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BEFORE THE ARIZONA CORPORATION COMMISSION

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CHAIRMAN  
WILLIAM A. MUNDELL  
COMMISSIONER  
JEFF HATCH-MILLER  
COMMISSIONER  
KRISTIN K. MAYES  
COMMISSIONER  
GARY PIERCE  
COMMISSIONER

Arizona Corporation Commission  
**DOCKETED**

APR 11 2008

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IN THE MATTER OF THE APPLICATION OF  
SOUTHWEST GAS CORPORATION FOR  
THE ESTABLISHMENT OF JUST AND  
REASONABLE RATES AND CHARGES  
DESIGNED TO REALIZE A REASONABLE  
RATE OF RETURN ON THE FAIR VALUE  
OF THE PROPERTIES OF SOUTHWEST  
GAS CORPORATION DEVOTED TO ITS  
OPERATIONS THROUGHOUT ARIZONA.

Docket No. G-01551A-07-0504

**NOTICE OF FILING DIRECT  
RATE DESIGN TESTIMONY**

The Residential Utility Consumer Office ("RUCO") hereby provides notice of filing the  
Direct Rate Design Testimony of William A. Rigsby, CRRRA, and Rodney L. Moore in the  
above-referenced matter.

RESPECTFULLY SUBMITTED this 11<sup>th</sup> day of April 2008.

  
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Attorney

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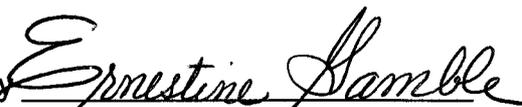
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**SOUTHWEST GAS CORPORATION**

**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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1 **INTRODUCTION**

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

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

6

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

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

10

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

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

16

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

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

1 Q. Please state the purpose of your testimony.

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

14

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

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

21

22

23

1       **SUMMARY OF TESTIMONY AND RECOMMENDATIONS**

2       Q.     Briefly summarize how your direct testimony is organized.

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

11  
12       Revenue Decoupling Adjustment Provision – I am recommending that the  
13       Commission reject SWG's proposed revenue adjustment provision. It is  
14       RUCO's position that the Company-proposed revenue adjustment  
15       provision would be counterproductive to conservation in that it will dilute  
16       the price message a customer receives when they reduce their demand.

17  
18       Weather Normalization Adjustment Provision – I am recommending that  
19       the Commission reject SWG's proposed weather normalization adjustment  
20       provision based on findings obtained during meetings, pursuant to  
21       Decision No. 68487, which focused on the issue of decoupling.

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

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

7  
8 **REVENUE DECOUPLING ADJUSTMENT PROVISION**

9 Q. What is the revenue decoupling adjustment provision?

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

18  
19 Q. Has this been a problem for SWG?

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

1 average usage has declined from 556 therms in 1986, to 332 therms in  
2 2007.

3

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

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

9

10 Q. Please explain.

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

18

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

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

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

15  
16 Q. Has consumption continued to decline at the same rate as it was declining  
17 twenty years ago?

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

23

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

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

16

17 Q. Does RUCO support the proposed RDAP?

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

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

5  
6   Q.   Does it appear that SWG needs to create additional incentives for  
7       customers to conserve?

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

14  
15   Q.   Is RUCO recommending anything that addresses revenue losses  
16      attributable to conservation in lieu of the Company-proposed RDAP?

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

22  
23

1 **WEATHER NORMALIZATION ADJUSTMENT PROVISION**

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

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

7

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

9 A. Weather was identified as the real cause for SWG's under-recoveries  
10 (as opposed to conservation) during a series of workshops that were  
11 conducted pursuant to Decision No. 68487. As ordered in Decision No.  
12 68487, RUCO, ACC Staff, SWEEP and SWG met for the purpose of  
13 seeking rate design alternatives that would truly encourage conservation  
14 efforts, while at the same time provide benefits to all affected  
15 stakeholders. Over the course of the meetings, the Company provided  
16 data, in response to questions from RUCO, which yielded a chart that  
17 demonstrated how much margin SWG had lost due to conservation and  
18 how much was lost due to weather over a three-year period. The chart  
19 demonstrated that over a three-year period, SWG had under-recovered by  
20 \$22.5 million. Of this amount, \$4.5 million, or approximately 20 percent  
21 was due to conservation, and \$18.1 million, or 80 percent was attributable  
22 to weather. In RUCO's opinion, the data was conclusive: the real cause  
23 for SWG's under-recoveries was not conservation, but weather. None of

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

3

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

7 A. No. As stated in a report that RUCO filed with the Commission on July 26,  
8 2007 (Attachment A), once weather was identified as the main source of  
9 the Company's under-recovery, discussions shifted away from decoupling  
10 and began to focus on subjects actually germane to SWG's under-  
11 recovery problem. The discussions included the following topics:

- 12 1) The merits of the current ten-year weather normalization for  
13 SWG vs. a weather decoupling mechanism;
- 14 2) Debate on stockholders' vs. ratepayers' responsibility to bear  
15 the weather risk;
- 16 3) The appropriate price signals that a conservation rate design  
17 should send; and
- 18 4) Potential adjustments to Return on Equity in light of any  
19 mechanism that would shift shareholder risk to ratepayers.  
20

21 Q. Was any consensus reached by the parties during the meetings?  
22

23 A. As further stated in RUCO's report, no consensus was ultimately reached  
24 between the parties on the relevant topics noted above. However, RUCO  
25 reported that the meetings proved useful in that the parties were able to  
26 identify weather as the true cause of SWG's inability to recover at  
27 approved levels, and that conservation efforts are of relatively little  
28  
29

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

5

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

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

19

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

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

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

5  
6 Q. What are the appropriate price signals that a conservation rate design  
7 should send to ratepayers?

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

14  
15 Q. What adjustments to SWG's return on equity is RUCO advocating in the  
16 event of Commission approval of any mechanism that would shift  
17 shareholder risk to ratepayers?

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

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

5

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

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

13

14 **SHIFT RESIDENTIAL REVENUE RECOVERY FROM VARIABLE TO FIXED**  
15 **RATES**

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

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

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

5  
6 Q. What are the salient features of RUCO's recommended rate design?

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

- 9 1) Provides a positive move to mitigate the Company's risk of  
10 not recovering its authorized revenue requirement by placing  
11 more cost recovery into basic customer charge;
- 12 2) Is consistent with the Company's Cost of Service Study  
13 parameters;
- 14 3) Eliminates the two-tier volumetric rates to send appropriate  
15 price signals regarding gas consumption; and
- 16 4) Resets the beginning PGA to zero, by shifting all existing  
17 gas costs to base rates.

18  
19 Q. Please describe RUCO's first fundamental change to SWG's existing rate  
20 structure.

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

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

3

4 Q. Please explain how this reallocation was accomplished.

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

13

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

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

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

12  
13 Q. Please describe RUCO's second fundamental recommended change in  
14 the Company's rate structure.

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

22

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

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

6

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

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

15

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

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

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

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

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

7  
8 Q. Please discuss your fourth fundamental recommended change in the  
9 Company's rate structure.

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

14  
15 Q. Why should RUCO's recommended rate structure be approved?

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

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

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

6

7 Q. Does that conclude your direct testimony?

8 A. Yes.

# **ATTACHMENT A**

# ORIGINAL

0000075470



RESIDENTIAL UTILITY CON

1110 WEST WASHINGTON • SUITE 220 • PHOENIX, ARIZONA 85007 • (602) 364-4835 • FAX: (602) 364-4846

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AZ CORP COMMISSION  
DOCKET CONTROLJanet Napolitano  
GovernorStephen Ahearn  
Director

July 26, 2007

Arizona Corporation Commission  
**DOCKETED**

JUL 26 2007

Docket Control  
Arizona Corporation Commission  
1200 West Washington  
Phoenix, Arizona 85007DOCKETED BY 

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.

Docket Control  
July 26, 2007  
Page 3

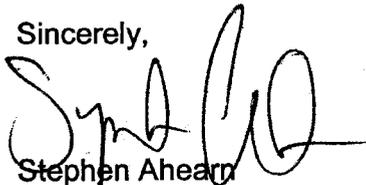
In addition, the Southwest Gas report may have earned greater credibility in RUCO's estimation had it been written by someone from the Company who had actually attended the meetings.

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.

Description (a)	Change From Revenue at Authorized Margin per Customer		
	Total (d)	Conservation- Related (f)	Weather- Related (h)
<b>2004</b>			
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
<b>2005</b>			
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)
<b>2006</b>			
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	<u>\$ (22,549,850)</u>	<u>\$ (4,454,333)</u>	<u>\$ (18,095,518)</u>

**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
<b><u>Average Usage</u></b>			
Actual	358.7	320.7	309.2
Weather Adjusted	342.7	345.2	342.3
Last GRC	347.0	347.0	347.0
<b><u>Difference From Last GRC</u></b>			
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
<b><u>Dollar Impact of Change in Average Use</u></b>			
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

Submitted by:  
NASUCA Consumer Protection Committee

June 12, 2007

June 11, 2007

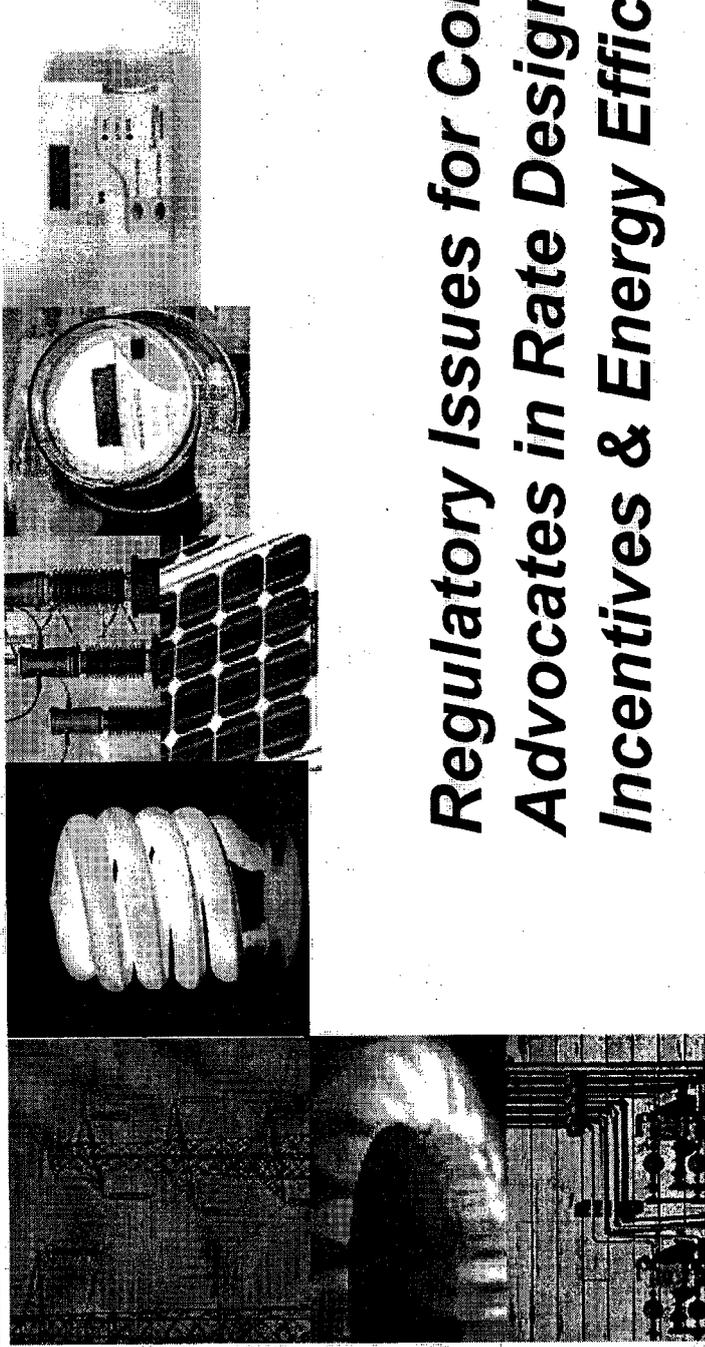
Opposed:

Ohio  
Indiana  
Colorado  
Wyoming

Abstained:

Massachusetts  
California

**ATTACHMENT 3**



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



David E. Dismukes, Ph.D.  
Professor & Associate Executive Director  
Center for Energy Studies  
Louisiana State University

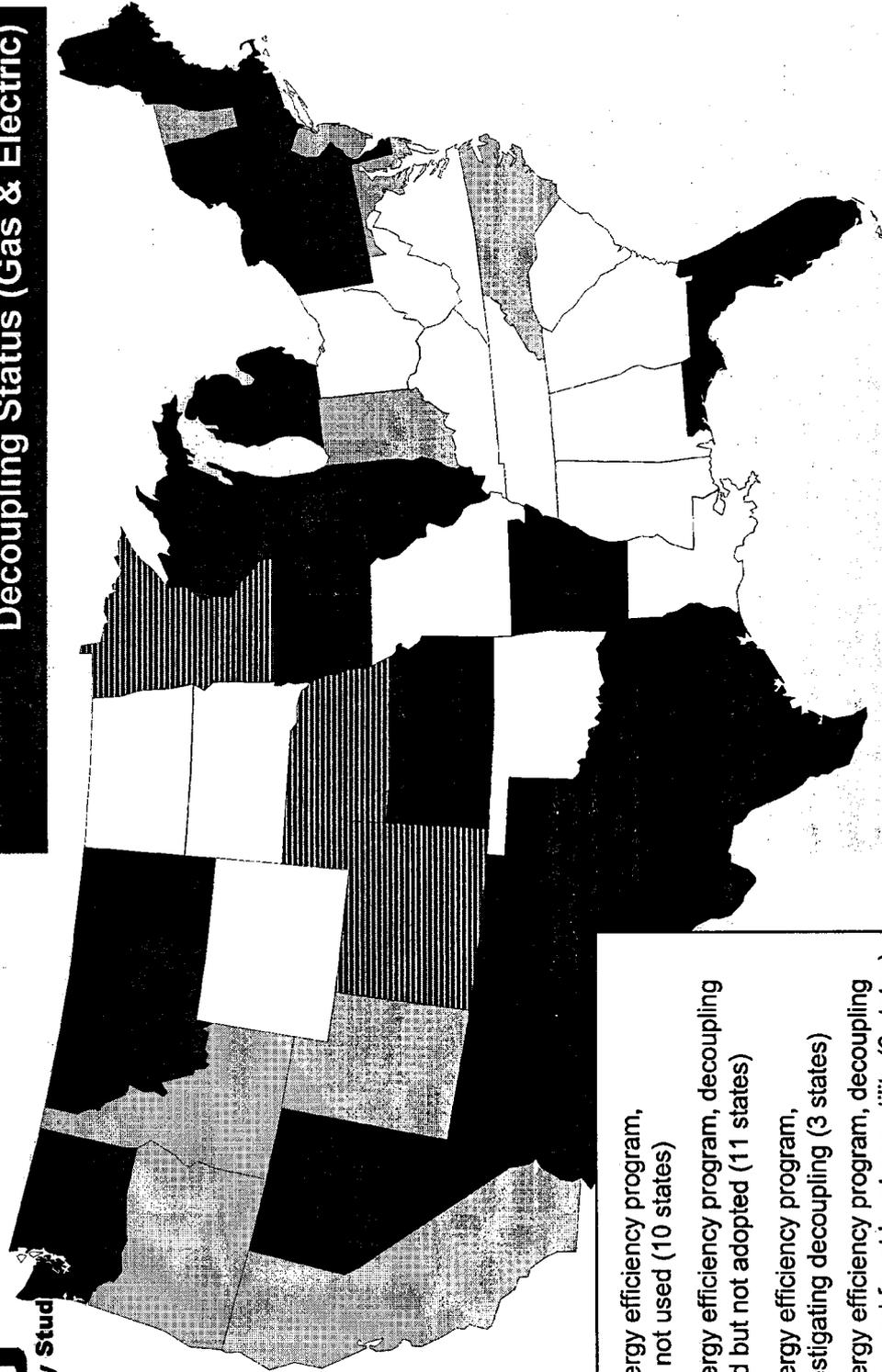
National Association of State Utility Consumer Advocates  
(NASUCA)  
Mid-Year Meeting  
June 11, 2007

- 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.

- 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.



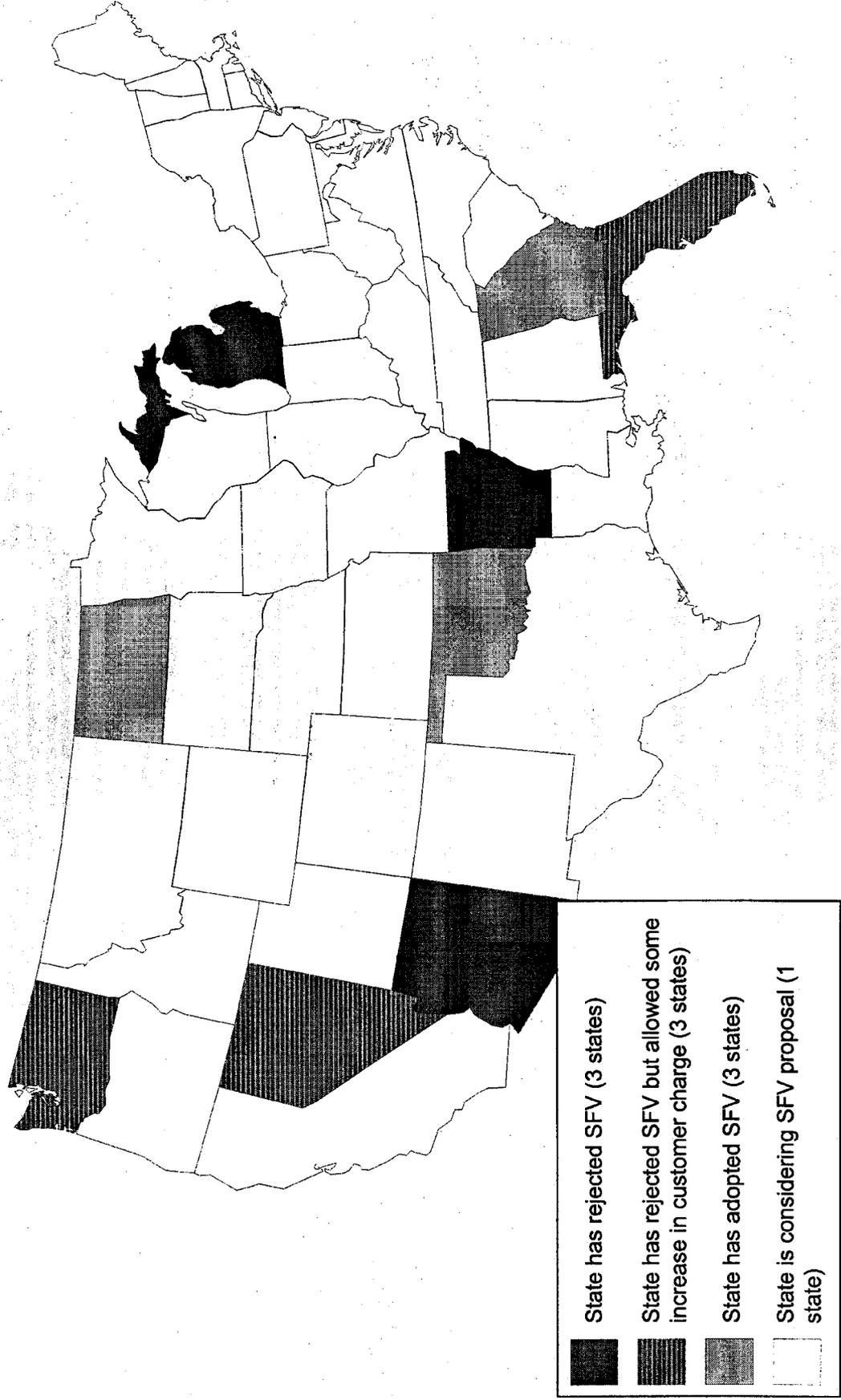
# States with Energy Efficiency Programs – Decoupling Status (Gas & Electric)



-  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 (1 state)

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.

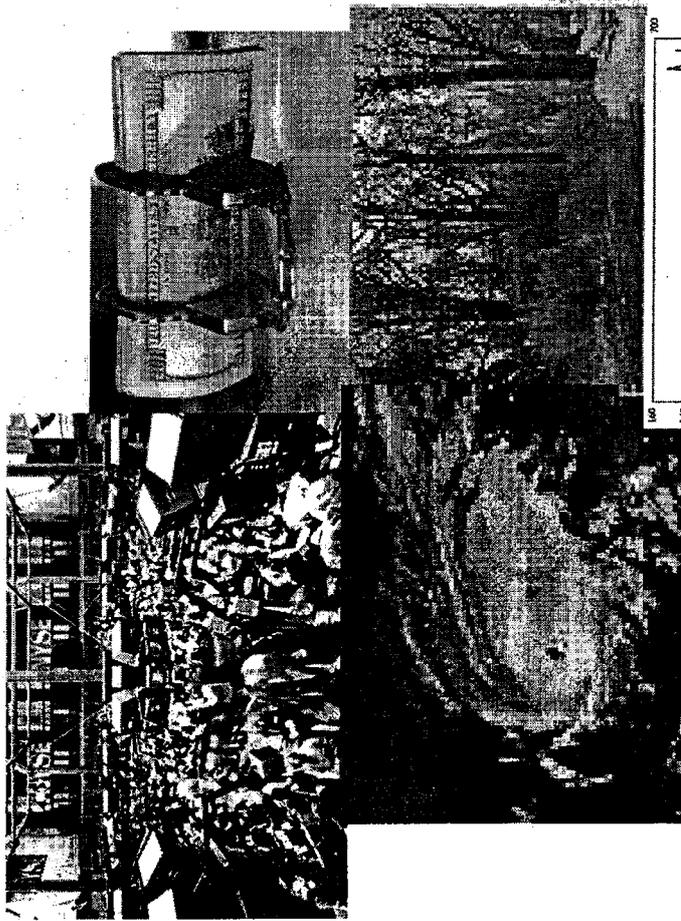
**States that have Considered SFV**



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

- 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.

**Risks that are Shifted to Ratepayers**



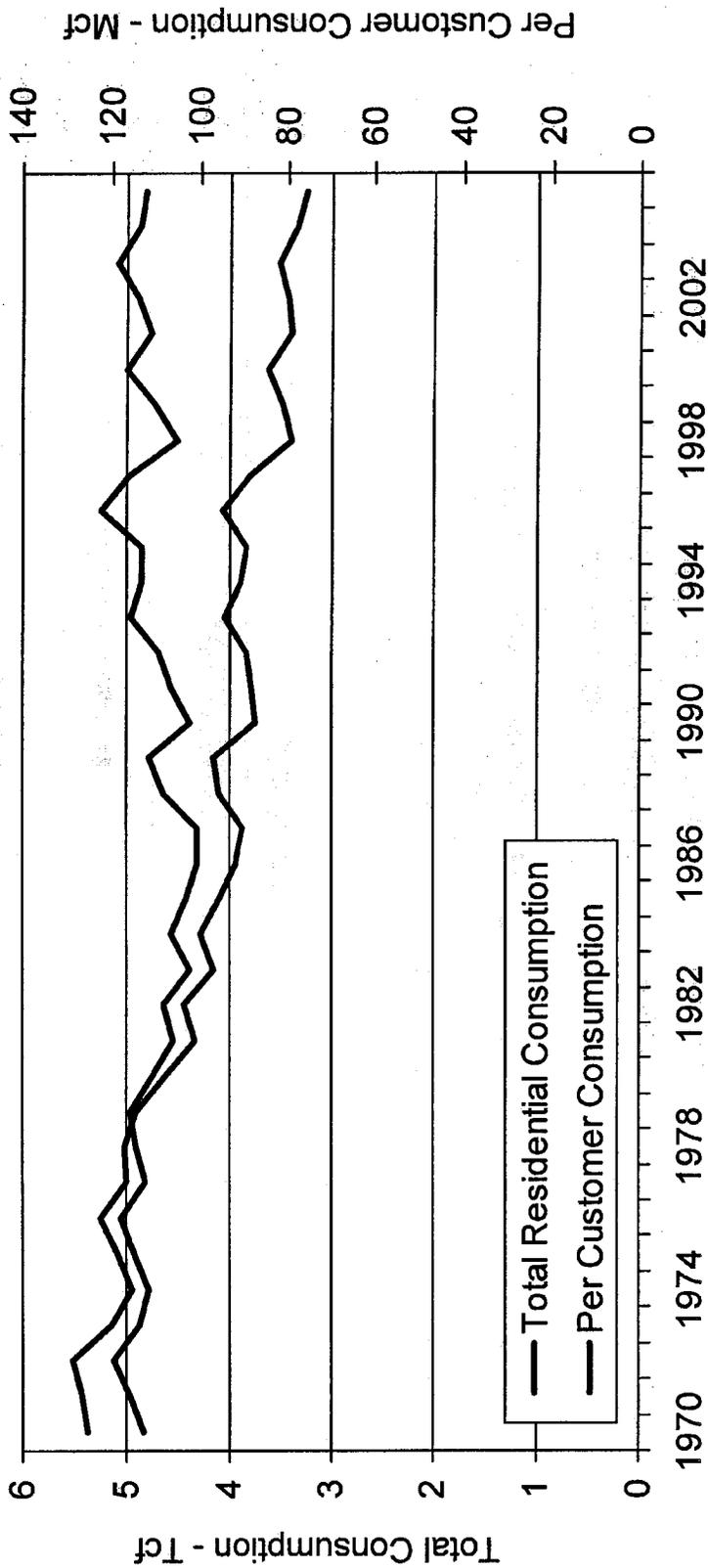
**Economy**

**Weather**

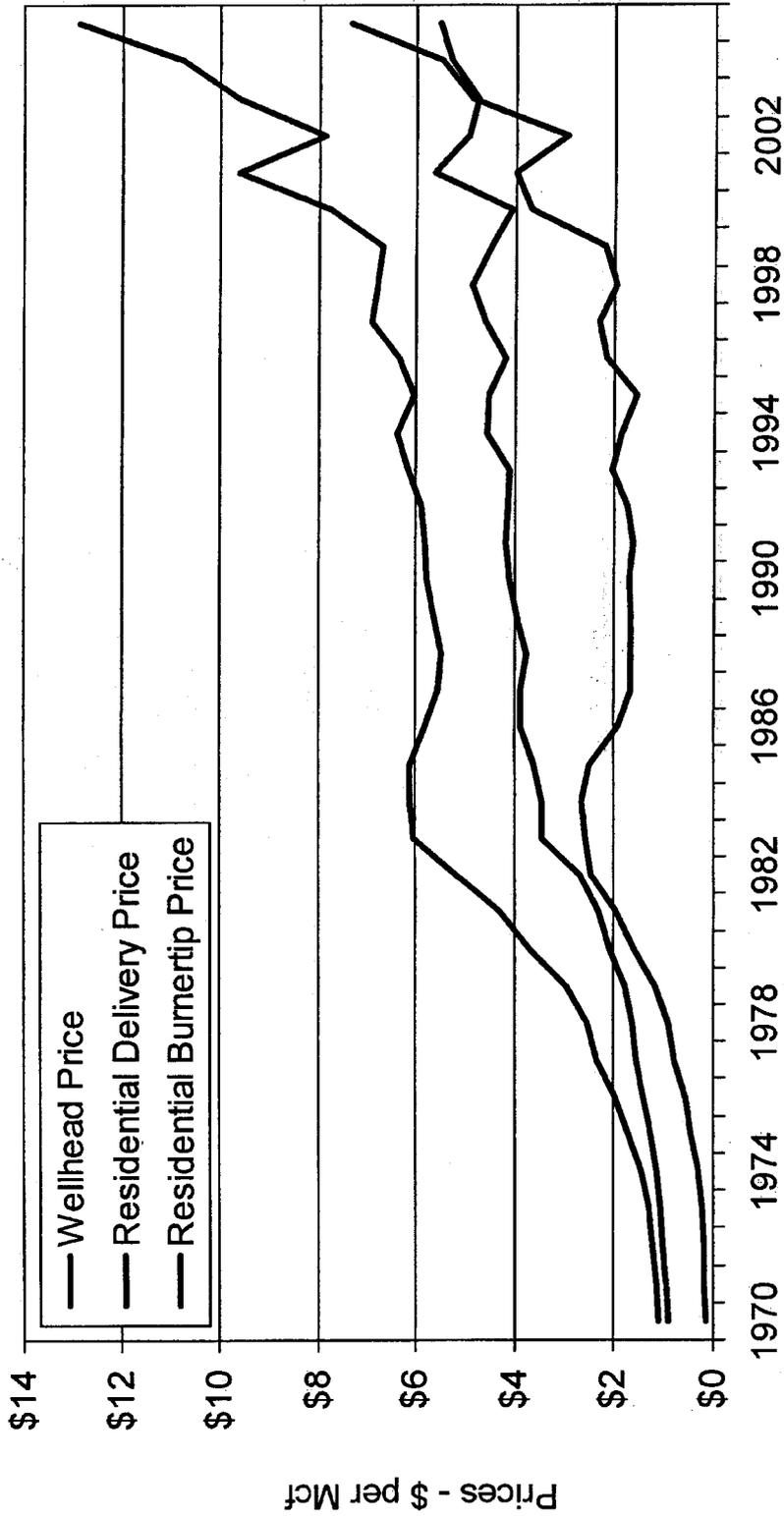
**Commodity Prices**

**Other Unanticipated Factors**

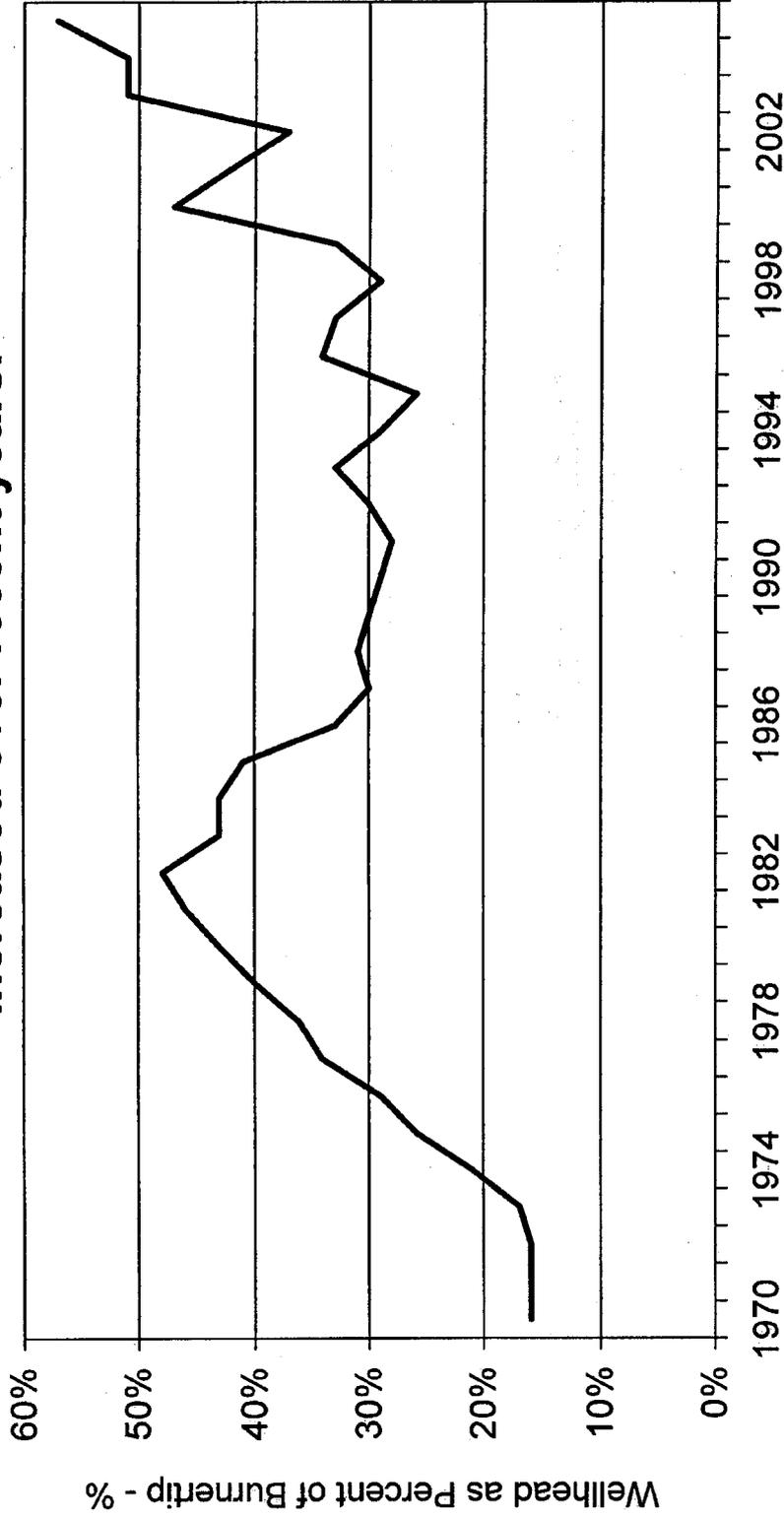
**While overall use per customer is decreasing, overall residential natural gas usage is flat to increasing.**



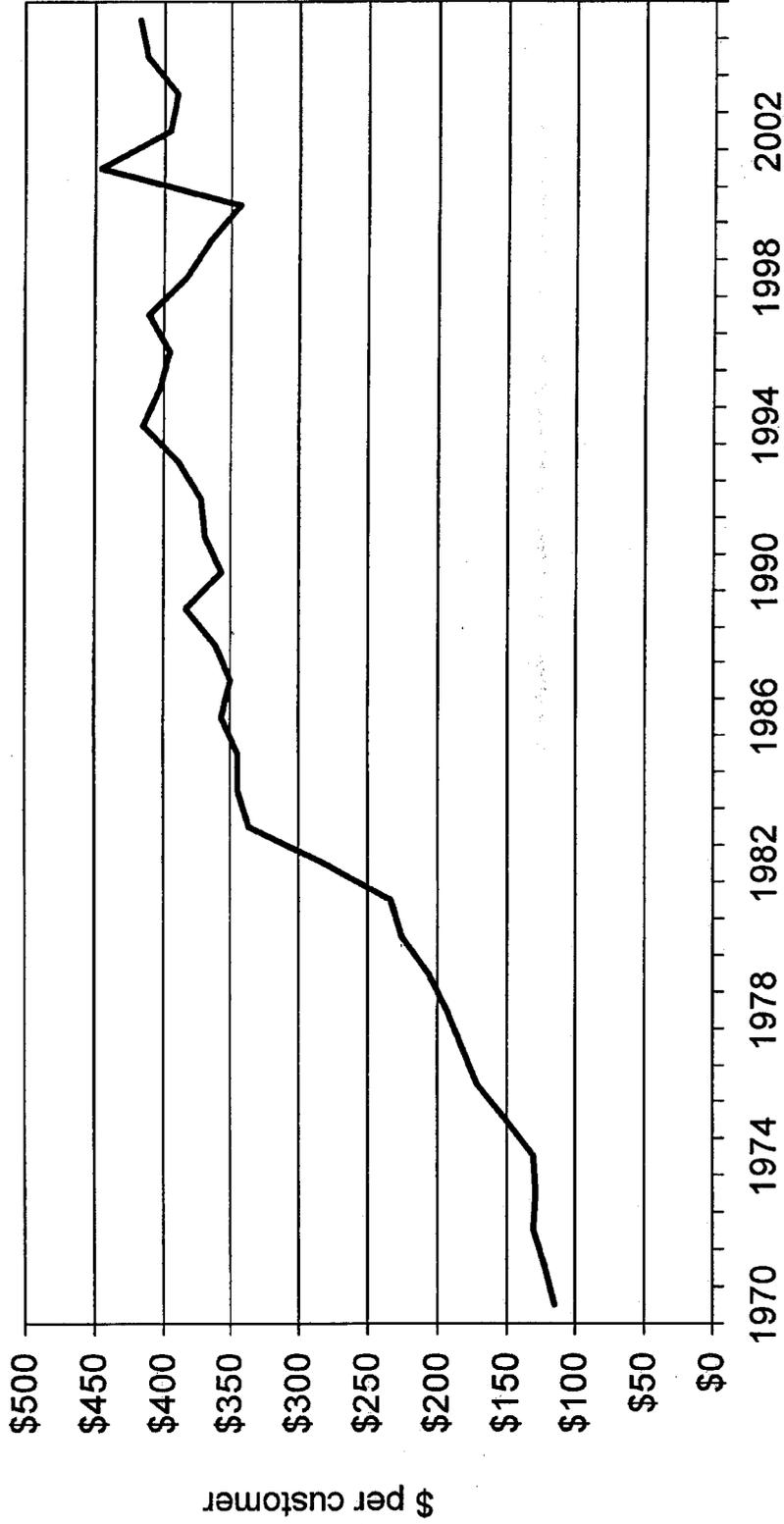
**Retail prices have increased significantly since 2000-2001.**



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



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





**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
<u>Return on Equity</u> 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?**

**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.

**Incremental Impact of DSM Implementation  
on Shareholders, Wild West Utility**

	Change in Revenue			Income Impact			Shareholders Equity	Impact on ROE
	Use per Customer	DSM	New Customers	Use per Customer	DSM	New Customers		
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%
<b>Total</b>	<b>\$(9,362,220)</b>	<b>\$(1,841,015)</b>	<b>\$19,657,399</b>	<b>\$(5,799,549)</b>	<b>\$(1,140,440)</b>	<b>\$12,177,031</b>	<b>\$5,237,041.80</b>	<b>1.61%</b>



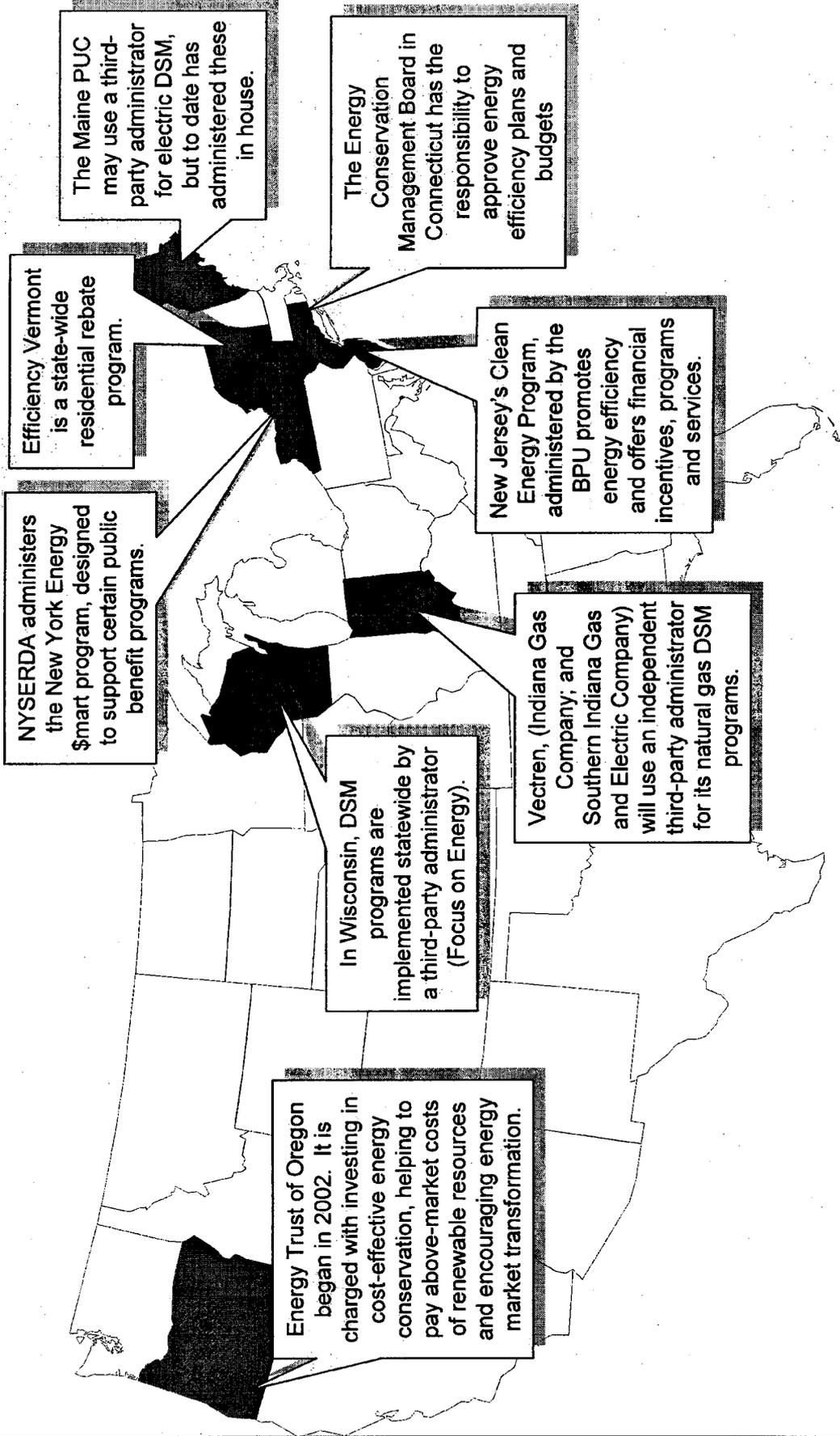
**Exaggerated  
Example**

- 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.

- 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."*

## States with Third-Party Administrators



- **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.



Questions, Comments, & Discussion

[dismukes@lsu.edu](mailto:dismukes@lsu.edu)

[www.enrg.lsu.edu](http://www.enrg.lsu.edu)

**SOUTHWEST GAS CORPORATION**

**DOCKET NO. G-01551A-07-0504**

**DIRECT  
RATE DESIGN TESTIMONY**

**OF**

**RODNEY L. MOORE**

**ON BEHALF OF**

**THE**

**RESIDENTIAL UTILITY CONSUMER OFFICE**

**April 11, 2008**

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1		
2	INTRODUCTION.....	1
3	RATE DESIGN.....	2
4	PROOF OF RECOMMENDED REVENUE .....	3
5	TYPICAL BILL ANALYSIS .....	3

1 **INTRODUCTION**

2 Q. Please state your name, position, employer and address.

3 A. Rodney L. Moore, Public Utilities Analyst V

4 Residential Utility Consumer Office ("RUCO")

5 1110 West Washington Street, Suite 220

6 Phoenix, Arizona 85007.

7

8 Q. Have you previously filed testimony regarding this docket?

9 A. Yes, I have. I filed direct testimony in this docket on March 28, 2008.

10

11 Q. What is the purpose of your additional direct testimony?

12 A. My additional direct testimony will address RUCO's rate design and prove  
13 that this rate design will produce RUCO's recommended revenue. Also I  
14 have included an analysis of a typical residential bill.

15

16 To support RUCO's position in this additional direct testimony, I have  
17 prepared Schedules numbered RLM-19 and RLM-20.

18

19

20

21

22

23

1 **RATE DESIGN**

2 Q. Please explain your contribution to RUCO's recommended rate designs.

3 A. As shown on Schedule RLM-19, I was responsible for producing an  
4 accurate set of bill determinants (i.e. test-year customer bill counts and  
5 therms consumed). After reviewing the Company's workpapers, I  
6 accepted SWG's bill determinants as adjusted for weather normalization  
7 and customer annualization. An in-depth discussion of RUCO's proposed  
8 rate design is contained in the testimony of RUCO witness, William  
9 Rigsby. In summary, for residential customers, RUCO proposes a  
10 monthly basic service charge of \$11.50 and a commodity charge of  
11 \$0.08803 for all therms consumed.

12

13 Q. Please explain elements of the rate design.

14 A. Schedule RLM-19 illustrates the elements of RUCO's rate design  
15 proposed by Mr. Rigsby in his testimony, which are:

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

19 2. Is consistent with the Company's Cost of Service Study  
20 parameters;

21 3. Eliminates the two-tier volumetric rates to send appropriate price  
22 signals regarding gas conservation; and

23

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

3

4     **PROOF OF RECOMMENDED REVENUE**

5     Q.     Have you prepared a Schedule presenting proof of your recommended  
6             revenue?

7     A.     Yes, I have. Proof that RUCO's recommended rate design will produce  
8             the recommended required revenue as illustrated, is presented on  
9             Schedule RLM-19.

10

11     **TYPICAL BILL ANALYSIS**

12     Q.     Have you prepared a Schedule representing the financial impact of  
13             RUCO's recommended rate design on the typical residential customer?

14     A.     Yes, I have. A typical bill analysis for residential customers with various  
15             levels of usage is presented on Schedule RLM-20.

16

17     Q.     Please provide an excerpt of RUCO's rate structure that illustrates  
18             RUCO's rate design goals as set forth in the testimony of Mr. Rigsby that  
19             captures these fundamental changes in SWG's current rate design.

20     A.     Schedule RLM-20 provides an extensive breakdown of the effects of  
21             RUCO's proposed rates on the G-5 Residential Customer. Below is a  
22             chart gleaned from Schedule RLM-19 comparing SWG's proposed rates  
23             to RUCO's proposed annual rates:

1	<u>SWG Proposed Rates and Charges</u>		
2	Basic Monthly Service Charge		\$12.80
3	Non-Weather Sensitive Use – Charge Per Therm		
4	Margin (Non-Gas Costs)	PGA (Gas Costs)	Total Gas Costs
5	\$0.88069	\$0.60996	\$1.49065
6	Weather Sensitive Use – Charge Per Therm		
7	Margin (Non-Gas Costs)	PGA (Gas Costs)	Total Gas Costs
8	\$0.00	\$1.49065	\$1.49065
9			
10	<u>RUCO Proposed Rates and Charges</u>		
11	Basic Monthly Service Charge		\$11.50
12	All Consumption – Charge Per Therm		
13	Margin (Non-Gas Costs)	PGA (Gas Costs)	Total Gas Costs
14	\$0.880298	\$0.60996	\$1.49026
15			

- 16 Q. Does this conclude your direct testimony?
- 17 A. Yes, it does.



RATE DESIGN AND PROOF OF RECOMMENDED REVENUE

LINE NO.	DESCRIPTION	(A) PROPOSED SCHEDULE NO.	(B) ADJUSTED BILLING NUMBER OF BILLS	(C) BILLING DETERMINANT: SALES (THERMS)	(D) PROPOSED BASIC SERVICE CHARGE	(E) PROPOSED MARGIN RATES		(F) BASIC SERVICE CHARGE	(G) MARGIN AT PROPOSED RATES		(H) TOTAL MARGIN	(I) REVENUE AT PROPOSED RATES		(J) TOTAL REVENUE
						BASIC SERVICE CHARGE	COMMODITY CHARGE		BASIC SERVICE CHARGE	COMMODITY CHARGE		GAS COST	REVENUE	
<b>G-6</b>														
	Multi-Family Residential Gas Service													
	Summer (May - October)		182,409		\$ 9.00		\$ 1,641,681		\$ 1,641,681		\$ 1,641,681		\$ 1,641,681	
26	Basic Service Charge per Month			1,044,432	\$ 0.88030	\$ 919,411	\$ 637,062	\$ 919,411	\$ 637,062		\$ 1,416,125		\$ 1,416,125	
27	Commodity Charge per Therm			950,005	\$ 0.00000									
28	First 7 Therms													
	Over 7 Therms													
29	Winter (November - April)		188,153		\$ 9.00		\$ 1,693,377		\$ 1,693,377		\$ 1,693,377		\$ 1,693,377	
	Basic Service Charge per Month													
30	Commodity Charge per Therm			2,633,090	\$ 0.88030	\$ 2,317,904	\$ 1,606,080	\$ 2,317,904	\$ 1,606,080		\$ 3,923,984		\$ 3,923,984	
31	First 18 Therms			1,880,532	\$ -		\$ 2,803,214		\$ 2,803,214		\$ 2,803,214		\$ 2,803,214	
	Over 18 Therms													
32	Total Multi-Family Residential Gas Service		370,562	6,508,059		\$ 3,335,056	\$ 6,462,481	\$ 3,335,056	\$ 6,462,481		\$ 13,034,854		\$ 13,034,854	
33	Ratio Of Fixed To Variable Revenues					50.74%		49.26%						
<b>G-11</b>														
	Low Income Multi-Family Residential Gas Svc													
	Summer (May - October)		13,560		\$ 7.25		\$ 98,310		\$ 98,310		\$ 98,310		\$ 98,310	
34	Basic Service Charge per Month													
35	Commodity Charge per Therm			79,822	\$ 0.88030	\$ 70,267	\$ 39,157	\$ 70,267	\$ 39,157		\$ 109,424		\$ 109,424	
36	First 7 Therms			78,071	\$ 0.00000		\$ 107,054		\$ 107,054		\$ 107,054		\$ 107,054	
	Over 7 Therms													
37	Winter (November - April)		13,828		\$ 7.25		\$ 100,253		\$ 100,253		\$ 100,253		\$ 100,253	
	Basic Service Charge per Month													
38	Commodity Charge per Therm			207,982	\$ 0.88030	\$ 183,086	\$ 102,026	\$ 183,086	\$ 102,026		\$ 285,112		\$ 285,112	
39	First 18 Therms			186,423	\$ -		\$ 255,630		\$ 255,630		\$ 255,630		\$ 255,630	
	Next 132 Therms				\$ -		\$ 473		\$ 473		\$ 473		\$ 473	
40	Over 150 Therms				\$ -		\$ 473		\$ 473		\$ 473		\$ 473	
41	Total Low Income Multi-Family Residential Gas Service		27,388	562,643		\$ 198,563	\$ 504,340	\$ 198,563	\$ 504,340		\$ 956,256		\$ 956,256	
42	Ratio Of Fixed To Variable Revenues					43.94%		56.06%						
<b>G-20</b>														
	Total Residential Gas Service		11,008,182	304,917,309		\$ 124,225,042	\$ 284,571,555	\$ 124,225,042	\$ 284,571,555		\$ 577,573,554		\$ 577,573,554	
	Ratio Of Fixed To Variable Revenues					42.40%		57.60%						
<b>G-25(S)</b>														
	Master Metered Mobile Home Park Gas Service		1,968		\$ 60.00		\$ 118,080		\$ 118,080		\$ 118,080		\$ 118,080	
44	Basic Service Charge per Month													
45	Commodity Charge per Therm All Usage			2,223,993	\$ 0.39476	\$ 877,950	\$ 2,083,637	\$ 877,950	\$ 2,083,637		\$ 2,961,587		\$ 2,961,587	
46	All Usage		1,968	2,223,993	\$ -	\$ 118,080	\$ 4,647,246	\$ 118,080	\$ 4,647,246		\$ 4,647,246		\$ 4,647,246	
	Total MMMHP Gas Service					\$ 118,080	\$ 4,647,246	\$ 118,080	\$ 4,647,246		\$ 4,647,246		\$ 4,647,246	
	Ratio Of Fixed To Variable Revenues					11.86%		88.14%						
<b>G-25(S)</b>														
	General Gas Service - Small		201,805		\$ 25.00		\$ 5,045,125		\$ 5,045,125		\$ 5,045,125		\$ 5,045,125	
	Basic Service Charge Per Month													
47	Commodity Charge per Therm All Usage			10,138	\$ 0.68117	\$ 6,906	\$ 8,288	\$ 6,906	\$ 8,288		\$ 15,194		\$ 15,194	
48	Transportation Customers			5,010,616	\$ 0.68117	\$ 3,413,058	\$ 4,647,246	\$ 3,413,058	\$ 4,647,246		\$ 8,060,314		\$ 8,060,314	
49	Sales Customers			5,020,754	\$ -	\$ 3,419,974	\$ 8,465,534	\$ 3,419,974	\$ 8,465,534		\$ 13,120,633		\$ 13,120,633	
50	Total Small General Gas Service		201,805	5,020,754		\$ 5,045,125	\$ 13,120,633	\$ 5,045,125	\$ 13,120,633		\$ 13,120,633		\$ 13,120,633	
51	Ratio Of Fixed To Variable Revenues					59.60%		40.40%						

RATE DESIGN AND PROOF OF RECOMMENDED REVENUE

LINE NO.	DESCRIPTION	(A) PROPOSED SCHEDULE NO.	(B) ADJUSTED BILLING DETERMINANT: NUMBER OF BILLS (THERMS)	(C) PROPOSED MARGIN RATES: BASIC SERVICE CHARGE	(D) MARGIN AT PROPOSED RATES: COMMODITY CHARGE	(E) TOTAL MARGIN	(F) REVENUE AT PROPOSED RATES: GAS COST	(G) TOTAL REVENUE
52	General Gas Service - Medium	G-25(M)	193,790	\$	\$ 41.59	\$ 8,060,078	\$	\$ 8,060,078
53	Basic Service Charge							
54	Commodity Charge per Therm All Usage		172,365	\$ 0.39190	\$ 67,550	\$ 140,905.00	\$ 208,455	
55	Transportation Customers		45,357,904	\$ 0.39190	\$ 17,775,765	\$ 42,088,549	\$ 59,844,314	
56	Sales Customers		45,530,289		\$ 17,843,315	\$ 42,209,454	\$ 88,112,847	
	Total Medium General Gas Service				31.12%			
	Ratio Of Fixed To Variable Revenues				68.88%			
57	General Gas Service - Large	G-25(L)	85,510	\$	\$ 152.98	\$ 13,081,438	\$	\$ 13,081,438
58	Basic Service Charge							
59	Commodity Charge per Therm All Usage							
60	Transportation Customers		3,556,829	\$ 0.27578	\$ 980,894	\$ 2,907,637.00	\$ 3,886,531	
61	Sales Customers		145,666,025	\$ 0.27578	\$ 40,171,430	\$ 135,102,325	\$ 175,273,755	
	Total Large General Gas Service		85,510		\$ 13,081,438	\$ 54,233,762	\$ 192,243,724	
	Ratio Of Fixed To Variable Revenues				24.12%			
	Ratio Of Fixed To Variable Revenues				75.88%			
	General Gas Service - Transportation Eligible	G-25(TE)						
62	Basic Service Charge							
63	Demand Charge per Month		2,222	\$	\$ 908.33	\$ 2,018,303	\$ 2,018,303	
	Commodity Charge per Therm All Usage							
	Transportation Customers							
64	Sales Customers		32,517,415	\$ 0.09468	\$ 3,078,630	\$ 3,078,630	\$ 26,562,336	
65	Total Transportation Eligible General Gas Service		67,008,985	\$ 0.09468	\$ 6,344,166	\$ 62,149,493	\$ 66,493,659	
66	Ratio Of Fixed To Variable Revenues		2,222		\$ 2,018,303	\$ 20,863,847	\$ 86,731,829	
67	Ratio Of Fixed To Variable Revenues				9.67%			
68	Total General Gas Service		483,327		81,251,157	109,466,101	273,606,779	383,072,880
69	Ratio Of Fixed To Variable Revenues				25.77%			
	Air Conditioning Gas Service	G-40						
70	Basic Service Charge							
71	With Other Service - No BSC		60	\$	\$ 0.00	\$	\$	
72	General Service - Small		188		25.00	4,950	4,950	
73	General Service - Medium		0		41.59	7,343	7,343	
74	General Service - Large		48		152.98	7,343	7,343	
	Essential Agricultural		12		908.33	10,900	10,900	
75	Commodity Charge per Therm All Usage							
76	Transportation Customers		373,987	\$ 0.09076	\$ 33,944	\$ 33,944	\$ 305,727	
77	Sales Customers		744,265	\$ 0.09076	\$ 67,552	\$ 67,552	\$ 690,291	
78	Total Air Conditioning Gas Service		318		23,183	124,689	996,018	
	Ratio Of Fixed To Variable Revenues				18.60%			
	Ratio Of Fixed To Variable Revenues				81.40%			
	Street Lighting Gas Service	G-45						
79	Commodity Charge per Therm							
80	of Rated Capacity		324	\$	\$ 68,363	\$ 68,363	\$ 94,871	
	All Usage		324		68,363	68,363	94,871	
81	Total Street Lighting Gas Service			\$	\$ 68,363	\$ 68,363	\$ 94,871	
	Ratio Of Fixed To Variable Revenues				100.00%			
	Ratio Of Fixed To Variable Revenues				0.00%			

RATE DESIGN AND PROOF OF RECOMMENDED REVENUE

LINE NO.	DESCRIPTION	(A) PROPOSED SCHEDULE NO.	(B) ADJUSTED BILLING DETERMINANT: NUMBER OF BILLS	(C) SALES (THERMS)	(D) PROPOSED MARGIN RATES: BASIC SERVICE CHARGE	(E) COMMODITY CHARGE	(F) MARGIN AT PROPOSED RATES: BASIC SERVICE CHARGE	(G) COMMODITY CHARGE	(H) TOTAL MARGIN	(I) REVENUE AT PROPOSED RATES: GAS COST	(J) TOTAL REVENUE
<b>Gas Service for Compression on Customers' Premises</b>											
<b>G-55</b>											
	Basic Service Charge				\$		\$		\$		\$
82	Small		252		25.00		6,300		6,300		6,300
83	Large		288		239.03		68,842		68,842		68,842
84	Residential		1,272		11.50		14,627		14,627		14,627
85	Commodity Charge per Therm All Usage Transportation Customers		0			\$ 0.16793	\$		\$		\$
86	Sales Customers										
87	Small			177,495		\$ 0.16793	29,807		29,807	164,623	194,430
88	Large			2,060,152		\$ 0.16793	345,960		345,960	1,910,750	2,256,710
89	Residential			77,361		\$ 0.16793	12,991		12,991	71,751	84,742
90	Total CNG Gas Service		1,812	2,315,008			89,769		478,527	2,147,124	2,625,651
	Ratio Of Fixed To Variable Revenues						18.76%		81.24%		
<b>Electric Generation Gas Service</b>											
<b>G-60</b>											
	Basic Service Charge				\$		\$		\$		\$
91	General Service - Small		36		25.00		900		900		900
92	General Service - Medium		36		41.59		1,497		1,497		1,497
93	General Service - Large		84		152.88		12,850		12,850		12,850
94	General Service - Transportation Eligible		84				0		0		0
95	Essential Agricultural		12		114.74		1,377		1,377		1,377
96	Commodity Charge per Therm All Usage Transportation Customers					\$ 0.11820	\$		\$		\$
97	Sales Customers			21,521,946		\$ 0.11820	2,544,000		2,544,000	19,961,174	22,505,174
98	Total Electric Generation Gas Service		252	21,521,946			16,624		2,560,624	19,961,174	22,521,798
99	Ratio Of Fixed To Variable Revenues						0.85%		99.35%		
<b>Essential Agriculture User Gas Service</b>											
<b>G-75</b>											
	Basic Service Charge				\$		\$		\$		\$
100	Commodity Charge per Therm All Usage Transportation Customers		1,216		114.74		139,519		139,519		139,519
101	Sales Customers			6,217,976		\$ 0.22311	1,387,316		1,387,316	5,083,071.00	6,470,387
102	Total Essential Agricultural Gas Service		1,216	7,214,684			1,609,695		1,609,695	6,691,475	8,301,170
103	Ratio Of Fixed To Variable Revenues			13,432,660			139,519		3,136,530	11,774,546	14,911,076
104							4.45%		95.55%		
<b>Natural Gas Engine Gas Service</b>											
<b>G-80</b>											
	Basic Service Charge				\$		\$		\$		\$
105	Off-Peak Season (Oct. - March)		2,516		0.00						
106	Peak Season (April - September)		2,589		119.52		309,429		309,429		309,429
107	Commodity Charge per Therm All Usage Transportation Customers					\$ 0.17924	\$		\$		\$
108	Sales Customers			13,070,981		\$ 0.17924	2,342,801		2,342,801	9,591,355	11,934,156
109	Total Natural Gas Engine Gas Service		5,105	13,070,981			309,429		2,652,230	9,591,355	12,243,585
110	Ratio Of Fixed To Variable Revenues						11.67%		88.33%		
<b>Total Tariff Sales</b>											
111	Optional Gas Service		11,502,504	658,002,715		\$ 153,126,800	\$ 259,358,493		\$ 412,485,093	\$ 604,827,059	\$ 1,017,312,152
112	Special Contract Service		84	49,447,344		120,940	3,136,458		3,255,988	40,422,215	43,678,213
113	Other Operating Revenues		244	35,660,859		449,274	2,078,755		2,528,029	2,528,029	2,528,029
114	Total		11,502,832	743,110,918		\$ 165,958,219	\$ 284,572,707		\$ 430,530,926	\$ 645,249,274	\$ 1,075,780,200
115	Ratio Of Fixed To Variable Revenues						38.55%		61.45%		
116	Total Revenue Requirement								\$ 430,530,964	\$ 645,249,274	\$ 1,075,780,237
117	Over/(Under)								(37)		(37)

**SINGLE - FAMILY RESIDENTIAL TYPICAL BILL ANALYSIS  
COMPARISON OF PRESENT MONTHLY CHARGES TO COMPANY PROPOSED AND RUCO PROPOSED**

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)	(E)	(F)
		USAGE THERMS	TOTAL MONTHLY COST PRESENT RATES	TOTAL MONTHLY COST COMPANY PROPOSED	TOTAL MONTHLY COST RUCO PROPOSED	RUCO INCREASE OVER PRESENT CHANGE	PERCENTAGE
<u>Single-Family Residential Gas Service</u>							
<u>Summer (May - October)</u>							
1	50% Average Summer Usage per Month	6	\$ 18.97	\$ 22.15	\$ 20.84	\$ 1.87	9.86%
2	75% Average Summer Usage per Month	9	\$ 23.61	\$ 26.82	\$ 25.52	\$ 1.91	8.07%
3	<b>100% Average Monthly Summer Use</b>	<b>13</b>	<b>\$ 28.25</b>	<b>\$ 31.49</b>	<b>\$ 30.19</b>	<b>\$ 1.94</b>	<b>6.88%</b>
4	125% Average Summer Usage per Month	16	\$ 32.86	\$ 36.17	\$ 34.86	\$ 2.01	6.10%
5	150% Average Summer Usage per Month	19	\$ 37.36	\$ 40.84	\$ 39.53	\$ 2.17	5.81%
<u>Winter (November - April)</u>							
6	50% Average Winter Usage per Month	22	\$ 41.76	\$ 45.11	\$ 43.80	\$ 2.05	4.90%
7	75% Average Winter Usage per Month	33	\$ 57.78	\$ 61.27	\$ 59.95	\$ 2.17	3.75%
8	<b>100% Average Monthly Winter Use</b>	<b>43</b>	<b>\$ 73.47</b>	<b>\$ 77.42</b>	<b>\$ 76.10</b>	<b>\$ 2.63</b>	<b>3.59%</b>
9	125% Average Winter Usage per Month	54	\$ 89.05	\$ 93.58	\$ 92.26	\$ 3.20	3.60%
10	150% Average Winter Usage per Month	65	\$ 104.64	\$ 109.73	\$ 108.41	\$ 3.77	3.60%

**RATE SCHEDULES**

DESCRIPTION	BASIC SERVICE CHARGE	NON-GAS COSTS	GAS COST	TOTAL GAS COST
<b>PRESENT RATES</b>				
<u>Single-Family Residential Gas Service</u>				
<u>Summer (May - October)</u>				
11	Basic Service Charge per Month	\$ 9.70		
12	Commodity Charge per Therm			
13	First 15 Therms	\$ 0.54200	\$ 0.93689	\$ 1.47889
13	Over 15 Therms	\$ 0.50100	\$ 0.93689	\$ 1.43789
<u>Winter (November - April)</u>				
14	Basic Service Charge per Month	\$ 9.70		
15	Commodity Charge per Therm			
16	First 35 Therms	\$ 0.54200	\$ 0.93689	\$ 1.47889
16	Over 35 Therms	\$ 0.50100	\$ 0.93689	\$ 1.43789
<b>COMPANY PROPOSED RATES</b>				
<u>Single-Family Residential Gas Service</u>				
<u>All Year Around And All Usage</u>				
17	Basic Service Charge per Month	\$ 12.80		
18	Non- Weather Sensitive Use - Commodity Charge per Therm	\$ 0.88069	\$ 0.60996	\$ 1.49065
19	Weather Sensitive Use - Commodity Charge per Therm	\$ -	\$ 1.49065	\$ 1.49065
<b>RUCO PROPOSED RATES</b>				
<u>Single-Family Residential Gas Service</u>				
<u>All Year Around And All Usage</u>				
20	Basic Service Charge per Month	\$ 11.50		
21	Commodity Charge per Therm	\$ 0.880298	\$ 0.60996	\$ 1.49026