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BEFORE THE ARIZONA CORPORATION COMMISSION

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Arizona Corporation Commission

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COMMISSIONERS

- GARY PIERCE, Chairman
- BOB STUMP
- SANDRA D. KENNEDY
- PAUL NEWMAN
- BRENDA BURNS

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 ITS PROPERTIES
 THROUGHOUT ARIZONA.

Docket No. G-01551A-10-0458

**NOTICE OF FILING
TESTIMONY**

GALLAGHER & KENNEDY, P.A.
 2575 E. CAMELBACK ROAD
 PHOENIX, ARIZONA 85016-9225
 (602) 530-8000

Pursuant to the requirements of the July 22, 2011 Procedural Order, on behalf of the
 Arizona Investment Council ("AIC"), attached are:

- The Direct Testimony of AIC President, Gary Yaquinto, in Support of the Settlement Agreement; and
- The Direct Testimony of Daniel G. Hansen, Ph.D. in Support of the Settlement Agreement.

RESPECTFULLY SUBMITTED this 29th day of July, 2011.

GALLAGHER & KENNEDY, P.A.

By Michael M. Grant

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 Attorneys for Arizona Investment Council

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1 **Original and 13 copies** filed this
29th day of July, 2011, with:

2 Docket Control
3 Arizona Corporation Commission
1200 West Washington Street
4 Phoenix, Arizona 85007

5 **Copies** of the foregoing mailed/delivered
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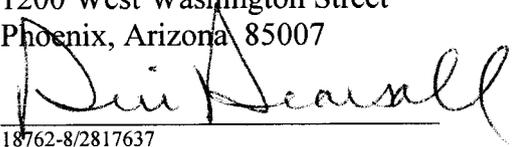
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BEFORE THE ARIZONA CORPORATION COMMISSION

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Docket No. G-01551A-10-0458

Direct Testimony of

Gary Yaquinto

in Support of the Settlement Agreement

on Behalf of

Arizona Investment Council

July 29, 2011

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1 **1. INTRODUCTION**

2 **Q. Please state your name, position and business address.**

3 A. Gary M. Yaquinto. I am the President of the Arizona Investment Council ("AIC"). Our
4 offices are located at 2100 North Central Avenue, Phoenix, Arizona 85004.

5
6 **Q. Please summarize your educational background and professional experience.**

7 A. I earned B.S. and M.S. Degrees in Economics in 1974 from Arizona State University. In
8 2005, I received an MBA from the University of Phoenix. From 1975 to 1977, I was
9 employed by the State of Wyoming as an economist responsible for evaluating the
10 economic, fiscal and demographic effects of resource development in Wyoming. From
11 1977 to 1980, I was Chief Research Economist for the Arizona House of Representatives.
12 From 1980 to 1984, I was employed as an economist in the consulting industry. Since
13 1984, I have worked in various capacities in government and the private sector in the area
14 of utility regulation, including positions with the Utilities Division Staff of the Arizona
15 Corporation Commission, a competitive local exchange telephone carrier and as a
16 consultant. I have also served as the Chief Economist at the Arizona Attorney General's
17 Office (2003-2005) and as the Director, Office of Strategic Planning and Budgeting,
18 under Governor Janet Napolitano (2005-2006). I became the AIC President in December
19 of 2006.

20
21 **Q. What is the Arizona Investment Council and what is its mission?**

22 A. The AIC is a non-profit association organized under Chapter 501(c)(6) of the Internal
23 Revenue Code. AIC's membership includes approximately 6,000 individuals—many of

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whom are debt and equity investors in Arizona utility companies and other Arizona businesses.

AIC's mission is to advocate on behalf of its members' interests before regulatory and legislative bodies. AIC also works with business leadership, policymakers, community leaders and educators to improve the investment climate in Arizona and to support the planning for and development of essential infrastructure to meet the needs of Arizona.

Q. What is the Arizona Investment Council's interest in this docket?

A. Southwest Gas Corporation ("Southwest Gas" or the "Company") must be positioned to attract capital on reasonable terms so that it can provide safe, reliable and adequate natural gas service to its customers while also maintaining its financial integrity. As the Company indicated in its Application and Direct Testimony filed with the Commission on November 12, 2010, its need for this rate increase primarily stems from declines in customer consumption and changes in the Company's cost of capital. A related and very important issue in this docket is Southwest Gas's decoupling proposal, which AIC views as a vital component in achieving the Commission's Energy Efficiency Standards ("EES") without depriving the Company of a realistic opportunity to recover its costs and earn a fair return. Both the Company's Application and the Settlement Agreement contain proposed rates and cost recovery mechanisms that AIC believes are fair, reasonable and in the public interest.

1 **2. SETTLEMENT AGREEMENT**

2 **Q. Is AIC a signatory to the Settlement Agreement dated July 15, 2011 (the “Settlement**
3 **Agreement”)?**

4 A. Yes. We participated with the other signatories in the discussions and negotiations which
5 led to the execution of the Settlement Agreement by all but one of the intervenors in this
6 case. I also participated in the meetings arranged by Southwest Gas to discuss technical
7 aspects of the Company’s Energy Efficiency Enabling Provision with parties to this
8 docket.

9
10 **Q. Generally, why does AIC support the Settlement Agreement?**

11 A. The primary reason for AIC’s support is the Settlement Agreement’s inclusion of a
12 decoupling mechanism. As explained by Staff witness David Parcell, Southwest Gas’s
13 debt rating was recently upgraded in response to the approval of a decoupling mechanism
14 by the Public Utilities Commission of Nevada, as well as the anticipation that decoupling
15 might also be approved by this Commission:

16 The rating upgrade also recognizes signs of improvements in
17 Southwest’s regulatory environment where we remain cautiously
18 optimistic about... potentially Arizona (55% of operating margins).¹

18 An upgrade in rating is significant for the Company, its investors and its customers,
19 because it generally leads to decreases in the costs of debt and an improvement in
20 investor confidence. Without decoupling, Southwest Gas will be viewed as less
21 financially stable and an inherently riskier investment by rating agencies, lenders and the
22

23 _____
24 ¹ Direct Testimony of David Parcell, p. 15, quoting Moody’s May 27, 2010 upgrade report.

1 investment community, because the Company's ability to earn a fair rate of return and,
2 specifically, to recover its fixed costs, will be subject to volumetric risks.²
3

4 **Q. How does the Company's good credit rating benefit customers?**

5 A. A lower cost of debt and improved access to capital—which are the byproducts of a
6 favorable rating—benefit customers in the form of lower rates. They also help assure
7 that Southwest Gas is better positioned to compete with other utilities and industries for
8 the capital needed to get safe, reliable and adequate service to customers. Given the link
9 between decoupling and the Company's credit rating, customers will benefit from the
10 Commission's approval of a decoupling mechanism.
11

12 **Q. The Settlement Agreement contains an Alternative A and Alternative B. Does AIC
13 have a preference as to which alternative the Commission approves?**

14 A. Yes. AIC supports the Decoupling mechanism contained in Alternative B and does not
15 oppose Alternative A's Lost Fixed Cost Recovery mechanism. AIC does prefer
16 Alternative B, because we believe it is the much better option for the Company, its
17 investors and its customers. Additionally, in considering the alternatives presented in the
18 Settlement Agreement, AIC strongly urges the Commission to adopt one of the
19 alternatives (preferably Alternative B) in its *entirety*. Each alternative was crafted
20 through a very careful and comprehensive negotiation process, such that the exclusion of
21 any particular term from one of the alternatives would undermine the signatories' efforts
22 and the compromises reached during the negotiations.
23

24 ² See Direct Testimony of Theodore Wood, p. 7, l. 14 – p. 8, l. 4.

1 **Q. Why does AIC prefer Alternative B?**

2 A. Many of the reasons for AIC's support for Alternative B are described by our witness,
3 Dan Hansen, in his concurrently-filed testimony. Simply put, AIC prefers Alternative B,
4 because it is a better, more complete solution for addressing many of the impediments to
5 achieving the EES as outlined in the Commission's December 29, 2010 Policy Statement.
6 Also, from an investor perspective, the rate case moratorium provision combined with the
7 decoupling in Alternative B reduces rate case cost and frequency and also reduces
8 regulatory uncertainty—all of which are viewed favorably by the market.

9
10 **Q. Are there any other aspects of the Settlement Agreement that AIC wants to**
11 **highlight?**

12 A. Yes. Section 1.8 of the Settlement Agreement outlines many customer and shareholder
13 benefits, but there are a few provisions—in addition to AIC's preference for
14 Alternative B's decoupling—that warrant particular attention. Although AIC believes the
15 Company has done a good job of controlling costs, the Settlement Agreement requires
16 Southwest Gas to further reduce annual expenses by an average of \$2.5 million per year
17 beginning in 2012. Southwest Gas's commitment to this level of additional cost
18 reduction is commendable and benefits both shareholders and customers.

19
20 Additionally, in the interest of compromise and to reach settlement of the case, the parties
21 agreed to commit \$1 million of shareholder funds to finance a weatherization program for
22 low-income customers. While shareholders are not usually called upon to fund such
23

1 programs, AIC agrees with low-income advocates and others that improved home
2 insulation and other weatherization enhancements will create substantial benefits.

3
4 Finally, the fact that the Settlement Agreement was signed and is supported by a broad
5 array of parties with differing interests is also a very positive signal to the markets
6 concerning the Company, its regulators, customers and stakeholder groups.

7
8 **3. RECOMMENDATION**

9 **Q. Mr. Yaquinto, what is AIC's recommendation for the Commission in relation to the**
10 **Settlement Agreement?**

11 A. The Settlement Agreement reflects an appropriate, productive balance among the often
12 widely divergent views of the parties on a broad and challenging set of issues. In
13 reaching that accord, we are confident that the Settlement Agreement, and especially its
14 Alternative B, is in the best interest of all concerned. It is also very responsive to the
15 Commission's Policy Statement on decoupling. It will give the Company a reasonable
16 opportunity to recover its fixed costs and earn its authorized rate of return as,
17 simultaneously, it meets the reduction in sales volumes required by the Commission's
18 EES and the Settlement Agreement. We recommend the Commission enter its Order
19 approving the Settlement Agreement with the inclusion of Alternative B in its entirety.

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1 **Q. Does that conclude your testimony?**

2 A. Yes, it does.

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DOCKET NO. G-01551A-10-0458

Direct Testimony of

Daniel G. Hansen, Ph.D.

in Support of the Settlement Agreement

on Behalf of

Arizona Investment Council

July 29, 2011

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RECOMMENDATIONS 21

1 **1. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND ADDRESS.**

3 A. My name is Daniel G. Hansen. My business address is 800 University Bay Drive,
4 Suite 400, Madison, Wisconsin 53705.

5
6 **Q. WHAT IS YOUR PROFESSION AND BACKGROUND?**

7 A. I am a Vice President at Laurits R. Christensen Associates, Inc. I received a Ph.D. in
8 Economics from Michigan State University in 1997, at which time I joined Laurits R.
9 Christensen Associates, Inc. I have worked primarily with and for regulators, intervenors
10 and the energy industry during my 14 years of consulting experience. In recent years, I
11 have, on several occasions, analyzed and testified on some of the key issues raised in this
12 docket. Specifically, in 2005, I conducted independent evaluations of Northwest Natural
13 Gas's decoupling and weather normalization mechanisms in Oregon, as required by that
14 Commission's orders approving the mechanisms. In 2007, I provided testimony on
15 behalf of the Utah Division of Public Utilities regarding Questar Gas Company's
16 decoupling mechanism. On behalf of Environment Northeast (a non-profit
17 environmental organization), I provided testimony regarding a decoupling mechanism
18 proposed by Connecticut Light & Power and also served on a panel before the
19 Massachusetts Department of Public Utilities to discuss the merits of decoupling
20 mechanisms (Docket No. 07-50). In 2009, I conducted an independent evaluation of
21 decoupling mechanisms in place at New Jersey Natural Gas and South Jersey Gas. My
22 resume is attached hereto as DGH-1.

23

24

1 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

2 A. The Arizona Investment Council (“AIC”) has retained Christensen Associates Energy
3 Consulting, LLC, a subsidiary of Laurits R. Christensen Associates, Inc., to provide
4 testimony regarding Alternatives A and B which are described on pages 6 to 14 of the
5 Proposed Settlement Agreement (the “Settlement Agreement”), which was executed on
6 July 15, 2011 by AIC, Southwest Gas Corporation (“Southwest Gas” or the “Company”),
7 this Commission’s Utilities Division Staff and other parties to this docket. AIC’s
8 position is that, while it can support the adoption of either Alternative A or B, it considers
9 Alternative B to be a much superior result with several advantages over Alternative A.
10 My testimony will explain why.

11
12 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

13 A. Following this introductory section, the testimony is organized as follows:

- 14 • Section 2: Identification of the key differences between the alternatives;
- 15 • Section 3: Description of the reasons that Alternative B is superior to
16 Alternative A;
- 17 • Section 4: Summary of the customer protections included in Alternative B; and
- 18 • Section 5: Summary of my recommendations.

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1 **2. KEY DIFFERENCES BETWEEN ALTERNATIVES A AND B**

2 **Q. WHAT IS THE MOST SIGNIFICANT DIFFERENCE BETWEEN**
3 **ALTERNATIVES A AND B?**

4 A. Alternative A contains a Lost Fixed Cost Recovery (“LFCR”) mechanism, which
5 compensates the Company only for lost revenues specifically linked to programs and
6 measures designed to meet the Commission’s required annual energy savings. In
7 contrast, Alternative B contains a revenue per customer decoupling (“Decoupling”)
8 mechanism that adjusts rates to account for deviations between allowed and actual
9 revenue per customer, even if the deviation cannot be directly tied to savings associated
10 with a particular energy efficiency program. This difference is crucial. As I explain in
11 Section 3, the Decoupling mechanism in Alternative B has a number of advantages
12 relative to the LFCR mechanism proposed in Alternative A.

13
14 **Q. WHAT ARE THE OTHER DIFFERENCES BETWEEN ALTERNATIVES A**
15 **AND B?**

16 A. There are three other significant differences between Alternatives A and B:

- 17 • **Rate case moratorium:** Alternative A has none, while under Alternative B,
18 Southwest Gas has committed not to file a rate case prior to April 30, 2016
19 (Section 3.30).¹
- 20 • **Allowed return on common equity:** 9.75 percent is allowed under
21 Alternative A; 9.5 percent is allowed under Alternative B (Sections 3.16 and
22

23 _____
¹ Parenthetical references are to the sections of the Settlement Agreement.

1 3.17). As a result, Alternative B's rate increase is approximately \$2.3 million
2 less than Alternative A.

- 3 • **Monitoring/reporting:** Alternative A has only an *annual* reset filing by the
4 Company (Section 3.9) and an *annual* review by Staff of compliance with energy
5 efficiency goals (Section 3.11), while Alternative B also includes *quarterly*
6 filings of monthly bill customer impacts and *annual* reports. These quarterly and
7 annual reports include a variety of components, such as monthly bill impacts by
8 customer sectors and individual tariff, a listing of customer complaints, an
9 analysis of compliance with annual energy efficiency goals, an analysis of usage
10 differences between new and existing customers (including use per customer),
11 comparisons of pre- and post-Decoupling usage levels and an analysis of
12 Company activities that support new customer growth (Sections 3.21 to 3.23).
13 Alternative B also requires that a detailed earnings test be completed on an
14 annual basis to ensure that the Company is not earning more than its authorized
15 return on common equity (Section 3.25).

16
17 **Q. DO THE ALTERNATIVES SHARE ANY IMPORTANT COMPONENTS?**

18 A. Yes, both alternatives include a weather-related component that adjusts current-month
19 customer bills to account for bill changes due to deviations from normal winter weather
20 conditions. However, as I describe in Section 3, the weather-related component functions
21 much better in combination with Alternative B's Decoupling mechanism than it does in
22 Alternative A, because Alternative B's approach eliminates concerns regarding errors in
23 the normal weather definition.

1 Also, both alternatives commit Southwest Gas to meeting the requirements of the
2 Energy Efficiency and Renewable Energy Resource Technology Portfolio
3 Implementation Plan (“EE and RET Plan”). Annual energy savings will be at least
4 1,250,000 therms within nine months of Commission approval. In addition, the
5 Settlement Agreement requires the Company’s shareholders to contribute at least
6 \$1 million over the next five years to support low-income weatherization programs.

7 Finally, the Company has agreed to develop a customer outreach/education plan.
8 While the primary goal of this program is to educate customers regarding the changes
9 affiliated with the alternative (either A or B) approved by the Commission, it can also be
10 used to inform them of the benefits associated with conservation and direct them toward
11 resources that can help them become more energy efficient consumers.

12
13 **3. REASONS THAT ALTERNATIVE B IS SUPERIOR TO ALTERNATIVE A**

14 **Q. WHICH ALTERNATIVE DOES AIC PREFER AND DO YOU RECOMMEND**
15 **THE COMMISSION ADOPT?**

16 A. I recommend the adoption of Alternative B, which I agree with AIC is superior to
17 Alternative A, primarily for the following reasons:

- 18 • Decoupling provides a more complete solution to the Company’s conservation
19 incentive issues;
- 20 • Decoupling combines well with the weather-related component;
- 21 • Decoupling reduces contentiousness regarding the measurement of usage
22 reductions; and

- 1 • Finally, Decoupling leads to improved bond ratings, which benefit all ratepayers
2 by reducing the utility's borrowing costs and improving its access to capital.

3 I will now explain each of these reasons in detail.
4

5 **Q. WHY IS DECOUPLING A MORE COMPLETE SOLUTION THAN LFCR TO**
6 **THE COMPANY'S CONSERVATION ISSUES?**

7 A. The LFCR in Alternative A only removes the Company's disincentive to support
8 conservation efforts used to meet specific energy efficiency goals. In contrast, the
9 Decoupling in Alternative B removes those same disincentives, but, as importantly, also
10 removes the utility's disincentive to support conservation efforts for which the benefits
11 are difficult to measure. In addition, unlike LFCR, Decoupling removes the utility's
12 incentive to *increase* use per customer.
13

14 **Q. WHAT KINDS OF CONSERVATION EFFORTS PRODUCE BENEFITS THAT**
15 **ARE DIFFICULT TO MEASURE?**

16 A. The most obvious category is customer outreach and education programs. A good
17 example of this is a web site that offers conservation tips to customers who visit the site.
18 While these tips may be effective in getting customers to reduce usage levels, it is very
19 difficult to track which customers are visiting the site and, as importantly, the actions
20 each customer takes based on the information they obtain. Because the LFCR only
21 allows the Company to recover lost revenues directly associated with measured usage
22 reductions, educational programs like these are unlikely to become part of the Company's
23 efforts to encourage conservation. In contrast, under Alternative B's Decoupling,
24

1 Southwest Gas has every incentive to be creative across the board in structuring and
2 implementing efficiency programs, because its ability to recover lost revenues will not be
3 hampered by restrictive attribution and verification requirements.
4

5 **Q. DR. JOHNSON'S DIRECT TESTIMONY ON RUCO'S BEHALF ATTACKS THE**
6 **PREMISE THAT DECOUPLING REMOVES THE COMPANY'S INCENTIVE**
7 **TO PROMOTE *INCREASES* IN CUSTOMER USAGE. DO YOU AGREE?**

8 A. No. The financial incentive to increase customer usage under traditional rate design is
9 obvious. In the absence of Decoupling, Southwest Gas improves its realized rate of
10 return with each additional therm sold. Put another way, additional sales drive an
11 increase in the Company's non-gas revenues regardless of whether there is an increase in
12 non-gas costs. Decoupling replaces the link between *sales* and non-gas revenues with a
13 link between *the number of customers* and non-gas revenues. Therefore, under
14 Alternative B's Decoupling, Southwest Gas will have an incentive to increase the number
15 of customers served, but will not have an incentive to increase the level of usage per
16 customer.
17

18 **Q. WHY DOES DECOUPLING COMBINE WELL WITH THE WEATHER-**
19 **RELATED COMPONENT?**

20 A. The weather-related component adjusts customer bills based on the difference between
21 actual winter weather conditions and "normal" winter weather conditions, which are
22 measured using a ten-year average of weather data. For example, in an unusually cold
23 winter month, customer bills and utility revenues will be adjusted down by the weather-

1 related component to account for the fact that sales were higher than they would have
2 been under “normal” weather conditions. However, a problem can arise when this type
3 of weather adjustment is used as a stand-alone mechanism instead of in combination with
4 a Decoupling mechanism such as AIC supports in Alternative B. Specifically, if the
5 definition of normal weather is set incorrectly, the results of the weather-adjustment
6 mechanism will be skewed toward either the utility or its ratepayers. One such instance
7 of this occurring is described by Staff witness Dr. David Dismukes on pages 22-23 of his
8 direct testimony. In that example, the Connecticut regulator discontinued a stand-alone
9 weather-adjustment mechanism, because payments over a 15-year period were skewed
10 toward the utility. The Connecticut results would not have been possible if the weather-
11 adjustment mechanism had been combined with a Decoupling mechanism, as is the case
12 with Alternative B.

13
14 **Q. PLEASE EXPLAIN WHY THESE SKEWED PAYMENTS WOULD NOT HAVE**
15 **OCCURRED IF THE WEATHER-RELATED COMPONENT WAS COMBINED**
16 **WITH DECOUPLING AS IT IS IN ALTERNATIVE B.**

17 A. Decoupling eliminates the potential for skewed weather-related adjustments, because it
18 ensures that the utility receives the same annual level of revenue per customer regardless
19 of the sales levels (and, by extension, weather conditions) that actually occurred. For
20 example, if the normal winter weather definition is set five percent “too cold,” the utility
21 will tend to be paid five percent too much through the weather-related component.
22 (Some years will be higher and some lower, depending on the weather in that particular
23 year.) However, the Decoupling component’s annual true-up (Section 3.20) will give

1 that five percent “surcharge” from the weather-related component back to customers
2 through a rate reduction in the following year.

3 Therefore, when the weather-related component is combined with Decoupling,
4 customers still benefit by an immediate reduction in the weather-induced variability of
5 their bills, but the annual adjustment eliminates the possibility of overpayment to the
6 utility due to any error in the definition of normal weather.

7
8 **Q. COULD THE SKEWED PAYMENTS OCCUR IF THE WEATHER-RELATED**
9 **COMPONENT IS COMBINED WITH ALTERNATIVE A’S LFCR**
10 **MECHANISM?**

11 A. Yes, because the LFCR does not true-up annual revenues in the same manner as
12 Decoupling. If the definition of normal winter weather is set too cold (so that actual sales
13 are consistently below “normal” sales), the utility will benefit from the weather-related
14 component over time. Extending this to the example I gave in the previous answer, the
15 Company would keep the five percent over-payment from the weather-related component
16 under LFCR. This problem is present only under Alternative A’s LFCR. Alternative B’s
17 Decoupling element eliminates the possibility that the utility will recover more revenue
18 because the normal weather definition is set at too cold a level.

19
20 **Q. HOW DOES DECOUPLING REDUCE CONTENTIOUSNESS REGARDING**
21 **THE MEASUREMENT OF USAGE REDUCTIONS?**

22 A. Under Decoupling, the utility receives the same test-year level revenue per customer
23 regardless of the level of its sales or commodity throughput. Therefore, there’s no need

1 to measure usage reductions in order to remove the utility's disincentive to promote
2 conservation and energy efficiency ("EE"). Under Alternative B, the requirements are
3 that the EE programs are cost effective and that the utility meets its Commission-required
4 EE goals. Once these hurdles are cleared, the level of utility revenues is unaffected by
5 *how much* Southwest Gas cleared the hurdle.

6 Conversely, under Alternative A, the LFCR requires the detailed measurement of
7 program-induced usage reductions. Under the LFCR, the amount of the lost revenue
8 payment to the utility depends directly upon the amount and cause of the measured usage
9 reductions. To relate it back to the earlier analogy, the LFCR in Alternative A requires
10 that we measure precisely the height the utility "jumped" and not merely a confirmation
11 that the Company cleared the hurdle (as is the case with Decoupling and Alternative B).
12 Therefore, protracted disputes regarding the measurement of program-induced usage
13 reductions are highly likely to occur under Alternative A, adding to the costs of
14 administering that alternative and discouraging the utility from pursuing or supporting EE
15 programs for which the measurement and verification method of their effects is not
16 assured.

17
18 **Q. DOES DECOUPLING, AS CONTAINED IN ALTERNATIVE B, LEAD TO**
19 **IMPROVED BOND RATINGS?**

20 A. Yes. As Staff witness David Parcell indicates on page 15 of his direct testimony,
21 Moody's recently upgraded Southwest Gas's bond rating from Baa3 to Baa2. Among the
22 upgrade reasons cited in Mr. Parcell's excerpt of the Moody's report are "signs of
23 improvements in Southwest's regulatory environment," which include approval of a

1 Decoupling mechanism in Nevada and the potential for the adoption of decoupling in
2 Arizona because of the Commission's workshops which were underway last year when
3 the Moody's upgrade occurred.
4

5 **Q. HOW DO CUSTOMERS BENEFIT FROM AN IMPROVEMENT IN THE**
6 **COMPANY'S BOND RATING?**

7 A. The improved bond rating reduces the Company's borrowing costs, which leads to lower
8 retail rates over time. It also improves Southwest Gas's access to capital for repairs,
9 replacements and system improvements necessary for customers to get safe, reliable and
10 adequate service.
11

12 **4. SUMMARY OF CUSTOMER PROTECTIONS IN ALTERNATIVE B**

13 **Q. SOME CONSUMER GROUPS, INCLUDING THE AARP, HAVE SUGGESTED**
14 **THAT POLICYMAKERS AND REGULATORS LIKE THE COMMISSION**
15 **SHOULD ADOPT CONSUMER PROTECTIONS ALONG WITH THE**
16 **APPROVAL OF DECOUPLING MECHANISMS. DOES ALTERNATIVE B,**
17 **WHICH AIC SUPPORTS, CONTAIN SUCH CONDITIONS AND**
18 **PROTECTIONS?**

19 A. Yes, Alternative B addresses these concerns in a number of ways:

- 20 • Southwest Gas will expand its cost-effective EE programs and improve its
21 customer outreach/education plans;
 - 22 • Rate adjustments are limited in size and frequency;
- 23

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- The Company’s allowed return on equity (“ROE”) is reduced to account for perceived (whether accurate or not) reductions in utility risk;
- Decoupling deferrals are subject to an earnings test that prevents the Company from earning more than its authorized ROE;
- The performance of the Decoupling mechanism will be regularly evaluated; and
- After each annual review, the Commission may set a hearing to determine whether the Decoupling mechanism should be suspended, terminated or modified.

Q. PLEASE DESCRIBE HOW ALTERNATIVE B COMMITS SOUTHWEST GAS TO SUPPORT THE EXPANSION OF COST-EFFECTIVE ENERGY EFFICIENCY PROGRAMS.

A. As I explained earlier in my testimony, both Alternatives A and B commit Southwest Gas to meeting the requirements of the EE and RET Plan, which includes annual energy savings of at least 1,250,000 therms within nine months of Commission approval (Sections 5.7 to 5.11). In addition, the Company’s shareholders will commit \$1 million to support low-income weatherization programs (Section 4.1). Finally, the Company has agreed to develop an outreach/education plan, which can also be used to inform customers of the benefits associated with conservation and direct them toward resources that can help them become more energy efficient (Section 3.31).

1 **Q. PLEASE DESCRIBE THE LIMITS THAT ALTERNATIVE B PLACES ON THE**
2 **SIZE AND FREQUENCY OF RATE ADJUSTMENTS.**

3 A. Under the Settlement Agreement, rate increases associated with Decoupling are limited to
4 an annual adjustment no greater than five percent of the non-gas portion of the rate
5 (Section 3.29), or approximately 2.5 percent of the *total* rate at current rate levels. *No*
6 limit is placed on the annual Decoupling-induced rate *decreases*. These provisions
7 ensure that customer rates will remain stable and predictable after the adoption of
8 Decoupling.

9
10 **Q. DOES THE MONTHLY ADJUSTMENT FROM THE WEATHER-RELATED**
11 **COMPONENT CHANGE YOUR CONCLUSION REGARDING THE**
12 **STABILITY OF RATES UNDER ALTERNATIVE B?**

13 A. No. To the contrary, the monthly bill adjustments from the weather-related component
14 provide a benefit to customers by reducing the weather-induced variability in their bills.
15 This adjustment, which occurs under both Alternatives A and B, is different from the
16 annual Decoupling adjustment that is only included in Alternative B. Additionally, as
17 described previously, the combination of the weather-related component and
18 Alternative B's Decoupling provides extra consumer protection against faulty definitions
19 of "normal" winter weather.

1 **Q. PLEASE DESCRIBE THE ADJUSTMENT TO THE COMPANY'S ALLOWED**
2 **RETURN ON EQUITY CONTAINED IN ALTERNATIVE B.**

3 A. As an initial matter, AIC does not believe there is any empirical evidence that supports or
4 requires an adjustment to ROE simply because a Decoupling mechanism is adopted.
5 However, it is my understanding that in negotiating the Settlement Agreement, the parties
6 did, as part of the negotiation process, adopt different ROE figures for each alternative.
7 Specifically, the allowed ROE is 9.50 percent under Alternative B, which is 25 basis
8 points lower than the 9.75 percent under Alternative A.

9 The Settlement Agreement does not provide a specific rationale for the different
10 ROE figures. However, a reduction in ROE is typically intended to account for
11 reductions in the utility's risk that can occur because revenue decoupling removes
12 variations in non-gas revenues due to customer responses to changing economic
13 conditions or commodity prices. While the risk is not one-sided (e.g., the Company loses
14 the opportunity to *increase* per-customer non-gas revenues when the economy is
15 booming or commodity prices are falling), those who support a reduction to the ROE
16 argue that it is an appropriate customer protection to reflect the reduced variability of
17 utility non-gas revenues.

18
19 **Q. PLEASE DESCRIBE THE REPORTING AND EVALUATION REQUIREMENTS**
20 **CONTAINED IN ALTERNATIVE B.**

21 A. There are both quarterly and annual reporting requirements (Sections 3.21 to 3.23). Each
22 quarter, Southwest Gas is required to report on customer bill impacts (using a variety of
23 measures) associated with the Decoupling mechanism. Each year, the Company must

1 prepare a filing that includes a variety of data, including: a listing of customer
2 complaints (which will help ensure that the Company's service quality is not affected); a
3 showing that its disincentives to support EE have been removed; compliance with
4 required annual energy savings targets; a comparison of usage between new and existing
5 customers; various analyses of changes in use per customer; an analysis of customer
6 migration between tariffs; and an analysis of Company activities that support new
7 customer growth.

8
9 **Q. ARE THE COMPANY REPORTS SUBJECTED TO REGULAR SCRUTINY?**

10 A. Yes, Staff will perform an annual review of Southwest Gas's filing, with a required
11 contribution of \$75,000 from Southwest Gas to obtain assistance in this review
12 (Section 3.28). In addition, each annual review will be the subject of an Open Meeting
13 during which the Commissioners may deliberate on the performance of the Decoupling
14 mechanism (Section 3.24).

15
16 **Q. DOES THE SETTLEMENT AGREEMENT PROVIDE THE COMMISSION**
17 **WITH ANY RECOURSE IF IT IS NOT PLEASED WITH THE RESULTS OF**
18 **THESE EVALUATIONS?**

19 A. Yes. The Commission may set a hearing to consider the suspension, termination or
20 modification of the Decoupling mechanism (Section 3.24). This ensures consumer
21 protection if unexpected problems arise from implementation.

1 **Q. DO YOU HAVE ANY CONCERNS ABOUT CUSTOMER-LEVEL INCENTIVES**
2 **TO CONSERVE UNDER DECOUPLING?**

3 A. No. Under Decoupling, customers continue to be financially incentivized to conserve.
4 For example, when a customer reduces usage by one therm, there is an immediate
5 financial benefit in the form of a bill reduced by that therm's full retail rate (which,
6 according to the Statement of Rates available on the Company's web site,² is currently
7 about \$1.14 per therm for single-family residential customers). Under Decoupling, only
8 the non-gas portion of this reduction (currently about 57 cents per therm) would be
9 placed in a deferral account to be recovered through an adjustment the following year.
10 This 57 cents is spread across *all* therms consumed in that year and is also subject to the
11 five percent cap. Thus, it is highly unlikely that any customer would give up the
12 immediate and larger financial benefits of a lower gas bill based on a concern that the
13 utility may be able to recoup a tiny fraction of that lost revenue a year later.

14
15 **Q. ON PAGES 15-16 OF HIS DIRECT TESTIMONY, DR. JOHNSON ARGUED**
16 **THAT, WHILE YOUR PRECEDING ARGUMENT IS TECHNICALLY**
17 **CORRECT, CUSTOMERS WILL NOT BE SUFFICIENTLY INFORMED TO**
18 **UNDERSTAND IT AND MAY STILL PERCEIVE THAT THEIR INCENTIVE**
19 **TO CONSERVE IS REDUCED. DO YOU AGREE WITH THIS OPINION?**

20 A. No, for two reasons. First, his argument assumes that customers will understand enough
21 about Decoupling to know that class-level conservation leads to increases in non-gas
22 rates, but will not understand it well enough to be able to work out its effect on them.

23 _____
24 ² See http://www.swgas.com/tariffs/arizona_rates_and_tariffs.php.

1 This “customers are smart, but not smart enough” argument does not strike me as very
2 plausible, particularly because the Settlement Agreement requires the Company to
3 develop, and Staff to review and approve, a customer outreach/education program that
4 will explain Decoupling to customers.

5 Second, rate changes allowed under Alternative B’s Decoupling mechanism are
6 smaller than the rate changes customers currently experience due to market changes in
7 gas costs. For example, the largest increase permitted by the Settlement Agreement is
8 five percent of the test-year non-gas revenues. Based on current single-family residential
9 rates (per the schedule on the Company’s web site), this would amount to an increase of
10 approximately 2.9 cents per therm and would only increase the per-therm total rate from
11 about \$1.14 to \$1.17. This is a very small amount compared to the changes in gas costs
12 that customers regularly experience. For example, since 2006, the average annual change
13 in gas costs (which I measured from August to August) was 8.4 cents per therm. That is,
14 the average annual change in the gas cost has recently been nearly *three times* greater
15 than the largest possible rate adjustment under Decoupling (using current rates). Because
16 the magnitude of Decoupling-induced rate changes will be quite small relative to gas-
17 cost-induced rate changes, it’s likely customers will not even notice the effect of
18 Decoupling on their bills.

19
20 **Q. DO YOU HAVE ANY CONCERNS ABOUT DECOUPLING REDUCING THE**
21 **COMPANY’S INCENTIVE TO OPERATE EFFICIENTLY?**

22 A. No. Decoupling only affects revenues; it does not change the fact that the Company can,
23 and remains incented to, improve its profitability by reducing its costs. In addition, the

1 Settlement Agreement contains a provision requiring Southwest Gas to reduce its annual
2 expenses by \$2.5 million beginning in 2012 (Section 5.20). This requires the Company
3 to operate more efficiently and removes concerns (which I do not believe to be valid in
4 the first place) that Decoupling will reduce the Company's incentive to operate
5 efficiently.

6
7 **Q. OPPONENTS OF DECOUPLING SOMETIMES CHARACTERIZE IT AS A**
8 **NON-MARKET-BASED MEANS OF PAYING THE UTILITY MORE TO**
9 **PRODUCE LESS. DO YOU AGREE WITH THIS CHARACTERIZATION?**

10 A. No. Decoupling leads to the same amount of utility revenue as one would obtain by
11 setting regulated rates based on marginal cost-based pricing principles found in
12 economics. That is, under marginal cost-based pricing, all fixed costs would be
13 recovered using fixed charges (e.g., the fixed monthly customer charge) and all variable
14 costs (e.g., gas costs) would be recovered using volumetric (i.e., dollar per therm) rates.
15 In the natural gas industry, this is known as Straight Fixed Variable ("SFV") pricing.
16 Decoupling produces the same outcome as SFV, because the non-gas costs that are
17 included in the Decoupling "true-up" mechanism are the same as the fixed costs that
18 would be recovered through the fixed monthly customer charge in SFV pricing. As a
19 result, under either Decoupling or SFV, the utility receives the same amount of non-gas
20 revenue per customer per year, which covers the utility's fixed costs and eliminates its
21 disincentive to promote conservation.

1 **Q. COULD YOU PLEASE ELABORATE ON THE EQUIVALENCE OF STRAIGHT**
2 **FIXED VARIABLE PRICING AND DECOUPLING?**

3 A. Under SFV, utility non-gas revenues are collected solely through monthly customer
4 charges. Therefore, the total amount of utility non-gas revenue in a given year under
5 SFV is equal to: $12 \times (\text{the monthly customer charge}) \times (\text{the number of customers served})$.
6 Under Decoupling, the utility recovers a fixed amount of non-gas revenue per customer
7 per year. Therefore, the total amount of utility non-gas revenue in a given year under
8 Decoupling, including the revenue gained or lost through the true-up mechanism, is equal
9 to: $(\text{the authorized non-gas revenue per customer per year}) \times (\text{the number of customers}$
10 $\text{served})$. In both cases, the amount of non-gas revenue is unrelated to the amount of gas
11 that customers use. If the SFV rates and Decoupling mechanism are designed using the
12 same information (i.e., using the same revenue requirement and test-year number of
13 customers), the utility would recover the exact same amount of non-gas revenue per year
14 using either method.

15
16 **Q. IF DECOUPLING AND SFV RETURN THE SAME AMOUNT OF NON-GAS**
17 **REVENUE FOR THE UTILITY, WHY IS DECOUPLING PREFERRED TO**
18 **STRAIGHT FIXED VARIABLE PRICING?**

19 A. Decoupling is preferred to SFV for two reasons. First, by raising the customer charge for
20 fixed costs, SFV tends to produce especially large bill increases for low-use customers. It
21 is believed that low-use customers are more likely to be low-income customers.
22 Therefore, SFV is often rejected on fairness grounds. Decoupling does not introduce bill
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impacts that differ by customer usage (and potentially income) levels. It simply adds a small adjustment factor to the current billing structure.

Second, SFV reduces the customer-level incentive to conserve, because the increase in the customer fixed monthly charge (which is required in order for the utility to recover fixed costs) must be matched by a decrease in the per-therm rate in order to hold the revenue requirement constant. But this reduction in the per-therm rate also reduces each customer's incentive to conserve. I have already described above why Decoupling does not affect the customer-level incentive to conserve.

Q. PLEASE EXPLAIN HOW DECOUPLING DOES NOT PAY THE UTILITY MORE TO PRODUCE LESS.

A. Under Decoupling, when customers reduce their usage levels, they will never pay the gas cost associated with the conserved therms, either in the current bill or through the Decoupling deferral mechanism. Decoupling compensates the utility only for reductions in *non-gas* (or fixed cost) revenues, which is reasonable, because the *non-gas costs* are not reduced when customers conserve (at least in the short run). That is, under Decoupling, when customers use less, it leads to a reduction in utility revenues that matches the reduction in utility costs.

1 **5. RECOMMENDATIONS**

2 **Q. WHAT ARE YOUR RECOMMENDATIONS REGARDING THE SETTLEMENT**
3 **AGREEMENT AND THE DECOUPLING ALTERNATIVES CONTAINED**
4 **THEREIN?**

5 A. I recommend that the Commission approve Alternative B, because it provides a more
6 complete solution to the energy conservation issues than Alternative A. Its primary
7 benefits relative to Alternative A are:

- 8 • Only Alternative B removes the incentive for the Company to *increase* usage per
9 customer;
- 10 • Only Alternative B removes the Company's disincentive to support the full range
11 of energy efficiency programs (rather than supporting only programs for which
12 benefits are easily measured); and
- 13 • Only Alternative B eliminates the potential for revenues from the weather-related
14 component to be skewed toward the utility or its customers because of errors in
15 the definition of normal winter weather.

16
17 **Q. DOES THIS COMPLETE YOUR TESTIMONY?**

18 A. Yes.
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EXHIBIT DGH-1

Daniel G. Hansen

RESUME

January 2011

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Academic Background:

Ph.D., Michigan State University, 1997, Economics
M.A., Michigan State University, 1993, Economics
B.A., Trinity University, 1991, Economics and History

Positions Held:

Vice President, Laurits R. Christensen Associates, Inc. 2006-present
Senior Economist, Laurits R. Christensen Associates, Inc., 1999-2005
Economist, Laurits R. Christensen Associates, Inc., 1997-1999
Research Assistant to David Neumark, 1995-1997
Instructor, School of Management, University of Michigan-Flint, spring 1996:
MBA Business Economics

Professional Experience:

I work in a variety of areas related to retail and wholesale pricing in electricity and natural gas markets. I have used statistical models to forecast customer usage, estimate customer load response to changing prices, and estimate customer preferences for product attributes. I have developed and priced new product options; evaluated existing pricing programs; evaluated the risks associated with individual products and product portfolios; and developed cost-of-service studies. I have conducted evaluations and provided testimony regarding revenue decoupling and weather adjustment mechanisms.

Major Projects:

- Evaluated the cost effectiveness of automated demand response technologies.
- Evaluated and modified short- and long-term electricity sales and demand forecasting models.
- Created a short-term electricity demand forecasting model.
- Prepared testimony regarding the return on equity effects associated with natural gas revenue decoupling mechanisms.
- Conducted an independent evaluation of two natural gas revenue decoupling mechanisms
- Created forecasts of load impacts from electricity demand response programs.
- Estimated historical the load impacts from electricity demand response programs.
- Prepared testimony regarding a proposed natural gas decoupling mechanism.
- Prepared testimony regarding the weather normalization of test year sales and revenues.
- Participated on a regulatory proceeding panel to discuss decoupling mechanisms.
- Prepared testimony regarding a proposed electricity decoupling mechanism.
- Prepared a report and testimony regarding a natural gas decoupling mechanism.
- Evaluated a model that estimated the costs associated with removing and relicensing hydroelectric facilities.
- Assisted an electric utility in evaluating new rate options for commercial and industrial customers.
- Designed and evaluated time-of-use and critical-peak pricing rates for an electric utility.
- Reviewed cost-of-service study for a municipal electric utility.
- Produced a report on rate design methods that provide appropriate incentives for demand response and energy efficiency.
- Assisted in wholesale power procurement process.
- Evaluated a weather-adjustment mechanism for a natural gas utility.
- Assessed weather-related fixed cost recovery risk for an electric utility.
- Evaluated a revenue decoupling mechanism for a natural gas utility.
- Estimated price responsiveness of real-time pricing customers.
- Evaluated the need for electricity transmission and distribution standby rates for a utility.
- Developed a market share simulation model using conjoint survey results of electricity distributors.

Conducted conjoint surveyed of electricity distributors regarding rate structure preferences.

Developed a method to calculate a retail forward contract risk premium.

Prepared a report on the performance of Financial Transmission Rights (FTRs) in the PJM electricity market.

Reviewed a retail pricing model for use in a competitive electricity market.

Provided support in a natural gas rate case filing.

Simulated outcomes associated with alternative wholesale rate offers to electricity distributors.

Developed a business case to support a natural gas fixed bill product.

Assessed the accuracy of a natural gas fixed bill pricing algorithm.

Audited an evaluation of the costs associated with implementing a renewable portfolio standard.

Developed a model to value interruptible provisions in a long-term customer contract.

Performed a study on the determinants of electricity price differences across utilities and regions.

Developed long-term demand and energy forecasts.

Conducted market research to assess customer interest in new product options.

Recommended new retail pricing products for commercial and industrial customers.

Prepared a report on the fundamentals of retail electricity risk management.

Prepared a report that presented a taxonomy of retail electricity pricing products.

Presented at a workshop in Africa regarding deregulated electricity markets.

Prepared a report on the effectiveness of distributed resources in mitigating price risk.

Performed a valuation of energy derivatives consistent with FAS 133.

Created an electricity market share forecasting model.

Developed standby rates for an electric utility.

Developed an electricity wholesale price forecast.

Forecasted retail customer loads for an electric utility.

Assisted in mediating a new product development process with a utility and its industrial customers.

Developed a model that simulates wholesale market price changes due to retail load response.

Developed a pricing model for an innovative financial product.

Estimated changes in wholesale electricity prices due to customer load response.

Oversaw creation of software that estimates customer satisfaction with utilities.

Developed a model to economically evaluate a capital addition to a generator.

Developed a wholesale version of the Product Mix Model.

Evaluate Risk Implications of New Product Offering.

Mixed Logit Estimation of Customer Preferences.

Estimation of Customer Price Responsiveness.

Product Mix Model Workshops.

Unbundling and Rate Design.

Development of a Computer Program.

Large Commercial and Industrial Customer Rate Analysis.

Residential Customer Rate Analysis.

Survey of Power Marketers.

Development of Multi-Period Analysis Tool.

Evaluating the Effect of Alternative Rates on System Load.

Estimating the Persistence of Weather Patterns.

Electricity Customer Survey Data Analysis.

Product Mix Analysis for Small Customers.

Survey of Postal Facilities.

Professional Papers:

“A Review of Natural Gas Decoupling Mechanisms and Alternative Methods for Addressing Utility Disincentives to Promote Conservation,” June 2007.

“Evaluation of the Klamath Project Alternatives Analysis Model: Reply to Addendum A of the Consultant Report Prepared for the California Energy Commission Dated March 2007,” May 2007, with Laurence D. Kirsch and Michael P. Welsh.

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“A Review of the Weather Adjusted Rate Mechanism as Approved by the Oregon Public Utility Commission for Northwest Natural,” October 2005, with Steven D. Braithwait.

“A Review of Distribution Margin Normalization as Approved by the Oregon Public Utility Commission for Northwest Natural,” March 2005, with Steven D. Braithwait.

“Analysis of PJM’s Transmission Rights Market,” EPRI Report #1008523, December 2004, with Laurence Kirsch.

“Using Distributed Resources to Manage Price Risk,” EPRI Report #1003972, November 2001, with Michael Welsh.

“Hedging Exposure to Volatile Retail Electricity Prices,” *The Electricity Journal*, Vol. 14, number 5, pp. 33-38, June 2001, with A. Faruqui, C. Holmes and B. Chapman.

“Weather Hedges for Retail Electricity Customers,” with C. Holmes, B. Chapman and D. Glycer. In papers for EPRI International Pricing Conference 2000.

“Worker Performance and Group Incentives: A Case Study,” *Industrial and Labor Relations Review*, Vol. 51, No. 1, pp. 37-49, October 1997.

“Worker Quality and Profit Sharing: Does Unobserved Worker Quality Bias Firm-Level Estimates of the Productivity Effect of Profit Sharing?” Working Paper, May 1996.

“Supervision, Efficiency Wages, and Incentive Plans: How Are Monitoring Problems Solved?” Working Paper, November 1996, presented at the Western Economics Association Meetings, 1997.

“Has Job Stability Declined Yet? New Evidence for the 1990’s,” with David Neumark and Daniel Polsky, *The Journal of Labor Economics*, 1999.

Testimony and Reports before Regulatory Agencies:

Otter Tail Power Company, Minnesota Docket No. E-017/GR-10-239: Testimony regarding the weather normalization of test year sales in a general rate case on behalf of Otter Tail Power Company, 2010.

Southwest Gas Corporation, Nevada Docket No. 09-04003: Testimony regarding the return on equity effects associated with a proposed revenue decoupling mechanism on behalf of Southwest Gas Corporation, 2009.

Southwest Gas Corporation, Arizona Docket No. G-01551A-07-0504: Testimony regarding a proposed revenue decoupling mechanism on behalf of the Arizona Investment Council, 2008.

Otter Tail Power Company, Minnesota Docket No. E-017/GR-07-1178: Testimony regarding the weather normalization of test year sales and revenues in a general rate case on behalf of Otter Tail Power Company, 2008.

Massachusetts Department of Public Utilities, Docket No. DPU 07-50: Participation in a panel regarding an “Investigation into Rate Structures that will Promote Efficient Deployment of Demand Resources”, on behalf of Environment Northeast, 2007.

Connecticut Light & Power Company, Docket No. 07-07-01: Testimony regarding a proposed electricity revenue decoupling mechanism on behalf of Environment Northeast, 2007.

Questar Gas Company, Docket No. 05-057-T01: Testimony regarding the effectiveness of a natural gas revenue decoupling mechanism on behalf of the Utah Division of Public Utilities, 2007.

PacifiCorp, FERC Docket No. 2082: "Evaluation of the Klamath Project Alternatives Analysis Model: Reply to Addendum A of the Consultant Report Prepared for the California Energy Commission Dated March 2007," May 2007, with Laurence D. Kirsch and Michael P. Welsh.

PacifiCorp, FERC Docket No. 2082: "Evaluation of the Klamath Project Alternatives Analysis Model," March 2007, with Laurence D. Kirsch and Michael P. Welsh.

Northwest Natural Gas Company, Oregon Docket UG 163: Testimony relating to an investigation regarding possible continuation of Distribution Margin Normalization, May 2005.

Northwest Natural Gas Company, Oregon Docket UG 152: Submitted a report in compliance with a requirement to evaluate the functioning of the Weather Adjusted Rate Mechanism, October 2005.