates.

The operation of the revenue accounting deferrals inherent in revenue decoupling results in periodic surcharges or refunds. This tends to increase rate volatility and uncertainty relative to traditional or rate cap regulation.[12] There are, however, adjustments that can be made to a revenue decoupling mechanism to reduce rate volatility. For example, the allowed revenue under a revenue cap could be adjusted for weather or economic conditions. The implementation of these types of adjustments, however, is complicated and may not work as intended.

Revenue decoupling does remove the impact of sale levels on utility earnings, but may not result in the utility becoming entirely indifferent to the overall level of sales. As a general matter, the loss of utility sales results in higher electricity rates regardless of whether there is a decoupling mechanism in place.[13] Even if its earnings are unaffected, a utility should still have an interest in minimizing its overall rate levels. Utility efforts to increase rates often result in customer acceptance issues and controversy that could entail expensive litigation. Moreover, the more that rates increase, the greater the likelihood that additional customers would seek to leave the grid, resulting in upward pressure

[12] The level of volatility would be less in a restructured environment in which only distribution revenue would be subject to refund or surcharge compared to utilities that have fixed cost generation assets.

[13] To the extent that lower utility sales result from cost-effective energy efficiency, price increases will be offset by bill decreases.

on rates. Therefore, decoupling may not completely neutralize a utility's efforts to maximize sales or avoid significant decreases in load.

In the event that a decoupling mechanism does completely neutralize a utility's interest in sale levels as intended, there are a variety of implications outside the context of energy efficiency and conservation. A utility that is completely neutral to sales would have less interest in promoting economic development within its service territory.[14] Similarly, a utility would have little interest in offering a larger customer a special discount rate as an incentive to remain on the grid (as opposed to self-generation) or to otherwise act to ensure that customer decisions to leave the grid are based on sound economic analysis. The result could be higher than necessary electricity rates and uneconomic decisions by individual customers to cease or reduce purchases through the electricity grid.

For the reader who would like additional information about the attributes of revenue decoupling, we have attached several documents to this report. Attachment C was published by the National Association of Regulatory Utility Commissions (NARUC) in September 2007 and titled *Decoupling for Electric and Gas Utilities: Frequently Asked Questions (NARUC FAQ document)*, provides useful background information and includes a detailed bibliography of current resources on the subject. Attachment D, which was adopted by the National Association of State Utility Consumer Advocates (NASUCA) in June 2007, is captioned *NASUCA Energy Conservation and Decoupling Resolution*. Attachment E is *A Response to the NASUCA "Decoupling" Resolution*, which was published in August 2007 by 11 separately named organizations. Attachment F is a PowerPoint presentation made by RAP in April 2007 and titled *Energy Efficiency and Utility Profits: Aligning Incentives with Public Policy*. Attachment G, a document titled *Revenue Decoupling*, is a policy brief prepared by the Electricity Consumers Resource Council (ELCON) in January 2007.

V. MAINE'S EXPERIENCE WITH REVENUE DECOUPLING

As mentioned above, Maine has experience with revenue decoupling that is generally considered a failure. In 1991, the Commission adopted, on a three-year trial basis, a revenue decoupling mechanism for CMP (referred to as "Electric Revenue Adjustment Mechanism" or "ERAM").[15] The "allowed" revenue was determined in a traditional rate case proceeding and adjusted annually

[14] If a "per-customer" decoupling mechanism is in place (see section VII, below), a utility would have the financial incentive to encourage new business to enter the State, but would not have the incentive to encourage increased production.

[15] *Investigation of Chapter 382 Filing of Central Maine Power Company, Order,* Docket No. 90-085 (May 7, 1991).

based on changes in the utility's number of customers (as a result the mechanism was also referred to as "ERAM per customer"). Analyses before the Commission at the time indicated that changes in the number of customers were at least as good an indicator of CMP's costs as changes in sales levels. CMP's ERAM was not, however, a multi-year plan, so CMP was free to file a rate case at any time to adjust its "allowed" revenues.

CMP's ERAM quickly became controversial. Around the time of its adoption, Maine, as well as the rest of New England, was experiencing the start of a serious recession that resulted in lower sales levels. The lower sales levels caused substantial revenue deferrals that CMP was ultimately entitled to recover. CMP filed a rate case in October 1991 that would have increased rates at the time, and resulted in lower amounts of revenue deferrals. However, the rate case was withdrawn by agreement of the parties to avoid immediate rate increases during bad economic times.[16]

By the end of 1992, CMP's ERAM deferral had reached $52 million. The consensus was that only a very small portion of this amount was due to CMP's conservation efforts and that the vast majority of the deferral resulted from the economic recession. Thus, ERAM was increasingly viewed as a mechanism that was shielding CMP against the economic impact of the recession, rather than providing the intended energy efficiency and conservation incentive impact. The situation was exacerbated by a change in the financial accounting rules that limited the amount of time that utilities could carry deferrals on their books.

Maine's experiment with revenue cap regulation came to an end on November 30, 1993 when ERAM was terminated by stipulation of the parties.[17]

VI. ACTIVITIES IN OTHER STATES

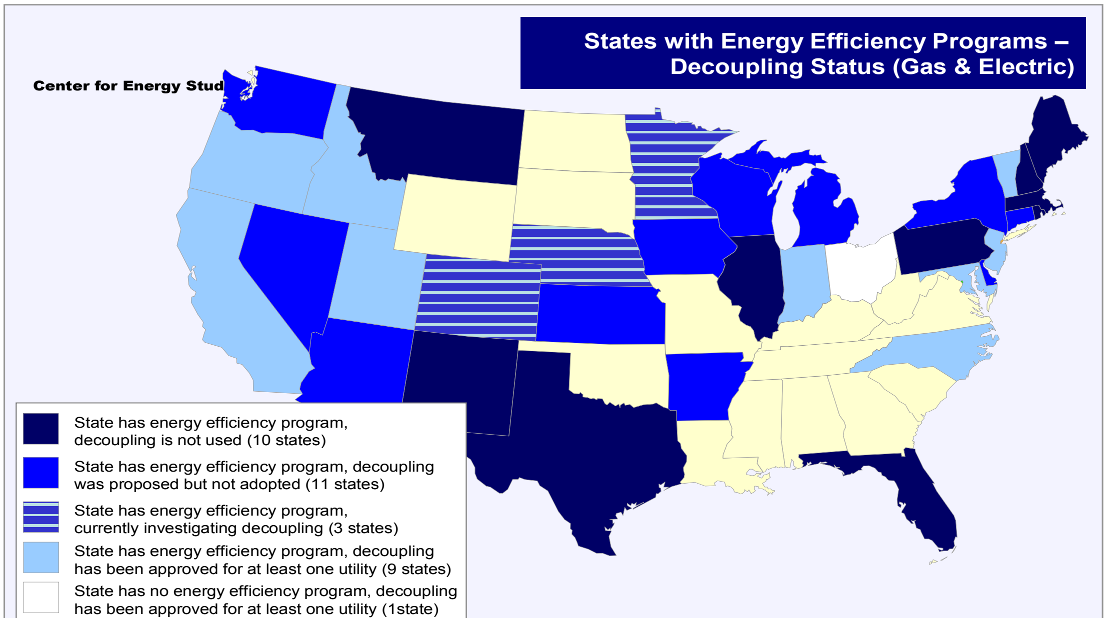
As discussed above, decoupling is not a new concept. It was developed over 15 years ago and was implemented in Maine and in other states in the 1990s. However, there has been a renewed interest in revenue decoupling in recent years. In the last few years, several states have adopted decoupling mechanisms, including Maryland, Delaware, California, New York and Idaho.

[16] *Proposed Increase in Rates, Order Granting Motion to Withdraw Proceeding,* Docket No. 91-174 (Jan. 10, 1992).

[17] *Consideration of Issues Concerning ERAM-Per-Customer for Central Maine Power Company, Order Approving Stipulation,* Docket No. 90-085-A (February 5, 1993). After the termination of ERAM, the Commission's efforts regarding incentive regulation moved to the development of rate cap regulation.

Within New England, Connecticut,[18] Massachusetts,[19] and New Hampshire[20] are at various stages of considering the adoption of a decoupling mechanism.

As the following map shows, 10 states have currently adopted a decoupling mechanism for at least one of their utilities.[21]



Note: In Connecticut, the electric utilities do not have decoupling, but two natural gas LDCs have a partial decoupling mechanism in connection with their energy efficiency programs for low-income customers (a conservation adjustment mechanism). Washington has utilities with decoupling, but rejected the most recent utility proposal (January 2007). In Michigan, revenue decoupling was proposed by the Michigan Staff but opposed by the Michigan AG. The MPSC approved a stipulation that excluded revenue decoupling . In Kansas, revenue decoupling was proposed by Aquila. The parties involved agreed to a stipulation that excluded revenue decoupling while the Commission investigates it further in a general docket.

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[18] The Connecticut Legislature enacted a law in 2007 requiring decoupling, P.L. 07-242, and the mechanism is being considered in a Connecticut Light and Power rate proceeding, *Application of the Connecticut Light and Power to Amend its Rate Schedules*, Docket No. 07-07-01. In that proceeding, the utility has proposed a revenue per customer approach with an annual true-up of weather normalized revenues.

[19] The Massachusetts Department of Public Utilities initiated a proceeding in June 2007 to consider decoupling, *Investigation by the Department of Public Utilities on its own Motion into Rate Structures that will Promote Efficient Deployment of Demand Resources,* DPU 07-50 (June 22, 2007). The Department presented a proposal to adjust revenue based on the number of customers served through an annual reconciliation of allowed revenues and actual revenues.

[20] The New Hampshire Commission has opened a proceeding to consider revenue decoupling. *Investigation into Energy Efficiency Rate Mechanisms,* DE 07-064 (May 14, 2007).

[21] The map was prepared in 2007 by the Louisiana State University Center for Energy Studies.

In addition, Attachment H to this report contains a summary of decoupling activities in other states. Attachment H includes excerpts from a document prepared by the American Council for an Energy-Efficient Economy (ACEEE) in October 2006 titled *Aligning Utility Interests with Energy Efficiency Objectives: A Review of Recent Efforts at Decoupling and Performance Incentives*. Due to the length of the document, we have not included it in its entirety, but we have included a four-page table and a 15-page written summary of the regulatory mechanisms in other states intended to promote energy efficiency including decoupling mechanisms.

A review of the states that have implemented decoupling or that are considering adoption of the mechanism shows that in almost all of these states, utilities have some responsibility to design and conduct energy efficiency and conservation programs. This is in contrast to Maine in which utilities do not have such responsibilities and, as a result, the financial incentives are of less concern.

VII. DESIGN CONSIDERATIONS FOR A DECOUPLING MECHANISM

As noted above, the Agencies have not attempted to achieve consensus through this stakeholder group process and do not include in this report any specific recommendations[22] about whether a decoupling mechanism should be adopted in Maine. However, there are several basic design considerations for a decoupling mechanism that the Committee should keep in mind as it considers the relative merits of revenue decoupling. These design considerations are summarized below.

In the event Maine pursues a decoupling mechanism, the Agencies believe that the mechanism should be designed in a way that maximizes its effectiveness and chances of success. Maine has experience with decoupling that is generally considered a failure. Any attempt to design a new decoupling mechanism should seek to avoid the pitfalls of Maine's prior efforts.

A per-customer revenue decoupling mechanism is widely regarded as the best approach and is the approach currently used in most of the states that have implemented decoupling. This is essentially the approach that Maine adopted in the early 1990s. To improve the operation of the mechanism and enhance its prospects of success, several adjustments should be seriously considered. These include adjustments for weather and economic trends designed to avoid substantial revenue deferrals based weather or economic fluctuations, rather than energy efficiency or conservation. A weather adjustment is not likely to be difficult because such a mechanism is common in utility ratemaking (e.g. revenue

[22] The Agencies did invite stakeholders to submit written recommendations regarding the implementation of decoupling mechanisms and the recommendations we received are appended to this report in Attachment B.

forecasts). However, an economic adjustment mechanism is uncommon and likely to be complex and extremely difficult to design.

The Agencies believe that a decoupling mechanism should have an annual reconciliation process, but there should also be quarterly rate adjustments if the cumulative difference between actual and allowed revenues is outside a pre-determined percentage range. This should help mitigate the possibility of large rate fluctuations as a consequence of the decoupling mechanism.

The Agencies believe that the decoupling mechanism should only be applied to distribution rates. This is because stranded costs are already reconciled to a large degree, transmission rates are set by FERC, and the energy portion of the rates are determined by the market. There should also be a return on equity (ROE) adjustment to account for any reduced risk faced by the utilities as a result of the adoption of revenue decoupling. The determination of any ROE adjustment is likely to be very complex and controversial.

Finally, the Agencies believe that the adoption of any decoupling mechanism should be accompanied by periodic reviews to determine, to the extent possible, if the mechanism is actually working to change the behavior of the applicable utilities.

VIII. RELATIONSHIP OF REVENUE DECOUPLING TO OTHER ISSUES CURRENTLY BEING CONSIDERED BY THE COMMITTEE

During the September 14th stakeholder group meeting, Representative Hinck asked how the issue of revenue decoupling in Maine would be affected by other issues that are currently being considered by the Committee such as T&D utility participation in the energy supply business. Representative Hinck noted that the Commission is currently drafting a report on this latter topic and requested the Agencies to list other pending reports that cover topics which relate directly to revenue decoupling.

The importance and desirability of revenue decoupling can be affected by significant changes in the regulatory structure that alter the role of T&D utilities in the State. Thus, revenue decoupling should not be considered in a vacuum but in a larger context that includes possible changes to the overall regulatory paradigm. There are several pending legislative reports that discuss the possibility of substantial changes to the current regulatory structure. These include the Commission’s reports on the T&D utilities re-entering the energy supply business and alternatives to participation in the ISO-NE. Other relevant reports include the OPA’s reports on the relationship of Efficiency Maine and the soon-to-be-created Carbon Trust and the impact that RGGI may have on Maine’s ratepayers.

IX. CONCLUSION

As discussed above, decoupling, like all ratemaking approaches, has both positive and negative attributes. In addition, the development of any new ratemaking approach comes with the possibility of serious unintended consequences (as occurred with Maine's experiment with ERAM in the early 1990s). Although we can learn from our mistakes, we can never predict all future scenarios and thus there will always be a risk that despite all the best intentions, ratepayers can be seriously harmed by the unforeseen impacts of alternative ratemaking approaches.

Accordingly, the Agencies believe that policy makers should carefully consider the problem that a new regulatory scheme is intended to address, and weigh the importance of addressing that problem with negative aspects and the prospects for unforeseen difficulties. For example, as stated in *MPUC 2004 Incentives Report* (see pages 40 and 43), there was evidence at that time that utility promotion of usage through bill inserts had limited effect on electricity usage. Moreover, serious consideration of potential benefits should occur before adopting a ratemaking approach that could substantially diminish the desire of utilities to minimize their rate levels. This consideration should take into account that Maine's utilities are no longer obligated to engage in energy efficiency activities thus reducing the need for and potential benefits of a decoupling regulatory structure.

Finally, the *NARUC FAQ document* notes that no major study has been undertaken that actually links decoupling directly to increased utility efficiency activities. That document, which is included as Attachment C to this report, states that some efficiency advocates have anecdotally pointed to strong increases in efficiency activities for some utilities concurrent with the adoption of decoupling, while all New York utilities (between 1993-1997) increased efficiency spending regardless of whether they were operating under a decoupling mechanism.[23]

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[23] *Decoupling for Electric and Gas Utilities Frequently Asked Questions (FAQ),* NARUC (page 4) (Sept. 2007).

ATTACHMENT A

"Decoupling" study group discussion
(More than a summary but less than a transcript)

September 14, 2007

Attending: Rep. Seth Berry (SB) (UTE Committee), Rep. Stacy Fitts (SF) (UTE Committee), Rep. John Hinck (JH) (UTE Committee), Chris Simpson (CS) (PUC), Brent Boyles (BB) (MPS), Jeff Jones (JJ) (BHE), Calvin Luther (CL) (BHE), Suzanne Watson (SW) (DEP), John Kerry (JK) (OEIS), David Bragdon (DB) (Energy Matters to Maine), David Allen (DA) (CMP), Rick Weston (RW) (Regulatory Assistance Project), Mitch Tannenbaum (MT) (PUC), Mike Stoddard (MS) (ENE), Dylan Voorhees (DV) (NRCM), Sharon Staz (SS) (KL&PD; Dirigo), Vendean Vafiades (VV) (PUC), Richard Davies (RD) (OPA). **Initials are used to identify speakers in this document.**

CS – gave opening remarks and a description of the task. Want to involve everyone. We won't be making any recommendations from this group, nor will we seek consensus on the issue of decoupling. Our responsibility is to report the discussion and ideas put forward.

RW – offered some alternative models for setting prices and revenues:
- Traditional regulation process – regulators set prices
- PBR (price based regulation) – incentive regulation, allows for changes in price over time
- Decoupling – latest tool for keeping utilities whole by aligning utility interests w/ public interest. Sets revenues for utilities regardless of number of kWh sold.
- Revenues per customer (RPC) – used by most states which have decoupled.Net loss revenue adjustments to accommodate lost revenues due to efficiency programs. Costs more closely related to # of customers served. Baltimore G&E, PEPCO, Revenue cap. Most use Revenue Per Customer.

MT – What form is the best model?

RW – Current form of decoupling has been modified to deal with the problems Maine had in 1990-92 w/ERAM. Have added a "k" factor to recognize that revenue changes and usage are changing over time. Captures expected changes in average revenues per customer under traditional regulation. This should be factored into expected revenues. Some utilities in New England have revenue decoupling (MA docket, CT law for decoupling, Green Mountain Power in VT. See NARUC document, item 15 listed on back page, for formula developed by RW's colleague (Wayne Shirley).

CS – I'll circulate this document to interested parties.

MS – Status of New England states w/ decoupling. Docket in NH, case in CT…

RW - …Green Mountain Power (without revenue per customer, just a revenue cap)

MT – Do you recommend using revenue per customer if we do decoupling?

RW – Yes. My colleagues and I have been thinking about this for a while. We keep looking for refinements.

CS – where are the utilities on this?

JJ – handed out 3-pager on elec. consumption and costs (all states). ME one of the higher"all-in" rates, but the lowest consumption per customer, and in lower third in monthly cost per customer.

We just went through a rate case. Decided not to talk about small customers. Focused on larger customers (inc. those who might put in their own generation) with a goal of moving more of their costs on to fixed customer charges, and billing energy separately.

Tension between utility's fixed costs and wanting customers not to use a lot of electricity, and try to get the variable price for energy high. Middle Atlantic model formula comes back to letting pricing be priced on a variable basis, and then work a formula like ERAM did, to adjust for the utility profitability. Does it indirectly. Remove disincentive for utility to do conservation. What's the right way to do this? Utilities look at it from a rate-setting basis, not the public policy basis.

DA – If you want to eliminate the disincentive, you set a rate that captures all the fixed charges and make that amount the customer charge. There would be no volumetric charge. That does exactly what you want. The cost at CMP was calculated to be $30-35/ month. But this idea doesn't work politically. It's dead in the water. There was a 50/50 winner/loser split with lots in the middle. But the people who used very little electricity would be up in arms.

ERAM wasn't a good experience. We didn't consider weather, economic upturns or downturns. Consumers owed CMP a lot of money under true-up. We don't want to make the same mistake.

You want a formula that removes the perceived incentive for the utilities to sell electricity. But it doesn't create incentives to do energy efficiency. No discussions yet discussing this. CMP did an outstanding job in 1980s promoting efficiency and conservation because we had incentives to do so.

DV – Do we need decoupling? Is there a perception of a problem. We think there are. State-run Energy programs eliminate some disincentives, but we believe that more can be done. If there is a fix to ERAM that takes economic factors like recessions into account? Do we know how to do this now? Do we agree there is a problem?

CS – How do others feel?

SW – I feel it's a magnitude problem. We've been nibbling around the edges on energy conservation and alternative technology. We need something more dramatic, not just feel good.

MS – Take a cue from other states. Utilities in these other states are supporting this move. Its time has come. Do ME utilities see it the same way? If RGGI money starts flowing in a couple of years easily doubling the funding for efficiency, plus plowing forward capacity markets payments back into efficiency, and using the Commission's authority to do procurement or ordering all cost-effective efficiency investments. It adds up to much more money than we are using now, and much more could be done than we're doing now.

CS – Lets hear from utilities now.

SS – from a utility standpoint, KLPD continues to promote conservation and use the state program, despite a few disagreements with EfficiencyMaine. We sell CFLs. Unfortunately a huge increase in our energy costs forced customers to become more efficient. Our delivery and consumption were down 2.5% in 2006. We absorbed that in 2006, but if it went to 5% or 10% I don't know what we would do. Losing a large customer (11% of load) which moved due to high energy costs will be responsible for 10% of a 30+% rate increase we'll be bringing to the PUC. If you lose numbers like this and you lose income without which you can't sustain your fixed costs, then you'll raise the delivery rate. How far can you go? If we can knock off a 9 cent kWh for a customer at the cost of a minor increase in delivery, its worth it. But at some point it stops making sense, and our customers say "stop". It's going to be hard. If you go to a fixed customer charge, you hurt your low income and elderly. Their bills may go up dramatically. These are people that we're spending a lot of money to help, and this will counteract those efforts.

JJ – there is another model to deal with that issue. Go back to my handout, page 3. We have the lowest consumption in the US. Not sure we're not already doing something right. The RAP Project suggests a way to fix what was wrong with ERAM. The future is to give customers a correct price Signal and the correct price signal has a lot to do with what's going on in NE and California with high energy prices. It's like a dynamic pricing model. BHE's advanced metering initiative's next enhancement will have <u>hourly</u> readings for customers. We don't have that now because we put in the system as we need it to get customer readings <u>daily</u>. At that point customers can see what the real cost is for the power they are using at any point during the day. When they see the cost to use their air conditioner on a hot summer day, they can shift their usage off-peak to manage their costs. Both the fixed and variable costs will give the customer incentive to reduce and manage their costs.

MS – Energy costs or distribution costs?

JJ – Energy costs.
We're trying to do something with the total cost.

MS – Couldn't you do both?

JJ – Yes, it's a public policy decision.
I believe Maryland is a leader in having gas utilities use 23 factor adjustments in decoupling to get at increased profitability with decreased sales.

RW – I know Baltimore G&E, but don't recall how many factors they use. They do Revenues Per Customer with the "k" factor to adjust for the revenue problem for the changing economy and changing usage over time.

JJ- the national standard for gas utilities is weather. Gas is priced per unit of energy per therm There is a standard adjustment for weather. Revenues are adjusted.

RW – How does the weather adjustment work?

JJ – Through an adjustable rate mechanism (ARM).

RW – if you do decoupling as I've described, you do a rate case. You can normalize the adjusted “rate year” data. The revenue requirement assumes a normalized year. If so, doing decoupling is already adjusted for weather. In a hot year, utility would collect more revenues that it would be allowed to keep, and less revenues in a cool year than they were entitled to (and would collect later when “true-up” occurred). Every year would have weather-normal revenues.

CS – David, do you have any additional comment?

DA – I’m interested in hearing response to the question “Is there a problem?” and if so, what is the problem? I echo Jeff’s comment about price signals. You want to influence consumer behavior, and that’s what price signals do. Residential customers get no price signals other than the volumetric price, a flat price. They have no idea if the kWh they are consuming costs 4 cents or 12 cents or 18 cents in the market. This takes rate design by the PUC to factor in real-time prices and give customers this information. Also work needs to be done on Standard Offer to give price signals.
CMP is not opposed to decoupling, but the devil’s in the details. There are all kinds of models, good and bad, but they just make the utilities neutral on the idea of energy efficiency. Need incentives to enlist utilities to promote efficiency.

JH – Price signals and incentives are not only good ideas but essential to move the equation. I do think there’s a problem. The problem is the carbon we put into our atmosphere, and how we source energy. We are doing some things to assist in our efficiency levels. Don’t think our measuring standard ought to be other states in the US, because we have set a new standard for wasteful use of energy in the recent past. We should look to Japan or parts of Western Europe as models. We can’t explain away the fact that Japan gets more work done with less Energy. That should be our goal. California is also moving towards reducing energy consumption per unit of work done.
What happened that we didn’t keep the incentives of the 1980s for conservation? How can we recapture that and go further? We’ve been working on this issue for awhile, for 20 yeas.

RW – Regulators are cautious folks, as have been legislators. Regulators have questioned whether they had authority to do some of these things w/o authority from their Legislatures. The new interest comes from desire for carbon reductions. This can be a tool to get us to the carbon reductions we have to achieve.

JH – It is a shame if a good policy result is achieved that it challenges utilities like KLPD to make its revenue projections. If we do a good thing, everyone ought to prosper.

SW – Or share in the pain.

JH – if we use energy more efficiently, more money stays in Maine and in our economy. Some of that needs to be shared with some of the people who will feel pain from our achieving this laudable goal. The mechanism is the issue. The flat rate is a non-starter. We’ve given the utilities an incentive to do energy conservation, but taken it away from the users. The users pay the same regardless of whether they conserve or not.

RW – I’m not aware of anyone proposing that…

SF – Well I have…

MS – Is anyone proposing a fixed customer charge?

JJ - I think some states have a fixed charge.

RW – If you went to a fixed, all-in, buffet-style charge, it would be "decoupling" at the retail level. I would dispute you on the economic theory of it as well. In the short run it works because we think your distribution costs are more closely linked with the number of customers you have. Once the poles and wires are in place, the cost of serving 100 customers or 10,000 customers is about the same. But in the long run these aren't fixed costs. Even these should be linked to pricing that allows consumers to save money when they save energy. I regard demand charges as volumetric, so long as there isn't a ratchet. Customers should be rewarded when they use less energy. This can't be done in rate design, but you can in rate making. In this way you resolve the tension between these two "goods", the utilities long term financial health and the consumer's incentives and the long term societal good. That is what you try to bridge.

SF – I go back to the "fixed" idea because it's easy to explain. We could tier the way we charge customers as a way to compensate for the lower level of use or lack of use. Some utilities have a greater portion of their rates in fixed charges than others, and I doubt that you can ever get to 100% fixed. On T&D (with true-ups), it is a fixed cost, except for the cost of capital and those items that vary based on the economy. I'm not against other ways of doing the same thing. It takes in "cost per customer". I think there is a problem, though it may be a problem of perception. We need to set up a system that fixes it, and still gives them the revenue stream they deserve.

SB – I don't know to what extent there is a problem. To what extent is there an imbalance? I would like it to be in the interest of utilities to conserve. I would like customers to know when is the best time to conserve. We need to get the balance right. I don't want ratepayers to shoulder a greater amount of the risk than they should. If I was CMP, I'd want to make sure that I can profit from conservation. If that's where the market is going, that's where I'd want to be. But I want to look after everyone's interest. How do we get it right?

MS – Process question. What is scope of what we discuss? In the last half hour several utilities have introduced concepts surrounding the energy charge, and how you could send signals to customers for efficiency. My view is that this is a pretty complicated issue, and it would make it a lot easier if we focus on just distribution rates and the different tools available. I don't think these are mutually exclusive, and as an environmentalist I'd like to do both, but our time is short and I'd like to focus on what brought us here today. The potential is good for progress. Some view this as a risk for consumer, but we see it as an opportunity.

We would envision a system where your revenue requirement is always, always met. But you don't get to keep the gravy if for any reason you bring in more than your revenue requirement. Consumers are not saving under the current idea we're discussing now. You keep it really simple, and then true-up every year and consumers are made whole. We can't get it right if we do too much.

SB – Our committee letter gives this group other things they can look at, but puts decoupling at the top of the list.

SF – I agree – decoupling on T&D is the top issue.

JH – I would say the same, with the caveat that we could flag other issues we want the committee to take a look at.

SS – I know Fox Island Electric Co-op looked into a fixed charge, and I could see if they would share what they found.

JJ – You can do fixed charges in tiers – 100kWh users pay $10 a month, 200 kWh users pay $20 per month, etc. There is a rate design that does away with the volumetric charges on the face of it. Some jurisdictions use this.

JH – do users get sophisticated about maximizing their usage within the tier?

CL – Keep in mind, we are less than 50% of the charges. Bangor Hydro is at 42% T&D. The other 58% is volumetric by standard offer.

JK – I'm encouraged by what John said about looking at the idea of a conservation utility over the long term. If we can save energy, we keep the financial resources in Maine. Between 2003 and 2005 we lost about $600 million in gross state product – going out of state, out of region and even out of country.

The group took a break at 2:30 p.m. for ten minutes.

MS – I think there is an opportunity here for a win-win. Not the least of which on consumer protection objectives. But some of the utility comments focused on what this will do to the rates. Focusing on the tools addressing distribution rates, what makes this story work is the ultimate impact on a consumer's bill going down. I can envision that the distribution rates will have to go up per kWh. We want to retain the kWh volumetric charge or some form of it. Some signal that consumers benefit by using less. The flip side is that by perfecting the incentives for utilities, and allowing these other energy efficiency programs to work to their full potential, the consumer's overall bills are going to come way down. Do we need to factor in the cost of a customer's energy component to make this a happy ending? Or can you say, just looking at distribution charges alone, even though the rates may go up, because their total consumption will come down and we are charging them on a volumetric basis, they will pay less - even just on distribution? I don't think that will work. I'm assuming it will have to factor in the benefits they will see from an overall reduction in the usage on the system.

RW – I think that is correct. I think most efficiency programs here are cost effective when looked at from a total system cost basis. Some efficiency re: T&D investment is cost effective. Consumer bills, all else being equal, should go down from the deployment of cost effective energy efficiency on their homes and businesses. But some portion of their bill – transmission and distribution charges – will go up because there will be fewer kWh over which to collect the same revenue requirement.

MS – In other states that are doing this, is there agreement that T&D rates will be going up incrementally even though their bills are going down?

RW – Whether it actually happens depends on a variety of factors, including changing numbers of customers and changing of other underlying factors as well. A utility could take up this idea so well that it became so lean and mean that even T&D rates could come down.

DV – That's not a result of decoupling.

RW – It seems to me that if we address a problem for the utilities with decoupling, we should also see a greater investment in energy efficiency. But doing decoupling by itself will not change attitudes towards energy efficiency.

SF – There is an anticipatory feeling that if we don't do decoupling, we'll be having the two forces coming to a fight.

DV – that fighting gets to my question. NRCM and the utilities have disagreed on greater expenditures on efficiency. You don't testify against bills just for the fun of it. You don't see it as in your interest to spend more on efficiency. That's good enough for me to prove that we have a problem. Do we all agree there is an incentive problem. Do we need to go from disincentive to neutral, or do we need to go from disincentive to incentive?

JJ – I think I agree with you. The utility's simple minded view is we're selling electricity on a volumetric basis, while our costs are fixed. We don't want to cut our throats. They'll fire us!

MT – One of the issues is the CMP bill inserts, and another is utilities tend to lobby against additional spending on efficiency.

DV – I would add that the utilities oppose conservation in PUC proceedings.

JH – Before you move off, add to the list, in addition to those things that may indicate the utilities interests in using more energy, it is the absence of their attention to every possible efficiency measure. If we got incentives right, they have the interesting relationships at both ends of their businesses. And if they were driving conservation we don't know what they could come up with.

MT – decoupling alone only gets rid of the disincentives and wouldn't get to your point. It doesn't create positive incentives.

RW – It breaks the link between sales and revenues. It's neutral.

MT – you can give utilities money as an incentive. Even with a decoupling regime, conservation would still have the effect of increasing customer rates. I assume doing just decoupling will still leave the utilities in opposition to conservation spending at the Legislature or at PUC. Does the whole decoupling debate revolve around bill inserts?

SF – I don't think it's just that. It deals with self-generation, net energy billing, distributed generation and other factors that go along with how utilities deal with customers, and how energy is delivered to customers. This would help finish restructuring – a step we didn't take when it was originally enacted. The more people find ways to generate electricity that doesn't go through their meter, the less revenue the utility receives. These effect how utilities make money.

MT – All these factors are related in that decoupling will eliminate the financial earnings disincentive, but the net effect will be rate increases in the short term. Utilities are not only interested in their earnings, they don't like to raise their rates every year. Decoupling won't eliminate their opposition to efficiency, net metering or distributed generation. They just won't oppose them as intensely.

SW – We can make a shift that will incentivize a lot of the things we want to see more of – energy efficiency (in large measure), distributed energy (seriously). Decoupling is a transformation (inelegant in nature) to where we need to move. The example is Eastern Maine Medical Center's combined heat and power project which is reaching 90% efficiency. and saving $800,000 a year in energy costs. But BHE opposed it because ratepayers will pick up the $800,000 cost of lost revenues.

MT – Under decoupling, BHE would have collected the money from ratepayers in deferred payments. This is one of the negatives of decoupling.

SW – There is a piece missing. But for this investment by Eastern Maine Medical, BHE might have been forced to invest in new Transmission or Distribution lines.

MT – We need to know both the good and bad about decoupling.

RW – Utilities don't like anything that raises rates for all the public relations reasons. Customers call and complain.

Big projects like this raise interesting questions and you want to think about how to deal with them, and under traditional regulation it's a rate case which has a lot of puts and takes and lots of costs associated with it that go into rates. Decoupling has a ministerial mechanism that allows you to adjust revenues collected for the revenue requirement. Mitch, you're right if your underlying presumptions are correct - that all other things are equal, no other costs are changing, no other factors are driving it, but you could have a decoupling regime that has productivity adjustments and inflation adjustments. In fact I would urge you to think seriously about this. Ultimately, there are a lot of moving parts, and the $800,000 transfer may not happen as we think it will.

DV – Can you describe how that avoided investment would get incorporated into decisions about whether that was really a transfer of $800,000?

RW – This goes to the cost-effectiveness analysis of the project. While it might be cost-effective from the customer's point of view, it might not be seen that way by the utility. But it might still be cost-effective from the societal view. That has to do with avoided energy. Not knowing anything about the project, I'm betting it was cost-effective from a societal view, but a killer from BHE's view. The only question is the $800,000 annual contribution to BHE fixed costs still have to be picked up but there may be T&D investments avoided down the road, reducing the net effect to maybe $500,000 or $300,000.

DA – There are lots of different decoupling mechanisms, and what we now seem to be discussing seems to insulate a utility from all changes in sales whether they are caused by self generation, conservation or other factors. I want to be clear that this is what people are discussing. Sharon brought up the perfect example of losing a big customer and having to raise distribution rates. For CMP it could be a paper mill, for Bangor Hydro it could be a Holtrachem or Eastern Maine Medical Center. Huge revenue losses and you end up with stranded transmission costs.

RW – You end up with the same situation in traditional regulation.

DA – I just want people to understand that with decoupling you do it for all aspects of volumetric changes, revenues…

RW – That's how I think of it. I will argue that from a societal perspective this approach to the costs of a utility is economically more efficient. There are lots of puts and takes that need to be considered.

DA – We want to avoid what happened with ERAM, with everyone agreeing in advance what would happen and than, when there was money owed to CMP, having other parties backing away from how it was supposed to work. Getting the formula down…

RW – Then everyone can have a high degree of confidence in the model. Make sure you look at the MADRI model (NARUC paper, back page, item #15 on bibliography – Chris to send to everyone).

SS – Not all utilities are in the business of making money. The municipals, co-ops and other non-profit utilities form a second model of utility service. We're not "one size fits all". Many states exempted this group from deregulation because we are different. For example we had a large customer who wanted to look at cogeneration, and we looked at it with them for the greater societal good and encouraged them as a way to retain them and their jobs in our community. It didn't end up happening, but we can do those things.

MS – Follow-up on Mitch's questions, am I right that once a rate case is finished there are annual "true-ups" or adjustments?

MT – Not in a traditional rate case. Under rate cap regulation it may occur based on a pre-determined formula – inflation-related or productivity-related.

RW – Is it a change of price? That recognizes changes in inflation or productivity.

MS – Do the utilities consider this "true-up" onerous? Does the Commission?

MT – Not particularly.
Even under decoupling, utilities are sensitive to their rate levels so they would look carefully at the hospital leaving their system, possibly opposing increases to efficiency funding or net billing…

JJ – We like to sell more kWh faster than growth to cover our increased costs and give our ratepayers a decrease every year.

CL – There are some other technologies, like heat pumps, that are more societally beneficial, but they will drive up the usage of electricity. The benefit is that they reduce overall energy consumption, and reduce our carbon output.

JH – Why societally better?

CL - A 300% efficient heat pump is better than an 85% efficient oil burner…

RD – …especially when you are drawing heat that already exists in the earth, air or water, rather than creating newheat from burning a fuel.

CL – We now have inventors in Bangor who are inventing high efficiency, air-source heat pumps that now eclipse the efficiency that previously was achieved. Ground source heat pumps are the way to go, but they will increase electricity consumption in Maine, but decrease carbon loading.

DV - We're happy to use more electricity if use of carbon-based energy goes down.

MS – One remedy to the issue Mitch raises may be getting out the message that there are cost savings to be had, and it is eminently rational. I'm told that fluctuations due to adjustments have been di minimus.

RW – That's been the case with Baltimore G&E and PEPCO. They're confident in the "k" factor.

RD – Calvin's comments on heat pumps prompts me to follow up on the question Dylan asked, which is "do we just need to go from disincentives to neutral, or do we need to go from disincentives to incentives?' David A. and Jeff, if there were incentives available to utilities to get back into efficiency, what aspects would your utilities be interested in?

DA – Rather than talk about specific programs, I'd say our real advantage is our relationship with our customers. Individual customers. Our reps know these commercial customers, their operations, and their opportunities for saving energy.

RD – I'm thinking less about the programs, but rather the types of activities. Would "demand response" be something that a utility would be better able to handle than a state agency?

DA – If we had AMI in place, demand response would be a good one. We used to run great demand response programs when we were in the generation business.

RD – Jeff, if the change were made today to let utilities back into efficiency, what would BHE do

JJ – Heat pumps are solar energy.

DA –It would make us more like Sharon (KLPD) in being able to work with customers. CMP could help customers to come up with the best mix of self-generation, efficiency, the whole energy business.

DV – Should utilities be back in the generation business? If the Legislature decides "Yes" they should, , that suggests, because we want to create demand resources similar to supply resources, that they should also be in the efficiency business..

SF – If there is no disincentive for utilities to promote self-generation and other forms of generation for customers, there would be an incentive for the utility to have a subsidiary that would help develop those resources like peak load shaving. I don't see any great benefit to utilities to be the deliverer of electrons, but to be a partner to those who receive the electrons.

JH – people have had different assessments of the idea but all of them are relatively compatible. Still not clear on the mechanism to accomplish it.

CS – We need to report on Jan 15, 2008 but we plan to have it ready earlier so we won't be writing it while the Legislature is in session. We hope the stakeholder group going for an additional month to allow for document exchange, but no plans for another meeting. We'd circulate the report to stakeholders for comment, then submit the report late this year.

JH – Are there other reports/studies, like the one on whether the utilities should get back into generation, that might effect this study or alter the implementation of decoupling? Can we ignore these other things?

DV – There is a requirement for the OPA to inquire into the delivery of efficiency programs and whether we should have two delivery mechanisms or just one. That has implications for delivery mechanisms.

CS – We could note such implications in our report.

DA – RGGI is going into effect in 2009, and its impact on electricity prices, the forward capacity market, auctions starting up. There are a few things coming down the pike that will impact electricity prices pretty dramatically. That will make more efficiency programs cost-effective, but people will be more sensitive to things that could push up energy prices. The landscape will change in the next few years.

CS – We're finished

Attachment B

On November 21, 2007, the Commission emailed the draft report to all stakeholders and invited comments and suggested edits by December 10, 2007. The Commission received comments from three stakeholders. We thank the stakeholders for their comments and have incorporated many of their suggestions in the text of the final report. We have attached stakeholder comments in their entirety in this Attachment because (1) in early process discussions we indicated to stakeholders that we would do so and (2) we wanted to make sure the Committee had the opportunity to see the comments in their entirety. We note, however, that some of the comments in this attachment include references to page and paragraph numbers from an earlier draft of the report. In some instances, this makes it difficult to compare the comments with the final report.

Comments from Environment Northeast are included in the following email. Comments from the Natural Resources Council and RAP are also included below.

-----Original Message-----
From: Roger Koontz [mailto:rkoontz@env-ne.org]
Sent: Tuesday, November 27, 2007 3:15 PM
To: 'Roger Koontz'; mstoddard@env-ne.org; 'Jeremy McDiarmid'; 'Derek K. Murrow'
Cc: dsosland@env-ne.org
Subject: RE: ME Draft Decoupling Report

The issues are discussed below:

Weather Normalization

This issue is frequently misunderstood and appears to be so in this draft. The assumption is that if the utility eliminates its weather risk through decoupling, it is shifted to customers. In fact, decoupling eliminates the weather risk for both parties because they have opposite risks. Currently, customers will overpay distribution costs in extreme weather conditions and utilities will undercollect in mild weather conditions. Decoupling ensures that neither will happen. The rates will change slightly due to the decoupling adjustment, but costs will be stable. CL&P devised a weather normalization mechanism for its rate case with a claim that it was taking the risk. However, it actually exacerbates the variations in payments (even higher in extreme conditions and lower in mild conditions).

The draft is correct about economic normalization. I am not aware that it has even been attempted and it would be very complex and subject to gaming. Not a good idea.

Revenue per Customer

If you're concerned about economic development, as most states are, and believe that utilities have much to do with it, the RPC approach is attractive. Decoupling adjustments are based on whether revenues per customer are higher or lower than the allowed revenues per customer. To the extent that customer numbers increase, utilities would see increased revenue and vice-versa. It is important that the adjustment be uniform for all rate classes, based on cumulating the revenue impacts, because otherwise small classes (industrial in particular) could see wide swings from year to year. We do not think this mechanism will account for all cost increases over time, but it would likely help to some degree.

Likely Impact

It should be noted that the likely impact on customers is much less than was seen in the early 1990s because of restructuring. Presumably, in 1990, the rate base included a large amount of fixed costs tied to investments in generating facilities. Today, the portion of the bill that would be affected by decoupling is in the vicinity of 20%.
Projections in CT show that the impact will be less than 1 mil / kWh.

History in Other States

Decoupling is much more critical if a state believes that ramping up DSM investments is an important thing to do. If not, one can limp along as in the past. If it is, one needs to have the incentives right so that the utilities can assist in the effort.

CA is really the only state that has had decoupling over an extended period, beginning in about 1980 and continued to the present except for a brief period in the late 1990s when it restructured and the state took over the EE programs. CA Commissioner Grueneich, who is the lead on efficiency programs, describes decoupling as one of the key policies contributing to the success of the recent ramp up towards “all cost effective efficiency”.

Comments by the Natural Resources Council of Maine on the
DRAFT REPORT ON REVENUE DECOUPLING FOR TRANSMISSION AND DISTRIBUTION UTILITIES

November 21, 2007
Maine Public Utilities Commission
Office of the Public Advocate
Office of Energy Independence and Security

Thank you for the opportunity to comment on this report, and for the chance to participate in the stakeholder process. We feel that, overall, the Agencies have done a fair job of presenting many of the issues related to decoupling. Below are several suggested edits to the report which will make it more accurate and balanced, in addition to comments on decoupling that can be attached to the report. If you have any questions, please contact me at 622-3101 or dylan@nrcm.org.

I. Suggested edits to the draft report

- Page 6, ¶ 1: It is more accurate to say that the purpose of revenue decoupling is to remove the financial *incentive* for utilities to *work against* efficiency and conservation. As following paragraphs make clear, decoupling makes utilities neutral. To our knowledge, none of the stakeholders suggested that the utilities should now "engage in or promote energy efficiency", so a *disincentive* to do so isn't explicitly problematic.
- Furthermore, the purpose of decoupling is also to remove the incentive to oppose distributed ("onsite") generation, such as combined heat-and-power or other applications. While the letter of inquiry from legislators did not specifically mention distributed generation, correcting the incentives in this area is also a fundamental purpose of decoupling which should be mentioned.

- Page 7, ¶ 4: Much has been made of the utility bill inserts promoting the use of air conditioners. In some venues it has become a matter of some amusement, but it indicates a flaw that goes beyond air conditioners. In fact, the utilities routinely insert many kinds of promotions. Businesses, for example, regularly receive promotions which link economic activity, productivity, public safety, and more to having greater outdoor and indoor lighting.

- Page 8, ¶ 2: This discussion of risk-shifting is incomplete and potentially misleading. Absent decoupling, utilities may bear a greater share of the *short-term* risk from weather or the economy. However over the long term, ratepayers ultimately bear the costs of maintaining the integrity and economic viability of the lines and poles system, regardless of weather or economic activity. We believe it is misleading to simply state that decoupling shifts this risk from one group to the other. Decoupling "evens" out the risk from weather (and to some extent economic fluctuations) over time.

- Page 9, ¶ 1: We recommend striking the reference to promotion of economic activity—the utilities are not agents of economic development activity. They may claim to provide that benefit—it may even be true—but that seems immaterial.
- Furthermore, the discussion of utility incentives for self-generation is too one-sided. Despite the implication in the draft, rate mechanisms do not *currently* provide the utility with an incentive for helping customers make decisions based on "sound economic analysis", much less what is in the best interest of the customer. Because utilities have an incentive to oppose actions which decrease sales, they have, and act on, an incentive to prevent self-generation activities of all kinds. The draft language suggests a presumption that the utility should play a role in keeping customers on the grid. (I have made comments on this subject in section II, but I still recommend that this section be edited further.)

- Page 10, ¶ 4: This would be an appropriate place to make it clear to legislators that, unlike the other New England states, the Commission has not undertaking a proceeding to give "serious consideration to the potential benefits" (p 14 of draft report) of decoupling. It would be unfortunate if the Committee gained the mistaken impression that the stakeholder process undertaken to-date (while perhaps entirely appropriate) could be equated with the level of inquiry occurring in the other states working on decoupling.

- Page 12, ¶ 1: We agree that Maine's use of a non-utility efficiency provider distinguishes it from many of the states using or considering decoupling. However the most notable exception begs to be mentioned: Vermont has probably achieved the highest level of efficiency savings in the country, with the possible exception of California.

II. <u>General comments on decoupling, for attachment</u>

The Natural Resources Council of Maine believes that decoupling is an essential component in a sound strategy for maximizing cost-effective energy efficiency and distributed generation in Maine. We acknowledge that decoupling alone can only make utilities *neutral* to these activities, however it remains a necessary foundation for the legislature's energy policies. Without decoupling we believe the state is effectively handicapping itself as it devotes considerable resources to pursuing efficiency and renewable power. This is especially true when we consider the magnitude of investment at stake—millions, perhaps billions of dollars —for efficiency and for traditional utility infrastructure. We acknowledge that decoupling can be complex but we are confident that Maine's Public Utilities Commission can handle it. The time has come for Maine should start this process.

1) **There are too many ratepayer dollars at stake to ignore decoupling**. The agency report implies that decoupling may not be worthwhile because it only makes utilities *neutral,* and that Maine's method of delivering efficiency *lessens* the potential benefits compared to other states. Maine spends more than $15 million per year to increase investments in efficiency. Given recent mandates to pursue all cost-effective

efficiency, that will probably increase. In addition, starting in 2008-2009, Maine will start spending tens of millions of dollars per year on efficiency through RGGI. Given all of this investment, can Maine afford to have utility incentives in place that work against these investments?

In 2008, the utilities are likely to propose what could be a billion dollars of ratepayer money going towards transmission infrastructure. Maybe we need that investment, we don't yet know. The question is, Can Maine afford to have *any* utility incentives that work against efficiency or distributed generation? Will current policies lead to the most appropriate level of investment?

2) **Decoupling will also smooth investment in and distributed generation like combined heat-and-power and small renewables**. The emphasis of this report is on efficiency and conservation disincentives. However another significant consideration should be the current financial incentive for the utilities to oppose on-site generation, even if it is cleaner, more efficient and more economical for the consumer. In some cases the utilities will go to considerable lengths to erect barriers to this kind of generation. Yet numerous policies enacted by the legislature, tax incentives for small renewable systems, *support* efficient distributed generation. Under the current rate regime, the utilities play the role of reverse gate-keeper for the grid, with an incentive to ensure that as many customers as possible are as reliant on the grid as they can be. In turn the drive to make the grid as reliable as possible can sometimes consumes us (and our resources). While it will take many years to find the right balance, we believe that a large increase in the distributed use of efficient, renewable power could play a significant role in improving Maine's energy future.

   As the legislature works to develop policies in the areas of net-metering, CHP, etc, it can and should examine the economic and environmental public benefit of distributed generation. Until we pursue decoupling, the utilities will have a financial incentive to participate in those deliberations in a way that may be contrary to that public benefit.

3) **Decoupling is part of a strategy that requires multiple policies**. If we step back from the complexity of decoupling as a rate mechanism and consider the direction Maine is going, we hope that we are on a path towards *far* greater energy efficiency. We do not believe that we will reach that objective unless we systematically adopt a variety of policies and programs with that common purpose. In some cases, the legislature applies basic standards—e.g. for appliances or buildings—in others it uses taxes and other incentives to induce outcomes that benefit the public. Decoupling is one of those policies that lie as a foundation for all other efforts in electrical efficiency.

NRCM is not submitting detailed comments on the mechanism of decoupling because neither the legislature nor the Commission have initiated a proceeding to rigorously determine the best way to undertake decoupling. We recognize that doing so would take time. We will gladly participate more deeply and provide more detailed recommendations if either body does decide to pursue decoupling.

THE REGULATORY ASSISTANCE PROJECT

13 December 2007

Mr. Chris Simpson
Maine Public Utilities Commission
242 State Street, 18 State House Station
Augusta, Maine 04333-0018

Re: Draft Decoupling Report

Dear Chris,

I'm writing to offer comments on the initial draft of the *Report on Revenue Decoupling for Transmission and Distribution*, issued last month by the Commission, the Office of the Public Advocate, and the Office of Energy Independence and Security. I apologize for missing the 10 December deadline, and I'm aware that this tardiness may mean that my feedback will not inform the final report.

Overall, the draft report does a good job of describing revenue decoupling, its basic mechanics, and a number of its pros and cons. There are several points, however, that I believe deserve fuller treatment. I will address them by section and page number.

III. Description of Revenue Decoupling

Page 6, first paragraph. The paragraph opens with the statement "Revenue decoupling is a form of utility ratemaking in which the corporate earnings of a utility are made independent of its level of sales." This is true, but it may be misleading in that, to some, it will connote that decoupling *guarantees* a specified level of earnings. It is important to make clear that, under decoupling, only revenues are specified and that earnings will be more or less than allowed, depending on the utility's managerial and operational performance. By focusing on revenues rather than earnings, decoupling assures that the utility retains a strong incentive to manage its costs and improve its productivity. This point, which is later made in footnote 9, could easily be added to the second paragraph on the page.

Page 7, first paragraph. "Expended" in the third line should presumably be "expanded."

IV. Attributes of Revenue Decoupling

Page 8, first and second paragraph. In the first paragraph, this statement is made: "Revenue decoupling results in utilities being financially neutral to the impact on sales levels (either sales decreases or increases) from any cause, most notably economic conditions and the weather." It is followed in the second paragraph with "Thus, revenue decoupling has the effect of shifting the risks of economic cycles and weather fluctuations from utilities to ratepayers." The first statement is correct, but the second does not logically follow from it. Decoupling will alter the risk profiles of both customers and utilities, but in ways that, in the long run, are better for both.

Let's consider first how weather risk is allocated under traditional regulation. Rates are set on the basis of a weather-normalized test year, but the actual bills customers pay and revenues utilities receive are a function of the actual, weather-affected sales. If the summer is cooler than expected and the winter warmer, the customers' bills and the utility's revenues will be less than they would have been in a weather-normal year—and thus customers will be better off and the utility worse off than had been expected. The opposite will be true if the summer is hotter and the winter colder than normal. In both cases, however, the weather risk is *shared* by the utility and its customers: when, as a consequence of weather, the customers spend more money the utility makes more, and vice versa.

Under decoupling, rates are, as in traditional regulation, set on a weather-normalized test-year basis, but that test year is also used to determine the actual level of revenues that the utility will be allowed to keep, regardless of actual sales levels. If the weather is normal and sales are as expected (setting aside for this exercise other influences on sales), no adjustments (surcharges or credits) to rates will be needed in order to reconcile allowed revenues with actual. If sales are less than expected because of a cool summer or warm winter, customers' bills will be lower than expected, but the shortfall will be made up in a later period. If the summer is warmer or the winter colder than normal, customers' bills will be higher than expected and they will be credited for their overpayments in the later period. In this sense, they still bear a weather risk—there are upsides and downsides—but the distribution of its effects is the reverse of that under traditional regulation. Under traditional regulation, a hot summer means higher customer bills than in a weather-normal year, whereas under decoupling their bills will always be those that they would pay in a weather-normal year—that is, in a hot summer, they will be lower than otherwise. The converse will be true if the summer is cooler than normal. Customers have acquired no new risk; simply the manner in which it is borne has changed.

But, in addition, we expect decoupling to reduce customers' weather risk because, by restricting revenue collections to weather-normalized sales, the utility's weather-related risk has been eliminated—it neither gains or loses as a consequence of actual weather—and this decrease in its overall business risk will be reflected in a lower overall cost of capital (either through reduced equity costs or a more highly-leveraged capital structure). This can be emphasized in other words: the utility's weather risk has not been shifted to customers but erased altogether.

The effect of decoupling on the manner in which the risks of changes in the economy are borne by companies and customers can be described in similar terms. In the end, regulation is aimed at giving utilities a reasonable opportunity to recover their prudent, just, and reasonable costs of service, including a fair return on capital—no more nor less. These costs must, in the long run, be covered, regardless of the weather and the state of the economy, if the essential service upon which the society depends is to be provided. Decoupling does a better job of this—of linking revenue collection to the revenue requirement—than does traditional (price-based) ratemaking.

Page 8, third paragraph. Decoupling, like any approach to ratemaking, requires regulatory care and vigilance. The rate volatility described in this paragraph should, if the decoupling mechanism is well-designed, be no greater than that in traditional regulation.[1] Insofar as adjustments are made to rates more frequently under decoupling than under traditional ratemaking, the rates can be said to be more volatile: but this volatility is offset by what should be the small magnitude of the changes (which are as likely to be credits as surcharges) and by what in the longer run should be more stable and predictable annual bills. The monthly rate adjustments under Baltimore Gas & Electric's decoupling program are typically small fractions of a percent—impacts that are hardly noticeable in relation to monthly changes in usage and commodity prices.

As for the mechanics of weather-normalization alluded to in this paragraph, we understand this to mean that only a weather-normalized revenue requirement should be collected from customers. As should be plain from the earlier discussion, we concur. Actual revenues should be reconciled with allowed (weather-normalized) revenues and the necessary adjustments made.

Pages 8 and 9. The discussion beginning at the bottom of page eight and carrying over to nine is, at its core, a discourse on the effect of reductions in sales on average prices. This problem, if it is a problem at all, is a feature of both decoupling and traditional regulation. It is not exacerbated by decoupling. However, to the extent that decoupling makes it easier for the state to invest in cost-effective energy efficiency, then rates will increase more than they would have otherwise, *all else being equal*. But all else is rarely equal, and higher demands for electricity will require greater investment in supply, which too will have impacts on rates. But cost-effective energy efficiency by definition will reduce bills by a greater amount than rates will increase, and customers will be better off.

I hope these thoughts are helpful. Thank you for giving me the opportunity to share them and to participate in the September stakeholder meeting.

Sincerely,

Frederick Weston
Director

[1] The concern with volatility in rates is often conflated with worries about rate increases. A decoupled utility should be no more prone to rate increases than a traditionally regulated utility.

2007

Decoupling For Electric & Gas Utilities: Frequently Asked Questions (FAQ)

NARUC

Grants & Research Department
September 2007

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Introduction

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 on 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.

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

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[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.

[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

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. 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

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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.

[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.

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.

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.**

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.

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. 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).

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[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.

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.

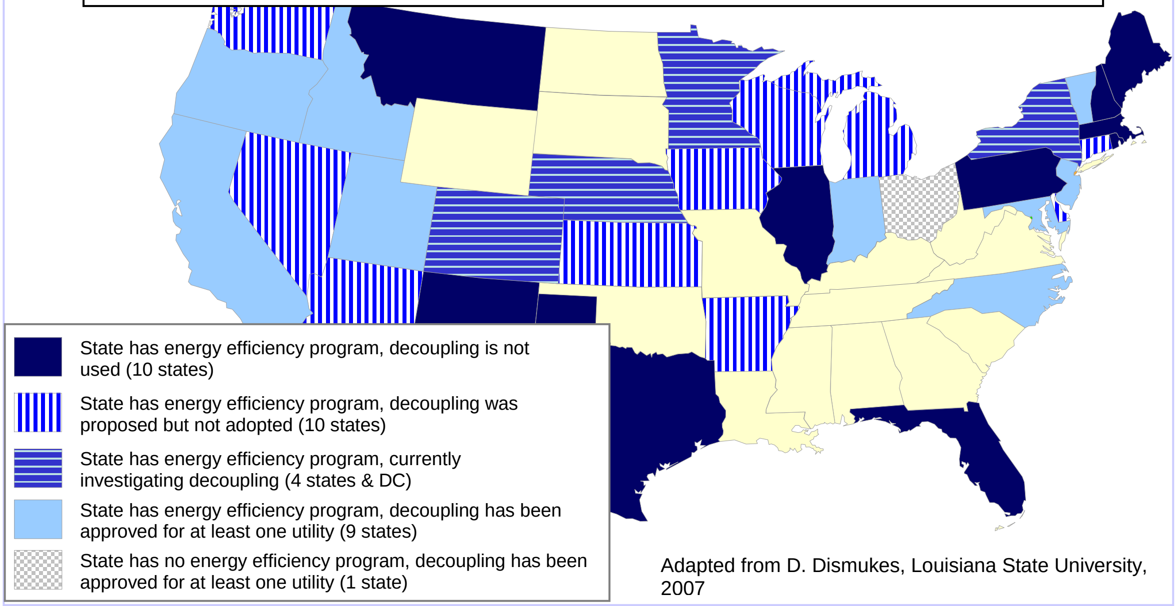
2. Net Lost Revenue Recovery, Lost Revenue Adjustments, or Conservation and Load Management Adjustment Clauses. This mechanism adjusts net changes in revenues only for sales deviations that can be proven or demonstrated to have resulted from conservation and load- management programs. Revenues continue 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 downturn can drive commercial customers out of business and reduce sales. Under traditional regulation,

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[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.

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 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.

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[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.

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 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

[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).

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 Miles Keogh of 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.

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
3. The National Action Plan on Energy Efficiency, US EPA / US DOE, Chapter 2, July 2006 http://www.epa.gov/cleanrgy/pdf/napee/napee_chap2.pdf
4. U.S. Environmental Protection Agency (US EPA) "Clean Energy-Environment Guide to Action: Policies, Best Practices, and Action Steps for States", (Section 6.2) June 2006. http://www.epa.gov/cleanenergy/pdf/gta/guide_action_chap6_s2.pdf
5. Costello, K., "Revenue Decoupling for Natural Gas Utilities", National Regulatory Research Institute, April 2006. http://www.nrri.ohio-state.edu/dspace/handle/2068/995
6. Jeanne Fox, Fred Butler, Nusha Wyner, and Jerome May: "Share The Gain, Not The Pain: Another Side To Decoupling". *Public Utilities Fortnightly*, August 2007.
7. Cheryl Harrington Et Al, "Regulatory Reform: Removing the Disincentives", Regulatory Assistance Project, June 1994. http://www raponline.org/Pubs/General/disincentives6-94.pdf
8. Dr. David Dismukes, PhD, Louisiana State University, presentation:, "Regulatory Issues for Consumer Advocates in Rate Design ,Incentives & Energy Efficiency", NASUCA Mid-Year Meeting, June 11, 2007 http://www.enrg.lsu.edu/presentations/NASUCA_DISMUKES_3.ppt
9. The American Gas Association & the Natural Resources Defense Council (NRDC) joint statement to the National Association of Regulatory Utility Commissioners, July 2004. http://www.ase.org/imgs/lib/e-FFICIENCY/joint_AGA_NRDC_NARUC_statement.pdf
10. Cheryl Harrington et. al, "Energy Efficiency Policy Toolkit", The Regulatory Assistance Project, January 2007, http://www.raponline.org/Pubs/Efficiency%5FPolicy%5FToolkit%5F1%5F04%5F07%2Epdf
11. Eric Hirst, "Statistical Recoupling:. A New Way To Break The Link. Between Electric Utility. Sales & Revenues" Oak Ridge National Lab, September 1993. http://www.osti.gov/energycitations/servlets/purl/10191622-8J4QlR/native/10191622.PDF
12. J. Eto, S. Stoft, T. Belden, "The Theory and Practice of Decoupling", Lawrence Berkeley National Laboratory, 1994. http://eetd.lbl.gov/EA/EMP/reports/34555 html
13. Carter, Sheryl, NRDC "Breaking The Consumption Habit: Ratemaking for Efficient Resource Decisions" in *The Electricity Journal*, December 2001. http://www nrdc.org/air/energy/abreaking.asp
14. David Moskovitz. "Profits & Progress Through Least-Cost Planning", November 1989. http://www.raponline.org/showpdf.asp?PDF_URL=%22Pubs/General/Pandplcp.pdf%22
15. MADRI, "Revenue Stability Model Rate Rider", the Mid-Atlantic Distributed Resources Initiative. http://www.energetics.com/madri/pdfs/Model_Revenue_Stability_RateRider_2006-05-16.pdf

16. New York Public Service Commission Docket 04-E-0572 – Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. http://www3.dps.state ny.us/pscweb/WebFileRoom nsf/Web/BFCF5488B5C3620A85256FCD005A5F0F/$File/04e0572.ord.03.24.05.pdf?OpenElement
17. ELCON, "Revenue Decoupling - A Policy Brief of the Electricity Consumers Resource Council," January 2007, Washington DC. http://www.elcon.org/Documents/Publications/3-1RevenueDecoupling.PDF
18. Connecticut Department of Public Utility Control, Docket No. 05-09-09, Investigation Into Decoupling Energy Distribution Company Earnings From Sales, January 18 2006.
19. Simon ffitch, Washington State Attorney General's Office, "Decoupling: Should Ratepayers Be Worried?" presentation to NARUC Decoupling Workshop, August 2006. http://www.masstech.org/renewableenergy/public_policy/DG/resources/2006-08_NARUC_Ffitch_Decoupling_concerns.pdf
20. NASUCA "Energy Conservation And Decoupling Resolution", the National Association of State Utility Consumer Advocates, July 2007 *www.nasuca.org/Resolutions/Decoupling-2007-01.doc*
21. Maine Public Utilities Commission Report on Utility Incentives Mechanisms for the Promotion of Energy Efficiency and System Reliability, February 2004 *http://www.mtpc.org/renewableenergy/public_policy/DG/resources/2004-02-01_ME-PUC_Eff-RelReport.pdf*
22. NARUC, Resource CD On Aligning Utility Incentives With Demand-Side Resources, Washington DC 2006.

ATTACHMENT D

THE NATIONAL ASSOCIATION OF STATE UTILITY CONSUMER ADVOCATES

RESOLUTION 2007-01

NASUCA ENERGY CONSERVATION AND DECOUPLING RESOLUTION

Whereas, the provision and promotion of energy efficiency measures are increasingly viewed by state commissions as a necessary component of utility service;

Whereas, many states are now encouraging rate-regulated utilities to adopt energy efficiency programs and other demand-side measures to decrease the number of units of energy each utility's customers purchase from the utility;

Whereas NASUCA has long supported the adoption of effective energy efficiency programs;

Whereas recent proposals by rate-regulated public utilities for the initiation or expansion of energy efficiency measures have featured utility rate incentives or revenue "decoupling" mechanisms that guarantee utilities a predetermined amount of revenues regardless of the number of units of energy sold;

Whereas, the utilities proposing decoupling measures seek guarantees from public utilities commissions that they will receive their allowed level of revenues;

Whereas, these utilities justify this departure from traditional rate-making principles on the theory they are being asked to help their customers purchase fewer energy units from them by promoting energy efficiency measures and other demand-side measures, thereby reducing their revenues and, consequently, their returns to their shareholders, and that decoupling mechanisms compensate utilities for revenues lost due to conservation;

Whereas, these utilities contend that because these measures reduce their revenues, they have a disincentive to encourage programs that aid their customers in purchasing fewer units of energy;

Whereas, historically, rates have been set in periodic rate cases by matching test-year revenues with test-year expenses, adding pro forma adjustments and allowing the utilities an opportunity to earn a reasonable rate of return on their investments in exchange for a state-protected monopoly;

Whereas revenue guarantee mechanisms allow rate adjustments to occur based upon one element that affects a utility's revenue requirement, without supervision or review of other factors that may offset the need for such a rate change;

Whereas, historically, rate-regulated utilities were not guaranteed they would earn the allowed return; rather, earnings depended on capable management operating the utilities in an efficient manner;

Whereas, many utilities proposing revenue decoupling request compensation for revenue lost per customer, implying that sales volumes are declining, when in fact these utilities' total energy sales revenues are stable or increasing;

Whereas, there are a number of factors that may cause a utility to sell fewer units of energy over a period of time, including weather, changing economic conditions, shifts in population, loss of large customers and switches to other types of energy, as well as energy efficiency and other demand-side measures;

Whereas many utilities have been offering cost-effective energy efficiency programs and actively marketing these programs for years without proposing or implementing rate incentives or revenue guarantee mechanisms such as decoupling, and have continued to enjoy financial health;

Whereas past experience has shown that revenue guarantee mechanisms such as decoupling may result in significant rate increases to customers;

Whereas some utilities have referenced the benefit of encouraging energy efficiency programs as a justification for revenue guarantee mechanisms without in fact offering any energy efficiency programs, indicating that the revenue guarantee mechanisms are attractive to utilities for reasons other than their interest in promoting energy conservation;

Whereas past experience has shown that rate increases prompted by revenue guarantee mechanisms such as decoupling are often driven not so much by reduced consumption caused by utility energy efficiency programs, as by reduced consumption due to normal business risks such as changes in weather, price sensitivity, or changes in the state of the economy;

Whereas utilities are better situated than are consumers or state regulators to anticipate, plan for, and respond to changes in revenue prompted by normal business risks, and the shifting of normal business risks away from utilities insulates them from business changes and reduces their incentive to operate efficiently and effectively;

Whereas the traditional ratemaking process has historically compensated utilities for experiencing revenue variations associated with normal business risks;

NOW THEREFORE NASUCA RESOLVES:

To continue its long tradition of support for the adoption of effective energy efficiency programs;

And to oppose decoupling mechanisms that would guarantee utilities the recovery of a predetermined level of revenue without regard to the number of energy units sold and the cause of lost revenue between rate cases;

BE IT FURTHER RESOLVED:

NASUCA urges Public Utilities Commissions to disallow revenue true-ups between rate cases that violate the matching principle, the prohibition against retroactive ratemaking, the prohibition against single-issue ratemaking, or that diminish the incentives to control costs that would otherwise apply between rate cases;

NASUCA urges State legislatures and Public Utilities Commissions to, prior to using decoupling as a means to blunt utility opposition to energy efficiency and other demand-side measures, (1) consider alternative measures that more efficiently promote energy efficiency and other demand side measures; (2) evaluate whether a utility proposing the adoption of a revenue decoupling mechanism has demonstrated a commitment to energy efficiency programs in the recent past; and (3) examine whether a utility proposing the adoption of a revenue decoupling mechanism has a history of prudently and reasonably utilizing alternative ratemaking tools;

If decoupling is allowed by any state commission, NASUCA recommends that the mechanism be structured to (1) prevent over-earning and provide a significant downward adjustment to the utilities' ROE in recognition of the significant reduction in risk associated with the use of a decoupling mechanism, (2) ensure the utility engages in incremental conservation efforts, such as including conservation targets and reduced or withheld recovery should the utility fail to meet those targets, and (3) require utilities to demonstrate that the reduced usage reflected in monthly revenue decoupling adjustments are specifically linked to the utility's promotion of energy efficiency programs.

NASUCA authorizes its Standing Committees to develop specific positions and to take appropriate actions consistent with the terms of this resolution to secure its implementation, with the approval of the Executive Committee of NASUCA. The Standing Committees or the Executive Committee shall notify the membership of any action taken pursuant to this resolution.

Approved by NASUCA:
Denver, Colorado

June 12, 2007

Submitted by:
NASUCA Consumer Protection Committee

June 11, 2007

<u>Opposed:</u>
Ohio
Indiana
Colorado
Wyoming

<u>Abstained:</u>
Massachusetts
California

ATTACHMENT E

A RESPONSE TO THE NASUCA "DECOUPLING" RESOLUTION

ALLIANCE TO SAVE ENERGY [Jeffrey Harris]
AMERICAN COUNCIL FOR AN ENERGY EFFICIENT ECONOMY [Martin Kushler]
CONSERVATION LAW FOUNDATION [Seth Kaplan]
ENVIRONMENT NORTHEAST [Dan Sosland]
IZAAK WALTON LEAGUE OF AMERICA [William Grant]
NATURAL RESOURCES DEFENSE COUNCIL [Ralph Cavanagh]
NORTHWEST ENERGY COALITION [Nancy Hirsh]
ORION ENERGY [Steve Heins]
PACE ENERGY PROJECT [Fred Zalcman]
ROCKY MOUNTAIN INSTITUTE [Amory Lovins]
WESTERN RESOURCE ADVOCATES [John Nielsen]

AUGUST 2007

Introduction: The National Association of State Utility Consumer Advocates (NASUCA) adopted Resolution 2007-01 on June 12, 2007, expressing concerns about mechanisms that have been proposed in many states to remove financial obstacles to utility investments in energy efficiency and distributed resources. We offer this response in the spirit of constructive interchange between traditional allies and colleagues. Each section of the resolution is reprinted below, followed by our comments.

[TEXT OF NASUCA RESOLUTION 2007-1 FOLLOWS]

Whereas, the provision and promotion of energy efficiency measures are increasingly viewed by state commissions as a necessary component of utility service;

COMMENT: We agree, and because states have applied rigorous cost-effectiveness criteria to such programs, the result is to reduce energy bills for all customers.

Whereas, many states are now encouraging rate-regulated utilities to adopt energy efficiency programs and other demand-side measures to decrease the number of units of energy each utility's customers purchase from the utility;

COMMENT: We agree, and note that nowhere in this resolution does NASUCA dispute that utilities incur financial losses from these reduced sales, or that significantly expanded efforts to improve efficiency would boost such losses.

Whereas NASUCA has long supported the adoption of effective energy efficiency programs;

COMMENT: We acknowledge and appreciate the long-time support of many NASUCA members for investments in energy efficiency as an alternative to more costly generation and grid additions.

Whereas recent proposals by rate-regulated public utilities for the initiation or expansion of energy efficiency measures have featured utility rate incentives or revenue "decoupling" mechanisms that guarantee utilities a predetermined amount of revenues regardless of the number of units of energy sold;

Whereas, the utilities proposing decoupling measures seek guarantees from public utilities commissions that they will receive their allowed level of revenues;

COMMENT: Decoupling mechanisms don't "guarantee revenues" per se; they "guarantee" only recovery of fixed-cost revenue requirements that utility regulators have reviewed and authorized, "regardless of the number of units of energy sold." Decoupling does not affect revenues associated with variable charges like fuel payments.

Whereas, these utilities justify this departure from traditional rate-making principles on the theory they are being asked to help their customers purchase fewer energy units from them by promoting energy efficiency measures and other demand-side measures, thereby reducing their revenues and, consequently, their returns to their shareholders, and that decoupling mechanisms compensate utilities for revenues lost due to conservation;

COMMENT: First, it is not a "theory" that energy efficiency programs aim to reduce energy use, or that this hurts utilities financially if they recover authorized fixed costs through charges on energy use. Moreover, using periodic rate true-ups to make fixed-cost revenue recovery independent of sales is not a "departure from traditional rate-making practices." Decoupling removes a potent financial disincentive for utilities without (as too often has happened historically) reducing their customers' incentive to conserve and making more of their bill independent of consumption (by raising fixed charges and lowering variable charges). And the rationale for decoupling goes beyond encouraging utilities to support energy efficiency programs and distributed resources; the hope is that utilities also will endorse mandatory efficiency standards and other non-utility initiatives to help customers save energy cost-effectively, while opposing promotional rate structures that reward increased consumption ("the more you use, the less you pay").

Whereas, these utilities contend that because these measures reduce their revenues, they have a disincentive to encourage programs that aid their customers in purchasing fewer units of energy;

COMMENT: We agree that utilities make this argument, and the resolution gives no reason to disagree.

Whereas, historically, rates have been set in periodic rate cases by matching test-year revenues with test-year expenses, adding pro forma adjustments and allowing the utilities an opportunity to earn a reasonable rate of return on their investments in exchange for a state-protected monopoly;

COMMENT: We agree.

Whereas revenue guarantee mechanisms allow rate adjustments to occur based upon one element that affects a utility's revenue requirement, without supervision or review of other factors that may offset the need for such a rate change;

COMMENT: Decoupling does not readjust utilities' authorized fixed-cost revenue requirements "without supervision or review of other factors;" it simply makes recovery of fully adjudicated revenue requirements independent of subsequent fluctuations in retail energy use. There is, as a result, no reason to review other rate case assumptions when decoupling adjustments are made; note that utilities may either gain or lose from each adjustment, depending on how rapidly retail sales are decreasing or increasing. Finally, unlike routinely applied "revenue guarantee mechanisms" like fuel adjustment clauses, decoupling mechanisms focus specifically on removing a potent financial obstacle to cost-effective energy efficiency measures that benefit all customers.

Whereas, historically, rate-regulated utilities were not guaranteed they would earn the allowed return; rather, earnings depended on capable management operating the utilities in an efficient manner;

COMMENT: We agree, and decoupling in no way affects utilities' incentive to operate efficiently, as explained further below.

Whereas, many utilities proposing revenue decoupling request compensation for revenue lost per customer, implying that sales volumes are declining, when in fact these utilities' total energy sales revenues are stable or increasing;

COMMENT: Decoupling mechanisms based on authorized revenue requirements per customer do not "imply" declining sales volumes; they reflect a judgment that any growth in fixed cost revenue recovery between rate cases should reflect increases in the number of customer served. The alternative, without decoupling, is to tie such growth directly to increases in electricity and natural gas sales, which is the worst possible outcome from the standpoint of society's interest in maximizing

cost-effective energy efficiency. We agree with the observation that "many utilities'" energy sales revenues are increasing, but that is because their retail energy sales keep rising in the face of pervasive market barriers to energy efficiency; the whole point of decoupling is to eliminate a perverse barrier to measures and policies that would reduce electricity and natural gas consumption.

Whereas, there are a number of factors that may cause a utility to sell fewer units of energy over a period of time, including weather, changing economic conditions, shifts in population, loss of large customers and switches to other types of energy, as well as energy efficiency and other demand-side measures;

COMMENT: We agree, but it is precisely the complexity of factors affecting energy use that make decoupling mechanisms appealing in their simplicity. The mechanisms do not attempt to disentangle all these intertwined causes and effects: decoupling merely ensures that recovery of authorized fixed costs is not affected by fluctuations in sales that regulators did not anticipate when they set the utility rates that are intended to recover those costs. Of course, for regulators who do not want to shift financial risk associated with unusual weather conditions from utilities to customers, retail sales can easily be weather-adjusted before decoupling adjustments are made.

Whereas many utilities have been offering cost-effective energy efficiency programs and actively marketing these programs for years without proposing or implementing rate incentives or revenue guarantee mechanisms such as decoupling, and have continued to enjoy financial health;

COMMENT: But precisely because utilities typically have a much stronger incentive to build and own power plants and transmission than to help customers conserve, utilities' energy efficiency record has been highly uneven over time, and on average utilities today are targeting average annual energy savings amounting to less than half of one percent of customers' annual consumption. In sum, and not at all surprisingly, most utilities' economic self-interest is wholly consistent with their relatively modest success in achieving energy savings.

Whereas past experience has shown that revenue guarantee mechanisms such as decoupling may result in significant rate increases to customers;

COMMENT: This is certainly true of fuel adjustment clauses, but the resolution provides no example of a decoupling mechanism that has resulted in "significant rate increases to customers," and such mechanisms can readily be designed with built-in rate impact safeguards. For example, PacifiCorp's most recent Oregon mechanism operated within a 2 percent annual rate impact limit, and Idaho Power's current mechanism constrains annual decoupling adjustments to 3 percent or less. Average annual rate impacts of decoupling in California over the policy's first decade were less than half of one percent annually. Finally, it bears emphasis that decoupling adjustments can go in either direction; adopting a mechanism does not

mean automatic rate increases. In any year when electricity and gas consumption grow at unexpectedly high rates, utilities must give the additional revenues back in the form of rate reductions. Customers collectively win under either scenario, of course; cost-effective energy efficiency programs steadily reduce systemwide energy *bills*, regardless of the direction of each modest decoupling-related *rate* adjustment.

Whereas some utilities have referenced the benefit of encouraging energy efficiency programs as a justification for revenue guarantee mechanisms without in fact offering any energy efficiency programs, indicating that the revenue guarantee mechanisms are attractive to utilities for reasons other than their interest in promoting energy conservation;

COMMENT: We are not aware that this has ever occurred, but we agree that Commissions should link approval of decoupling mechanism to utilities' agreement to offer a robust portfolio of cost-effective energy efficiency programs.

Whereas past experience has shown that rate increases prompted by revenue guarantee mechanisms such as decoupling are often driven not so much by reduced consumption caused by utility energy efficiency programs, as by reduced consumption due to normal business risks such as changes in weather, price sensitivity, or changes in the state of the economy;

COMMENT: Other factors do indeed affect energy consumption, but why would society want unexpected changes in energy consumption to affect utilities' ability to recover authorized costs that are unrelated to consumption – particularly when the result is a palpable barrier to energy efficiency progress? Also, the resolution appears once again to be assuming incorrectly that decoupling can only increase rates, when in fact adjustments in both directions are routine, as explained above. Note, finally, that other factors affecting consumption include mandatory state and federal efficiency standards, rate designs that boost rewards for saving energy, and public education on the linkages between energy use and global warming pollution. Utility support for all these measures makes them more feasible and productive, and without decoupling all these measures automatically hurt utilities financially.

Whereas utilities are better situated than are consumers or state regulators to anticipate, plan for, and respond to changes in revenue prompted by normal business risks, and the shifting of normal business risks away from utilities insulates them from business changes and reduces their incentive to operate efficiently and effectively;

COMMENT: Utilities' incentives to "operate efficiently and effectively" are not affected by decoupling, since with or without it the company keeps any operating savings that it achieves between rate cases and absorbs any cost overruns. The true-ups associated with decoupling guarantee only recovery of an authorized revenue requirement, not any particular level of net revenues.

Whereas the traditional ratemaking process has historically compensated utilities for experiencing revenue variations associated with normal business risks;

COMMENT: We agree in general, but ratemaking processes typically also have made successful energy efficiency programs automatic financial losers for utilities, while creating a substantial earnings opportunity for investments in more expensive substitutes like generation and grid assets. Decoupling helps fix this misalignment; it does not enlarge authorized revenue requirements, and as indicated earlier it includes both upsides and downsides for utility shareholders (it eliminates under-recoveries of authorized costs due to reduced energy sales, but it simultaneously takes away the upside associated with over-recoveries due to increased energy sales, from which many utilities have profited handsomely for decades).

NOW THEREFORE NASUCA RESOLVES:

To continue its long tradition of support for the adoption of effective energy efficiency programs;

COMMENT: We applaud this tradition of support, but history shows that the full potential for such programs cannot be realized without a better alignment of shareholder and customer interests.

And to oppose decoupling mechanisms that would guarantee utilities the recovery of a predetermined level of revenue without regard to the number of energy units sold and the cause of lost revenue between rate cases;

COMMENT: Here and subsequently, this resolution hints that NASUCA might look favorably on recovery of lost revenues from kilowatt-hours and therms specifically determined to have been saved by utility conservation programs. We strongly encourage NASUCA to rethink this proposal, which would substitute for true "decoupling" regular payments of lost revenues from saved kilowatt-hours. The calculations themselves would be hugely contentious and the rate impacts increasingly significant, since each year's savings and lost revenues would add to the previous year's tally, and each stream of savings and payments could persist over decades, with steadily escalating financial consequences for all involved (often more than three-fifths of the retail value of kilowatt-hours and one-fourth of the retail value of therms represent "lost revenues" for this purpose). And the system would create additional perverse incentives for utilities, since the most lucrative programs would be those that looked good on paper while saving little or nothing in practice (allowing double recovery of "lost revenues"). Finally, the system would be inherently inequitable and asymmetrical, since the utility would be recovering its "lost revenues" from energy efficiency gains without being required to give up its "found revenues" from growth in sales associated with economic expansion elsewhere on the system.

BE IT FURTHER RESOLVED:

NASUCA urges Public Utilities Commissions to disallow revenue true-ups between rate cases that violate the matching principle, the prohibition against retroactive ratemaking, the prohibition against single-issue ratemaking, or that diminish the incentives to control costs that would otherwise apply between rate cases;

COMMENT: Traditional ratemaking makes ample provision for "trackers" and/or true-ups associated with, e.g., fuel costs; decoupling is no different in its "single issue" and "retroactive" implications, rate impacts are lower, and the public interest justification is at least as compelling. Ken Costello of the National Regulatory Research Institute has investigated whether decoupling mechanisms meet the traditional tests justifying state utility regulators' use of "tracking mechanisms that adjust rates and revenues whenever sales deviate from their targeted level," and has concluded that "[u]nless a state commission faces legal restrictions in implementing a 'sales tracker' or has a built-in policy of limiting trackers in general, [revenue decoupling] would seem to meet the regulatory threshold for a tracker." Ken Costello, Briefing Paper: Revenue Decoupling for Natural Gas Utilities, p. 9 (National Regulatory Research Institute, April 2006).

NASUCA urges State legislatures and Public Utilities Commissions to, prior to using decoupling as a means to blunt utility opposition to energy efficiency and other demand-side measures, (1) consider alternative measures that more efficiently promote energy efficiency and other demand side measures; (2) evaluate whether a utility proposing the adoption of a revenue decoupling mechanism has demonstrated a commitment to energy efficiency programs in the recent past; and (3) examine whether a utility proposing the adoption of a revenue decoupling mechanism has a history of prudently and reasonably utilizing alternative ratemaking tools;

If decoupling is allowed by any state commission, NASUCA recommends that the mechanism be structured to (1) prevent over-earning and provide a significant downward adjustment to the utilities' ROE in recognition of the significant reduction in risk associated with the use of a decoupling mechanism, (2) ensure the utility engages in incremental conservation efforts, such as including conservation targets and reduced or withheld recovery should the utility fail to meet those targets, and (3) require utilities to demonstrate that the reduced usage reflected in monthly revenue decoupling adjustments are specifically linked to the utility's promotion of energy efficiency programs.

COMMENT: We agree with NASUCA that decoupling should be linked to utilities' energy efficiency commitments, but we disagree strongly with the proposal to link decoupling adjustments specifically to savings from conservation programs (as explained above). Moreover, it is at best premature to link decoupling in any way to utilities' ROE. It is important to recognize that regulators and utilities have only limited experience with decoupling outside California (whose PUC has never invoked decoupling as an ROE consideration), and that decoupling creates both upside and downside exposure for company shareholders (they will no longer under-recover authorized fixed costs if retail sales drop below expectations, but they

also will lose their longstanding opportunity for gains from sales increases). Whether the net result is a material change in the company's risk profile cannot be determined without company-specific and capital market experience. This is particularly true for mechanisms that are weather-adjusted to avoid affecting current allocation of weather-related risks. Finally, if the goal is to encourage utilities to devote more management resources and creativity to energy efficiency, tying decoupling to the immediate imposition of a reduction in shareholder returns would be wholly counterproductive.

Energy Efficiency & Utility Profits:

Aligning Incentives with Public Policy

Rhode Island GHG Process

26 April 2007

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About RAP

- Non-profit organization formed in 1992 by former utility regulators
- Funded by:
  - The Energy Foundation and other charitable organizations
  - US DOE and
  - US EPA
- Provides workshops and educational assistance to regulators and other government agencies

Traditional Regulatory Methods Provide Strong Disincentives for Customer-Sited Resources

- Utility revenues and profits are linked to unit sales (kW, kWh, therms, etc.)
- Loss of sales due to successful acquisition of energy efficiency and DG/CHP will lower utility profitability
- *The effect may be quite powerful. . .*

Assumptions for A Sample Utility

Assumptions	
Operating Expenses	$160,000,000
Rate Base	$200,000,000
Tax Rate	35.00%

			Weighted Cost Rate		Dollar Amount	
Cost of Capital	% of Total	Cost Rate	Pre-tax	After-Tax	Pre-Tax	After-Tax
Debt	55.00%	8.00%	4.40%	2.86%	$8,800,000	$5,720,000
Equity	45.00%	11.00%	4.95%	7.62%	**$9,900,000**	$15,230,769
Total	100.00%			10.48%		

Revenue Requirement	
Operating Expenses	$160,000,000
Debt	$5,720,000
Equity	$15,230,769
Total	$180,950,769
Allowed Return on Equity	$9,900,000

How Changes in Sales Affect Earnings

	Revenue Change		Impact on Earnings		
% Change in Sales	Pre-tax	After-tax	Net Earnings	% Change	Actual ROE
5.00%	$9,047,538	$5,880,900	$15,780,900	**59.40%**	17.53%
4.00%	$7,238,031	$4,704,720	$14,604,720	**47.52%**	16.23%
3.00%	$5,428,523	$3,528,540	$13,428,540	**35.64%**	14.92%
2.00%	$3,619,015	$2,352,360	$12,252,360	**23.76%**	13.61%
1.00%	$1,809,508	$1,176,180	$11,076,180	**11.88%**	12.31%
0.00%	$0	$0	$9,900,000	**0.00%**	11.00%
-1.00%	-$1,809,508	-$1,176,180	$8,723,820	**-11.88%**	9.69%
-2.00%	-$3,619,015	-$2,352,360	$7,547,640	**-23.76%**	8.39%
-3.00%	-$5,428,523	-$3,528,540	$6,371,460	**-35.64%**	7.08%
-4.00%	-$7,238,031	-$4,704,720	$5,195,280	**-47.52%**	5.77%
-5.00%	-$9,047,538	-$5,880,900	$4,019,100	**-59.40%**	4.47%

An Alternative Approach

- "Throughput" incentive is at odds with a requirement to meet demand for present and future demand for service at the lowest total cost
  - The throughput incentive inhibits a company from invest in energy efficiency, even when it's the least-cost resource, and it encourages the company to promote incremental sales, even when they are wasteful
- Policies should, instead, align utilities' profit motives with public policy: the acquisition of all cost-effective resources, in particular energy efficiency, DG, and CHP
- Decoupling, strong regulatory and legislative policy support, and industry leadership are a part of the solution

Addressing Utility Incentives for EE and DG/CHP

- Net Lost Revenue/Expense Recovery
- Decoupling utility revenues from sales volume
- Providing positive incentives for meeting efficiency goals

Net Lost Revenue Recovery

- Adjustment that tracks the implementation of energy efficiency and, uses statistical tools, determines net lost revenues due to customer-sited resources
  - Net lost revenue = Gross lost revenue – costs avoided
- Recovery of net lost revenue can be contingent on achieving certain EE and other program goals
- General approach adopted by many states in the 90s
  - Still used in several, including Kentucky and Nevada
- Unfortunately, net lost revenue recovery does not remove the throughput incentive
  - Company still makes money on sales

Revenue-Profit Decoupling: What is it?

- Breaks the mathematical link between sales volumes and profits
- Objective is to make profits levels immune to changes in sales volumes
  - This is a revenue issue
  - This is not a pricing issue
- Not intended to decouple customers bills from consumption
  - Unit-based pricing approaches are to be retained
  - Customers continue to see the cost implications of their consumption decisions, while the utility's risks associated with variations in sales due to efficiency are mitigated

Revenue Decoupling: The Essential Concept

- Basic Sales-Revenue Decoupling
  - Utility “base” revenue requirement determined with traditional rate case
  - Each future period has a calculable “allowed” revenue requirement
  - Differences between the allowed revenues and actual revenues are tracked on an average use per customer or other basis
  - The difference (positive or negative) is flowed back to customers in a small adjustment to unit rates

Cost Drivers

- In the long-term
  - Demand for electricity service is the primary driver of costs
- But in the short-term (the rate-case horizon)
  - Utility costs vary more directly with numbers of customers than with sales
  - Particularly true of unbundled distribution service, where the marginal costs of delivery are, on average, very low or nil, but for which the costs of acquiring and serving customers are significant and recurring

Revenue-Per-Customer Decoupling

- Holds class average revenues-per-customer (RPC) constant
  - Or may have a periodic increase or decrease in average revenues-per-customer
- Based on prior rate case values
- Monthly (or other periodic) adjustment mechanism similar to traditional fuel and purchase power adjustments
- See Maryland (BG&E) for an example

“Advanced” Decoupling

- RPC value periodically adjusted for inflation and/or productivity
- Can be combined with performance goals and incentives
- Adjustments can be bounded (SDG&E/SoCalGas) and/or “shared” with customers (PG&E/Northwest Natural Gas, Oregon)
- California has the most comprehensive decoupling and PBR mechanisms

Decoupling Examples:

- Maryland – Gas Utilities (in place), PEPCO (filed)
- North Carolina – Gas Utilities
- California – 3 IOUs Electric & Gas Utilities
- Oregon – Northwest Natural Gas
- New Jersey (NJNG – Awaiting approval order)
- Utah (Questar)
- Indiana & Ohio (Vectren)

Decoupling: Maryland Baltimore Gas & Electric

- Decoupling mechanism for residential and general service gas customers
- Straight revenue-per-customer method
- Based on prior rate case test year for base revenue per customer
- Monthly adjustment mechanism similar to traditional fuel and purchase power adjustments
- BG&E program formed the basis of the MADRI Model Rate Rider

Maryland: BG&E's Decoupling

- Allowed Revenues = Test Year Average Use per Customer * No. of Customers * Delivery Price
- Adjustment to Delivery Price = (Allowed Revenues - Actual Revenues) ÷ Estimated Sales
- Any difference between actual and estimated sales is reconciled in a future month
- Calculated separately for each class
- Calculations of the billing adjustments are filed monthly with the Public Service Commission

MADRI Model Revenue Stability Rider

- Mid-Atlantic Distributed Resources Initiative
  - Aimed at developing state and regional policies and programs to increase deployment of distributed energy resources (EE, DG/CHP, other demand response) in 5 mid-Atlantic states
  - Developed model decoupling approach, based on BG&E program
    - PEPCO proposals based on the model

Incentives

- Financial rewards for superior performance in achieving desired policy outcomes
  - Increase ROE for cost-effective EE and other specified investments
  - Shared savings
  - Payments for meeting specified performance targets
- Available in a number of states
  - E.g., AZ, CT, MA, MN, NH, NV, VT

Appendices

New Mexico: Example of Clear Policy Direction

- It serves the public interest to support public utility investments in cost-effective energy efficiency and load management <u>by removing any regulatory disincentives that may exist and allowing recovery of costs for reasonable and prudently incurred expenses of energy efficiency and load management programs</u>
- The commission shall <u>identify any disincentives or barriers</u> that may exist for public utility expenditures on energy efficiency and load management and, if found, <u>ensure that they are eliminated in order that public utilities are financially neutral in their preference for acquiring demand or supply-side utility resources</u>

New Mexico Statutes, Chapter 62-17-2

Decoupling: North Carolina An Interesting Read

- North Carolina's three major gas utilities have decoupling mechanism
- Expressed importance of highly volumetric rate structures and lower fixed customer charges
- Good overall discussion of policy framework for decoupling
  - Rejected higher fixed-charge approach as unpopular with customers
  - Rejected Attorney General's argument that decoupling would penalize customers for conserving

North Carolina: Customers & Shareholders

- "Different usage patterns and tariffs of industrial customers" provide good cause to exclude class from mechanism
- Approved as an experimental tariff limited to no more than 3 years
- Required utility contribution toward conservation programs (e.g. $500,000 per year for Piedmont)
- Required utility to work with the Attorney General and the Public staff to develop appropriate and effective conservation programs to assist its residential and commercial customers

North Carolina Rationale for Decoupling

- Recognized conservation has potential for financial harm to the utility and its shareholders
- Cited number of benefits: Improved opportunities for conservation of energy resources, savings for customers, downward pressure on wholesale gas prices, helping utility recovery of margin and a reasonable return
- Decoupling better aligns interests of Company and customers with respect to conservation
- Commission on Shareholder Risk: "In a period of declining per-customer usage, a mechanism that decouples recover of margin from usage, without requiring the utility to file frequent rate cases or increase unpopular fixed charges, <u>clearly reduces shareholder risk</u>."

Which Brings Us To:
A Policy Tale of Two Utilities

- Rising revenue-per-customer utilities:
  - Experience rising earnings between rate cases
  - Typical of many electric utilities
- Declining revenue-per-customer utilities:
  - Experience declining earnings between rate cases
  - Typical of many gas utilities
- Under reasonable assumptions, not symmetric between rising and declining cases
- Usually driven by differences in the average consumption between new and old customers
- Policy question: Should decoupling be "profit neutral" relative to future such profit expectations?

California Decoupling Basics

- Part of an aggressive and comprehensive policy framework designed to deploy cost-effective energy efficiency
- Covers SDG&E/SocCalGas, PG&E and SCE
- Tracks difference between allowed revenues and actual revenues
- Trued up each year to that year's authorized revenues
- Revenue requirements are adjusted each year for inflation
- Each utility has individual mechanisms for determining annual revenue requirements

California Case Specifics: Company Plan Features

- Southern California Edison
  - Citing:
    - Poor financial health of company
    - Changed circumstances since such adjustments were rejected (20 years ago)
  - Commission approved "non-test year" revenue requirement adjustments
  - Implemented revenue balancing account for over- under-collections of revenue adjustment
- San Diego Gas & Electric and SoCalGas
  - Each year's revenue requirement is determined by the previous year's base margin adjusted by CPI
  - Minimum and maximum authorized adjustments (in 3%-4% range)
  - Balancing account for adjustment collections
  - Sharing mechanism

California: SDG&E/SoCalGas Shareholder & Customer Sharing

Earnings Band	Shareholders	Ratepayers
0 - 50	100%	0%
51 – 100	75%	25%
101 – 125	35%	65%
126 – 150	45%	55%
151 – 175	55%	45%
176 – 200	65%	35%
201 – 300	75%	25%
Over 300	Suspension	

Pacific Gas & Electric

- Separate Distribution and Generation mechanisms:
  - DRAM (Distribution revenue adjustment mechanism) and
  - UGBA (Utility Generation Balancing Account) revenue adjustment mechanisms
- Allowed revenues: annual CPI-based attrition adjustments for 2004-2006, with following minimums and maximums:

Year	Min	Max
2004	2.00%	3.00%
2005	2.25%	3.25%
2006	3.00%	4.00%

Decoupling: Oregon Northwest Natural Gas

- Defers and subsequently amortizes 90 percent of the margin differentials in the residential and commercial customer groups
- Average customer margin-per-therm calculation
- Calculated Monthly
- Places weather risk on utility

MADRI Model Rule

- Used BG&E Rate Rider as starting point
- Model Rule is product of collaborative stakeholder process
- Available at: http://www.raponline.org/Feature.asp?select=78
- Tracks on demand and energy basis
- Currently 60-day lag between consumption & recovery – may present rate design issue
- Lag can be eliminated with a “use and file” approach
- As written, places weather risk on customer – but this is not a policy position *per se*

Lost Revenue/Expense Approaches

- Kentucky
- Nevada

Lost Revenue/Expense Approaches: Kentucky

- Allows lost revenue recovery for both electric and gas DSM programs.
- Recovery mechanisms are determined on a case-by-case basis
- Utilities can recover
  - Full costs of commission-approved demand-side management programs and
  - Revenues lost
  - Incentives designed to provide financial rewards to the utility for implementing cost-effective demand-side management programs

Lost Revenue/Expense Recovery Approaches: Nevada

- Utility required to track and separate costs
- For Commission approved action plan programs, utility may recover labor, overhead, materials, incentives paid to customers, advertising, marketing and evaluation

Positive Incentives

- Arizona
- Connecticut
- Massachusetts
- New Hampshire
- Nevada
- Vermont

Positive Incentives: APS Performance Incentives

- Funding for DSM
  - Base rates ($10 million per year) and
  - Through implementation of an adjustor (average of $6 million per year)
- APS recovers performance incentive for DSM program results
  - Share of the net economic benefits (benefits minus costs),
  - Maximum reward of 10% of DSM spending
  - Credits against test year base revenue requirement
  - Low income bill assistance
- APS was obligated to spend $13 million in 2005 on DSM projects.

Positive Incentives: Connecticut Performance Incentives

- Utilities managing conservation & load management programs are eligible for "performance management fees," tied to performance goals approved by the ECMB and DPUC, including lifetime energy savings and demand savings, and other measures
- Incentives are available for a range of outcomes from 70-130% of pre-determined goals.
- 2004 utilities collectively reached 130% of their energy savings goals, and 124% of their demand savings goals.
- Received performance management fees of $5.27 million
- 2006 joint budget anticipates $2.9 million in performance incentives.

Positive Incentives: Massachusetts Performance Incentives

- NSTAR
  - After-tax shareholder incentive of five percent
  - Level of performance bounded from 75 percent to 110 of design level performance
  - Regulatory finding: Incentives must be large enough to promote good program management, but small enough to leave almost all of the energy efficiency funds to directly serve customers

Positive Incentives: Minnesota Performance Incentives

- 1999 – Utilities receive a percentage of total net benefits when performance levels are met or exceeded
- Net Benefits are calculated by subtracting each utility’s program costs from the avoided costs resulting from each utility’s Conservation Improvement Plan (CIP) investment
- Avoided cost estimates ($/kw,$/kWh) saved remain constant for the duration of approved biennial CIP

Positive Incentives: New Hampshire Performance Incentives

- Two separate incentives
- Cost-effectiveness incentive
  - Utility must achieve Actual to Projected Cost-Effectiveness ratio of 1.0 or higher
  - Incentive is 4% of Planned Energy Efficiency Budget multiplied by the ratio of Actual Cost-Effectiveness to Planned Cost-Effectiveness
- Energy Savings incentive
  - Utility must achieve 65% of planned energy savings
  - Incentive is 4% of Planned Energy Budget, multiplied by ratio of Actual Energy Savings to Planned Energy Savings
- Maximum incentive in each sector (residential and commercial/industrial) is 12%
- Sectors are calculated separately

Positive Incentives: Nevada Incentives

- DSM Incentive: Bonus rate of return for DSM investments 5% higher than authorized rates of return for supply investments
- Critical Facilities Incentive: Facilities may be designated "critical" for reliability, diversity of supply- and demand-side resources, development of renewable resources, fulfilling statutory mandates and/or retail price stability
- Incentives for critical facilities may include:
  - Enhanced return on equity on facility over its life
  - CWIP treatment
  - Creation of "regulatory asset" account

Positive Incentives: Vermont Performance Incentives

- Incentive in effect for 2000-2002
- Efficiency is responsibility of Efficiency Vermont, the state's "Energy Efficiency Utility" (EEU)
- EEU receives performance incentives for meeting or exceeding specific goals in contract between Vermont's Public Service Board (PSB) and EEU
- Incentive categories:
  - Program Results Incentives (electricity savings &resource benefits)
  - Market Effects Incentives (significant market transformation)
  - Activity Milestones Incentive (exemplary performance for rapid start-up and/or infrastructure development)
- Incentives capped at $795,000 over three years

Resources

- Website: www.raponline.org
- E-mail:
  - Rapweston@aol.com
  - Rapwayne@aol.com
- MADRI Model Revenue Stability Rider
  - http://www.energetics.com/MADRI/pdfs/Model_Revenue_Stability_RateRider_2006-05-16.pdf
- RAP Efficiency Policy Toolkit:
  - http://www.raponline.org/Pubs/General/EfficiencyPolicyToolkit.pdf

ELCON

Revenue Decoupling

A Policy Brief of the Electricity Consumers Resource Council

Every complex problem has a simple solution too good to be true, and it usually is.

Attributed to H.L. Mencken

Introduction

For over two decades advocates of ratepayer-funded energy efficiency and load reduction programs have recommended that the 'link' between utility's revenues and its sales be 'decoupled' to eliminate a utility's disincentive to sponsor such programs. The argument is that the combination of the utility management's fiduciary duty to shareholders and the use of rates based on a revenue requirement, that includes sales in its calculation, discourages utilities from being competent vendors of energy efficiency and load reduction services.

Revenue decoupling (RD) is generally defined as a ratemaking mechanism designed to eliminate or reduce the dependence of a utility's revenues on sales. It is adopted with the intent of removing the disincentive a utility has to administer and promote customer efforts to reduce energy consumption and demand or to install distributed generation to displace electricity delivered by the utility's T&D system. In regulatory parlance, RD takes the form of a tracker or attrition allowance in which authorized per customer margins are subject to a true-up mechanism to maintain or cap a given level of revenues or revenues per customer. Variations from the targeted sales or revenues are subsequently recaptured from ratepayers through a surcharge or credit.

In a significant departure from traditional cost-of-service principles, which historically provides utilities with only the opportunity to earn a fair return, RD guarantees actual earnings at the level of authorized earnings. Under RD, a utility is indifferent to the impact of sales levels or when the sales occur because of changing economic conditions, weather, or new technologies.

ELCON members are strong supporters of energy efficiency and are world-class practitioners of innovative technologies that reduce their energy costs to improve their competitiveness. But ELCON strongly opposes decoupling because it disrupts and distorts the utility core business functions and is not a particularly effective way of promoting energy efficiency or anything of benefit to customers. Time and time again decoupling has been tried in several states, only to be suspended because it unduly interferes with the overall regulatory process. ELCON believes that there are other ways to promote energy efficiency and load reduction services that have proven to be more effective. This paper describes the simple mechanics of decoupling, why decoupling has historically failed and is not likely to be any more effective in future applications, and proposes alternative regulatory policies that more effectively focus on market transformation and the effective delivery of demand-side services.

The Mechanics of Revenue Decoupling
An Illustrated Example of An Annualized RD Mechanism[1]

Base Year Assumptions

	Year One	Year Two
Utility's Operating Costs (A)	$4 billion	$4 billion
Utility's Rate Base (B)	$5 billion	$5 billion
Authorized Return to Equity Owners (ROE)	10%	10%
Authorized Earnings to Equity Owners (C) (10% of $5 billion)	$500 million	$500 million
Utility's Authorized Revenue (A + C)	$4.5 billion	$4.5 billion
RD Balance Account (D)	0	$45 million
Baseline Sales (E)	45,000 GWh	45,000 GWh
Base Rate per KWh (A + C)/E	$0.10	$0.10
Effective Rate per KWh (F) (A + C + D)/E	$0.10	$0.101

Actual Sales Year

Actual Sales (G) (1% diviation from baseline forecast)	44,550 GWh 1% Below Baseline	45,450 GWh 1% Above Baseline
Actual Revenues Collected (H) (F × G)	$4,455 million	$4,590 million
Unadjusted Earnings to Equity Owners (I) (H minus A)	$455 million	$590 million
Reported ('Authorized') Earnings (C)	$500 million	$500 million
Actual ROE (I/B)	9.1% Reduction of 90 basis points	11.8% Increase of 180 basis points
Reported ('Authorized') ROE	10%	10%
End-of-Year Balance Account (D) (A + C) minus H	$45 million	($90 million)

[1] This is a simplified example of revenue decoupling that assumes no variable T&D costs or change in the number of customers. Also, tax implications and accounting for price elasticity are ignored.

How Decoupling Works

RD mechanisms can take several forms but all accomplish the same thing: customer rates are automatically adjusted to immunize utility earnings from sales fluctuations.

The first example is illustrated on the spreadsheet on page 2. It provides a simplified form of mechanism in which true-ups are done on an annual or multi-year basis. The process usually starts with a baseline determination of a utility's revenues that may include the anticipated consequences of a DSM program. This is the 'base case' in the illustration.

The illustration holds this baseline constant over a two-year period. In the first year, actual sales are 1% below the baseline amount; in the second year actual sales are 1% above the baseline. The result is a revenue shortfall in the first year of $45 million. Absent any other offsetting revenue recovery mechanism, this shortfall reduces earnings to equity owners and the expected ROE. This illustrates a main argument of proponents of RD that any small reduction in sales can produce a significant reduction in the utility's allowed earnings. In the example, the actual ROE is 9.1%, a reduction of 90 basis points from the allowed ROE of 10%.

Applying the RD mechanism in the second year, revenues are adjusted by increasing the customer rate upwards to ensure that sufficient revenues are collected to achieve the allowed ROE. However, actual sales are 1% above the baseline amount and the utility over collects $90 million. The actual ROE is 11.8% or 180 basis points above the allowed ROE. This simple example highlights the potential year-to-year volatility of the RD mechanism.

With compounding economic events (e.g., recessions), the accrual account can grow quite large unless more frequent rate cases or true-ups are ordered. RD mechanisms tried in the past tended to generate substantial accruals that quickly became a dilemma for regulators and a burden for ratepayers.

The second example (on page 4) illustrates decoupling on a revenue-per-customer (RPC) basis. The base year revenue collected per customer (RPC) on an average customer class basis is fixed, and the annual charge is then typically allocated on a monthly, normalized basis over a reference year. Each month the actual revenues collected per ratepayer are compared to the allowed monthly RPC and the difference is either credited or debited to a balancing account. Customers would still be billed on a per-unit consumption basis, but the rate would be trued-up based on actual revenues collected per customer. This prevents the utility from earning additional profit from unexpected sales but also ensures that the utility recovers its costs resulting from unexpected customer growth. For unexpected declines in sales per customer and/or declines in the number of customers, the mechanism works the same way. Under- or over-recoveries in any month are automatically trued-up the following month or at the end of the year.

The RPC mechanism highlights the 'blunt instrument' nature of decoupling. The utility is made whole for earnings losses that go beyond the limited losses caused solely by energy efficiency and load reduction programs. The net effect of the true-up mechanism is to put the utility's revenue stream on autopilot. This isolates utility management and equity owners from the normal business risk inherent to the utility industry, notwithstanding that the existence of a ROE is to reward equity owners with a return on their investment that includes a sizeable risk premium commensurate with the business risk. In short, an RD mechanism makes retail electric distribution service virtually risk free for utilities.

The Mechanics of Revenue Decoupling
An Illustrated Example of Revenue-Per-Customer (RPC) Mechanism With Monthly True-Ups [2]

Base Year Allowed RPC
For a Base Year Month

Base Year Rate per kWh (A)	$0.10
Base Year (Month) Sales in kWh (B)	1 billion
Base Year (Month) Revenue (A x B)	$100 million
Base Year Number of Customers (C)	1,000,000
Allowed RPC (A x B)/C	$100

Calculation of Revenue Adjustment
For A Single Month

Base Year Rate per kWh (A)	$0.10
Actual Sales for the Month (D) 5% Reduction from Baseline (B)	0.95 billion
Actual Revenues for the Month (E) (A x D)	$ 95 million
Actual Number of Customers (F)	1,010,000
Allowed RPC	$100
Allowed Revenues (G) (F x E)	$101 million
Revenue Adjustment (H) (G - E)	$6 million
Forecasted Next Month Sales (I)	1.0 billion
Rate Adjustment (True-Up) (H/I)	$0.006

This adjustment is added to rates for sales the following month, or at the end the year.

[2] This example assumes that sales per customer decline but the number of customers grows.

ELCON Position & Recommendations

A. *Decoupling Promotes Mediocrity In The Management Of A Utility.*

The primary function of a regulated electric utility is and will always be to efficiently sell and deliver electric energy to customers. For investor-owned utilities, the profit-motive is a legitimate and practical means to incent utility managers to operate their business in a competent and efficient manner. There also need not be any conflict with 'unselling' the business' primary product by offering energy efficiency and load reduction services.

Firms in many industries meet the competition by selling a range of products competing for different segments of the market share. But in regulated industries, such as electric utilities, rate structures and regulatory policies may have to be aligned to make this work. The attractiveness of revenue decoupling to many utility executives is that it will immunize the company's earnings or revenues from sales fluctuations. This can only promote mediocrity and indifference to the utility's core business, a situation that should not be in the best interests of either advocates of selling or unselling the energy product.

B. *Decoupling Shifts Significant Business Risk From Shareholders To Consumers With Only Dubious Opportunities For Net Increases In Consumer Benefits.*

Decoupling does not create an economic incentive promoting greater energy efficiency or load reduction. It establishes, at best, utility indifference to these objectives. At the same time, it undermines customer efficiency efforts and muddles price signals to consumers. For example, conservation efforts are rewarded with higher future rates, while excessive consumption paradoxically produces bill credits. This is a cynical way to induce energy conservation that is not likely to be effective. Decoupling only removes an alleged disincentive while at the same time creating real disincentives for competent management of the business. The Maine Public Utilities Commission stated in 2004:

> Revenue decoupling does not ... provide any positive incentive for utilities to promote or support energy efficiency or conservation programs; it only makes them financially neutral to such activities.

There is growing national concern that utilities are under-investing in infrastructure and not adequately planning for the future needs of their customers. Why this situation has been allowed to happen is troublesome given that for many utilities their allowed return is already above their actual cost of capital. Regulatory policies need to refocus utility management on its core responsibilities to efficiently sell and deliver electric energy and to make prudent long-term investments. Regulators must not bargain with their utilities from a weak position that assumes that financial incentives in excess of a reasonable return is necessary for ordinary business behavior. For all practical purposes RD mechanisms put utility management on autopilot and this will only further encourage them to ignore their core business, the value of economic development in their franchise area, and the broader needs of the utility's customers. These objectives are at least as important as any attempt to only eliminate a disincentive to energy efficiency.

An important feature of the financial structure of investor-owned utilities is that the utility's shareholders assume normal business risk. This is the risk-reward model that pervades private businesses in the US and global economies. Shareholders are best able to diversify business risk and market-based economies strive on this basis. Utility ratepayers are least able to do so; yet it is the expressed intent of RD mechanisms to shift risk from shareholders to consumers, a radical departure from standard regulatory policy intended to balance the interests of equity owners and ratepayers.

Proponents of RD mechanisms almost always support preserving the utility's allowed return on equity at a level that assumes the shareholders retain such risk. Getting utility management to buy into the scheme would be difficult otherwise. Hence RD mechanisms are an attempt to force energy efficiency and load reduction programs at any cost and with no regard for the economic welfare of the impacted ratepayers.

Using RD mechanisms in conjunction with general rate cases also can have a ratchet effect on revenues and rates to the extent the RD adjustments in between rate cases are memorialized in the next rate case. For these and other reasons there is ample justification for dismissing the alleged value of RD mechanisms in ratemaking.

C. *Decoupling Eliminates A Utility's Financial Incentive To Support Economic Development Within Its Franchise Area. This Includes The Incentive To Support The Well Being of Manufacturers And Their Workforce.*

Promoting growth in sales through the addition and expansion of business enterprises is a key area where utility financial incentives and local public interests are precisely aligned. Revenue decoupling breaks that alignment. While its sole purpose is the elimination of the alleged disincentive to a utility's active support for energy efficiency and load reduction programs, it also eliminates the financial incentive to actively promote the economic development of the utility's franchise area. More specifically, it neutralizes the financial incentive to attract new commercial and industrial businesses—and new job opportunities—to the utility's franchise area, and to support the well being of its existing commercial and industrial customers, unless those customer classes are specifically exempt from the RD mechanism. ELCON believes that regulatory policies should promote greater customer focus, not less.

D. *Revenue Decoupling Mechanisms Tend To Address 'Lost Revenues' And Not The Real Issue, Which Is Lost Profits.*

To the extent that rates based on sales create a disincentive for utility efforts to promote energy efficiency and load reduction, the problem is in the rate design and the failure to abide by long-standing cost-of-service ratemaking principles. RD mechanisms have the effect of shifting the recovery of the utility's fixed costs into the customer (or demand) charge of base rates where they belonged in the first place. Thus, from one perspective, RD can be viewed as a stopgap ratemaking mechanism to overcome rate designs that have been used and abused for other misguided policy objectives such as the imposition of cross-class subsidies and stranded cost recovery. The complexity of RD mechanisms also makes them very expensive to administer and regulate. This greatly reduces the transparency of the ratemaking process and, even more so in the public mind, reduces the logic of cost causation.

The ability of a utility to have the opportunity to earn a fair return on assets that are prudently incurred and that remain used and useful is a grand compromise of regulation that has withstood the test of over a hundred years of practice. Any increased opportunity for a utility to earn its authorized rate of return must be commensurate with an increase in business risk, not the reverse!

There is no inherent inconsistency that a utility would both sell and 'unsell' electric energy if rates are appropriately designed for the different services. Selling competing products and services is a common business choice and need not be a moral dilemma only for utility executives. There are examples of state ratemaking practices such as shareholder performance incentives that create more explicit economic inducements for promoting energy efficiency and load reduction. These practices avoid the collateral damage created by the 'blunt instrument' nature of RD mechanisms.

E. *The First And Most Important Step Regulators Can Take To Promote Energy Efficiency Is To Send The Proper Price Signals To Each Customer Class.*

In the short term, seasonal weather variations are the predominant cause of variations from sales forecasts. For example, unseasonably mild winters can lead to below forecast sales. In the longer term, economic growth in the form of increased customer accounts and usage drive electric sales and revenue growth. Ratepayer investments in energy efficiency gradually moderate energy sales growth. Load shifting efforts from peak to off-peak periods may not reduce overall kWh sales, but should lower the cost of supplying that energy.

Thus the first and most important step regulators can take to ensure that ratepayers themselves are induced to make energy efficient investments and behavioral changes is to implement retail rates that send the proper price signals to each customer class. This includes allocation of fixed costs to customer (or 'demand') charges and time-variant energy charges. The Energy Policy Act of 2005 directs the states to consider expanded deployment of time-based pricing and advanced metering, and ELCON strongly encourages states to pursue this path to more efficient pricing rather than the futile pursuit of decoupling mechanisms.

Large industrial customers are almost always on some form of time-of-use rate, with a demand charge, and this rate structure is extremely valuable to the customer for evaluating the cost-effectiveness of energy efficiency improvements in their manufacturing facilities. Large industrial customers do not look for guidance from utilities on how to co-optimize their energy consumption and manufacturing activities, and 'decoupling' does not make utilities experts in these matters. By further blunting price signals to ratepayers, RD mechanisms actually undermine incentives for customers to invest in more efficient appliances and equipment because the reward for reducing consumption is higher rates in the future. ELCON members believe that a utility's fundamental responsibility is to efficiently sell and deliver energy at the lowest possible cost, and appropriate price signals are an essential component of that objective.

F. *Several States Have Successfully Used Alternative Entities—Including Government Agencies—For Unselling Energy. This Creates An Entity Whose Sole Mission Is To Promote Energy Efficiency, And Retains A Separate Entity Whose Responsibility Is To Efficiently Sell And Deliver Energy.*

Some states believe that simultaneously selling and unselling electric energy is a real conflict of interest and have assigned the administration of the unselling function to an independent entity or agency whose mission is dedicated to promoting energy efficiency and load reduction. This policy recognizes that another entity—the utility—must be responsible for efficiently selling and delivering electric energy. States that have taken this path are Wisconsin, Maine, New Jersey, Ohio, Vermont, Oregon, New York, and Connecticut.

In New York, for example, the New York State Energy and Research Development Authority (NYSERDA) is charged with the responsibility for demand-side programs, and is funded by a systems benefit charge that is collected by the utilities. Wisconsin established *Focus On Energy* as a public-private partnership offering energy information and services to residential, business, and industrial customers throughout the state. There services are delivered by a group of firms contracted by the Wisconsin Department of Administration's Division of Energy.

Aligning Utility Interests with Energy Efficiency Objectives: A Review of Recent Efforts at Decoupling and Performance Incentives

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Table 1. Regulatory Mechanisms for Cost Recovery, Performance Incentives, and Decoupling

State	Cost Recovery	Direct Lost Revenues Recovery	Performance Incentives	Decoupling
Arizona	Yes—Electric rate cases	No	Yes—Capped at 10% of Arizona Public Service's electric energy efficiency program budget. APS's electric EE Plan not yet finalized.	No
California	Yes—Electric and natural gas "system benefits" or "public goods" charge plus additional funding through rates.	No	Under development	Yes—Natural gas and electric
Colorado	Yes—Electric rate cases	No	No	No
Connecticut	Yes—Electric system benefits charge (SBC)	No—Electric distribution companies are only allowed recovery of lost revenues if their earnings are below their allowed rate of return for six months. In addition, in certain regions in Connecticut, the DPUC has introduced a type of lost-revenue recovery mechanism for new CL&M electric load response and distributed generation initiatives.	Yes	No–Electric Partial—Natural gas In CT DPUC Docket 05-05-09, the DPUC rejected enacting any changes to existing rate-making approaches for electric and natural gas utilities. (Electric has no decoupling but two natural gas local distribution companies have a partial decoupling mechanism in connection with their energy efficiency programs for low-income customers—a "conservation adjustment mechanism".)
Florida	Yes—Electric rate or tariff rider/ surcharge	No	No	No
Idaho	Yes—Electric rate or tariff rider/ surcharge	No	No	Investigating—Electric

State	Cost Recovery	Direct Lost Revenues Recovery	Performance Incentives	Decoupling
Illinois	Yes—Small-scale electric energy efficiency programs supported by an assessment on electric utilities.	No	N/A—The electric and natural gas energy efficiency programs are administered by the Department of Commerce and Economic Opportunity (DCEO), a state agency.	No
Iowa	Yes	No	No	No
Maine	Yes—Public benefits assessment	No	N/A—Efficiency Maine, a division of the Maine Public Utilities Commission, administers the electric energy efficiency programs.	No
Massachusetts	Yes—Electric SBC	No	Yes—5% (of electric EE expenditures) shareholder incentive for meeting goals	No
Minnesota	Yes—Electric and natural gas cases (based on legislative mandate)	No	Yes—Electric and natural gas	No
Montana	Yes—Electric SBC Yes—Natural gas general rate cases	No	No	No
Nevada	Yes—Electric rate cases	No	Yes—Electric	No
New Jersey	Yes—Electric SBC	No	N/A (NJ is moving to state administration)	No
New Hampshire	Yes—Electric SBC	No	Yes—Electric	No
New Mexico	Not applicable yet; just enacted law that requires utility DSM; cost recovery to be via rate cases.	No	No	No—However a new statute (dealing with both electric and natural gas) calls for removal of disincentives—nothing proposed or in place.
New York	Yes—Electric SBC	No	NA—Electric (NYSERDA administers the electric energy efficiency programs)	Investigating—open docket

State	Cost Recovery	Direct Lost Revenues Recovery	Performance Incentives	Decoupling
Ohio	Yes—Electric rate rider	No	NA—Electric (The Ohio Department of Development administers the electric energy efficiency programs.)	No—Electric Issue is being examined for natural gas utilities.
Oregon	Yes—Electric and natural gas SBC	No	N/A—Electric (The Energy Trust of Oregon administers the electric and natural gas energy efficiency programs.) No—Natural gas.	No—Electric. Yes—mechanisms in place for the two biggest natural gas utilities.
Rhode Island	Yes—Electric SBC	No	Yes	No
Texas	Yes	No	No	No
Utah	Yes—Electric rate or tariff rider/surcharge	No	No	No
Vermont	Yes—Electric SBC	No	Yes (non-utility)—Electric (A nonprofit, EVT, administers the programs. EVT can obtain an incentive for program performance.)	No (A proposal was submitted in one current rate case—settlement is pending.)
Washington	Yes—Electric rate or tariff rider/surcharge	No	No	Investigating—Electric
Wisconsin	Yes—Electric SBC, plus additional funding through rates is possible, if utilities request and PSCW approves.	No	Generally N/A—Electric (Currently the state of WI, Dept. of Administration administers the majority of the programs but utilities have the option to administer.) One exception, Alliant Energy is allowed to earn its rate-of-return on one C/I "shared savings" energy efficiency program.	No—Electric (A proposal was submitted in one current rate case.)

APPENDIX B: STATE SUMMARIES OF DECOUPLING MECHANISMS

States with Decoupling Mechanisms in Place or Proposed

Over the past two decades, a number of states across the U.S. have experimented with some form of utility revenue decoupling. In this section we examine both historical and recent experiences with decoupling, including a series of state-by-state summaries of these experiences.

The renewed interest in decoupling is occurring in parallel with renewed interest in the "resource" aspect of energy efficiency. This renewed interest seems to stem from a number of factors, including rising "supply-side" costs, growing demand for energy resources, and heightened environmental concerns. Support for decoupling comes from a broad spectrum of industry stakeholders—environmental groups, consumer advocates, utilities, and trade associations. For an example of the latter, the American Gas Association is strongly in favor of decoupling—not necessarily just for its benefits related to energy efficiency investments, but probably more to provide more secure and stable revenue streams in an industry increasingly concerned about fixed-cost recovery.[15]

"Decoupling" has re-emerged as a mechanism of interest to address lost revenues and to remove the disincentive for utilities to pursue energy efficiency programs. There are a growing number of jurisdictions that have enacted or are actively considering enacting decoupling. Below we provide brief profiles and summaries of leading states that have enacted or have seriously investigated and considered implementation of decoupling.

California

Overall Energy Efficiency Program Approach and Structure

California's investor-owned utilities administer energy efficiency programs with CPUC oversight. These programs are funded both by a public goods charge and via rates as a result of recent CPUC decisions to aggressively pursue acquisition of energy efficiency resources as part of the state's energy plan. The CPUC approves the utilities' plans for efficiency programs and oversees the program planning, market assessment, and program evaluation of the efficiency programs. In addition to the utility programs, there also are programs administered and implemented by "third-party providers" as a way to encourage innovation and ensure coverage of markets that utility programs may be missing.

California's structure and funding for energy efficiency programs are undergoing major changes as a result of recent legislative and regulatory decisions. The state has a "public goods" wires charge in place that had become the primary funding mechanism for utility energy (and some non-utility) energy efficiency programs. This charge is assessed as a separate line item on customers' monthly electric bills and as a small charge per therm on

[15] Many gas utilities are facing stagnant or declining sales levels in response to high natural gas prices. This has led to a growing interest in decoupling mechanisms.

natural gas bills. Utilities also have been authorized to raise additional program dollars in the utility procurement process as determined in general rate cases.

In September 2005, the CPUC embraced an aggressive resource procurement plan for energy efficiency, on top of its base of public goods charge program funding. Between the two sources, the regulated utilities will spend a total of $2 billion over the 3-year period of 2006–2008. Cost recovery for the resource procurement portion of the energy efficiency will presumably occur through regulatory casework.

Performance Incentives

The utilities used to be able attain shareholder incentives based on the success of their programs. Performance incentives, however, have been eliminated. In Decision 02-03-056 delivered in March 21, 2002, the California Public Utilities Commission stated:

> In the past, the Commission has offered shareholder incentives to large IOUs for successful program delivery, in lieu of a profit margin. The Commission will no longer make a special provision for shareholder earnings. Both utility and non-utility entities are free to propose program budgets they feel are necessary for their organizations to complete the program delivery successfully.

While there are no performance incentives presently in place, the CPUC has kept the door open for enactment of such mechanisms in individual utility rate cases. The CPUC is currently undergoing extensive efforts to establish a common performance basis for energy efficiency programs that will capture cost-effective energy savings that defer more costly supply-side investments and costs. Once these foundations and frameworks are established, the CPUC will work on establishing performance incentives for energy efficiency programs.

Decoupling and Lost Revenue Recovery

California was one of the first states to enact decoupling mechanisms for its regulated electric utilities. In 1982 the CPUC adopted an "electric rate adjustment mechanism" (ERAM) to achieve two key objectives: (1) decouple utility revenues from sales; and (2) remove disincentives for utility investment in energy efficiency and conservation. This mechanism was implemented in conjunction with the state's integrated resource planning requirements. ERAM required utilities to track the difference between actual and forecasted base rate revenues. Overcollections would then be refunded to ratepayers and undercollections would be recovered by subsequent rate adjustments. ERAM allowed the utilities to recover their revenue requirements independent of actual energy sales.

California's experience with ERAM was generally positive. It was largely successful in reducing rate increase risk to customers and revenue recovery risks to the utilities. Despite that positive track record, however, other industry developments led to the elimination of ERAM in the mid-1990s. Specifically in conjunction with restructuring its electric utility industry, the CPUC ruled that ERAM would no longer be appropriate. In Order D.96-12-077 the CPUC concluded:

> Introduction of competition for generation will render ineffective the CPUC's past approach of supporting demand-side management by using ERAM to counter the utility's economic incentive to increase sales.

As it turned out, California's restructured electricity markets failed to function effectively, leading to the infamous "crisis" of 2001. As a result, California enacted another set of sweeping changes to its electricity markets—re-introducing regulatory control over utilities and placing the responsibility for "resource portfolio management" back with the utilities. The legislation that was enacted in 2001, AB29X, also included regulatory provisions for ratemaking. One of these specifically addressed decoupling requirements:

> The Commission shall ensure that errors in estimates of demand elasticity or sales do not result in material over or undercollections of the electrical corporations. (Public Utilities Code Section 739.10).

This rather tersely worded statutory language essentially requires revenue decoupling. This statute rules out any ratemaking approach that ties earnings to sales fluctuations and also provides regulated utilities with assurance of cost recovery for authorized revenue requirements. From 2002–2005, California's investor-owned utilities developed and implemented decoupling mechanisms as required by this statute. Each utility's mechanism arose out of general rate cases before the CPUC. While specific details of the mechanisms vary, they share a common approach, which is to use balancing accounts for annual true-ups. This protects utilities from fluctuations in revenues stemming from fluctuations in sales for any of many possible reasons (energy efficiency and conservation are just two of these—weather and economic activity are other prominent reasons). Through individual rate cases, the CPUC determines initial revenue requirements and then takes one of two specific approaches to adjusting revenue requirements between rate cases:

- Using attrition mechanisms that escalate revenue requirements by inflation minus a productivity offset every year—and adding a factor to account for customer growth; or
- Using an inflation adjustment (consumer price index) to escalate the revenue requirement each year with boundaries set for a minimum and maximum allowable escalation.

The changes in rate-making approaches for California's utilities have occurred during a period of significant changes overall with California's approach to energy efficiency. In September 2005, the CPUC embraced an aggressive resource procurement plan for energy efficiency, on top of its base of public goods charge program funding. The CPUC adopted an "Energy Action Plan" (CPUC 2005) that places energy efficiency as the first resource in utility loading order—meaning that the first dollars spent by California's utilities are to be on cost-effective energy efficiency. This policy in turn is translating to unprecedented levels of investment in new energy efficiency resource in California. Over the next three years, 2006–

2008, California plans to invest a total of $2 billion in energy efficiency through programs offered by utilities and other organizations. These investments are to achieve aggressive targets for energy efficiency savings impacts—by the year 2013, reducing peak demand by nearly 5,000 MW and reducing energy use by over 23,000 GWh and 400 million therms.

California's decoupling initiatives are thus one element of a much larger energy policy—a policy that requires utilities to commit large amounts of resources to fund and implement energy efficiency programs. We found no efforts to date that attempt to evaluate the impacts of just the decoupling mechanisms on the utilities' investment and related actions toward energy efficiency programs. Given these tremendous additional changes with CPUC targets and approved budgets for energy efficiency programs, we believe it will be difficult to isolate the specific policy impacts of decoupling. However, we also observe that establishing such mechanisms is a valuable complement to achieve the overall policy objective. It's part of a "complete package" to align utility financial interests with public policy interests towards greater levels of energy efficiency.

References

[CPUC] California Public Utilities Commission. 2005. *Energy Action Plan.* Sacramento, Calif.: Public Utilities Commission of the State of California.

[CPUC] California Public Utilities Commission. Various years. Decisions:

- Decision 04-07-022. *Opinion on Base Rate Revenue Requirement and Other Phase 1 Issues. Application of Southern California Edison Company for Authority to, Among Other Things, Increase Its Authorized Revenues for Electric Service in 2003, and to Reflect That Increase in Rates.* July 16, 2004.
- Decision 04-05-055. *Opinion: Phase 1 Issues. Application of Pacific Gas and Electric Company for Authority, Among Other Things, to Increase Revenue Requirements for Electric and Gas Service and to Increase Rates and Charges for Gas Service Effective on January 1, 2003.* May 27, 2004.
- Decision 05-03-023. *Decision on Southern California Gas Company and San Diego Gas & Electric Company's Phase 2 Post-Test Year 2004 Ratemaking, Earnings Sharing, Incentive Proposals, and 2004 Incentive Proposals.* March 17, 2005.
- D.96-12-077 [Copy not available; cited by Prusnek 2005]

Prusnek, B. 2005."Promoting Energy Efficiency in California." Presentation to the State EE/RE Technical Forum. May 18. U.S. Environmental Protection Agency, State and Local Clean Energy Programs.

Southern California Edison Company, San Diego Gas and Electric Company, Southern California Gas Company, and Pacific Gas and Electric Company. 2006. "Decoupling Mechanisms—Energy Efficiency Policy Impacts and Regulatory Implementation." In *Proceedings of the 2006 ACEEE Summer Study on Energy Efficiency in Buildings.* Washington, D.C.: American Council for an Energy-Efficient Economy.

Idaho

Overall Energy Efficiency Program Approach and Structure

The state's vertically integrated, regulated utilities administer energy efficiency programs. Cost recovery is by individual rate cases and rate design. Generally the approach taken by the Idaho Public Utilities Commission is using rate design to reduce energy rates (variable costs) and use more fixed costs to recover revenue requirement.

Rate riders (surcharges) are also used. Both Pacificorp and Idaho Power have 1.5% surcharges collected as an adder on customer bills to fund energy efficiency programs. The final order for a Pacificorp rate case has not been issued yet, which may change this surcharge slightly.

Performance Incentives

None in place. PUC staff are interested in moving toward some type of performance-based ratemaking, but nothing is proposed or in-process.

Decoupling and Lost Revenue Recovery

There is no mechanism for lost revenue recovery.

Decoupling is being actively proposed and investigated. In May 2004, in a general rate case for Idaho Power Company (Case No. IPC-E-03-13, Order No. 29505), the Idaho Public Utilities Commission (IPUC) determined that a separate proceeding was called for to "assess financial disincentives inherent in Company-sponsored conservation programs." The Commission directed the parties to propose a workshop schedule and initiate a proceeding. On June 18, 2004, the parties formally requested that a proceeding be initiated, and on August 10, 2004 the IPUC established Case No. IPC-E-04-15 for an "investigation of financial disincentives to investment in energy efficiency" by Idaho Power Company.

A series of workshops were held and a final report filed by the parties on February 14, 2005 ("Final Report on Workshop Proceedings"). The parties all agreed that "material financial disincentives to the implementation of DSM programs do exist" (p. 6), but not all participants agreed that restoration of lost fixed-cost revenues alone would directly result in additional or more effective investment in DSM programs by Idaho Power. However, the parties did all agree on a set of principles, or "criteria," to use to evaluate possible approaches to address the lost fixed-cost revenues problem. Those criteria are:

1. Stakeholders are better off than they would be without the mechanism.
2. Minimizes cross subsidies across customer classes.
3. Removes financial disincentives.
4. Optimizes the acquisition of all cost-effective DSM.
5. Promotes rate stability.
6. Simple mechanism.

7. Administrative costs and impacts of the mechanism are known, manageable, and not subject to unexpected fluctuation.
8. Monitors short and long-term effects to customers and company.
9. Avoids perverse incentives.
10. Closes link between mechanism and desired DSM outcomes. (p. 7)

The parties also agreed on two recommendations:

1. That Idaho Power would conduct a simulation analysis to examine what might have occurred if a decoupling or true-up mechanism had been implemented for Idaho Power at the time of the last general rate case and share those results with the parties.
2. That Idaho Power would develop and file an application with the Commission to implement a pilot energy efficiency program that would incorporate both performance incentives and "lost revenue" adjustments. (pp. 10–11)

On January 27, 2006, Idaho Power filed an application in Case No. IPC-E-04-15 requesting authority to implement a rate adjustment mechanism that would adjust the Company's rates upward or downward to recover the Company's fixed costs independent from the volume of the Company's energy sales. This type of ratemaking mechanism is commonly referred to as a "decoupling mechanism." However, Idaho Power believes that a more accurate description of what the Company is proposing is a "true-up mechanism." The true-up mechanism it is proposing, entitled "Fixed-Cost Adjustment," would be applicable only to Residential Service and Small General Service customers. This case is currently in process.

The Idaho Public Utility Commission has not yet reached a decision in the present Idaho Power rate application that would decouple revenues from utility earnings.

References

Idaho Public Utilities Commission. Various Years. Decisions and Orders in Dockets:

- Case No. IPC-E-04-15 on January 27, 2006, "In the Matter of the Investigation of Financial Disincentives to Investment in Energy Efficiency by Idaho Power Company."
- Case No. IPC-E-04-15. "Investigation of Financial Disincentives to Investment in Energy Efficiency by Idaho Power Company. Final Report on Workshop Proceedings." February 14, 2005.
- Case No. IPC-E-03-13, Order No. 29505. May 2004. Idaho Power Company General Rate Case.

New York

Overall Energy Efficiency Program Approach and Structure

New York established a state-wide systems benefits energy program administered by the New York State Energy Research and Development Authority (NYSERDA). Two public power authorities—the New York Power Authority and the Long Island Power Authority—

offer similar programs. Customers of regulated distribution utilities pay a non-bypassable system benefits charge as a separate line item.

Performance Incentives

Not applicable to the state-administered program.

Decoupling and Lost Revenue Recovery

New York is once again considering decoupling. On May 2, 2003, the NYPSC issued an order (Case 03-E-640) that instituted a proceeding "[T]o investigate potential electric delivery rate disincentives against the promotion of energy efficiency, renewable technologies and distributed generation." In its order, the NYPSC directed the administrative law judge to request, at a minimum:

- detailed "typical" bill analyses of possible impacts of alternative rate structures,
- comments on the degree to which current rate designs discourage electric delivery utilities from promoting energy efficiency, renewable technologies, and distributed generation,
- an indication of each of the electric delivery utilities of the feasibility of, and their interest in, making cost-based electric delivery rate design modifications for each service classification that remove such disincentives, and
- other recommendations to remedy any identified rate design disincentives against the promotion of energy efficiency, renewable technologies, and distributed generation.

The NYPSC defines decoupling this way in this docket:

> Revenue decoupling is defined as a rate making mechanism that is designed to eliminate or reduce the dependence of a utility's revenues on system throughput, adopted for the purpose of removing utility opposition to customer efforts to reduce energy consumption and demand or to install generation to displace electricity delivered by the utility's distribution and transmission system.

A technical conference was held to initiate the proceedings, after which time the NYPSC invited parties to submit comments on the issues identified at the conference and within the scope of the investigation. NYPSC staff did not submit comments, but did summarize comments received and provided its recommendations in a staff report issued July 9, 2004. Below are key findings given by NYPSC staff in this report:

- Staff's previous experience with comprehensive "revenue decoupling mechanisms" (RDMs) is that they tend to generate large revenue accruals, nearly all caused by weather.
- To the degree that unit prices are considered "too high" due to rate design measures such as volumetric rates, those rates create a strong incentive for customers to consider energy conservation, distributed generation or alternative energy sources.

While the proponents of RDMs argue that current rates provide a disincentive to utilities to promote energy conservation or distributed generation, the same rates provide a strong counter-balancing incentive to customers to engage in those practices. [emphasis added]

- While there may continue to be a financial disincentive in utility rate structures, in staff's view it is not enough to warrant implementation of RDMs.
- Rather than implementation of RDMs, staff recommends the continued development of better rate designs and, where appropriate, targeted mechanisms and performance incentives should be pursued.
- The application of focused performance incentives should be further explored, most appropriately within individual utility rate proceedings.

Based on these findings and analysis of the issues raised in the proceeding, staff issued the following recommendations in this report:

- While theoretically imposition of an RDM could resolve some of the conflicts [between utility revenues and profits to the throughput of the utilities' systems] as the proponents of the RDM concept argue, there are serious concerns with such an approach, such as the difficulty that would be involved in developing an appropriate mechanism and the risk of rate instability that might result.
- Further, other approaches, such as improved rate designs, targeted rate incentives, and performance incentives, may be just as effective as or even better than such a broad-based incentive ratemaking approach.
- Indeed, the various program initiatives identified above have achieved success without the need for a broad-based RDM, and other incentive approaches should be explored in the various utility rate proceedings as needed.
- *Accordingly, staff recommends than an RDM not be required at this time* [emphasis added].

A final decision in this investigation is still pending. The NYPSC has not issued an Order or other decision.

References

State of New York Public Service Commission. Various years. Case documents:

- Case 03-E-0640. "Staff Report: Proceeding on Motion of the Commission to Investigate Potential Electric Delivery Rate Disincentives Against the Promotion of Energy Efficiency, Renewable Technologies and Distributed Generation." July 9, 2004.
- Case 96-E-0898. "In the Matter of Rochester Gas and Electric Corporation's Plans for Electric Rate/Restructuring Pursuant to Opinion No. 96-12" Settlement Agreement.
- Case 96-E-0897. "In the Matter of Consolidated Edison Company of New York, Inc.'s Plans for (1) Electric Rate/Restructuring Pursuant to Opinion No. 96-12; and (2) the Formation of a Holding Company Pursuant PSL, Sections 70, 108 and 110, and Certain Related Transactions."
- Opinion 88-20, issued July 26, 1988.

Oregon

Overall Energy Efficiency Program Approach and Structure

The Energy Trust of Oregon, a nonprofit set up by the Oregon Public Utility Commission, is the administrator of the energy efficiency and renewable energy programs. A state agency, the Oregon Housing and Community Services, administers the low-income programs. The Education Service Districts administer the public purpose funding for the schools.

PacifiCorp and PGE collect 3% of billed revenues from ratepayers (with the exception of certain large customers who are allowed to invest the conservation and/or renewable portions of the public purpose charges in their own facilities). Distributions of fund allocations to program administrators occur monthly net of uncollectibles and administrative costs of both the utilities and the Oregon Public Utility Commission. Funding amounts are reported to the Commission. Public purpose funding sunsets for all programs in 2012 unless the Oregon Legislature renews it.

Oregon has established a statewide public benefits program for electricity and natural gas energy efficiency. The state's restructuring legislation (SB 1149) established a 3% "public purpose charge" on customer utility bills.

Performance Incentives

None is in place or proposed.

Decoupling and Lost Revenue Recovery

In the 1990s, Oregon established and used various mechanisms to remove utility disincentives toward energy efficiency investments, including lost revenue adjustments, shared savings, and decoupling. But none of these prior mechanisms are in effect because of the change in program administration and implementation.

While electric utilities were no longer expected to administer or implement programs, in 2002 Oregon implemented a decoupling mechanism for one of its large natural gas utilities, Northwest Natural. On September 12, 2002, the PUC issued an order (No.02-634) adopting a stipulation agreement allowing Northwest Natural Gas Company (NWN) to implement a Distribution Margin Normalization mechanism. (This was included in a package deal along with a very substantial funding mechanism [over 3% of total revenues] for "public purpose programs" to support low-income bill payment assistance, low-income weatherization assistance, and enhanced energy efficiency programs. The revenues for energy efficiency are provided to the Energy Trust of Oregon for administration.)

Oregon has since enacted decoupling for another of its natural gas utilities. A recent decoupling proposal by Cascade Natural Gas (Docket UG 167) was approved in early April 2006 (Order No. 06-191 entered 4/19/06) by the Public Utility Commission of Oregon.

Cascade's application for approval of its "Conservation Alliance Plan" (CAP) includes a decoupling mechanism consisting of two deferral accounts:

- One deferral account tracks changes in margin due to variations in weather-normalized usage, and
- The other deferral account tracks changes in margin due to weather that varies from normal.

The PUC also had considered a decoupling proposal for Portland General Electric, but rejected the proposal. We provide details of these cases in Appendix A because Oregon is the state with the greatest recent experience with decoupling.

References

Hansen, D.G. and S.D. Braithwait. 2005. *A Review of Distribution Margin Normalization as Approved by the Oregon Public Utility Commission for Northwest Natural.* Evaluation report prepared for the Oregon Public Utility Commission. Madison, Wisc.: Christensen Associates Energy Consulting. March 31.

Public Utility Commission of Oregon. Various years. Decision and Orders in dockets:

- Order No. 06-191, Docket UG 167. *In the Matter of Cascade Natural Gas Corporation Request for Authorization to Establish a Decoupling Mechanism and Approval of Tariff Sheets No. 30 and No. 30-A.* April 19, 2006
- Order No. 05-934, Docket UG 163. *NWN Joint Stipulation to Extend the Existing Decoupling Mechanism for Another Four Years.* August 25, 2005.
- Order No. 02-634, Docket No. UG 143. *In the Matter of Northwest Natural Gas Company Application for Public Purpose Funding and Distribution Margin Normalization.* September 12, 2002.
- Order 02-633, Docket UE 126. *In the Matter of Portland General Electric's Proposed Tariffs to Decouple Distribution Revenues from Residential and Small Nonresidential Consumers and their kWh Sales.* September 12, 2002.
- Order No. 98-191. *In the Matter of the Revised Tariff Schedules in Oregon Filed by Pacificorp, dba Pacific Power and Light Company.* 1998.
- Order 95-322. *In the Matter of the Revised Tariff Schedules for Electric Service in Oregon filed by Portland General Electric Company.* 1995.

Washington

Overall Energy Efficiency Program Approach and Structure

Washington is a non-restructured state. Utilities carry out DSM programs with regulatory oversight by the state's regulatory body, the Utilities and Transportation Commission. Utilities get cost recovery of energy efficiency programs through tariff riders. Program costs are expensed and trued up annually.

Performance Incentives

No performance incentive is in place or proposed. The Utilities and Transportation Commission (UTC) has established penalties for non-performance for Puget Sound Energy for not achieving energy savings targets.

Decoupling and Lost Revenue Recovery

In 1991, Washington Utilities and Transportation Commission adopted a revenue cap mechanism for Puget Sound Power Energy in order to decouple company revenues from energy sales. This "experimental rate design" was enacted in Docket Numbers UE-901183-T and UE-019184-P. In addition to the revenue caps, the WUTC established a "periodic rate adjustment mechanism" (PRAM). The WUTC explained its reasoning for taking this action, including a note about not instead using some type of "lost revenue adjustment" in the following excerpt:

> [T]he revenue per customer mechanism does not insulate the company from fluctuations in economic conditions, because a robust economy would create additional customers and hence, additional revenue. Furthermore, the Commission believes that a mechanism that attempts to identify and correct only for sales reductions associated with company-sponsored conservation programs may be unduly difficult to implement and monitor. The company would have an incentive to artificially inflate estimates of sales reductions while actually achieving little conservation.

Implementation of this decoupling mechanism played a critical part in changing the role of energy efficiency and conservation programs within Puget Sound Energy. In the first two years following enactment of decoupling, there were dramatic improvements in energy efficiency program performance. In an order (11^{th} Supplemental Order, Sept 21, 1993), the WUTC observed:

> PRAM has achieved its primary goal—the removal of disincentives to conservation investment. Puget has developed a distinguished reputation because of its conservation programs and is now considered a national leader in this area.

This supplemental order extended PRAM another 3 years. In 1995, the WUTC approved a request from Puget and several other parties to terminate a set of rate adjustment mechanisms, including the revenue-per-customer cap, as part of a litigation settlement. The WUTC approved the request adopting an alternative set of rate proposals, which ended decoupling for Puget Sound Energy. However, the proposal itself brought before the WUTC expressly reserved the right of all parties to bring forth in the future "other rate adjustment mechanisms, including decoupling mechanisms, lost revenue calculations [and] similar methods for removing or reducing utility disincentives to acquire conservation resources."

Decoupling is once again being actively investigated and proposed in Washington. The Washington Utilities and Transportation Commission has considered (or is considering) decoupling both in a rulemaking docket and in individual utility rate cases. On March 31, 2005, the WUTC began its rulemaking inquiry into decoupling when it issued CR-101, "Preproposal Statement of Inquiry Concerning the Possible Issuance of Administrative Rules for Natural Gas Companies Pertaining to Rate and Accounting Methods to Separate or 'Decouple' Utility Recovery of Fixed Costs from the Volume of its Commodity Sales." This commenced WUTC Docket No. UG-050369, "Natural Gas Decoupling Rulemaking."

In May 2005 the WUTC held a workshop that was "intended as a forum for open discussion of alternative approaches to natural gas decoupling, as well as an opportunity for parties to identify potential issues or concerns associated with use of various types of decoupling methodologies." Following the workshop, the WUTC issues a Notice of Opportunity to File Written Comments. Numerous parties filed written comments. On Oct 17, 2005, the WUTC withdrew its rulemaking on decoupling and closed the docket. The UTC noted in its decision:

> The comments provide a wide spectrum of views on decoupling and highlighted a number of issues that require more detailed thought.....The Commission believes that the wide variety of alternative approaches to decoupling make it more efficient to address these issues in the context of specific utility proposals included in general rate case filings rather than through a generic rulemaking.
>
> The Commission's decision is not intended as a comment on the viability of any specific decoupling proposal that has been discussed and considered in this docket. (Docket UG-050369)

In its ruling, "Summary, Analysis of Comments and Decision to Close Docket without Action," the WUTC identified key issues with enacting decoupling, namely:

a) *Scope of events covered by decoupling?* Weather impacts? All-inclusive (all impacts including energy efficiency/conservation)?
b) *Scope of customer classes included?* Residential only? Small commercial? All commercial/industrial? All classes? Cost allocation accordingly?
c) *Scope of the measurement and subsequent rate impacts?* Decoupling applied to individual customers? Across all customers in a class? If cost reductions achieved are spread out over entire rate class, does this encourage and/or provide correct incentives for such actions? Equity?
d) *Timing of adjustments: deferral with annual true-up vs. monthly adjustments?* Administrative efficiency versus more timely feedback to customers from actions?
e) *New customer impacts?* How to account for growth in number of customers? Impacts on fixed cost recovery?
f) *Rate of return implications?* Does decoupling materially reduce the risk associated with investment in a gas utility?
g) *Low-income customer considerations?* Since low-income customers tend already to be low volume customers, do decoupling mechanisms affect them adversely and disproportionately?

h) *Pilot project implementation approach?* Should a pilot program be tried first?
i) *Basic charge increase alternative?* Should the Commission be open to covering all fixed costs through a uniformly applied customer charge?
j) *Earnings cap or other mechanism to avoid windfalls?* Should measures be built in to protect against windfall recoveries caused by operation of the mechanism?
k) *Need to set fixed cost level in general rate case?* How much data does the Commission need to make an informed decision on any decoupling proposal?
l) *Proper way to measure weather impacts?* Best way of measuring deviations from normal weather for rate adjustment purposes?

In this Summary, the WUTC only identified the above issues. It did not describe possible approaches to address the issues and did not offer recommendations on any such approaches. As noted earlier, the WUTC concluded that decoupling was more appropriately addressed in the context of specific utility rate cases rather than a general rulemaking docket. Such individual cases have arisen, as we describe next.

PacifiCorp proposed a decoupling mechanism in a recent general rate case before the WUTC (Docket No. UE—50684). The decoupling proposal in this case was a response to an earlier Docket (UE-032065), in which WUTC ordered, "PacifiCorp may propose a true-up mechanism, or some other approach to reducing or eliminating any financial disincentives to DSM investment. This could be in connection with a general rate proceedings such as the Company suggests will be filed sometime in 2005."

In its recent rate case, concluded April 17, 2006 (Docket No. UE-050684), PacifiCorp (Pacific Power) sought to establish three "key regulatory mechanisms" to support "continued reliable operations." One of these three goals is to develop and adopt a decoupling mechanism to support implementation of energy conservation programs. The Natural Resources Defense Council submitted a "Joint Proposal" with PacifCorp for a 3-year pilot test of a true-up (decoupling) mechanism.

The WUTC denied the request by Pacific Power for the rate increase, which included the proposal for a pilot decoupling mechanism. The case involved a "long standing dispute over how to allocate costs in the utility's six-state territory." According to a WUTC press release on its decision:

> In rejecting the allocation formula, the UTC found that the company failed to carry the burden it alone bears to prove that resources in its eastern service territories, remote from Washington, provide tangible and quantifiable benefits to customers in this state.

Rejection of this proposal does not close the door to future consideration of decoupling. As noted in a WUTC press release (WUTC 2006), "In its order, the commission said that while it would support a well-designed decoupling program, it could not approve a proposal for PacifiCorp until it determined the proper allocation of the utility's costs to Washington."

The WUTC is presently considering another decoupling proposal in a different general rate case. Cascade Natural Gas Corporation has sought to establish a decoupling mechanism in its recent general rate case (UG-060256). The Company filed its application on February 14, 2006.

References

[WUTC] Washington Utilities and Transportation Commission. Various years: Decisions, Orders, Filings and Proceedings:

- Docket No. UG-060256. *Cascade Natural Gas Corporation, 2006 General Rate Case Application.*
- Docket No. UE-050684. *PacifiCorp (Pacific Power). General Rate Case Application.* Final Order issued April 17, 2006.
- Docket No. UG-050369. *Rulemaking to Review Natural Gas Decoupling, Notice of Withdrawal of Rulemaking* and *Summary, Analysis of Comments and Decision to Close Docket without Action.* October 17, 2005;
- Docket No. UG-051651. *Application for an Order Authorizing the Establishment of a Decoupling Mechanism and Deferred Accounting Treatment for Changes in Margin Due to Conservation and Due to Variances from Normal Weather Decoupling Mechanism Proposal.* December 2005.
- Docket UE-920433. *11th Supplemental Order.* Sept. 21, 1993.
- Docket Numbers UE-901183-T and UE-019184-P. *Puget Sound Power Energy General Rate Case Application.* 1991.

Other Examples

There are a few other jurisdictions that either have decoupling in place or are actively considering proposals to enact decoupling. In this section, we present short summaries of a few of these other cases.

Maryland

Maryland has had a decoupling mechanism for Baltimore Gas & Electric (BG&E) since 1998 and just recently enacted the same mechanism for its other principal gas utility, Washington Gas. The decoupling mechanism consists of three parts: (1) base revenues are set based on weather-normalized patterns of consumption, (2) monthly revenue adjustments are accrued based on actual revenues, and (3) monthly adjustments to rates are made based on the accrued adjustments. The intent of this mechanism is to decouple weather and energy efficiency impacts from the revenue ultimately recovered by gas companies. Another main objective is to provide revenue stability to the companies.

The energy efficiency impacts on revenues are only those achieved by customers without the support or funding provided by utility or other types of utility-sector energy efficiency programs. BG&E and Washington Gas do not fund or provide energy efficiency programs, and Maryland has no statewide "public benefits" program in place. The only exception is that the utilities do fund and administer programs for low-income residential customers.

These cases in Maryland provide concrete examples that decoupling mechanisms alone are not sufficient to lead to significant investments by utilities in energy efficiency. Other mechanisms, policies, and regulatory requirements are required.

New Jersey

On October 12, 2006, the New Jersey Board of Public Utilities approved two pilot programs for natural gas conservation for the South Jersey Gas and New Jersey Natural Gas companies. These pilot programs include provisions for decoupling so that gas cost savings (through improved energy efficiency) will not be offset by costs related to reduced usage. Details of this mechanism and other aspects of this decision were not available as this report went to press. It is noteworthy that these decoupling mechanisms were part of a package that includes plans to promote greater energy efficiency and to provide incentives (via decoupling—not "performance incentives" as described in this report) to the gas companies to promote energy conservation.

North Carolina

Piedmont Natural Gas Company

In October 2005, the North Carolina Utilities Commission issued "Order Approving Partial Rate Increase and Requiring Conservation Initiative" in Docket No. G-9, Sub 499; Docket No. G-21, Sub 461; and Docket G-44, Sub 15. In this order, the Commission approved an experimental conservation tariff, called the "customer utilization tracker" (CUT) in order to align the interests of company shareholders with those of customers regarding conservation initiatives. This tariff is effective for the 3-year period, November 1, 2005 to November 1, 2008. During the life of the CUT, Piedmont is also to contribute $500,000 per year toward conservation programs. The company is to work with attorney general and utilities commission staff to "develop appropriate and effective conservation programs to be submitted to the Commission for approval and annual review."

The status of this mechanism is unclear at the present time. The North Carolina Attorney General has filed a notice of appeal challenging the North Carolina Utilities Commission's legal authority to approve the CUT.

While the ultimate resolution of this issue is not known, this case provides a good illustration of the desirable tactic of tying decoupling to other provisions or requirements for specific funding of energy efficiency programs.

References

North Carolina Utilities Commission. 2005. *Order Approving Partial Rate Increase and Requiring Conservation Initiative.* Docket No. G-9, Sub 499; Docket No. G-21, Sub 461; and Docket G-44, Sub 15. October.

New Mexico

In the Energy Efficiency Act of 2005, the New Mexico Legislature recently passed enabling legislation for utility DSM, and this legislation calls for removal of financial disincentives towards energy efficiency. Nothing is yet in place.

Utah

The Public Service Commission of Utah approved a decoupling mechanism for the Quester Gas Company on October 5, 2006 in Docket No. 05-057-T01. This mechanism establishes a "Conservation Enabling Tariff (CET)" Pilot Program for a 3-year period. CET is to address the issue of declining usage per customer while removing the disincentives for Questar Gas to implement demand-side management programs, which Questar Gas committed to undertake in the settlement in this docket. The basic approach of this tariff is to determine "non-gas revenue" per customer and use a balancing account with periodic true-ups to meet established utility revenue requirements.

The Conservation Enabling Tariff methodology consists of three steps:

1. The allowed GS-1 distribution non-gas revenue (DNG) per customer per month is calculated. The revenue requirement and the year-end customers are allocated to the calendar months based on historical patterns. The monthly revenue requirement is then divided by the monthly number of customers to arrive at the allowed revenue per customer per month. The proposed revenue per customer will be based on projected year-end 2005 customers and the revenue collected from these customers using the rates proposed to be effective on January 1, 2006.
2. On a monthly basis, the allowed DNG revenue per customer each month is multiplied by the actual number of GS-1 customers. The product is compared to the actual GS-1 DNG revenue and any difference, higher or lower, is booked into a balancing account.
3. On a schedule of not less than twice per year, the Company will file for a percentage adjustment to the GS-1 DNG block rates in an amount to amortize the balancing account over the projected sales for the upcoming 12 months.

References

Public Service Commission of Utah. 2006. *Order Approving Settlement Stipulation: In the Matter of the Approval of the Conservation Enabling Tariff Adjustment Option and Accounting Orders*. Issued October 5.

Questar Gas Company. 2005. *Joint Application of Questar Gas Company, the Division of Public Utilities, and Utah Clean Energy, for the Approval of the Conservation Enabling Tariff Adjustment Option and Accounting Orders*. Docket No. 05-057-T01. December 16.