SOUTHWEST GAS CORPORATION

DOCKET NO. G-01551A-07-0504

DIRECT
RATE DESIGN TESTIMONY

OF

WILLIAM A. RIGSBY, CRRA

ON BEHALF OF

THE

RESIDENTIAL UTILITY CONSUMER OFFICE

April 11, 2008

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ATTACHMENT A

INTRODUCTION

Q. Please state your name, occupation, and business address.

A. My Name is William A. Rigsby. I am a Public Utilities Analyst V employed by the Residential Utility Consumer Office ("RUCO") located at 1110 W. Washington, Suite 220, Phoenix, Arizona 85007.

Q. Have you filed any previous testimony in this proceeding?

A. Yes. On March 28, 2008, I filed direct testimony on the cost of capital issues that are associated with this case.

Q. What are your educational and professional qualifications in the field of utility regulation?

A. Appendix I, which is attached to my direct testimony on cost of capital describes my educational background and includes a list of the rate case and regulatory matters in which I have participated.

Q. Didn't you state in your direct testimony, filed on March 28, 2008, that you would only be testifying on the cost of capital issues associated with SWG's filing?

A. Yes I did. However, circumstances that have occurred since the filing of my direct testimony have made it necessary for me to serve as RUCO's witness on the revenue decoupling, weather normalization, and rate design change issues described above.

Q. Please state the purpose of your testimony.

A. The purpose of my testimony is to present RUCO's positions on Southwest Gas Corporation's ("SWG" or "Company") requests for a decoupling mechanism that would guarantee Company-recovery of margins lost due to conservation, and a decoupling mechanism that would true-up margins lost or gained due to variations in weather. I will also address the Company's proposal to shift residential revenue recovery from variable to fixed rates. SWG requested these proposed mechanisms and rate design changes in the Company's application for a permanent rate increase ("Application"), which was filed with the Arizona Corporation Commission ("ACC" or "Commission") on August 31, 2007. SWG has chosen the period ended April 30, 2007 for the test year in this proceeding.

Q. Will you also be sponsoring RUCO's recommended rate design for SWG?

A. Partially. The "nuts and bolts" of RUCO's recommended rate design will be presented in the testimony of RUCO witness Rodney L. Moore. Mr. Moore previously filed direct testimony on the rate base and revenue requirement issues associated with SWG's Application. I will address the policy considerations that shaped RUCO's recommended rate design.

SUMMARY OF TESTIMONY AND RECOMMENDATIONS

Q. Briefly summarize how your direct testimony is organized.

A. My direct testimony is organized into five sections. First, the introduction I have just presented and second, the summary of my testimony that I am about to give. Third, I will present RUCO's position on SWG's request concerning a revenue decoupling mechanism. Fourth, I will address the Company-proposed decoupling mechanism that would true-up margins lost or gained due to variations in weather. Finally, I will present RUCO's position on SWG's proposal to shift residential revenue recovery from variable to fixed rates.

Revenue Decoupling Adjustment Provision – I am recommending that the Commission reject SWG's proposed revenue adjustment provision. It is RUCO's position that the Company-proposed revenue adjustment provision would be counterproductive to conservation in that it will dilute the price message a customer receives when they reduce their demand.

Weather Normalization Adjustment Provision – I am recommending that the Commission reject SWG's proposed weather normalization adjustment provision based on findings obtained during meetings, pursuant to Decision No. 68487, which focused on the issue of decoupling.

Shift Residential Revenue Recovery from Variable to Fixed Rates – I am recommending that the Commission adopt RUCO's recommended rate

design (presented in the testimony of RUCO witness Rodney L. Moore). This rate design largely mirrors the Company-proposed rate design (that was based on SWG's cost of service study), and provides a positive move to mitigate the Company's risk of not recovering its authorized revenue requirement by placing more cost recovery into basic customer charge, while still retaining a conservation signal to consumers.

REVENUE DECOUPLING ADJUSTMENT PROVISION

Q. What is the revenue decoupling adjustment provision?

A. The revenue decoupling adjustment provision ("RDAP") is a rate design mechanism that would allow SWG to recover any margins that the Company would lose as a result of customer conservation. SWG complains that traditional rate designs do not allow the Company to recover all of its fixed costs when customer usage declines as a result of conservation. SWG further argues that if an RDAP is authorized it will "decouple" its incentive to promote conservation from its ability to realize its authorized margins.

Q. Has this been a problem for SWG?

A. SWG argues that its inability to recover is authorized margins due to declining average customer usage has been a big problem. In support of this position the Company has prepared an exhibit (JLC-1) that shows that

average usage has declined from 556 therms in 1986, to 332 therms in 2007.

Q. Does this mean that SWG is currently losing the margin on 224 therms per customer, representing the decline in average usage from 1986 until now?

A. No. The Company's Exhibit JLC-1 and its testimony on this issue is somewhat deceiving, and SWG is not currently losing 224 therms in margin per customer.

Q. Please explain.

A. Every time SWG has a rate case the Commission resets the billing determinants that are used to set the new rates. Thus, any decline in average consumption is trued-up in rates in the next rate case. This means that when looking at Exhibit JLC-1, the only potential under recovery is the 15 therms lost between the 2004 rate case and the current case. The circumstances are far less dire that the Company would have us believe.

Q. Isn't the declining average use of therms simply a regulatory lag issue?

A. Yes. Utilities operate in a dynamic environment. As a result, during the period between rate cases, a utility will experience all sorts of changes. Inflation will put pressure on costs, revenue will increase due to growth, return requirements will in(de)crease due to plant additions and

depreciation of existing plant, revenues may decline or incline depending on weather, interest rates may rise or fall. The list goes on and on. These types of changes are normal events that result because of regulatory lag. Regulatory lag is a two-way street that sometimes favors the utility – sometimes the ratepayer. The decoupling scheme promoted by SWG is nothing more than an attempt to mitigate the regulatory lag associated with declining consumption, yet to ignore other regulatory lag aspects that favor the Company, such as growth, declining interest rates, depreciating plant, etc. Approval of the decoupling scheme would result in unfair and biased rates, as often happens when a utility is allowed to engage in single issue ratemaking. The dynamics of change should be dealt with as a whole in the context of a rate case. It is only through the comprehensive view that is gained through a rate case that fair and balanced rates can be determined.

Q. Has consumption continued to decline at the same rate as it was declining twenty years ago?

A. No. The rate of decline has leveled off over the last twenty years. From 1986 through 1996 average consumption declined approximately 26%, yet from 1996 to 2007 it has declined approximately 19%. This data indicates that there is a limit to the amount customers can conserve and that this phenomenon is abating.

Q. Is there adequate justification for such a radical departure from traditional rate design?

A. No. In fact, pursuant to Commission instructions in Decision No. 68487, dated February 23, 2006, SWG, RUCO, Staff, and SWEEP met on several occasions to discuss innovative rate designs that would promote conservation. RUCO was interested in how much of SWG's claimed under recoveries of margin historically were related to declining usage and how much was related to variations in weather. The statistics showed that weather was as much responsible for under recoveries of margin as was conservation, and in some cases more so. Thus, SWG's problem isn't so much a continuing conservation problem, as it would have us believe, but rather variations in weather. SWG's insistent need for the RDAP to mitigate the effects of conservation appears to be a red herring used to justify SWG's desire to pass the risk of variations in weather from shareholders to ratepayers.

Q. Does RUCO support the proposed RDAP?

A. RUCO does not support the proposed mechanism, and believes it would result in biased rates. First, the mechanism would require customers to pay for a predetermined level of gas service regardless of whether that level was actually used. Second, despite the Company's argument that the mechanism is necessary because its costs are primarily fixed in nature so that decreases in consumption do not result in decreases in cost to

serve, the implementation of a mechanism that would have customers pay the margin on therms they did not consume is not warranted. In fact, a mechanism that sent such a price signal would be counterproductive when coupled with increased DSM conservation efforts.

Q. Does it appear that SWG needs to create additional incentives for customers to conserve?

A. No. Given the declining average gas usage of SWG customers, it appears that the Company's customers are already motivated to conserve, and/or new equipment and appliances are themselves becoming more efficient over time. The RDAP would be counterproductive to conservation in that it will dilute the price message a customer receives when they reduce their demand.

Q. Is RUCO recommending anything that addresses revenue losses attributable to conservation in lieu of the Company-proposed RDAP?

A. Yes. As I stated earlier in my testimony, RUCO believes that a more positive approach to mitigate the Company's risk of not recovering its authorized revenue requirement is by placing slightly more cost recovery into basic customer charge. This will be discussed in the last section of my testimony.

WEATHER NORMALIZATION ADJUSTMENT PROVISION

Q. Please describe SWG's proposed weather normalization adjustment provision **("**WNAP").

A. SWG's proposed WNAP is a tariff mechanism that removes weather-related volatility from the non-gas component of customer bills for each winter season billing cycle.

Q. Has weather-related volatility been a problem for SWG?

A. Weather was identified as the real cause for SWG's under-recoveries (as opposed to conservation) during a series of workshops that were conducted pursuant to Decision No. 68487. As ordered in Decision No. 68487, RUCO, ACC Staff, SWEEP and SWG met for the purpose of seeking rate design alternatives that would truly encourage conservation efforts, while at the same time provide benefits to all affected stakeholders. Over the course of the meetings, the Company provided data, in response to questions from RUCO, which yielded a chart that demonstrated how much margin SWG had lost due to conservation and how much was lost due to weather over a three-year period. The chart demonstrated that over a three-year period, SWG had under-recovered by $22.5 million. Of this amount, $4.5 million, or approximately 20 percent was due to conservation, and $18.1 million, or 80 percent was attributable to weather. In RUCO's opinion, the data was conclusive: the real cause for SWG's under-recoveries was not conservation, but weather. None of

the actual participants in the meetings disagreed as to the meaning of the data.

Q. Does RUCO support the Company's request for the WNAP as a result of the findings obtained during the aforementioned meetings that were conducted pursuant to Decision No. 68487?

A. No. As stated in a report that RUCO filed with the Commission on July 26, 2007 (Attachment A), once weather was identified as the main source of the Company's under-recovery, discussions shifted away from decoupling and began to focus on subjects actually germane to SWG's under-recovery problem. The discussions included the following topics:

1) The merits of the current ten-year weather normalization for SWG vs. a weather decoupling mechanism;

2) Debate on stockholders' vs. ratepayers' responsibility to bear the weather risk;

3) The appropriate price signals that a conservation rate design should send; and

4) Potential adjustments to Return on Equity in light of any mechanism that would shift shareholder risk to ratepayers.

Q. Was any consensus reached by the parties during the meetings?

A. As further stated in RUCO's report, no consensus was ultimately reached between the parties on the relevant topics noted above. However, RUCO reported that the meetings proved useful in that the parties were able to identify weather as the true cause of SWG's inability to recover at approved levels, and that conservation efforts are of relatively little

significance to the under-recovery phenomenon. In that respect, the Commission's decision to ask the parties to confer on rate design alternatives was fruitful in narrowing the necessary scope of future consideration of possible remedies to the Company's earnings problems.

Q. What is RUCO's position on the merits of the current ten-year weather normalization for SWG as opposed to a weather decoupling mechanism?

A. RUCO believes that the ten-year (120 month) average of heating degree days, to represent normal weather conditions, utilized by SWG to calculate its weather normalization adjustment may well provide a truer picture of how weather impacts the Company. A number of states including Colorado, Connecticut, Indiana, Iowa, Maryland, New Hampshire, Ohio, Pennsylvania, Tennessee, and Virginia rely on a thirty-year average of heating degree days to represent normal weather conditions in the calculation of a weather normalization adjustment. Other states, such as Wisconsin, rely on a twenty-year average while Illinois (which typically relies on thirty-years) and Wyoming have had some experience with a ten-year average.

Q. Does RUCO believe that it is the stockholders responsibility to bear the weather risk as opposed to ratepayers?

A. Yes. Weather is certainly one of the risks that are associated with investment in a local distribution company such as SWG. Informed

investors would have to recognize the fact that earnings could fluctuate as a result of changes in weather patterns. This type of risk would certainly be reflected in the price of the Company's stock and also in the returns that investors obtain in the form of dividends.

Q. What are the appropriate price signals that a conservation rate design should send to ratepayers?

A. RUCO believes that for the most part, and whenever practical, a conservation oriented rate design should clearly send a message to ratepayers that the more natural gas they use, the higher their bills will be. RUCO generally supports a rate design that clearly sends this type of price message to ratepayers. This is one of the topics that will be discussed in the last section of my testimony.

Q. What adjustments to SWG's return on equity is RUCO advocating in the event of Commission approval of any mechanism that would shift shareholder risk to ratepayers?

A. RUCO believes that the approval of any mechanism that would shift shareholder risk to ratepayers, such as the RDAP and WNAP mechanisms being proposed by SWG in this proceeding, would certainly merit a downward adjustment to any recommended return on common equity. The reason for this is simple: once a decoupling mechanism is put into place, the risks associated with operating income volatility will shift

from SWG's investors to their ratepayers. That being the case, investors should not be entitled to a higher return on investment that reflects the possibility of less than stable earnings due to customer conservation, weather fluctuations or any other reasons.

Q. So RUCO is definitely opposed to the implementation of the Company-proposed WNAP?

A. Yes. For the reasons discussed above, RUCO is opposed to the implementation of the WNAP. RUCO further believes, as it did in SWG's prior rate case that a better method of addressing the Company's under-earning problem is through RUCO's recommended changes to rate design that will be discussed in the next section of my testimony.

SHIFT RESIDENTIAL REVENUE RECOVERY FROM VARIABLE TO FIXED RATES

Q. Briefly summarize the rate design changes that RUCO is recommending in this proceeding.

A. RUCO is recommending a rate design that slightly shifts residential revenue recovery from variable to fixed rates. The recommended changes from the Company's current rate design are consistent with the recommendations that RUCO advocated in the prior SWG rate case proceeding. RUCO's recommended rate design essentially mirrors the Company-proposed rate design with the exception of the percentages of

total revenues that are being generated by the fixed monthly basic service charge ("BSC"). RUCO believes that its recommended rate design is a better alternative to the Company-proposed decoupling mechanisms discussed earlier.

Q. What are the salient features of RUCO's recommended rate design?

A. RUCO's recommended rate design embodies the following four salient features:

1) Provides a positive move to mitigate the Company's risk of not recovering its authorized revenue requirement by placing more cost recovery into basic customer charge;

2) Is consistent with the Company's Cost of Service Study parameters;

3) Eliminates the two-tier volumetric rates to send appropriate price signals regarding gas consumption; and

4) Resets the beginning PGA to zero, by shifting all existing gas costs to base rates.

Q. Please describe RUCO's first fundamental change to SWG's existing rate structure.

A. In order to provide a more positive move to mitigate the Company's risk of not recovering its authorized revenue requirement, RUCO's recommended rate design places more cost recovery into the fixed monthly BSC. In

short, RUCO has reallocated some of the revenue that the Company currently recovers from its commodity charges to the fixed monthly BSC.

Q. Please explain how this reallocation was accomplished.

A. Currently, 39.61 percent of the residential class' revenue is generated from the monthly BSC. RUCO's recommended rate structure will generate 42.50 percent of the fixed residential revenue through the monthly BSC. RUCO also made minor changes to the monthly BSC's of SWG's other rate classes. For the most part, RUCO's adjustments to the monthly BSC's for the Company's various rate classes also have the effect of decreasing the percentage of revenue to be recovered through the respective commodity charges for those rate classes.

Q. Why are you recommending a shift in revenue recovery from the commodity rate to the fixed monthly BSC?

A. As discussed earlier, RUCO opposes the Company-proposed RDAP and WNAP decoupling mechanisms. However, this is not to say that the issues and concerns the Company cites for wanting these decoupling mechanisms do not have some validity. As RUCO stated in SWG's prior rate case proceeding, these concerns include the continued decline in average customer consumption, the relative proportion between SWG's fixed and variable costs to the Company's existing fixed and variable rates, and the resultant strain that puts on SWG's opportunity to recover

its authorized rate of return. RUCO's recommended incremental shift in revenue recovery from variable rates (i.e. commodity) to fixed rates (i.e. the monthly BSC) is designed to move the current rate structure to more accurately mirror the fixed vs. variable nature of the Company's cost of service. This shift will afford SWG with a better opportunity to recover its costs, even if average customer consumption declines. RUCO's recommended rate structure also more fairly addresses the Company's fixed vs. variable rate concerns because it applies the remedy to all of the Company's customers, whereas SWG's proposed decoupling mechanisms would hold residential customers largely responsible for the entire remedy.

Q. Please describe RUCO's second fundamental recommended change in the Company's rate structure.

A. RUCO's recommended rate design is consistent with the Company's Cost of Service Study parameters. As stated earlier, the rate structure that RUCO is recommending essentially mirrors the Company-proposed rate design with the exception of the percentages of total revenue that are being generated by the fixed monthly BSC. Thus, RUCO's recommended rate design largely adheres to the rate design which resulted from the Company's cost of service study.

Q. Is RUCO also recommending that there be no differential between summer and winter rates?

A. Yes. Since RUCO's recommended rate design includes a flat residential commodity rate across all therm usage, as does the Company's, there should be no distinction between summer and winter rates.

Q. Please describe RUCO's third fundamental recommended change in the Company's rate structure.

A. RUCO's recommended rate design eliminates two-tier volumetric rates to send appropriate price signals regarding gas consumption. Once again, RUCO is in agreement with SWG's proposed single commodity rate for each rate schedule. Thus, under RUCO's recommended rate structure each customer within each rate schedule will pay the same amount per therm regardless of the volume consumed.

Q. Why are you recommending a flat or one-tiered rate structure?

A. RUCO's recommended flat or one-tiered rate structure is consistent with its support for demand side management ("DSM") efforts. RUCO believes it would be counterproductive on the one hand to support increased spending to promote energy efficient usage, and at the same time recommend a rate structure that provides a discounted commodity rate to large users. RUCO further believes that the elimination of two-tier volumetric rates also sends an appropriate price signal to ratepayers.

Q. Wouldn't an inclining two-tiered rate structure also send a price message to customers to conserve?

A. It has to be remembered that one of RUCO's concerns in this case is to mitigate SWG's declining revenues through an increased BSC as opposed to a decoupling mechanism. RUCO views its recommendation as a trade-off. While it is true that an inclining two-tier rate structure would send a signal to customers to conserve, it is that very act of conservation that contributes to the declining revenue problem that RUCO is attempting to mitigate. Once again RUCO's position on an inclining two-tiered rate structure is consistent with its recommendations in the prior SWG proceeding. Admittedly, while an inclining two-tiered rate structure would send an even stronger energy efficiency price signal than a flat rate structure, the sole objective of an effective and fair rate design is not merely the promotion of energy efficiency. A rate structure that is based on the cost to serve the various rate classes can be the cornerstone of a fair and effective rate design. While cost of service is the starting point of a good rate design, it is sometimes warranted and even desirable to make small departures from pure cost of service rate structures in an effort to send price signals designed to elicit certain behaviors. A total departure from cost of service, however, is contrary to fundamental fairness and accepted rate design principles. As a gas distribution company, SWG's cost of service declines as usage increases. Thus, a recommendation to use an inclining tier rate structure in a declining commodity cost business

would depart too far from cost of service. At the same time, however, the current declining commodity rate structure is counterproductive to the energy efficiency goal of DSM programs. As stated earlier, RUCO's recommended flat rate structure adheres more closely to cost of service and at the same time does not send a price signal that discourages energy efficiency, as would continuation of the declining rate structure.

Q. Please discuss your fourth fundamental recommended change in the Company's rate structure.

A. Consistent with prior rate case proceedings, RUCO has reset the beginning purchased gas adjustor ("PGA") to zero. This allows for the existing purchased gas adjustor bank balance to be recovered in base rates on a going forward basis.

Q. Why should RUCO's recommended rate structure be approved?

A. RUCO's recommended rate structure was designed specifically to address some of Company's cost recovery problems, to send a price signal that will not discourage energy efficient gas usage, while at the same time protect ratepayers from extreme and abrupt changes in their monthly bill. I believe my recommended rate design addresses those objectives through adherence to basic rate design principles of cost of service, gradualism, and the appropriate price signals.

Q. Will your recommended rate design accomplish the three goals you identified earlier?

A. Yes, I believe it will. RUCO's recommended rates are fair and reasonable, are designed to encourage energy efficient usage, and afford the Company an opportunity to recover its authorized rate of return.

Q. Does that conclude your direct testimony?

A. Yes.

ATTACHMENT A

ORIGINAL

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RE: RUCO's Report on Rate Design Alternatives to Encourage Conservation (Docket No. G-01551A-04-0876, Decision No. 68487)

Pursuant to Decision No. 68487, RUCO, ACC Staff, SWEEP and Southwest Gas met to "... seek rate design alternatives that will truly encourage conservation efforts, while at the same time providing benefits to all affected stakeholders." (Decision, p. 34)

The first several meetings centered around Southwest Gas' presentations on decoupling mechanisms in general and with specific regard to SWG's perceived need for a decoupling mechanism. This included the following SWG arguments:

1) A history of declining usage;

2) Conservation and efficiency's role in declining usage;

3) Inability for SWG to earn its authorized rate of return;

4) Desirability of removing any disincentives for SWG to aggressively promote conservation.

Beginning with the third meeting, RUCO expressed its concern that SWG appeared to have reached a solution to a purported "problem", although the purported "problem" and its cause had not been conclusively identified. RUCO stated that it needed certain facts and data so the parties could establish what the problem really was and then seek a solution, rather than the other way around, and supplied the Company with a number of questions to answer.

Data responsive to RUCO's questions yielded a chart that demonstrated how much margin SWG had lost due to conservation and how much was lost due to weather over a three-year period. This chart showed that over the three-year period SWG had under-recovered by $22.5 million. Of this amount, $4.5 million, or approximately 20%, was due to conservation, and $18.1 million, or 80%, was attributable to weather (see Schedules on Attachment 1). The data was conclusive: the real cause for SWG's under-recoveries was not conservation, but weather. None of the actual participants in the meetings disagreed as to the meaning of the data.

The real problem having been identified, subsequent discussions shifted away from decoupling and began to focus on subjects actually germane to SWG's under-recovery problem. These discussions included the following topics:

1) The merits of the current 10-year weather normalization for SWG vs. a weather decoupling mechanism;

2) Debate on stockholders vs. ratepayers' responsibility to bear the weather risk;

3) The appropriate price signals that a conservation rate design should send;

4) Potential adjustments to Return on Equity in light of any mechanism that would shift shareholder risk to ratepayers.

No consensus was ultimately reached between the parties on these more relevant topics. However, the meetings proved useful in that the parties were able to identify weather as the true cause of SWG's inability to recover at approved levels, and that conservation efforts are of relatively little significance to the under-recovery phenomenon. In that respect, the Commission's decision to ask the parties to confer on rate design alternatives was fruitful in narrowing the necessary scope of future consideration of possible remedies to the Company's earnings problems.

RUCO is disappointed in the selective nature of the Company's "report" on this matter, and had supplied the Company with language that could have been used to more accurately reflect what actually transpired in the meetings, inclusion of which could possibly have earned our co-sponsorship of the report. That the Company did not accept our language and filed the report in the manner it did—replete with apologia for the very mechanism revealed through the meeting process to be inappropriate to the peculiar circumstances of this Company—has necessitated this more balanced and accurate retelling of the meeting process and its results.

In addition, the Southwest Gas report may have earned greater credibility in RUCO's estimation had it been written by someone from the Company who had actually attended the meetings.

Attached please find materials as counterpoint to the self-serving AGA attachment to the Company's "report," as follows:

- NASUCA's June 2007 Resolution opposing the sort of decoupling mechanism proposed by Southwest Gas in its most recent rate case (Attachment 2), and
- A slide presentation given by LSU's Center for Energy Studies to NASUCA members in June 2007 that covers the topic of incentives and energy efficiency more expansively than does AGA (Attachment 3).

It is my understanding that NASUCA President John Perkins presented this same information at NARUC's Summer Meeting last week.

Sincerely,

Stephen Ahearn
Director

SA:hs

attachments

cc: All Parties of Record

ATTACHMENT 1

SOUTHWEST GAS CORPORATION
ARIZONA STAKEHOLDER DECOUPLING WORK GROUP
RESPONSES TO RUCO'S QUESTIONS AT 3RD MEETING

Response 4 (Continued).

Data reflected in Responses 1 and 4 allow us to determine the impact on the recovery of Southwest's fixed cost of providing service of changes in actual use per customer (captures both weather and conservation), weather adjusted use per customer (captures conservation) and actual less conservation (captures weather) from amounts authorized in the last rate case. The calculations are reflected below for 2004, 2005 and 2006.

	Change From Revenue at Authorized Margin per Customer		
Description	Total	Conservation-Related	Weather-Related
(a)	(d)	(f)	(h)
2004			
Change in Average Use per Customer	11.7	(4.3)	16.0
Average Commodity Margin	$ 0.52579	$ 0.52579	$ 0.52579
Change in Margin per Customer	$ 6.15	$ (2.26)	$ 8.41
Average Number of Customers	785,673	785,673	785,673
Change in Annual Margin	$ 4,833,258	$ (1,776,326)	$ 6,609,584
Change in Fixed Component of Margin	**$ 4,587,102**	**$ (1,685,858)**	**$ 6,272,961**
Change in Variable Component of Margin	$ 246,156	$ (90,468)	$ 336,623
2005			
Change in Average Use per Customer	(26.3)	(1.8)	(24.5)
Average Commodity Margin	$ 0.52579	$ 0.52579	$ 0.52579
Change in Margin per Customer	$ (13.83)	$ (0.95)	$ (12.88)
Average Number of Customers	825,650	825,650	825,650
Change in Annual Margin	$ (11,417,317)	$ (781,413)	$ (10,635,904)
Change in Fixed Component of Margin	**$ (10,835,838)**	**$ (741,616)**	**$ (10,094,221)**
Change in Variable Component of Margin	$ (581,479)	$ (39,797)	$ (541,682)
2006			
Change in Average Use per Customer	(37.8)	(4.7)	(33.1)
Average Commodity Margin	$ 0.52579	$ 0.52579	$ 0.52579
Change in Margin per Customer	$ (19.87)	$ (2.47)	$ (17.40)
Average Number of Customers	864,201	864,201	864,201
Change in Annual Margin	$ (17,175,876)	$ (2,135,625)	$ (15,040,251)
Change in Fixed Component of Margin	**$ (16,301,115)**	**$ (2,026,858)**	**$ (14,274,257)**
Change in Variable Component of Margin	$ (874,760)	$ (108,767)	$ (765,994)
Three-Year Impact on Fixed Cost Recovery	**$ (22,549,850)**	**$ (4,454,333)**	**$ (18,095,518)**

SOUTHWEST GAS CORPORATION
ARIZONA STAKEHOLDER DECOUPLING WORK GROUP
RESPONSES TO RUCO'S QUESTIONS AT 3RD MEETING

Question 1.
For the last three years, provide weather adjusted and actual average use per residential customer data so we can see both the conservation and weather impacts on usage.

Response 1.
See table below for residential customer average usage and dollar impacts.

Description	2004	2005	2006
Average Usage			
Actual	358.7	320.7	309.2
Weather Adjusted	342.7	345.2	342.3
Last GRC	347.0	347.0	347.0
Difference From Last GRC			
Actual/Weather and Conservation-Related	11.7	(26.3)	(37.8)
Weather Adjusted/Conservation-Related	(4.3)	(1.8)	(4.7)
Weather-Related	16.0	(24.5)	(33.1)
Average No. of Customers	785,673	825,650	864,201
Average Commodity Rate	$ 0.52579	$ 0.52579	$ 0.52579
Dollar Impact of Change in Average Use			
Actual	$ 4,833,258	$(11,417,317)	$(17,175,876)
Conservation-Related	$ (1,776,326)	$ (781,413)	$ (2,135,625)
Weather-Related	$ 6,609,584	$(10,635,904)	$(15,040,251)

Question 2.
Over the same period, provide average use for newly installed customers versus vintage customers.

Response 2.
See table below. Results are based on weather-adjusted data for 12-months ending December 2006, and includes data for all customers installed prior to 2002 (vintage customers) and for customers installed in 2002, 2003 and 2004.

	Vintage	2002	2003	2004
Weather-Adjusted Average Use	343.4	339.2	334.5	334.0
Change From Vintage		(4.2)	(8.9)	(9.4)

ATTACHMENT 2

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

Opposed:
Ohio
Indiana
Colorado
Wyoming

Abstained:
Massachusetts
California

ATTACHMENT 3

Regulatory Issues for Consumer Advocates in Rate Design, Incentives & Energy Efficiency

LSU

David E. Dismukes, Ph.D.
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Center for Energy Studies
Louisiana State University

National Association of State Utility Consumer Advocates (NASUCA)
Mid-Year Meeting
June 11, 2007

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Arguments In Favor of Revenue Neutrality

- Aligns utility incentives with energy efficiency.
- Assists utility in earning its authorized rate of return that is challenged by the decreasing use per customer problem (gas).
- Easier for customers to understand and reduces bill volatility.
- Reduces regulatory costs and the need for frequent rate cases.

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Common Types of Revenue Neutrality Programs

- Straight-Fixed Variable Rate Design: eliminates all variable distribution charges and DNG costs are recovered through a fixed delivery services charge or an increase in the fixed customer charge alone (gas LDCs).

- Sales-Revenue Decoupling: separates revenue recovery from sales (sets annual revenues to a "per-customer" target.) Can be done on a full or partial basis.

- Sales-Margin Decoupling: separates margin recovery from sales (sets margin per customer target). Can also be done on a full or partial basis.

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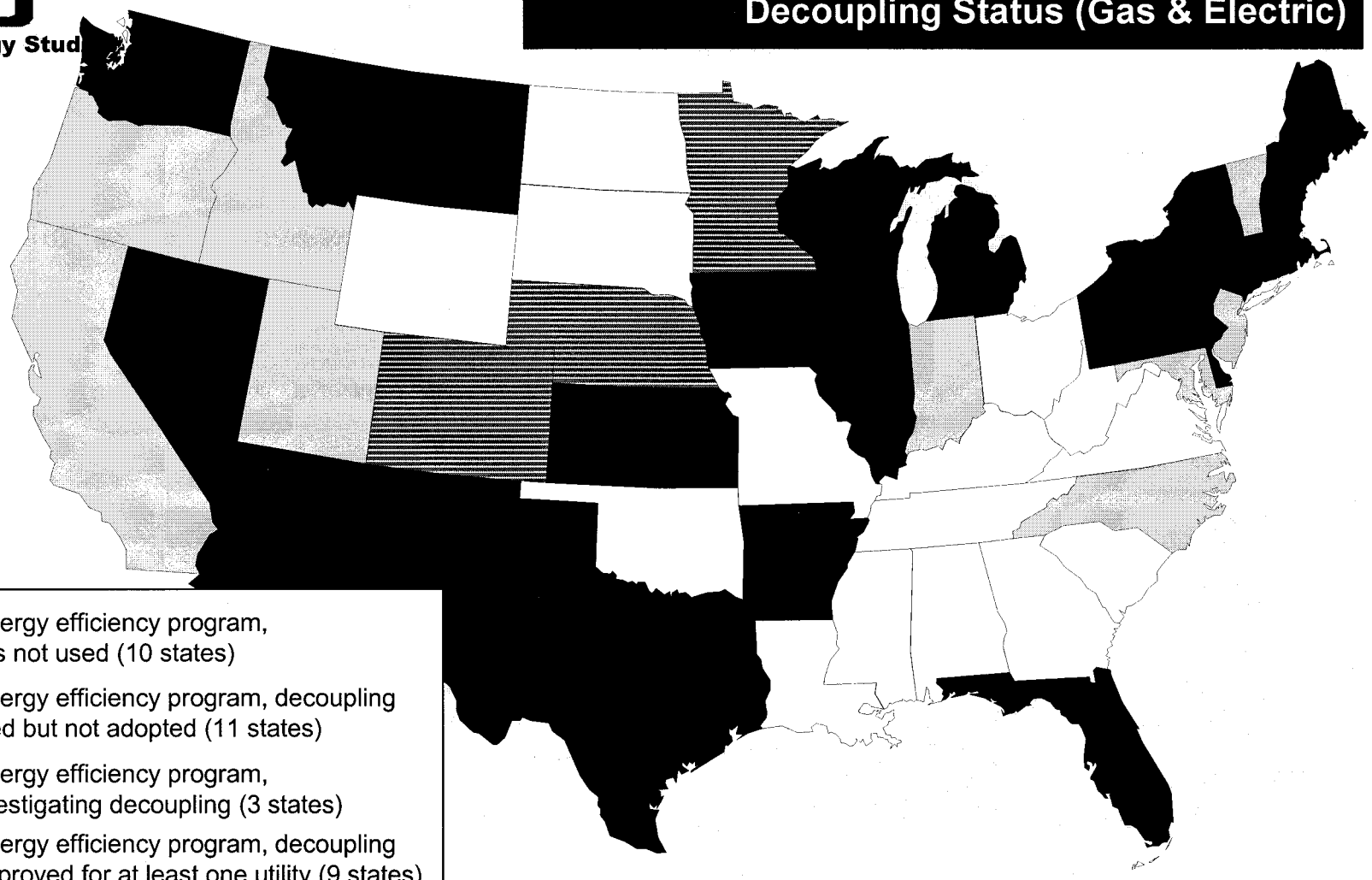
States with Energy Efficiency Programs – Decoupling Status (Gas & Electric)



- State has energy efficiency program, decoupling is not used (10 states)
- State has energy efficiency program, decoupling was proposed but not adopted (11 states)
- State has energy efficiency program, currently investigating decoupling (3 states)
- State has energy efficiency program, decoupling has been approved for at least one utility (9 states)
- State has no energy efficiency program, decoupling has been approved for at least one utility (1state)

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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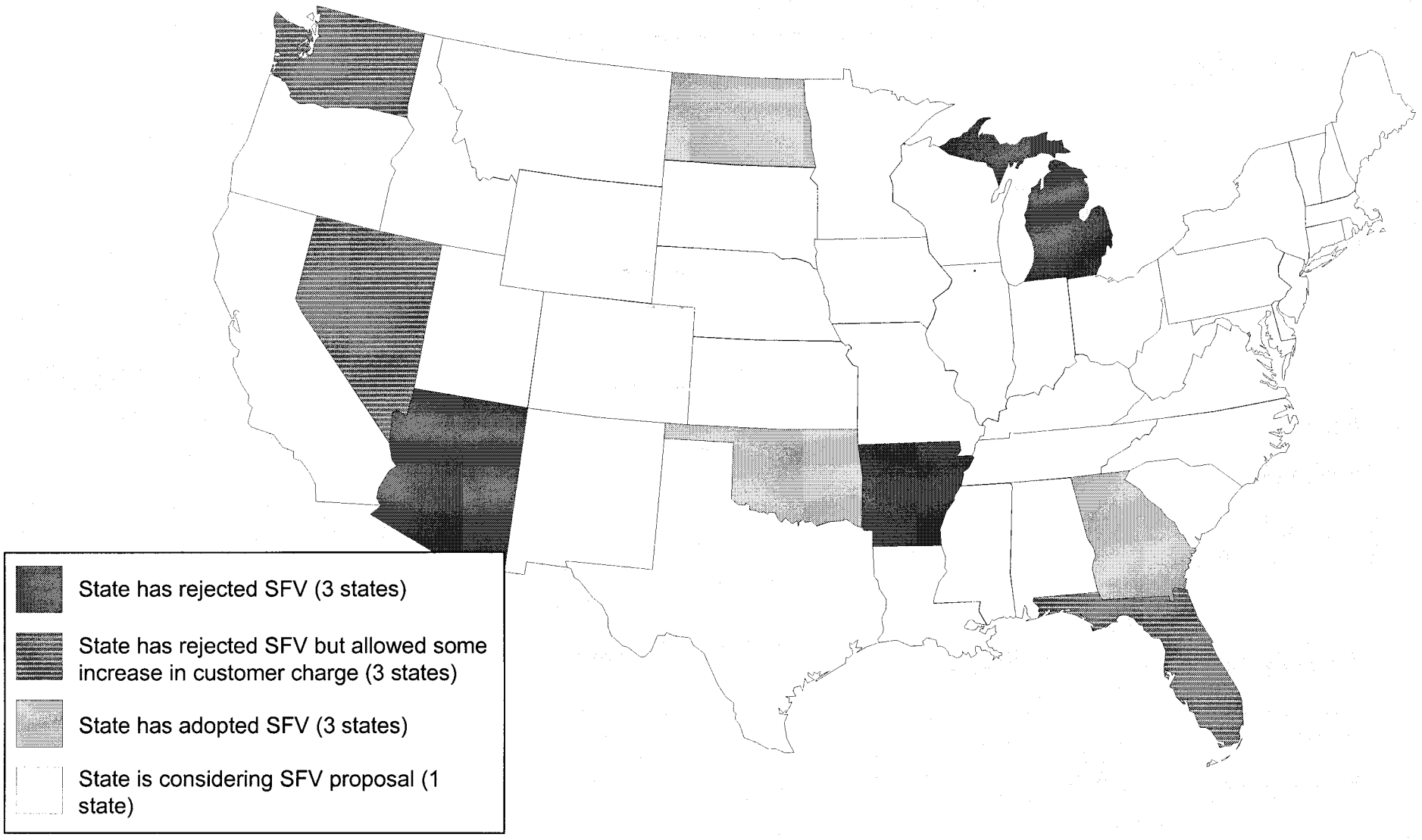
States that have Considered SFV



Note: In Michigan, SFV was proposed by SEMCO Energy but opposed by the Michigan AG. The MPSC approved a stipulation that excluded SFV .

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Common Reasons for Rejecting Revenue Neutrality

- Represents a significant departure from traditional regulation.
- Shifts sales risks from utilities to customers.
- The impact of changes in use per customer for the gas industry are overstated and address the wrong causes on changes in margins. Power industry faces an entirely different set of usage trends.
- At best, the incentive issue is not resolved and never can be with revenue decoupling.
- Current proposals, offered in conjunction with other "regulatory remedies" diminishes the simplicity argument and raises questions about the purpose of proposal.
- Proportionality issue – changing the rate design for all customers based upon programs for which an exceptionally small percentage of the customers will participate.
- Is actually contrary to "sound economic principles" and well-grounded regulatory policies.

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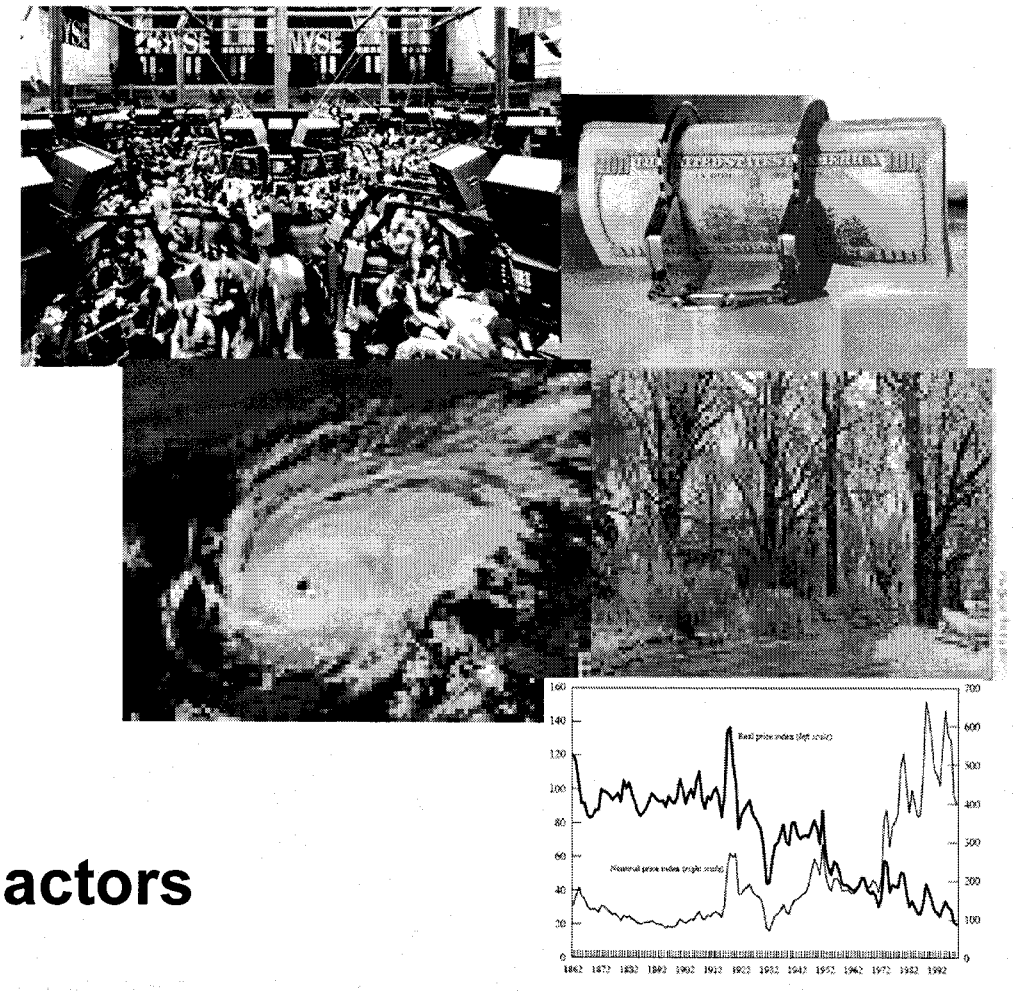
Risks that are Shifted to Ratepayers

Economy

Weather

Commodity Prices

Other Unanticipated Factors



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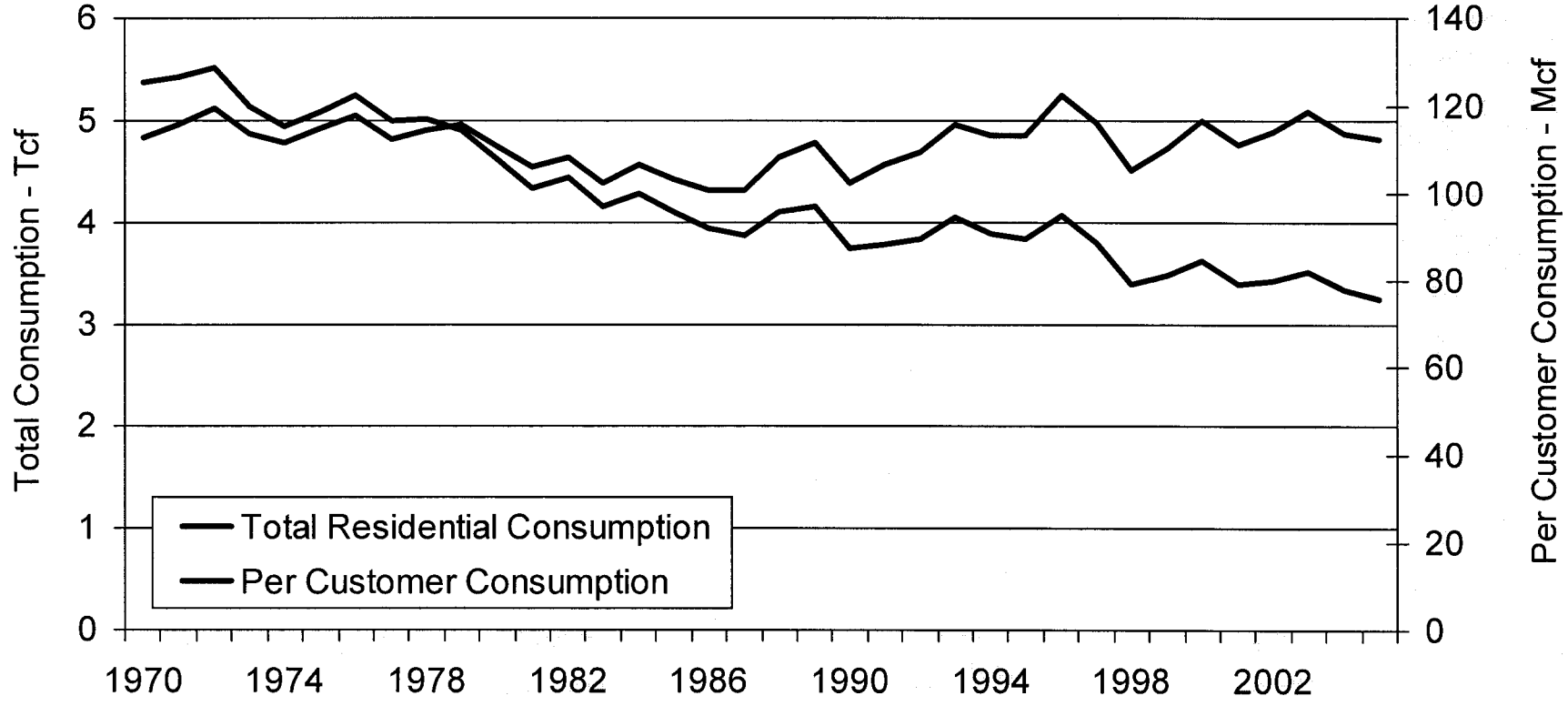
US Residential Natural Gas Use

While overall use per customer is decreasing, overall residential natural gas usage is flat to increasing.



Source: Energy Information Administration, US Department of Energy

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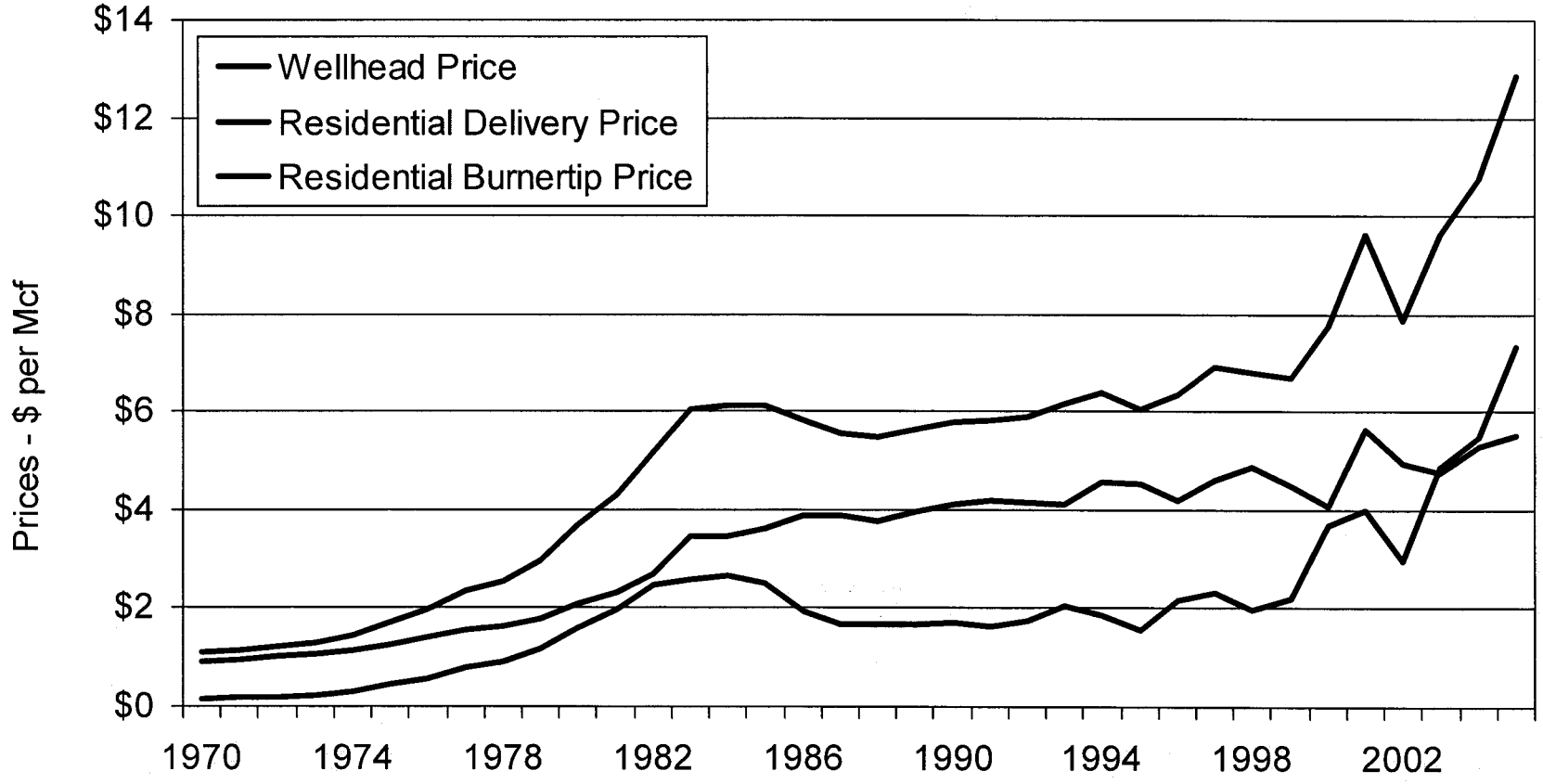
US Natural Gas Price Trends
Wellhead to Burner-Tip Price

Retail prices have increased significantly since 2000-2001.



Source: Energy Information Administration, US Department of Energy

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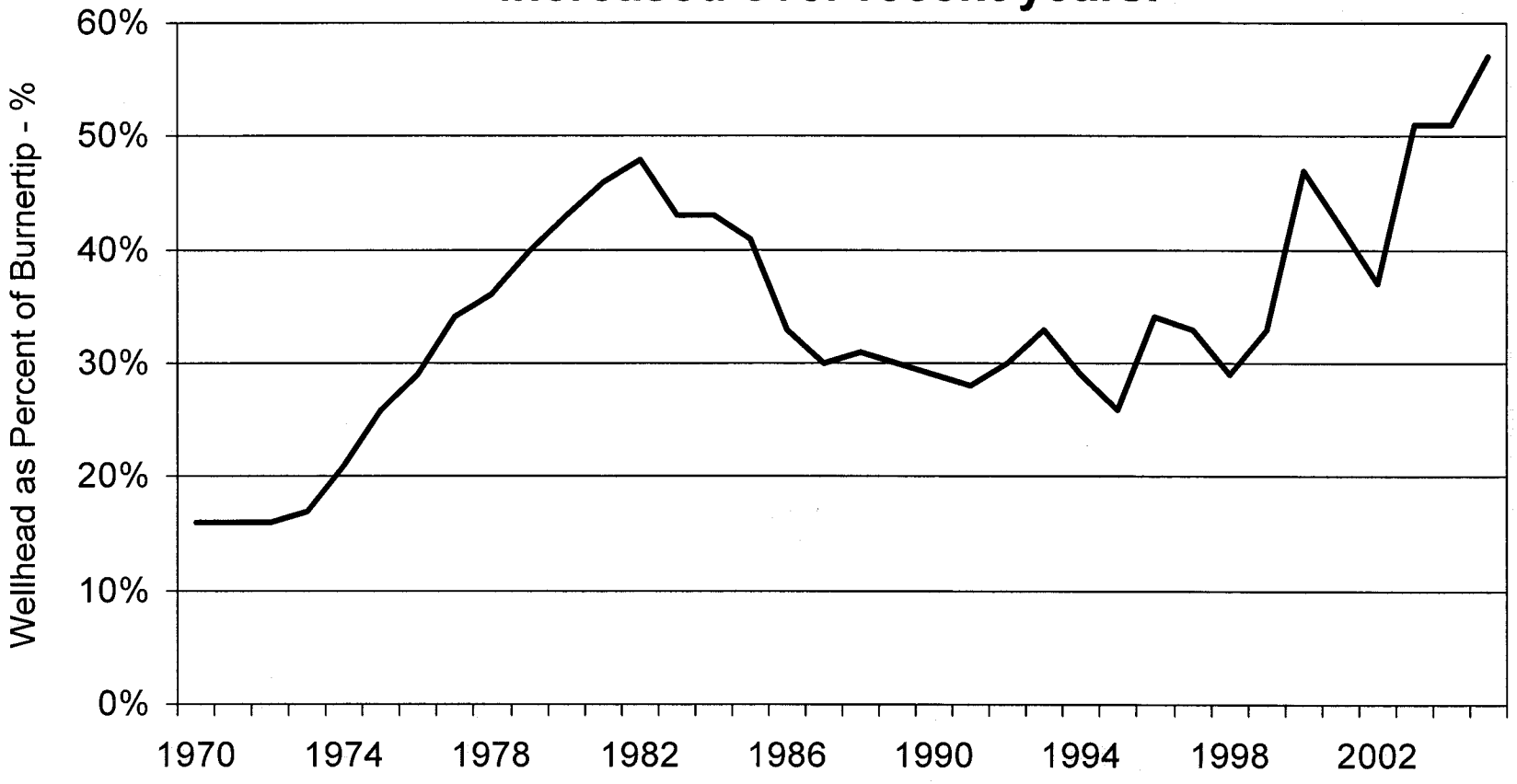
US Natural Gas Price Trends
Wellhead as a Percent of Burner-Tip Price

The commodity share of overall natural gas rate has increased over recent years.



Source: Energy Information Administration, US Department of Energy

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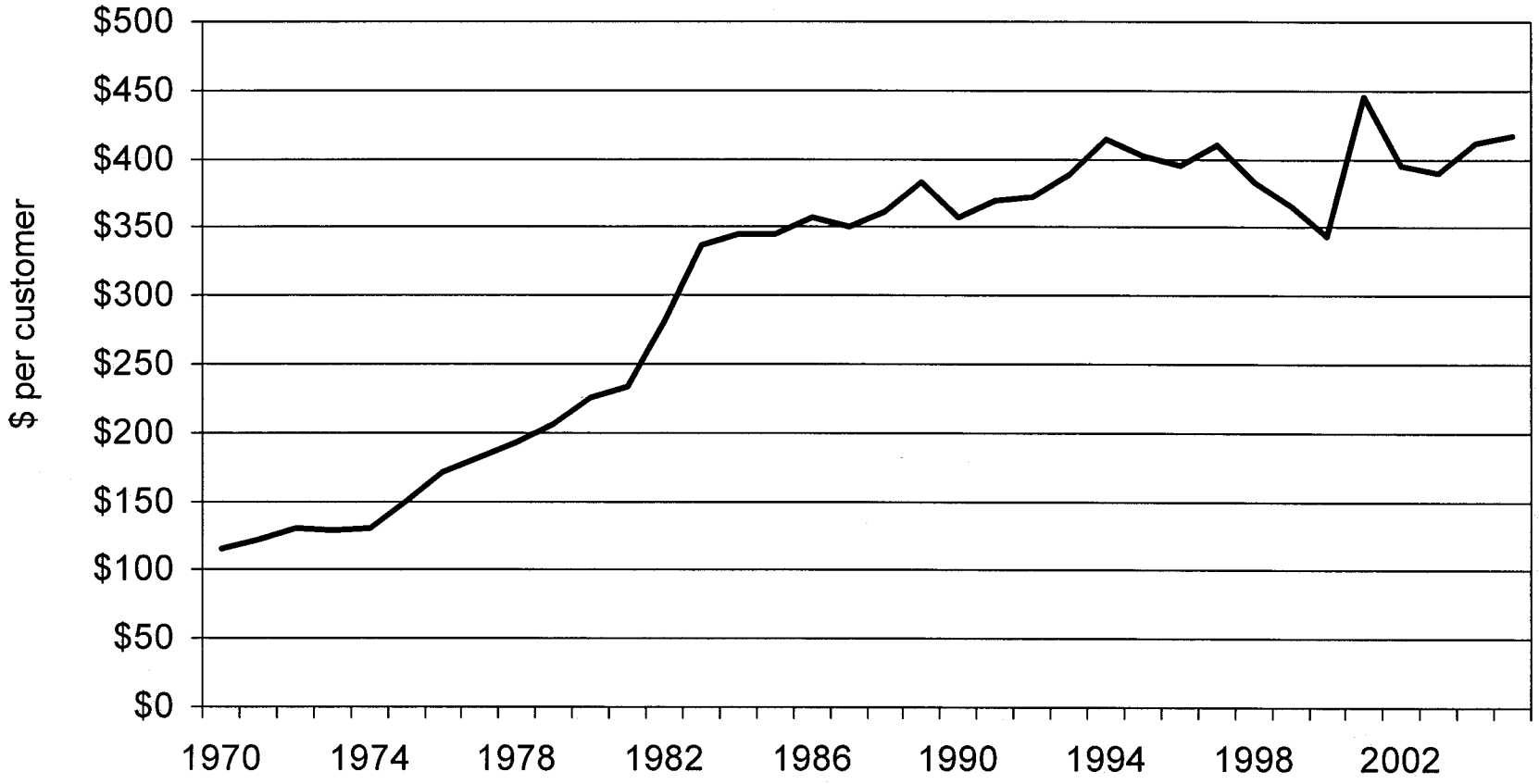
DNG Revenue per Customer

Yet despite high prices, and decreases in use per customer, overall DNG revenues per customer are at close to historic highs.



Source: Energy Information Administration, US Department of Energy

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Summary Financial Impact of Changes in Use and Customers, "Wild West Utility" (2001-2005)

Wild West LDC is facing significant growth challenges – ROE impacts of decreases in use per customer pale in comparison to change in rate base and new customer capital expenses.

	2001	2002	2003	2004	2005	2006
Return on Equity						
Allowed ROE	11.00%	11.00%	11.20%	11.20%	11.20%	11.20%
ROE Impact of Change in Use per Customer	0.00%	-0.60%	1.99%	-0.41%	-0.87%	-0.41%
ROE Impact Change in Customers	0.00%	1.04%	1.66%	1.17%	1.51%	1.51%
ROE Impact Change in Expenses Rate Base and Capital Elements	**-0.54%**	**-2.38%**	**-3.76%**	**-1.92%**	**-1.16%**	**-2.08%**
Actual Achieved ROE	10.46%	9.06%	11.09%	10.05%	10.68%	10.22%

Is decoupling a solution to the "use per customer problem" or an "end-run" on a rate case?

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Proportionality Issue

Significant change in rate design for a very small change in overall sales and very limited number of customers.

		Program Spending (million $)	Percent of Retail Revenues (%)	Gas Savings (Mcf/year)	Percent of Gas Sales Saved (%)	Volume saved per million $ (Mcf/year)	Benefit-Cost Ratio
Aquila	$	2.10	1.4%	146,000	0.5%	69,000	-
Centerpoint	$	5.60	0.5%	720,000	0.5%	128,600	2.60
Keyspan	$	12.00	1.0%	490,000	0.4%	41,000	3.00
Northwest Natural Gas	$	4.70	0.7%	85,000	0.1%	18,000	-
NSTAR	$	3.90	0.8%	71,500	0.2%	18,000	2.29
PG&E	$	13.50	0.4%	2,000,000	0.7%	148,000	2.10
PSE	$	3.80	0.4%	311,000	0.5%	82,275	1.93
SoCal Gas	$	21.00	0.6%	1,100,000	0.3%	52,000	2.67
Vermont Gas	$	1.10	1.6%	57,000	1.0%	52,000	5.60
Xcel Energy (MN)	$	4.00	0.7%	663,000	0.9%	166,000	1.56

Generally, less than one-half of one percent.

Source: S. Tegen and H. Geller, Natural Gas Demand-Side Management Programs: A National Survey. Boulder, CO: Southwest Energy Efficiency Project. January 2006. Based upon surveyed findings of the top ten gas utilities in 2004.

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Incremental Impact of DSM Implementation on Shareholders, Wild West Utility

	Change in Revenue			Income Impact				
	Use per Customer	DSM	New Customers	Use per Customer	DSM	New Customers	Shareholders Equity	Impact on ROE
2007	$ (1,971,361)	$ (288,537)	$ 7,052,203	$ (1,221,185)	$ (178,738)	$ 4,368,579	$ 313,071,056	0.95%
2008	$ (2,905,519)	$ (608,826)	$ 6,391,367	$ (1,799,862)	$ (377,145)	$ 3,959,215	$ 339,501,229	0.52%
2009	$ (4,485,340)	$ (943,652)	$ 6,213,829	$ (2,778,502)	$ (584,557)	$ 3,849,237	$ 363,965,179	0.13%
Total	**$ (9,362,220)**	**$ (1,841,015)**	**$ 19,657,399**	**$ (5,799,549)**	**$ (1,140,440)**	**$ 12,177,031**		**1.61%**
							Net Impact:	**$ 5,237,041.80**

Exaggerated Example

- Reduced revenues/income reduces overall taxes and needs to be considered.
- A one percent per year (3 percent cumulative) reduction is beyond current experience.
- The additional income created by customer growth from the test year is completely ignored (and its corresponding income effects).
- Net impact for a growing LDC is moderate – the net income impact is still positive, not negative.

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Decoupling Creates a Number of New Incentive Issues

- Reduces customers' ability to have full control of their energy savings. Reduces, in part, incentive to conserve particularly with SFV.
- If successful in reducing sales incentive, then also reduces incentive to measure sales losses and savings. You have "decoupled" DSM performance to any form of measurement.
- If successful in reducing sales incentive, then reduces incentive to promote efficient natural gas use and economic development.
- Revenues more difficult to estimate than costs, creating revenue certainty reduces incentive to push cost efficiency.

George A. Schreiber, Jr., SEMCO Company President and Chief Executive Officer, said, "I am very pleased with the Company's results for 2006. We achieved these results, despite warmer-than-normal temperatures and continued customer conservation, which, when combined, adversely impacted 2006 earnings by an estimated $3.5 million." Schreiber added, ***"One way we overcame the impact of the weather and customer conservation was to keep spending under control."***

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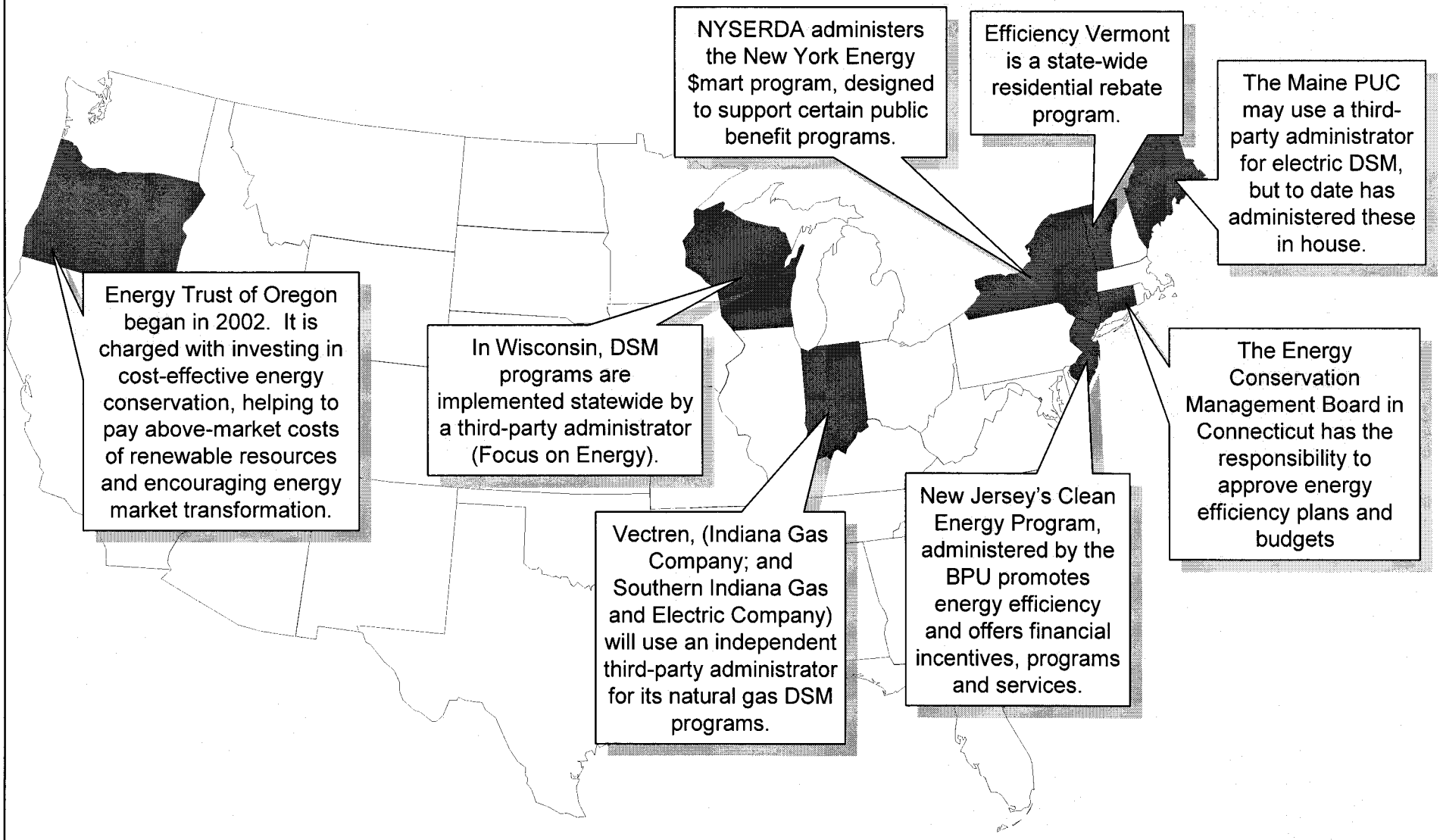
States with Third-Party Administrators



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Revenue Neutrality Mechanisms Are Not the Only Options

- **Projected test years:** forecasts could account for anticipated energy efficiency savings.
- **Cost-effectiveness tests:** screening on RIM-passing measures only.
- **Lost Revenues (*ex post*):** periodic filings on proven, *ex post* lost revenues/sales.
- **Rate design (inclining blocks):** higher rates in upper blocks.
- **Repression adjustments**: usage adjustment to correct of DSM-related reductions in usage.
- **Direct Incentives:** performance-based incentives for programs.
- **Risk Management:** if volatility is an issue, then manage it.
- **More frequent rate cases:** traditional approach at correcting rates that get out of balance.

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Questions, Comments, & Discussion

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