

BEFORE THE PUBLIC SERVICE COMMISSION OF WYOMING

IN THE MATTER OF THE APPLICATION OF)
SOURCEGAS DISTRIBUTION LLC FOR) Docket No. 30022-148-GR-10
AUTHORITY TO INCREASE ITS NATURAL) Record No. 12450
GAS RATES BY \$7.46 MILLION PER ANNUM,)
TO CONSOLIDATE ITS TORRINGTON,)
CASPER AND GILLETTE DIVISIONS, AND)
TO IMPLEMENT A DEMAND-SIDE)
MANAGEMENT PROGRAM AND SEVERAL)
RATE ADJUSTMENT MECHANISMS.)

PRE-FILED DIRECT TESTIMONY OF

Kimber M. Wichmann

On Behalf of the Wyoming Office of Consumer Advocate

Testimony Filed: July 19, 2010
Hearing Begins: September 20, 2010

1 **Q. PLEASE STATE YOUR NAME, ADDRESS AND OCCUPATION.**

2
3 A. My name is Kimber Wichmann. My business address is 2515 Warren Avenue, Suite
4 304, Cheyenne, WY, 82002. I am a Rate Analyst for the Wyoming Office of Consumer
5 Advocate (OCA). The OCA is an independent consumer advocacy agency that was
6 created by an act of the legislature in the 2003 general session.

7
8 **Q. WHAT IS THE FUNCTION OF THE OCA?**

9
10 A. Pursuant to W.S. § 37-2-401,

11
12 The office of consumer advocate shall represent the interests of Wyoming
13 citizens and all classes of utility customers in matters involving public
14 utilities. In the exercise of its powers the office of the consumer advocate
15 shall consider all relevant factors, including, but not limited to, the
16 provision of safe, efficient and reliable utility services at just and
17 reasonable prices.
18

19
20 **Q. ARE THE ANALYSES AND RECOMMENDATIONS OF THE OCA, IN THIS OR**
21 **ANY OTHER CASE BEFORE THE COMMISSION, INFLUENCED OR**
22 **DIRECTED BY THE COMMISSION?**

23
24 A. No. Although the OCA is a division within the Commission according to W.S. § 37-2-
25 401, it is a separate division with no reporting or supervisory links to the Commission.
26 The OCA has the right under W.S. § 37-2-402(ii) to appeal decisions of the Commission.
27 The primary link between the OCA and the Public Service Commission is the source of
28 common funding provided by the assessment on gross utility operating revenues; this
29 assessment funds both the Commission and the OCA.

30
31 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND**
32 **OCCUPATIONAL EXPERIENCE.**

33
34 A. I received a B.S. degree with a double major in Economics and Political Science from
35 The Colorado College and an M.B.A. degree from the University Of Phoenix. While

1 achieving my undergraduate degree, I worked part-time for a statewide rural electric
2 association (REA), which gave me the opportunity to learn about electric cooperatives
3 and the energy industry as well as the members they serve. After college, I accepted a
4 marketing and media position with Sumpter Electric Cooperative in Sumpterville,
5 Florida.

6 In 1997, I accepted a position with the Wyoming Department of Employment
7 Department of Research and Planning (R&P) in the capacity of Statistician. I assisted the
8 team in gathering employment statistics for businesses throughout Wyoming. I learned
9 the statistical modeling used by the Bureau of Labor Statistics for the Current
10 Employment Statistics and Labor Market Information provided by the State of Wyoming.

11 In 1998, I left the R&P office as a Senior Statistician and accepted a position with eBay,
12 Inc. as a Business and Process Analyst for the Consumer Experience department. While
13 at the internet company, I gained 10 years experience in identifying, documenting,
14 implementing, and measuring the performance of cost effective processes and
15 informational system improvements on a global scale using data sampling and statistical
16 modeling techniques. As a lead worker, I established baselines, identified key metrics for
17 measuring project success, and tracked performance in a timely manner for senior
18 management. In 2008, I left eBay as a Lead Senior Business Analyst and accepted a
19 position as a Rate Analyst for the Wyoming Office of Consumer Advocate, where I
20 remain employed today.

21 I completed the 51st Regulatory Studies Program, which is an intensive regulatory boot
22 camp sponsored by the Institute of Public Utilities and Michigan State University in the
23 summer of 2009. More recently, I expanded my skills by attending the Essentials of
24 Utility Finance training in Denver, Colorado in March that was jointly taught by Dr.
25 Morin, a professor of Finance at Georgia State University, and Ron Kneckt, MS, JD, PE
26 and Senior Economist at the Nevada Public Utilities Commission.

27 I stay professionally connected to regulatory issues by participating in NARUC through
28 the internet, phone, and attending the meetings in person when possible. I am also a
29 member of the Society of Utility and Regulatory Financial Analysts (SURFA) which
30 meets annually at Georgetown University to discuss current events and evolving financial
31 modeling methodologies.

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Q. ON WHOSE BEHALF DO YOU APPEAR HERE TODAY?

A. I appear here today on behalf of the OCA. As I indicated previously, the OCA is an independent party in this proceeding, separate and apart from the Commission or its advisory staff.

Q. AS A MEMBER OF THE OCA, DO YOU ADVOCATE THE INTERESTS OF CERTAIN GROUPS OF CONSUMERS OVER OTHERS?

A. No. As a member of the OCA, it is my statutory obligation to advocate the best interest of all citizens in the state. Specifically, W.S. § 37-2-401 states that the OCA “shall represent the interests of Wyoming citizens and all classes of utility customers in matters involving public utilities.” This public interest standard requires the OCA to represent the broadest possible utility consumer constituency, even though some of those consumers may also be represented independently as parties in this case.

Q. ARE YOU SPONSORING ANY EXHIBITS IN THIS PROCEEDING?

A. Yes. I am sponsoring Exhibits KMW1 through KMW5 which detail key points in my analysis.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of the my testimony is to provide an analysis of SourceGas Distribution LLC (SourceGas) cost of common equity capital and determine the overall rate of return for the Company’s gas utility operations in the state of Wyoming that is in the public interest. My second objective is to review the Company’s recommended cost of capital financing as presented through the testimony of the Company’s witnesses Dr. Moyer and Denise Martinez. My third objective is to provide a review of the revenues presented by the company and determine if they are reasonable.

Q. AS A MEMBER OF THE OCA, DO YOU ADVOCATE THE INTERESTS OF CERTAIN GROUPS OF CONSUMERS OVER OTHERS?

1 A. No. As a member of the OCA, it is my statutory obligation to advocate the best interest
2 of all citizens in the state. Specifically, W.S. § 37-2-401 states that the OCA “shall
3 represent the interests of Wyoming citizens and all classes of utility customers in
4 matters involving public utilities.” This public interest standard requires the OCA to
5 represent the broadest possible utility consumer constituency, even though some of those
6 consumers may also be represented independently as parties in this case.

7 **Q. WHAT RATE OF RETURN IS OCA RECOMMENDING IN THIS DOCKET?**

8 A. Based on the capital balances presented by the Company, I am recommending the overall
9 allowed rate of return of 7.8% which includes a 9.6% cost of common equity. I did not
10 change the capital structure presented by the company. The table below uses the debt cost
11 supplied by the company and the equity cost and overall rate of return I stated above.

Capital Structure

	Balance	Ratio	Cost	Required Return
SourceGas				
LT Debt	\$450,000,000	49.66%	6.01%	2.98%
Common Equity	\$456,072,981	50.34%	9.60%	4.83%
Total	\$906,072,981	100.00%		7.81%

12

13

14 **Q. HOW DID YOU CONDUCT YOUR COST OF CAPITAL ANALYSIS IN THIS**
15 **CASE?**

16 A. I began my analysis by constructing a group of companies capable of being compared. I
17 used the Value Line Investment Survey Issue 3 published on June, 11, 2010 to establish a
18 universe of natural gas utility companies. Value Line publishes a weekly investment
19 survey that contains ratings and reports for approximately 1,700 stocks in over 90
20 industries, one of which is the natural gas utility industry. I approached this task the same
21 way as Dr. Moyer and as a result I had the same 12 companies as documented on exhibit
22 KMW1.

1 However, my proxy group differs from Dr. Moyer's in that I applied a filter for regulated
2 revenues. The purpose of the proxy group in a utility rate case is to determine a fair cost
3 of capital for a regulated utility. This Docket specifically applies to a regulated natural
4 gas utility.

5 All of SourceGas Distribution LLC 's Wyoming revenues are regulated. Thus, one of the
6 constructs of a comparable group should be that the majority of its revenues originate
7 from a regulated source as well. Such a standard ensures similar comparable risk.

8 Setting the percentage of regulated natural gas revenues for the proxy group involves
9 judgment. I wanted companies that had a comfortable majority of revenues attributable to
10 regulated natural gas operations without being overly constrictive to the proxy group. My
11 analysis selected those companies that had at least 60% of revenues attributable to
12 regulated natural gas revenues. I set the filter at 60% to allow for a bigger proxy group
13 that was still representative of regulated natural gas utilities.

14 I found the company specific information on revenues attributable to regulated natural
15 gas operations available in the AUS Monthly Utility Report publication dated June 2010.
16 This narrowed the sample from 12 to 7 companies and these can be viewed on Exhibit
17 KMW2.

18 My final filter for the proxy group was that all the companies had to pay out dividends in
19 2011. This filter did not change the sample size and the proxy group remained the same
20 7 companies mentioned above. The final 7 companies can be viewed on Exhibit KMW2.

21 **Q. WHY IS IT IMPORTANT TO SELECT A GROUP OF COMPARABLE**
22 **COMPANIES?**

23 A. Two legal cases have set the fundamental standards for rate making which include
24 selecting a comparable group of companies. The two cases are the Federal Power
25 Commission v. Hope Natural Gas Co. (Hope) and Bluefield Waterworks & Improvement
26 Co. v. Public Service Commission of West Virginia (Bluefield). In Bluefield the Supreme
27 Court found:
28

1 A public utility is entitled to such rates as will permit it to earn a return on
2 the value of the property which it employs for the convenience of the
3 public equal to that generally being made at the same time and in the same
4 general part of the country on investments in other business undertakings
5 which are attended by corresponding, risks and uncertainties;....¹
6

7 In Hope the Supreme Court found:

8
9the return to the equity owner should be commensurate with
10 returns on investments in other enterprises having corresponding
11 risks.²
12

13 The precedent set by these decisions is that the returns authorized by regulatory
14 authorities must be commensurate with those being earned by similarly situated
15 companies under comparable circumstances and must provide the utility with the
16 financial ability to attract and maintain capital.

17 **Q. WHY DIDN'T YOU APPLY A FILTER TO THE PROXY GROUP FOR A BOND**
18 **RATING?**

19 A. I considered a bond rating filter. However, I did not want to unnecessarily constrict the
20 proxy group to three companies especially when there were other options available such
21 as the application of a risk adjustment. I agree with Dr. Moyer in this aspect that a risk
22 adjustment is the better mechanism to use to capture a robust comparable group in this
23 situation.

24 Since Dr. Moyer used the Standard & Poor's for his bond rating in his analysis I used the
25 same in my analysis so that our methods could be as similar as possible. Standard's &
26 Poor's is a reputable rating agency that is commonly used by the industry when
27 conducting economic analysis.

¹ Bluefield Waterworks & Improvement Co. vs. Public Service Commission of West Virginia, 262 U.S. 679 (1923).

² Federal Power Commission vs. Hope Natural Gas Co., 320 U.S. 591 (1944).

1 **Q. WHAT IS SOURCEGAS' CREDIT RATING WITH STANDARD & POORS AND**
2 **MOODY'S?**

3 A. SourceGas LLC is rated at the holding company level. Standard & Poor's (S&P)
4 reaffirmed SourceGas' BBB- investment grade rating on its unsecured notes on June 30,
5 2010. Moody's changed its outlook of SourceGas to positive but reaffirmed its Ba1
6 below investment grade rating of SourceGas' unsecured notes of On June 28, 2010.

7 On May 19, 2010 I had a chance to talk with Ms. Martinez, treasurer at SourceGas, at the
8 company headquarters. She mentioned that the company only needed one investment
9 grade rating to access capital markets. Since SourceGas has an investment grade rating
10 with S&P the rating from Moody's would not be used should the company apply for
11 additional capital. Thus the non investment grade rating although unfortunate is not
12 punitive to the company or investors at this time.

13 **Q. WHAT CREDIT RATING SHOULD BE USED FOR THE PROXY GROUP?**

14 A. This is not an easy answer due to the fact there were two stipulations with express
15 provisions regarding the cost of capital for this rate case and the present credit situation
16 of the company. However, a rating from BBB to BBB+ would be reasonable.

17 Kinder Morgan previously owned the utility we know as SourceGas. In 2006, Kinder
18 Morgan filed two dockets with the Wyoming Commission requesting approval to first
19 sell its utility business to General Electric and Alinda and second to become a privately
20 held company. Selling the utility to GE and Alinda was Docket 30022-84-GA-06 and
21 changing the Kinder Morgan utility operations from public to private was Docket 30022-
22 85-GA-06.

23 The first stipulation regarding cost of capital for SourceGas began with Docket 30022-
24 85-GA-06. To fully serve the public interest now, I had to go back and research the
25 public interest that was stipulated in the proceeding. I was particularly interested in the
26 Company's understanding of the stipulated agreement in addition to the credit standing of
27 Source Gas prior to any transitions. I looked to the prefiled testimony of Bentley Breland

1 to get clarity on the Company's position for the cost of capital for Source Gas at that
2 point in time:

3 **Q: WHAT IS THE PARTIES AGREEMEST AS TO A**
4 **FUTURE SHOWING REGARDING COST OF CAPITAL?**

5 A: In Section II (H) of the stipulation Source Gas Distribution has
6 agreed that in each general rate proceeding within five years following
7 the closing date of the Management Buy Out (MBO) Transaction, is will
8 include a showing that the cost of capital proposed by the Company in
9 that proceeding is no greater than that which would have been requested
10 absent the change in ownership of the utility operations. The MBO
11 stipulation also provides guidelines as to how the Company might go
12 about making this affirmative showing. The Company can impute a
13 market cost of debt assuming a minimum debt rating of (BBB+) and can
14 compute its cost of equity by using comparable companies with at least a
15 (BBB+) debt rating. In the alternative, it is deemed reasonable for the
16 Company to make this showing by having the debt necessary for the
17 utility operations issued and held at the Source Gas Distribution or
18 KMRUH level, with a rating based on utility operations.³

19 The prefiled testimony in the testimony of Bentley Breland in the Docket 30022-84-GA-
20 06 is less precise but still clear in regards to the cost of capital:

21 **Q: WHAT IS THE PARTIES' AGREEMENT AS TO A**
22 **FUTURE SHOWING REGARDING COST OF CAPITAL?**

23 A: In Section II (H) of the Sale Transaction stipulation Source Gas
24 Distribution has agreed that in its next rate case, it will include a showing
25 that the cost of capital proposed by the Company in that proceeding is no
26 greater than that which would have been requested absent the change in
27 ownership of the utility operations.⁴

³ 30022-85-GA-06 Prefiled Testimony in Support of Stipulation of Bentley Breland on Behalf of Applicants pg 9-10

⁴ 30022-84-GA-06 Prefiled Testimony in Support of Stipulation of Bentley Breland on Behalf of Applicants pg 8

1 In short, I don't believe that SourceGas filed an application with an affirmative showing
2 that its cost of capital is no more than it would have otherwise been had a change in
3 ownership not occurred as stipulated in Docket 30022-84-GA-06.

4 However there is still some value to be gained from Docket 30022-85-GA-06. Mr.
5 Breland's prefiled testimony in section II (H) are that the credit rating was at a BBB+⁵
6 preceding a change in utility operations and that the main concern for section II (H) of the
7 stipulation related to imputing a market credit rating.

8 In Docket 30022-84-GA-06, the OCA anticipated a halo effect to occur from GE being
9 an AA+ rated company. However, OCA did not want customers harmed should credit
10 conditions deteriorate. Thus the language in the 30022-84-GA-06 stipulation is not as
11 precise but still protective of consumer interests. The focus was still toward the cost of
12 capital and states:

13 *"In Section II (H) of the Sale Transaction stipulation Source Gas Distribution has*
14 *agreed in its next rate case, it will include a showing that the cost of capital*
15 *proposed by the company in that proceeding is no greater than that which would*
16 *have been requested absent the change in ownership of the utility operations."*⁶

17 After reviewing the two stipulations and the last Kinder Morgan rate case the only credit
18 rating I saw posted in the exhibits were BBB+ and BBB. I believe these ratings are
19 representative of the credit rating prior to the change of ownership of the utility
20 operations. Although I believe there is an argument to be made from the data available
21 from Docket 3022-85-GA-06 that prior to any buyout transaction the credit standing was
22 BBB+ I have erred on the side of caution and thus used a credit rating of BBB for the
23 proxy group.

⁵ It may be of use to know that a rate case was filed by Kinder Morgan around this same time frame and stipulated as well in Docket 30022-73-GR-06 in which credit ratings for comparable companies were filed from both the OCA and Dr. Moyer for proxy groups inclusive of BBB and BBB+ companies.

⁶ 30022-84-GA-06 Prefiled Testimony in Support of Stipulation of Bentley Breland on Behalf of Applicants pg 8

Docket Type	Docket	Credit Rating
Rate Case	30022-84-GA-06	Cost of capital not specified by either witness but comparable companies for both included BBB and BBB+
MBO Application	30022-85-GA-06	Next rate case cost of capital imputed as BBB+
GE Alinda Application	30022-84-GA-06	Next rate case cost of capital not worse than before buy out

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The stipulated agreement specifically stated that SourceGas would include a showing in this rate case that ratepayers would not be harmed. Yet SourceGas filed a cost of capital with a split bond credit rating of BBB-/Ba1 without any explanation of how that meets either the spirit or the letter of the earlier agreement. Any rating that includes a portion of non investment grade bonds would certainly increase the cost of capital to a degree more than would have been requested absent the change in ownership of the utility operations.

Q. ARE THERE ANY OTHER ISSUES REGARDING THE STIPULATION YOU WANT TO DISCUSS?

A. Yes. Please refer to the prefiled direct testimony of Ms. Martinez, page 5 lines 14-24. The testimony refers to a Kinder Morgan’s previous rate case. Please note the numbers stated in the testimony for Kinder Morgan (KMI) are not the numbers that resulted from the Commission Orders from the last Kinder Morgan Rate case, but rather the numbers that Kinder Morgan filed with its application in that case. The true comparison of the cost of capital previously approved by the Commission and presently before the Commission is listed below.

KMI Last Rate Case	Percentage	Cost	Weighted Cost
LT Debt	56.44	6.33%	3.57%
Common Equity	43.56	11.00%	4.79%
Overall Return			8.36%

SourceGas Current filing	Percentage	Cost	Weighted Cost
LT Debt	49.66%	6.01%	2.98%
Common Equity	50.34%	12.30%	6.19%
Overall Return			9.17%

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I would like to point out that the cost of equity and the overall cost of capital that SourceGas is seeking is greater than the level authorized in KMI's last rate case. I believe this may be in violation of Commission Order 30022-84-GA-06 paragraph 50 where it states:

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Mr. Breland testified, per Section II(H) of the Stipulation, Source Gas Distribution has agreed, in its next rate case, to include a showing that the cost of capital proposed by the Company in that proceeding is no greater than that which would have been requested if the change in ownership in utility operations had never occurred. (Tr., pp. 247-248.)

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12 **Q. HOW DID YOU BALANCE THE BOND RATINGS FOR THE PROXY**
 13 **COMPANIES IN YOUR CALCULATIONS?**

14 A. Standard & Poor's reaffirmed its rating of SourceGas' senior unsecured bonds at BBB-
 15 on June 30, 2010. The proxy group consists of AA, A, and BBB rated companies.

16 In the DCF and NCD CF models, I made a risk adjustment to each company in the proxy
 17 group that had a bond rating higher than BBB for the additional risk not present in their

1 calculations. Bonds that have a higher rating than BBB cause a downward bias on the
 2 cost of capital calculations and merit an adjustment to the calculations, which both Dr.
 3 Moyer and I have placed a risk adjustment for in our calculations. However we disagree
 4 on our approach and application to the risk adjustment mechanism.

5 The source I selected to make such an adjustment was the Corporate Bond Yield
 6 Averages for Public Utility Bonds from the Mergent Bond Record (May 2010) because it
 7 contains all the classes of public utility bonds, which represent regulated revenues, that
 8 are in my proxy group.

9 On the table below, I summarize the risk adjustment calculation. The first column lists all
 10 of the Standard & Poor's Credit investment level grades that may be in my proxy group
 11 in exhibit KMW3 and KMW4. The second column lists the equivalent Public Utility
 12 Bond rate you would need to look up on the Mergent Bond record. The last column
 13 shows the risk adjustment.

Standards & Poor's	Mergent Bond Record	Risk Adjustment
AA+	Aa	0.57%
AA		
AA-		
A+	A	0.38%
A		
A-		
BBB+	Baa	none
BBB		
BBB-		

14
 15 The Public Utility Corporate Bond Yield Average for a Baa company was 6.19%⁷, which
 16 served as the baseline for the group. The Public Utility Corporate Bond Yield Average
 17 for an Aa company was 5.62%⁸. The difference between the baseline and an Aa company

⁷ Mergent Bond Record May 2010 Pg 11

⁸ Mergent Bond Record May 2010 Pg 11

1 was 0.57%. Thus I added 0.57% to all the AA rated companies in the proxy list in the last
2 column labeled Risk Adjustment to compensate for the difference in additional risk.

3 The Public Utility Corporate Bond Yield Average for an A company was 5.81%⁹. The
4 difference between the baseline and an A company was 0.38%. Thus I added 0.38% to all
5 the A rated companies in the proxy list in the last column labeled Risk Adjustment to
6 compensate for the difference in additional risk.

7 Bonds that had a BBB rating had no risk adjustment and were calculated “as is.”

8 In the CAPM analysis, Beta provides the measure of risk between the companies.
9 Theoretically companies with a better or higher credit rating would have a lower Beta
10 than those with a lower credit rating. Beta equates risk in the Capital Asset Pricing Model
11 and therefore does not require an additional adjustment.

12 **Q. ONCE THE PROXY GROUP WAS ESTABLISHED WHAT WAS THE NEXT**
13 **STEP OF YOUR ANALYSIS?**

14 A. I conducted my analysis using the Discounted Cash Flow (DCF), Non Constant Growth
15 Discounted Cash Flow (NCDCF), and the Capital Asset Pricing Model (CAPM)
16 calculations. This combination of models maximizes the strengths and minimizes the
17 weaknesses of the calculations. Each model requires the exercise of considerable
18 judgment regarding the reasonableness of the assumptions underlying the theory and the
19 reasonableness of the proxies used to apply the method. I attempted to use all relevant
20 evidence known and available to me, in order to minimize judgmental, measurement, and
21 conceptual error.

22 The models provided a range of reasonableness that was later narrowed using informed
23 judgment related to the public interest as well as SourceGas’ financial and business risks
24 to determine the recommended cost of equity and overall rate of return.

25 **Discounted Cash Flow Model**

⁹ Mergent Bond Record May 2010 Pg 11

1 The traditional DCF calculation is a commonly used model in rate cases that assumes a
2 constant growth rate of dividends into perpetuity. One criticism of this model is that the
3 resulting cost of capital from this model is too high because the model assumes that
4 dividends grow at a constant rate year after year. Investors know that in reality no
5 investment dividend grows at a constant rate forever. However, the strength of this model
6 is that it uses analyst growth rates which empirical research supports to be the best
7 forecasts for future growth.

8 To mitigate the risk that the resulting calculation from this model may be too high due to
9 the assumption of constant growth and analysts' optimism I also included a more real
10 world version of business growth using the non-constant DCF Model. Thus the NCDCF
11 model was included to mitigate the assumptions inherent in the DCF model.

12 **Non-Constant DCF Model**

13 The NCDCF model I used provides a more realistic estimate of future growth rates by
14 incorporating two stages of growth into its calculation. Dr. Morin, an expert witness in
15 regulatory matters before numerous federal and state boards as well as a seasoned
16 consultant for several Fortune 500 corporations regarding financial management and
17 corporate litigation, explains the two-stage model:

18 *“The two-stage DCF model is based on the premise that investors expect*
19 *the growth rate for the utilities to be equal to the company-specific growth*
20 *rates for the next 5 years, (Stage 1 Growth), and to converge to an*
21 *expected steady-state long-run rate from year 6 onward (stage 2*
22 *Growth).”¹⁰*
23

24 Including the NCDCF model in my analysis tempers the results found in the traditional
25 DCF model since empirical evidence indicates that dividend growth does not occur at a
26 constant rate forever.

27 One criticism of my NCDCF model is that it is very dependent on a single data source,
28 which is the Value Line Investment Survey, for its calculation. Although it is a very
29 reliable source it is important to understand that the model is heavily dependent on this

¹⁰ Morin, Roger Dr., New Regulatory Finance (2006), p.309

1 single source of information. This issue, however is mitigated by having two other
2 calculations that use other sources in addition to Value Line Investment Survey
3 information.

4 **Capital Asset Pricing Model**

5 The final model I used was the Capital Asset Pricing Model (CAPM). The purpose of this
6 model is to provide an objective measure of risk for a regulated natural gas utility
7 company like SourceGas Distribution LLC. I selected the CAPM because the calculation
8 analyzed the regulated industry through the use of Beta. Being a regulated industry does
9 impact the return on equity. Regulated companies perform differently than companies
10 which operate in competitive markets.

11 In practice the CAPM is a refinement of the traditional risk premium method that
12 attempts to measure the risk inherent in individual securities relative to all other securities
13 on the market. As such I did not rely on the results of the traditional Risk Premium (RP)
14 model but instead considered the results of the CAPM which more accurately captures
15 the risk associated with regulated utilities.

16 Together the three calculations mentioned above provided a range of reasonableness that
17 captures risk while providing an estimated range for cost of equity that represents
18 investors' expectations.

19 20 **Q. HOW DID YOU CONDUCT YOUR DCF ANALYSIS?**

21 A. I began my analysis by examining the traditional DCF equations. The traditional annual
22 constant growth DCF calculation¹¹ is:

$$23 \quad K = D_1 / P_0 + g$$

24 Where: K = Cost of Equity

25 D₁ = Dividend in Period 1

26 P₀ = Current Stock Price

27 g = expected growth in dividends
28

¹¹ Morin, Roger Dr., New Regulatory Finance (2006), p.254

1 A key theoretical assumption of this model is that dividends will grow at a constant rate
2 in perpetuity. Thus the calculation¹² I use is:

$$3 \quad \mathbf{K} = \mathbf{D}_1 / \mathbf{P}_0 + \mathbf{g}$$

4 Where: K = Cost of Equity

5 D_1 = Dividend in Period 1 (Average of the Value Line's 2011 Dividend
6 Projections for the proxy group)

7 P_0 = Current Stock Price (Spot stock price for proxy companies on 6/15/2010
8 from the Wall Street Journal)

9 g = expected growth in dividends (Average of the 5-year earnings growth rate
10 from Value Line, Zack's, and Yahoo! Finance)

11
12 Analysts differ mainly in the approach to derive the dividend in period 1, stock price, and
13 growth for the DCF formula. As a rule, I used the Value Line analyst information when it
14 was available since there is empirical research¹³ supporting Value Line analysts' growth
15 forecasts.

17 **Approach to the elements in the calculation**

18 For the dividend in period 1, I used Value Line's 2011 Dividend Declared per Share
19 projection for the proxy companies. Because I am attempting to measure the present
20 value of investors' future return expectations the theory underpinning the DCF model
21 requires that I use the estimated dividend in the next future period rather than the current
22 dividend to derive the current dividend yield. Using the prospective dividend also
23 prevents any downward bias in the dividend yield. This is important so the cost of equity
24 is not underestimated.

25 The 2011 projected dividend per share information taken from Value Line is shown on
26 Exhibit KMW3. The data is located in column three titled: (D_1) Value Line projected

¹² Morin, Roger Dr., New Regulatory Finance (2006), p.283

¹³ Important papers include Brown, Lawrence D. and Rozeff, Michael S., The Superiority of Analyst Forecasts as Measures of Expectations: Evidence from Earnings. *Journal of Finance*, Vol. 33, No. 1, March 1978.

J. G. Cragg, J.G. and Malkiel, Burton G., The Consensus and Accuracy of Some Predictions of the Growth of Corporate Earnings. *The Journal of Finance*, Vol. 23, No. 1 (Mar., 1968), pp. 67-84.

Vander Weide, J. H., and W. T. Carleton. "Investor Growth Expectations: Analysts vs. History." *The Journal of Portfolio Management*, Spring 1988, pp. 78-82.

Lys, Thomas and Sungkyu Sohn. 1990. The association between revisions of financial analysts' earnings forecasts and security price changes. *Journal of Accounting and Economics*. 13(4): 341-363.

John C. Easterwood & Stacey R. Nutt, 1999. "Inefficiency in Analysts' Earnings Forecasts: Systematic Misreaction or Systematic Optimism?," *Journal of Finance*, American Finance Association, vol. 54(5), pages 1777-1797, October.

1 2011 Dividend Per Share. The data from that column was used as D_1 in the DCF equation
2 mentioned above for each of the companies in the proxy group in the final calculation on
3 the spreadsheet.

4 **Stock Price**

5 I used the current stock price from the June 15, 2010 Wall Street Journal website which
6 was the most current price available at the time I conducted my analysis. I believe in the
7 Efficient Market Hypothesis¹⁴ that states the most relevant stock price is the most recent
8 stock price. In my view historic share prices are irrelevant to investors' current
9 expectations and their use in the DCF model, even on an average basis, produces
10 unreliable results and violates the rule of market efficiency.¹⁵ My approach balances the
11 fact that the period used in measuring the dividend yield portion of the formula must be
12 consistent with the growth portion of the formula. The current stock price from the Wall
13 Street Journal for the proxy group is located on Exhibit KMW3 in the column titled:
14 (P_0) Stock Price WSJ 06/15/10. The data in that column was used as P_0 in the calculation
15 for each of the proxy companies in the final calculation on the spreadsheet.

16 **Growth**

17 Analysts differ in their approaches to measuring growth. There are three general
18 approaches available to measure growth: historical growth rates, analysts' forecasts and
19 sustainable growth rates. Empirical research¹⁶ appears to support analysts' growth
20 forecasts rather than historical time series forecasts, in relation to cost of capital studies,
21 even though analysts' forecasts prove to trend optimistically high over time. Thus, I used
22 analysts' forecasts for growth in the DCF calculation and sustainable growth rates in the
23 NCDCF calculation to provide a balance in my results.

24 My analysis uses the average of analysts' 5-year earnings growth forecasts' from Value
25 Line Investment Survey, Yahoo! Finance, and Zack's Investment Research. The earnings
26 growth rate was used from these sources because empirical research supports the use of

¹⁴ The Efficient Market Hypothesis, E. Fama. Efficient capital markets: a review of theory and empirical work. *Journal of Finance*, 25:383–417, 1970.

¹⁵ Morin, Roger Dr., *New Regulatory Finance* (2006), p.279 Empirical evidence: Reilly and Brown (2003)

¹⁶ Important papers include Brown and Rozeff (1978), Cragg and Malkiel (1968, 1982), Harris (1986), Vander Weide and Carleton (1988), Lys and Sohn (1990), and Easterwood and Nutt (1999)

1 earnings. Additionally it was difficult to find dividend growth rates from all the sources.
2 Furthermore, corporate dividend policies are subject to change over time.¹⁷

3 The data for the 5-year earnings growth rate was entered and averaged from Value Line,
4 Zack's, and Yahoo! Finance for the proxy group. The averaged growth is on Exhibit
5 KMW3 in the second to last column titled: (g) Average Earnings Growth. The data in that
6 column was used as 'g' in the final calculation on the spreadsheet.

7 **Results**

8 The data and the results of the calculation of the DCF model are displayed in Exhibit
9 KMW3 in the last column. The cost of equity, which results from the calculation with the
10 risk increment adjustment, was 9.21%.

11 **Q. HOW DID YOU CONDUCT YOUR NCDCF ANALYSIS?**

12 A. I began my analysis by looking at the NCDCF equation¹⁸.

$$P_0 = \frac{D_1}{1+K} + \frac{D_2}{(1+K)^2} + \dots + \frac{D_n}{(1+K)^n} + \frac{D_n(1-g)}{K-g} \times \frac{1}{(1+K)^n}$$

13 Where: K = Cost of Equity

14 D₁, D₂ . . . D_n = Expected dividends in each year

15 P₀ = Current stock price

16 g = Constant growth rate beyond year 5

17 K = required return on equity

18
19
20 Since the growth rates in the traditional annual constant growth DCF model were for 5
21 years, I elected a two-stage NCDCF calculation that incorporates a first-stage growth
22 estimate for 5 years as well. Thus, the equation for NCDCF looks like this:

$$P_0 = \frac{D_1}{1+K} + \frac{D_2}{(1+K)^2} + \dots + \frac{D_n}{(1+K)^n} + \frac{D_n(1-g)}{K-g} \times \frac{1}{(1+K)^n}$$

23
24 Where:

25 D₁, D₂, D₃, D₄, D₅ = Expected dividends in each year.

¹⁷ Board members of companies decide the dividend policy for the companies they represent and the board members change over time.

¹⁸ Morin, Roger Dr., New Regulatory Finance (2006), p.264

1 D₁ and D₅ are from the Value Line Investment Survey.
2 D₂ through D₄ are imputed from the Value Line information.
3 P₀ = Current stock price. Spot stock price for proxy companies on 6/15/2010 from
4 the Wall Street Journal.
5 g = Constant growth rate beyond year 5. The calculated retention ratio from 2015
6 multiplied by the Value Line projected Return on Equity for 2013-2015.
7 K = required return on equity

8 The purpose is to solve the equation for K, which is the required return on equity (ROE).

9 **Growth**

10 As mentioned before, there are three general approaches an analyst has available to
11 measure growth: historical growth rates, analysts' forecasts and sustainable growth rates
12 with empirical research favoring analysts' forecasts. For the sake of providing a robust
13 analysis, I chose to use sustainable growth rates in this calculation since analyst growth
14 rates were used in the DCF model. For the first stage of the model I used the sustainable
15 growth method often called the "retention ratio method" to estimate a reasonable growth
16 rate that could persist during the initial five year period. Using this method the fraction of
17 earnings expected to be retained by the company is multiplied by the expected return on
18 equity during the initial five year period to produce the annual growth rate.

19 The calculation for the sustainable growth¹⁹ is:

20
$$g = b \times r$$

21 Where: b = fraction of earnings expected to be retained

22 r = expected return on equity

23 g = future growth in earnings

24

25 **Solving future growth in earnings (g)**

26 Before starting on the NCD CF calculation 'g' had to be known and to do that required
27 calculating the retention ratios for 2011-2015. The first step for the sustainable growth
28 calculation was to determine the earnings and dividends per share for 2011 – 2015. Value
29 Line projects dividends and earnings for 2011 and 2015 in the Investment Survey. Thus
30 the implicit earnings and dividends values for years 2012-2014 were calculated by
31 spreading the difference in projected dividends per share between 2011 and 2015 evenly

¹⁹ Morin, Roger Dr., New Regulatory Finance (2006), p. 303

1 over the intervening years. The results are shown in exhibit KMW4 under the columns
2 titled: Value Line Dividend 2011, Imputed Dividend 2012, Imputed Dividend 2013, and
3 Imputed Dividend 2014, and Value Line Dividend 2015.

4 **Fraction of earnings expected to be retained (b)**

5
6 The second step was calculating the retention ratio. The analysis took the dividend per
7 share yield for a given year and divided it by the earnings per share for the same given
8 year and arrived at the retention ratios for 2011-2015. The data is on Exhibit KMW4
9 under column titles: Retention Ratio 2011, Retention Ratio 2012, Retention Ratio 2013,
10 Retention Ratio 2014, and Retention Ratio 2015. This data was used as 'b' for each of the
11 proxy companies to calculate the Sustainable Growth Rate, which has its own column on
12 Exhibit KMW4.

13 **Projected ROE (r)**

14 For the second stage of the NCD CF model I assumed that dividends would grow at a
15 constant perpetual rate beginning in 2015 and thereafter. Value Line provides the
16 projected ROE for all the proxy companies for 2015 and the data was added into exhibit
17 KMW4 under the column titled: Value Line ROE 2013-15. The 2015 ROE projection
18 functions as 'r' in the NCD CF calculation located on the third to last column on Exhibit
19 KMW4. The sustainable growth rate is then calculated by multiplying the 2015 retention
20 rate by the 2015 ROE. The results of the calculation are available in Exhibit KMW4
21 under the column titled: Sustainable Growth Rate.

22 Since 'g' has been calculated for each of the proxy companies and the data has been
23 documented under the sustainable growth rate column in Exhibit KMW4 the analysis
24 returns to the NCD CF calculation which is:

$$P_0 = \frac{D_1}{1+K} + \frac{D_2}{(1+K)^2} + \frac{D_3}{(1+K)^3} + \frac{D_4}{(1+K)^4} + \frac{D_5}{(1+K)^5} + \frac{D_5(1-g)}{K-g} \times \frac{1}{(1+K)^5}$$

25 Where: D_1, D_2, D_3, D_4, D_5 = Expected dividends in each year.

26 D_1 and D_5 are from Value Line.

27 D_2 through D_4 are imputed from the Value Line information.

28 P_0 = Current stock price. Spot stock price for proxy companies on 6/15/2010 from
29 the Wall Street Journal.
30

1 g = Constant growth rate beyond year 5. The calculated retention ratio from 2015
2 multiplied by the Value Line projected Return on Equity for 2013-2015.
3 K = required return on equity

4 D₁, D₂, D₃, D₄, D₅ were calculated during the sustainable growth equation, which
5 determined the earnings and dividends per share for 2011 – 2015. The data is on exhibit
6 KMW5 under the columns titled: Value Line DY 2011 (D₁), Imputed DY 2012 (D₂),
7 Imputed DY 2013 (D₃), and Imputed DY 2014 (D₄), and Value Line DY 2015 (D₅).

8 **Stock Price**

9 The OCA used the current stock price from the June 15, 2010 Wall Street Journal website
10 at the time of its analysis for all the same reasons mentioned when using the annual
11 constant growth version of the DCF model. The final element to enter into the equation
12 was 'g.'

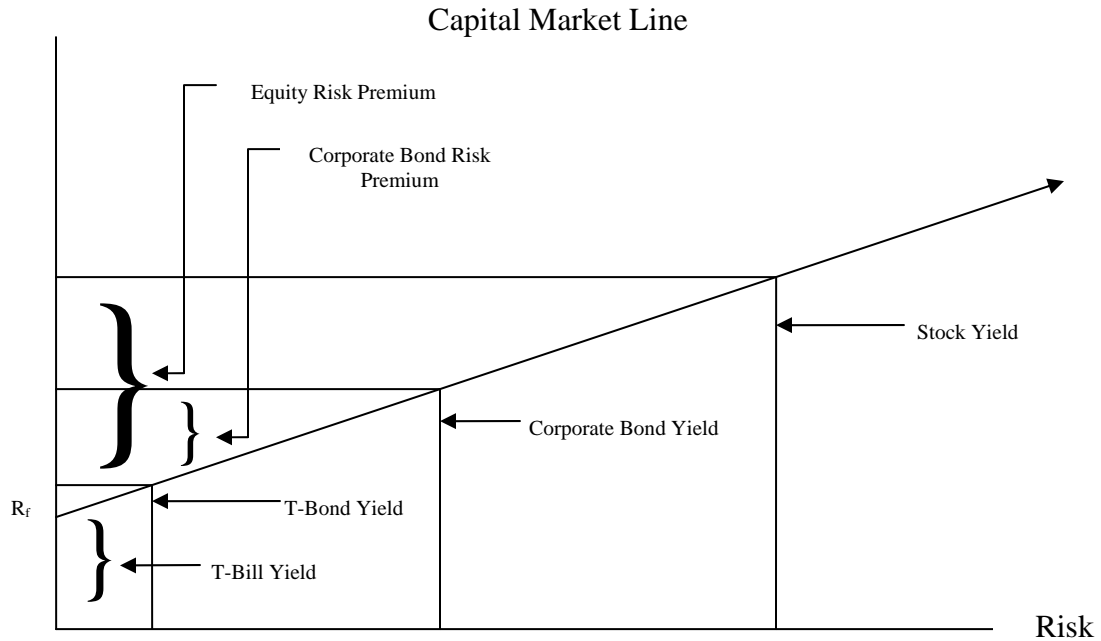
13 **Results**

14 The resulting Cost of Equity from the NCD CF model with the risk increment adjustment
15 was 8.88%. The calculation for the proxy group is detailed in Exhibit KMW4. The last
16 column shows the results of the calculation with the risk increment adjustment.

18 **Q. HOW DID YOU CONDUCT YOUR CAPM ANALYSIS?**

19 A. The CAPM is based on the premise that equity investors demand a premium in return for
20 assuming the increased risk associated with investments in corporate common stock
21 relative to less risky corporate bonds or risk free U.S. government securities.

22 In the CAPM model, historical performance of corporate stock and bond premiums in
23 relation to risk free investments such as US treasury bills and bonds establish the
24 framework of what investors expect to occur in the future.



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The return on equity for regulated utilities, which typically have a beta of less than one, will generally fall between the risk free rate and the average yield for corporate stock. Ibbotson explains the figure above as:

“The riskless asset forms the y-intercept of the security market line and represents the expected return on the asset with no systematic risk (beta equal to zero). The market portfolio by definition has a beta of one. Drawing a line that passes through the riskless asset and the market portfolio forms the security market line.”²⁰

12 My CAPM analysis looked at the current risk free premiums for US Treasury Bills and
13 Bonds as well as the current premiums for corporate bonds and stock. The purpose is to
14 determine the return on equity investors expect for the increased risk associated with a
15 regulated utility compared to risk free investments. Ibbotson explains the simplicity of
16 the model:

17 *“The historical equity risk premium can be calculated by subtracting the*
18 *long-term average of the income return on the riskless asset (Treasuries)*

²⁰ Ibbotson SBI 2008 Valuation Yearbook p.58

1 *from the long-term average stock market return (measured over the same*
2 *period as that of the riskless asset).”²¹*
3

4 The CAPM calculation²² is:

$$K = R_F + \beta (ERP)$$

5 Where: K = Cost of Equity
6 R_F = Risk Free Rate
7 β = Beta
8 ERP = Expected Risk Premium
9

10 **Risk free rate**

11 The Risk Free Rate, R_F , in my analysis consists of 3 elements: short-term risk free rate,
12 long-term risk free rate, and corporate risk free rate. I used the U.S. 1-month Treasury
13 Bill taken from the Wall Street Journal on June 16, 2010 for the short-term risk free rate
14 of 0.05%, U.S. 30-year Treasury Bond taken from the Wall Street Journal on June 16,
15 2010 for the long-term risk free rate of 4.18%, and The Wall Street Journal U.S
16 Corporate Long Term Bond Yield Averages²³ for the corporate risk free rate of 5.82%.
17 These rates are listed on Exhibit KMW5 under the columns titled: ST Risk Free Rate (US
18 1 month Treasury Bill 06/16/10 WSJ), LT Risk Free Rate (US 30-year Bond 06/16/10
19 WSJ), and Corp Risk Free Rate (Corp Risk Free Rate (WSJ 7/1/2010 website). The data
20 in those columns were used as R_F in the calculation for each of the proxy companies in
21 the final 3 columns of Exhibit KMW5.

22 **Beta**

23 Beta, β , is available in the Value Line publication for each of the proxy companies. Beta
24 is the piece of the equation that brings in the regulatory factor into the calculation. Beta is
25 calculated for every company in the Value Line Investment Survey. Regulated utilities
26 have a beta that is typically under the value of one. The number one represents the beta of
27 the market as a whole. The average beta for the proxy group was 0.7.

²¹ Ibbotson SBBI 2008 Valuation Yearbook p.71

²² Ibbotson SBBI 208 Valuation Yearbook p.58

²³ WSJ online Corporate Bond Yield Averages online.wsj.com July 1, 2010

1 The degree to which the share price of a specific company co-varies with variations in the
2 share prices of the overall market is defined as its beta. The closer the beta is to one the
3 more the share price of the company varies in tandem with average share prices for the
4 market in total. Conversely, shares with beta coefficients more or less than one are said to
5 vary more or less than the market in general. Data for beta is compiled in Exhibit KMW5
6 under the column titled: Value Line Beta.

7 **Difference between the market risk premium and the risk free rate**

8 The last portion of the calculation stated as **(ERP)** consists of three elements: short-term
9 equity risk rate, long-term equity risk rate, and corporate equity risk rate. An analyst
10 must decide to use the Arithmetic Mean or the Geometric Mean for the element.

11 I was purposeful when selecting the Arithmetic Mean for ERP. The Arithmetic Mean
12 represents the simple difference between the stock market returns and the riskless rates
13 which is the most appropriate for discounting future cash flows. Since the purpose was to
14 calculate the future equity risk premium, I selected the Arithmetic Mean. Ibbotson
15 supported this decision by stating:

16 *“The geometric average is more appropriate for reporting past*
17 *performance, since it represents the compound average*
18 *return.”²⁴(Ibbotson)*

19 **Short-term equity risk premium**

20 The short-term equity risk premium was calculated using information from Ibbotson
21 SBBI in the 2010 Valuation Yearbook.²⁵ I took the Arithmetic Mean of the Large
22 Company Stocks Total Returns (11.8%) and subtracted the Arithmetic Mean for the
23 Treasury Bills Total Returns (3.7%) to arrive at the Short-Term Equity Risk Premium of
24 8.1%. The data is on Exhibit KMW5 under the column titled: Ibbotson ST Equity Risk
25 Premium.
26

27 **Long-term equity risk premium**

²⁴ Ibbotson SBBI 2008 Valuation Yearbook p.77

²⁵ Ibbotson SBBI 2010 Valuation Yearbook p.23

1 The long-term equity risk premium was calculated using information from Ibbotson
2 SBBI in the 2010 Valuation Yearbook.²⁶ I took the Arithmetic Mean of the Large
3 Company Stocks Total Returns (11.8%) and subtracted the Arithmetic Mean for the
4 Income of the Long-Term Government Bonds (5.2%) to arrive at the Long-Term Equity
5 Risk Premium of 6.6%. The data is on Exhibit KMW5 under the column titled: Ibbotson
6 LT Equity Risk Premium.

7 **Corporate equity risk premium**

8 The corporate equity risk premium was calculated using information from Ibbotson SBBI
9 in the 2010 Valuation Yearbook.²⁷ I took the Arithmetic Mean of the Large Company
10 Stocks Total Returns (11.8%) and subtracted the Arithmetic Mean for the Long-Term
11 Corporate Bonds Total Returns (6.2%) to arrive at the Corporate Equity Risk Premium of
12 5.6%. The data is on Exhibit KMW5 under the column titled: Corp Equity Risk Premium.

13 The CAPM equations, with the Ibbotson data that I used for the CAPM are:

14 **Short Term CAPM $K = R_F + \beta$ (8.1%)**

15 **Long Term CAPM $K = R_F + \beta$ (6.6%)**

16 **Corporate CAPM $K = R_F + \beta$ (5.6%)**

17 **Results**

18 The results of my analysis are detailed in the last three columns of Exhibit KMW5. The
19 Long Term Cost of Equity and the Corporate Cost of Equity that resulted from the
20 CAPM Model were 8.90% - 9.82%. The short term CAPM was 5.84% and provided a
21 benchmark for reasonableness when looking at SourceGas' cost of short term debt in its
22 capital structure in Ms.Martinez's testimony.

23 **Summary**

24 The OCA attempted to use all relevant evidence known and available, in order to
25 minimize judgmental, measurement, and conceptual error. The Cost of Common Equity

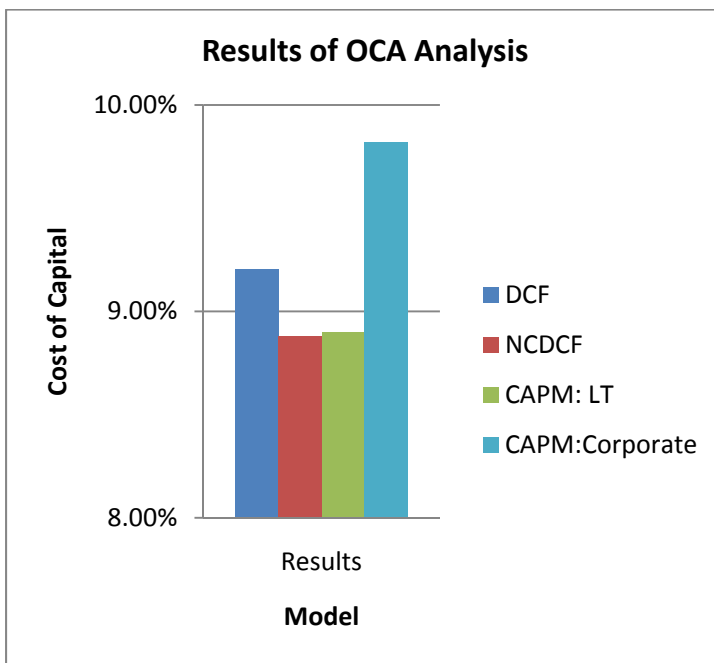
²⁶ Ibbotson SBBI 2010 Valuation Yearbook p.23

²⁷ Ibbotson SBBI 2010 Valuation Yearbook p.23

1 was determined using 3 calculations and informed judgment. The summary of the results
2 is indicated in the tables below:

OCA Calculations				
Models	Average	Median	Min	Max
DCF	9.21%	9.25%	8.48%	10.31%
NCD CF	8.88%	8.80%	8.36%	9.63%
CAPM: LT	8.90%	9.13%	8.14%	9.79%
CAPM: ST	5.84%	6.13%	4.91%	6.94%
CAPM: Corporate	9.82%	10.39%	9.55%	10.95%

3



4

5

6 **YOU HAVE ESTABLISHED A RANGE OF 8.88% - 9.82% FOR THE COST OF**
7 **EQUITY USING ALL THREE METHODS. WHAT DID YOUR ANALYSIS**
8 **LOOK AT NEXT?**

9 A. Once my calculations were complete, I looked at the macroeconomic, financial, and
10 business risks facing the SourceGas Distribution LLC.

11

1 **Q. WHY ARE FINANCIAL, MACRO, AND BUSINESS RISKS IMPORTANT?**

2 A. Macroeconomic, financial, and business risk all contribute different factors to the scale of
3 risk. Macroeconomic conditions impact the industry as a whole and cannot be controlled
4 by the company but can influence the credit markets and risk premiums that are
5 demanded by investors.

6 Financial risk is measured by the capital structure of the company. Risk is measured by
7 the company's ability to attract capital as well as its ability to react to changes in the
8 market. Thus a company's credit rating plays a significant role in its financial stability.

9 Business risk is the assurance that the company has adequate cash flow to meet its
10 expenses. Clear strategic direction with effective business processes and policies that
11 secure revenue and kept costs down mitigate risks in this arena.

12 **Q. WHAT WERE THE MACROECONOMIC CONDITIONS YOU**
13 **INVESTIGATED?**

14 A. Knowing the U.S. economy is currently in a recession, I focused my research on credit
15 spreads the labor market and gross domestic product to understand the impact those
16 issues were having on the cost of capital.

17
18 **Q. WHAT ARE THE CURRENT CREDIT SPREADS?**

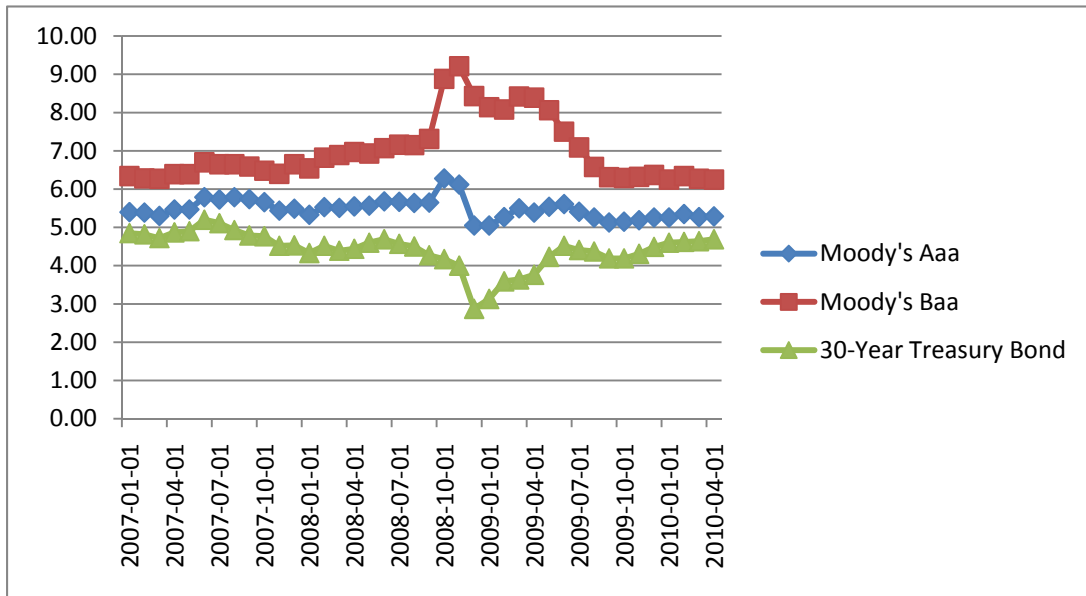
19 A. The graph below, titled Credit Spreads vs. 30-Year Treasury Yield, details the credit
20 spread information for Aaa and Baa rated companies in comparison to the 30-Year
21 Treasury Bond yield. The data for the graph was taken from the Federal Reserve of St.
22 Louis website with the most current information available for download as of July 2,
23 2010.²⁸ Please keep in mind that utilities perform under the market value and that the
24 graph below represents the Aaa and Baa yields of the market. However the peaks and
25 troughs of the market which appear in the graph below impact the utility industry in the
26 same way.

27

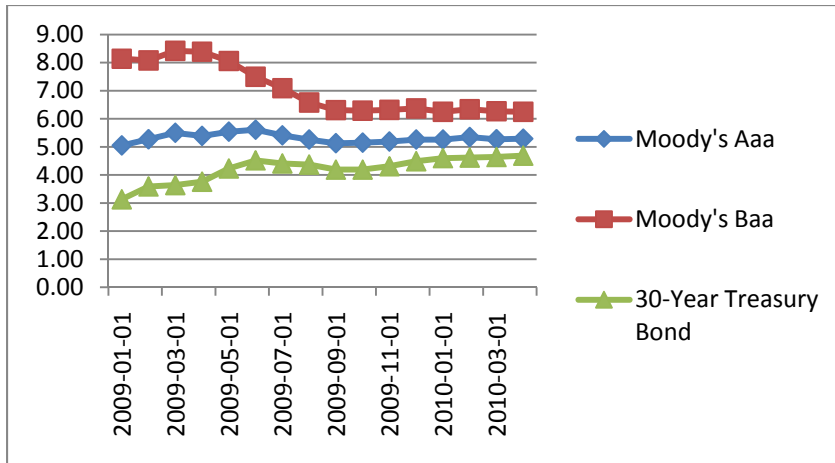
²⁸ <http://www.stlouisfed.org/>

1 **Corporate Bond Yields Vs 30 Year Bond Yields**

2 Credit spreads continued to contract throughout 2010. The narrowing of credit spreads
3 signals an increase in investor confidence in the market. The gap between Baa credit
4 spreads and the 30-year Treasury yield has significantly narrowed since the catastrophic
5 market conditions experienced in 2008. The wider the gap appears on the graph, the
6 more investors expect a premium for the threat of enhanced risk they perceive for that
7 grade of investment.



8 The interesting insight from the graph is to see that the fluctuations which occurred in
9 late 2008 have leveled out. I've created a second look at the same data in the graph below
10 so you can really see how the tail of the graph is leveling out and the credit spreads are
11 narrowing. The narrowing of the gap reveals that the market stabilized and that credit
12 spreads have decreased.
13



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The graph illustrates that investors expect less of a premium on corporate debt when compared to government debt. Another insight gained from this graph is that the credit spread between corporate Aaa bonds and Baa bonds is less than 100 basis points.

5

6

At this time, there is not an excessive risk in these securities and the premiums are average.

7

8

Q. WHAT IS THE CURRENT CONDITION OF THE UNEMPLOYMENT AND GDP?

9

10

11

12

13

14

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16

A. The Bureau of Labor Statistics (BLS) website reports that the seasonally adjusted unemployment rate for June 2010 was 9.5%. That is a decrease from the 9.7% in May but a relatively flat change from the overall rate for the 2010 year which has averaged 9.7%.²⁹ The troubling point is that the unemployment rate in the United States remains higher than the historical norms which typically range around 3-5%. Growth in the economy is not happening as quickly as many projected. I wanted to see if the continual high unemployment numbers meant that the growth in the Gross Domestic Product (GDP) was slowing as well.

17

18

19

The U.S Department of Commerce Bureau of Economic Analysis (BEA) website had annual Gross Domestic Product growth data available through 2009. The 2009 data was interesting. The 2009 annual data revealed a -2.4% GDP. The recession facing the U.S. is

²⁹ http://data.bls.gov/PDQ/servlet/SurveyOutputServlet?data_tool=latest_numbers&series_id=LNS14000000

1 not going to pass us as quickly as some had hoped. With the information available, I
2 could trend the GDP annual data that showed:

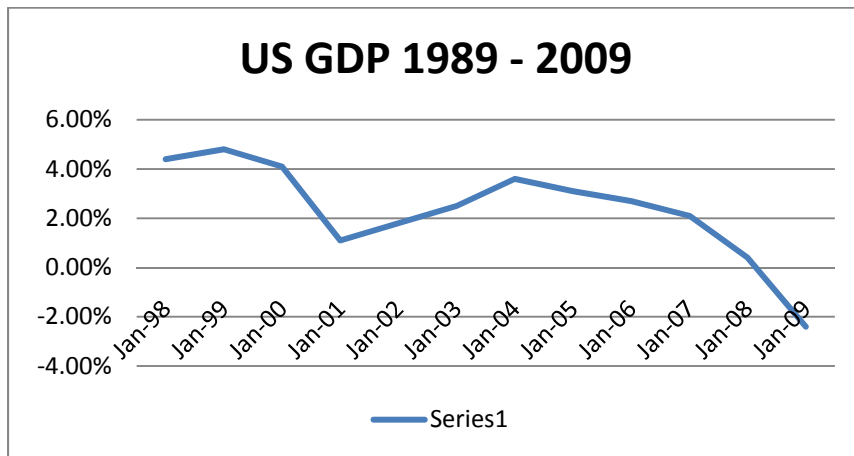
3 GDP 30-year average: 2.7%

4 GDP 20-year average: 2.6%

5 GDP 10-year average: 1.9%

6 GDP 5-year average: 1.2%

7 The graph below tracks the US GDP for the past 10 years. The trend seems to be
8 downward as 2009 ended.



9
10 **Q. WHY ARE THE LABOR MARKET AND GDP SIGNIFICANT?**

11 A. The labor market is a condition that signals positive or negative economic conditions.
12 When the labor market is growing, that can signal prosperity and growth of the economy.
13 However, when unemployment is high and the labor market is shrinking or stagnant this
14 can signal minimal growth of the economy. Slow growth can indicate less investments or
15 a slower need for investments. Less investment opportunities can translate into less
16 competition and potentially lower premiums required by the market.

17
18 **Q. WHAT ARE THE FINACIAL RISKS?**

19 A. Financial risk is the amount of debt the company uses to finance its operations. My first
20 concern was the corporate structure of the company. I agree with Ms. Martinez's cost of

1 capital categories shown in her Exhibit 3 Schedule 12. I believe that the capital structure
2 she filed in this Docket is the correct capital structure to review when considering the
3 cost of capital for Source Gas Distribution LLC.

4 I was satisfied to find that SourceGas Distribution LLC, the utility operations itself, is
5 within the realm of reasonableness with a capital structure of 50% long term debt and
6 50% equity. The proxy group had an average debt to equity ratio of 46% to 54%. The fact
7 that SourceGas' capital structure is within 4% of the proxy groups does not create
8 unnecessary concern. However, the 4% deviation from the proxy group is notable
9 regarding the company's leverage and need for liquidity when reviewing its business risk.
10 The company is choosing to be more leveraged than its counterparts.

11 SourceGas is aware of its need to increase its equity. It revealed that rate cases and
12 increasing internal efficiency are the strategic plans it has to increase equity moving
13 forward. The synergies from the acquisitions, such as the integrated billing system, have
14 not been fully realized. However, the company is hopeful that there is still room for
15 efficiencies in its internal processes to be realized in the near future.

16 SourceGas has passed up other opportunities, to increase the proportion of equity. When
17 SourceGas sold its international subsidiaries in Mexico, the net proceeds of \$9.5 million
18 were not retained. Moody's last credit rating report stated that \$9 million of the proceeds
19 were distributed to Sourcegas shareholders.³⁰

20 **Q. WHAT CAN SOURCEGAS DO TO IMPROVE ITS FINANCIAL STABILITY?**

21 A. Moody's was generous in stating how SourceGas could improve its rating moving
22 forward and it is worth noting here:

23 *Moody's acknowledges SourceGas' rate case strategy of pursuing*
24 *the implementation of regulatory mechanisms to insulate the*
25 *subsidiaries' financial performance from lower usage associated*
26 *with reductions in the customer base or efficiency programs while*
27 *also seeking rate designs that allow the subsidiaries to collect a*

³⁰ Moody's Credit Report on Source Gas LLC June 28, 2010

1 *larger portion of their revenues through fixed monthly customer*
2 *charges reducing its exposure to volumetric charges. Currently*
3 *fixed charges account for at least 35% of the revenues*
4 *generated in each of the jurisdictions.*³¹

5 The OCA agrees that all customers should pay their own way and that no customer class
6 should subsidize another class. Our goal is to bring all classes as close to the cost to serve
7 them as possible with the rate design created by Ms. Zamora

8 The OCA has proposed a straight fixed variable rate design that wraps 65% of the fixed
9 cost into the customer charge. As the Moody's report points out, doing so increases the
10 customer charge that typically only included 35% of the fixed costs included in the
11 customer charge with the rest of the fixed costs wrapped in the volumetric rate. Placing
12 65% of the fixed charge in the monthly customer charge drastically improves the much
13 needed cash flow to the company and removes the seasonality from the cash flow.

14 In addition, the OCA also supports a weather normalization adjustment to the test year as
15 well as including the energy efficiency budget as part of the revenue requirement. These
16 two elements further fuel the cash flow which strengthens the company's financial
17 standing as long as the parents of SourceGas do not distribute the equity. All these factors
18 should be looked upon favorably by the credit rating agencies.

19 There is a sense of urgency to improving the credit rating of the company, which make
20 me tend toward the high side of the financial risk scale. I am concerned that there are two
21 large pieces of debt that will need to be refinanced within the next 3 years. Although the
22 debt is at the holding company level it is completely reliant on the utility operations in
23 order to be serviced. SourceGas needs to remain financially stable to ensure reasonable
24 rates on the debt. SourceGas is on the right track to improve its credit situation, but one
25 market catastrophe could derail its progress.

26 It is no secret that SourceGas has some pretty powerful parents, which makes me slide
27 back toward the medium range of the financial risk scale. GE Capital Business, an AA+

³¹ OCA Data Request 1.8 Response Moody's Credit Opinion

1 rate company is one of the parent companies involved. It is *really* difficult to imagine that
2 GE would let this company fail. GE Capital Business is a AA+ rated company. The
3 parent companies, GE and Alinda, have not been forced to infuse capital into SourceGas
4 because it has maintained investment grade status to date. In fact, the parent entities were
5 still taking distributions from the SourceGas Holdings LLC as recently as May 21, 2010.
6 Thus, I do not see the financial situation as dire at this time although it is getting
7 uncomfortable.

8 I give the company a rating of medium high for financial risk in this category at this time.
9 The medium high rating is not so much due to its leverage at the utility level as it is due
10 to its credit rating status.

11 **Q. WHAT ARE THE BUSINESS RISKS?**

12 A. Business risk is tied to the management of the company and the consumer classes it
13 supports. Good policies and procedures should mitigate risk by assuring revenue flows as
14 much as possible. A large part of a utility's risk is expenses. The policies and procedures
15 a company has in place to recover expenses that are volatile greatly define the company's
16 business risk.

17 Source Gas' Wyoming Customers are 68% Small General Service, which are mainly
18 residential, 18% Medium General Service and 14 % Large General Service. Generally
19 having a larger residential to commercial ratio reduces risk to a utility as the residential
20 energy usage is less volatile than medium and large general service customers.

21 I've looked into the company's deposit, disconnect, and new service policies which tend
22 to be biggest expenses to the company and thus pose the most exposure to monetary risk.
23 The company follows the standard Public Service Commission Rules of Wyoming Rules
24 241- 243 in regards to the policies mentioned above and the company has several fees in
25 place to protect the business from any risk involved from such activity. Thus the
26 company's current fee schedule adequately protects itself from any monetary risk these
27 activities could impose.

1 With all these positive policies and procedures, SourceGas is plagued by processes and
2 quality challenges. This is evident by the costly billing issues that surfaced in 2007 with
3 the PEACE system and continued for years. When the new Customer Support Center
4 came on board in October 2009 there were still troubles answering calls in a timely
5 manner which finally got under control months later. Billing, customer support, and
6 payment problems all impact revenue and cash flows which negatively impact the
7 business and enhance business risk.

8 SourceGas is moving forward. I would assume the financial situation fueled by the
9 current business situation fueled the company's decisions to replace its CEO, CFO, and
10 Senior VP of Regulatory Affairs. In addition, SourceGas has an aggressive acquisition
11 strategy which has been identified as a contributor to its credit rating by both S&P and
12 Moody's. All these factors heighten the uncertainty for the company and increase its
13 business risk.

14 SourceGas' biggest risk remains its business risk as I look into the future of this
15 company. Containing the costs and establishing a reliable revenue stream is the key to
16 success for this company. The straight fixed variable rate design that will be mentioned in
17 Ms. Zamora's testimony coupled with the company's current policies should assist the
18 cash flow needs of this company. However, the company needs to take aggressive
19 measures in assuring the quality and integrity of its payment and billing system in order
20 to move forward. Thus, I rate Source Gas as high on the business risk scale at this time.

21 **Q. NOW THAT YOU HAVE REVIEWED ALL THE RISKS WHAT IS YOUR**
22 **RECOMMENDATION FOR THE COST OF EQUITY?**

23
24 A. Based on the analysis and evidence that I presented in my testimony it is my judgment
25 that a fair and reasonable return for SourceGas should fall in the top quadrant of my
26 range of reasonable returns. My recommendation for the cost of equity is 9.6% which
27 results in a rate of return of 7.8%.

28
29 I believe that the return rates are just, reasonable, and uphold the public interest.
30 Although my proposed rate of return is lower than that proposed by the company that

1 does not make it unreasonable. Determining just and reasonable rates requires balancing
2 both consumer and investor interests.

3 The OCA approaches the analysis from the perspective of what is in the interest of
4 Wyoming consumers while recognizing that keeping the company viable is in the
5 consumers' best interests as well.

6 Specific to the Rate of Return Hope states:

7 *“Rates which enable the company to operate successfully, to maintain its*
8 *financial integrity, to attract capital, and to compensate its investors for*
9 *the risks assumed certainly cannot be condemned as invalid, even though*
10 *they might produce only a meager return on the so-called ‘fair value’ rate*
11 *base.”*³² – Hope (10-12)

12
13 What the company is entitled to ask is a fair return upon the value of that which it
14 employs for public convenience.³³

15
16 **Q. WHAT ARE YOUR OBSERVATIONS REGARDING THE COMPANY'S**
17 **PROPOSED COST OF CAPITAL IN THIS CASE?**

18
19 A. The OCA's approach and Dr. Moyer's are similar using two DCF models and a CAPM.
20 The major difference is the risk adjustment. Both the approach to the risk adjustment and
21 the application of the risk adjustment are very different between the analysts.

22 **Risk Adjustment**

23 Dr. Moyer's risk adjustment was a straight 2.65% (265 basis points) that was applied to
24 the overall calculations regardless of the bond ratings involved.

25 My first disagreement with the 2.65% is how it was derived. I've looked at the source
26 page 3141 Value Line Selection & Opinion Page December 25, 2009 and the rate
27 displayed for Utility (25/30 year) A is 5.74 rather than the 5.85 stated in Dr. Moyer's
28 testimony.

³² Federal Power Commission vs. Hope Natural Gas Co., 320 U.S. 591 (1944)

³³ Smyth v. Ames, 169 U.S. 466 (1898)

1 I also disagree with how Dr. Moyer applied the risk adjustment to the models. First, only
2 the DCF models measure credit risk in a way that would require a risk adjustment. Beta
3 equates risk in the Capital Asset Pricing Model and therefore does not require an
4 additional adjustment. I disagree with Dr. Moyer in that he adds a risk adjustment to his
5 CAPM analysis.

6 Second, in the DCF models all the companies have varying bond ratings. Due to the
7 varying ratings the risk adjustment should also be applied in varying degrees otherwise
8 you will overstate the results of the risk adjustment.

9 The application of the risk adjustment is an important factor. My method applied the risk
10 adjustment on a company specific basis. My method only compensated for the risk
11 differential in the bond rating where it was necessary and only by the additional
12 increment merited.

13 I also disagree that 265 basis points was the correct amount for a risk adjustment in this
14 case. I do not believe that the split bond rating of BBB-/Ba1 that Dr. Moyer used was the
15 correct bond rating to apply in light of the stipulated agreement in Docket 30022-84-GA-
16 06.

17 **DCF Model**

18 I had one issue with Dr. Moyer's DCF model. The issue is that an analyst has the choice
19 to use the current dividend (2009) or the next period dividend (2010) in the DCF
20 calculation. In reviewing Exhibit RCM-4 I see that Dr. Moyer stated he would use the
21 current dividend rate which would be 2009 dividend. Reviewing the Value Line
22 supporting data included in Exhibit RCM-2 I do not see that he used 2009 data
23 consistently on Exhibit RCM-4 as detailed in the table below.

24

Company Name	Dr. Moyer Dividend	VL 2009 Dividend
AGL	1.72	1.72

Atoms Energy	1.34	1.32
Laclede	1.54	1.53
N J Resources	1.36	1.24
NICOR	1.86	1.86
NiSource	0.92	0.92
NWNG	1.66	1.60
Piedmont	1.08	1.07
SJ Industries	1.22	1.22
SW Gas	0.95	0.95
UGI	0.80	0.79
WGL	1.48	1.47

1

2 **Q. WHAT IS THE PURPOSE OF REVIEWING THE COMPANY REVENUES IN**
3 **THIS DOCKET?**

4 A. From September 2007 to August 2009, SourceGas had a billing system called PEACE.
5 From August 2009 to present, SourceGas moved to a billing system called SAP. The
6 PEACE system had several technical issues, but the one that will be of focus in my
7 testimony concerns a database and a corrupted table.

8 Due to the extensive billing problems with the PEACE billing system, there was
9 legitimate concern by the OCA that the prior billing data would influence the historical
10 revenue numbers submitted by the company to the detriment of Wyoming customers. The
11 OCA conducted an investigation into the revenue numbers to understand how the
12 Company compensated for the corrupted billing files that tracked customer usage in order

1 to give a clean historical accounting for its revenues in its application. My testimony
2 below indicates the findings for that investigation.

3 **Q. WHAT WAS YOUR FINDING FROM YOUR INVESTIGATION?**

4 A. I found that the revenues submitted in the company's filed case were reasonable if not on
5 the conservative side. I found the revenues to be fair and to be in the public interest.

6 **Q. HOW IS SOURCEGAS BILLING DATA GENERATED?**

7 A. There are three layers of information in the data system. They are tied together by three
8 tables: meters, rates, and billing. I will start by describing the first layer, which is the
9 meter data layer. SourceGas assigns a premise ID for every meter on its system. To
10 generalize there are two groups of meters. Group A is on the Automated Meter Reading
11 (AMR) system and read every 30 days. Group B is on the EFM system which is already
12 computerized and usage information is uploaded daily. For my investigation, I
13 concentrated on Group A's data since had to be filtered through various systems. Every
14 meter is assigned a premise ID. Usage information is tracked daily by the premise ID
15 even though the data isn't downloaded until its scheduled time and date.

16 The rate layer is the second step the data must filter through in order to produce a bill.
17 The system looks at the premise ID in the meter table then assigns the corresponding rate
18 to the customer. The transportation and distribution rates charged to customers vary
19 depending on the customer class and location within the state. The company assured me
20 that this table did not experience any corruption problems during the PEACE billing
21 issues.

22 The third layer is the billing data system which is more complex. The billing system
23 uploads all the AMR information, converts premise ids to billing accounts, and CCFs to
24 therms while consolidating all the customer information and usage into a bill. The billing
25 table is the layer that had the corruption occurs in the PEACE billing system.

26 **Q. WHAT DID SOURCEGAS USE TO GET USAGE AND REVENUES FOR ITS**
27 **TEST YEAR?**

1 A. The Company took the raw data from the AMR that showed the daily usage from
2 September 01, 2007 through August 2009, and updated the Rate ID and Consumption
3 Type (Choice Program) with January 2010 information to produce the test year schedules
4 shown as Exhibit 3 Schedules 21 and 22.

5 **Q. DID THE COMPANY’S APPROACH SEEM A REASONABLE TO THE OCA?**

6 A. Yes, the company’s approach did seem reasonable; however the OCA did want some
7 reassurance. The OCA asked the company to take data samples from the raw meter data
8 and ensure that it does sync with the revenues that resulted. The company said it was too
9 labor intensive to do any data sampling that would produce anything of statistical
10 significance. However the company agreed to give us a sample of 10 raw data feeds to
11 sync up with revenues in the hope of instilling our confidence in the credibility of the
12 methodology used.

13 **Q. DID THE RAW DATA USAGE MATCH THE REVENUES WHEN IT WAS PUT**
14 **THROUGH THE TEST YEAR METHODOLOGY USED BY THE COMPANY?**

15 A. Yes. I was able to sync up the raw data from the AMR table with the billing table for the
16 10 random data feeds the company shared with me. Although this was a small sample
17 size, I believe I vetted this issue with the time and resources available for this issue. I
18 recommend accepting the revenues the company is proposing in its application at this
19 time as correct, without adjustment.

20 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

21 A. Yes.

22