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BEFORE THE ARIZONA CORPORATION COMMISSION

COMMISSIONERS
JEFF HATCH-MILLER, Chairman
WILLIAM A. MUNDELL
MARC SPITZER
MIKE GLEASON
KRISTIN K. MAYES

IN THE MATTER OF THE APPLICATION OF SOUTHWEST GAS CORPORATION FOR THE ESTABLISHMENT OF JUST AND REASONABLE RATES AND CHARGES DESIGNED TO REALIZE A REASONABLE RATE OF RETURN ON THE FAIR VALUE OF THE PROPERTIES OF SOUTHWEST GAS CORPORATION DEVOTED TO ITS OPERATIONS THROUGHOUT THE STATE OF ARIZONA.	Docket No. G-01551A-04-0876 **STAFF'S NOTICE OF FILING SURREBUTTAL TESTIMONY**

Staff of the Arizona Corporation Commission hereby files the Surrebuttal Testimony of James J. Dorf, Dennis R. Rogers, Stephen G. Hill, William Gehlen, William H. Musgrove, Steve P. Irvine, and Robert G. Gray, in the above-referenced matter.

RESPECTFULLY SUMITTED this 13th day of September, 2005.

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The original and thirteen (13) copies of the foregoing were filed this 13th day of September, 2005, with:

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ARIZONA CORPORATION COMMISSION
UTILITIES DIVISION

SURREBUTTAL

TESTIMONY

OF

JAMES J. DORF

DENNIS ROGERS

STEPHEN HILL

WILLIAM GEHLEN

WILLIAM H. MUSGROVE

STEVE P. IRVINE

ROBERT G. GRAY

DOCKET NO. G-01551A-04-0876

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

SEPTEMBER 13, 2005

DORF

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF SOUTHWEST GAS CORPORATION FOR THE ESTABLISHMENT OF JUST AND REASONABLE RATES AND CHARGES DESIGNED TO REALIZE A REASONABLE RATE OF RETURN ON THE FAIR VALUE OF THE PROPERTIES OF SOUTHWEST GAS CORPORATION DEVOTED TO ITS OPERATIONS THROUGHOUT THE STATE OF ARIZONA.	)	DOCKET NO. G-01551A-04-0876

SURREBUTTAL

TESTIMONY

OF

JAMES J. DORF

CHIEF ACCOUNTANT

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

SEPTEMBER 13, 2005

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EXECUTIVE SUMMARY
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-04-0876

The surrebuttal testimony of Staff witness James J. Dorf addresses the following issues:

1) **Revenue Requirement Increase** – Staff's recommended revenue requirement increase is now $51,625,135 which is a 15.99 percent increase over adjusted test year revenue.

2) **Labor Annualization and In-Grade Wage Adjustment** – Southwest Gas Corporation ("Company") has provided the actual in-grade wage adjustments as of August, 2005. Staff will accept the Company's proposed in-grade adjust since the amount is now known and measurable.

3) **Transmission Integrity Management Program ("TRIMP")** – While the Company has accepted the amount proposed by the Residential Utility Consumer Office ("RUCO") in its direct testimony, Staff continues its support of utilization of a surcharge mechanism.

4) **Sarbanes-Oxley ("SOX")** – Staff continues its recommendation offered in direct testimony that there is support for at least a 25 percent reduction in both the cost of implementing and related incremental outside audit fees associated with SOX. Additionally, Staff continues to recommend a sharing of the costs of SOX between ratepayers and shareholders.

5) **Injuries and Damages** – The Company has provided additional support for its adjustment of $3,043,711 for increased premium costs and a provision for partial self-insurance for liability claims. However, Staff has reduced the adjustment by $430,535 by using ten years of Company claims history rather than the fourteen year period used by the Company.

6) **Management Incentive Program ("MIP")** – Staff continues to support its recommended sharing of the MIP between ratepayers and shareholders.

7) **Company Proposed Rate Base Adjustment** – The Company now proposes to increase rate base by approximately $21 million due to a new Federal income tax regulation which was effective August 3, 2005. Due to the late submission of this adjustment Staff needs additional information to review this proposal.

INTRODUCTION

Q. Please state your name.

A. My name is James J. Dorf.

Q. Are you the same James J. Dorf who previously submitted pre-filed testimony in this docket?

A. Yes, I am.

Q. What is the purpose of your surrebuttal testimony?

A. The purpose of my surrebuttal testimony is to respond, on behalf of the Utilities Division ("Staff"), to certain rebuttal testimony of Southwest Gas Corporation ("SWG" or "Company") and certain aspects of the direct testimony of the Residential Utility Consumer Office ("RUCO") witnesses.

SUMMARY OF SURREBUTTAL TESTIMONY

Q. Please indicate the scope and order of your surrebuttal testimony related to the Company's rebuttal testimony and RUCO's direct testimony.

A. I am presenting Staff's analysis and recommendations regarding Southwest Gas Corporation's rebuttal testimony on the following issues:

1. Annualized labor adjustment and in-grade wage adjustment.
2. Transmission Integrity Management Program costs.
3. Sarbanes Oxley expense.
4. Injuries and Damages adjustments.
5. The Management Incentive Program.
6. A Company Proposed Rate Base Increase.

Q. Are there other Staff surrebuttal witnesses?

A. Yes. The Staff witnesses and the areas covered by their surrebuttal testimony are as follows:

1. Dennis Rogers will present Staff's surrebuttal testimony on interest on customer deposits and property taxes.
2. On behalf of Commission Staff, Stephen G. Hill (Hill & Associates) will present surrebuttal testimony on the Company's capital structure and cost of capital.
3. William Gehlen will provide surrebuttal testimony regarding the Company's fuel procurement and purchasing department practices.
4. William Musgrove's surrebuttal testimony will respond to the Company's rebuttal testimony on its proposed Conservation Margin Tracker ("CMT").
5. Steven Irvine will review the Company's rebuttal testimony on the proposed demand side management ("DSM") programs.
6. Robert Gray will review the Company's rebuttal testimony on the proposed rate design.

REVENUE REQUIREMENT

Q. What is the new revenue requirement based on Staff's surrebuttal testimony?

A. Based on Staff's surrebuttal testimony the required revenue increase is $51,625,135 which is a 15.99 percent over adjusted test year revenues. The primary changes from Staff's direct testimony are discussed below and include in-grade wage adjustments, the Transmission Integrity Management Program, Sarbanes Oxley costs, injuries and damages and the management incentive program.

OPERATING INCOME ADJUSTMENTS

Operating Income Adjustment for Annualized Labor and In-Grade Wage Adjustments

Q. What is the Company's rebuttal response to Staff's Operating Income Adjustment for In-Grade Wage adjustments?

A. In its pre-filed direct testimony, the Company provided estimates for labor wage adjustments and in-grade adjustments. In its rebuttal testimony, the Company has calculated these same adjustments using actual data from September 1, 2004 through August 7, 2005. The Company's calculation indicated that the actual general labor annualization and in-grade adjustments were very close to those proposed in its initial filing. (Aldridge RT, Exhibit No. (RLA-1), Sheet 1 of 2) Staff had previously accepted the 2 percent salary adjustment approved by the Board of Directors.

In its direct testimony, Staff recommended elimination of the in-grade portion of the Company's labor annualization. Based on the Company's actual experience, Staff will now recognized the in-grade salary adjustment as being known and measurable. Staff will eliminate its recommended adjustment for $655,368.

Q. Has the Commission granted similarly timed wage increases in prior Decisions?

A. Yes, the Commission has allowed wage increases that occurred after the test period but before the Commission rendered its Decision. Such approval was granted as the amount was known and measurable and the increase was consistent with industry pay practices.

Operating Income Adjustments for – TRIMP Costs

Q. What is the Company's rebuttal testimony related to Staff's proposed adjustments for Transmission Integrity Management Program ("TRIMP") costs?

A. The Company is proposing to adopt RUCO's recommended adjustments for TRIMP costs. (Mashas RT, Page 11, lines 21-22) RUCO argues that sufficient data now exists to update the Company's estimated TRIMP costs. RUCO has calculated revised estimates for TRIMP costs ((Diaz Cortez DT, Schedule MDC-5). RUCO proposes amortization of 2004 and 2005 TRIMP costs over a seven year period at $138,365 per year (versus the Company's annual amortization of $1,183,333, based on three year amortization period) and test year annual expense is $603,677 (versus the Company's proposed $2,091,964).

Q. What other rebuttal testimony did the Company offer?

A. The Company calculated the approximate effects on customer bills using three scenarios; 1) Staff's recommended surcharge method, 2) Staff's recommended surcharge using 50 percent of the updated estimates, and 3) 100 percent of the Company's estimated costs. The estimated annual cost to customers would be $0.97, $0.24, and $0.48, respectively, for each of the three methods.

The Company asserts that there should be no sharing of the costs between ratepayers and shareholders as indicated in the Public Utilities Commission of Nevada ("PUNC") order in Docket No. 04-9012, Order dated March 16, 2005 ("Order"). The Company indicates that "The PUCN has authorized the Company to defer 100 percent of its TRIMP expense…", (Mashas RT, page 15, lines 7-9) but does not cite where this language is contained in the Order. The Company did not dispute the language cited by Staff in its direct testimony which clearly states that the PUCN "concludes that both ratepayers and shareholders should share in these costs".

Q. Is Staff comfortable with the revised estimates for TRIMP costs?

A. No. Staff is concerned that the preliminary costs incurred in a complex multi-year program will not be sustained. Additionally, initial implementation costs for a new and unprecedented safety program will arguably be higher in the beginning of the program.

Q. What is Staff recommending?

A. Staff continues to recommend the surcharge mechanism described in its direct testimony. However, the projected costs for the three year surcharge period should utilize the most recent estimates. Staff continues to recommend a sharing of the TRIMP cost as the Company has failed to provide any justification that shareholders will not benefit from the TRIMP program.

Q. Does Staff continue to recommend the Company disclose the surcharge on its monthly customer bills labeled "DOT Pipeline Safety Surcharge"?

A. Yes. The Company submits that "Given the limited space on a customer's bill and the very small monthly surcharge (as low a one cent), a separate line item on a customer's bill is simply not warranted." (Mashas RT, page 13, lines 20-23). Staff reviewed a typical residential billing and there appears be plenty of space for a separate line item.

Q. Any additional comments on TRIMP?

A. Staff, while encouraging the Company to fully comply with the new safety regulations, is concerned about the huge change in the estimated TRIMP program costs through 2009. The Company originally estimated $12,642,438 for this period and now offers a revised estimate of $3,137,492. (Mashas RT, Exhibit No. (RAM-2)) Such a wide variance in estimated costs surely lends support to Staff's recommended surcharge mechanism. It offers both the Company and ratepayers a more accurate methodology for implementing this important safety program.

Operating Income Adjustment for Sarbanes-Oxley Expense.

Q. What is the Company's rebuttal position with respect to Sarbanes-Oxley?

A. Staff, RUCO, and the Company agree that the Company's actual updated total cost to comply with Sarbanes Oxley ("SOX") was $78,461 for initial implementation and $915,000 for incremental SOX related annual audit fees. The Company continues to argue it should be allowed to recover its initial implementation costs over 3 years and its incremental audit fees of $915,000 on an annual basis.

Q. Is Staff modifying its direct testimony recommendation with regard to SOX?

A. No, it is not. The Company's updated costs did not result in a change to Staff's test period adjustment for SOX. See Schedule JJD-14. Staff continues to supports its recommendation to reduce the Company's proposed SOX cost recovery for two reasons.

First, Staff continues to recommend that the first year SOX costs be reduced by 25 percent as being non-recurring. This recommendation is based on numerous published articles that suggest significant reductions to first year implementation and audit costs. For example, an Enterprise Financial Consulting, LLP white paper reports on the cost of implementing SOX and suggests seven ways to reduce SOX costs moving forward. It indicates that "using a compliance software application alone can save a minimum of 30 percent of the initial cost of complying with SOX". See Exhibit I, page 6.

Second, Staff continues to recommend a sharing of the SOX cost between ratepayers and shareholders. The primary motivation of Congress in approving SOX legislation was to protect shareholders from management impropriety. However, Staff recognizes that ratepayers can also benefit from improved internal controls that prevent inappropriate costs from being included in the cost of service. Therefore, it is appropriate that there be a sharing of the cost to comply with SOX.

Q. What is Staff recommending?

A. Staff continues to recommend its proposed adjustment in its direct testimony computed as indicated on Schedule JJD-14.

Staff continues to recommend denial of any deferral for SOX costs and will again eliminate the Company proposed amortization of $27,346 to Account 407.3.

Operating Income Adjustment for Injuries and Damages.

Q. What is the Company's rebuttal testimony regarding Injuries and Damages?

A. The Company continues to support its proposed adjustment to increase test year operating expenses by $3,043,711. The adjustment annualizes test year insurance premiums and an estimate for the Company's self-insurance component for liability insurance.

Q. Please describe the Company's self-insurance component for liability claims.

A. The Company's current insurance coverage requires the Company to retain $1 million per occurrence (retention) during a 12-month period and the assumption of the first $10 million worth of exposure over the retention level (supplemental retention). (Johnson RT, page 3, lines 9-12) The Company is thus self-insured for the retention and supplemental retention amounts.

Q. What has been the Company's general liability claims experience?

A. The Company reviewed its claims experience for the period 1990 through 2003. General liability claims totaled $54,905,191.[1] The claims are for all of the Company's jurisdictions. The Company uses the Modified Massachusetts Formula to allocate insurance expense to each of its jurisdictions.

Q. Has the Company provided additional information regarding its claims experience?

A. The Company provided independently prepared 10 year and 5 year liability claims history for six comparable companies, including SWG. (Johnson RT, Exhibit No. (RMJ-3)) The summary indicates that the Company's experience is not unusual. The Company has previously indicated that because they have facilities and construction activity in the fast growing areas of Arizona and Nevada, one might expect their claims experience to be even higher.

Q. What were the self-insured general liability costs in the test year?

A. The self-insured general liability insurance cost in the test year was $562,552.[2] The Company's self-insurance adjustment was $1,598,744.

Q. Has Staff reevaluated its position on the Company's proposed Injuries and Damages adjustment?

A. Yes, it has. Staff has recalculated the proposed self-insurance adjustment using the latest five years and latest ten years of actual claims experience. See Schedule JJD-15. As indicated on this Schedule, the Company's proposed adjustment using the most recent five years would have been $1,117,127 instead of $1,598,744. Using the latest ten years of liability claims experience yields an adjustment of $1,168,209.

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[1] Company Workpaper Schedule C-2, Adjustment No. 10, sheet 2 of 2.

[2] Company Workpaper Schedule C-2, Adjustment No. 10, sheet 1 of 2.

Q. What is Staff's recommendation?

A. Staff is recommending the ten year amortization method. Staff notes the significant difference when including the four oldest years. It increases the Company's proposed adjustment by over $400,000 when compared to using a 10 or 5 year amortization period.

The Company has noted its recent efforts to reduce liability claims including utilizing external risk management advisors, review of claims with external auditors, training contractors on proper excavation procedures, and public education via print and radio.

Assuming these efforts to reduce the Company's risk are successful, Staff is inclined to utilize more recent claims experience in its analysis. However, utilization of the five year claims experience is perhaps too short a period for estimating the proper expense level.

Therefore, Staff recommends use of the ten year amortization method for establishing an appropriate level for the self-insurance portion of the Company's proposed injuries and damages adjustment. Staff will reduce the Company's total injuries and damages adjustment from $3,043,711 to $2,613,176 to reflect a ten year amortization period for the self-insurance of liability claims.

Operating Income Adjustment for Management Incentive Program.

Q. What is the Company's response to Staff's proposed adjustment for the Management Incentive Program?

A. The Company is proposing to include all Management Incentive Plan ("MIP") costs. The Company argues that the five factors comprising the MIP awards "were designed to align the interests of customers and shareholders as a basis for calculating the compensation paid out pursuant to the MIP; each are equally weighted." (Mashas DT, pg 7, lines 8-11)

Staff would agree that the five factors, if successfully achieved, could derive benefits for both ratepayers and shareholders. This is precisely why Staff recommends a sharing of the cost equally between ratepayers and shareholders.

Additionally, there is no assurance that the award levels achieved during the test period will be successfully achieved in the future. In fact, the Company has argued that it has not been able to achieve its authorized return on equity for several years. By sharing the cost of the program equally, ratepayers are at less risk of having costs included in rates that may not be awarded under the MIP.

Staff continues to recommend a sharing of the MIP between ratepayers and shareholders and its adjustment of $969,259.

Rate Base Adjustment

Q. Has the Company proposed an adjustment to its pre-filed rate base?

A. Yes, it has. The Internal Revenue Service issued regulations on August 2, 2005, and a revenue ruling related to the capitalization of costs under two simplified methods contained in prior regulation on uniform capitalization rules.[3] The Company is proposing to adjust its deferred taxes based on the implementation of these new rules.

Q. What is the amount of its proposed adjustment?

A. The Company would reduce its deferred tax balance by $21,120,694 and thereby increase its test period rate base by a like amount.

[3] Code Section 263A.

Q. What is the Company's rationale for proposing this post test year adjustment?

A. The Company asserts that "if the Commission accepts the proposal to include post-test period enacted legislative changes, which also have an effective date post-test period for property tax adjustments related to CIAC (2005 effective date) and the property tax assessment ratio (2006 effective date), then it should give equal consideration to federal SSCM UNICAP legislation effective for Southwest on January 1, 2005". (Moses RT, page 7, lines 7-13)

Q. Has the Company provided sufficient information for Staff to draw a conclusion as to the efficacy of the Company's argument and the amount of adjustment proposed?

A. No, it has not. The Company offers one schedule outlining the pre-tax capitalization adjustment for Arizona totaling $53,430,613 and the resulting deferred tax amount of $21,120,694. (Moses RT, Exhibit No. (RLM-2) Staff needs more detailed information regarding the Company's proposed adjustment such as the underlying property records and the calculations made to determine the "Without Simplified Method" amounts.

Q. Will Staff be requesting such information?

A. Staff will be providing the Company with data requests in the near future.

Q. Does this conclude your testimony?

A. Yes, it does.

EXHIBIT I

EXECUTIVE BRIEF

Enterprise Financial Consulting, LLP
July 2004

Sarbanes-Oxley: Lessons and Insights From Experience

An EFC White Paper

"To do it right the first time requires a structured approach and discipline. To do it right the second time will require not forgetting the lessons learned from the first time."

J-L "John" Alarcon, CPA, CITP
Enterprise Financial Consulting, LLP

ENTERPRISE
Financial Consulting

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Indeed, many CFOs and controllers acknowledge that they continue to navigate in uncertainty. While it is true that there are still a lot of questions open since the U.S. Securities and Exchange Commission (SEC) and the Public Company Accounting Oversight Board (PCAOB) started establishing new accounting, internal control, and audit standards, best-in-class organizations are learning from their early experience and are figuring out ways to improve the efficiency and effectiveness of their SOX efforts moving forward.

Seven Ways to Reduce SOX Costs Moving Forward
At EFC, we have identified seven ways to reduce the amount of resources required:

1. Increase communications and exchanges with and among the external auditor, process owners, and Internal Audit
2. Focus on what is important to the auditor
3. Acquire and implement a compliance software solution to address life cycle management and optimization challenges ahead
4. Obtain formal process owner sign-off on internal control documentation as soon as completed or updated
5. Give ownership to process owners and make them accountable for maintaining their documentation up-to-date
6. Establish a procedure for quarterly sign-off of internal control documentation by process owners as part of the section 302 certification
7. Involve Internal Audit in the monitoring of the periodic, internal control review process moving forward

Cost savings opportunities are significant. Our experience indicate that using a compliance software application alone can save a minimum of 30% of the initial cost of complying with SOX and more than half the costs of the ongoing compliance life cycle management.

Lesson #2: Focus, Focus, Focus

Focusing on the right things (i.e., risks and internal controls) is really the key to successfully completing a Sarbanes-Oxley compliance project on time and on budget (if there is one!). There is something vicious about any Sarbanes-Oxley project, it is that the more time and resources you have to document your internal controls, the more detailed and irrelevant you become, and God knows how much accountants and auditors love details. The other part of this issue is that the more detailed you get, the more materials auditors need to review and test. To focus on the right things, SOX project leaders need to consider the following dimensions: significant accounts, significant processes that might impact these accounts, significant transactions within these processes, and

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SOUTHWEST GAS CORPORATION
Docket No. G-01551A-04-0876
DIRECT TESTIMONY OF JAMES J. DORF AND DENNIS R. ROGERS

September 13,2005
Surrebuttal
Revised 9/13/2005

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Schedules DRR sponsored by Dennis R. Rogers
Schedules JJD sponsored by James J. Dorf

SOUTHWEST GAS CORPORATION
Docket No. G-01551A-04-0876
Test Year Ended August 31, 2004

Schedule DRR-1
Surrebuttal
Revised 9/13/2005

REVENUE REQUIREMENT

LINE NO.	DESCRIPTION	(A) COMPANY ORIGINAL COST	(B) COMPANY RECONSTRUCTION COST	(C) COMPANY FAIR VALUE	(D) STAFF ORIGINAL COST	(E) STAFF RECONSTRUCTION COST	(F) STAFF FAIR VALUE
1	Adjusted Rate Base	$ 925,212,452	$ 1,418,490,765	$ 1,171,851,609	$ 924,927,566	$ 1,418,205,879	$ 1,171,566,722
2	Adjusted Operating Income (Loss)	$ 44,233,351	$ 44,233,351	$ 44,233,351	$ 46,644,274	$ 46,644,274	$ 46,644,274
3	Current Rate of Return (L2 / L1)	4.78%	3.12%	3.77%	5.04%	3.29%	3.98%
4	Required Rate of Return	9.40%	6.13%	7.42%	8.40%	5.48%	6.63%
5	Required Operating Income (L4 * L1)	$ 86,957,925	$ 86,957,925	$ 86,957,925	$ 77,693,916	$ 77,693,916	$ 77,693,916
6	Operating Income Deficiency (L5 - L2)	$ 42,724,574	$ 42,724,574	$ 42,724,574	$ 31,049,641	$ 31,049,641	$ 31,049,641
7	Gross Revenue Conversion Factor	1.6573	1.6573	1.6573	1.6627	1.6627	1.6627
8	Required Revenue Increase (L7 * L6)	$ 70,809,100	$ 70,809,100	$ 70,809,100	$ 51,625,135	$ 51,625,135	$ 51,625,135
9	Adjusted Test Year Revenue	$ 322,865,978	$ 322,865,978	$ 322,865,978	$ 322,865,978	$ 322,865,978	$ 322,865,978
10	Proposed Annual Revenue (L8 + L9)	$ 393,675,078	$ 393,675,078	$ 393,675,078	$ 374,491,113	$ 374,491,113	$ 374,491,113
11	Required Increase in Revenue (%)	21.93%	21.93%	21.93%	15.99%	15.99%	15.99%
12	Rate of Return on Common Equity (%)	11.95%	11.95%	11.95%	9.50%	9.50%	9.50%

References:
Column (A): Company Schedule B-1
Column (B): Company Schedule B-1
Column (C): Company Schedules A-1, A-2, & D-1
Column (D): Staff Schedules DRR-3, DRR-9 AND SH-1
Column (E): Staff Schedules DRR-6, DRR-9 AND SH-1
Column (F): Staff Schedules DRR-3, DRR-6, DRR-9 AND SH-1

(SH-1; Steven Hill)

SOUTHWEST GAS CORPORATION
Docket No. G-01551A-04-0876
Test Year Ended August 31, 2004

Schedule DRR-2
Surrebuttal
Revised 9/13/2005

GROSS REVENUE CONVERSION FACTOR

LINE NO.	DESCRIPTION	(A)	(B)	(C)	(D)
	Calculation of Gross Revenue Conversion Factor:				
1	Revenue	100.0000%			
2	Uncollecible Factor (Line 11)	0.1327%			
3	Revenues (L1 - L2)	99.8673%			
4	Combined Federal and State Tax Rate (Line 17)	39.7229%			
5	Subtotal (L3 - L4)	60.1444%			
6	**Revenue Conversion Factor (L1 / L5)**	1.662664			
	Calculation of Uncollectible Factor:				
7	Unity	100.0000%			
8	Combined Federal and State Tax Rate (Line 17)	39.7229%			
9	One Minus Combined Income Tax Rate (L7 - L8)	60.2771%			
10	Uncollectible Rate	0.2201%			
11	Uncollectible Factor (L9 * L10)	0.1327%			
	Calculation of Effective Tax Rate:				
12	Operating Income Before Taxes (Arizona Taxable Income)	100.0000%			
13	Arizona State Income Tax Rate	6.9680%			
14	Federal Taxable Income (L12 - L13)	93.0320%			
15	Applicable Federal Income Tax Rate (Line 47)	35.2082%			
16	Effective Federal Income Tax Rate (L14 x L15)	32.7549%			
17	Combined Federal and State Income Tax Rate (L13 +L16)	39.7229%			
18	[redacted]	$ 77,693,916			
19		$ 46,644,274			
20	Required Increase in Operating Income (L18 - L19)		$ 31,049,641		
21	Income Taxes on Recommended Revenue (Col. (D), L43)	$ 25,499,129			
22	Income Taxes on Test Year Revenue (Col. (B), L43)	$ 4,992,126			
23	Required Increase in Revenue to Provide for Income Taxes (L21 - L22)		$ 20,507,003		
24	Recommended Revenue Requirement (Schedule JJD-1, Line 10)	$ 374,491,113			
25	Uncollectible Rate (Line 10)	0.1327%			
26	Uncollectible Expense on Recommended Revenue (L24 * L25)	$ 496,837			
27	Adjusted Test Year Uncollectible Expense	$ 428,346			
28	Required Increase in Revenue to Provide for Uncollectible Exp. (L26 - L27)		$ 68,491		
29	Total Required Increase in Revenue (L20 + L23 + L28)		$ 51,625,135		
	Calculation of Income Tax:	Test Year		STAFF Surrebuttal	
30	[redacted]	$ 322,865,978	$ 51,625,135	$ 374,491,113	
31	Operating Expenses Excluding Income Taxes	$ 271,229,578		$ 271,229,578	
32	Synchronized Interest (L47)	$ 38,754,465		$ 38,754,465	
33	Arizona Taxable Income (L30 - L31 - L32)	$ 12,881,935		$ 64,507,070	
34	Arizona State Income Tax Rate	6.9680%		6.9680%	
35	Arizona Income Tax (L33 x L34)		$ 897,613		$ 4,494,853
36	Federal Taxable Income (L33 - L35)	$ 11,984,322		$ 60,012,218	
37	Federal Tax on First Income Bracket ($1 - $50,000) @ 15%	$ 7,500		$ 7,500	
38	Federal Tax on Second Income Bracket ($50,001 - $75,000) @ 25%	$ 6,250		$ 6,250	
39	Federal Tax on Third Income Bracket ($75,001 - $100,000) @ 34%	$ 8,500		$ 8,500	
40	Federal Tax on Fourth Income Bracket ($100,001 - $335,000) @ 39%	$ 91,650		$ 91,650	
41	Federal Tax on Fifth Income Bracket ($335,001 -$10,000,000) @ 34%	$ 3,286,100		$ 3,286,100	
42	Federal Tax on Sixth Income Bracket ($10,000,001 -$15,000,000) @ 35%	$ 694,513		$ 1,750,000	
43	Federal Tax on Seventh Income Bracket ($15,000,001 -$18,333,333) @ 38%	$ -		$ 1,266,667	
44	Federal Tax on Eighth Income Bracket (Over $18,333,333) @ 35%	$ -		$ 14,587,610	
45	Total Federal Income Tax		$ 4,094,513		$ 21,004,276
46	Combined Federal and State Income Tax (L35 + L42)		$ 4,992,126		$ 25,499,129
47	Applicable Federal Income Tax Rate [Col. (D), L42 - Col. (B), L42] / [Col. (C), L36 - Col. (A), L36]				35.2082%
	Calculation of Interest Synchronization:				
48	[redacted]	$ 924,927,566			
49		4.19%			
50	Synchronized Interest (L45 X L46)	$ 38,754,465			

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Schedule DRR-3
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RATE BASE - ORIGINAL COST

LINE NO.		(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	(C) STAFF AS ADJUSTED
1	Plant in Service	$ 1,685,504,157	$ (284,886)	$ 1,685,219,271
2	Less: Accumulated Depreciation	593,542,012	-	593,542,012
3	Net Plant in Service	$ 1,091,962,145	$ (284,886)	$ 1,091,677,259
	LESS:			
4	Customer Advances for Construction	$ 7,027,372	$ -	$ 7,027,372
5	Less: Accumulated Amortization	-	-	-
6	Net CIAC	7,027,372	-	7,027,372
7	Customer Deposits	23,912,141	-	23,912,141
8	Deferred Income Tax Credits	136,691,328	-	136,691,328
9	Total Deductions	167,630,841	-	167,630,841
	ADD:			
10	Working Capital	881,148	-	881,148
11	**Original Cost Rate Base**	$ 925,212,452	$ (284,886)	$ 924,927,566

References:
Column (A), Company Schedule B-1
Column (B): Schedule DRR-4
Column (C): Column (A) + Column (B)

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Schedule DRR-4
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SUMMARY OF ORIGINAL COST RATE BASE ADJUSTMENTS

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJ No.1 Company Adj. No. 20 CCNC	[C] STAFF ADJUSTED
		DIRECT GAS PLANT IN SERVICE:			
1		Intangible Plant	$ 3,702,685	$ -	$ 3,702,685
2		Distribution Plant	1,502,889,184	-	1,502,889,184
3		General Plant	90,766,242	-	90,766,242
4	101	Total Gas Plant In Service	$ 1,597,358,111	-	$ 1,597,358,111
		ACCUM. PROVISION FOR DEPR. AND AMORT.			
5		Intangible Plant	$ 2,196,699	-	$ 2,196,699
6		Distribution Plant	527,648,429	-	$ 527,648,429
7		General Plant	16,140,237	-	16,140,237
8	108 & 111	Total Accumulated Depr. & Amort.	545,985,365	-	$ 545,985,365
9		Total Net Gas Plant In Service	$ 1,051,372,746	-	$ 1,051,372,746
		SYSTEM ALLOCABLE GAS PLANT IN SERVICE			
10		Intangible Plant	$ 106,236,031	$ (494,768)	$ 105,741,263
11		General Plant	46,849,120	-	46,849,120
12	101	Total System Allocable Gas Plant	$ 153,085,151	$ (494,768)	$ 152,590,383
		ACCUM. PROVISION FOR DEPR. AND AMORT.			
13		Intangible Plant	$ 60,385,073	-	$ 60,385,073
14		General Plant	22,207,588	-	22,207,588
15		Total System Allocable Accum. Depr. & Amort.	$ 82,592,661	-	$ 82,592,661
16		System Allocable Net Gas Plant In Service	$ 70,492,490	$ (494,768)	$ 69,997,722
17		4-Factor Allocation Rate (Sch. C-1, Sh 18)	57.58%	57.58%	57.58%
18		Allocated System Allocable Gas Plant	$ 88,146,046	$ (284,886)	$ 87,861,160
19		Allocated System Allocable Accum. Depr. & Amort.	47,556,647	-	47,556,647
20		Total System Allocable Net Gas Plant In Service	$ 40,589,399	$ (284,886)	$ 40,304,513
21		Total Plant in Service	$ 1,685,504,157	$ (284,886)	$ 1,685,219,271
22		Less: Accumulated Depreciation	593,542,012	-	593,542,012
23		Net Plant in Service (L59 - L 60)	$ 1,091,962,145	$ (284,886)	$ 1,091,677,259
		LESS:			
24		Contributions in Aid of Construction (CIAC)	$ 7,027,372	$ -	$ 7,027,372
25		Less: Accumulated Amortization	-	-	-
26		Net CIAC (L25 - L26)	$ 7,027,372	-	$ 7,027,372
27		Customer Meter Deposits	23,912,141	-	23,912,141
28		Deferred Income Tax Credits	136,691,328	-	$ 136,691,328
		ADD:			
29		Working Capital	881,148	-	$ 881,148
30		**Original Cost Rate Base**	$ 925,212,452	$ (284,886)	$ 924,927,566

ADJ No.	
1	Completed Construction Not Classified

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Schedule DRR-5
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ORIGINAL COST RATE BASE ADJUSTMENT No.1 - REMOVAL OF POST-TEST YEAR PLANT (CCNC)

Line No.	Removal of Post Test Year Plant (Completed Construction Not Classified)	
1	Company Projected Intangible System Allocable Plant	$ 1,473,459
2	Actual Plant in Service 12/31/2004	$ 978,691
3	Increase/(Decrease) to Plant-In-Service	$ (494,768)
4	4-Factor Allocation Rate (Sch. C-1, Sh 18)	57.58%
5	Removal of System Allocable Net Gas Plant In Service	$ (284,886)

References:
Line 1: Company Adjustment No. 20.
Line 2: Company Response to RUCO Data Request 4-3.
Line 3: Line 2 minus Line 3.

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Schedule DRR-6
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RATE BASE - RECONSTRUCTION COST

LINE NO.		(A) COMPANY AS FILED	(B) STAFF ADJUSTMENTS	(C) STAFF AS ADJUSTED
1	Plant in Service	$ 2,442,053,861	$ (284,886)	$ 2,441,768,975
2	Less: Accumulated Depreciation	856,813,403	-	856,813,403
3	Net Plant in Service	$ 1,585,240,458	$ (284,886)	$ 1,584,955,572
	LESS:			
4	Advances in Aid of Construction (AIAC)	$ 7,027,372	$ -	$ 7,027,372
5	Less: Accumulated Amortization	-	-	-
6	Net CIAC	7,027,372	-	7,027,372
8	Customer Deposits	23,912,141	-	23,912,141
9	Deferred Income Tax Credits	136,691,328	-	136,691,328
	ADD:			
12	Working Capital	881,148	-	881,148
17	**Reconstruction Cost New Rate Base**	$ 1,418,490,765	$ (284,886)	$ 1,418,205,879

References:
Column [A], Company Schedule B-3
Column [B]: Schedule DRR-7
Column [C]: Column [A] + Column [B]

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Schedule DRR-7
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SUMMARY OF RECONSTRUCTION COST RATE BASE ADJUSTMENTS

LINE NO.	ACCT. NO.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJ No.1 Completed Construction Not Classified	[C] STAFF ADJUSTED
		DIRECT GAS PLANT IN SERVICE:			
1		Intangible Plant	$ 3,271,604	$ -	$ 3,271,604
2		Distribution Plant	2,236,345,320	-	2,236,345,320
3		General Plant	109,432,123	-	109,432,123
4	101	Total Gas Plant In Service	2,349,049,047	-	2,349,049,047
		ACCUM. PROVISION FOR DEPR. AND AMORT.			
5		Intangible Plant	2,196,699	-	2,196,699
6		Distribution Plant	785,179,009	-	785,179,009
7		General Plant	19,509,899	-	19,509,899
8	108 & 111	Total Accumulated Depr. & Amort.	806,885,607	-	806,885,607
9		Total Net Gas Plant In Service	1,542,163,440	-	1,542,163,440
		SYSTEM ALLOCABLE GAS PLANT IN SERVICE			
10		Intangible Plant	106,236,031	(494,768)	105,741,263
11		General Plant	55,286,744	-	55,286,744
12	101	Total System Allocable Gas Plant	161,522,775	(494,768)	161,028,007
		ACCUM. PROVISION FOR DEPR. AND AMORT.			
13		Intangible Plant	60,385,073	-	60,385,073
14		General Plant	26,325,236	-	26,325,236
15		Total System Allocable Accum. Depr. & Amort.	86,710,309	-	86,710,309
16		System Allocable Net Gas Plant In Service	74,812,466	(494,768)	74,317,698
17		4-Factor Allocation Rate (Sch. C-1, Sh 18)	57.58%	57.58%	57.58%
18		Allocated System Allocable Gas Plant	93,004,814	(284,886)	92,719,928
19		Allocated System Allocable Accum. Depr. & Amort.	49,927,796	-	49,927,796
20		Total System Allocable Net Gas Plant In Service	43,077,018	(284,886)	42,792,132
21		Total Plant in Service	$ 2,442,053,861	$ (284,886)	2,441,768,975
22		Less: Accumulated Depreciation	856,813,403	-	856,813,403
23		Net Plant in Service (L59 - L 60)	$ 1,585,240,458	$ (284,886)	1,584,955,572
		LESS:			
24		Contributions in Aid of Construction (CIAC)	$ 7,027,372	$ -	$ 7,027,372
25		Less: Accumulated Amortization	-	-	-
26		Net CIAC (L25 - L26)	7,027,372	-	7,027,372
27		Customer Meter Deposits	23,912,141	-	23,912,141
28		Deferred Income Tax Credits	136,691,328	-	136,691,328
		ADD:			
29		Working Capital	881,148	-	881,148
30		**Original Cost Rate Base**	$ 1,418,490,765	$ (284,886)	1,418,205,879

ADJ No.	
1	Completed Construction Not Classified - DRR-8

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Schedule DRR-8
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RECONSTRUCTION COST RATE BASE ADJUSTMENT No.1 - REMOVAL OF POST-TEST YEAR PLANT (CCNC)

Line	Description	[A] Estimated PIS	[B] Actual PIS	[C] Rate Base Adjustment	[D] Company Amortization
1	Purchase Software for EMRS	$ 212,459	$ 212,459	$ -	$ 70,820
2	Riser Verification - CSS/EMRS	500,000	-	(500,000)	166,667
3	Purchase DB Microwave Software	277,000	267,153	(9,847)	92,333
4	Software Licenses - Mobile Facility Data Mgmt.	434,000	454,500	20,500	144,667
5	Purchase Com Software for Output to Microfiche	50,000	44,579	(5,421)	16,667
6	Total Adjustment to Intangible Plant	$ 1,473,459	$ 978,691	$ (494,768)	$ 491,153
7	Arizona 4-Factor	57.58%	57.58%	57.58%	57.58%
8	Arizona Adjustment Amounts	$ 848,414	$ 563,528	$ (284,886)	$ 282,805

References:
Column [A]: Company Adjustment Nos. 17 and 20, Workpapers Schedule C-2, ADJ. 17, Sheet 9
Column [B]: Company's Response to RUCO Data Request 4-3.
Column [C]: Column [B] minus Column [A]
Column [D]: Company Workpapers Schedule C-2, Adj. 17, Sheet 9

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Schedule DRR-9
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OPERATING INCOME STATEMENT - ADJUSTED TEST YEAR AND STAFF RECOMMENDED

LINE NO.	DESCRIPTION	[A] COMPANY ADJUSTED TEST YEAR AS FILED	[B] STAFF TEST YEAR ADJUSTMENTS	[C] STAFF TEST YEAR AS ADJUSTED	[D] STAFF PROPOSED CHANGES	[E] STAFF RECOMMENDED
1	*REVENUES:*					
2	Revenues	$ 322,865,978	$ -	$ 322,865,978	$51,625,135	$ 374,491,113
3	Gas Cost	-	-	-	-	-
4						
5	**Total Operating Revenues**	$ 322,865,978	$ -	$ 322,865,978	$51,625,135	**$ 374,491,113**
6	*OPERATING EXPENSES:*					
7	Other Gas Supply	$ 740,391	$ -	$ 740,391	$ -	$ 740,391
10	Distribution	78,580,466	(2,091,964)	76,488,502	-	76,488,502
11	Customer Accounts	34,003,279	-	34,003,279	68,491	34,071,770
13	Customer Information	548,496	-	548,496	-	548,496
14	Sales	-	-	-	-	-
15	Administrative & General	-	-	-	-	-
16	Direct	6,993,300	-	6,993,300	-	6,993,300
17	System Allocable	45,487,895	(1,458,699)	44,029,196	-	44,029,196
18	Depreciation & Amortization	-	-	-	-	-
19	Direct	67,338,861	-	67,338,861	-	67,338,861
20	System Allocable	7,062,583	(94,962)	6,967,621	-	6,967,621
21	Regualtory Amortizations	1,548,204	(1,210,679)	337,525	-	337,525
22	Other Taxes	33,455,124	(1,076,925)	32,378,199	-	32,378,199
23	Interest On Customer Deposits	717,364	686,844	1,404,208	-	1,404,208
24	Income Taxes	2,156,664	2,835,462	4,992,126	20,507,003	25,499,129
40						
41	**Total Operating Expenses**	$ 278,632,627	$ (2,410,923)	$ 276,221,704	$20,575,494	$ 296,797,198
42	**Operating Income (Loss)**	$ 44,233,351	$ 2,410,923	$ 46,644,274	$31,049,641	**$ 77,693,916**

References:
Column [A]: Company Schedule C-1
Column [B]: Schedule DRR-10
Column [C]: Column [A] + Column [B]
Column [D]: Schedules DRR-1 and DRR-2
Column [E]: Column [C] + Column [D]

Schedule DRR-10
Surrebuttal
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UTHWEST GAS CORPORATION
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IMMARY OF OPERATING INCOME STATEMENT ADJUSTMENTS - TEST YEAR

NE O.	DESCRIPTION	[A] COMPANY AS FILED	[B] ADJ No.1 Accept In Grade Adj.	[C] ADJ No.2 TRIMP Opr. Expense	[D] ADJ No.3 TRIMP Amortization	[E] ADJ No.4 Sarbanes-Oxley	[F] ADJ No.5 Injuries and Damages	[G] ADJ No.6 Management Incent. Program	[J] ADJ No.7 Estimated Sys Alloc. PIS	[K] ADJ No.8 Property Taxes	[L] ADJ No.9 Customer Deposits	[M] ADJ #10 Income Taxes	[N] STAFF ADJUSTED
	REVENUES:												
1	Revenues	$ 322,865,978	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 322,865,978
2	Gas Cost	-	-	-	-	-	-	-	-	-	-	-	$ -
5	Total Margin	$ 322,865,978	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 322,865,978
6	OPERATING EXPENSES:												
7	Other Gas Supply	$ 740,391	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 740,391
8	Distribution	78,580,466	-	(2,091,964)	-	-	-	-	-	-	-	-	76,488,502
9	Customer Accounts	34,003,279	-	-	-	-	-	-	-	-	-	-	34,003,279
10	Customer Information	548,496	-	-	-	-	-	-	-	-	-	-	548,496
11	Sales	-	-	-	-	-	-	-	-	-	-	-	-
12	Administrative & General												
13	Direct	6,993,300	-	-	-	-	-	-	-	-	-	-	6,993,300
14	System Allocable	45,487,895	-	-	-	(58,905)	(430,535)	(969,259)	-	-	-	-	44,029,196
15	Depreciation & Amortization												
16	Direct	67,338,861	-	-	-	-	-	-	-	-	-	-	67,338,861
17	System Allocable	7,062,583	-	-	-	-	-	-	(94,962)	-	-	-	6,967,621
18	Regualtory Amortizations	1,548,204	-	-	(1,183,333)	(27,346)	-	-	-	-	-	-	337,525
19	Other Taxes	33,455,124	-	-	-	-	-	-	-	(1,076,925)	-	-	32,378,199
20	Interest On Customer Deposits	717,364	-	-	-	-	-	-	-	-	686,844	-	1,404,208
21	Income Taxes	2,156,664	-	-	-	-	-	-	-	-	-	2,835,462	4,992,126
22	Total Operating Expenses	$ 278,632,627	$ -	$ (2,091,964)	$ (1,183,333)	$ (86,251)	$ (430,535)	$ (969,259)	$ (94,962)	$ (1,076,925)	$ 686,844	$ 2,835,462	$ 276,221,704
23	Operating Income (Loss)	$ 44,233,351	$ -	$ 2,091,964	$ 1,183,333	$ 86,251	$ 430,535	$ 969,259	$ 94,962	$ 1,076,925	$ (686,844)	$ (2,835,462)	$ 46,644,274

ADJ No.		References:
1	In-Grade Adjustments	Schedule JJD-11
2	TRIMP Operating Expenses	Schedule JJD-12
3	TRIMP Amortization	Schedule JJD-13
4	Sarbanes Oxley	Schedule JJD-14
5	Injuries and Damages	Schedule JJD-15
6	Management Incentive Program	Schedule JJD-16
7	Estimated System Allocable PIS	Schedule DRR-17
8	Property Taxes	Schedule DRR-18
9	Interests On Customer Deposits	Schedule DRR-19
10	Income Taxes	Schedule DRR-20

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Schedule JJD-11
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OPERATING INCOME ADJUSTMENT No.1 - RECOMMEND COMPANY IN-GRADE ADJUSTMENTS

LINE NO.	Functionalization	[A] Company Proposed	[B] Staff Recommended	[C] Staff Adjustment
1	Other Gas Supply	$ 19,584	$ 19,584	$ -
2	Distribution	835,813	835,813	-
3	Customer Accounts	432,863	432,863	-
4	Customer Service & Information	4,399	4,399	-
5	Administrative & General	345,760	345,760	-
6	Totals	$ 1,638,419	$ 1,638,419	$ -

References:
Column [A]: Company Ajustment No. 3, Schedule C-2, Sheet 1
Column [B]: Surrebuttal Testimony JJD
Column [C]: Column [B] minus Column [A]

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Schedule JJD-12

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OPERATING INCOME ADJUSTMENT No.2 - REMOVAL OF ESTIMATED OPERATING TRIMP COSTS

LINE NO.	Removal of Estimated TRIMP Operating Costs		
1	Company Proposed	$	2,091,964
2	Staff Recommended		-
3	Adjustment	$	(2,091,964)

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SUMMARY OF TRIMP COSTS

Estimated Cost Incurrance	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
Baseline & Confirmatory Assessments	355,000	532,500	532,500	532,500	319,500	319,500	319,500	497,000	585,750	3,993,750
Direct Examination Cost	1,065,000	1,597,500	1,597,500	1,597,500	958,500	958,500	958,500	958,500	958,500	10,650,000
Maintenance & Repairs	532,500	798,750	798,750	798,750	479,250	479,250	479,250	479,250	479,250	5,325,000
Total Expense	1,952,500	2,928,750	2,928,750	2,928,750	1,757,250	1,757,250	1,757,250	1,934,750	2,023,500	19,968,750
Company Proposed Regulatory Recovery*										
Amortization of 2004/2005 (Acct 407.3)			1,183,333	1,183,333	1,183,333					
Direct Assessment (Acct 874)**			380,357	380,357	380,357					
Direct Examination (Acct 874)**			1,141,071	1,141,071	1,141,071					
*Maintenance & Repair (Acct 887)***			570,536	570,536	570,536					
Operating Expense			2,091,964	2,091,964	2,091,964					
Total Annual Recovery			3,275,297	3,275,297	3,275,297					
Cummulative Company Expense	1,952,500	4,881,250	7,810,000	10,738,750	12,496,000	14,253,250	16,010,500	17,945,250	19,968,750	
Cummulative Recovery			3,275,297	6,550,594	9,825,891	13,101,188	16,376,485	19,651,782	22,927,079	

***Does not include Capital Replacements totaling $9,372,000**
which will be capitalized and included in rate base in the
Company's subsequent rate applications.

**Based on seven year average of years 2006 through 2012

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Schedule JJD-12

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TRIMP SURCHARGE CALCULATION & EXAMPLE

				YEAR 1		
		[A]	[B]	[C]	[D]	
Line No.	Year	Initial Cost Estimates	Ratepayer Share (50%)	Cumulative Recoverable	Projected[1] Therm Sales	
1	2004	1,952,500	976,250	976,250		
2	2005	2,928,750	1,464,375	2,440,625		
3	2006	2,928,750	1,464,375	3,905,000	737,834,487	
4	2007	2,928,750	1,464,375	5,369,375	759,969,522	
5	2008	1,757,250	878,625	6,248,000	782,768,607	
6	2009	1,757,250	878,625	7,126,625		
7	2010	1,757,250	878,625	8,005,250		
8	2011	1,934,750	967,375	8,972,625		
9	2012	2,023,500	1,011,750	9,984,375		
10	Totals	19,968,750	9,984,375		2,280,572,616	
11						
12	Est. TRIMP cost 2004 thru Jan '09: 1/12*878,625 + 6,248,000:					$ 6,321,219
13	Projected 36-month (Feb '06 - Jan '09) therm sales:					2,280,572,616
14	TRIMP Surcharge Rate for first 12 months					$ 0.00277
15	Assume actual therm sales for Feb '06 - Jan '07 period:					740,000,000
16	Surcharge revenue in first 12 months:					$ 2,051,108
17						
18				YEAR 2		
19						
20	2004	1,952,500	976,250	976,250		
21	2005	2,928,750	1,464,375	2,440,625		
22	2006	2,286,312	1,143,156	3,583,781		
23	2007	2,928,750	1,464,375	5,048,156	752,591,177	
24	2008	1,757,250	878,625	5,926,781	767,643,000	
25	2009	1,757,250	878,625	6,805,406		
26	2010	1,757,250	878,625	7,684,031		
27	2011	1,934,750	967,375	8,651,406		
28	2012	2,023,500	1,011,750	9,663,156		
29	Totals	19,326,312	9,663,156		1,520,234,177	
30						
31	Revised est. TRIMP cost 2004 thru Jan '09: 1/12*878,625 + 5,926,781:					$ 6,000,000
32	Less: Surcharge from first twelve months (L16)					$ 2,051,108
33	Est. recoverable TRIMP surcharge in remaining 24 months =					$ 3,948,891
34	Projected 24-month (Feb '07 - Jan '09) therm sales:					1,520,234,177
35	TRIMP Surcharge Rate for second 12 months					$ 0.00260
36	Assume actual therm sales for Feb '07 - Jan '08 period:					750,000,000
37	Surcharge revenue in second 12 months:					$ 1,948,166
38						
39				YEAR 3		
40						
41	2004	1,952,500	976,250	976,250		
42	2005	2,928,750	1,464,375	2,440,625		
43	2006	2,286,312	1,143,156	3,583,781		
44	2007	3,428,750	1,714,375	5,298,156		
45	2008	2,257,250	1,128,625	6,426,781	770,000,000	
46	2009	1,757,250	878,625	7,305,406		
47	2010	1,757,250	878,625	8,184,031		
48	2011	1,934,750	967,375	9,151,406		
49	2012	2,023,500	1,011,750	10,163,156		
50	Totals	20,326,312	10,163,156		770,000,000	
51						
52	Revised est. TRIMP cost 2004 thru Jan '09: 1/12*878,625 + 6,426,781:					$ 6,500,000
53	Less: Surcharge from first twenty-four months (L16 + L39)					$ 3,999,274
54	Est. recoverable TRIMP surcharge in remaining 12 months =					$ 2,500,725
55	Projected 12-month (Feb '08 - Jan '09) therm sales:					770,000,000
56	TRIMP Surcharge Rate for second 12 months					$ 0.00325
57	Assume actual therm sales for Feb '07 - Jan '08 period:					771,000,000
58	Surcharge revenue in second 12 months:					$ 2,503,973

[1] Based on Company Schedule H-8, page 3, line, column (d) for first 12 months and 3 percent annual growth.

SUMMARY OF TRIMP COST TREATMENT

STATE JURISDICTIONS

Transmission Integrity Management Program cost have received different treatment in the various jurisdictions that have already ruled on TRIMP costs. Presented below is a summary of jurisdictions that have issued rulings as of April, 2005.

Deferred Accounting Orders -	North Carolina Utah Nevada*
Capitalized Cost -	Oregon
Base Rate Case -	Kentucky New Mexico Michigan Alabama Washington Oklahoma
Trackers -	Indiana Ohio

* The costs for TRIMP will be shared equally by ratepayers and shareholders. Allowed to defer until 12/31/2007 or earlier rate case, subject to prudency review. No return or cost of money allowed on the deferral balance.

FEDERAL ENERGY REGULATORY COMMISSION ("FERC") -

The FERC issued an "Order on Accounting For Pipeline Assessment Costs" on June 30, 2005 providing guidance on accounting for pipeline assessment activities. In general, it requires an entity to recognize costs incurred in performing assessments as part of a pipeline integrity management program as maintenance expense.

Source: American Gas Association

SOUTHWEST GAS CORPORATION
Docket No. G-01551A-04-0876
Test Year Ended August 31, 2004

Schedule JJD-13
Surrebuttal
Revised 9/13/2005

OPERATING INCOME ADJUSTMENT No.3 - REMOVAL OF TRIMP AMORTIZATION

LINE NO.	Removal of TRIMP Amortization		
1	Company Proposed	$	1,183,333
2	Staff Recommended		-
3	Adjustment	$	(1,183,333)

SOUTHWEST GAS CORPORATION
Docket No. G-01551A-04-0876
Test Year Ended August 31, 2004

Schedule JJD-14
Surrebuttal
Revised 9/13/2005

OPERATING INCOME ADJUSTMENT No.4 - *SARBANES OXLEY*

LINE NO.	Sarbanes Oxley						
1	Estimated Annual Compliance Costs	$	915,000				
2	Non-recurring Start-up Costs		(228,750)				
3	Subtotal			$	686,250		
4	Less:						
5	Stockholders Share (50%)	$	(343,125)				
6	Paiute Allocation (4.29%)		(14,720)		(357,845)		
7	Subtotal			$	328,405		
8	Arizona 4-Factor Percentage				57.58%		
9	Allocable to Arizona					$	189,095
10	Less:						
11	Allocated Test Year Amount						(45,737)
12	Staff Recommended					$	143,358
13	*Company* as Filed						202,263
14	Increase (decrease) Sarbanes Oxley					$	(58,905)
	Amortization of Deferred Sarbanes Oxley Costs						
15	Disallowance of Amortization (Reference Workpapers Schedule C-2, Adj. 17)						(27,346)
16	Staff Direct Adjustments					$	(86,251)

SOUTHWEST GAS CORPORATION
Docket No. G-01551A-04-0876
Test Year Ended August 31, 2004

Schedule JJD-15
Surrebuttal
Revised 9/13/2005

OPERATING INCOME ADJUSTMENT No.5 - INJURIES AND DAMAGES

LINE NO.	Injuries and Damages	[A]	[B]
1	Company Test Year Proposed	$ 3,043,711	
2	Staff Recommended	2,613,176	
3	Staff Surrebuttal Adjustment	$ (430,535)	
		ADJUSTMENT DETAIL	
		10 Year Average	5 Year Average
4	Less than $1,000,000	$ 5,858,370	$ 2,247,880
5	At $1,000,000	8,000,000	2,000,000
6	Greater than $1,000,000 and Less than $10,000,000	17,547,300	10,991,500
7	Total Paid	$ 31,405,670	$ 15,239,380
8	Average	$ 3,140,567	$ 3,047,876
9	Less FERC Allocation at 4.29 percent:	(134,730)	(130,754)
10	Net System Allocable	$ 3,005,837	$ 2,917,122
11	Arizona 4-Factor at 57.58 percent:	$ 1,730,761	$ 1,679,679
12	Less: Amount recorded in Test Year	(562,552)	(562,552)
13	Revised Adjustment:	$ 1,168,209	$ 1,117,127
14	Adjustment for insurance policy annualization	1,444,967	1,444,967
15	Total Insurance Adjustment	$ 2,613,176	$ 2,562,094

References:
Line 1: Company Schedule
Line 2: Column [A] Line 15, Testimony JJD
Line 3: Line 2 minus Line 1

SOUTHWEST GAS CORPORATION
Docket No. G-01551A-04-0876
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Schedule JJD-16
Surrebuttal
Revised 9/13/2005

OPERATING INCOME ADJUSTMENT No.6 - MANAGEMENT INCENTIVE PROGRAM

LINE NO.	Management Incentive Program		
1	Company Expensed	$	3,366,667
2	System Allocable Percentage		57.58%
3	Amount Available	$	1,938,518
4	Staff Recommends a 50/50 split, between ratepayers and shareholders		50.00%
5	Staff Recommended Adjustment	$	(969,259)

SOUTHWEST GAS CORPORATION
Docket No. G-01551A-04-0876
Test Year Ended August 31, 2004

Schedule DRR-17
Surrebuttal
Revised 9/13/2005

OPERATING INCOME ADJUSTMENT No.7 - SYSTEM ALLOCABLE AMORTIZATION OF CCNC

Line	Description	[A] Estimated PIS	[B] Actual PIS	[C] Rate Base Adjustment	[D] Company Amortization	[E] Staff Amortization	[F] Amortization Adjustment
1	Purchase Software for EMRS	$ 212,459	$ 212,459	$ -	$ 70,820	$ 70,820	$ -
2	Riser Verification - CSS/EMRS	500,000	-	(500,000)	166,667	-	(166,667)
3	Purchase DB Microwave Software	277,000	267,153	(9,847)	92,333	89,051	(3,282)
4	Software Licenses - Mobile Facility Data Mgmt.	434,000	454,500	20,500	144,667	151,500	6,833
5	Purchase Com Software for Output to Microfiche	50,000	44,579	(5,421)	16,667	14,860	(1,807)
6	*Total Adjustment to Intangible Plant*	$ 1,473,459	$ 978,691	$ (494,768)	$ 491,153	$ 326,230	$ (164,923)
7	Arizona 4-Factor	57.58%	57.58%	57.58%	57.58%	57.58%	57.58%
8	Arizona Adjustment Amounts	$ 848,414	$ 563,528	$ (284,886)	$ 282,805	$ 187,843	$ **(94,962)**

References:
Column [A]: Company Adjustment Nos. 17 and 20, Workpapers Schedule C-2, ADJ. 17, Sheet 9
Column [B]: Company's Response to RUCO Data Request 4-3.
Column [C]: Column [B] minus Column [A]
Column [D]: Company Workpapers Schedule C-2, Adj. 17, Sheet 9
Column [E]: Three year amortization rate times Column [C]
Column [F]: Column [E] minus Column [D]

SOUTHWEST GAS CORPORATION
Docket No. G-01551A-04-0876
Test Year Ended August 31, 2004

Schedule DRR-18
Surrebuttal
Revised 9/13/2005

OPERATING INCOME ADJUSTMENT No.8 - PROPERTY TAXES

Line No.	Description	
1	Net Plant in Service	$ 1,051,372,747
	Add:	
2	Customer Contributions in Aid of Construction	-
3	Materials and Supplies	9,222,489
	Less:	
4	Transportation Equipment	(25,153,605)
5	Land Rights	(797,670)
6	Estimated Full Cash Value	$ 1,034,643,961
7	Assessment Rate	24.50%
8	Assessed Value	$ 253,487,770
9	Property Tax Rate With Bond Issues	12.77%
10	Staff Annualized Property Tax Expense	$ 32,370,388
11	Company as Filed	$ 33,447,313
12	Staff Recommended Adjustment	$ (1,076,925)

References:
Line 1: Company Schedule B-2, Sheet 1.
Line 2: Testimony DRR
Line 3: Company Schedule C-2, Adj. No. 18, Sheet 1 of 1.
Line 4: Company Workpapers Schedule B-2
Line 5: Company Workpapers Schedule B-2
Line 6: Line 1 to Line 5.
Line 7: Testimony DRR
Line 8: Line 6 times Line 7.
Line 9: Company Schedule C-2, Adj. No. 18, Sheet 1 of 1.
Line 10: Line 8 times Line 9.
Line 11: Company Schedule C-2, Adj. No. 18, Sheet 1 of 1.
Line 12: Line 10 minus Line 11.

SOUTHWEST GAS CORPORATION
Docket No. G-01551A-04-0876
Test Year Ended August 31, 2004

Schedule DRR-19
Surrebuttal
Revised 9/13/2005

OPERATING INCOME ADJUSTMENT No.9 - CUSTOMER DEPOSITS

LINE NO.	Customer Deposits Interest Expense		
1	Staff Direct Recommended	$	-
2	Staff Recommended Surrebuttal		686,844
3	Increase (decrease) to Staff Direct	$	686,844

References:
Line 1: Company Schedule C-1
Line 2: Staff Direct Recommended
Line 3: Line 1 minus Line 2
Line 4: Testimony DRR
Line 5: Line 3 plus Line 4

SOUTHWEST GAS CORPORATION
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Test Year Ended August 31, 2004

Schedule DRR-20
Surrebuttal
Revised 9/13/2005

OPERATING INCOME ADJUSTMENT No.11 - INCOME TAX EXPENSE

Line No.	Income Tax Expense	
1	Staff Calculated Income Tax	$ 4,992,126
2	Company Income Tax	2,156,664
3	Increase/(Decrease) to Income Tax Expense	$ 2,835,462

References:
Line 1: Staff Schedule DRR-2; Line 46.
Line 2: Per Company Schedule C-1.
Line 3: Line 1 minus Line 2.

ROGERS

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF	)	DOCKET NO. G-01551A-04-0876
SOUTHWEST GAS CORPORATION FOR THE	)	
FOR THE ESTABLISHMENT OF JUST AND	)	
REASONABLE RATES AND CHARGES	)	
	)	

SURREBUTTAL

TESTIMONY

OF

DENNIS R. ROGERS

PUBLIC UTILITIES ANALYST IV

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

SEPTEMBER 13, 2005

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EXECUTIVE SUMMARY
SOUTHWEST GAS CORPORATION, INC.
RATES AND CHARGES APPLICATION
DOCKET NO. G-01551A-04-0876

The surrebuttal testimony of Staff witness Dennis R. Rogers addresses the following issues:

Staff responds to Ms. Randi L. Aldridge's rebuttal testimony concerning interest on customer deposits. Staff has revised its schedules to include the interest expense to reflect Staff's recommended six percent interest expense on customer deposits (Schedule DRR-19). This adjustment increases interest expense on customer deposits by $686,844, from $717,364 to $1,404,208.

Staff responds to Ms. Lisa E. Ross's rebuttal testimony regarding property tax expense. Staff has reassessed its property tax assessment rate, increasing its recommended rate from 24.0 percent to 24.5 percent. Staff's revised property tax assessment rate agrees with the Company and RUCO (Schedule DRR-18). Staff's revised position increases property tax expense by $660,620, from $31,709,768 to $32,370,388.

INTRODUCTION

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

A. My name is Dennis R. Rogers. I am a Public Utilities Analyst IV employed by the Arizona Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Are you the same Dennis R. Rogers who filed direct testimony in this case?

A. Yes, I am.

Q. What is the purpose of your surrebuttal testimony in this proceeding?

A. The purpose of my surrebuttal testimony in this proceeding is to respond, on behalf of the Staff, to the rebuttal testimonies of Southwest Gas Corporation Inc.'s ("Company") witnesses Ms. Randi L. Aldridge and Ms. Lisa E. Moses regarding customer interest on deposits and property tax expenses, respectively.

Q. Please explain how Staff's surrebuttal testimony is organized.

A. Staff testimony is organized to present issues in the same sequence as presented in the Company's rebuttal testimony.

INTEREST ON CUSTOMER DEPOSITS

Q. How does Staff respond to Ms. Aldridge's rebuttal testimony on Page 15, lines 11 through 15, that:

> **Staff acknowledged that if the Commission authorizes a customer deposit rate of anything other than three percent, an adjustment to the revenue requirement would be appropriate.**

A. The Company's direct testimony proposed a $686,844 pro forma adjustment reducing interest on customer deposits expense to reflect its proposal to reduce the interest rate it pays to customers on deposits from six percent to three percent. Staff's direct testimony recommended retaining the six percent customer deposit interest rate. The Company's pro forma adjustment should be removed for consistency with Staff's recommendation. However, Staff neglected to remove the Company's pro forma adjustment resulting in an understatement of expenses. Staff has revised its expenses to remove the Company's pro forma adjustment as shown on Schedule DRR-19. This adjustment increases Staff's recommended interest on customer deposits expense by $686,844, from $717,364 to $1,404,208.

PROPERTY TAX EXPENSE

Q. How does Staff respond to Ms. Moses' rebuttal testimony on Page 6, lines 1 through 7, that:

> **The Company accepts RUCO's recommendation to use the 24.5 percent property tax assessment ratio effective January 1, 2006, because the effective date of that assessment ratio is before rates in this proceeding are expected to go into effect. However, the Company recommends the Commission reject Staff's proposal to use the 2007 assessment rate of 24 percent.**

A. Upon further analysis, Staff agrees with the Company and RUCO that 24.5 percent is an appropriate property tax assessment rate. Calculation of property tax expense using 24.5 percent as the assessment rate is shown on Schedule DRR-18. This adjustment increases

Staff's recommended property tax expense by $660,620, from $31,709,768 to $32,370,388.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does.

HILL

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF SOUTHWEST GAS CORPORATION FOR THE ESTABLISHMENT OF JUST AND REASONABLE RATES AND CHARGES DESIGNED TO REALIZE A REASONABLE RATE OF RETURN ON THE FAIR VALUE OF THE PROPERTIES OF SOUTHWEST GAS CORPORATION DEVOTED TO ITS OPERATIONS THROUGHOUT THE STATE OF ARIZONA.	)	DOCKET NO. G-01551A-04-0876

SURREBUTTAL

TESTIMONY

OF

STEPHEN G. HILL

ON BEHALF OF THE

ARIZONA CORPORATION COMMISSION

STAFF

SEPTEMBER 13, 2005

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INTRODUCTION

Q. Please state your name, occupation and address.

A. My name is Stephen G. Hill. I am self-employed as a financial consultant, and principal of Hill Associates, a consulting firm specializing in financial and economic issues in regulated industries. My business address is P. O. Box 587, Hurricane, West Virginia, 25526 (e-mail: sghill@compuserve.com).

Q. Are you the same Stephen Hill who testified previously on behalf of the Arizona Corporation Commission Staff regarding capital structure and cost of capital issues in this proceeding?

A. Yes, I am.

Q. What is the purpose of your testimony at this time?

A. I will respond to the Rebuttal Testimony of Company witnesses Theodore Wood and Frank Hanley concerning the capital structure and the cost of equity capital, respectively. I will also comment, briefly, regarding the cost of capital testimony of Residential Utility Consumer Office ("RUCO") cost of capital witness William Rigsby.

Q. Have any substantial changes occurred in the capital markets since the filing of your direct testimony that would cause you to alter your equity return recommendation?

A. No, my most recent review of current market conditions indicates that the 9.50 percent cost of equity capital I recommend in this proceeding for Southwest Gas Company ("SWG" or the "Company") remains reasonable.

Q. Has the Rebuttal testimony of the Company witnesses caused you to alter your testimony in any way?

A. No. With regard to my capital structure and cost of capital recommendations in this proceeding, the Company's rebuttal testimony has not caused me to alter my recommendations. In addition, Company witness Hanley has not responded effectively to the criticisms of his analytical technique offered in my direct testimony.

Q. How is your Surrebuttal testimony organized?

A. I respond initially to the capital structure issues raised by Mr. Wood.

With regard to Mr. Hanley's cost of equity Rebuttal, I first address his comments on my cost of equity analyses and then turn to his response to my criticism of his analytical techniques. In doing so, I point out that the Company witness' analysis produces results that overstate the Company's actual cost of capital. Finally, I discuss RUCO witness Rigsby's Capital Asset Pricing Model, which produces equity cost estimates that I believe are somewhat overstated.

CAPITAL STRUCTURE

Q. Prior to discussing the details of Mr. Wood's rebuttal on the issue of capital structure, do you have any general comments regarding his testimony?

A. Yes. First of all, Mr. Woods and I are in agreement on several issues. For example, Mr. Woods agrees that the SWG (and its parent Southwest Gas Corporation) has a common equity ratio that is well below the hypothetical capital structures recommended by Staff in this proceeding (36 percent versus 40 percent). He also recognizes that the ratemaking use of higher equity ratio than actually employed by SWG "increases the return on equity" to the parent company (Woods Rebuttal, p. 12). That means if the regulated company is allowed and earns a return equal to the current cost of capital, the parent (with a lower equity ratio) will earn a return in excess of the cost of equity capital. If that occurs, stockholders are unfairly advantaged at the expense of ratepayers.

Limiting the potential for ratepayer's disadvantage is precisely the point of Staff's position regarding capital structure in this proceeding. While Staff recognizes that the parent company will be temporarily afforded an opportunity to earn a return above the cost of capital through the use of hypothetical capital structure, Staff recommends the use of a hypothetical capital structure in this proceeding to protect the Company's financial integrity. However, Staff's capital structure position (i.e., using 40 percent common equity rather than 42 percent common equity) provides a better balance of economy and efficiency than does the Company's requested capital structure. That is, Staff's capital structure recommendation provides financial support for the Company at a lower cost to ratepayers. Staff also recommends a methodology through which the imbalance in actual and hypothetical capital structures can be eliminated in the future (i.e., increasing SWG's common equity ratio to at least 40 percent of capital).

Also, while Mr. Woods elects to cite regulatory precedent regarding the allowance of hypothetical capital structures, there is no dispute on this point. All parties are recommending the use of a ratemaking common equity ratio higher than that which the Company actually employs. However, Mr. Woods fails to mention the regulatory precedent that is most pertinent in this jurisdiction: what this Commission has consistently done with SWG's ratemaking capital structure in the past. This Commission has consistently utilized a ratemaking capital structure for SWG containing 40 percent common equity in order to balance financial safety and economy. It should continue to do so here.

Finally, Mr. Woods makes much of the fact that SWG's common equity has grown by 67 percent over the past ten years. While that is interesting, it is a fact in isolation and it is of little moment in determining the proper ratemaking capital structure in this proceeding. It would be important if and only if the amount of common equity had grown at a faster rate than the amount of debt capital used by SWG management. Unfortunately, that is not the case. As I show in Exhibit (SGH-1), Schedule 2, page 3 attached to my Direct Testimony, SWG had a common equity ratio of 36.9 percent in 1995 and has about the same common equity ratio today (Wood Rebuttal, p. 8: 36.7 percent). What that means is that SWG has added debt to its capital structure at the virtually same rate as it has added common equity and has not improved its financial risk position over the past ten years. Mr. Wood's facts regarding the addition of common equity in isolation do not support the Company's 42 percent common equity request because, by his own admission, even the most recent capital structure shows SWG's common equity ratio remains well below the 40 percent that Staff recommends for ratemaking purposes.

Q. At pages 4 and 5 of his rebuttal, Company witness discusses his concern with your representation of the average common equity ratio in the gas utility industry. What are your comments?

A. Mr. Woods appears to be concerned that I compared Staff's recommended ratemaking common equity ratio (40 percent) to that of the gas industry, generally, as well as to my sample group of gas distributors. His concerns are twofold. First, Mr. Woods is concerned that my comparison to the entire gas utility industry includes diversified companies not just gas distributors. That concern is unjustified.

The gas utility industry as reported by AUS Utility Reports includes gas distributors as well as integrated natural gas companies. Integrated natural gas companies include pipeline as well as exploration and production and, often, energy trading operations. Those diversified operations are riskier operations than that of a gas distribution utility like SWG. Firms that carry higher operating risk are optimally capitalized with more equity and less debt than less risky firms. Therefore, relying on the average common equity ratio for both distributors and diversified gas companies (41.7 percent, see Hill Direct, p. 23) provides a conservative estimate of an appropriate equity ratio for the less-risky distribution operation. That information, in combination with the fact that the average common equity ratio for gas distributors was 42.7 percent at the time I prepared my Direct Testimony, indicate that the ratemaking common equity ratio recommended by Staff (and approved many times by this Commission) of 40 percent provides a reasonable balance of financial safety and economy.

Second, Mr. Woods expresses his concern that the common equity ratios I cite are based on total capital, which includes consideration of short-term debt, claiming that SWG does not include short-term debt in its ratemaking capital structure. There are two problems with Mr. Woods' claim. The first problem is that in evaluating the financial risk of a firm investors as well as the financial community (e.g., bond rating agencies) consider all debt obligations of a company, including short-term debt. Gas distributors commonly use significant amounts of short-term debt. Therefore, in evaluating relative financial risk it is appropriate to consider all of the capital supplied by investors (i.e., including short-term debt) rather than, as Mr. Woods would have it, only part of the total debt obligations of similar companies.

The second problem with Mr. Woods' concern that I have improperly considered short-term debt is that SWG includes short-term debt in its capital structure, but calls it long-term debt. As shown on Schedule D-2, Sheet 1 accompanying the Company's filing in this proceeding, roughly 12.5 percent of the Company's total debt carries a short-term debt cost rate. Also, as the Company noted in its June 30, 2005 S.E.C. Form 10-Q:

> "In April 2005, the Company replaced its $250 million credit facility, scheduled to expire in May 2007, with a $300 million facility that expires in April 2010. Of the $300 million, $150 million will be available for working capital purposes and $150 million will be designated long-term debt. Interest rates for the facility are calculated at either the London Interbank Offering Rate plus an applicable margin, or the greater of the prime rate or one-half of one percent plus the Federal Funds rate. The applicable margin on the new credit facility is lower than the applicable margin of the previous facility. At June 30, 2005, $102 million of the facility was outstanding and is reflected as long-term debt."(Southwest Gas Corporation, June 30, 2005, S.E.C> Form 10-Q, p. 10)

The credit facility debt that is included in SWG's capital structure and its "reflected as long-term debt," carries a short-term debt cost (LIBOR or Federal Funds plus 1/2 percent). Short-term debt is the cheapest form of investor-supplied capital available to the Company, helps to lower overall capital costs and should be included in ratemaking capital structures. Therefore, the Company's capital structure effectively contains short-term debt and comparison to the common equity ratio of other gas utility firms that also includes consideration of short-term debt is appropriate.

Q. At page 11 of his rebuttal, Mr. Woods claims that your calculation of the rate impact of the Company's capital structure request is overstated. How do you respond?

A. In assessing the rate impact of the Company's capital structure request compared to SWG's actual capital structure, I used the Company's requested cost of equity capital. Because the cost of equity capital is based on SWG's actual capital structure (the market evaluates the Company's actual financial position) and because Mr. Hanley adjusted his recommendation upward to account for SWG's greater financial risk, the use of the same cost of equity for both the actual and requested capital structure is reasonable. The annual rate impact of that difference, as I show in my Direct Testimony, is $8 Million (Exhibit (SGH-1), Schedule 2, p. 2).

If, as I believe Mr. Woods implies, there were two different capital structures and both of them actual capital structures of two different companies, investors would perceive the capital structure with less debt as lower in risk. My cost of equity analysis indicates that the cost of equity difference between the lowest risk and highest risk gas distributor is 50 basis points, and that estimate is based on a sample group with an average common equity ratio very similar to the Company's requested 42 percent. Therefore, in order to address Mr. Woods' concerns, if we add 25 basis points to the Company's requested 11.95 percent cost of common equity to be applied to SWG's actual capital structure, the annual rate impact of the capital structure difference would still be quite substantial—$6.7 Million.

In sum, because we are analyzing the rate impact of the difference between a hypothetical ratemaking capital structure and the actual capital structure of the same company, I believe the analysis shown on page 2 of Schedule 2 attached to my Direct Testimony provides the Commission with a reliable estimate of the annual rate impact of the Company's capital structure request in this proceeding. However, even if we make the theoretical adjustment suggested by Mr. Woods and raise the cost of equity applicable to the more leveraged, actual, capital structure, the annual rate impact on SWG's customers remains a substantial one. One, which I believe, this Commission should strive to eliminate in the future.

Q. At pages 12 and 13 of his rebuttal, Mr. Woods testifies that because SWG has not earned its authorized return on equity, ratepayers have not provided a subsidy to the company. Is that correct?

A. No, that is not correct. Every time this Commission has set rates for SWG using a 40 percent common equity ratio, which has been in excess of the actual common equity ratio of Southwest Gas Corporation, the per mcf rates include an overall return based on that "ratemaking" common equity the Company does not actually have. Whether or not, the Company's actual bottom line (profitability) experience does not match what was allowed in rates is not germane to the issue of whether or not ratepayers have been providing the subsidy. They have provided that subsidy for many years and will continue to do so if the Staff's recommended capital structure is used for ratesetting purposes in this proceeding. Only when the gap between the manner in which SWG management actually capitalizes its utility assets and its ratemaking capital structure is eliminated will ratepayers no longer provide an unnecessary financial subsidy to the Company.

It is important to note here that I believe a regulated utility should have an opportunity, under efficient and effective management, to earn the return it is allowed. If there are technical impediments to that end that can be addressed in a regulatory format, then they should be addressed. However, continuing to allow the utility to earn a return on common equity it does not have is neither an economically efficient nor appropriate solution.

Q. Company witness Woods, at page 13 of his rebuttal, provides a list of reasons that a 42 percent hypothetical common equity ratio is reasonable. What are your comments?

A. Mr. Woods indicates that a 42 percent hypothetical common equity ratio implies a debt-to-total capital ratio that falls within Standard & Poor's published range for BBB-rated companies. Southwest Gas Corporation currently has a "BBB" bond rating with a 36 percent common equity ratio—42 percent is simply more costly for ratepayers.

Mr. Woods criticizes Staff for failing to consider the improvements SWG has made in its equity capitalization. The Company insists on focusing only on the increase in common equity capital and simply doesn't report the fact that, over the past ten years, the amount of debt capital employed by SWG management to finance its operations has increased just as rapidly. While the Company has increased the dollar amount of common equity, it has not increased its common equity as a percentage of total capital employed.

Mr. Woods cites the "higher financial risk" of SWG as a rationale for allowing a 42 percent hypothetical common equity ratio. Here, the Company is requesting that it be able to have its cake and eat it too. SWG management determines how it will be capitalized by selecting the mix of debt and equity used to finance operations. In doing so, it has consistently selected a capital mix that carries relatively more debt and less equity than other gas distributors, generally. Then the Company comes to regulators, with its hand out, claiming that the additional financial risk that it has voluntarily assumed is a reason to set rates with a higher common equity ratio. That simply is not rational regulatory policy and actually encourages the Company to remain in a financially risky position. In fact, if SWG management elected to lower its common equity ratio, Mr. Woods' logic would call for an even higher ratemaking equity ratio to "account for" that additional financial risk.

Finally, Mr. Woods' also cites other regulatory support for hypothetical capital structures as a reason why 42 percent is reasonable in this proceeding. The regulatory support he fails to cite is from this Commission, which has consistently set rates for SWG with a 40 percent common equity ratio, not 42 percent.

Q. At page 16 of his rebuttal, Mr. Woods claims that the company has "every incentive" to improve its capital structure. Is that true?

A. No. Moreover, the current ratemaking scheme employed by SWG and followed in all of its regulatory jurisdictions, namely, capitalizing cheaply with more debt and less equity while setting regulated rates with a more expensive, less financially risky capital structure, actually encourages the Company not to recapitalize its operations. After all, if the firm is able to earn a return on common equity capital it does not actually have to issue or pay for, why would it increase its common equity ratio? The answer is, it wouldn't, and SWG's capital structure has not changed significantly in over a decade.

In my view, the Company's incentive to recapitalize its operations (improve its common equity ratio) can be encouraged only through regulators' willingness to set rates for the Company in the future using its actual capital structure. That is why Staff recommends that, in this proceeding, the Commission make a definitive finding that it will no longer set rates for SWG with a capital structure containing a higher common equity ratio than that actually employed by the parent company. Then, the Company will have incentive to improve its common equity ratio and its financial risk will be reduced.

Q. At page 22 of his rebuttal, Mr. Woods indicates that the Staff's position that the company should recapitalize would be seen negatively in the financial community if adopted by this Commission. Do you agree?

A. No. This Commission has, for years, supported SWG' financial position by requiring Arizona ratepayers to provide an equity return (and the taxes associated with it) on rate base that is actually financed with debt capital. Staff recommends in this proceeding that the Commission continue to follow its past practice and use a 40 percent common equity ratio, when the Company is actually capitalized with much less.

The difference in this proceeding is that Staff is recommending that the Commission make very clear to the Company (and the investment community) that, at the time of SWG's next rate proceeding in Arizona, it will no longer require Arizona ratepayers to provide that financial subsidy. If SWG management elects not to respond and improve its financial position and the Commission sets rates based on its actual capital structure and actual costs (as Staff recommends), the responsibility for any negative investor response would rest solely with SWG management.

Finally, it is difficult to believe that the Company is testifying that increasing its common equity ratio from 36 percent to 40 percent would, somehow, be detrimental to investors. An SWG with a 40 percent common equity ratio would have lower financial risk, possibly a higher bond rating and lower marginal debt costs. A more financially secure company can only be good for investors. For the benefit of both consumers as well as investors, this Commission should adopt Staff's recapitalization proposal for SWG.

Q. Does this conclude your discussion of Mr. Woods' rebuttal testimony, Mr. Hill?

A. Yes, it does.

COST OF COMMON EQUITY

Q. Beginning at page 3 of his rebuttal Mr. Hanley indicates that it is appropriate to use more than one econometric model to estimate the cost of equity capital. Do you agree?

A. Yes, I do agree; and my equity cost estimate in this proceeding is based on the results of four different equity cost estimation techniques. Mr. Hanley seems concerned with, as he put it, "Mr. Hill's primary reliance on the DCF model" in estimating the cost of equity capital[1]. Mr. Hanley's rebuttal reduces, simply, to his belief that I have relied too heavily on the results of a DCF analysis. While the DCF continues to provide the most reliable equity cost estimates and, therefore, I place reliance on that methodology, I continue to believe it is reasonable to temper the results of that analysis with other methodologies and have done so in this proceeding.

I have, in my Direct Testimony, previously outlined my reasons for relying on the DCF and will not revisit that logic here. However, in light of Mr. Hanley's comment at page 4 of his Rebuttal that he is aware of no evidence which indicates that the DCF is a superior methodology, I would simply call attention to a survey by the National Association of Regulatory Utility Commissioners ("NARUC") regarding the methodologies considered by regulators when deciding allowed rates of return[2]. That survey shows that the cost of capital estimation methodology listed most frequently by regulators in the U.S. and Canada is the DCF.

Both the DCF and CAPM/Risk Premium-type analyses have been available to regulators since the early 1970s and regulators have, over time, elected to rely primarily on the DCF method, as opposed to the CAPM/Risk Premium models, to set regulated rates of return. Moreover, during this time period of dominance in DCF-determined rates of return, the utility industry has continued to provide necessary service, attract capital and maintain its financial integrity. In my view, the empirical evidence regarding the efficacy of the DCF in setting regulated rates of return Mr. Hanley claims is lacking is certainly available.

[1] Hanley Rebuttal, p. 3.
[2] National Association of Regulatory Utility Commissioners, "Utility Regulatory Policy in the United States and Canada, Compilation 1994-1995, pp. 264, 520, 588.

Q. At page 4 of his rebuttal, Mr. Hanley cites a 1998 order of the Pennsylvania Public Service Commission indicating that it recognizes the "problems" with too-heavy reliance on the DCF. Do more recent orders by that Commission offer a different view of the DCF?

A. Yes. In its Order in Docket No. R-00984567 issued in the Fall of 1999 (after the Order Mr. Hanley cites), the Pennsylvania Commission supported the ALJ's reliance on the DCF-determined cost of equity, rejecting reliance on other methods and citing its own "consistent reliance on the DCF":

> "The ALJ noted that, in numerous cases since 1988, the Commission has determined the cost of common equity primarily by utilizing the DCF method and informed judgement. *See Pennsylvania Public Utility Commission v. PECO Energy Co.*, 87 Pa.P.U.C. 184,212 (1997); *City of Bethlehem*, 84 Pa.P.U.C. at 304-305; *Media Borough*, 77 Pa.P.U.C. at 481; *Pennsylvania Public Utility Commission v. Philadelphia Suburban Water Co.*, 71 Pa.P.U.C. 593, 623-32 (1989); *Pennsylvania Public Utility Commission v. Western Pennsylvania Water Co.*, 67 Pa.P.U.C. 529, 559-70 (1988).
>
> Generally, observed the ALJ, the Commission has criticized the Risk Premium and CAPM methodologies….
>
> The ALJ noted that the Commission's adoption of the DCF in *PECO, supra,* is particularly compelling due to the recency of the decision. Specifically, we responded to PECO's criticism of the OTS relying solely on the DCF methodology by replying that the OTS's proposal conformed to our consistent reliance on the DCF method and informed judgement to determine the cost of common equity in numerous current cases." (Order in Docket No. R-00984567, Pa.P.U.C. v. City of Lancaster (Water), September 22, 1999)

Mr. Hanley also cites a 1994 Order by the Iowa Utilities Board that is critical of the DCF. However, that regulatory body has also "changed its tune" regarding the DCF equity cost estimates as evidenced in a more recent order. In that 2003 decision, the Iowa Utilities

Board indicates that, in determining an appropriate allowed return, they review DCF results first.

> "The determination of the return on equity cannot be based on the rigid mechanical application of any particular formula, but must be based on the specific facts presented. In determining the return on equity, the Board has generally looked first at the results under the various DCF models."(Iowa Utilities Board, Docket Nos. RPU-02-3, RPU-02-8 and ARU-02-1, Interstate Power and Light, April 15, 2003, p. 61)

Q. Throughout his rebuttal, Mr. Hanley states his belief that market-to-book ratios are not meaningful in utility cost of capital analysis. Is he correct?

A. No, Mr. Hanley is not correct.

First, Mr. Hanley states that there is "no evidence of any direct relationship between market-to-book ratios and the rate of earnings on book common equity" (Hanley Rebuttal, p. 7, ll., 5, 6). Of course, he is careful to preface that statement with the phrase "in the unregulated sector." As I point out at page 18, lines 14 through 20 of my Direct Testimony in this proceeding (which Mr. Hanley fails to mention), there is no relationship between the cost of equity, earned returns ("ROEs") and market-to-book ratios in the unregulated sector because, in the unregulated sector of the economy, a firm's earnings are not dependent on the book value of its assets. In regulation, a utility's earnings are directly related to its rate base—the depreciated book value of its used and useful assets dedicated to utility service.

Therefore, Mr. Hanley's statement with regard to regulated utilities—like SWG—is incorrect. The best evidence available that utility market prices, book values, book earnings (ROEs) and the cost of capital are inter-related is the actual historical record of utility stock prices relative to book value from the mid-1970s to the present.

Prior to and during the early the 1970s, utilities' market prices generally exceeded book value, indicating they were being allowed and earning returns which exceeded the cost of capital. As the double-digit inflation rates of the later 1970s pushed capital costs higher, allowed returns followed capital costs upward, with a lag. Also, due to the advancing inflation rates the allowed returns were not often earned. As a result, utilities were allowed and earned returns that were below their cost of capital. In the very early 1980s, when interest rates were at an all-time peak, often utilities were not even earning a cost of equity that exceeded their marginal cost of long-term debt. Clearly, even though regulators raised allowed returns to unprecedented levels during that time period, utilities were not earning their cost of capital. As a result, during that time utility market prices were below book value.[3]

As capital costs rose during that time, utility investors bid down the price of utility stock in order to achieve their required return. In so doing, investors bid the market price down below book value because the only way to earn the return they required (the utilities' cost of equity capital) was to provide a market price for the utility stock that was below the per share value of the utilities' earnings base -- book value. During this time period in which utilities were earning returns below their cost of capital (generally, 1978-1983), utility stock prices were below book value.

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[3] It is interesting to note that utility-sponsored rate of return witnesses, during the time that market prices were below book value, cited that fact as prime-facie evidence that utilities were not earning their cost of equity capital. Now that utility market prices are uniformly <u>above</u> book value, utility-sponsored rate of return witnesses, like Mr. Hanley, claim that there is "no relationship" between utility market-to-book ratios, earned ROEs and the cost of equity capital.

In 1984 when the U.S. economy began to pull out of a very deep recession and inflation and interest rates began to fall, capital costs fell; but the very high equity returns allowed utilities in the late 1970s and early 1980s did not. As a result, utilities were generating returns on book value that began to exceed investors' required returns, and investors, in turn, bid up utility market prices. By 1984, utilities, on average, began to show market prices that approximated book value. By 1986, when a very large drop in oil prices triggered a correspondingly large drop in inflation, interest rates and, consequently capital costs, utilities' market prices were above book value because the embedded equity book returns exceeded investors' required market returns. The large drop in capital costs in 1986 exacerbated the problem, and utility stock prices rose to even higher levels above book value.

During the remainder of the 1980s and into the early 1990s, as capital costs continued their decline, regulatory lag has worked in favor of utilities because allowed returns lagged the actual cost of equity. Therefore, even though regulators have responded to lower capital costs by lowering allowed returns, they have not kept pace with the actual cost of capital and utility market prices have remained well above book value.

In sum, there is evidence that utility market prices, book values, allowed returns and the cost of equity capital are inter-related. It is found in the actual, recent historical evidence available in the capital marketplace.

Second, witness Hanley claims to "show" in his Exhibit (FJH-16), attached to his Rebuttal Testimony, that market prices, earned returns and book values are not related. However, the Mr. Hanley's "evidence" that market-to-book ratios do not provide meaningful information in estimating the cost of equity capital for utilities is based, not on utility market evidence, but on the historical evidence of a sample of unregulated firms—the Standard & Poor's Industrials ("S&P Industrials"). That "evidence" is not probative of the value of utility industry market-to-book ratios.

The reason Mr. Hanley's S&P Industrials' market evidence does not support his position is that the earnings basis of the two groups (regulated utilities and competitive industrials) are distinctly different. Although there are exceptions, the basis for utility industry earnings on its equity capital is the value of the equity that appears on its books of account (book value). That is, generally speaking, utility earnings are allowed and earned based on book value. Investors are aware of this fact and react accordingly. Utilities' expected earnings, then, are a function of book value, and the price investors are willing to provide for a utility operation indicates whether or not that expected return on book value is above or below the investors' required return for that type of investment.

On the other hand, the basis for the equity earnings of unregulated, industrial firms is not the book value of its assets, rather, it is the economic value of those assets. In other words, investors gauge industrial firms' expected equity returns based on the earnings potential of the firm's capital equipment not its depreciated historical cost (book value). Therefore, it is to be expected that investors' earnings expectations for industrial firms, and, thus, the market prices they are willing to provide for those equities are not necessarily related to the book value of those unregulated assets. Therefore, the fact that the market prices of industrial firms are not related to their book values is, in no way, indicative of whether or not the same is true for utility firms. In other words, the accounting conventions in the two industry groupings are very different, and Mr. Hanley's attempt to "prove" that utility market-to-book ratios are irrelevant in the equity cost estimation process is deficient.

Third, I provided my own cites to the financial literature in support of the position that the relationship between the market-to-book ratios of public utilities and the cost of equity capital is well established, which Mr. Hanley does not discuss in his rebuttal.

In sum, while cost of equity estimates should be grounded on market-based equity cost methodologies, market price, book value and projected returns on book value for utilities are important market-based indicators of the cost of equity capital that provide useful corroborative information toward that end. Mr. Hanley's rebuttal on this issue, focusing on the "straw-man" of competitive, industrial firms, is off-point and should be disregarded by this Commission.

Q. At page 10 of his rebuttal, Mr. Hanley discusses Professor Myron Gordon's comments regarding limitations of the DCF model and sustainable growth. How do you respond?

A. Professor Gordon is a distinguished professor of financial economics who is credited with the popularization of the DCF model in regulation. The DCF, in fact, is often called "the Gordon model." Mr. Hanley is aware that I know Professor Gordon and had the good fortune to preside over a session at the 30th Financial Forum of the Society of Utility and Financial Analysts in 1998 in which Professor Gordon was the featured speaker.

Professor Gordon is an academician and, it is unsurprising that he would unceremoniously point out, to a gathering of the Institute for Quantitative Research in Finance, the shortcomings of a very simple algebraic model (the DCF) of a very complex phenomenon (investor expectations). However, contrary to Mr. Hanley's implications, that does not mean that Professor Gordon is no longer an advocate of the DCF, or that he believes analysts' earnings growth projections are superior to an informed sustainable growth rate analysis of the type that I perform in my Direct Testimony.

In fact, in the quote Mr. Hanley has provided, Professor Gordon opines to his audience of quantitative analysts that analysts' projections are better than earnings growth rates derived solely from financial statements. A review of the entire article that Mr. Hanley cites, reveals that the financial statement data to which Professor Gordon refers is historical data over the past five years.

As I noted in my Direct Testimony, academic studies (like the one by Malkiel and Cragg referenced by Gordon in the cite provided by Mr. Hanley) have shown that analysts projected earnings growth rates are superior to simple, mechanical averages of historical growth rates (i.e., financial statement data). That, again, is unsurprising, and does not mean, as Mr. Hanley seems to assume, that analysts' earnings growth projections are the sole determinant of investor expectations.

Moreover, my DCF growth rate analysis is not based only on historical "financial statement data." The sustainable growth rate analysis I set out in my Direct Testimony and, in detail in Appendix C, considers projected retention ("b x r") growth rates as well as historical and projected growth rates in dividends, earnings and book value.

Finally, Professor Gordon has published his opinion regarding the rather unsurprising fact that analysts' earnings growth rate estimates outperform simple historical growth rate averages as well as the efficacy of sustainable (retention) growth rates.

> "...the superior performance by KFRG [analysts forecasts] should come as no surprise. All four estimates of growth rely upon past data, but in the case of KFRG [analysts

> forecasts] a larger body of past data is used, filtered through a group of security analysts who adjust for abnormalities that are not considered relevant for future growth. We assume this is done by any analyst who develops retention growth estimates of yield for a firm. If we had done this for all seventy-five firms in our utility sample, it is likely that the correlations would have been as good or better than those obtained with the analyst forecasts of growth." (Gordon, Gordon, Gould, "Choice among methods of estimating share yield," *The Journal of Portfolio Management,* Spring 1989, pp. 50-55)

Q. Mr. Hanley, at page 11 of his rebuttal, claims that if you had relied solely on projected 5-year earnings growth, your DCF result would have been higher. Is that correct?

A. Yes, although Mr. Hanley overstates it. Using only earnings growth projections from all three sources I studied (Value Line, First Call and Zacks), the DCF growth rate would have been 5.44 percent, not the 5.61 percent that appears in Mr. Hanley's rebuttal.

However, as Mr. Hanley fails to mention, I discuss in Appendix C attached to my Direct Testimony several instances in which data anomalies cause the Value Line earnings growth rates to be overstated as predictors of long-term sustainable growth. Further, if one considers <u>all</u> the projected data available, as it is reasonable to believe that investors do, and includes Value Line's 5-year projections for book value and dividend growth, the average projected growth rate is 5.06 percent. I use a 5.12 percent growth rate in my DCF analysis. Therefore, considering all the projected data available to investors, not just some of it, my DCF growth rate appears to be overstated, not understated as Mr. Hanley would have it.

Q. Prior to moving on to other areas of Mr. Hanley's rebuttal, do you have any other comments regarding the issue of market-to-book ratios and the over- or under-statement of DCF equity cost estimates?

A. Yes. Mr. Hanley testifies that when utility market prices are above book value, a DCF equity cost estimate will understate the cost of capital. The converse of Mr. Hanley's logic would, of course, be that when market prices are *below* book value, then a DCF equity cost estimate would *overstate* the cost of capital. However, during the early 1980s, when utility market prices were below book value (and, according to Mr. Hanley's logic, the DCF should have overstated the cost of equity capital), I am unaware of any utility cost of capital witness that recommended a DCF equity cost estimate be lowered because the market price was below book value.

In addition, witness Hanley and I have appeared in many cases together over the years and I have asked him in data requests on numerous occasions to provide copies of any cost of capital testimony where 1) the utility market price was below book value and 2) the witness recommended a reduction in the DCF result because of that fact, Mr. Hanley has <u>never</u> produced any such testimony. His response to the same question in this proceeding (which he attaches to his Rebuttal Testimony as Exhibit (FJH-25)), likewise, produced no such testimony.

In response to this issue in his Rebuttal Testimony at page 33, Mr. Hanley claims that he made no statement regarding the inaccuracy of the DCF in the early 1980s (when utility market prices were well below book value) "because there was no decided trend among regulatory agencies for exclusive reliance on the DCF model." However, he offers no evidence that that was the case, and it is my recollection, having been an expert witness during that time period, that regulators did, indeed, rely primarily on the DCF, just as they do today.

In addition to the fact that Mr. Hanley still has produced no testimony calling for a reduction in DCF results when market prices are below book value, his rationale is not supportable. Regardless of what the regulatory "style" is or was, if Mr. Hanley's theory regarding the over/understatement of the DCF when market prices under/overstate book value is true, it would have been as valid in the early 1980s as it is today. As such, it would have been valid to discuss it in a DCF cost of equity estimate even if the DCF was not the model exclusively relied on. We must conclude that his theory regarding the efficacy of the DCF is a relatively new one—one that works to inflate his DCF cost of equity in the current economic environment.

Q. At page 15 of his rebuttal Mr. Hanley states his belief that because investors can invest in a diversified portfolio of stocks, your concerns regarding the use of the CAPM in cost of capital analysis are unwarranted. Is he correct?

A. No, he is not correct on that point. Investors have always been able to diversify their portfolios. The old saw, "Don't put all your eggs in one basket," which is the essence of portfolio theory, is just common sense. However, the fact that investors can diversify is unrelated to the fact that the CAPM, when used in cost of capital analysis, is taken out of the context for which it was intended. Mr. Hanley attempts to brush away the CAPM's shortcomings in cost of capital estimation (and there are many) with a factual statement which is unrelated to the issue.

Q. At page 16 of his rebuttal Mr. Hanley discusses Fisher Black's response to the Fama and French article regarding the inaccuracy of beta that you mention in your direct testimony. What are your comments?

A. First, it is interesting to note that Mr. Hanley elects to take issue with Fama and French ("F&F") on the issue of the reliability of beta. That is because Mr. Hanley credits F&F with "pioneering" the Efficient Market Hypothesis ("EMF"), which is an essential element of his testimony in this proceeding. Apparently, Mr. Hanley is willing to accept some, but not all, econometric research published by the authority he cites in his Direct Testimony as pioneering "the cornerstone of modern investment theory."

Second, it is not surprising that Professor Fisher Black would respond to the sharp criticism leveled at the key parameter of the CAPM—beta—by Professors Fama and French. The opinions of Eugene Fama, because his econometric analyses were originally used to support the validity of beta and the CAPM[4], carry significant weight in regard to the accuracy of beta. Also, what is more surprising is that Professor Black does not disagree with their methodology (he could hardly do so since it was the same methodology that was originally used to support the CAPM theory) or their results, but the *interpretation* of Fama and French's results.

Black's position in defending his work on the CAPM is as follows: The relationship between beta and returns discovered by Fama and French appears as a horizontal line with, essentially, a slope of zero. Fama and French's interpretation of those results is that there is, essentially, no relationship between beta and return. Black, in defense, points out that the historical return data is so widespread (i.e., variable) that one cannot absolutely "...rule out the hypothesis that the slope of the line is positive" (Hanley Rebuttal, p. 16, ll. 17, 18,

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[4] Also, as Mr. Hanley points out in his Direct Testimony, p. 21, footnote 7, Fama was a key figure in the initial support for the Efficient Market Hypothesis.

quoting Black). A positive relationship between return and beta (no matter how weak) could be said to support the notion of the beta model CAPM, according to Black.

In my view however, Professor Black's "defense" that the data are so variable that the possibility of a positive slope of the beta/return relationship cannot be ruled out is hardly a ringing endorsement of the theory. The CAPM theory holds that there is a direct one-to-one relationship between beta and return. Black's position is that, upon examining beta and return data over a thirty year period, all we can say is even though it appears that there is no relationship between the two variables, there is a small chance that there may be. I do not find such logic reassuring, and continue to advise caution in relying on CAPM equity cost estimates as primary indicators of the cost of common equity capital.

Q. At pages 18 through 21 of his rebuttal, Mr. Hanley devotes a considerable portion of his rebuttal to a discussion of which historical market risk premium (arithmetic or geometric) to use in a CAPM analysis. Do you have any comments?

A. There are two averaging methods available for analyzing the results of historical return data. One is an arithmetic mean, which simply adds up each period's return and divides the total by the number of periods. The other averaging technique is the geometric mean, which measures the compound return over the entire period. The arithmetic mean produces a higher market risk premium than the geometric mean. Mr. Hanley believes that the CAPM should be applied using only the arithmetic mean of the historical market risk premium. I have used both the geometric and arithmetic means in estimating my CAPM cost of equity, which I believe is a more balanced approach than that advocated by the Company witness.

There is theoretical and practical support for reliance on both arithmetic and geometric market risk premiums in the CAPM and, in my view, a reasonable and well-balanced course of action is to employ both averaging techniques in a CAPM cost of equity estimate. Mr. Hanley, on the other hand, recommends that this Commission utilize only the higher of the two market risk premiums (the arithmetic mean).

Moreover, both arithmetic and geometric averages are published and are equally available to investors. On that basis alone, given Mr. Hanley's heavy reliance on the Efficient Market Hypothesis (all publicly available information is incorporated into market prices), it is curious that he recommends consideration of only the arithmetic mean—only part of the historical return data available to investors. I continue to recommend that, if the Arizona Commission elects to consider CAPM equity cost estimates, it employ the more balanced approach, i.e. using both the arithmetic and geometric market risk premiums.

Q. At page 17 of his rebuttal, Mr. Hanley notes that the authors of one of the financial texts, which you have previously cited, recommend reliance on the CAPM to determine the cost of capital. Does this weaken your position vis a vis the reliability of the CAPM in setting allowed returns for public utilities?

A. No. I recognize that the CAPM is widely used in the academic community. Nevertheless, it remains true that there are problems with the application of that model in ratesetting situations. The fact that so few regulatory bodies even consider CAPM evidence in setting allowed returns, is evidence of the unreliability of that model.

In this portion of his Rebuttal Testimony, Mr. Hanley references the Copeland, Koller and Murrin ("CKM") text that I previously cited in this jurisdiction. I cited that text as evidence of the fact that some academicians rely on geometric means of historical market risk premium data in applying the CAPM, rather than the higher arithmetic mean Mr. Hanley prefers. Copeland, Koller and Murrin recommend the use of the geometric mean market risk premium in the CAPM.

However, rather than weaken my position regarding the CAPM, Mr. Hanley's cite to CKM strengthens it. The fact that CKM prefer the CAPM as an equity cost estimation tool <u>and</u> recommend the use of a geometric mean with that model underscores the fact that the geometric mean provides a viable measure of the market risk premium in the CAPM. That position is consistent with my use of both geometric and arithmetic market risk premiums in the CAPM, but is inconsistent with Mr. Hanley's arithmetic-only CAPM.

Q. At page 21 of his rebuttal, Mr. Hanley cites Ibbotson as support for the use of long-term treasury bonds in the CAPM, indicating that the risk-free rate used "should match the horizon of whatever is being valued." Does that comport with CAPM theory?

A. No. The CAPM theory does not address the investment horizon period. The CAPM is a single-period model and seeks to estimate the cost of equity capital in the current period. There are simply two ways to go about it, with regard to the selection of a risk-free rate. Moreover, if current short- and long-term Treasury yield differences are similar to long-term historical averages, the CAPM equity cost estimates using T-Bills and T-Bonds will produce the same result.

If short-term T-Bills are used as the risk-free rate, then the appropriate market risk premium is the long-term difference between stock returns and T-Bill returns. Currently that T-Bill-based market risk premium ranges from 6.7 percent to 8.6 percent (see Exhibit (SGH-1), Schedule 7). If long-term T-Bonds are used as the risk-free rate, then the appropriate market risk premium is the long-term difference between stock returns and T-Bond returns. Currently, that difference ranges between 5.0 percent and 6.6 percent. Therefore, because the market risk premium used with T-Bills is larger than the market risk premium used with T-Bonds, the difference in the resulting CAPM cost of equity estimate is often similar. That similarity of result is shown in Schedule 7 attached to my Direct Testimony in this proceeding.

Q. At page 22 of his rebuttal, Mr. Hanley discusses the use of forecasted bond yields in risk-premium equity cost estimates. Do you believe it is appropriate to use interest rate projections in a cost of equity esitmate?

A. No. Investors are aware of current projections regarding the expectations for the economy and the level of interest rates and incorporate those expectations into the price they are willing to provide for bonds and, thus, the bond yield. One of the most widely-accepted tenets of modern finance—the efficient market hypothesis (cited often by Mr. Hanley)—holds that all publicly available information is included in security prices. That includes interest rate forecasts. Therefore, the current yield does not need to be adjusted again for the same expectations that are already included by investors. Basing risk premium estimates on projected bond yields would be similar to basing DCF equity cost estimates on projected stock prices. Mr. Hanley has not attempted the latter and the Commission should not utilize his equity cost estimates that rely on the former.

Second, bond yield projections of the type relied on by Dr. Avera are often wrong. For example, Blue Chip Financial Forecasts ("Blue Chip") (a forecasting service relied on by Mr. Hanley), in April 2003 forecast that the AAA Corporate Bond yield would be 6.8 percent by the 4th Quarter of 2004. Value Line[5] reports that the AAA Corporate Bond

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[5] Value Line *Selection & Opinion*, Quarterly Economic Review, May 27, 2005, p. 1704.

yield in the 4th Quarter of 2004 averaged 5.5 percent—130 basis points less that predicted by Blue Chip. In April of 2004, Blue Chip forecast that the AAA Corporate Bond Yield would be 6.5 percent by the 3rd Quarter of 2005. The August 1, 2005 Federal Reserve Statistical Release H.15 indicates that the average AAA Corporate Bond Yield in July 2005 was 5.06 percent—144 basis points below the Blue Chip projection.

This Commission should assign little, if any, weight to Mr. Hanley's Risk Premium results that are based on projected bond yields.

Q. Also at page 22 of his rebuttal, Mr. Hanley discusses the issue of income return versus total return in the measurement of the market risk premium. Why is the income return Mr. Hanley favors incorrect?

A. The rationale behind the use of the long-term income return (the return differential using historical bond yields rather than bond returns) is that, over time, there has been a capital appreciation experienced by bond-holders. That is, bond returns turned out, ultimately, to be higher than bond yields, which are supposed to represent investor expectations.

While I do not quarrel with those facts, that does not make a risk premium based on bond yields rather than bond returns appropriate. The reason is that there is no corresponding expectational measure of "yield" for the broad stock market, that is, there is no simple measure of return expectation for stocks that corresponds to bond yields. [If Ibbotson Associates or Mr. Hanley wanted to perform monthly DCF equity cost estimates on the S&P 500 from 1926 through 2004, then they'd have a similar measure to match with bond yields. However, they have not done so.]

Therefore, when comparing historical returns—and it is important to recall here that the basic assumption of historical risk premiums is that long-term historical returns are a reasonable proxy for investor expectations—the only proper comparison for rate of return purposes is stock returns to bond returns. The total return difference between stocks and bonds is the appropriate market risk premium to use in the CAPM analysis.

Q. At page 24 of his rebuttal testimony, in discussing one of your equity cost estimation methods, Mr. Hanley indicates that he "know[s] of no regulatory commission that relies on the earnings-price ratio methodology." What are your comments?

A. Mr. Hanley's has, in prior proceedings, relied on the NARUC survey of regulatory commission in the U.S. and Canada and has included that document in his Schedules, although he has elected not to do so in this case. That document, with which Mr. Hanley is familiar, lists regulatory commissions that use earnings-price ratio as an equity cost estimation methodology. While this Commission does not rely on an earnings price ratio analysis as its primary cost of equity methodology—that role is reserved for the DCF—Mr. Hanley is aware that regulators do consider such data in a corroborative role, as I do in my testimony in this proceeding.

Q. At page 25 of his rebuttal, Mr. Hanley testifies that because Standard and Poor's has changed its bond rating benchmarks, pre-tax interest coverage no longer has meaning. Is that a reasonable position?

A. No, it's not. Pre-tax interest coverage continues to be a fundamental indicator of financial risk. The Company publishes that information for the investment community in its S.E.C. Forms. For example, Exhibit 12.1 attached to the Company's most recent S.E.C. Form 10-Q, shows the pre-tax interest coverage for Southwest Gas Corporation for June 30, 2005 and each year, at year-end, for the previous five years (2000-2004). The average pre-tax coverage for Southwest Gas Corporation for all those periods was 1.71 times.

The equity return and capital structure I recommend in this proceeding, affords the Company an opportunity to achieve a pre-tax interest coverage of 2.38 times. The comparison of the pre-tax interest coverage afforded by my recommendation to that previously realized by the Company and reported to the investment community, supports the reasonableness of my recommendations in this proceeding. The capital structure and equity return I recommend affords the Company an opportunity to achieve a pre-tax interest coverage that is substantially higher than it has earned, on average, over the past five years, and, therefore, and opportunity to at least maintain if not improve its credit rating.

Q. At page 31 of his rebuttal, Mr. Hanley indicates that the use of short-term debt in the ratemaking capital structure is "inconsistent with the practice of this commission." Is that right?

A. No. I am informed by Staff that, while the Staff of this Commission oftentimes includes short-term debt with long-term debt and simply uses the term "debt" in the recommended ratemaking capital structure, that does not mean that this Commission has not considered short-term debt in setting rates for utilities in Arizona. It has. Short-term debt is investor-supplied capital and should be considered in the determination of the overall cost of capital used for ratemaking purposes.

Q. At pages 33 through 35 of his rebuttal, Mr. Hanley responds to issues you raised in your direct testimony regarding the use of beta in his non-DCF equity cost analyses, what are your comments?

A. In that portion of his rebuttal, Mr. Hanley confirms that his Risk Premium ("RP"), CAPM and Comparable Earnings ("CE") methodologies utilize beta in some manner. I pointed out in my Direct Testimony that beta is not an accurate indicator of relative risk and return and that Mr. Hanley's non-DCF methodologies are, therefore, less reliable for their reliance on beta.

With regard to his Risk Premium analysis, Mr. Hanley's only response is that not all of his RP analysis is based on beta. However, Mr. Hanley's Exhibit (FHJ-11), page 5 supporting his Direct Testimony indicates that his beta-adjusted risk premium was averaged with his non-beta risk premium to arrive at the risk premium he uses in his analysis. Therefore, since the two risk premiums were averaged to reach a conclusion, it is reasonable to say that Mr. Hanley's RP result is dependent on beta.

The CAPM is, by definition, a beta-dependent equity cost estimation methodology and Mr. Hanley does not quarrel with that issue. With regard to his CE analysis, however, Mr. Hanley attempts to respond to the criticism that that analysis is also beta-dependent by indicating that the unregulated sample selection process was dependent not only on beta but also on certain regression coefficients. Unfortunately, those regression coefficients are produced through the derivation of beta and are, most definitely, beta-related. Therefore, Mr. Hanley's CE analysis also is fundamentally dependent on beta—a parameter that has been shown to be a relatively poor indicator of relative risk and return.

Q. At page 35 of his rebuttal, Mr. Hanley testifies that your comment that he weighed the results of his beta models more heavily than the DCF is incorrect. How do you respond?

A. Mr. Hanley claims that because he has weighed the results of each model equally, he has not de-emphasized the results of his DCF. However, Mr. Hanley used four equity cost estimation models (DCF, beta-adjusted Risk Premium, CAPM and Comparable Earnings). His DCF result gets 1/4 weight in the final results and the other; beta-related models get 3/4 weight. It is quite obvious that, mathematically, Mr. Hanley has weighed his beta-adjusted results three times more heavily than his DCF results.

Q. At pages 38 and 39 of his rebuttal testimony, Mr. Hanley responds to your criticism of the "example" he provided in Exhibit (FHJ-6) regarding the accuracy of DCF estimates when market prices exceed book value. Has he effectively deflected your criticism?

A. No, he has not. Mr. Hanley begins his discussion with the incorrect premise that investors would "be aware that the regulatory commission would be allowing a 10.00 percent market-based rate of return." However, that situation could not exist in the hypothetical he posits. Mr. Hanley's Exhibit (FHJ-6) hypothetical begins with a market price well above book value and a DCF equity cost estimate of 10.0 percent. If investors require a 10.0 percent return and they are "aware" that regulators "would be" allowing a 10.0 percent return on book value, then, there would be no reason for those investors to provide a market price for that stock which is any higher than book value. If they did, they would not earn their required return on the market price. However, Mr. Hanley's original assumption is that the market price is *well above book value*. Given that assumption, it <u>cannot</u> also be true that investors expected a return on book value equal to 10.0 percent. The original situation, as I explained in direct, must have been one in which the current allowed return was higher than the investors' required return (10.0 percent), such that it would have caused investors to bid up the stock price well above book value. Therefore, Mr. Hanley's Exhibit (FHJ-6) example of the supposed shortcomings of the DCF when market prices are above book value continues to be flawed, as are his attempts to rehabilitate it in rebuttal.

Q. At page 46 of his rebuttal Mr. Hanley responds to your criticism that his use of beta in a risk premium analysis is improper. What are your comments?

A. In my Direct Testimony I noted that using a measure of systematic risk (beta) in a cost of capital model that includes both systematic and non-systematic risks (such as the Risk Premium) was improper. It took one parameter from one analysis and applied it to another absent any theoretical nexus. In responding to that criticism, Mr. Hanley indicates that he is responding to this criticism but expounds on a topic that is not related to the inappropriate use of beta in a Risk Premium analysis. Here, Mr. Hanley provides no response to my original concerns regarding his use of beta in a Risk Premium analysis.

Q. At pages 48 through 50 of his rebuttal, Mr. Hanley responds to your criticism that adjusted betas and the Empirical Capital Asset Pricing Model "ECAPM" adjust for the same tendency and are redundant. What are your comments?

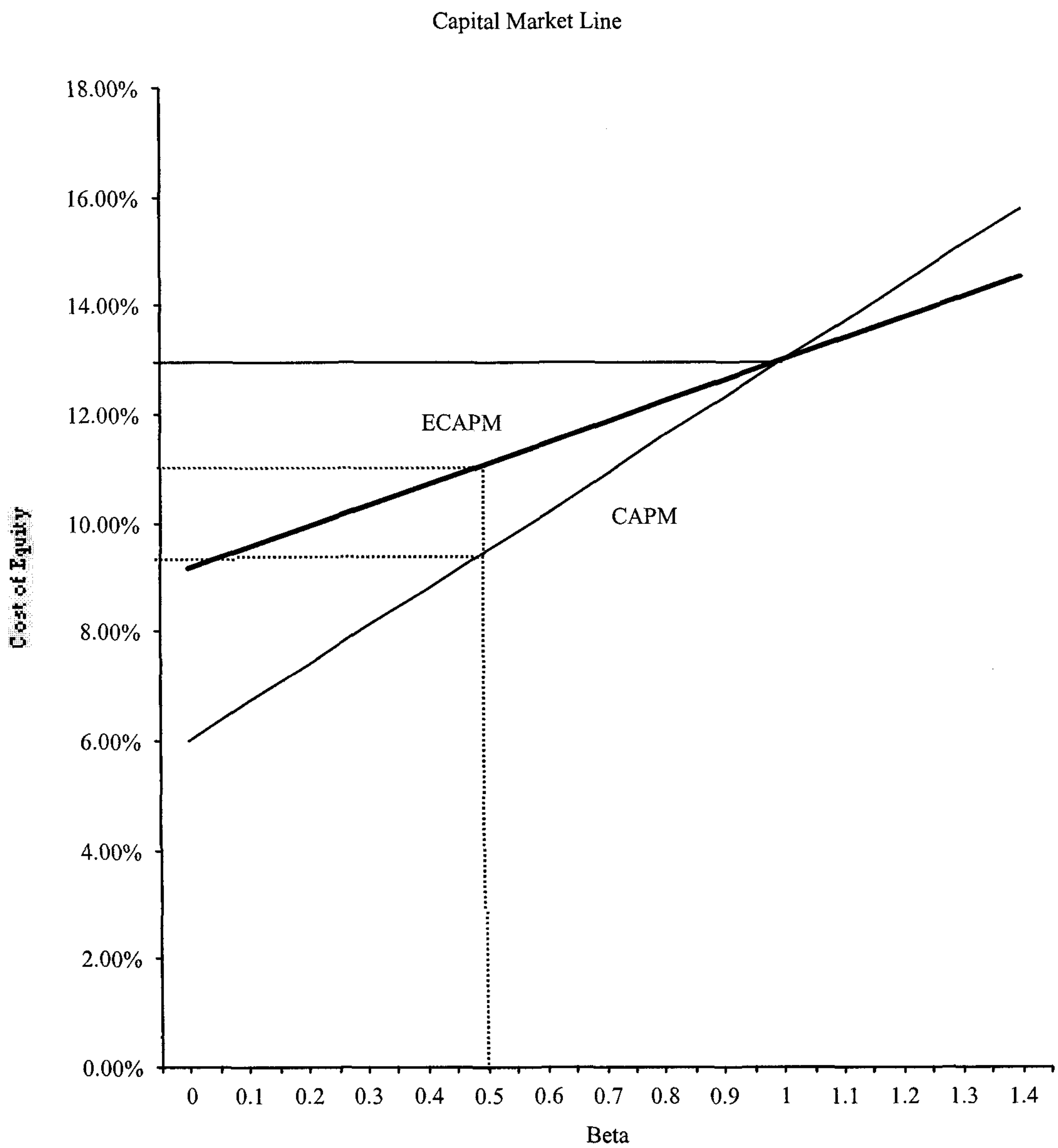
A. Mr. Hanley claims that adjusted betas (which raise low betas and lower high betas) and the Empirical Capital Asset Pricing Model (ECAPM – which, supposedly, accounts for the fact that the regular CAPM understates the cost of equity for low beta stocks and overstates the cost of equity for high beta stocks) are not redundant. His rationale is that those adjustments to the CAPM are not redundant because the ECAPM is a y-axis adjustment and the adjusted beta is an x-axis adjustment. That logic, is incorrect and, as I noted in my Direct Testimony the use of adjusted betas in an ECAPM analysis will overstate the estimated cost of equity.

Q. To what is Mr. Hanley referring when he says "y-axis" and "x-axis" adjustments?

A. Mr. Hanley is referring to the Capital Market Line, which is the basis of the CAPM. The Capital Market Line is a straight line that is plotted on a graph with beta (the CAPM risk measure) on the "x" or horizontal axis and the yield (or cost of capital) on the "y" or vertical axis. In theory, the Capital Market Line is a straight line that slopes upward and to the right. The Capital Market Line based on the original CAPM has a steeper slope than that based on the ECAPM. Both are shown in the graph below.

It can be seen from reference to the graph below that for companies, like utilities with betas below 1.0 (by definition, the beta of the market, generally), the result of the ECAPM would be to raise cost of equity estimates. For example, at a beta of 0.5 (an adjusted beta for gas distributors) the CAPM indicates a cost of equity of between 9 percent and 10 percent. However, based on that same beta, the ECAPM (represented by the bold line in the graph below) would indicate a cost of equity of about 11 percent. So, for utilities, the use of the ECAPM raises the resulting cost of equity. This is the "y-axis" effect referenced by Mr. Hanley.

The graph below also shows that, because the Capital Market Line is upward-sloping, that is, it increases with increasing betas, when one moves along the x-axis from a low beta to a higher beta, the resultant cost of equity is increased. As I noted in the graph below, a company with a beta of 0.5 has a cost of equity between 9 percent and 10 percent, while a company with a beta of 1.0 (the market in general) has a cost of equity of about 13 percent.



Therefore, because adjusted betas for low-beta companies like utilities are higher than raw betas, the use of adjusted betas in a CAPM calculation, also increases the resultant cost of equity. That is because, as we move to the right on the x-axis (beta), the resultant cost of equity also rises.

In other words, even though the ECAPM operates on the "y-axis" and the use of adjusted rather than raw betas operates on the "x-axis" the result of both of those adjustments for low-beta stocks like utilities is to raise the cost of equity capital. Therefore because both adjustments seek the same remedy and produce the same effect (increasing the CAPM result for low-beta stocks), they are redundant. Clearly, if Mr. Hanley wants to use the ECAPM he should use raw, not adjusted betas in that analysis. As I noted in direct, the use of adjusted betas in the ECAPM is redundant and overstates the cost of equity capital, and Mr. Hanley's two-axis rationale does not change that fact.

Q. What is your reply to Mr. Hanley's response, at page 51 of his rebuttal, to your criticisms of his comparable earnings analysis?

A. First, Mr. Hanley claims that his CE analysis is "not beta oriented," and, then, goes on to extol the virtues of beta and the associated statistics that are produced in the regression analyses that derive beta. Clearly, Mr. Hanley's CE analysis suffers from a heavy reliance on beta just as his CAPM and Risk Premium analyses do.

Mr. Hanley's juxtaposition of gas distributors and candy companies (Tootsie Roll Ind.) in his CE analysis is symptomatic of the problems an analyst can get into when he/she relies too heavily on beta. As I noted in my Direct Testimony the primary risk selection parameter for Mr. Hanley's CE sample was beta. The fact that a candy company—a firm that experiences intense competition and is subject to the vagaries of popular style—was selected as a similar-risk proxy for a gas distributor stands as prime facie evidence that beta is not a reliable indicator of relative investment risk.

Q. Does this conclude your review and discussion of Mr. Hanley's Rebuttal Testimony?

A. Yes, it does.

RUCO WITNESS RIGSBY

Q. What are your concerns with the cost of equity testimony of RUCO witness Rigsby?

A. I believe Mr. Rigsby has given too much weight to the CAPM in determining his cost of equity estimate, and I am also concerned with the manner in which he has calculated the historical market risk premium. I believe it is overstated.

First, at page 3 of his Direct Testimony, Mr. Rigsby indicates that he believes that the DCF is "the most reliable methodology" and that he uses the CAPM "as a check" on the DCF. Then, at page 27 of his testimony, Mr. Rigsby notes that his DCF result is 8.91 percent and his CAPM analysis provides an equity cost range of 8.82 percent to 10.39 percent. Mr. Rigsby then awards SWG a return near the "extreme upper end" of his CAPM results. Therefore, in my view, Mr. Rigsby has weighted his CAPM results too heavily.

Second, Mr. Rigsby's calculation of the market risk premium appears to be overstated. When asked to provide the support for his historical market risk premium, in Staff Data Request JDD 1-1, Mr. Rigsby provided several pages from Ibbotson Associates 2005 Yearbook. That source (at page 33) indicates an historical market risk premium between common stocks and US Treasury Bills ranging from 6.7 percent (geometric) to 8.6 percent (arithmetic) over the 1926-2004 period.

Mr. Rigsby, in his CAPM analysis used different market risk premiums (7.37 percent (geometric) and 9.37 percent (arithmetic)). Those market risk premiums used in RUCO's CAPM analysis are 67 to 77 basis points higher than the historical market risk premiums published by the source from which the data were taken.

Q. Why is Mr. Rigsby's market risk premium overstated?

A. In deriving his market risk premium, Mr. Rigsby subtracted the current U.S. T-Bill yield from the long-term historical return on common stocks. However, that is not a proper time-period comparison of returns. In order to derive an appropriate comparison of the returns on common stocks and the return on risk-free U.S. T-Bills, one must utilize the total returns of T-Bills over the entire 1926-2004 period. That produces the appropriate comparison of historical returns and indicates the long-term average return differential between stocks and T-Bills. While it is appropriate to use the current T-Bill yield as the risk-free rate in the CAPM, the long-term historical return on T-Bills should be used to determine the historical market risk premium.

As reported by Ibbotson Associates, the average return for T-Bills over the long-term (1926-2004) period ranges from 3.7 percent to 3.8 percent. The current T-Bill yield used by Mr. Rigsby (3.04 percent) is historically low due to the continued relatively accommodative stance of the Federal Reserve. When Mr. Rigsby uses the current 3.04 percent T-Bill yield to calculate the market risk premium instead of the correct long-term average return (3.7 percent to 3.8 percent) he is overstating the historical market risk premium.

Using the 6.7 percent to 8.6 percent market risk premium based on the entire historical record and published by Ibbotson Associates, Mr. Rigsby's CAPM results would range from 8.33 percent to 9.83 percent [3.04% + 0.79 (6.7% - 8.6%)]. Then, following Mr. Rigsby's methodology of recommending a return for SWG that is 25 basis points below the uppermost end of his range of equity costs, he would recommend 9.58 percent (9.83% - 0.25%). That result is very similar to my 9.50 percent recommendation in this proceeding.

Q. Does this conclude your Surrebuttal Testimony, Mr. Hill?

A. Yes, it does.

GEHLEN

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF SOUTHWEST GAS CORPORATION FOR THE ESTABLISHMENT OF JUST AND REASONABLE RATES AND CHARGES DESIGNED TO REALIZE A REASONABLE RATE OF RETURN ON THE FAIR VALUE OF THE PROPERTIES OF SOUTHWEST GAS CORPORATION DEVOTED TO ITS OPERATIONS THROUGHOUT THE STATE OF ARIZONA.	)	DOCKET NO. G-01551A-04-0876

SURREBUTTAL

TESTIMONY

OF

WILLIAM GEHLEN

PUBLIC UTILITIES ANALYST V

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

SEPTEMBER 13, 2005

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SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-04-0876

This Surrebuttal Testimony identifies Staff's recommendations made in Direct Testimony, and rebuts, and discusses, selected points from the Rebuttal Testimony of witness William H. Moody.

INTRODUCTION

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

A. My name is William Gehlen. I am a Public Utilities Analyst V employed by the Arizona Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Are you the same William Gehlen who filed Direct Testimony in this case on July 26, 2005.

A. Yes.

Q. What is the purpose of your testimony?

A. This testimony responds to the Surrebuttal Testimony of Southwest Gas Corporation witness William M. Moody in relation to the acceptance, or rejection, of the Staff recommendations contained in my Direct Testimony for the Gas Procurement function and the Purchasing Department.

STATUS OF STAFF RECOMMENDATIONS

Q. Did Southwest accept all of Staff's Recommendations?

A. No. A total of seven (7) recommendations were made in my Direct Testimony. Five (5) recommendations were made for the Fuel Procurement function, and two (2) recommendations were made for the Purchasing Department. Southwest accepted without comment two (2) of the recommendations for the Fuel Procurement function, agreed to two (2) with comment, and disagreed with one (1) recommendation. Of the two (2) Staff recommendations made for the Purchasing Department Southwest disagreed with one (1) and did not respond to one (1).

FUEL PROCUREMENT FUNCTION

Q. List the Staff Recommendations made for the Fuel Procurement function.

A. Staff made the following five (5) recommendations:

1. Southwest Gas should be required to conduct a best practices review of the fuel procurement and planning functions by an impartial outside organization.
2. Southwest Gas should preclude employee stock ownership, or other financial interest, with any supplier or class of suppliers with whom they conduct business.
3. Southwest Gas should provide a check and balance in the fuel procurement process that would separate contract award authority from invoice approval authority.
4. Southwest Gas should eliminate the use of cell phones during fuel bidding and negotiating activities, and ensure all discussions are recorded. During the "Next Month" and "APSP" procurements neutral personnel should monitor the bidding and negotiation activities.
5. Southwest Gas should upgrade its portfolio evaluation software.

Q. Discuss the Southwest response to the preceding five (5) Staff recommendations.

A. Southwest accepted without comment Staff recommendations 3 and 4. Southwest accepted in principal recommendations 1 and 5. Southwest has not accepted recommendation 2.

Q. Discuss the Southwest responses to Staff recommendations 1 and 5.

A. Southwest has agreed to conduct a best practices review of its Fuel Procurement function (Recommendation 1), and perform a review of its portfolio evaluation software (Recommendation 5). Staff had set June 30, 2006 for the filing in Docket Control of the completed best practices and software reviews in conjunction with schedules for implementation. Southwest would prefer to meet with Staff to discuss the results of the software review in lieu of filing a report, and also meet with Staff to discuss the scope of work for the best practices study.

Q. What is Staff's position on Southwest's response to Recommendations 1 and 5?

A. Recent developments in all sectors of the energy industry (natural gas, oil, coal, and gasoline) give one reason for pause. All of these sectors have seen rapid increases in price and volatility. Staff sees merit in meeting to discuss the scope involved in a best practices study as well as a discussion of portfolio evaluation software. As such, Staff recommends Southwest provide a recommended scope of work for the benchmarking study, and the evaluation of portfolio software, to Docket Control within 30 days of the Commission decision is this matter. After reviewing the scope of work recommendations Staff shall meet with Southwest to discuss their merits and develop schedules for implementation as appropriate.

Q. Discuss the Southwest response to Staff Recommendation 2.

A. At page 6 line 4 through 19 of his Rebuttal Testimony Mr. Moody discusses the Southwest Gas Corporation Code of Business Conduct & Ethics. Here Mr. Moody reiterates the Southwest position that the Code of Business Conduct & Ethics, which provides in part that no employee shall own "substantial stock or other financial interest in any competitor, supplier, contractor or vendor or other organization with which an employee is engaged in a business relationship", is an adequate guide for avoiding conflicts of interest. Staff's concern in its Direct Testimony concerning the Gas Procurement, and Purchasing departments with this portion of the Code of Business Conduct & Ethics is that at present there is no definition, or measurement criteria for what constitutes "substantial stock or other financial interest". In the absence of a definition or other measurement criteria, Staff offered that the clearest way to eliminate conflicts is to preclude any stock ownership (substantial or otherwise), or other financial interest with any supplier, or within a class of suppliers, with whom any employee may conduct business. Southwest counters that Staff's recommendation is overly broad and unduly burdensome. Staff does not find Southwest's argument persuasive, therefore, continues to recommend that stock ownership or other financial interests be precluded.

PURCHASING DEPARTMENT

Q. List the Staff Recommendations for the Purchasing Department.

A. Staff made the following two (2) recommendations:

1. Southwest Gas should preclude employee stock ownership, or other financial interest, with any supplier or class of suppliers with whom they conduct business.
2. Southwest Gas is to investigate how other peer utilities address commodity price hedging, with an emphasis on steel, and file a report in Docket Control by June 30, 2006.

Q. Did Southwest accept the preceding two (2) Staff Recommendations?

A. Southwest did not accept Recommendation Number 1, and did not respond to Recommendation number 2.

Q. What is the Staff's position to the Southwest response for Recommendation Number 1?

A. This recommendation "Southwest Gas should preclude employee stock ownership, or other financial interest, with any supplier or class of suppliers with whom they conduct business", is identical to Recommendation 2 for the Fuel Procurement function. The same conflict of interest concerns exist for both procurement groups. Therefore, Staff continues to recommend that stock ownership or other financial interests be precluded.

Q. What is the Staff position on recommendation Number 2?

A. Southwest did not respond to Recommendation Number 2, and Staff views this as an acceptance of the recommendation.

Q. Does this conclude your surrebuttal testimony?

A. Yes it does.

MUSGROVE

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
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MARC SPITZER
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IN THE MATTER OF THE APPLICATION OF SOUTHWEST GAS CORPORATION FOR THE ESTABLISMENT OF JUST AND REASONABLE RATES AND CHARGES DESIGNED TO REALIZE A REASONABLE RATE OF RETURN ON THE FAIR VALUE OF THE PROPERTIES OF SOUTHWEST GAS CORPORATION DEVOTED TO ITS OPERATIONS THROUGHOUT THE STATE OF ARIZONA.	)	DOCKET NO. G-01551A-04-0876

SURREBUTTAL TESTIMONY

OF

WILLIAM H. MUSGROVE

ON BEHALF OF STAFF

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

SEPTEMBER 13, 2005

EXECUTIVE SUMMARY
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-04-0876

On July 26, 2005, Staff filed Direct Testimony addressing a proposal by Southwest Gas Corporation ("Southwest") to decouple margin recovery from sales. Southwest has named the proposed decoupling mechanism the Conservation Margin Tracker ("CMT"). Staff's Direct Testimony recommended that the Commission reject the proposed CMT on the grounds that it would create an unprecedented, inequitable and drastic rate making change for Arizona's rate payers served by Southwest. To further support its opposition to the proposed CMT, Staff's Direct Testimony also includes discussions on state commissions' treatment of proposed CMT-like mechanisms in states such as Nevada and California.

On August 23, 2005, Southwest filed Rebuttal Testimony addressing Staff's arguments and recommendations.

On September 13, 2005, Staff filed Surrebuttal Testimony addressing five major areas of separation between Southwest and Staff regarding the proposed CMT: 1) the appropriate use of a rate case venue in discussing the proposed margin tracking mechanism; 2) the inequitable application of the proposed CMT only to residential customers; 3) declining average residential consumption per customer; 4) the California Commission's treatment of Southwest's California margin tracking mechanism; and, 5) the non-traditional and experimental rate making nature of CMT-like mechanisms. Staff believes that its Surrebuttal Testimony clarifies the differences between Southwest's and Staff's positions in these five areas; and, further reinforces Staff's analyses and recommendations regarding the proposed Conservation Margin Tracker. In addition, Staff's Surrebuttal Testimony questions the illogical fit of Southwest's testimony regarding: increased residential sales, plus new residential customer hook-ups at authorized rate of return parity or higher, producing a residential rate of return of only 2.29 percent.

For the reasons summarized above and as discussed and recommended in detail in Staff's Direct and Surrebuttal Testimonies, Staff recommends that the Commission not accept the proposed Conservation Margin Tracker.

INTRODUCTION

Q. Please state your name and business address.

A. My name is William H. Musgrove ("WHM"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. What is the nature of your work relationship with the Arizona Corporation Commission?

A. I am an Independent Contractor providing utilities consulting services to the Arizona Corporation Commission, Utilities Division ("Staff").

Q. Did you submit prepared Direct Testimony in this Docket on behalf of Staff?

A. Yes.

Q. What is the purpose of your Surrebuttal Testimony?

A. The primary purpose of my Surrebuttal Testimony is to provide Staff's response to rebuttal comments made by Messrs. Edward B. Gieseking ("EBG") and A. Brooks Congdon ("ABC") relevant to the proposed Conservation Margin Tracker ("CMT") and traditional expense recovery through monthly "Basic Service Charges", respectively. In addition, I also briefly address CMT-related rebuttal comments made by Ms. Vivian E. Scott and Messrs. Steven M. Fetter, and Frank J. Hanley.

Q. Please discuss Staff's responses to Mr. Gieseking's Rebuttal Testimony.

A. In general, Mr. Gieseking and Staff are pointed in the same direction, but we disagree on the best way to reach an equitable destination. Staff believes that the following discussions on proposed tariff changes, the inequitable exclusive application of the proposed CMT to residential ratepayers, declining average residential consumption per customer, the California Commission's decision on Southwest Gas Corporation's ("Southwest") California margin tracking mechanism, and assertions regarding the Joint Resolution of the American Gas Association and the National Resources Defense Council clarifies the differences in our positions and further justifies Staff's position relevant to the CMT.

Q. What are Staff's comments regarding proposed tariff changes?

A. Staff agrees that this Proceeding is the appropriate forum to submit proposed tariff changes. A careful, contextual reading of Staff's Direct Testimony makes it clear that: a) Staff is addressing how Southwest's proposed CMT causes a swing of 10-cents per therm in rates; and, b) Staff explicitly states that it is inappropriate to define "authorized margin" as is proposed in Attachment 3, Item 1, because the phrase was being used by Southwest in Direct Testimony as if it were already a fait accompli. Staff's objective was to create a clear distinction between Mr. Gieseking's Direct Testimony at p.4, ll. 5-8, wherein he uses the phrase "Commission-authorized margin levels", and the use of a very similar phrase in the proposed Tariff filing. If, for example, Mr. Gieseking's had used words such as, "Commission-authorized margin levels as proposed in Attachment 3, Item 1" in his Direct Testimony, Staff would not have felt compelled to make a clear distinction between the phrase as used by Mr.Gieseking and the similar phrase as proposed by Southwest in its appropriate Tariff filing. Staff also agrees with Southwest that a rate case proceeding is the appropriate venue to review the proposed CMT. In fact, Staff recommends the Commission reject the CMT, partly because it would likely move prospective CMT-related hearings to the realm of filing updated Tariff sheets. Staff believes that, if accepted by the Commission as filed, the CMT should always be reviewed under the evidentiary process embodied in general rate cases.

Q. What are Staff's comments regarding the proposed CMT applying exclusively to residential ratepayers?

A. Staff's Direct Testimony thoroughly establishes the inequities of applying the proposed CMT only to residential ratepayers. Southwest's arguments fail to convince Staff that residential customers are the appropriate "chosen" group to exclusively bear this added financial burden. If the Commission adopts the proposed CMT, Staff notes that Southwest agrees that it would be willing to apply the CMT to all customer classes (EBG, p.8, ll. 3-5).

Q. What are Staff's comments regarding declining average residential consumption?

A. Southwest and Staff are in general agreement on this matter. Mr. Gieseking states that total residential sales were not claimed to have decreased, but that residential consumption per customer has decreased (p. 8, ll. 14-16). Staff agrees. However, Staff must state that Mr. Gieseking used the phrase "decreased sales" rather than using words "decreased sales per customer" in discussing Southwest's inability to earn its authorized rate of return (EBG Direct Testimony, p.4, l.5). Furthermore, Staff believes that the reported impact of a decline in residential sales per customer of approximately 11 percent since 1999 is overstated (James L. Cattanach, Direct Testimony, p.4, ll. 22-25). Southwest refuses to accept that average sales per residential customer have been decreasing at rates that are driven by increases in the number of new customers. Staff has created Attachment 1, which illustrates several points: a) the average number of residential customers has increased approximately 14 percent since 1999; b) the average amount of residential sales has increased approximately 7 percent since 1999; and, c) the average amount of residential sales per customer has decreased approximately 6 percent since 1999. The data contained in Attachment 1 are important because they illustrate how the change in number of customers (14%) represents approximately two-thirds of the combined change in sales and customers (21%). The data also demonstrate that, all other things being equal, by arbitrarily matching percent changes in sales or customers, respectively, one is able to show that average sales per customer remain virtually unchanged.

Southwest never disproves Staff's findings regarding average use per residential customer as presented in Staff's Direct Testimony; but, rather states, "Regardless of the reason for the decline in average residential consumption, is there any dispute that the decline will have a negative impact on Southwest's ability to recover the fixed costs associated with serving its customers?" (EBG Rebuttal Testimony, pp.10-11, ll.27-4). Obviously Staff does not dispute the statement. What is being disputed by Staff is Southwest's position that a CMT-like mechanism is the correct solution to allow Southwest the opportunity to recover fixed costs associated with serving its customers. To clarify and recap Staff's position on this matter, Staff's findings are that: a) Test Year sales volumes are being exceeded, on average, by approximately 7 percent due to increases in the number of customers; 2) two-thirds of the decline in sales per residential customer are explained by increases in the number of residential customers rather than decreasing sales; c) the 9.20 percent current authorized rate of return is far from being met with a reported return of 2.29 percent for residential customers; and, d) new customers are reported to be providing a return at least equal to the authorized return (Robert A. Mashas, Direct Testimony, p.26, ll. 11-14). Given this information, Staff can only draw the following conclusions: (1) something is wrong when an average 7 percent increase in residential sales translates into a 2.29 percent rate of return for residential customers; 2) conclusion (1) is reinforced by the fact that there are, on average, approximately 79,000 (Attachment 1) more residential customers providing approximately $7.6 million (79,000 x 12 months x $8) additional Basic Service Charge revenues per year than were modeled into the Test Year; (3) conclusions (1) and (2) raise a question about the absolute certainty that new residential customers are providing a return approximately equal to 9.2 percent; and, (4) conclusions (1) through (3) convince Staff that more traditional rate relief methods should apply until Southwest reconciles how the Test Year and Contribution Models' predictions can translate into a rate of return of 2.29 percent for residential customers. At this juncture, Staff is not convinced that imposing a margin mandate mechanism such as the proposed CMT, is an equitable way to help Southwest earn its authorized rate of return. Given the circumstances, Staff can come to no other logical conclusions regarding the proposed CMT.

Q. What actions does Staff recommend the Commission take in this Proceeding regarding the CMT and requested increase to Southwest's rates?

A. Staff makes the following recommendations to the Commission: (1) reject the proposed CMT as filed, and consider the merits of Southwest's rate increase proposals based on the facts in this proceeding without the proposed CMT; (2) in light of the unexplained reason (s) for the wide disparity between 1999 Test Year model system projections of 9.20 percent rate of return and actual residential rate of return of 2.29 percent, implement an inquiry to reconcile the residential shortfall in rate of return; and, (3) perhaps initiate an exploratory effort to identify the merits of CMT-like mechanisms in future rate cases, but do not hold rates or conservation initiatives approved in this Proceeding hostage to the outcome of the exploratory effort. Recommendation number (3) should only be considered under the condition that findings developed in recommendation number (2) fully explain: a) how actual residential Sales and Basic Service Charge revenues can exceed Test Year 1999 model projections; and, b) new residential customers since Test Year 1999 are providing at least a 9.20 percent rate of return – but reported rate of return is off target by such a large number.

Q. Does Staff have any comments regarding the California Commission's decision to accept Southwest Gas Corporation's proposed margin tracking mechanism in California?

A. Yes. Staff believes that its Direct Testimony on this matter is clear and accurately reflects the circumstances surrounding the California Commission's acceptance of the margin tracking mechanism proposed by Southwest for California. A rubber stamp procedure, as cited by Southwest, may imply that the Office of Rate Payer Advocates ("ORA") never even read the terms and conditions submitted by Southwest. Staff personally telephoned ORA on June 13, 2005, to gather background regarding the processing of Southwest's margin tracking filing. ORA clearly stated that after reviewing the terms and conditions of the proposed tracking application, it was decided not to contest Southwest's application. The consensus was that Southwest was simply asking for approval of a tariff provision that was similar in nature to other fixed-cost adjustment mechanisms already in place for the major gas distribution companies doing business in California. Consequently, Staff stands by its position that parameters regarding the proposed CMT in Arizona are different compared to those that exist in California.

Q. Does Staff have comments regarding Southwest's references to the Joint Resolution of the American Gas Association ("AGA") and the Natural Resources Defense Council ("NRDC")?

A. Yes. Southwest's comment that Staff asserted a narrowly focused approach by Southwest relevant to certain points in the AGA/NRDC Joint Statement is interesting (EBG, p.19, ll. 22-25). Staff merely followed Southwest's witness Steven M. Fetter's lead in describing the focus of his Direct Testimony in this Case. To quote Mr. Fetter: "My testimony focuses on a forward-thinking concept that seeks to decouple core revenues from the Company's sales ...." (p.5, ll. 4-5). Furthermore, Mr. Fetter also said that the implementation of the proposed CMT by the Commission would make the Commission a leader in natural gas utility regulation (Direct Testimony, p.9, ll.1-2). These comments by Southwest's witness clearly demonstrate that Mr. Fetter thought that he was sponsoring an "experimental" concept. Therefore, Staff stands by the comment it made in Direct Testimony that Mr. Fetter is focusing on the non-traditional programs approach in this Proceeding.

Q. Does Staff have comments relevant to traditional expense recovery through monthly Basic Service Charges?

A. Yes. Southwest misses the point being made by Staff in its Direct Testimony on traditional rate design (WHM, p. 4, ll. 13-23). It is incorrect for Southwest to state that traditional utility rate design <u>has always</u> (emphasis added) included a portion of customer-related costs not captured in the basic service charge in commodity margin rates (ABC Rebuttal Testimony, p. 9, ll. 7-9). Southwest is describing the state of rate design as it now exists. In fact, there was a time when state commissions confined customer-related costs to monthly customer charges, and balanced ratemaking principles with gradual and equitable customer charge increases. Customer-related expenses unaddressed by rate relief were not rolled into commodity rate blocks. Staff was not trying to turn-back the hands of time with its Direct Testimony. Current rate making practices are here and have to be dealt with as they exist. Staff believes that rate design "package" options, including Southwest's proposed CMT, distort traditional rate design practices without any compelling reasons to do so. A proposed mechanism capable of swinging Southwest's residential second commodity block rates by 25 percent should always be considered within the boundaries of a general rate case proceeding.

Q. Does Staff have any comments regarding Mr. Frank J. Hanley's Rebuttal Testimony?

A. Yes. A CMT-like mechanism has an indisputable link with expected return on equity. Although Staff's position in this proceeding is to reject the proposed CMT, Staff recognizes that CMT-like devices are likely to be proposed in future rate case proceedings. Therefore, Staff emphasizes that the revenue/risk/return-on-equity equation will never be equitably balanced when, as demonstrated in Staff's Direct Testimony at pp.11-12, ll. 17-4, residential ratepayers would experience an estimated $10.5 million rate increase directly attributable to the CMT if it were implemented as filed.

Q. Does Staff have any comments regarding the withholding of proposed energy efficiency programs until CMT-related questions are resolved, and the financial disincentive of programs that promote energy conservation?

A. Yes. Staff recognizes that several parties to this Proceeding have reservations about going forward with conservation-related activities until CMT-related questions are resolved. Staff believes that it would be a mistake to hold existing and proposed conservation efforts hostage to the outcome of any CMT-related discussions. Regarding the issue of decreasing sales and rate of return, Staff believes that Southwest can always file a subsequent rate case, should the need arise to do so.

Q. Briefly summarize your surrebuttal testimony and recommendations.

1. Although Southwest indicates a willingness to apply the CMT to all customer classes, Staff still recommends rejecting the CMT proposal. Staff's position is based, in part, on the grounds that it is an experimental rate making mechanism that can only further complicate the matter of designing equitable rates.

2. Average consumption per residential customer has declined since 1999, but Staff has difficulty accepting that the decline fully explains how the adjusted actual system rate of return is 48 percent (4.78 percent/9.20 percent) less than was designed in the Test Year 1999 model. This outcome is particularly perplexing in light of actual average residential sales being 7 percent greater than expected sales, and new residential customers are reportedly providing a rate of return of at least 9.20 percent. Staff supports rejecting Southwest's CMT proposal because Southwest's data in the record never explicitly reconcile this issue.
3. California's acceptance of Southwest's margin tracking mechanism was, in fact, granted under parameters that are different in Arizona. Namely, other major local gas distribution companies are not operating with such a mechanism in Arizona, and the California mechanism applies to both residential and nonresidential customers.
4. Southwest's CMT-related testimony in this Proceeding, while innovative, is untested. As such, ratepayers, not investors would be at risk through the introduction of a margin tracking adjustment mechanism.
5. Staff believes that it would be inappropriate to hold existing and proposed energy conservation programs hostage until questions surrounding the proposed CMT are resolved.

For the reasons summarized above and discussed in more detail herein, Staff recommends that the Commission not accept the proposed Conservation Margin Tracker.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does.

Southwest Gas Corporation Residential Sales/Customer Statistics* Attachment 1

	Therms x 000000	% Delta from TY	Avg. No. of Custs.	% Delta from TY	Avg. Thms. Per Cust.	% Delta from TY
TY1999	213		556326		383	
2000	225	5.6%	587281	5.6%	383	0.0%
2001	236	10.8%	612751	10.1%	385	0.5%
2002	230	8.0%	650439	16.9%	354	-7.6%
2003	217	1.9%	654688	17.7%	331	-13.6%
2004	232	8.9%	673344	21.0%	345	-9.9%
5-Year Avg	228	7.04%	635701	14.27%	359	-6.36%

Average Delta Cust->	79,375	Delta th/cus--------->	(24)
@7.04% Increase TY Cus ---->	597494		382
@14.27% Increase TY Sls ---->	243		383

*Based on RAM-1 Data, Sheets 4-5

IRVINE

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF THE APPLICATION OF SOUTHWEST GAS CORPORATION FOR THE ESTABLISHMENT OF JUST AND REASONABLE RATES AND CHARGES DESIGNED TO REALIZE A REASONABLE RATE OF RETURN ON THE FAIR VALUE OF THE PROPERTIES OF SOUTHWEST GAS CORPORATION DEVOTED TO ITS OPERATIONS THROUGHOUT THE STATE OF ARIZONA	)	DOCKET NO. G-01551A-04-0876

SURREBUTTAL

TESTIMONY

OF

STEVE IRVINE

PUBLIC UTILITIES ANALYST III

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

SEPTEMBER 13, 2005

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EXECUTIVE SUMMARY
SOUTHWEST GAS CORPORATION
DOCKET NO. G-01551A-04-0876

On December 9, 2004, Southwest Gas Corporation ("Southwest") filed an application with the Arizona Corporation Commission ("Commission") for an increase in its rates throughout the State of Arizona. The application seeks among other things approval for its proposed Demand Side Management ("DSM") programs. Southwest proposed continuation of two existing DSM programs and implementation of seven new DSM programs.

On August 23, 2005, Southwest filed Rebuttal Testimony. Having reviewed Southwest's rebuttal testimony, Staff now reasserts recommendations made in Direct Testimony and proposes additional recommendations, including: future semi-annual DSM Progress Reports should be certified by an Officer of the Company; that the Commission evaluate the appropriateness of the bill assistance component of the Low-Income Energy Conservation DSM program as a separate and distinct program from DSM, but that Southwest's request to include $50,000 in rate assistance as a part of its DSM program should not be approved; the total annual DSM budget should be $4,335,000; Southwest should implement and maintain a collaborative DSM working group to solicit and facilitate input from any interested party; finally, implementation of a performance incentive should not be approved.

INTRODUCTION

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

A. My name is Steve Irvine. I am a Public Utilities Analyst III employed by the Arizona Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Have you filed Direct Testimony in this case?

A. Yes, I have. In Direct Testimony I provided Staff's recommendations regarding Southwest Gas Corporation's ("Southwest" or "Company") proposal for its Demand Side Management ("DSM") programs.

Q. What is the purpose of this Surrebuttal Testimony?

A. This Surrebuttal Testimony addresses matters raised in the Rebuttal Testimony of Southwest witness Vivian E. Scott. The first matter to be addressed is Southwest's recommendations for Progress Reports and Filing Practices. The second matter to be addressed is the Bill Assistance Component of the Low-Income Energy Conservation ("LIEC") program. The third matter to be addressed relates to proposals by Southwest, RUCO, Southwest Energy Efficiency Project ("SWEEP") and Natural Resources Defense Council ("NRDC") regarding Program Approval, Funding, and the Collaborative Process. The final matter which will be addressed is Southwest's comments on a proposal by Sweep/NRDC to include a Performance Incentive.

PROGRESS REPORTS AND FILING PRACTICES

Q. What recommendations has Staff made regarding Progress Reports and Filing Practices?

A. In Direct Testimony, Staff has recommended that Southwest's future semi-annual DSM Progress Reports be certified by an Officer of the Company as indicated in the Annual Report that Southwest submits to the Commission.

Q. Has Staff's recommendation in this matter changed?

A. No. In Rebuttal Testimony (Scott Rebuttal Testimony page 3), Southwest submits that officer certification for these reports is not necessary. Staff continues, however, to recommend a requirement that the reports be certified by an Officer of the Company. A requirement for certification of the reports by an Officer of the Company will create a high level of accountability for the accuracy of the reports. Staff finds a higher level of accountability appropriate given the increased size and monetary costs of the program.

BILL ASSISTANCE COMPONENT OF LOW-INCOME ENERGY CONSERVATION ("LIEC")

Q. What is Staff's recommendation regarding the bill assistance component of the LIEC program.

A. In Direct Testimony (Irvine Direct Testimony page 12), Staff recommends that the Commission not approve Southwest's request to include $50,000 in rate assistance as a part of its LIEC program.

Q. Does Southwest agree with this position?

A. No. In rebuttal testimony (Scott Rebuttal Testimony page 3), Southwest disagrees with Staff's recommendation. Southwest contends that the funds will be used to help low-income customers in emergency situations and cites that a similar program was approved recently for Arizona Public Service Company ("APS").

Q. Does Staff maintain its recommendation that the bill assistance component of the LIEC program not be approved?

A. Yes. While a bill assistance benefit for low-income customers in emergency situations would help needy customers, and a similar program has been approved for APS, it remains that bill assistance is not DSM and consequently not an appropriate component of a DSM program. Inclusion of rate assistance measures within a DSM program would have several undesirable effects. The instrument used to fund DSM programs is a rate component called the DSM adjustor. Its name implies to ratepayers that it is an assessment for DSM costs. Should rate assistance be included in the DSM program, it may not be clear to ratepayers that they also fund rate assistance through the DSM adjustor. Additionally, inclusion of a rate assistance component within a DSM program will result in a lack of clarity related to the total annual level of Southwest's DSM funding. Should rate assistance be included in the DSM program, the actual level of DSM funding could only be accurately described by the total DSM program funding level minus the amount of funds used for the rate assistance component. Finally, inclusion of program components which are not DSM within the DSM program could reduce clarity about the objectives of the DSM program. However, the Commission should evaluate the appropriateness of the bill assistance component of the Low-Income Energy Conservation DSM program as a separate and distinct program from DSM, and Southwest's request to include $50,000 in rate assistance as a part of its DSM program should not be approved.

Q. Why does Staff not recommend inclusion of bill assistance within a DSM program when recently bill assistance was included in a DSM program approved for APS?

A. Decision No. 67744 of April 2005 approved a settlement agreement for APS' rate application. Included in that Decision and settlement agreement was a rate assistance component in APS' DSM program. Many parties with diverse interests participated in the APS settlement agreement. Recommendations made in the settlement agreement were the result of a negotiated process. Taken on its own, and removed from any negotiated process, Staff finds that inclusion of rate assistance as a component of a DSM program inappropriate. However, as stated earlier, the Commission should evaluate the appropriateness of the bill assistance component of the Low-Income Energy Conservation DSM program as a separate and distinct program from DSM, and Southwest's request to include $50,000 in rate assistance as a part of its DSM program should not be approved.

PROGRAM APPROVAL, FUNDING, AND THE COLLABORATIVE PROCESS

Q. What has Staff recommended regarding program approval?

A. Staff has recommended that within 120 days of a decision in this matter Southwest shall submit to the Commission for approval a DSM plan that includes detailed descriptions of each of the proposed DSM programs. Staff has also recommended that the DSM plan shall be filed under a new docket number and that only the total annual DSM budget be approved at this time.

Q. Does Southwest agree with these recommendations?

A. It is unclear what position Southwest takes regarding program approval. On page 5 of Rebuttal Testimony of Southwest's witness Vivian E. Scott, Southwest recommends both approval of the proposed programs at this time and final Commission approval within 120 days. It is not clear what conditions Southwest intends to establish through approval of the programs at this time relative to final approval within 120 days.

Q. Given Southwest's position, what does Staff recommend regarding program approval.

A. Staff continues to recommend that within 120 days of a decision in this matter Southwest shall submit to the Commission for approval a DSM plan that includes detailed descriptions of each of the proposed DSM programs. The filing shall be made under a new docket number and only the total proposed funding level be approved at this time.

Q. What has Staff recommended regarding funding approval?

A. Staff has recommended a total annual DSM budget of $4,335,000. This figure is based on Southwest's original budget proposal, but having eliminated funding for the bill assistance component of the LIEC program.

Q. Does Southwest agree with Staff's recommendation regarding the funding level?

A. No. Southwest's witness Vivian E. Scott describes in Rebuttal Testimony that Southwest requests a funding level sufficient to fund an expanded Energy Star® Home Certification program and performance incentives proposed in testimony of SWEEP/NRDC (Scott Rebuttal Testimony page 5).

Q. What recommendation has SWEEP/NRDC made regarding an expanded Energy Star® Home Certification program?

A. SWEEP/NRDC has recommended that funding for the Energy Star® Home Certification program, currently called the Energy Advantage Plus program ("EAP"), be increased from the proposed $250,000 to at least $1,000,000. SWEEP/NRDC cites that such funding is necessary in order to provide the program throughout the Southwest Gas service territory and for promoting and incentivizing the program (page 5 of Direct Testimony of Jeff Schlagel).

Q. What are Staff's comments regarding additional Energy Star® Home Certification program funding for promotions and incentives?

A. On page 4 of Direct Testimony of Southwest's witness Vivian E. Scott, Ms. Scott describes that as a result of past efforts, Southwest now believes that the market has sufficiently transformed and that incentives are no longer necessary to ensure more energy-efficient construction. Southwest also cited this belief in its application May 10, 2005 for continuation of the Energy Advantage Plus Program (Docket No. G-01551A-05-0249). Consequently, in Decision No. 67878 of June 1, 2005, the Commission ordered that the annual EAP budget be reduced from $900,000 to $250,000.

Q. What are Staff's comments regarding additional funding for the Energy Star® Home Certification program in order to provide the program throughout the Southwest Gas service territory?

A. In a data request to Southwest, Staff inquired about the extent to which Southwest would be able to offer each of the proposed DSM programs through its service territory. In response to this request (Southwest's response to STAFF-SPI-16 question #3, See Exhibit SPI-1), Southwest indicated that it expected that the Energy Star® Home Certification program could be offered throughout its entire service area. Southwest responded to this data request following its Direct Testimony recommendation in which it recommended a funding level of $250,000, and prior to the recommendation by SWEEP/NRDC that the program level be increased to at least $1,000,000. Southwest's expectation that the program can be offered throughout its service territory when funded at the $250,000 level does not support the recommendation by SWEEP/NRDC to increase the program funding for purposes of expansion of the program to the entire service territory.

Q. What is Staff's recommendation regarding the proposal that the Energy Star® Home Certification program funding level be increased from $250,000 to $1,000,000?

A. Given that Southwest and Staff believe it is no longer necessary to provide program incentives or to promote the program, and given Southwest's expectation that it could offer the program throughout its entire service area, Staff does not support the recommendation to increase funding of the Energy Star® Home Certification program beyond the $250,000 level previously proposed by both Southwest and Staff. For this reason, Staff continues to recommend a total annual DSM budget level of $4,335,000, which includes $250,000 for the Energy Star® Home Certification program.

Q. What are Staff's comments regarding use of a collaborative process to consider Southwest's formal DSM program proposal?

A. In Direct Testimony, Staff recommended that Southwest file for Commission approval an application under a new docket number with detailed plans for the DSM programs. RUCO and SWEEP/NRDC have proposed that a working group be formed to consider the DSM proposal and any member of the group be permitted to submit a program plan to the Commission for approval. Southwest supports the collaborative process as a means to obtain input from participants, but takes exception to the proposal that any member of the group be permitted to submit a program plan to the Commission for approval (Scott Rebuttal Testimony page 5). Staff agrees that formation of a working group will allow for consideration of input of interested parties and recommends that such a group be formed. Staff recommends that Southwest be required to implement and maintain the collaborative DSM working group to solicit and facilitate input from any interested party. The DSM working group shall review Southwest's draft program plans before Southwest submits them to the Commission. Southwest shall retain responsibility for demonstrating to the Commission the appropriateness of any program proposed by Southwest.

Q. Does Staff have comments related to the ability of parties to submit their own proposals for a DSM program for consideration by the Commission?

A. Staff notes that once Southwest's DSM proposal is filed under a new docket number, any interested party is permitted to file for intervention and submit comments in the matter. Such comments could include alternative proposals.

PROPOSAL BY SWEEP/NRDC TO INCLUDE A PERFORMANCE INCENTIVE

Q. What has Staff recommended regarding a performance incentive?

A. Staff has not made a recommendation regarding a performance incentive in Direct Testimony. Southwest had not made a recommendation for a performance incentive in Direct Testimony. A recommendation for a performance incentive was introduced in Direct Testimony of Jeff Schlegel, representing SWEEP/NRDC. Southwest supports the performance incentive recommendation in Rebuttal Testimony of Southwest witness Vivian E. Scott.

Q. What comments does Staff have at this time regarding a performance incentive?

A. It is not clear in either Direct Testimony of Jeff Schlegel or Direct Testimony of Vivian E. Scott how the amount of any performance incentive would be calculated. The recommendation does describe that the incentive should be based on net economic benefits and metrics such as number of customers served. SWEEP/NRDC also describes that the incentive mechanism should include a threshold for minimum performance. It is Staff's expectation that setting a minimum performance threshold is unnecessary as

Southwest would implement any programs as ordered by the Commission regardless of whether a performance incentive exists or not. Additionally, it is unclear to Staff how Southwest's effort to implement the programs would be reduced should it not be granted a performance incentive. For this reason Staff does not recommend implementation of a performance incentive.

SUMMARY OF STAFF RECOMMENDATIONS

Q. Please provide a summary of each of Staff's recommendations regarding DSM made in this testimony.

A. Staffs recommendations are as follows:

1. Future semi-annual DSM Progress Reports shall be certified by an Officer of the Company.
2. The Commission should evaluate the appropriateness of the bill assistance component of the Low-Income Energy Conservation DSM program as a separate and distinct program from DSM, and Southwest's request to include $50,000 in rate assistance as a part of its DSM program not be approved.
3. Within 120 days of a decision in this matter, Southwest shall docket for the Commission's approval a DSM plan that includes detailed descriptions of each of the proposed DSM programs. This application for approval of the DSM Plan shall be made under a new docket number and only the total proposed funding level shall be approved at this time.
4. Approval of a total annual DSM budget of $4,335,000.
5. Southwest be required to implement and maintain the collaborative DSM working group to solicit and facilitate input from any interested party.
6. The DSM working group shall review Southwest's draft program plans before Southwest submits them to the Commission.

7. Southwest shall retain responsibility for demonstrating to the Commission the appropriateness of any program proposed by Southwest.

8. The Commission shall not approve implementation of a performance incentive.

Q. Does this conclude your testimony?

A. Yes it does.

GRAY

BEFORE THE ARIZONA CORPORATION COMMISSION

JEFF HATCH-MILLER
Chairman
WILLIAM A. MUNDELL
Commissioner
MARC SPITZER
Commissioner
MIKE GLEASON
Commissioner
KRISTIN K. MAYES
Commissioner

IN THE MATTER OF THE APPLICATION OF	)	DOCKET NO. G-01551A-04-0876
SOUTHWEST GAS CORPORATION –	)	
APPLICATION FOR AN INCREASE IN GAS	)	
IN GAS RATES.	)	
	)	

SURREBUTTAL

TESTIMONY

OF

ROBERT G. GRAY

PUBLIC UTILITIES ANALYST V

UTILITIES DIVISION

ARIZONA CORPORATION COMMISSION

SEPTEMBER 13, 2005

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INTRODUCTION

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

A. My name is Robert G. Gray. I am a Public Utilities Analyst 5 employed by the Arizona Corporation Commission ("ACC" or "Commission") in the Utilities Division ("Staff"). My business address is 1200 West Washington Street, Phoenix, Arizona 85007.

Q. Are you the same Robert Gray that filed direct testimony on July 26, 2005 and supplemental testimony on August 2, 2005?

A. Yes.

Q. What is the purpose of you surrebuttal testimony?

A. The purpose of my surrebuttal testimony is to provide Staff's response to issues raised by Southwest Gas ("Southwest") rebuttal testimony filed by Steven Fetter, William Moody, Marti Marek, Brooks Congdon, and Ed Gieseking, and the supplemental testimony filed by Christina Palacios.

Q. Does Staff continue to support the recommendations contained in your direct testimony unless otherwise modified herein?

A. Yes.

GAS TECHNOLOGY INSTITUTE FUNDING

Q. What was Southwest's response to the recommendation in your direct testimony to fund natural gas research by the Gas Technology Institute ("GTI")?

A. Southwest witness Marti Marek supported funding gas research at the level recommended by Staff, but wished for the Company to have the freedom to distribute funds to other research entities beyond GTI if it preferred to do so.

Q. What is Staff's response to Southwest's recommendation to spread the funding to other organizations?

A. Staff recognizes that there are other worthwhile entities beyond GTI that also do natural gas research and development. In concept Staff agrees with Southwest's recommendation that funding possibly be available for other research and development efforts beyond those that might be funded at GTI. One concern Staff has is that an open ended commitment to allowing funding to go to any number of other possible entities for research and development work makes it more difficult for the Commission to ensure that research and development funds are used to maximize their benefits. Such a concern was not as great in Staff's initial recommendation for funding to only be directed to GTI, given that GTI is a high profile research and development entity with a long history of working with state commissions and others. At least some of the other research entities discussed in Southwest's testimony are not as well known nationally and in Arizona.

Another concern is that GTI's Utilization Technology Development ("UTD") and Operations Technology Development ("OTD") programs are designed for minimum funding levels, which are reflected in the funding levels proposed in my direct testimony. To the extent those dollars are shifted away from GTI, Southwest would fall below the minimum funding levels for the UTD and OTD programs. Additionally, there is some inherent benefit in GTI being provided with a relatively stable funding level given the nature of its research and development efforts.

Q. Does Staff have any further thoughts on this matter?

A. Yes. To address the concern identified above regarding the other research and development entities, Staff recommends that Southwest provide in this proceeding a list of other potential entities which it might wish to direct research funds to and some background information on each of these entities. This would provide a limited list which the Commission would know would be possible destinations for research and development funds on a going forward basis. Also, Staff would anticipate that when Southwest makes its annual filing to identify where it intends to direct its research funds, that the Company, in addition to discussing any GTI programs it wishes to fund, would provide ample explanation of any non-GTI programs it wishes to direct funds to.

Regarding the issue of minimum GTI funding, Staff believes that GTI research and development efforts should be funded at the level proposed in Staff's direct testimony. To the extent Southwest wishes to fund some research and development activities other than those conducted by GTI, Southwest should identify an amount of funding it wishes to have for such research and development and should propose recovery of that amount in this rate case as Staff has with the GTI funding. To the extent some of this research and development funding is not spent, this would reflect over time as the annual surcharge is reset by Southwest each year in April. The surcharge would be calculated based upon any over or under-recovery from the prior calendar year as well as projected spending for the upcoming calendar year. This is similar to how Southwest's current demand side management adjustor is calculated.

NARUC RESOLUTION ON GAS AND ELECTRIC ENERGY EFFICIENCY

Q. In support of Southwest's request for approval of the conservation margin tracker ("CMT"), Southwest witnesses have indicated that the National Association of Regulatory Utility Commissioners ("NARUC") issued a resolution in which NARUC endorsed an approach such as the CMT. Does Staff have any comments on this?

A. Yes. Staff Witness Bill Musgrove will address all other matters related to the CMT, but I will comment on the limited matter of Southwest's contention that NARUC endorsed such an approach. For example, Southwest Witness Steven Fetter, on page 2-3 of his rebuttal testimony indicates that the American Gas Association and the Natural Resources Defense Council reached an understanding of the issue "that has also received the endorsement of the National Association of Regulatory Utility Commissioners (NARUC)."

Q. **Why are you specifically addressing the issue of whether NARUC "endorsed" the type of mechanism being proposed by Southwest?**

A. The resolution in question was approved by NARUC at NARUC's Summer 2004 Committee meetings. I was in attendance at those meetings and was involved in work on resolutions in my position at that time as vice-chair of the NARUC Staff Subcommittee on Gas.

Q. **Why is Southwest's contention that the resolution in question endorses the type of approach the Company is proposing erroneous?**

A. First and foremost, the plain language of the resolution, in the third Resolved paragraph, merely states that "the Board of Directors of NARUC encourages State Commissions to **review and consider** the recommendations contained in the enclosed *Joint Statement of the American Gas Association, the Natural Resources Defense Council, and the American Council for an Energy-Efficient Economy.*" (emphasis added in bold) Encouraging state commissions to review and consider an approach such as the CMT put forward by Southwest in this rate proceeding in no way means that NARUC was "endorsing" a mechanism such as the CMT, as Steven Fetter's testimony seems to suggest. The resolution further indicates that NARUC recognizes the best approach should consider local issues, preferences, and conditions. Having been in attendance at the meetings where this resolution was discussed, and having heard concerns expressed with NARUC endorsing such a concept, it was clear to me that the neutral language "review and consider" was purposely used so that the resolution would not be considered an endorsement of the concept.

PURCHASED GAS ADJUSTOR

Q. Southwest Witness William Moody opposes Staff's recommendation that a Southwest officer be required to certify, under oath, through an affidavit attached to each monthly PGA report that all information provided in the adjustor report is true and accurate to the best of his or her information and belief. Please comment.

A. Staff continues to believe its recommendation should be adopted. This is a standard provision which the Commission has adopted in previous cases regarding adjustor reports for electric and natural gas companies, as was noted in my direct testimony. There is no reason why Southwest should be exempted from providing such certification.

Q. Southwest accepts Staff's recommendation to increase the PGA bank balance trigger level to $29.2 million, subject to increasing the band on the monthly PGA rate from $0.10 per therm to $0.13 per therm. Please comment.

A. Staff recognizes Southwest's interest in expanding the band on the monthly PGA rate, given greater natural gas price volatility in recent years. However, Staff is also cognizant of the initial purpose of the band, which was to limit the amount which the monthly PGA rate could adjust automatically (and impact customer bills automatically) within a twelve month period absent any specific Commission action. The band was already expanded by the Commission once in the past, from $0.07 per therm to $0.10 per therm, and any further expansion really comes down to the amount of fluctuation the Commission is comfortable with absent specific Commission action. Staff is not conceptually opposed to a possible expansion of the band on the monthly PGA rate, if such an expansion is the wish of the Commission. But Staff will not propose or support such an expansion at this time due to the previously stated reason why the band was initially introduced. Further, there is no need to link a moderate expansion of the PGA bank balance trigger as proposed by Staff to an expansion of the band as proposed by Southwest.

RATE DESIGN

Q. Having read the rebuttal testimony of Southwest witnesses Brooks Congdon and Ed Gieseking regarding rate design, please discuss whether Staff is proposing any substantive changes to its approach to rate design.

A. Having read Southwest's rebuttal testimony, Staff's general approach to rate design has not changed from that which is described in my direct testimony. In this section of my testimony I will provide further commentary on some specific rate design issues raised by Southwest in its rebuttal testimony.

Q. Southwest Witness Brooks Congdon, in discussing the issue of Southwest's declining block rate structure on pages 9-10 of his rebuttal testimony, cites the City of Mesa's declining block rate structure as an example of a natural gas declining block rate structure in Arizona as well as the block rate structures of several electric utilities. Please comment.

A. First, the City of Mesa natural gas utility is not under the Commission's jurisdiction regarding the setting of rates and therefore rates which the City of Mesa chooses to charge its customers do not necessarily have any reflection on the Commission's current or past views regarding rate design. Further, an examination of the City of Mesa's current rate design shows that it weighs costs toward the winter months, with the second block of usage (above 25 therms) having a per therm rate more than double the rate for the second block of usage in the summer months. Such a rate design would run counter to the

Commission's expressed interest of trying to reduce customer impacts in the winter months to the extent possible.

Second, APS' residential rate E-12 is a block structure in the summer, but heavily declining in nature, a block structure Southwest opposes. The two other large jurisdictional electric utilities in Arizona serving retail customers are UNS Electric and Tucson Electric, both of whom have a flat residential rate structure year round. The second utility cited by Southwest appears to be SRP, another entity over which the Commission does not have rate jurisdiction; and SRP's declining block is only in the winter, its off-peak season.

Q. Witness Mary-Lee Diaz Cortez for the Residential Utility Consumer Office ("RUCO"), in her direct testimony, recommends movement to a flat residential rate structure in this proceeding, in contrast to your recommendation to reduce the block rate structure in this case and move to a flat rate in Southwest's next rate proceeding. Please discuss.

A. Staff and RUCO take the same general approach to this issue. Staff just takes a more gradual approach to moving to a flat rate than RUCO does. Staff continues to support its rate structure proposal for residential customers, but does not oppose RUCO's proposed movement to a flat rate structure in this proceeding if the Commission wishes to do so.

Q. In Southwest Witness Ed Gieseking's rebuttal testimony he cites the decline in average residential usage since 1996 as evidence that a declining block rate structure does not discourage conservation. Please comment.

A. Any decline over time of average residential consumption does not necessarily have any relation to Southwest's declining block structure since its implementation following

Southwest's 1996 rate case. Many factors can contribute to any such decline and there is no basis to assume that Southwest's declining block rate structure contributes to any such decline.

Q. Southwest Witness Brooks Congdon, on pages 11-12 of his rebuttal testimony states that Staff's assertions regarding the impact of Southwest's proposed residential rate design and its impact on low usage customers are unfounded. Does Staff agree?

A. No. Under Southwest's proposed residential rate design the customer charge would increase from $8.00 to either $12.00 (with the CMT) or $16.00 (without the CMT). Under either of Southwest's proposals, the first block of the residential rates would be much higher than it currently is and the differential from the second block is expanded drastically. It is mathematically impossible for a customer with low usage, paying a much higher customer charge and a much higher first block rate to not see a large rate increase.

Q. Southwest Witness Brooks Congdon's rebuttal testimony discusses how customer bill increases should be properly represented. Please discuss how Staff represented customer bill increases in the rate design contained in your direct testimony.

A. My direct testimony, primarily in Schedule RGG3, calculates customer bill impacts of Staff's proposed rate design for each class across a wide range of possible usage levels, noting annual and January average usage levels as well as January and annual median usage levels, where available for each class. This provides a broad overview of potential customer bill impacts, on both an actual dollar increase and percentage increase basis.

Q. Southwest Witness Brooks Congdon's rebuttal testimony on page 14 cites that the annual dollar impact is important because Southwest's residential rate design proposal shifts margin recovery from the winter to the summer months. Please comment.

A. A review of Southwest's residential rate design proposal reveals that the primary reason Southwest's proposal shifts margin recovery to the summer months is simply because Southwest is proposing such a large increase in the customer charge, which proportionately makes up a greater percentage of a customer's summer bills, when usage is low.

Q. Southwest Witness Brooks Congdon's rebuttal testimony on pages 15-21 goes through a series of exercises attempting to represent that Southwest's proposed residential rate design promotes customer rate stability and energy efficiency. Please comment.

A. Southwest's proposed residential rate structure does provide greater rate stability, but it does so by front-loading costs in the customer charge and first usage block, an unacceptable proposal as Staff has previously discussed. If ultimate rate stability were desired, all costs would be loaded onto a fixed customer charge and customers' bills (subject to how gas costs were addressed) would be very stable. But in looking at how residential rates should be designed, the desire for rate stability must be balanced with a variety of other goals.

Q. Southwest Witness Brooks Congdon expresses concerns regarding the allocation of costs amongst customer classes by Staff and RUCO. Please discuss.

A. Cost allocation among classes is one of a number of factors which must be considered in designing rates, as discussed on page 31 of my direct testimony. Staff's proposed G-5 residential rates result in the median annual residential bill increasing 9.16 percent, a higher increase than any other customer class except the small general service class which receives an 11.84 percent increase. By contrast the median annual medium and large general service customers receive increases of 4.93 percent and 2.73 percent. Given the size of revenues from these customer classes, residential (G-5) and general service (G-25 – small, medium, and large), by far the two largest customer classes Southwest has, any sizable shift in one class will generally require a roughly equal and opposite shift for the other class. Staff does not believe a further increase above what it has recommended for the residential rate is acceptable, particularly in present circumstances with such high and volatile natural gas prices.

Q. **Does Staff wish to comment further on Southwest's proposal to create a new multi-family residential rate class?**

A. Yes. Staff is not implacably opposed to creation of a multi-family residential rate class, but simply does not believe it is in the long term interest to take a small segment of the general residential rate class and create a separate rate class and structure for them. There are likely other segments of the residential customer class which have at least somewhat different characteristics, but a Balkanization of the residential rate class absent a compelling need to do so is not something Staff will support.

Q. **In support of Southwest's proposal to change the low income discount to a year round discount, Southwest Witness Brooks Congdon states that due to Southwest's proposed rate design there is less need to shield low income customers from the affect of high winter bills. Does Staff agree with this assertion?**

A. No. Staff does not support Southwest's proposed residential rate design. But even if Southwest's rate design were to be adopted, Staff still believes that the Commission has sent a clear signal that the focus of its interest in protecting low income customers of local distribution companies, including Southwest, is to minimize the impact of high winter bills experienced by such customers. Staff continues to believe that Southwest's low income discount should be focused on high consumption winter months, especially as natural gas prices continue to escalate, rather than shifting some portion of the discount dollars to low usage summer months.

Q. Having reviewed Southwest Witness Brooks Congdon's testimony regarding the G-25 General Service rate schedule, does Staff have any changes it wishes to make to Staff's approach to setting rates for the G-25 schedule?

A. No. Staff continues to believe that its approach to setting G-25 rates, as outlined in my direct testimony, should be adopted. In Staff's view, Southwest's proposed G-25 rates move too quickly toward Southwest's goal of matching cost-based rates, to the detriment of customers who will see significant bill impacts under Southwest's proposals.

Q. Please comment on Southwest's discussion of Staff's recommendations regarding the G-35, Armed Services tariff and the G-75, Small Essential Agricultural User Gas Service tariff.

A. Southwest in its direct testimony proposed moving G-35 customers to the G-25 tariff, contending that it would be beneficial to G-35 customers to do so. Staff's analysis raised doubt over whether this was the case. But if Southwest's contention is true, customers, given the choice, would naturally move from the G-35 to the G-25 tariff. If that happens, then Southwest's proposal will take place via the acquiescence of the G-35 customers. If not, then Staff's concern that a move to the G-25 tariff might not be beneficial would be consistent with G-35 customer behavior. As such, Staff continues to recommend that G-35 customers be given the option to move to the G-25 tariff if they so wish. In

Southwest's next rate proceeding the Company would be free to propose any change to this arrangement which it would see fit to propose.

Regarding the G-75 tariff, customers taking service under this rate schedule already have the ability to take service under the G-25 tariff. Southwest has not presented any compelling reason why new customers who would be eligible for the G-75 tariff should not have the ability to take service under that tariff.

Q. Regarding the G-60 Cogeneration tariff, Southwest Witness Brooks Congdon on page 35 of his rebuttal testimony indicates that Staff mischaracterizes Southwest's proposal regarding the G-60 tariff. Please discuss.

A. The discussion in my direct testimony regarding Southwest banning customers above 5 MW from taking service under the G-60 tariff was directed at the fact that such customers would be required under Southwest's proposal to take transportation service, not normal sales service on the G-60 tariff as other customers could. If a customer above 5 MW is taking transportation service, they would then first and foremost be considered a customer taking service under the T-1 transportation tariff.

Regarding Southwest's proposal to include special gas procurement language in the G-60 tariff to protect other core customers, it is unclear exactly what language Southwest is proposing to include in the G-60 tariff.

Q. Regarding the G-80, Natural Gas Engine Gas Service tariff, please discuss Staff's proposed increase for this rate class.

A. Staff is cognizant of the circumstances surrounding this rate class and took them into consideration in designing the rates. A review of Staff's proposed rate design shows that the G-80 tariff receives the smallest revenue increase, 2.27 percent, of any rate class under Staff's proposed rate design, approximately one-third of the overall revenue increase of 6.86 percent. However, Staff does not believe the potential for customers leaving a given rate class should totally exempt that rate class from bearing some, albeit small, portion of the overall rate increase.

OTHER ISSUES

Q. On page 38 of Southwest Witness Brooks Congdon's testimony, he indicates that Southwest opposes Staff's recommendation to add a place on customer bills for customers to donate money to the Energy Share program when customers pay their bills. Please discuss.

A. It is puzzling why Southwest would oppose addition of a further way for customers to make voluntary donations to the Energy Share program when paying their bills. Arizona Public Service and other entities have such a provision on their bills. It is logical that by providing additional means for customers to make voluntary donations to help other less fortunate customers, additional funds would be made available to help those people. Many customers do not carefully look at their bill inserts but notice their actual bill more closely. Staff supports Southwest's current method of notifying customers on how they can contribute to the Energy Share program via a bill insert, but believes that providing the additional opportunity for customers to make a donation on their monthly Southwest bill will increase funding to help less fortunate customers and is in the public interest.

Q. In your direct testimony Staff raises the issue of the length of the service window Southwest has for scheduling a visit to customer premises. Does Staff continue to have a concern regarding this issue?

A. Yes. The Supplemental Testimony filed by Southwest Witness Christina Palaciios indicates that if a customer requests a four hour service window, Southwest will provide a four hour window, but otherwise a four hour window is not provided. While a four hour window may currently be available to customers upon request, many customers likely do not know that such a window is available and therefore by default take service under the longer default window. Staff believes that there is not a compelling reason why Southwest cannot adopt a standard four hour window to service its customers, as other Arizona utilities use. Such a move will reduce the burden on customers who would otherwise have to remain at their location for a large portion of the day, waiting for the Southwest technician to arrive. Staff recommends that absent representation of the need to do otherwise by Southwest, the Company adopt, within six months of the date of the decision in this rate proceeding, a four hour service window as standard practice, as is used by other Arizona electric and gas utilities.

Q. Southwest Witness Brooks Congdon's rebuttal testimony provides further discussion of subsequent meter tests for large volume customers and Southwest's proposal to charge the actual costs of the subsequent test to the customer. Please comment.

A. Staff accepts Southwest's recommendation.

Q. Southwest responded to Staff's recommendations regarding interest rates for customer deposits and balancing accounts by stating that the Company believed that interest rates should be the same or approximately the same. Please respond.

A. Staff continues to believe that its recommendations regarding interest rates are reasonable and should be adopted. Southwest's recommendation in its surrebuttal testimony that interest rates should be set at or approximately at the same level is inconsistent with Southwest's proposal regarding interest rates in the Company's direct testimony. In Southwest's direct testimony the Company recommended a low fixed three percent customer deposit rate, while keeping the interest rate on other accounts such as the PGA bank balance set on the adjustable three month non-financial commercial paper rate published by the Federal Reserve. While this interest rate has been lower than three percent at times since its inception in 1997, more often than not it has been noticeably higher than three percent. Setting the customer deposit rate at the three percent level proposed by Southwest in its direct testimony is certainly not equivalent to the interest rate used elsewhere.

Staff's proposal for interest rates is more favorable overall to Southwest than the current interest rate regime. While Staff is proposing to keep the six percent customer deposit rate, it is proposing to change the interest rate being applied to the other bank balances including the PGA bank balance to a marginally higher Federal Reserve interest rate than what has been used since Southwest was first allowed to collect interest on the PGA bank balance in June 1999. Prior to that time, Southwest paid a six percent customer deposit and was not granted any interest on the PGA bank balance. Such differences are commonplace in the utility industry around the country, with some states still not providing any interest on PGA bank balances or providing a lower interest rate for undercollections than overcollections. Staff believes its interest rate proposal reasonably balances the interests in this case.

Q. In your direct testimony you discussed the El Paso rate proceeding at the Federal Energy Regulatory Commission ("FERC") and its possible implications for Southwest and its customers. Does Staff have any further discussions and recommendations related to the El Paso rate case?

A. Yes. One of the primary concerns the Commission has raised in the El Paso rate case is the elimination of El Paso's short-haul rate and its implications on natural gas infrastructure development in Arizona. In summary, the lack of a reasonably priced short-haul rate on El Paso's system is a serious anti-competitive impediment to natural gas infrastructure development in Arizona by entities other than El Paso and is emblematic of El Paso's apparent desire to maintain its monopoly pipeline status in most of Arizona. FERC has deferred the question of a possible short-haul rate to the hearing portion of El Paso's rate case, guaranteeing uncertainty for the next year or two at least regarding if or when a reasonably priced short-haul rate will be available. This is particularly troubling given El Paso's ownership of a very extensive lateral system in Arizona. The way pipeline service is priced on an interstate level, Arizona is at a fundamental disadvantage to a state like California where large shippers with other supply options, such as Southern California Gas and Pacific Gas and Electric, have been able to negotiate very favorable discount contracts with El Paso. Not only are captive Arizona shippers not offered such discounts, but they are likely to be looked upon as the source of additional funds to pay for the discounted rates California shippers receive. Such a situation calls for efforts to address Arizona's unfavorable competitive position. The Commission recognized this in its December 18, 2003 policy statement on natural gas infrastructure, which recognized the need to diversify Arizona's natural gas infrastructure and that the current monopoly on interstate pipeline service in central and southern Arizona is not beneficial to the state of Arizona.

Q. In light of these circumstances, does Staff have any recommendations?

A. Yes. It appears likely that El Paso will do what it can to inhibit the development of competitive natural gas infrastructure in Arizona for the foreseeable future and it is unclear whether FERC will take substantive or timely action to address El Paso's anti-competitive stance. In such a situation El Paso's control over the extensive Arizona lateral system is problematic. Therefore I recommend that as Southwest moves forward to develop its distribution system to serve customer demands, the Company should as a general practice build any needed laterals and related infrastructure itself, rather than having El Paso build such laterals, unless there are significant cost or other reasons why it would be preferable for El Paso to build a lateral instead. Further, if reasonable opportunities occur for Southwest to acquire El Paso laterals in Arizona, Southwest should pursue such opportunities, assuming there are not significant costs or other reasons why it should not. Over time this approach may at least to some extent reduce El Paso's monopoly control over the local natural gas infrastructure in Arizona and may increase the ability of Southwest to take service from others in Arizona. Staff recognizes that some laterals Southwest currently takes service over are also used to serve other entities such as electric generators. In such circumstances, Staff encourages Southwest to work with these other entities to address any issues which may arise in relation to service being taken on such laterals.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does.