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OPEN MEETING AGENDA ITEM



**SOUTHWEST GAS CORPORATION**

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AZ CORP COMMISSION  
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April 29, 2013

Docket Control  
Arizona Corporation Commission  
1200 West Washington Street  
Phoenix, AZ 85007-2996

Re: Docket No. G-01551A-10-0458; Decision No. 72723

Pursuant to ordering paragraph #7 of the Commission's Opinion and Order in the above referenced docket, Southwest Gas Corporation hereby submits its annual compliance report concerning its revenue decoupling mechanism and application for approval of the initial Energy Efficiency Enabling Provision (EEP) rate.

If you have any questions, please contact me at (702) 876-7163.

Respectfully,

*Debra S. Gallo by cmg*

Debra S. Gallo, Director  
Government & State Regulatory Affairs

Enclosures

c Jodi Jerich, ACC  
Bob Gray, ACC  
Brian Bozzo, ACC Compliance  
Patrick Quinn, RUCO

Arizona Corporation Commission  
**DOCKETED**

APR 30 2013



1 **BEFORE THE ARIZONA CORPORATION COMMISSION**

2 **COMMISSIONERS**

3 BOB STUMP – Chairman  
4 GARY PIERCE  
5 BRENDA BURNS  
6 BOB BURNS  
7 SUSAN BITTER SMITH

8 In the Matter of the Application of  
9 Southwest Gas Corporation for the  
10 Establishment of Just and Reasonable  
11 Rates and Charges Designed to Realize a  
12 Reasonable Rate of Return on the Fair  
13 Value of the Properties of Southwest Gas  
14 Corporation Devoted to its Arizona  
15 Operations; Approval of Deferred  
16 Accounting Orders; and for Approval of an  
17 Energy Efficiency and Renewable Energy  
18 Resource Technology Portfolio  
19 Implementation Plan.

Docket No.: G-01551A-10-0458

16 **APPLICATION FOR APPROVAL TO SET ENERGY EFFICIENCY  
17 ENABLING PROVISION RATE**

18 **Introduction**

19  
20 1. Southwest Gas Corporation (Southwest Gas or Company) hereby  
21 submits its application to the Arizona Corporation Commission (Commission)  
22 respectfully requesting approval of the initial rate related to its revenue decoupling  
23 mechanism, the Energy Efficiency Enabling Provision (EEP).

24 2. Southwest Gas is a corporation in good standing under the laws of the  
25 state of Arizona, is a corporation duly organized, validly existing, and is qualified to  
26 transact intrastate business.

27  
28

1           3.       Southwest Gas' corporate offices are located at 5241 Spring Mountain  
2 Road, P. O. Box 98510 Las Vegas, Nevada 89193-8510. Communications regarding  
3 this filing should be addressed to:

4           Catherine M. Mazzeo, Esq.  
5           Associate General Counsel  
6           Southwest Gas Corporation  
7           P.O. Box 98510  
8           Las Vegas, Nevada 89193-8510  
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            Debra Gallo  
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            Regulatory Affairs  
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11           4.       Southwest Gas is a public utility subject to the jurisdiction of the  
12 Commission pursuant to Article XV of the Arizona Constitution and the applicable  
13 chapters of Title 40 of the Arizona Revised Statutes (A.R.S.). Southwest Gas  
14 currently serves approximately 1.9 million customers in the states of Arizona,  
15 California, and Nevada. Approximately 54 percent of the Company's customers are  
16 located in the state of Arizona, including portions of Cochise, Gila, Graham, Greenlee,  
17 La Paz, Maricopa, Mohave, Pima, Pinal, and Yuma counties. For operational  
18 purposes, Southwest Gas' Central Arizona division is headquartered in Phoenix and  
19 its Southern Arizona division is headquartered in Tucson.

20           **Background**

21           5.       The Commission authorized Southwest Gas to implement full revenue  
22 decoupling as part of its 2010 general rate case. The decoupling mechanism, which  
23 is referred to by Southwest Gas as the EEP, has two components: 1) a monthly  
24 weather component that provides "real-time" bill adjustments when actual weather  
25 during the winter months differs from the average weather used to calculate rates; and  
26 2) a non-weather component that adjusts rates on an annual basis to reflect any  
27 differences between the Company's authorized revenues per customer and its actual  
28 revenues per customer, thereby protecting customers and ensuring that the Company

1 recovers only its Commission-authorized revenue per customer – no more, no less. It  
2 is the second component of the EEP that is the subject of this filing.

3 6. As part of the approval of the EEP, Southwest Gas agreed to file a report  
4 with the Commission in April of each year to provide various details on the EEP's  
5 performance.<sup>1</sup> The Company's Revenue Decoupling Report (Report), covering the  
6 period from January 1, 2012 through December 31, 2012, is attached hereto as  
7 Exhibit 1.

8 7. As detailed in the accompanying Report, the mechanism performed as  
9 intended, and the Company's Arizona customers recognized many EEP-related  
10 benefits, including but not limited to bill stability and a revenue ceiling that results in  
11 the Company seeking to refund approximately \$1.9 million to customers through this  
12 Application.

### 13 **Request to Set Rate**

14 8. Southwest Gas hereby requests approval of its initial EEP rate, which is  
15 based upon results for the period January 1, 2012 through December 31, 2012.

16 9. In the first year of the EEP, the Company collected more than its  
17 authorized revenues, resulting in a credit balance of \$1,890,149. The Company  
18 therefore seeks to refund this balance to its Arizona customers through a credit rate of  
19 \$0.00387 per therm. The Company's surcredit calculations are attached hereto as  
20 Exhibit 2.

21 10. The Company respectfully requests that the Commission approve the  
22 initial EEP rate at its earliest convenience, such that the credit can be implemented by  
23 September 1, 2013, or as soon as otherwise practicable.

24 11. Although not at issue in the instant Application (because of the surcredit  
25 to customers), Southwest Gas agreed to submit an annual earnings test as part of the  
26 annual review.<sup>2</sup> As illustrated in the results of the Company's 2012 earnings test,

27 \_\_\_\_\_  
28 <sup>1</sup> Settlement Agreement, at §3.23.

<sup>2</sup> Id. at §§3.25-3.27.

1 notwithstanding the Company's recovery of its authorized level of revenue per  
2 customer through the EEP, it is still not earning its Commission authorized return  
3 (primarily due to the continuing upward pressure on the costs of providing safe and  
4 reliable natural gas service to customers). A copy of the earnings test is attached  
5 hereto as Exhibit 3.

6 **Conclusion**

7 12. Based upon the foregoing, Southwest Gas respectfully requests that the  
8 Commission establish the initial EEP rate as set forth herein, with an effective date of  
9 September 1, 2013, or as soon as otherwise practicable.

10 Respectfully submitted this 30<sup>th</sup> day of April 2013.

11  
12 SOUTHWEST GAS CORPORATION

13   
14 \_\_\_\_\_

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22 *Attorney for Southwest Gas Corporation*  
23  
24  
25  
26  
27  
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# **EXHIBIT 1**



**SOUTHWEST GAS CORPORATION**

# **Revenue Decoupling Report**

Reporting Period:  
January 1, 2012 through December 31, 2012

## **I. INTRODUCTION**

Southwest Gas Corporation (Southwest Gas or Company) hereby submits to the Arizona Corporation Commission (Commission) its first annual Revenue Decoupling Report (Report). Pursuant to the Settlement Agreement in Southwest Gas' 2010 General Rate Case, which was approved by the Commission in Decision No. 72723 (Decision), the Company agreed to report annually on the effects of its revenue decoupling mechanism, the Energy Efficiency Enabling Provision (EEP). This annual report also allows the Commission and all parties an opportunity to review the EEP's performance.<sup>1</sup>

Southwest Gas' Report covers the period from January 1 through December 31, 2012, and demonstrates that the EEP performed as designed and benefitted customers by stabilizing their monthly bills. The EEP, which is Arizona's first and, thus far, only full revenue decoupling mechanism performed precisely as the Settlement Parties<sup>2</sup> intended. As a result, Southwest Gas' customers recognized many EEP-related benefits, including but not limited to bill stability and a revenue ceiling that results in the Company refunding approximately \$1.9 million to customers.

## **II. DECOUPLING OVERVIEW**

Decoupling (also commonly referred to as "revenue decoupling", "full revenue decoupling", and "per-customer decoupling"), at its highest level, is a rate design methodology that separates a utility's fixed cost recovery from its sales.<sup>3</sup> Decoupled utilities collect revenues according to a predetermined revenue requirement established by the governing regulatory body, and utilize an automatic rate adjustment mechanism to periodically "true-up"

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<sup>1</sup> Settlement Agreement, at §3.23.

<sup>2</sup> In addition to the Company, "Settlement Parties" includes the Arizona Corporation Commission Utilities Division Staff ("Staff"), the Southwest Energy Efficiency Project ("SWEET"), the Arizona Investment Council ("AIC"), the Natural Resources Defense Council ("NRDC"), and Cynthia Zwick.

<sup>3</sup> *Decoupling for Electric & Gas Utilities: Frequently Asked Questions*, National Association of Regulatory Utility Commissioners (NARUC), Grants & Research Department (Sept. 2007), at p.2.

the difference between the predetermined revenue requirement and actual revenues.<sup>4</sup> Therefore, unlike more traditional ratemaking, which allows utilities to recover their authorized fixed costs based upon sales volumes, decoupling allows utilities to recover their Commission-approved fixed costs irrespective of the volumes sold.<sup>5</sup>

Decoupling also differs from other rate adjustment mechanisms that are sometimes categorized as “partial decoupling”, such as Lost Fixed Cost Recovery (LFCR) mechanisms (also referred to as “net lost revenue recovery”, “lost revenue adjustments”, and “conservation or load management adjustment clauses”). LFCR mechanisms adjust rates for revenue changes (i.e., losses) that result from conservation and energy efficiency programs and generally only result in upward adjustments to rates. Conversely, full revenue decoupling adjusts rates for any difference between authorized and actual revenues, regardless of the cause. Moreover, full revenue decoupling refunds customers for any over-collections, thus completely eliminating the link between revenues and sales. Straight Fixed Variable (SFV) rate designs are similar to full revenue decoupling in that they assign all utility fixed costs to a fixed charge (typically the basic service charge or monthly charge), and all variable costs are recovered through a volumetric rate.

### **Decoupling in Arizona**

In Arizona, the Commission committed to a thorough investigation and evaluation of ways to better align utility and customer interests. Through this process the Commission completely vetted various alternatives, and ultimately approved the *ACC Policy Statement Regarding Utility Disincentives to Energy Efficiency and Decoupled Rate Structures* (Policy Statement) in December 2010. In its Policy Statement, the Commission stated its preference

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<sup>4</sup> Id.

<sup>5</sup> Id. at pg. 4.

for full revenue decoupling, citing it as the methodology that, "...establishes better certainty of utility recovery of authorized fixed costs and better aligns utility and customer interests."<sup>6</sup>

The number of utilities with decoupled rate designs has continued to grow over the past several years, as the concept becomes increasingly prevalent in the utility industry. As detailed in **Appendix A**,<sup>7</sup> in 2009, there were 28 natural gas LDCs and 12 electric utilities with decoupling, located across 17 states. Today, Arizona is included among the 25 states that have approved decoupling mechanisms for 52 LDCs and 25 electric utilities.

### **III. SOUTHWEST GAS' EEP MECHANISM**

As noted in the Decision, Southwest Gas has been unable to earn its Commission-authorized rate of return for at least 15 years, primarily because of a trend of declining usage per customer - a trend that is likely to continue, and stands to be exacerbated by the EE Rules.<sup>8</sup> The Commission acknowledged that without recourse, the Company's financial profile could deteriorate, thereby making it more difficult for the Company to finance debt at reasonable rates, and ultimately leading to higher customer rates.<sup>9</sup> Historically, the Company's declining usage was addressed by traditional approaches, such as increased basic service charges and declining block rate structures; however, these approaches were never completely successful in removing the detrimental financial impacts of declining usage.

Southwest Gas has been decoupled in its California jurisdiction for many years, and received an order authorizing a decoupled rate design in its Nevada jurisdiction in 2009. Although the Company had pursued decoupling in Arizona twice before,<sup>10</sup> it was not until its 2010 rate case that the Company, in cooperation with the other Settlement Parties, was able to

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<sup>6</sup> Policy Statement, at pg. 30.

<sup>7</sup> Appendix A includes excerpts from *A Decade of Decoupling for US Energy Utilities: Rate Designs, Impacts, and Observations*, by Pamela Morgan (revised February, 2013). These excerpts include a map indicating those states that have implemented decoupling for gas and/or electric utilities, and a summary of the decoupling mechanisms approved by the Commission, including Southwest Gas' EEP.

<sup>8</sup> Decision, at ¶137, pg. 40.

<sup>9</sup> *Id.*

<sup>10</sup> Southwest Gas proposed revenue decoupling mechanisms in its 2004 (Docket No. 04-0876) and 2007 (Docket No. 07-0504) general rate cases.

craft a mechanism that was supported by Staff and ultimately approved by the Commission. The resulting EEP mechanism has two components: 1) a weather component, which stabilizes customer bills by providing a “real-time” bill adjustment when actual weather during the winter months differs from the average weather used to calculate rates; and 2) a revenue decoupling component that benefits both customers and the Company by adjusting rates on an annual basis to reflect any difference between the Company’s authorized (non-gas) revenues per customer and its actual (non-gas) revenues per customer, thereby ensuring that the Company recovers only its Commission-authorized revenue per customer – no more, no less.

The EEP also facilitates a partnership between Southwest Gas and its customers in their efforts to lower monthly utility bills. However, the EEP also offers multiple benefits beyond aligning utility and customer interests – some which are inherent to full revenue decoupling, and others that were incorporated into the mechanism by the Settlement Parties. These benefits include:

**Benefits Inherent to Full Revenue Decoupling**

- Mechanism with a ceiling and a floor – Company receives its Commission-authorized revenues and provides a refund to customers when it over-collects;
- Enhanced bill stability through less frequent rate cases;
- Enhanced revenue stability, resulting in improved financial health and lower long-term debt costs;
- Administratively and mechanically simple – reduces the frequency of rate cases and does not require lengthy and often contentious hearings to determine lost fixed costs associated with energy efficiency programs.

## **Benefits Incorporated by the Settling Parties<sup>11</sup>**

- Enhanced bill stability through “real-time” bill adjustments during extreme weather events;
- Cap on amounts collected through the surcharge, with no limit on the amounts refunded to customers in the event of an over-collection;
- 5 year stay-out provision which prevents the Company from bringing another rate case until at least April of 2016 as long as the EEP is in place;
- Annual earnings test that prevents the Company from collecting a surcharge if it will result in the Company over-earning;
- Accountability through quarterly and annual reporting requirements;
- Required customer outreach and education.

## **IV. 2012 EEP RESULTS**

As demonstrated below, Southwest Gas customers are already beginning to realize many of the benefits of full revenue decoupling, through enhanced bill stability by reducing the frequency of rate cases, by adjusting customer bills to remove the vagaries of abnormal weather, and by preventing Southwest Gas from increasing profits through increased sales. As mentioned previously, the EEP mechanism has two components: 1) an annual revenue decoupling component; and 2) a monthly weather component.

### **Revenue Decoupling**

The revenue decoupling component of the EEP adjusts rates on an annual basis such that the Company recovers *only* its authorized revenue on a per customer basis. If the Company over-collects, customers receive a refund. Southwest Gas' Arizona customers will experience this benefit - which is unique to full revenue decoupling – as a result of the EEP's performance in 2012. As indicated in the accompanying application, in the period from January

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<sup>11</sup> In addition to the benefits listed, Southwest Gas and the other Settlement Parties agreed to a 25 basis point reduction in Return on Equity (ROE) as part of the settlement that adopted full revenue decoupling for the Company. There were 3 instances where utilities received 25 basis point ROE reductions in conjunction with the approval of a decoupling mechanism; however, Southwest Gas' was the only case where the ROE reduction resulted from a settlement. See, *A Decade of Decoupling for US Energy Utilities: Rate Designs, Impacts, and Observations*, Pamela Morgan (revised February, 2013), at pp. 14-15.

1, 2012 through December 31, 2012, Southwest Gas collected more than its authorized revenues, resulting in a credit balance of approximately \$1.9 million. The Company seeks to refund this amount to customers at a credit rate of approximately \$.00387 per therm. Moreover, if the Company were to true-up the EEP's revenue decoupling component based on results from the first quarter of 2013, customers would receive a refund of approximately \$6 million.<sup>12</sup>

### **Weather Adjustment**

Although not the subject of the Company's annual decoupling report, the EEP's weather component provides immediate customer relief from high energy bills and an additional layer of stability, by adjusting customer bills during the winter months when weather conditions are either colder or warmer than normal.<sup>13</sup> A review of customer bill impacts in Arizona over the past few months illustrates the effectiveness of the weather component, including its symmetry and bill stabilization. As indicated in the graph attached as **Appendix B**, December's warmer than normal weather resulted in an upward adjustment to the average residential customer's bill. Conversely, when weather was colder than normal in January and February, the weather component credited customer bills. Over the course of these three months, the weather component worked to avoid the "peaks and valleys" effect that abnormal weather typically has on customer bills, and instead stabilized bills with moderate upward and downward adjustments. Indeed, with colder than normal weather extending into March, Southwest Gas estimates that in the first quarter of 2013 alone, the EEP's weather component has provided relief from high winter bills by crediting Arizona customers nearly \$15.4 million.

### **Cost of Capital**

Another benefit of full revenue decoupling is enhanced revenue stability. This contributes to the utility's improved financial health and leads to lower long-term debt costs

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<sup>12</sup> The results of the revenue decoupling component for calendar year 2013 will be the subject of an annual report filed with the Commission in April 2014.

<sup>13</sup> Pursuant to Sections 3.21 and 3.22 of the Settlement Agreement, the Company reports on the EEP's weather component in quarterly reports to the Commission.

which, in turn, benefit customers through positive credit ratings and future reduction in debt costs.

Credit ratings play an important role in capital markets by providing an effective and objective tool for market participants to evaluate and assess credit risk. As a result, Southwest Gas' credit ratings are a key factor in determining the required yield on the Company's debt securities and bank facilities, and the amount and terms of available unsecured trade credit. Indeed, decoupled rates, in conjunction with: (1) improved operating results; and (2) an improved capital structure, have resulted in upgrades to Southwest Gas' credit ratings. The table below displays the Company's current unsecured credit ratings compared to the ratings at June 30, 2010 (the end of the test period in the 2010 general rate case).

<u>Rating Agency</u>	<u>Last Change</u>	<u>Current</u>	<u>June 30, 2010</u>
S&P	March 2013	A-	BBB
Moody's	March 2012	Baa1	Baa2
Fitch	May 2012	A-	BBB

In addition, Southwest Gas' decoupled rate designs have been cited by the rating agencies as a contributing positive factor in rating upgrades. In the press release attached hereto as **Appendix C**, Fitch announces the Company's upgrade from BBB to BBB+, and states:

...a push toward more decoupled rate structures within SWX's operating jurisdictions has helped to lower some of the revenue volatility associated with the effects of weather and conservation. Fitch generally views the implementation of rate mechanisms such as decoupling that reduce cash flow volatility favorably.<sup>14</sup>

Further, in upgrading Southwest Gas from Baa2 to Baa1, Moody's cited decoupling as "...supportive to Southwest's credit quality."<sup>15</sup>

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<sup>14</sup> Fitch Ratings, *Fitch Ratings Upgrades Southwest Gas Corp. to 'BBB+'; Outlook Stable*, June 2, 2011, p.1.

<sup>15</sup> Moody's Investors Service, *Rating Action: Moody's Upgrades Southwest Gas Corp to Baa1 from Baa2; Outlook Stable*, March 15, 2012, p.1

A utility's regulatory environment is another key factor in its credit ratings. In order to gauge the level of regulatory risk for a utility and assess regulatory jurisdictions on a relative basis, Standard & Poor's (S&P) evaluates the relative credit supportiveness of regulatory jurisdictions based on quantitative and qualitative ratemaking factors that focus on four main categories: (1) the basic regulatory paradigm employed in the jurisdiction; (2) ratemaking procedures; (3) political influence; and (4) financial stability.<sup>16</sup> S&P then classifies each jurisdiction into one of five categories: (1) Most Credit-Supportive; (2) More Credit-Supportive; (3) Credit-Supportive; (4) Less Credit-Supportive; and (5) Least Credit-Supportive. In its December 2012 update of regulatory assessments, a copy of which is attached as **Appendix D**, S&P raised Arizona's regulatory assessment stating:

We revised Arizona to "Less Credit-Supportive" from "Least Credit-Supportive" to reflect decreasing regulatory time lags in deciding rate cases for the state's utilities, as well as the inclusion of lost fixed cost-recovery mechanisms and efforts to ease the burdens of meeting the state's ambitious renewable energy mandate. The Arizona Corporation Commission has been providing the state's utilities with improved recovery mechanisms in recent rate cases.<sup>17</sup>

S&P also cited the improved regulatory environment in Arizona for Southwest Gas due to the approval of decoupling, stating:

In our opinion, regulation in Arizona (historically considered one of the less credit-supportive jurisdictions) has improved substantially because the ACC approved a decoupled rate design in Southwest Gas's latest rate case.<sup>18</sup>

### **Energy Efficiency**

Southwest Gas is focused on prudently and gradually increasing its energy efficiency spending. The most recent Energy Efficiency and Renewable Energy Resource Technology Portfolio Implementation Plan (EE/RET Plan) approved by the Commission authorized an

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<sup>16</sup> Standard & Poor's Direct, *Assessing U.S. Utility Regulatory Environments*, November 7, 2008.

<sup>17</sup> Standard & Poor's Direct, *Standard & Poor's Revises Its U.S. Utility Regulatory Assessments*, December 28, 2012, p. 2.

<sup>18</sup> Standard & Poor's Direct, *Summary: Southwest Gas Corp.*, March 20, 2013, p. 4.

annual budget of \$4.7 million,<sup>19</sup> with an average cost to customers of approximately \$0.20 per month. Southwest Gas has prudently managed the approved budget, and is aggressively promoting energy efficiency programs that are both cost-effective and responsive to market demands. As a result, and only partially through Year 1 of its EE/RET Plan,<sup>20</sup> the Company has already surpassed its total 2011 spending.

In addition, with the inception of decoupling, Southwest Gas has been gradually reforming and renaming its Energy Services Department functions. The Company's newly created Energy Solutions and Customer Engagement departments place greater emphasis on market research, strategic outreach and customer communications with the goal of better understanding where new market opportunities for natural gas may exist.

#### **V. Additional Information Required by Settlement Agreement**

Section 3.23 of the Settlement Agreement requires Southwest Gas to address various factors related to the EEP's revenue decoupling component in its annual report. Several of those items are addressed below.<sup>21</sup>

##### **Customer Complaints Resulting From or Associated With Decoupling**

Southwest Gas provided service to over 1 million customers on decoupled rate schedules in 2012. In that same time frame, Southwest Gas did not receive any complaints regarding the annual decoupling component of the EEP. The Company received 7 billing-related complaints where its customer service representatives explained, among other things, how the monthly weather component of the EEP affects customer bills. The Company considered each complaint to be very high priority, and a senior member of its Pricing and Tariffs Department contacted each customer personally to ensure their concerns were fully

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<sup>19</sup> In Decision Nos. 73231 and 73229, the Commission approved an annual DSM budget of \$4.7 million with projected annual program savings of 1.4 million therms.

<sup>20</sup> The Year 1 Plan was effective June 1, 2012 and continues until May 31, 2013.

<sup>21</sup> The Company discusses other items listed in Section 3.23 of the Settlement Agreement, such as the removal of disincentives to energy efficiency and compliance with the EE Rules, in Section IV of this Report.

addressed. Southwest Gas actually received more customer inquiries regarding the difference between its Monthly Gas Cost and the currently low wholesale market cost of natural gas. These customers questioned why the Company's Monthly Gas Cost did not more closely reflect the current market price for natural gas and the Company was able to explain to their satisfaction that because the Company's Tariff requires the Monthly Gas Cost to be calculated based on a twelve-month rolling historical average, there is a lag between the time the costs are incurred and the time they are fully reflected in customer bills.

**Usage/Usage Per Customer Differences Between New and Existing Customers**

The information attached as **Appendix E** displays the usage per customer (UPC) for residential customers initiating service during 2011 (the most recent year for which a full twelve-months of data is available), and those initiating service between 2001-2010; 1991-2000; 1981-1990; 1971-1980; and prior to 1971. **Appendix E** also includes a comparison of the recorded and weather-adjusted monthly UPC for customers initiating service in 2011, and those initiating service prior to 2011. This data indicates that, in general, new customer UPC is less than it has historically been.

**Overall Customer Usage, UPC, and Customer Growth per Class on a Pre- and Post-Decoupling Basis**

Southwest Gas analyzed the five-year (2007 through 2012) changes in recorded number of customers and recorded volumes, for those rate schedules included in the EEP. The total changes are summarized in the table below.

	Customers	Volume	UPC
Residential	31,035	(29,779,435)	(41.2)
Non-Residential	(1,159)	(17,617,746)	(306.2)

In addition, actual and weather normalized UPC for Southwest Gas' single-family residential customers for the ten-year period from 2002 through 2012, is attached as **Appendix F**. This data shows a trend of declining UPC over the period for residential customers, the Company's largest customer class.

### **Customer Migration**

No Southwest Gas customers have migrated (i.e. elected to move) from a decoupled rate schedule to a non-decoupled schedule. The Company's non-decoupled rate schedules, with only one exception (the Company's rate Schedule No. G-25 – Transportation Eligible), either require the customer to install and operate a specific natural gas appliance, or are closed to service to new customers. Southwest Gas is not aware of any customers that converted to non-gas energy service.

### **Support for New Customer Growth Including the Encouragement of New and Economic Uses of Natural Gas**

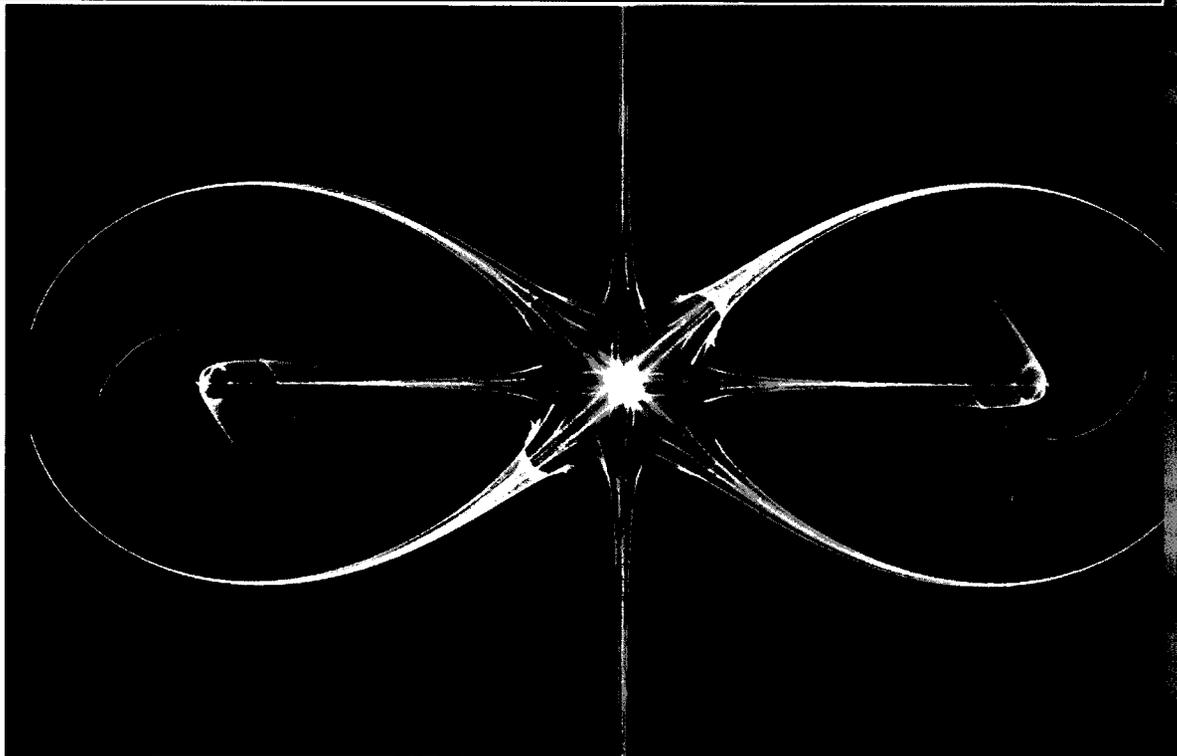
Southwest Gas continues to support new economic uses of natural gas and opportunities for new customer growth. For example, the Company continues to evaluate proposals for multi-family residential DSM programs, as it believes greater utilization of natural gas in the multi-family market will result in greater overall energy efficiency for all Arizona customers. The Company is also engaged in studying the use of liquefied natural gas (LNG) and compressed natural gas (CNG) for use as a motor fuel for long-haul trucking and other commercial applications.

## **VI. CONCLUSION**

As demonstrated by the information contained in this Report, customers have benefited by the Commission's decision to implement the EEP and the full revenue decoupling is functioning as the Commission and the Settlement Parties intended. Since Commission approval of the EEP, customers have and continue to benefit from enhanced bill stability by reducing the frequency of rate cases, by adjusting customer bills to remove the vagaries of abnormal weather, and by preventing Southwest Gas from increasing profits through increased sales. The Company therefore believes that the EEP remains in the public interest, and no good cause exists to suspend, terminate or modify the EEP. The EEP should be continued in its current form.

# **APPENDIX A**

# A Decade of Decoupling for US Energy Utilities: Rate Impacts, Designs, and Observations



**Pamela Morgan**

*Graceful Systems LLC*

Revised February 2013

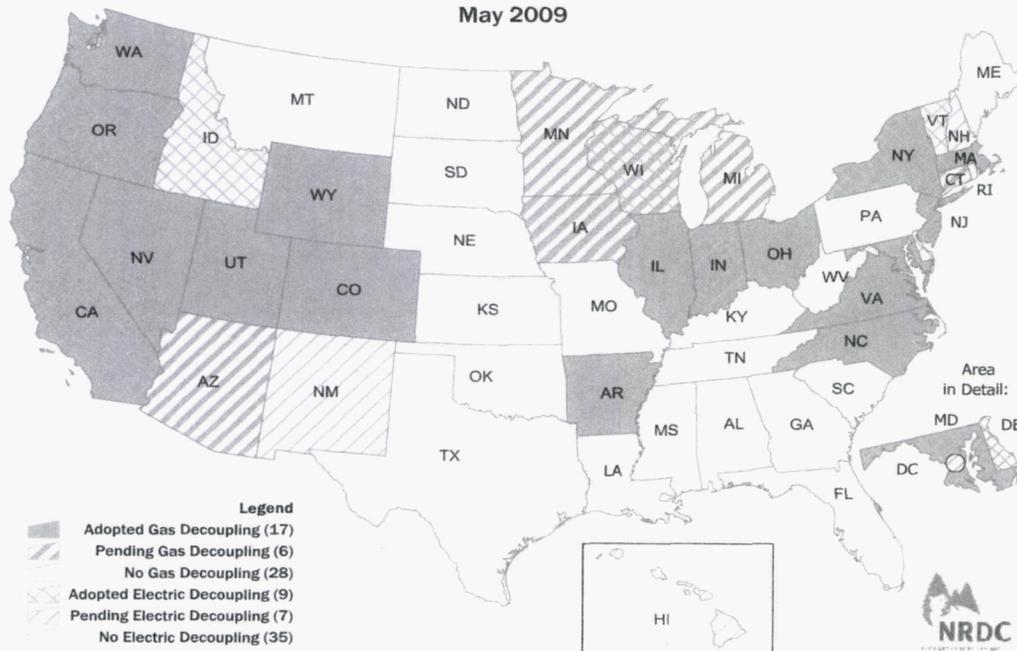
## Summary

With the turn of the century and its many energy-related events – the western power market crisis, record and unexpected natural gas prices, slowing (electricity) or falling (natural gas) demand, growing concern about climate change – energy utility funding for energy efficiency programs revived after the 1990s lull. Along with renewed funding, that spanned both types of energy utilities and restructured as well as vertically integrated markets, came a serious look at decoupling. Decoupling is a regulatory tool that first appeared in the 1980s as a means of helping utilities overcome the throughput incentive; i.e., the contribution to gross income that occurs with every energy unit sold because the unit (variable) price recovers some of a utility’s fixed costs. A decoupling mechanism separates a utility’s revenues from its unit sales volumes without affecting the design of customer rates.<sup>1</sup> In other words, utility customers continue to pay for service primarily according to the amount of energy they use. The utility’s revenue is based on a formula approved by its regulator.

This report builds on a 2009 report, which summarized the designs and rate impacts associated with the decoupling mechanisms of 28 local natural gas distribution utilities (LDCs) and 12 electric utilities, across 17 states. Much has happened in the three intervening years. This was the map the 2009 report addressed:

### Gas and Electric Decoupling in the US

May 2009

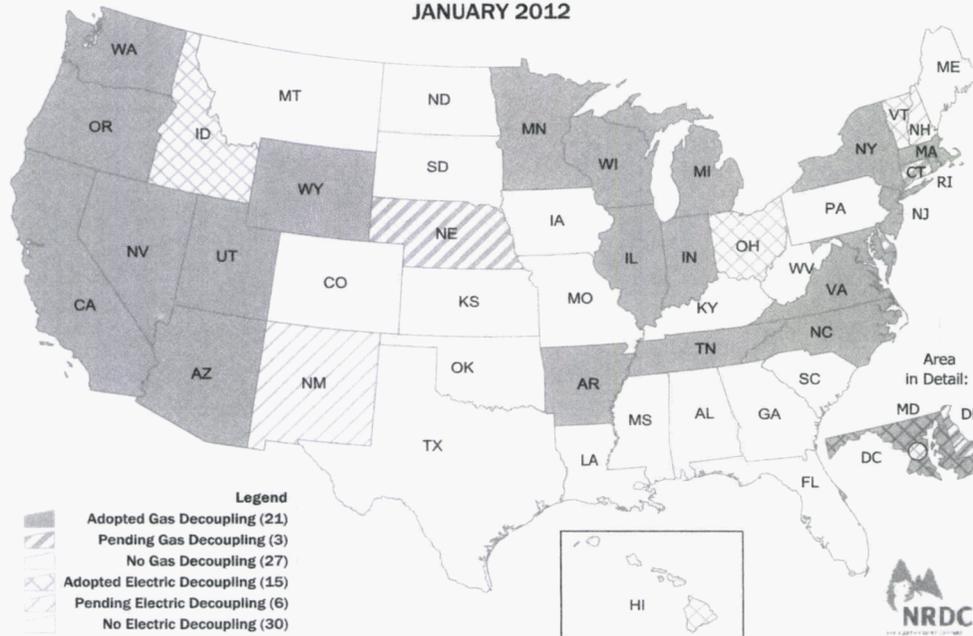


<sup>1</sup> Some also use the term “decoupling” to describe rate design changes, such as straight fixed-variable rates that recover all utility fixed costs in a fixed price per billing period and all variable costs according to usage. While these approaches achieve the similar results for utilities as decoupling mechanisms described above, they often do so with significant impact to customers. These impacts include shifting cost recovery within a customer class and weakening incentives to invest in energy efficiency and distributed generation. Moreover, the result can be rigid rate designs that may send wholly inadequate price signals and permit little experimentation. This report addresses only decoupling mechanisms that operate at the regulatory level, leaving rate design largely untouched.

Now covering 25 states, including 52 LDCs and 25 electric utilities,<sup>2</sup> this is the map that this report addresses:

## Gas and Electric Decoupling in the US

JANUARY 2012



This report<sup>3</sup> summarizes the decoupling mechanism designs these utilities use and the rate adjustments they have made under those mechanisms. Some of these utilities make decoupling adjustments monthly; some semi-annually; some annually; and others on an as-needed basis. In total, this report estimates the retail rate impacts of 1269 decoupling mechanism adjustments since 2005.

With respect to decoupling rate adjustments, even though jurisdictions around the U.S. have now performed a vastly greater number of adjustments, the primary conclusions of the prior study remain valid based on this updated and expanded research:

- Decoupling rate adjustments are mostly small – within plus or minus two percent of retail rates.** Across the total of all utilities and rate adjustment frequencies, 64% of all adjustments are within plus or minus 2% of the retail rate. This amounts to about \$2.30 per month for the average electric customer, and about \$1.40 per month for the average natural gas customer.<sup>4</sup>

<sup>2</sup> Indication on the map that a given state has adopted decoupling for its gas or electric utilities, or both, does not necessarily mean that every utility in the state has a decoupling mechanism. The detailed state reports that appear after this summary indicate clearly which utilities in each of the states indicated on the map has a decoupling mechanism and whether that mechanism is currently active or has expired.

<sup>3</sup> This report is a corrected version of the report dated December 2012. That report inadvertently omitted four decoupling mechanisms in Michigan: three for natural gas utilities and one for an electric utility. This report includes those mechanisms in all tables and the Michigan-specific detail is now correct.

<sup>4</sup> The electric calculation uses an average monthly consumption of 1000 kWh and the 2010 annual average residential price of 11.54¢/kWh from the Energy Information Administration (EIA). An average monthly consumption does not make as much sense for natural gas customers because usage is seasonal. EIA's 2010 report on Trends in U.S. Residential Natural Gas Consumption reported a 2009 average annual use of 74 Mcf for

About 80% are within plus or minus 3%. The primary distinction on size variation exists between mechanisms that adjust monthly and those that adjust on some other basis, most commonly annually. For natural gas mechanisms that adjust monthly, the adjustments are within plus or minus 2% only half of the time; for electric monthly decoupling mechanisms, this is 65% of the time. Electric decoupling mechanisms that adjust other than monthly have been within plus or minus 2% most of the time – 85%. Gas mechanisms that adjust other than monthly have stayed within this range 75% of the time. In other words, the more frequent adjustments yield more volatile rate changes.

- **Decoupling mechanism adjustments yield both refunds and surcharges.**<sup>5</sup> Across all electric and gas utilities and all adjustment frequencies, 63% were surcharges and 37% were refunds. There are many reasons that actual revenues can deviate from the revenues assumed in ratemaking. Most of the mechanisms do not adjust revenues to remove, or normalize, the effects of weather.<sup>6</sup> If the mechanism does not normalize weather, the primary cause of greater and lower sales volumes, particularly on a monthly basis or for residential rate schedules, is usually weather effects. Other causes include energy efficiency, programmatic and otherwise, customer conservation, price elasticity, and economic conditions. Regardless of the particular combination of causes for any given adjustment, no pattern of either rate increases or decreases emerges.

Figure 1, below, summarizes the distribution of rate adjustments due to decoupling from 2005 to 2011,<sup>7</sup> followed by the table<sup>8</sup> that supports the chart.

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residential customers. Spreading this over 12 months is 6.16 Mcf, which when multiplied by the 2010 average annual rate of \$11.39/Mcf is about \$70.

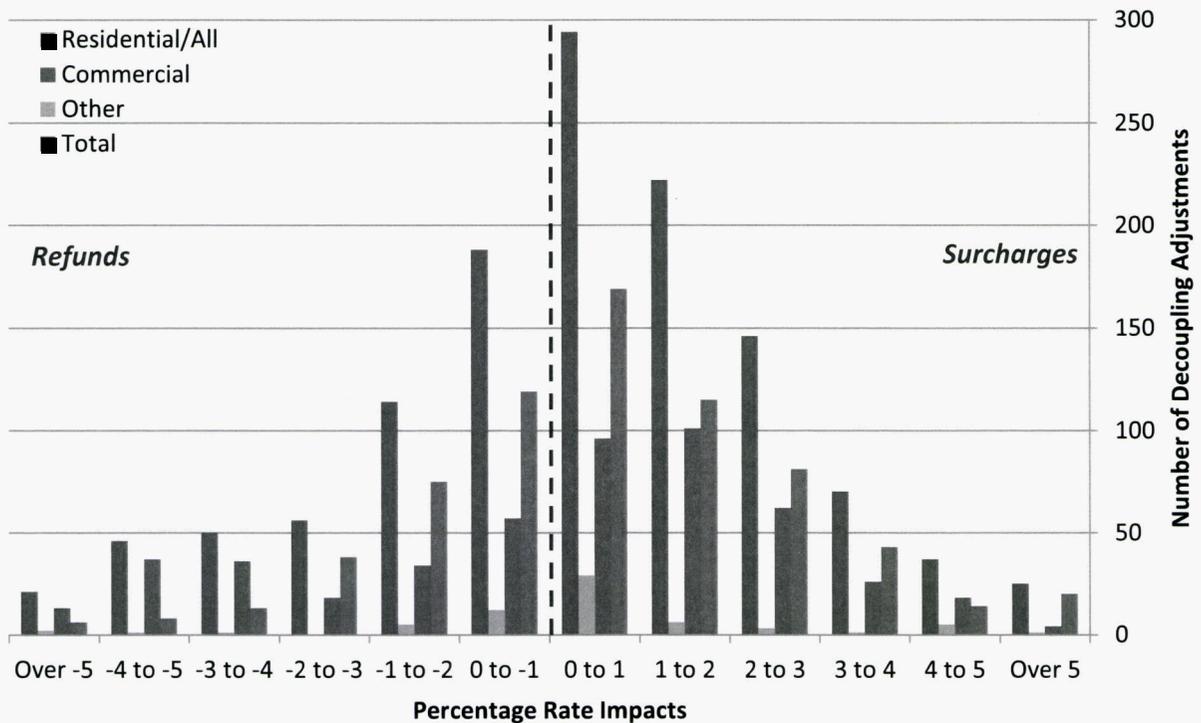
<sup>5</sup> The calculations are not the actual rate changes that occurred because this is usually impossible to determine unless the decoupling adjustment is occurring by itself and the utility calculates the rate change in its filing. Otherwise, the actual rate change depends on what rate adjustments might be ending (including a prior decoupling adjustment) and what new ones other than decoupling might be starting. See the section on methodology for more information.

<sup>6</sup> For natural gas utilities, it is common that a separate mechanism adjusts rates for weather variations for the winter heating season months only.

<sup>7</sup> This chart and table show “All” adjustments as a percentage of retail rates, regardless whether gas or electric, monthly or annual. Adjustments done either just for residential customers or for the entire customer base appear under the category of “Residential/All.” The “Commercial” category captures the customer class often referred to as general service or small general service. “Other” includes the few decoupling mechanism adjustments found that applied to industrial or larger commercial customers. For some utilities, the study recorded only the residential and general service or small commercial adjustments, even though the mechanisms applied to other rate schedules. This was done to keep the number somewhat manageable and because retail rate detail at that level is not available.

<sup>8</sup> In all of these tables, the positive number ranges mean that customers received surcharges while the negative number ranges mean that customers received refunds.

## Total Utility Decoupling Adjustment Rate Impacts



Adjustment Amount	Residential/All	Commercial	Other	Total
Over 5	20	4	1	25
4 to 5	14	18	5	37
3 to 4	43	26	1	70
2 to 3	81	62	3	146
1 to 2	115	101	6	222
0 to 1	169	96	29	294
0 to -1	119	57	12	188
-1 to -2	75	34	5	114
-2 to -3	38	18		56
-3 to -4	13	36	1	50
-4 to -5	8	37	1	46
Over -5	6	13	2	21

In addition, this report updates the summary of the features various states and utilities have used in constructing their decoupling mechanisms. Although there are interesting variations, a notable similarity has emerged in designs, with differentiation depending on the utility's status as either a distribution only utility or a vertically integrated<sup>9</sup> electric utility. This report also reviews state decisions whether or not to reduce a utility's authorized return on common equity (ROE) in conjunction with the

<sup>9</sup> For purposes of this report, vertically-integrated utility refers to any utility that owns at least some of the generation it uses to provide retail service, whether or not it owns a majority or all. Thus, the report considers the California utilities vertically integrated even though they purchase a significant amount of generation.

adoption of decoupling for that utility, the amount of any such reduction and the reasons why and why not. The conclusion discusses observations made on the topic of decoupling during the preparation of this report.

Immediately below is a brief explanation of “decoupling”<sup>10</sup> as used in this report, followed by a short description of the methodology used to calculate rate adjustments and a summary of the findings. The discussions of features and ROE follow, with the conclusion. Decoupling information on a state-by-state basis is attached, along with the table showing the ROE reduction made, if any, in each of the cases in which a commission adopted a decoupling mechanism.

## Decoupling

Decoupling, as used in this study, is a regulatory mechanism that adjusts rates periodically to ensure that the amount a utility books as revenue for fixed cost recovery is no more and no less than the amount of revenue authorized by the regulator for that cost coverage. Under traditional ratemaking methodologies, a utility’s revenues result from the combination of its customer accounts, customer energy use (in therms or kilowatt-hours) and customer demand (this usually applies only to commercial customers with larger usage and industrial customers) and the rates the regulator has approved. For residential and smaller-usage commercial customers, most of the utility’s revenue will derive from energy use. This is what causes the throughput incentive: the more energy customers use, the more revenue the utility collects and, to the extent this revenue exceeds variable costs, the better its financial performance.

Decoupling changes the driver of revenue from energy use to a basis approved by the regulator in the decoupling mechanism design. Some mechanisms use the revenue authorized in the utility’s last general rate case; others adjust that for specific cost changes or according to a formula, and still others calculate revenue on a per-customer account basis rather than as a single dollar amount.

A decoupling mechanism does not affect the design of customer utility rates. For example, most states design rates for customers with relatively low levels of use such that the biggest driver of a customer’s bill is the amount of energy they use. Such a design provides the best incentive for customers to conserve or use energy more efficiently because the reduced consumption translates directly into a reduced bill.

On some regular basis, a decoupling mechanism causes a rate adjustment to ensure that customers, in effect, receive refunds or pay surcharges based on whether the revenues the utility actually received from customers were less or greater than the revenues the mechanism calculates. This difference can occur for many reasons, primary among which are weather, economic conditions, energy efficiency programs and incentives, and customer behavior that cause the use of electricity or natural gas to differ from amounts assumed in the ratemaking process.

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<sup>10</sup> For a more in-depth explanation of decoupling and decoupling mechanisms, see Regulatory Assistance Project, *Revenue Regulation and Decoupling: A Guide to Theory and Application*, June 2011, [www.raponline.org/document/download/id/902](http://www.raponline.org/document/download/id/902); National Action Plan for Energy Efficiency, *Aligning Utility Incentives with Investments in Energy Efficiency*, November 2007, [www.epa.gov/cleanenergy/energy-programs/suca/resources.html](http://www.epa.gov/cleanenergy/energy-programs/suca/resources.html); Natural Resources Defense Council, *Removing Disincentives to Utility Energy Efficiency Efforts*, May 2012, [www.nrdc.org/energy/decoupling/](http://www.nrdc.org/energy/decoupling/); Sullivan, D., D. Wang and D. Bennett, “Essential to Energy Efficiency but Easy to Explain: Frequently Asked Questions about Decoupling,” *The Electricity Journal*, Vol 24, Issue 8, October 2011.

The overwhelming majority of decoupling mechanisms cover only a utility’s fixed costs associated with local delivery of natural gas or electricity.<sup>11</sup> Seven electric utility decoupling mechanisms, however, include the fixed costs associated with generating plants owned by the utility or other supply-related fixed costs.<sup>12</sup>

## Methodology

Rate adjustments made pursuant to decoupling mechanisms are reported here as a percentage of retail rates. For a few utilities, as noted in footnotes, this percentage rate change was either specified in the adjustment filing or provided by the utility for purposes of this study. For most of the adjustments, however, utility filings provided with the adjustment but not the retail rate. To estimate the rate impact, the report uses data from the Energy Information Administration (EIA). For gas utilities, the data is generally the appropriate class (residential, commercial or industrial) for the year of the adjustment. 2012 is an average of the months to date. For gas utilities that make monthly decoupling adjustments, the study used monthly EIA gas prices. For months that did not have a retail price, the study uses the price from the month before. For electric utilities, utility specific retail prices are available for years before 2011. For 2011 and 2012 adjustments, the study uses statewide data except as noted. All data on the adjustments are from utility filings, with any additional calculations noted. The resulting adjustment percentages should not be viewed as precise; these are estimates that are correct in general magnitude, not tenths or hundredths of a percentage point.

Moreover, regardless of whether the rate impact is from the utility or calculated from EIA data, the percentage shown is not necessarily what customers experienced. Experienced rate changes would vary depending on whether the prior decoupling adjustment was more or less than the adjustment being put into place. For example, if the prior adjustment was a refund of 0.02 cents per kWh and the new adjustment is a refund of 0.01 cents per kWh, customers will experience a rate increase, even though the adjustment is negative because the prior adjustment terminates. Experienced rate changes may also depend on whether the utility was changing rates for any other adjustment clauses at the time, as is often the case.

## Summary Tables and Charts

Below are chart/table sets for gas utilities that make decoupling adjustments monthly and those that make decoupling adjustments annually or on some frequency other than monthly, and the same two sets for electric utilities. Overall, the charts reveal some differences in the distribution of surcharges and refunds and the overall rate impacts between (1) gas utilities and electric utilities; and (2) decoupling mechanisms that make monthly rate adjustments and those that make adjustments on some other basis. The table below summarizes these differences:

Frequency Of	Gas Utilities		Electric Utilities	
	Surcharges	Refunds	Surcharges	Refunds
Mechanisms Adjusting Monthly	49%	51%	66%	34%
Mechanisms Adjusting “Other”	65%	30%	64%	36%

<sup>11</sup> For natural gas utilities, these fixed costs are virtually all of their fixed costs, although some pipeline-related fixed costs may flow through purchased gas cost adjustment clauses. For electric utilities, the limitation to distribution fixed costs stems from state retail market restructuring, which resulted in electric utilities that do not own generation or, if they do so, do not include such generation in revenue requirement in a traditional sense.

<sup>12</sup> This could include the fixed costs of transmission as well.

## ***A State-By-State Look At Decoupling***

### **Arizona**

Arizona presently has decoupling in place for one gas utility. On January 6, 2012, the Arizona Corporation Commission (ACC) adopted decoupling for Southwest Gas Company in Docket No. G-01551A-10-0458, decision # 72723, approving a stipulation containing the mechanism. The terms of the Stipulation indicate that Southwest Gas agreed to a 25 basis point reduction in its authorized return on common equity (ROE) as part of the settlement, along with a one-time \$2.3 million revenue requirement reduction.

The decoupling mechanism appears in Arizona Gas Tariff No. 7, sheet 92 as the “Energy Efficiency Enabling Provision.” For November through April, the mechanism includes a weather adjustment, calculating the per-customer margin revenue differences of actual versus normal (rate case” temperatures and making a volume adjustment on each customer’s bill. The decoupling component applies year-round and calculates, per rate schedule, the difference between actual billed margin per customer and authorized margin per customer (stated in the tariff). The utility may not recover any surcharges that would raise its earnings above the authorized ROE, and there is a 5 percent cap on adjustments in any one year, with any balance carried forward to future years without interest. The first adjustment filing under this tariff will not occur until 2013.

For one of its major electric utilities – Arizona Public Service Company – and another gas utility – UNS Gas Company, the ACC instead approved lost revenue recovery mechanisms that account only for margins lost as a result of compliance with Arizona’s energy efficiency and distributed generation standards. APS Docket No. E-01345A-11-0224; UNS Gas Docket No. G-04204A-11-0158.

### **Arkansas**

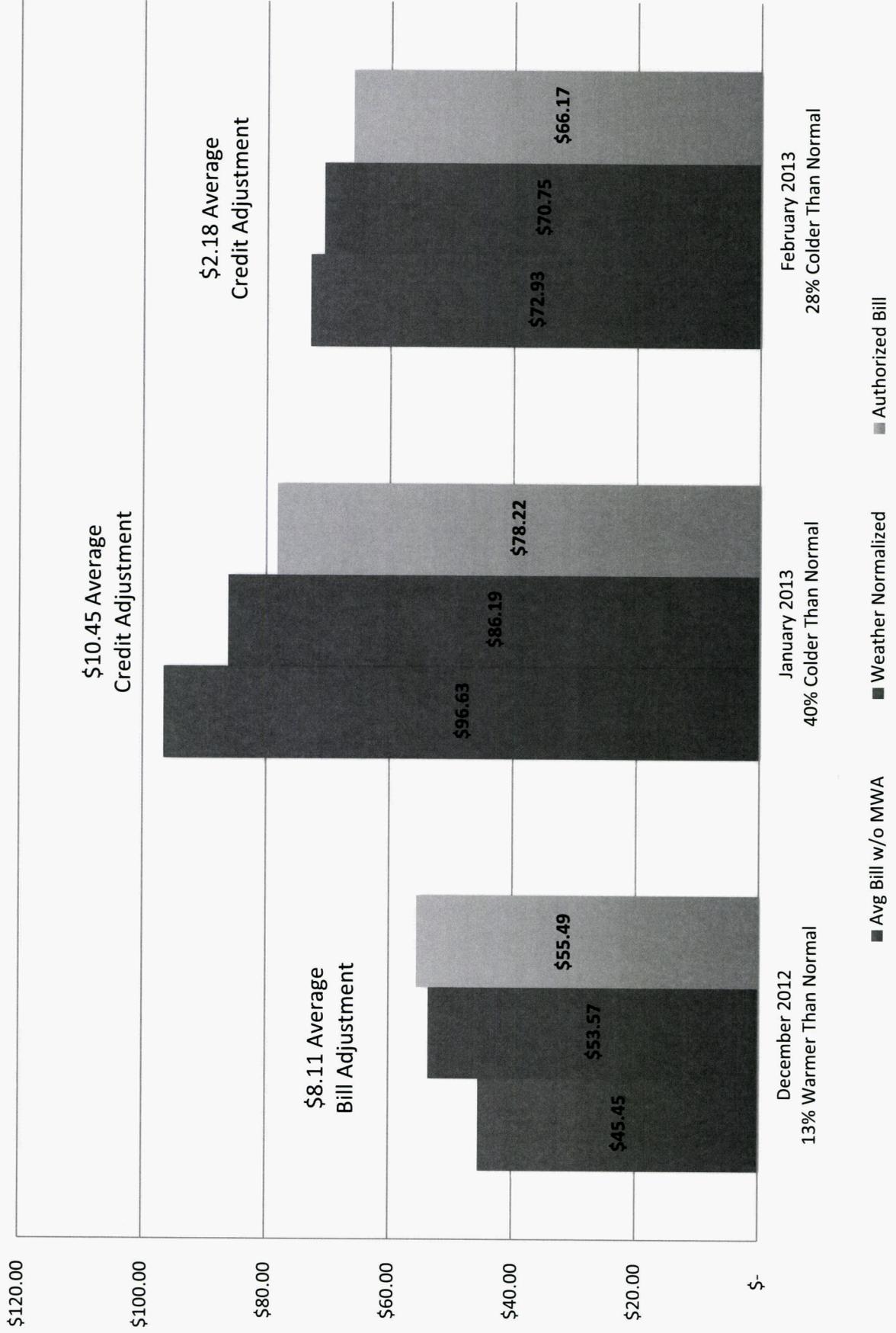
Beginning in 2007, Arkansas’ three natural gas utilities put in place decoupling tariffs known as Billing Determinant Adjustments for a three-year trial period. Arkansas Oklahoma – Case No. 07-026-U, Order No. 7 (November 2007) (by settlement agreement; 10 basis point ROE reduction included); Arkansas Western – Case No. 06-124-U, Order No. 6 (July 2007) (by settlement agreement; 25 basis point ROE reduction included); CenterPoint Energy Resources – Case No. 06-161-U, Order No. 6 (October 2007) (by settlement agreement; 10 basis point ROE reduction included). Arkansas Oklahoma’s tariff has now expired. Arkansas Western’s Billing Determinant Adjustment Tariff, Rider No. 3.6 expires December 31, 2013. CenterPoint Energy Resources’ Billing Determinant Adjustment Tariff, Rider No. 6 extends through March 31, 2015. Both tariffs reconcile actual weather-adjusted revenues to rate case revenues for the residential and small business classes only and authorize a surcharge, specific to each class, for under-recovery (net across all schedules). There is no refund for over-recovery.

In 2010, the Commission approved lost revenue recovery for all utilities as part of an order on energy efficiency. Docket No. 08-137-U, Order No. 14. The Order modified the existing BDA’s for gas utilities to ensure that these riders did not double-collect. See, e.g. Docket No. 07-078-TF for Arkansas Western Gas Company, Order No. 26, June 30, 2011.

Neither Arkansas Oklahoma nor Arkansas Western made any adjustments because the amounts accrued under their mechanisms would have resulted in refunds, rather than surcharges. The table below shows the adjustments for CenterPoint Energy Resources.

# **APPENDIX B**

# Residential Weather Adjustments



## **APPENDIX C**

# Fitch Ratings

Tagging Info

**Fitch Ratings Upgrades Southwest Gas Corp. to 'BBB+'; Outlook Stable** Ratings

02 Jun 2011 3:39 PM (EDT)

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Fitch Ratings-New York-02 June 2011: Fitch Ratings has upgraded its ratings on Southwest Gas Corp.'s (SWX) as follows:

Southwest Gas Corporation

- Long-term Issuer Default Rating (IDR) to 'BBB+' from 'BBB';
- Senior Unsecured Rating including industrial development revenue bonds to 'BBB+' from 'BBB'.

Also, Fitch affirms the following:

- Short-term IDR and commercial paper at 'F2'.

In addition, the Rating Outlook for the above securities has been revised to Stable from Positive.

Fitch's upgrade reflects Fitch's expectations for continued strength in SWX's credit metrics supported by stable earnings and cash flow from SWX's gas utility operations. The majority of SWX's cash flow and operating income is being generated by SWX's gas distribution operations which should provide for continued earnings and cash flow stability. Despite the significant economic downturn affecting SWX's operating regions, its credit metrics have improved as a result of the combination of favorable rate decisions, the slowdown of growth, and improvements in capital structure. More decoupled rate structures in NV and CA have added increased stability to revenue and cash flow. Meanwhile, slower growth has helped mitigate some of the regulatory lag prior growth spending had caused and helped to boost earnings. Additionally, over the past five years SWX has taken steps to increase the common equity portion of its capital structure moving from 36.2% Common Equity/Total Capital in 2005 to 50.9% in 2010 through its dividend reinvestment program and through increased retained earnings. As a result SWX had 2010 Debt/EBITDA and EBITDA to Interest coverage of 2.8 times (x) and 5.4x, respectively, ahead of Fitch's forecast of 3.0x and 5.0x for the same period.

As mentioned, a push toward more decoupled rate structures within SWX's operating jurisdictions has helped to lower some of the revenue volatility associated with the effects of weather and conservation. Fitch generally views the implementation of rate mechanisms such as decoupling that reduce cash flow volatility favorably; more predictable cash flow will translate to lower business risk for SWX. SWX is currently in the middle of a rate case in AZ which included a request for a decoupled rate structure. Implementation of such a rate structure in AZ would benefit SWX's business risk profile. However, Fitch believes that SWX's credit profile supports its rating upgrade given the strength of the company's metrics and operations.

Fitch notes that SWX's credit measures can be affected over the short term due to the recovery lag associated with gas supply acquisitions. Gas costs that are incurred in excess of amounts embedded in customer rates are generally deferred and recovered under its purchased gas adjustments (PGAs). The company uses its bank lines for borrowings to fund gas purchases. In periods of under-recovery, there may be some near-term negative effect on coverage ratios and capital structure.

SWX has the ability to draw on a \$300 million credit facility which it uses primarily to temporarily finance under-collected PGA balances. This facility was extended by one year in April 2007 to expire in April 2012. SWX has designated \$150 million of the facility as long-term debt and the remaining \$150 million for working capital purposes. Historically, usage of the facility has been low and concentrated in the first half of the winter heating period when gas purchases require temporary financing. As of March 31, 2011, there were no borrowings outstanding on the credit facility, leaving full availability under the revolver.

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**Applicable Criteria and Related Research:**

--'Corporate Rating Methodology' Aug. 16, 2010;  
--'Rating North American Utilities, Power, Gas and Water Companies Special Report,' May 16, 2011;  
--'Recovery Ratings and Notching Criteria for Utilities,' May 12, 2011.

**Applicable Criteria and Related Research:**

Corporate Rating Methodology  
Rating North American Utilities, Power, Gas, and Water Companies  
Recovery Ratings and Notching Criteria for Utilities

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## **APPENDIX D**

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## Standard & Poor's Revises Its U.S. Utility Regulatory Assessments

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# Standard & Poor's Revises Its U.S. Utility Regulatory Assessments

In Standard & Poor's Ratings Services' commentary "Assessing U.S. Utility Regulatory Environments," (originally published Nov. 7, 2007 and most recently republished Nov. 15, 2011 on RatingsDirect), we discussed our views on what constitutes a credit-supportive regulatory climate. We then used those factors to create assessments of the regulatory environments in states that regulate the electric and gas utilities that we rate. We based the assessments of relevant jurisdictions on quantitative and qualitative factors, focusing on four main categories: the basic regulatory paradigm employed in the jurisdiction, ratemaking procedures, political influence, and financial stability.

The table and map below show our updated assessments of regulatory jurisdictions.

We revised Arizona to "Less Credit-Supportive" from "Least Credit-Supportive" to reflect decreasing regulatory time lags in deciding rate cases for the state's utilities, as well as the inclusion of lost fixed cost-recovery mechanisms and efforts to ease the burdens of meeting the state's ambitious renewable energy mandate. The Arizona Corporation Commission has been providing the state's utilities with improved recovery mechanisms in recent rate cases.

We revised Indiana to "Credit-Supportive" from "More Credit-Supportive" in response to the significant disallowance of project costs on Duke Energy Indiana Inc.'s new integrated gasification combined-cycle (IGCC) generation plant following the breakdown in the review process established at the project's outset that was designed to avoid such an outcome. In addition, less credit-supportive regulatory decisions due to regulatory lag and disallowances have provided insufficient revenue to adequately recover investments and operating costs with a fair return.

We revised our assessment of Louisiana to "Credit-Supportive" from "Less Credit-Supportive" to reflect an improving trend in regulatory actions. Over the past several years, the regulated utilities in Louisiana have benefited from the implementation of formula rate plans that enable the companies to earn at or close to their allowed returns, recover approved capital spending without the need for a full rate case filing, and recover storm and abandoned costs through securitizations.

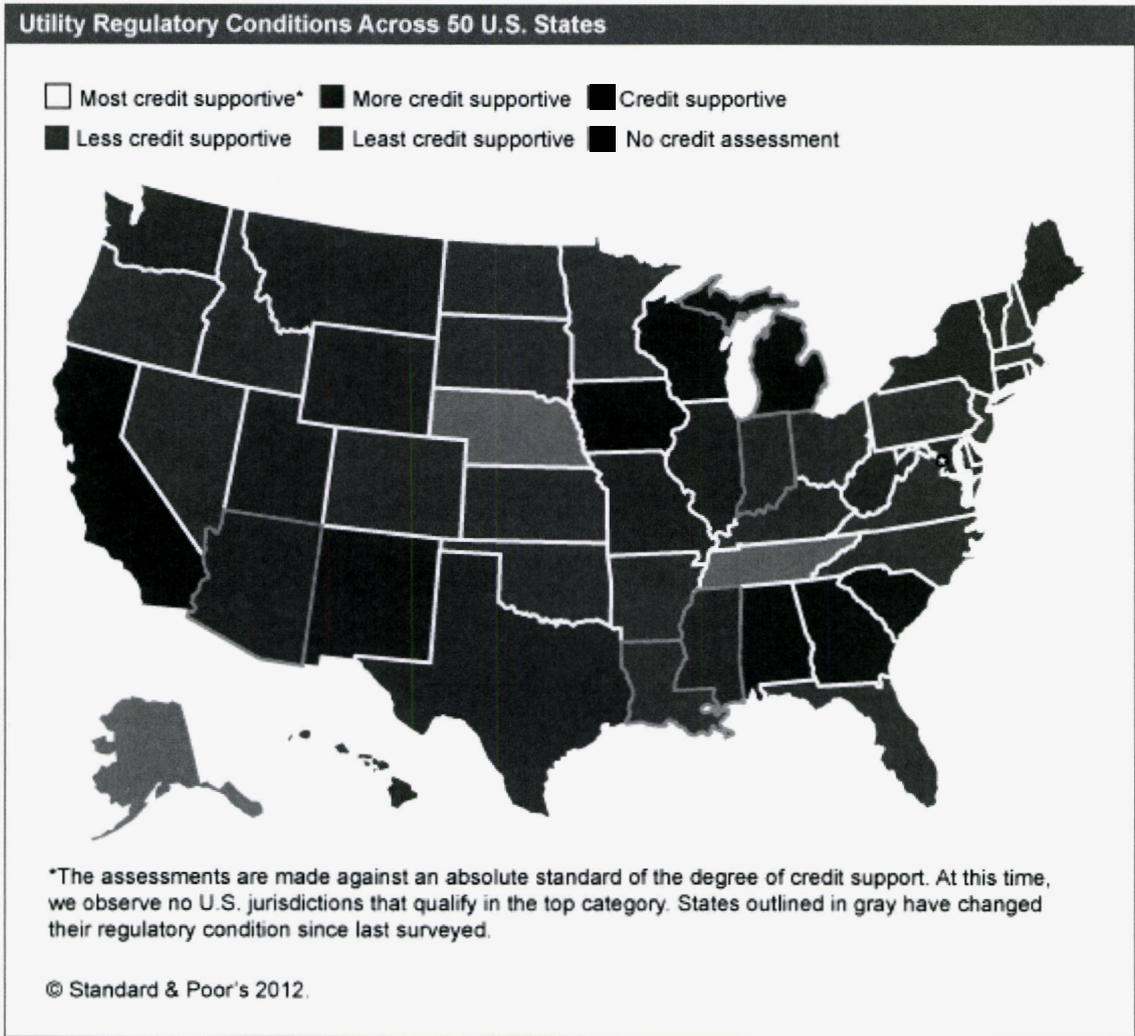
We revised Michigan to "More Credit-Supportive" from "Credit-Supportive" reflecting our opinion that legislative reforms that mandated a 12-month deadline for rate cases, self-implemented interim rate increases, forecast test years, and other risk-reducing features are permanent. We view the 19 rate cases since the reforms as generally supportive of credit quality. Overall, the reforms have reduced regulatory lag and provided utilities with a reasonable opportunity to earn the returns authorized by regulators.

We revised our assessment of Mississippi to "Less Credit-Supportive" from "Credit-Supportive" to reflect unexpected and potentially detrimental actions on Mississippi Power Co.'s large IGCC generation facility now under construction. Regular prudence reviews and recovery of financing costs during construction (as allowed but not required by legislation) should be containing risk for both the company and ratepayers, but the process has foundered amid legal challenges. The inability of the company to thus far recover financing costs during construction creates significant regulatory uncertainty.

**Regulatory Jurisdictions For Utilities Among U.S. States**

<b>Most credit supportive</b>	<b>More credit supportive</b>	<b>Credit supportive</b>	<b>Less credit supportive</b>	<b>Least credit supportive</b>
Alabama	Arkansas	Arizona*	Delaware	
California	Colorado	Connecticut	Dist. of Columbia	
Georgia	Florida	Hawaii	New Mexico	
Iowa	Idaho	Illinois		
Michigan*	Indiana¶	Maine		
South Carolina	Kansas	Maryland		
Wisconsin	Kentucky	Mississippi¶		
	Louisiana*	Missouri		
	Massachusetts	Montana		
	Minnesota	New York		
	Nevada	Rhode Island		
	New Hampshire	Texas		
	New Jersey	Utah		
	North Carolina	Vermont		
	North Dakota	Washington		
	Ohio	West Virginia		
	Oklahoma	Wyoming		
	Oregon			
	Pennsylvania			
	South Dakota			
	Virginia			

\*Assessment raised. ¶Assessment lowered.



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# **APPENDIX E**

**SOUTHWEST GAS CORPORATION  
ARIZONA JURISDICTION  
2012 RESIDENTIAL USE PER CUSTOMER (in therms)  
BY INSTALL YEARS**

	<u>2011-2012</u>	<u>2001-2010</u>	<u>1991-2000</u>	<u>1981-1990</u>	<u>1971-1980</u>	<u>up to 1970</u>
Jan	49.9	63.5	69.3	56.3	75.2	78.2
Feb	34.5	47.2	51.6	42.8	53.0	54.6
Mar	27.5	37.5	40.2	33.5	44.6	46.0
Apr	18.2	23.7	23.3	20.1	23.5	23.9
May	18.9	15.7	14.7	12.9	12.6	12.8
Jun	9.8	12.6	11.8	10.7	11.0	11.2
Jul	7.5	9.9	9.6	8.9	9.3	9.3
Aug	7.0	9.2	8.9	8.3	8.8	8.9
Sep	7.5	9.8	9.3	8.3	9.3	9.5
Oct	8.9	11.4	10.6	9.3	9.8	10.1
Nov	13.8	17.6	16.7	13.9	14.0	14.1
Dec	<u>23.5</u>	<u>30.7</u>	<u>32.2</u>	<u>26.2</u>	<u>31.2</u>	<u>32.4</u>
Total	<u><u>227.0</u></u>	<u><u>288.8</u></u>	<u><u>298.2</u></u>	<u><u>251.2</u></u>	<u><u>302.3</u></u>	<u><u>311.0</u></u>

**SOUTHWEST GAS CORPORATION**  
**TOTAL ARIZONA: DISTRICTS 32 - 49**  
**RESIDENTIAL GAS SERVICE G-5 SINGLE FAMILY**  
**INSTALL YEAR 2011**  
**JANUARY 2012 - DECEMBER 2012**  
**WEATHER NORMALIZATION ADJUSTMENT**

Month	Year	Actual Consumption Per Customer (Therms)	Weather Normalized Consumption Per Customer (Therms)	Normal Heating Degree Days (Cycle Billed)	Actual Heating Degree Days (Cycle Billed)	Billed Customers	Actual Sales Volumes (Therms)	Weather Normalized Sales Volumes (Therms)	Weather Normalization Adjustment (Therms)	HDD Coefficients
July	2012	8.1	8.1	0.0	0.0	5,943	47,926	47,926	0	
August	2012	7.6	7.6	0.0	0.0	5,953	45,276	45,276	0	
September	2012	8.2	8.2	0.0	0.0	5,965	48,784	48,784	0	
October	2012	9.9	9.9	1.5	0.0	5,982	59,242	59,242	0	
November	2012	15.3	16.0	26.0	21.5	6,016	92,206	96,001	3,795	0.140200
December	2012	25.5	39.3	220.5	116.5	6,048	154,000	237,719	83,719	0.133100
January	2012	46.2	48.8	343.5	326.0	5,380	248,636	262,420	13,784	0.146400
February	2012	35.1	42.7	274.0	223.5	5,681	199,632	242,551	42,919	0.149600
March	2012	28.6	30.8	173.0	159.0	5,866	167,905	180,519	12,614	0.153600
April	2012	19.5	19.7	52.0	50.5	5,940	115,560	117,123	1,563	0.175400
May	2012	13.1	13.2	9.5	9.0	5,926	77,358	77,955	597	0.201600
June	2012	10.8	10.8	0.5	0.0	5,934	64,018	64,018	0	
<b>Total</b>		<b>227.9</b>	<b>255.1</b>	<b>1,100.5</b>	<b>906.0</b>	<b>70,634</b>	<b>1,320,543</b>	<b>1,479,534</b>	<b>158,991</b>	

**SOUTHWEST GAS CORPORATION  
TOTAL ARIZONA: DISTRICTS 32 - 49  
RESIDENTIAL GAS SERVICE G-5 SINGLE FAMILY  
MINUS INSTALL YEAR 2011**

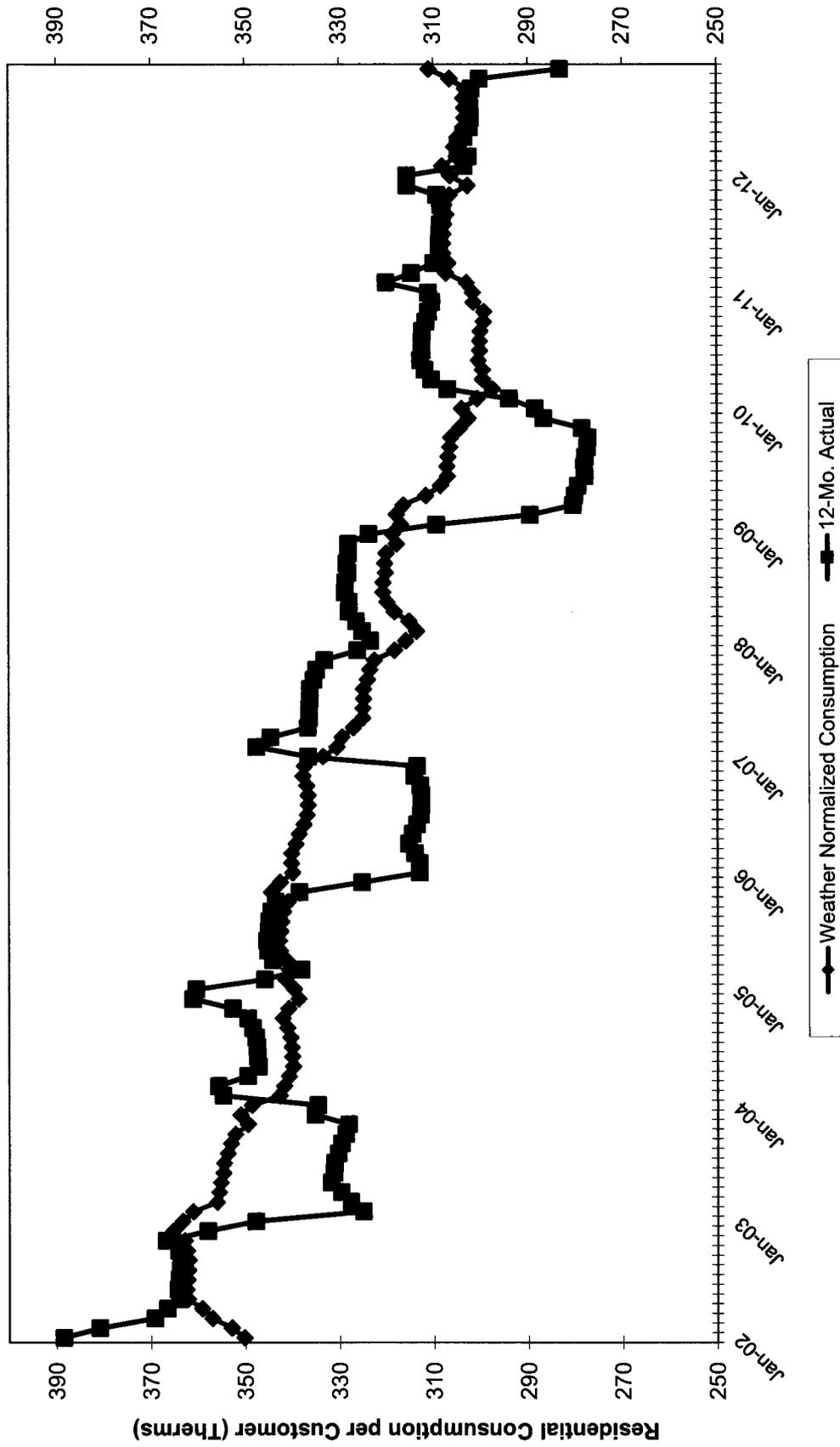
**JANUARY 2012 - DECEMBER 2012**

**WEATHER NORMALIZATION ADJUSTMENT**

Month	Year	Actual Consumption Per Customer (Therms)	Weather Normalized Consumption Per Customer (Therms)	Normal Heating Degree Days (Cycle Billed)	Actual Heating Degree Days (Cycle Billed)	Billed Customers	Actual Sales Volumes (Therms)	Weather Normalized Sales Volumes (Therms)	Weather Normalization Adjustment (Therms)	HDD Coefficients
July	2012	9.5	9.5	0.0	0.0	868,247	8,251,091	8,251,091	0	
August	2012	8.9	8.9	0.0	0.0	867,388	7,705,221	7,705,221	0	
September	2012	9.2	9.2	0.0	0.0	868,179	8,021,419	8,021,419	0	
October	2012	10.4	10.4	1.5	0.0	869,055	9,061,566	9,061,566	0	
November	2012	15.8	16.5	26.0	21.5	876,368	13,878,626	14,431,527	552,901	0.140200
December	2012	30.0	43.8	220.5	116.5	882,690	26,448,196	38,666,744	12,218,548	0.133100
January	2012	64.8	67.3	343.5	326.0	878,733	56,923,563	59,174,877	2,251,314	0.146400
February	2012	48.1	55.6	274.0	223.5	878,541	42,232,603	48,869,805	6,637,202	0.149600
March	2012	38.2	40.3	173.0	159.0	879,417	33,588,719	35,479,817	1,891,098	0.153600
April	2012	22.7	23.0	52.0	50.5	875,911	19,891,332	20,121,784	230,452	0.175400
May	2012	14.3	14.4	9.5	9.0	871,865	12,452,621	12,540,505	87,884	0.201600
June	2012	11.7	11.7	0.5	0.0	869,200	10,182,958	10,182,958	0	
<b>Total</b>		<b>283.6</b>	<b>310.6</b>	<b>1,100.5</b>	<b>906.0</b>	<b>10,485,594</b>	<b>248,637,915</b>	<b>272,507,314</b>	<b>23,869,399</b>	

# **APPENDIX F**

**SOUTHWEST GAS CORPORATION**  
**ARIZONA**  
**RESIDENTIAL CUSTOMER CLASS G-5**  
**ACTUAL AND WEATHER NORMALIZED CONSUMPTION PER CUSTOMER**  
**12-MONTH TOTALS**  
**JANUARY 2002 - DECEMBER 2012**



## **EXHIBIT 2**

**SOUTHWEST GAS CORPORATION  
ARIZONA  
COMPUTATION OF ENERGY EFFICIENCY ENABLING PROVISION RATE ADJUSTMENT**

Line No.	Description (a)	Volumes (b)	Amount (c)	Line No.
1	EEP Balancing Account Balance at December 31, 2012		\$ (1,890,149)	1
	Applicable Therms [1]			
2	G-5 Residential	279,773,286		2
3	G-6 Multi-Family Residential	6,065,730		3
4	G-10 Low-Income Residential	11,480,083		4
5	G-11 Multi-Family Low-Income Residential	709,663		5
6	G-25(S) Small General Service	4,370,515		6
7	G-25(M) Medium General Service	43,391,856		7
8	G-25(L1) Large-1 General Service	102,738,962		8
9	G-25(L2) Large-2 General Service	33,481,643		9
10	All GTS Billed Volume	6,441,818		10
11	Total Therms	<u>488,453,556</u>		11
12	EEP Rate Adjustment Per Therm		<u>\$ (0.00387)</u>	12

[1] Sales for the 12-months ended March 2013

## **EXHIBIT 3**

**SOUTHWEST GAS CORPORATION  
ARIZONA  
EARNINGS TEST CALCULATION  
TWELVE MONTHS ENDED DECEMBER 31, 2012**

Line No.	Description (a)	Reference (b)	Amount (c)	Line No.
1	Fair Value Rate Base	Decision No. 72723	\$ 1,452,933,391	1
2	Fair Value Rate of Return	Decision No. 72723	<u>6.92%</u>	2
3	Operating Income Required	Ln 1 * Ln 2	\$ 100,542,991	3
4	Net Operating Income Available	Company Records	\$ <u>98,829,544</u>	4
5	Earnings Deficit/(Excess)	Ln 3 - Ln 4	\$ 1,713,447	5
6	Gross Revenue Conversion Factor	Decision No. 72723	1.6579	6
7	Revenue Deficit/(Excess)	Ln 5 * Ln 6	<u>\$ 2,840,723</u>	7