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# BY HAND DELIVERY

May 4, 2007

BRYAN-CAVE

Cully Dale Secretary/Chief Administrative Law Judge Missouri Public Service Commission 200 Madison Street Jefferson City, MO 65101

FILED<sup>2</sup>

MAY 0 4 2007

# Missouri Public Service Commission

RE: Case No. GR-2007-0208

Dear Judge Dale:

Attached for filing on behalf of the Missouri Industrial Energy Consumers are an original and eight (8) copies of the Direct Testimony of Michael Gorman in the above-referenced case.

Thank you for your assistance in bringing this filing to the attention of the Commission.

Very truly yours,

Diana Vinglateke

Diana M. Vuylsteke DMV:ln

Attachments cc: All Parties Tel (573) 556-6620 Fax (573) 556-6630 www.bryancave.com

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	Exhibit No.: Witness: Type of Exhibit: Issue: Sponsoring Parties: Case No.:	Michael Gorman Direct Testimony Return on Equity, Rate of Return Missouri Industrial Energy Consumers GR-2007-0208	
	THE PUBLIC SERVICE ( OF THE STATE OF MISS		
In the Matter of Lacl Tariff to Revise Natu Schedules		Case No. GR-2007-0208	
	Direct Testimony of	MAY 0 4 2007	
	Michael Gorman	Missourl Public Service Commission	
	On Behalf of		
Missouri Industrial Energy Consumers			
	May 4, 2007		
	Project 8750		
	BRUBAKER & ASSOCIATES, IN ST. LOUIS, MO 63141-2000	C.	

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# BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

)

In the Matter of Laclede Gas Company's Tariff to Revise Natural Gas Rate Schedules

Case No. GR-2007-0208

STATE OF MISSOURI ) ) SS COUNTY OF ST. LOUIS )

# Affidavit of Michael Gorman

Michael Gorman, being first duly sworn, on his oath states:

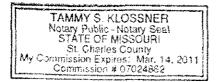
1. My name is Michael Gorman. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 1215 Fern Ridge Parkway. Suite 208, St. Louis, Missouri 63141-2000. We have been retained by the Missouri Industrial Energy Consumers in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes are my direct testimony and schedules, which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. GR-2007-0208.

3. I hereby swear and affirm that the testimony and schedules are true and correct and that they show the matters and things they purport to show.

Michael Gorman

Subscribed and sworn to before me this 3rd day of May, 2007



Notary Public

# BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

In the Matter of Laclede Gas Company's Tariff to Revise Natural Gas Rate Schedules

Case No. GR-2007-0208

# **Direct Testimony of Michael Gorman**

# 1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

- 2 A My name is Michael Gorman and my business address is 1215 Fern Ridge Parkway,
- 3 Suite 208, St. Louis, MO 63141-2000.

# 4 Q WHAT IS YOUR OCCUPATION?

- 5 A I am an energy advisor and a consultant in the field of public utility regulation and a
- 6 managing principal in the firm of BAI (Brubaker & Associates, Inc.).

# 7 Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPER-

- 8 IENCE.
- 9 A These are set forth in Appendix A to my testimony.

# 10 Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

- 11 A I am appearing on behalf of the Missouri Industrial Energy Consumers (MIEC).
- Member companies purchase substantial amounts of gas from Laclede Gas
  Company (Laclede or Company).

# 1 Summary

# 2 Q WHAT IS THE SUBJECT OF YOUR TESTIMONY?

- 3 A In my testimony, I make the following recommendations:
- 4 5

- A fair return on common equity and overall rate of return, and
- Treatment of off-system sales and capacity release revenue.

# 6 Q PLEASE SUMMARIZE YOUR RATE OF RETURN RECOMMENDATIONS.

7 A I recommend the Commission award Laclede a return on common equity of 9.8%.
8 My recommended return on equity for Laclede is based on a Discounted Cash Flow
9 (DCF), Risk Premium (RP), and Capital Asset Pricing Model (CAPM) analyses.
10 These analyses estimate a fair return on equity based on observable market
11 information for a group of publicly traded risk proxy gas utility companies.

12 I recommend including the balance of short-term debt in excess of 13 Construction Work in Progress in the capital structure used to develop Laclede's 14 overall rate of return in this proceeding. The overall rate of return using this capital 15 structure should be applied to permanent investments included in rate base, and 16 permanent working capital requirements recovered through the purchase gas 17 adjustment mechanism as proposed by Laclede in this proceeding.

18 I also show that my recommended return on equity and Laclede's proposed 19 capital structure will provide adequate earnings to support Laclede's current single 20 "A" investment grade bond rating from Standard & Poor's (S&P). Consequently, my 21 proposed return on common equity is not only compensatory for the inherent 22 investment risk of Laclede, but also is adequate to maintain Laclede's bond rating 23 and financial integrity. These factors ensure that Laclede could be able to attract 24 capital to make needed investments in utility plant while fairly compensating investors 25 for capital deployed in Laclede.

# 1 Q PLEASE SUMMARIZE YOUR POSITION CONCERNING OFF-SYSTEM SALES

# 2 AND CAPACITY RELEASE REVENUE.

- 3 A My recommendation is summarized as follows:
- I recommend rejection of Laclede's proposal to remove all off-system sales and capacity release revenues net of costs from base rates. The Company's proposal is a change to the imputation of net revenue from off-system sales and capacity release adopted in the settlement in Case No. GR-2005-0284.
- 8 2. I believe the Company's proposal in this case is unreasonable and unnecessarily
  9 inflates the claimed base rate revenue deficiency in this case, and provides
  10 Laclede with an opportunity to earn a return on equity far in excess of a
  11 reasonable return.
- I recommend the current practice of imputing a revenue credit for off-system sales and capacity release should continue to be done in developing base rates in this case.
- 4. I recommend including a \$12 million off-system sales and capacity release net revenue imputation in Laclede's cost of service in this case.

# 17 Q PLEASE SUMMARIZE LACLEDE'S CURRENT CREDIT STANDING.

- 18 A Laclede Gas Company has a bond rating of "A" from Standard & Poor's and "A3" from
- 19 Moody's. Standard & Poor's ranks Laclede Gas Company's business profile score
- 20 and its parent company, Laclede Group, at a rating of 3. S&P's business profile
- 21 score ranges from 1, lowest risk to 10, highest risk. Laclede Gas Company and its
- 22 parent company's business profile score represents average utility operating risk with
- a business profile score of 3.
- 24 Assessing Laclede Group's ratings, S&P stated as follows:
- 25 The ratings on Laclede Gas Co., the main subsidiary of The Laclede 26 Group Inc. (LG), are based on the consolidated financial and business 27 risk profiles of the LG family of companies. Through its subsidiaries, 28 St. Louis, Mo.-based LG is involved principally in natural gas 29 distribution and to a much lesser extent in certain unregulated 30 businesses, including underground facility locating and marking 31 services, as well as unregulated natural gas marketing efforts and 32 Because Missouri has limited regulatory related activities. 33 mechanisms or other structural barriers to sufficiently restrict the

holding company's access to the utility's cash flow, Standard & Poor's
 Ratings Services views Laclede Gas' default risk as the same as that
 of LG.

4 LG's creditworthiness reflects a strong business risk position of "3" 5 (utility business profiles are ranged from "1" (excellent) to "10" 6 (vulnerable)) and somewhat weak, but gradually improving, 7 consolidated financial parameters. Laclede Gas also has a business 8 profile of "3". The business profile is a function of a stable, largely 9 residential customer base, low market risk, competitive gas space-10 heating rates, diverse supply sources, significant gas storage capacity, 11 and reasonably supportive Missouri regulation. The significant 12 residential customer base limits the utility's susceptibility to economic 13 downturns and threats from other energy providers. These strengths 14 are offset marginally by relatively low annual customer growth (less 15 than 1%), due to a mature service territory, and by LG's investment in 16 riskier unregulated activities. Continued growth in unregulated 17 businesses will increase business risk, requiring a stronger 18 consolidated financial profile at LG to maintain the current rating level.

19 (Standard & Poor's "Laclede Gas Co.," November 3, 2006, Page 2).

20 Q SHOULD THE COMMISSION PLACE HEAVY RELIANCE ON PROJECTED 21 INTEREST RATES AND FUTURE CAPITAL MARKET COSTS RELATIVE TO 22 TODAY'S OBSERVABLE CAPITAL MARKET COSTS?

- 23 А No. While projected interest rates should be given some consideration, the 24 determination of Laclede's cost of capital today should be based primarily on 25 observable and verifiable actual current market costs. The accuracy of projected 26 changes to interest rates is highly problematic. In fact, over the past five years, the 27 interest rate experienced at the time a projection was made has been a better 28 predictor of the interest rate that would be experienced two years later than the 29 prediction itself.
- 30 An analysis supporting this conclusion is illustrated on my Schedule MPG-1. 31 This analysis clearly illustrates that projected interest rates based on current interest 32 rates are likely to be as accurate as economists' consensus projections of future 33 interest rates.

1 On this exhibit, under Columns 1 and 2, I show the actual market yield at the 2 time a projection is made for Treasury bond yields two years in the future. In Column 3 1, I show the actual Treasury yield and, in Column 2, I show the projected yield two 4 years out.

5 As shown in Columns 1 and 2, over the last five years Treasury yields were 6 projected to increase relative to the current Treasury yields at the time of the 7 projection.

8 In Column 4, I show what the Treasury yield actually turned out to be two
9 years after the forecast. Under Column 5, I show the actual yield change at the time
10 of the projections relative to the projected yield change.

As shown on this exhibit, over the last five years economists have consistently been projecting increases to interest rates. However, as demonstrated under Column 5, those yield projections have turned out to be overstated in virtually every case. Indeed, Treasury yields have actually decreased or remained flat over the last five years, rather than increase as the economists' projections indicated. Further, as shown under Column 6, interest rates have stayed relatively flat compared to the prevailing interest rates at the time the forecast was made.

18 This review of the experience with projected interest rates clearly illustrates 19 that interest rate projection accuracy is highly problematic. Indeed, current 20 observable interest rates are just as likely a reasonable projection of future interest 21 rates as are economists' projections. Accordingly, while I will use projected interest 22 rates to provide some sense of the market's expectations of future capital market 23 costs in my models, I will not use them exclusively. Rather, my analyses will be 24 based on the combination of current observable interest rates and projected interest 25 rates. Thus, my analyses will capture a return on equity range reflecting a broad

> Michael Gorman Page 5

range of potential actual capital market costs during the period rates determined in
 this proceeding will be in effect.

# Q ARE THERE OTHER REASONS NOT TO PROVIDE EXCLUSIVE RELIANCE ON 4 UNCERTAIN PROJECTED INCREASES TO INTEREST RATES?

5 A Yes. The ratemaking process in itself provides utility protection against the increasing 6 cost of capital. Indeed, if Laclede's utility subsidiaries' rates of return are set based 7 on today's market cost of capital, and capital costs increase in the future, then the 8 utilities are free to file for a rate change to reflect higher capital costs in the future 9 when or if costs change. Hence, the regulatory mechanism itself provides utilities a 10 hedge against increasing capital costs.

11 Depriving customers of today's low cost capital market environment is 12 prejudicial and unreasonably tilts the regulatory balance in favor of investors. 13 Consequently, Dr. Murry's exclusive use of projected interest rates, which reflect a 14 dramatic increase over current observable and real interest rates today, must be 15 rejected.

16

# Laclede's Proposed Capital Structure

# WHAT CAPITAL STRUCTURE IS THE COMPANY REQUESTING TO USE TO DEVELOP ITS OVERALL RATE OF RETURN FOR ELECTRIC OPERATIONS IN THIS PROCEEDING?

A The Company's overall rate of return was developed using the capital structure
 recommended by Laclede witness Donald Murry on his Schedule DAM-5. Dr. Murry's

- 1 recommended capital structure includes investors' capital amounts as shown below in
- 2 Table 1.

TABLE 1				
Laclede's Proposed Capital Structure				
Description	Percent of Total Capital			
Long-Term Debt Preferred Stock Common Equity Total	49.2% 0.1% <u>50.7%</u> 100.00%			
Source: Laclede witness Donald Murry, Direct Testimony, Schedule DAM				

# 3 Q IS THE COMPANY'S PROPOSED CAPITAL STRUCTURE REASONABLE FOR

# 4 SETTING RATES IN THIS PROCEEDING?

5 A No. The Company did not include short-term debt in the development of its capital
6 structure and therefore, its capital structure is unreasonable.

# 7 Q WHY DID THE COMPANY EXCLUDE AN AMOUNT OF SHORT-TERM DEBT IN

# 8 ITS DEVELOPMENT OF ITS OVERALL RATE OF RETURN?

9 A Laclede Gas Company witness Glenn W. Buck stated that he removed short-term
10 debt in the capital structure because the average level of construction work in
11 progress (CWIP) and underground storage inventories, propane and deferred gas
12 cost balances exceeded the average level of short-term debt outstanding during the
13 test year. (Direct Testimony of Glenn W. Buck, December 2006 at Page 10).

1 Q DO YOU AGREE WITH MR. BUCK'S CONTENTION THAT SHORT-TERM DEBT 2 SHOULD NOT BE INCLUDED IN LACLEDE'S OVERALL RATE OF RETURN IN 3 THIS PROCEEDING?

A No. I agree with Mr. Buck that the amount of short-term debt that supports its CWIP should be excluded from the capital structure in this proceeding. However, gas working capital components identified by Mr. Buck including underground storage inventories, propane and deferred gas costs are long-term working capital requirements of the utility, and carrying charges on these should be based on the utility's overall rate of return regardless of whether or not these costs are recovered through base rates or through the PGA mechanism.

Hence, the amount of short-term debt that exceeds the amount of CWIP
should be included in Laclede's capital structure.

13QHOWMUCHSHORT-TERMDEBTSHOULDBEINCLUDEDINTHE14DEVELOPMENT OF LACLEDE'S OVERALL RATE OF RETURN?

15 А I relied on Mr. Buck's workpapers to determine the amount of short-term debt in 16 relationship to CWIP during the 13-month period ending September 2006. This is 17 shown on my Schedule MPG-2. As shown on this schedule, during the 13-month 18 period ending September 2006, Laclede has a short-term debt average balance of 19 \$162.6 million. During that time period, it had CWIP balance of \$8.8 million. Hence, 20 the difference between short-term debt and CWIP balances during this time period 21 indicates an appropriate amount of short-term debt to include in Laclede's capital 22 structure be \$153.8 million.

1 Q WHAT CAPITAL STRUCTURE DO YOU PROPOSE TO USE TO DEVELOP

# 2 LACLEDE'S OVERALL RATE OF RETURN IN THIS PROCEEDING?

3 A My proposed capital structure is shown below, and developed on my Schedule
4 MPG-3.

TABLE 2				
Mr. Gorman's Proposed Capital Structure				
Description	Percent of Total Capital			
Long-Term Debt Short-Term Debt Preferred Stock Common Equity Total	41.2% 16.2% 0.1% <u>42.5%</u> 100.00%			
Source: Schedule MPG-3	<b>}</b> .			

5 My proposed capital structure is based on the Company's proposed capital 6 structure, with the addition of the short-term debt balance described above. As set 7 forth later, this capital structure along with my proposed return on equity will support 8 Laclede's current "A" rated utility bond rating.

# 9 Q DO YOU HAVE ANY PROPOSED ADJUSTMENTS TO LACLEDE'S ESTIMATED 10 EMBEDDED DEBT COSTS?

11 A Yes. Laclede had a 7.5% bond that will mature in November 2007. I propose 12 repricing these debt securities down to the current market price. Based on current "A" 13 rated utility bond yield of 5.9%, and an estimate of floatation expenses of 14 approximately 0.30%, I propose to reprice this debt instrument at 6.2% in determining 15 Laclede's embedded cost of debt in this proceeding. This adjustment reduces Laclede's embedded debt cost from 6.78%, down to 6.64%. The development of this
 alternative embedded debt cost is shown on my Schedule MPG-4.

# 3 Q HOW DID YOU PRICE LACLEDE'S SHORT-TERM DEBT COST?

- 4 A According to Mr. Buck's workpapers, Laclede's average embedded debt cost during
- 5 the 13-month period ending September 2006 was 4.75%. I propose using this as the
- 6 cost of short-term debt to develop Laclede's overall rate of return.

# 7 Rate of Return

# 8 Q WHAT OVERALL RATE OF RETURN DO YOU RECOMMEND FOR LACLEDE IN

# 9 THIS PROCEEDING?

A As shown on Schedule MPG-3, I recommend the Commission set Laclede's overall
 rate of return at 7.68%. This is based on Laclede's proposed capital structure and
 embedded debt cost and my proposed return on equity of 9.8%.

# 13 Return on Common Equity

# 14 Q PLEASE DESCRIBE THE FRAMEWORK FOR DETERMINING A REGULATED 15 COMPANY'S COST OF COMMON EQUITY.

A In general, determining a fair cost of common equity for a regulated utility has been
 framed by two decisions of the U.S. Supreme Court, in Bluefield Water Works vs.
 West Virginia PSC (1923) and Federal Power Commission vs. Hope Natural Gas
 Company (1944). These decisions state that in establishing the cost of common
 equity for a public utility, the general standards to be considered are that the

authorized return should: (1) be sufficient to maintain financial integrity, (2) attract
 capital under reasonable terms, and (3) be commensurate with returns investors
 could earn by investing in other enterprises of comparable risk.

4

5

Q

# PLEASE DESCRIBE WHAT IS MEANT BY "UTILITY'S COST OF COMMON EQUITY."

A The utility's cost of common equity is the return investors expect, or require, in order
to make an investment. Investors expect to achieve their return requirement from
receiving dividends and stock price appreciation.

# 9 Q PLEASE DESCRIBE THE METHODS YOU HAVE USED TO ESTIMATE THE COST 10 OF COMMON EQUITY FOR LACLEDE.

11 A I have used several models based on financial theory to estimate Laclede's cost of 12 common equity. These models are: (1) the constant and two-stage growth 13 discounted cash flow (DCF) models, (2) the bond yield plus equity risk premium 14 model, and (3) a capital asset pricing model (CAPM). I have applied these models to 15 grcups of publicly traded utilities that I have determined represent the investment risk 16 of an gas utility similar to Laclede.

# 17 Proxy Group

# 18 Q HOW DID YOU DEVELOP A DCF ANALYSIS AND CAPM ESTIMATES FOR 19 LACLEDE?

A Since Laclede is not a publicly traded entity, I performed the DCF and CAPM analysis
 on a group of publicly traded companies that are predominantly involved in the gas

utility business. I relied on both Dr. Murry's gas utility group as shown on his
 Schedule DAM-6 and a risk proxy group I developed. I developed a proxy risk group
 based on a review of total business and financial risk comparison of the proxy group
 to Laclede.

# 5 Q HOW DID YOU SELECT THE COMPANIES INCLUDED IN YOUR COMPARABLE 6 GROUP?

- A I started with the natural gas distribution companies followed by Value Line and I
  excluded the companies that did not meet the following criteria:
- 9 (1) Have investment grade credit rating from Standard & Poor's (S&P) and Moody's.
- 10 (2) Have a common equity ratio equal to or greater than 40.0%.
- 11 (3) Have not suspended or reduced dividends over the last two years.
- 12 (4) Have not been involved in recent merger and acquisition activities.
- 13 The two comparable groups are shown on Schedule MPG-5.

# 14 Q HOW DO THE RISKS OF YOUR PROXY GROUP AND DR. MURRY'S PROXY

# 15 GROUP COMPARE TO LACLEDE?

As shown on my Schedule MPG-5, Page 1, this group has a group average bond 16 Α 17 rating of "A" from Standard & Poor's (S&P), and "A3" from Moody's, which is identical 18 to Laclede's ratings from each of these rating agencies. The group has an average 19 S&P business profile score of 3, which indicates the same business risk as that of 20 Laclede. The group's average common equity ratio from Value Line and AUS Utility 21 Reports is 53% and 48%, respectively, which is similar to the common equity ratio for 22 Laclede of 51% (excluding short-term debt) and 42% (including short-term debt). 23 Consequently, the group has comparable business and financial risk to Laclede.

Dr. Murry's comparable group is shown in the second page of my Schedule 1 2 MPG-5. It has a group average bond rating of "A+" from S&P and "A3" from Moody's, 3 which is reasonably comparable to Laclede's credit ratings. The group has an average S&P business profile score of 2, which indicates slightly lower business risk 4 5 than that of Laclede. The group's average common equity ratio from Value Line and 6 AUS Utility Reports is 56% and 48%, respectively, which is similar to the common 7 equity ratio for Laclede of 51% (excluding short-term debt) and 43% (including short-8 term debt).

9 Overall, I believe both comparable risk groups fairly proxy Laclede's total
10 investment risk.

# 11 Constant Growth Discounted Cash Flow (DCF) Model

## 12 Q PLEASE DESCRIBE THE DCF MODEL.

A The DCF model posits that a stock price is valued by summing the present value of
expected future cash flows discounted at the investors' required rate of return (ROR)
or cost of capital. This model is expressed mathematically as follows:

16 17 18 19	$P_{o} = \frac{D_{1}}{(1+K)^{1}} + \frac{D_{2}}{(1+K)^{2}} \cdots \frac{D_{\infty}}{(1+K)^{\infty}} \text{ where } (Equation 1)$ $P_{o} = Current \text{ stock price}$ $D = Dividends \text{ in periods } 1 - \infty$
20 21	K = Investor's required return This model can be rearranged in order to estimate the discount rate or
22	investor required return, "K." If it is reasonable to assume that earnings and
23	dividends will grow at a constant rate, then Equation 1 can be rearranged as follows:

24	K = D1/Po + G	(Equation 2)
25		
26	K = Investor's required return	
27	D1 = Dividend in first year	
28	Po = Current stock price	

1

- G = Expected constant dividend growth rate
- 2
- Equation 2 is referred to as the "constant growth" annual DCF model.

#### PLEASE DESCRIBE THE INPUTS TO YOUR CONSTANT GROWTH DCF MODEL. 3 Q

- 4 А As shown under Equation 2 above, the DCF model requires a current stock price, 5 expected dividend, and expected growth rate in dividends.
- 6

#### 7 Q WHAT STOCK PRICE HAVE YOU RELIED ON IN YOUR CONSTANT GROWTH 8 DCF MODEL?

### 9 А I relied on the average of the weekly high and low stock prices over a 13-week period 10 ending April 20, 2007. An average stock price is less susceptible to market price 11 variations than a spot price. Further, an average stock price is less susceptible to 12 aberrant market price movements, which may not be reflective of the stock's long-13 term value.

14 A 13-week average stock price is short enough to contain data that 15 reasonably reflects current market expectations, but it is not too short to be 16 susceptible to market price variations that may not be reflective of the security's long-17 term value. Therefore, in my judgment, a 13-week average stock price is a 18 reasonable balance between the need to reflect current market expectations and to 19 capture sufficient data to smooth out aberrant market movements.

#### 20 Q WHAT DIVIDEND DID YOU USE IN YOUR CONSTANT GROWTH DCF MODEL?

21 А I used the most recently paid quarterly dividend, as reported in the Value Line 22 Investment Survey. This dividend was annualized (multiplied by 4) and adjusted for 23 next year's growth to produce the D1 factor for use in Equation 2 above.

# 1 Q WHAT DIVIDEND GROWTH RATES HAVE YOU USED IN YOUR DCF MODEL?

A For purposes of determining the market required return on common equity, one must
attempt to estimate what the consensus of investors believes the dividend or earnings
growth rate will be, and not what an individual investor or analyst may use to form
individual investment decisions.

6 Security analyst growth estimates have been shown to be more accurate 7 predictors of future returns than growth rates derived from historical data.<sup>1</sup> Because 8 they are more reliable estimates, and assuming the market, in general, makes 9 rational investment decisions, analysts' growth projections are the most likely growth 10 estimates built into stock prices.

11 For my constant growth DCF analysis, I have relied on a consensus, or mean, 12 of professional security analysts' earnings growth estimates as a proxy for the 13 investor consensus dividend growth rate expectations. I used the average of three 14 sources of customer growth rate estimates: Zack's Detailed Analyst Estimates, 15 Reuters, and Thomson Financial or First Call. All consensus analyst projections used 16 were available on April 23, 2007, as reported on-line. Each consensus growth rate 17 projection is based on a survey of security analysts. The consensus estimate is a 18 simple arithmetic average or mean of surveyed analysts' earnings growth forecasts. 19 A simple average of the growth forecast gives equal weight to all surveyed analysts' 20 projections. It is problematic as to whether any particular analyst's forecast is most 21 representative of general market expectations. To avoid using only one particular 22 forecast, I used a simple average, or arithmetic mean, of multiple analyst forecasts to 23 arrive at a good proxy for market consensus expectations. The growth rates I used in 24 my DCF analysis are shown on my Schedule MPG-6.

<sup>&</sup>lt;sup>1</sup> See, for example, David Gordon, Myron Gordon, and Lawrence Gould, "Choice Among Methods of Estimating Share Yield," <u>The Journal of Portfolio Management</u>, Spring 1989.

1

# Q WHAT ARE THE RESULTS OF YOUR CONSTANT GROWTH DCF MODEL?

A The results of my constant DCF analyses are shown on Schedule MPG-7. As shown on Schedule MPG-7, the average DCF cost of common equity for my comparable group is 8.3%. The average DCF cost of common equity for Dr. Murry's comparable group is 8.1%. The midpoint of the constant growth DCF study is 8.2%.

# 6 Q DO YOU HAVE ANY COMMENTS CONCERNING THE RESULTS OF YOUR DCF 7 ANALYSES?

8 А The growth rate used in my constant growth DCF analysis reasonably Yes. 9 represents a sustainable growth rate. The average five-year growth rate is 4.30% for 10 my comparable group and 4.69% for Dr. Murry's comparable group. These growth 11 rate estimates are sustainable over an indefinite period of time because they do not 12 exceed the growth rate of the overall U.S. economy. A company cannot grow, 13 indefinitely, at a faster rate than the market in which it sells its products. However, 14 growth rates slower than the U.S. economy are sustainable depending on dividend 15 payout ratios and earnings reinvestment. Based on consensus economic projections, 16 as published by Blue Chip Financial Forecasts, the five-year and ten-year U.S. 17 economy, or GDP, is estimated to grow at a nominal rate of 5.1%.<sup>2</sup> The U.S. 18 economy growth projection represents a ceiling for a sustainable growth rate for a 19 utility over an indefinite period of time.

20 Utilities' dividend growth cannot sustain a growth rate that exceeds the growth 21 rate of the overall economy. The growth rate of the utility's service territory is the 22 proxy for the sustainable long-term growth rate of earnings. Utilities invest in plant to 23 meet sales growth, and sales growth in turn is tied to economic activity. Hence,

<sup>&</sup>lt;sup>2</sup> Blue Chip Economic Indicators, March 10, 2007 at 15.

nominal GDP growth is a proxy for the highest sustainable long-term growth rate of
 the utility.

3 Moreover, projected growth rates of 4.30% and 4.69% are considerably higher 4 than the historical growth rate the proxy group has achieved over the last five to ten 5 years, and that projected over the next three to five years. As shown on Schedule MPG-8, pages 1 and 2, the historical growth of my proxy group's dividend is 6 substantially lower than the nominal GDP growth, and actually less than the projected 7 8 inflation growth. Importantly, my use of a growth rate that exceeds the projected 9 growth of inflation and is approaching the projected growth of nominal GDP growth and illustrates the conservative nature of this growth projection and the robust nature 10 11 of the DCF results.

# 12 Q DO THE COMPANIES INCLUDED IN YOUR TWO PROXY GROUPS REPRESENT 13 FINANCIAL FUNDAMENTALS WHICH SUPPORT THE USE OF A CONSTANT 14 GROWTH DCF MODEL IN THIS CASE?

15 A Yes. Under a constant growth DCF model, the companies included in my proxy 16 group should have reasonable sustainable payout ratios, which would support 17 constant growth in earnings, dividends and book value. As such, a review of the 18 payout ratios of the companies would give a reasonable indication of whether or not 19 the companies are financially in the fundamental position that can support constant 20 growth.

21 Utilities typically pay 60% to 70% of their earnings out as dividends on a long-22 term sustainable basis. The current, and three to five-year projected payout ratios for 23 my proxy group are 64% to 62%, respectively. The current and projected three to 24 five-year payout ratios for Dr. Murry's proxy group is 57% to 56%, respectively. These payout ratios indicate that the proxy groups are fundamentally capable of
 supporting long-term sustainable growth.

Further, the dividends to book value ratios of my proxy group and Dr. Murry's 3 4 proxy group also indicate that the dividends are affordable in today's low-cost capital 5 market environment. Specifically, the current three to five-year projected and dividend-to-book ratio is 7.36% and 6.98% for my group, and 6.80% and 6.74% for 6 7 Dr. Murry's. These dividend-to-book ratios indicate the return on equity needed to 8 support the current dividend payment. These low-cost dividends can be supported at 9 an authorized return on equity of 9.8%, and allow the utilities to retain earnings above dividend payments to support future growth in book value, earnings, and dividends. 10 11 Again, these fundamental factors support the use and reliance on a constant growth 12 DCF model in this case.

# 13 Two-Stage DCF Model

# 14 Q WHY DO YOU PROPOSE TO USE A TWO-STAGE DCF MODEL TO TEST THE 15 RESULTS OF YOUR CONSTANT GROWTH DCF STUDY?

16 A I am relying on a two-stage growth DCF in this model to test the results of my 17 constant growth model. As set forth above, I believe the results of my constant 18 growth DCF reflect today's very low-cost capital market environment, and the proxy 19 company fundamentals support the basic principles of a constant growth DCF model 20 at this time. Nevertheless, my two-stage growth DCF model will capture the potential 21 that the three to five-year growth outlooks of the proxy companies will increase after 22 year 5, to a higher level.

# 1 Q PLEASE DESCRIBE YOUR TWO-STAGE DCF MODEL.

The two-stage DCF growth model reflects the possibility of non-constant growth to the 2 А company over time. The two-stage reflects two growth periods: (1) a short-term 3 arowth period, which consists of the first five years; and (2) a long-term growth period, 4 5 which consists of each year starting in year six through perpetuity. For the short-term growth period, I relied on the consensus analysts' growth projections described above 6 7 in relationship to my constant growth model. For the long-term growth period, I 8 assumed each company's growth would increase toward the maximum sustainable growth rate for a utility company as proxied by the consensus analysts' projected 9 10 growth for the U.S. GDP.

# 11 Q WHAT STOCK PRICE AND DIVIDEND DID YOU USE IN YOUR MULTI-STAGE 12 DCF ANALYSIS?

A I relied on the same 13-week stock price as in the constant DCF analysis, the most
 recent quarterly dividend payment, and consensus analysts' growth rate projections
 discussed above in my constant growth DCF model. For the long-term sustainable
 growth rate starting in year six, I used the consensus economists' five to ten-year
 projected GDP normal growth rate of 5.1%.<sup>3</sup>

# 18 Q WHAT ARE THE RESULTS OF YOUR TWO-STAGE GROWTH DCF MODEL?

A The results are shown on the attached Schedule MPG-9. The DCF cost of common
equity for my and Dr. Murry's gas proxy groups using my two-stage DCF models are
8.9% and 8.5%, respectively. The midpoint of the two-stage growth DCF study is
8.7%.

<sup>&</sup>lt;sup>3</sup> Blue Chip Economic Forecast, March 10, 2007.

# 1 Risk Premium Model

# 2 Q PLEASE DESCRIBE YOUR BOND YIELD PLUS RISK PREMIUM MODEL.

3 А This model is based on the principle that investors require a higher rate of return to 4 assume greater risk. Common equity investments have greater risk than bond 5 investments because bonds have more security of payment in bankruptcy 6 proceedings than common equity and the coupon payments on bonds represent 7 contractual obligations. In contrast, companies are not required to pay dividends on 8 common equity, or to guarantee returns on common equity investments. Therefore, 9 common equity securities are considered to be more risky than bond securities. 10 used two models to estimate an equity risk premium.

11 This risk premium model is based on two estimates of an equity risk premium. 12 In the first model, I estimated the difference between the required return on utility 13 common equity investments and Treasury bonds. The difference between the 14 required return on common equity and the bond yield is the risk premium. I estimated 15 the risk premium on an annual basis for each year over the period 1986 through 16 2006. The common equity required returns were based on regulatory commission-17 authorized returns for gas utility companies. Authorized returns are typically based 18 on expert witnesses' estimates of the contemporary investor required return.

The second equity risk premium method is based on the difference between regulatory commission authorized returns on common equity and contemporary "A" rated utility bond yields. This time period was selected because over the period 1986 through 2006, public utility bond yields have consistently traded at a premium to book value. This is illustrated on my Schedule MPG-10, where the market to book ratio for the gas utility industry was consistently at or above 1.0 since 1986. Therefore, over this time period, regulatory authorized returns were sufficient to support market prices that at least exceeded book value. This is an indication that regulatory authorized
returns on common equity supported a utility's ability to issue additional common
stock, without diluting existing shares. This is an indication that utilities were able to
access equity markets without a detrimental impact on current shareholders.

5 Based on this analysis, as shown on my Schedule MPG-11, the average 6 indicated equity risk premium of authorized gas utility common equity returns over 7 U.S. Treasury bond yields over the period 1986 to 2006 has been 4.93%. Of the 21 8 observations, 15 indicated risk premiums fall in the range of 4.2% to 5.7%. Since the 9 risk premium can vary depending upon market conditions and changing investor risk 10 perceptions, I believe using an estimated range of risk premiums provides the best 11 method to measure the current return on common equity using this methodology.

As shown on my Schedule MPG-12, the average indicated equity risk premium, based on the authorized gas utility common equity returns over contemporary Moody's utility bond yields, was 3.53% over the same period. Removing the three highest and lowest risk premium estimates produces an equity risk premium in the range of 3.0% to 4.4% over this time period.

17 Q BASED ON THIS HISTORICAL ANALYSIS, WHAT RISK PREMIUM DO YOU 18 PROPOSE TO USE TO ESTIMATE LACLEDE'S COST OF EQUITY IN THIS 19 PROCEEDING?

A Academic research indicates that equity risk premiums should reflect the current market perception of risk in the equity versus debt markets. A recent study contends that one can reasonably approximate the relative level of equity risk premiums, by comparing the spread in corporate bond yields relative to Treasury bond yields. When the Corporate/Treasury bond yield spreads are wide, the market assessment of industry risk is greater, which suggests an increase to the equity risk premium. Conversely, when Corporate/Treasury bond yield spreads are relatively low, the
 industry equity risk premiums would also be relatively low.<sup>4</sup>

3 In order to assess the current investment risk of the utility industry, I have compared utility bond yield spreads over Treasury yields for the last 27 years. This is 4 5 shown on my Schedule MPG-13. On this schedule I show the yield spread between 6 utility bonds and Treasury bonds over the last 27 years. As shown on this schedule, 7 the current utility bond yield spreads for "A" rated and "Baa" rated utility bonds are 8 1.16% and 1.41%, respectively. These utility bond yield spreads over Treasury 9 bonds are among the lowest yield spreads in the last 27 years, and are below the 27-10 year average for "A" and "Baa" yields of 1.58% and 1.94%, respectively.

11 This comparison of utility bond yield spreads over Treasury bond yields 12 indicates the market's current perception of utility risk to be below average over this 13 historical time period. As such, it is appropriate to conclude that utility equity 14 investment risk is relatively low over this historical time period. Recognizing a robust 15 market for low-risk utility investments. I believe it is appropriate to use an average 16 market equity risk premium estimated over my historical time period to proxy the 17 current market assessment of utility risk and equity risk premiums today and going 18 forward.

Based on this assessment, I believe a market based equity risk premium for utility stock investments over Treasury bonds of 5.0% (the midpoint of the 4.2% of 5.7% spread) is reasonable, and an equity risk premium of 3.7% (the midpoint of 3.0% to 4.4% range, as described above) over utility bond yields is reasonable.

<sup>&</sup>lt;sup>4</sup> "The Market Risk Premium: Expectational Estimates Using Analysts' Forecasts," by Robert S. Harris and Felicia C. Marston, *Journal of Applied Finance*, Volume 11, No. 1, 2001.

# 1 Q HOW DID YOU ESTIMATE LACLEDE'S COST OF COMMON EQUITY WITH THIS 2 MODEL?

A I added to my estimated equity risk premium over Treasury yields a projected longterm Treasury bond yield. Blue Chip Financial Forecasts projects 30-year Treasury
bond yields to be 5.0%, and a 10-year Treasury bond to be 4.8% (April 1, 2007 at 2).
Using the long-term bond yield of 5.0%, and an equity risk premium of 5.0%,
produces an estimated common equity return of 10.0%.

8 I next added my equity risk premium over utility bond yields, an average yield
9 on an "A" rated utility bond for the 13-week period ending April 20, 2007 of 5.93%.
10 See my Schedule MPG-14. A premium of 3.7 and a rounded "A" yield of 5.9%
11 produces a cost rate of 9.6%.

12 My risk premium analyses produce a return estimate in the range of 9.6% to 13 10.0%, with a mid-point estimate of 9.8%.

# 14 Capital Asset Pricing Model (CAPM)

# 15 Q PLEASE DESCRIBE THE CAPM.

A The CAPM method of analysis is based upon the theory that the market required
ROR for a security is equal to the risk-free ROR, plus a risk premium associated with
the specific security. This relationship between risk and return can be expressed
mathematically as follows:
Ri = Rf + Bi x (Rm - Rf) where:

- 21 Ri = Required return for stock i
- 22 Rf = Risk-free rate 23 Rm = Expected retu
  - Rm = Expected return for the market portfolio
- 24 Bi = Beta Measure of the risk for stock.

1 The stock specific risk term in the above equation is beta. Beta represents the 2 investment risk that cannot be diversified away when the security is held in a 3 diversified portfolio. When stocks are held in a diversified portfolio, firm-specific risks 4 can be eliminated by balancing the portfolio with securities that react in opposite 5 direction to firm-specific risk factors (e.g., business cycle, competition, product mix 6 and production limitations).

7 The risks that cannot be eliminated when held in diversified portfolio are 8 nondiversifiable risks. Nondiversifiable risks are related to the market in general and 9 are referred to as systematic risks. Risks that can be eliminated by diversification are 10 regarded as nonsystematic risks. The CAPM theory suggests that the market will not 11 compensate investors for assuming risks that can be diversified away. Therefore, the 12 only risk that investors will be compensated for are systematic or nondiversifiable 13 risks. The beta is a measure of the systematic or nondiversifiable risks.

## 14 Q PLEASE DESCRIBE THE INPUTS TO YOUR CAPM.

A The CAPM requires an estimate of the market risk-free rate, the company's beta, and
the market risk premium.

# 17 Q WHAT DID YOU USE AS AN ESTIMATE OF THE MARKET RISK-FREE RATE?

18 A I used Blue Chip Financial Forecasts' projected long-term Treasury bond yield of
19 5.0% (Blue Chip Financial Forecast, April 1, 2007 at 2).

# 20 Q WHY DID YOU USE LONG-TERM TREASURY BOND YIELDS AS AN ESTIMATE 21 OF THE RISK-FREE RATE?

A Treasury securities are backed by the full faith and credit of the United States
 government. Therefore, long-term Treasury bonds are considered to have negligible

credit risk. Also, long-term Treasury bonds have an investment horizon similar to that
of common stock. As a result, investor-anticipated long-run inflation expectations are
reflected in both common stock required returns and long-term bond yields.
Therefore, the nominal risk-free rate (or expected inflation rate and real risk-free rate)
included in a long-term bond yield is a reasonable estimate of the nominal risk-free
rate included in common stock returns.

7 Treasury bond yields, however, include risk premiums related to unanticipated 8 future inflation and interest rates. Therefore, a Treasury bond yield is not a risk-free 9 rate. Risk premiums related to unanticipated inflation and interest rates are 10 systematic or market risks. Consequently, for companies with betas less than one, 11 using the Treasury bond yield as a proxy for the risk-free rate in the CAPM analysis 12 can produce an overstated estimate of the CAPM return.

## 13 Q WHAT BETA DID YOU USE IN YOUR ANALYSIS?

A I relied on the group median Value Line beta estimate for my comparable group and
 Dr. Murry's comparable group. A group median beta has stronger statistical
 parameters that better describe the systematic risk of the group, than does an
 individual company beta. For this reason, a group median beta will produce a more
 reliable return estimate.

As shown on Schedule MPG-15, the group median beta estimate is 0.85 for
my comparable group and 0.80 for Dr. Murry's comparable group, which results in
average beta of 0.83.

## 22 Q HOW DID YOU DERIVE YOUR MARKET PREMIUM ESTIMATE?

A I derived two market premium estimates, a forward-looking estimate and one based
on a long-term historical average.

1 The forward-looking estimate was derived by estimating the expected return 2 on the market (S&P 500) and subtracting the risk-free rate from this estimate. I 3 estimated the expected return on the S&P 500 by adding an expected inflation rate to 4 the long-term historical arithmetic average real return on the market. The real return 5 on the market represents the achieved return above the rate of inflation.

The Ibbotson and Associates' <u>Stocks, Bonds, Bills and Inflation 2007 Year</u> <u>Book</u> publication estimates the historical arithmetic average real market return over the period 1926-2006 as 9.1%. A current five-year consensus analyst inflation projection, as measured by the Consumer Price Index, is 2.3% (Blue Chip Financial Forecasts, April 1, 2007 at 2). Using these estimates, the expected market return is 11.6%.<sup>5</sup> The market premium then is the difference between the 11.6% expected market return, and my 5.0% risk-free rate estimate, or 6.6%.

13The historical estimate of the market risk premium was also estimated by14Ibbotson and Associates in the Stock, Bonds, Bills and Inflation, 2006 Year Book.15Over the period 1926 through 2006, Ibbotson's study estimated that the arithmetic16average of the achieved total return on the S&P 500 was 12.3%, and the total return17on long-term Treasury bonds was 5.8%. The indicated equity risk premium is 6.5%18(12.3% - 5.8% = 6.5%).

# 19 Q WHAT ARE THE RESULTS OF YOUR CAPM ANALYSIS?

A As shown on Schedule MPG-16, based on the prospective market risk premium
estimate of 6.6% and historical estimate of 6.5%, the CAPM estimated return on
equity is 10.5% and 10.4%, respectively, with a mid-point of 10.4%.

<sup>5</sup> [(1+0.091)\*(1+0.023)-1]\*100

# 1 Return on Equity Summary

# Q BASED ON THE RESULTS OF YOUR RATE OF RETURN ON COMMON EQUITY ANALYSES DESCRIBED ABOVE, WHAT RETURN ON COMMON EQUITY DO YOU RECOMMEND FOR LACLEDE? A Based on my analyses, I estimate an appropriate return on equity for Laclede to be

9.8%.

6

TABLE 3				
Return on Common Equity Summary				
Description	Result			
Constant Growth DCF Two-Stage DCF Average	8.2% <u>8.7%</u> 8.5%			
Risk Premium CAPM	9.8% 10.4%			

7 My recommended return on equity is based on the mid-point of my estimated 8 return on equity range for Laclede of 9.1% to 10.4%. The high end of my estimated 9 range is based on my CAPM analysis, and the low end of my estimated range is 10 based on the average DCF result and Risk Premium studies. I recommend setting 11 Laclede's authorized return on equity at 9.8%, which falls at the midpoint of my 12 estimated range.

# 1 Financial Integrity

# 2 Q WILL YOUR RECOMMENDED OVERALL RATE OF RETURN SUPPORT 3 LACLEDE'S CURRENT BOND RATING FROM S&P?

A Yes. I have reached this conclusion by comparing the key credit rating financial
ratios for Laclede at my proposed capital structure and return on equity to S&P's
benchmark financial ratios for an "A" rated utility and "BBB" rated utility with a
business profile score of 3.

# 8 Q PLEASE DESCRIBE S&P'S USE OF THE FINANCIAL BENCHMARK RATIOS IN

# 9 ITS CREDIT RATING REVIEW.

10 A S&P evaluates a utility's credit rating based on an assessment of its financial and 11 business risks. A combination of financial and business risks equates to the overall 12 assessment of the Company's total credit risk exposure. S&P publishes a matrix of 13 financial ratios that defines the level of financial risk as a function of the level of 14 business risk. S&P rates a utility's business risk based on a business profile score of 15 1, lowest risk, up to 10, highest risk.

16 S&P publishes ranges for three primary financial ratios that it uses as 17 guidance in its credit review for utility companies. The three primary financial ratio 18 benchmarks it relies on in its credit rating process include: (1) funds from operations 19 ("FFO") to debt interest expense, (2) FFO to total debt, and (3) total debt to total 20 capital. 1 Q HOW DID YOU APPLY S&P'S FINANCIAL RATIOS TO TEST THE 2 REASONABLENESS OF YOUR RATE OF RETURN RECOMMENDATIONS?

A I calculated each of S&P's financial ratios based on Laclede's cost of service for retail
operations.

5 While S&P would be concerned with total Laclede consolidated financial ratios 6 in its credit review process, my investigation in this proceeding is to judge the 7 reasonableness of my proposed cost of capital for setting rates in Laclede's 8 jurisdictional utility operations. Hence, I am attempting to determine whether the rate 9 of return and cash flow generation opportunity reflected in my proposed return on 10 equity for Laclede will support Laclede's current "A" investment grade bond rating and 11 financial integrity.

# 12 Q PLEASE DESCRIBE THE RESULTS OF THIS CREDIT METRIC ANALYSIS FOR 13 LACLEDE.

14 A The S&P financial metric calculations for Laclede are developed on my Schedule
15 MPG-17.

As shown on my Schedule MPG-17, based on an equity return of 9.8%, Laclede will be provided an opportunity to produce a Funds From Operations ("FFO") to debt interest expense of 3.7x. This FFO to interest coverage ratio is above (stronger) S&P's benchmark ratio range for an "A" rated utility company, with a business profile score of 3, of 3.5x to 2.5x. This indicates a very strong "A" rating to "AA" rated utility.

Laclede's total debt ratio to total capital is 57.0%. This is within S&P's "BBB"
rated utility range of 55% to 65%.

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BRUBAKER & ASSOCIATES, INC.

Finally, Laclede's retail operations FFO to total debt coverage at a 9.8% equity
 return would be 16%, which is again within S&P's financial metric range of 25% to
 15% for an "A" rated utility company.

At Laclede's proposed capital structure and my return on equity of 9.8%,
Laclede's financial metrics are supportive of an "A" utility bond rating.

# 6 Off-System Sales and Capacity Release Margins

7QIS THE COMPANY PROPOSING A CHANGE TO THE TREATMENT OF OFF-8SYSTEM SALES AND CAPACITY RELEASE MARGINS IN THE DEVELOPMENT

# 9 OF BASE RATES?

10 A Yes. In Schedule 4 and 5, the Company removes \$139.5 million in revenue from off-11 system sales and capacity release, and \$124.0 million of costs associated with the 12 same activity. This results in a decrease to pretax margins of approximately 13 \$15.5 million. With this adjustment, the Company has removed all "net revenue" or 14 margin associated with off-system sales and capacity release from the development 15 of base rates in this proceeding?

16 The Company also proposes to share approximately \$3.5 million, or the net 17 margin above \$12 million, with customers via a rate credit. (Patricia A. Krieger Direct 18 Testimony at 20). 1 Q IS THIS TREATMENT OF OFF-SYSTEM SALES AND CAPACITY RELEASE 2 MARGINS CONSISTENT WITH LACLEDE'S CURRENT BASE RATE 3 DEVELOPMENT?

A No. In Case No. GR-2005-0284, the Company and stakeholders settled on a base rate change for Laclede that included an imputation of net revenues to account for off-system sales and capacity release revenues. The Stipulation provided that with this net revenue imputation, the Company could retain 100% of any net revenues realized under these transactions and would share margin above \$12 million. That is, in the event the Company had net revenues above \$12 million, it would share the excess margin 50% with customers and 50% to shareholders. (*Id.* at 9 and 10).

# 11 Q IS IT REASONABLE TO NOT IMPUTE REVENUE ASSOCIATED WITH OFF 12 SYSTEM SALES AND CAPACITY RELEASE REVENUE MARGINS?

13 A No. The \$12 million off-system sales and capacity release margins will increase 14 Laclede's earned return on equity opportunity. This \$12 million net revenue equates 15 to a 2.0% to 2.5% increase to the return on equity approved by the Commission for 16 Laclede. That is, if Laclede is authorized to earn a 9.8% return on equity, and it 17 retains \$12 million of net revenue margin, it will actually have an opportunity to earn a 18 return up to 11.8% to 12.3% (9.8% + (2.0% to 2.5%)) -- depending on whether short-19 term debt is included in the capital structure.

Further, the investments Laclede has made to support off-system sales and capacity release margins, are included in rate base. Therefore, by excluding this wholesale net revenue margin, customers will pay for the cost of the wholesale activity, and Laclede will keep all the benefit. This is patently unreasonable, and results in over charges to retail customers and produces excessive profit opportunities for Laclede.

# 1QBUT ISN'T LACLEDE PROPOSING AN EARNINGS MECHANISM WHICH COULD2MITIGATE THIS CUSTOMER EXPOSURE OF PAYING EXCESSIVE PRICES?

A Laclede is proposing an earnings mechanism where it would share a portion of over
earnings with customers under certain conditions after a three-year period.
Nevertheless, the rates Laclede is proposing are excessive at the outset, because
they will provide Laclede an opportunity to earn a return on equity far in excess of the
return approved by this Commission.

# 8 Q WOULD IT BE APPROPRIATE TO CONTINUE TO INCLUDE A NET MARGIN 9 OFFSET TO RETAIL COST OF SERVICE IN THIS PROCEEDING?

10 А Yes. Again, since the infrastructure supporting these off-system sales and capacity 11 release are included in the retail cost of service, to the extent Laclede can generate 12 revenues from wholesale activities to support these investments, the retail customers' 13 rates should be reduced to reflect this revenue from other sources. Therefore, 14 continuing the current treatment of a net revenue imputation in the development of 15 base rates, and sharing of net margin above that level, will eliminate excessive profit 16 potential but provide Laclede an incentive to maximize its off-system sales and 17 capacity release margin sales opportunities, with fair profit opportunities.

# 18 Q HOW DO YOU PROPOSE TO MODIFY LACLEDE'S POSITION TO INCLUDE A 19 NET REVENUE IMPUTATION FOR OFF-SYSTEM SALES AND CAPACITY 20 RELEASE?

A I propose a \$12 million net revenue imputation for off-system sales and capacity
 release. Further, I recommend that Laclede share net revenue margin above this
 level 50% with customers and 50% to shareholders. Customers' allocated share of

net margin above this level should be deferred and reflected in Laclede's next base
 rate filing.

3 This treatment of off-system sales/capacity release revenue margin will 4 reduce retail customers' cost of service, and will incent Laclede to maximize the 5 amount of off-system sales and capacity release revenue.

# 6 Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

7 A Yes, it does.

## Appendix A

## **Qualifications of Michael Gorman**

## 1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A Michael P. Gorman. My business mailing address is P. O. Box 412000, 1215 Fern
Ridge Parkway, Suite 208, St. Louis, Missouri 63141-2000.

## 4 Q PLEASE STATE YOUR OCCUPATION.

A I am a consultant in the field of public utility regulation and a managing principal with
Brubaker & Associates, Inc., energy, economic and regulatory consultants.

## 7 Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND WORK 8 EXPERIENCE.

9 A In 1983 I received a Bachelors of Science Degree in Electrical Engineering from
10 Southern Illinois University, and in 1986, I received a Masters Degree in Business
11 Administration with a concentration in Finance from the University of Illinois at
12 Springfield. I have also completed several graduate level economics courses.

13 In August of 1983, Laccepted an analyst position with the Illinois Commerce 14 Commission (ICC). In this position, I performed a variety of analyses for both formal and informal investigations before the ICC, including: marginal cost of energy, central 15 16 dispatch, avoided cost of energy, annual system production costs, and working 17 capital. In October of 1986, I was promoted to the position of Senior Analyst. In this 18 position, I assumed the additional responsibilities of technical leader on projects, and 19 my areas of responsibility were expanded to include utility financial modeling and 20 financial analyses.

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In 1987, I was promoted to Director of the Financial Analysis Department. In
this position, I was responsible for all financial analyses conducted by the staff.
Among other things, I conducted analyses and sponsored testimony before the ICC
on rate of return, financial integrity, financial modeling and related issues. I also
supervised the development of all Staff analyses and testimony on these same
issues. In addition, I supervised the Staff's review and recommendations to the
Commission concerning utility plans to issue debt and equity securities.

8 In August of 1989, I accepted a position with Merrill-Lynch as a financial 9 consultant. After receiving all required securities licenses, I worked with individual 10 investors and small businesses in evaluating and selecting investments suitable to 11 their requirements.

12 In September of 1990, Laccepted a position with Drazen-Brubaker & 13 Associates, Inc. In April 1995 the firm of Brubaker & Associates, Inc. (BAI) was 14 formed. It includes most of the former DBA principals and Staff. Since 1990, I have 15 performed various analyses and sponsored testimony on cost of capital, cost/benefits 16 of utility mergers and acquisitions, utility reorganizations, level of operating expenses 17 and rate base, cost of service studies, and analyses relating industrial jobs and 18 economic development. I also participated in a study used to revise the financial 19 policy for the municipal utility in Kansas City, Kansas.

At BAI, I also have extensive experience working with large energy users to distribute and critically evaluate responses to requests for proposals (RFPs) for electric, steam, and gas energy supply from competitive energy suppliers. These analyses include the evaluation of gas supply and delivery charges, cogeneration and/or combined cycle unit feasibility studies, and the evaluation of third-party asset/supply management agreements. I have also analyzed commodity pricing

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indices and forward pricing methods for third party supply agreements. Continuing, I
 have also conducted regional electric market price forecasts.

In addition to our main office in St. Louis, the firm also has branch offices in
Phoenix, Arizona; Corpus Christi, Texas; and Plano, Texas.

## 5 Q HAVE YOU EVER TESTIFIED BEFORE A REGULATORY BODY?

6 А Yes. I have sponsored testimony on cost of capital, revenue requirements, cost of 7 service and other issues before the regulatory commissions in Arizona, California, 8 Delaware, Georgia, Illinois, Indiana, Iowa, Louisiana, Michigan, Missouri, New 9 Mexico, New Jersey, Oklahoma, Oregon, Tennessee, Texas, Utah, Vermont, 10 Washington, West Virginia, Wisconsin, Wyoming, and before the provincial regulatory 11 boards in Alberta and Nova Scotia, Canada. I have also sponsored testimony before 12 the Board of Public Utilities in Kansas City, Kansas; presented rate setting position 13 reports to the regulatory board of the municipal utility in Austin, Texas, and Salt River 14 Project, Arizona, on behalf of industrial customers; and negotiated rate disputes for 15 industrial customers of the Municipal Electric Authority of Georgia in the LaGrange, 16 Georgia district.

17QPLEASEDESCRIBEANYPROFESSIONALREGISTRATIONSOR18ORGANIZATIONS TO WHICH YOU BELONG.

A Learned the designation of Chartered Financial Analyst (CFA) from the Charter
 Financial Analyst Institute. The CFA charter was awarded after successfully
 completing three examinations which covered the subject areas of financial
 accounting, economics, fixed income and equity valuation and professional and
 ethical conduct. Lam a member of CFA's Financial Analyst Society.

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## Accuracy of Interest Rate Forecasts (Long-Term Treasury Bond Yields - Projected Vs. Actual)

		F	Publication D	ata	Actual Yield	Projected Yield	
		Current	Projected		in Projected	Higher (Lower)	Actual Yields
<u>Line</u>	<u>Date</u>	<u>Yield</u>	Yield	For Quarter	<u>Quarter</u>	<u>Than Actual Yield</u>	<u>Differential</u>
		(1)	(2)	(3)	(4)	(5)	(6)
4	Dae 00	5.8%	5.8%	1Q, 02	5.6%	0.2%	0.2%
1	Dec-00				5.8%	-0.2%	-0.1%
2 3	Mar-01 Jun-01	5.7% 5.4%	5.6% 5.8%	2Q, 02 3Q, 02	5.0% 5.2%	0.6%	0.2%
3 4		5.4% 5.7%	5.6% 5.9%	3Q, 02 4Q, 02	5.1%	0.8%	0.6%
5	Sep-01 Dec-01	5.7%	5.9% 5.7%	4Q, 02 1Q, 03	4.9%	0.8%	0.6%
6	Mar-02	5.3%	5.9%	2Q, 03	4.9%	1.2%	0.6%
0 7						1.2 %	0.8%
	Jun-02	5.6%	6.2%	3Q, 03	5.2%		0.6%
8	Sep-02	5.8%	5.9%	4Q, 03	5.2%	0.7%	
9	Dec-02	5.2%	5.7%	1Q, 04	4.9%	0.8%	0.3%
10	Mar-03	5.1%	5.7%	2Q, 04	5.4%	0.3%	-0.3%
11	Jun-03	5.0%	5.4%	30, 04	5.1%	0.3%	-0.1%
12	Sep-03	4.7%	5.8%	4Q, 04	4.9%	0.9%	-0.2%
13	Dec-03	5.2%	5.9%	1Q, 05	4.8%	1.1%	0.4%
14	Mar-04	5.2%	5.9%	2Q, 05	4.6%	1.3%	0.6%
15	Jun-04	4.9%	6.2%	3Q, 05	4.5%	1.7%	0.4%
16	Sep-04	5.4%	6.0%	4Q, 05	4.8%	1.2%	0.6%
17	Dec-04	5.1%	5.8%	1Q, 06	4.6%	1.2%	0.4%
18	Mar-05	4.9%	5.6%	2Q, 06	5.1%	0.5%	-0.3%
19	Jun-05	4.8%	5.5%	3Q, 06	5.0%	0.5%	-0.2%
20	Sep-05	4.6%	5.2%	4Q, 06	4.7%	0.5%	-0.2%
21	Dec-05	4.5%	5.3%	1Q, 07	4.8%	0.5%	-0.3%
22	Jan-06	4.8%	5.3%	2Q, 07			
23	Feb-06	4.8%	5.1%	2Q, 07			
24	Mar-06	4.8%	5.1%	2Q, 07			
25	Apr-06	N/A	5.1%	3Q, 07			
26	May-06	4.6%	5.2%	3Q, 07			
27	Jun-06	4.6%	5.3%	3Q, 07			
28	Jul-06	5.1%	5.3%	4Q, 07			
29	Aug-06	5.1%	5.3%	4Q, 07			
30	Sep-06	5.1%	5.2%	4Q, 07			
31	Oct-06	5.0%	5.1%	1Q, 08			
32	Nov-06	5.0%	5.1%	1Q, 08			
33	Dec-06	5.0%	5.0%	1Q, 08			
34	Jan-07	4.7%	5.1%	2Q, 08			
35	Feb-07	4.7%	5.1%	2Q, 08			
36	Mar-07	4.7%	5.1%	2Q, 08			
37	Apr-07	4.8%	5.0%	3Q, 08			
38	May-07	4.8%	5.1%	3Q, 08			

Source:

Blue Chip Financial Forecasts, Various Dates.

## Short-Term Debt (STD) Balance

<u>Line</u>	<b>Description</b>	Amount (1)
1	Average CWIP Balance*	\$ 8,836,550
2	Average STD Balance**	\$ 162,595,417
3	STD For Capital Structure	\$ 153,758,867

Source:

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Laclede's spreadsheet provided by E-mail STD - Offset - Inventories.xls

\* CWIP - Construction Work in Progress

\*\* STD - Short-Term Debt

## Rate of Return at 9.8% ROE

Line	Description		Amount ( <u>\$_000)</u> (1)	<u>Weight</u> (2)	<u>Cost</u> (3)	Weighted <u>Cost</u> (4)
1	Long-Term Debt <sup>1</sup>	\$	390,248	<b>4</b> 1.2%	6.64%	2.7 <b>4</b> %
2	Short-Term Debt <sup>2</sup>	\$	153,759	16.2%	4.75%	0.77%
3	Preferred Stock	\$	946	0.1%	4.93%	0.00%
4	Common Equity	<u>\$</u>	402,636	<u>42.5%</u>	<u>9.80%</u>	<u>4.16%</u>
5	Total	\$	947,589	100.0%		7.67%

Source:

Mo. PSC Case No. GR-2007-, Schedule 3.

<sup>1</sup> The cost of debt was adjusted based on the repriced 7.5% Series Due November 1, 2007.

<sup>2</sup> Schedule MPG-2.

## **Embedded Cost of Debt**

<u>Line</u>	Long-term Debt	<u>Rate</u> (1)	Amount <u>Outstanding</u> (2)	Annualized <u>Cost</u> (3)
1	7.5% Series Due November 1, 2007*	6.20%	\$ 40,000	\$ 2,480.000
2	6.5% Series Due November 15, 2011	6.50%	\$ 25,000	\$ 1,625.000
3	6.5% Series Due October 15, 2012	6.50%	\$ 25,000	\$ 1,625.000
4	5.5% Series Due May 1, 2019	5.50%	\$ 50,000	\$ 2,750.000
5	7% Series Due June 1, 2029	7.00%	\$ 25,000	\$ 1,750.000
6	7.9% Series Due September 15, 2030	7.90%	\$ 30,000	\$ 2,370.000
7	6% Series Due June 1, 2034	6.00%	\$ 100,000	\$ 6,000.000
8	6.15% Series Due June 1, 2036	6.15%	\$ 55,000	\$ 3,382.500
9	Long-term Debt to Unconsolidated Affiliate Trust		\$ 46,400	\$ 3,572.800
10	Unamortized Discount, Expense, and Losses On Reacquired Debt		<u>\$(6,152</u> )	<u>\$ 364.671</u>
11	Total		\$ 390,248	\$25,919.971
12	Embedded Cost of Long-Term Debt		6.	64%

Source:

Schedule 3, Page 2.

- - -

\* The 7.5% issuance was repriced to 6.2%, based on the current 13-week average A-rated utility yield of 5.9% adjusted by 30 bps to account for floatation costs.

## Gorman's Comparable Group

				Business	200	<u>6</u>
			ured Ratings	Profile	Common Equ	<u>ity Ratios</u>
Line	<u>Gas Utility</u>	<u>S&amp;P<sup>1</sup></u>	<u>Moody's<sup>1</sup></u>	Rating <sup>3</sup>	<u>Value Line<sup>2</sup></u>	AUS
		(1)	(2)	(3)	(4)	(5)
1	AGL Resources	A-	A3	4	50%	42%
2	Atmos Energy	BBB	Baa3	4	43%	45%
3	Cascade Natural Gas	BBB+	Baa1	2	43%	43%
4	KeySpan Corp.	A+	A2	4	51%	45%
5	Laclede Group	А	A3	3	50%	58%
6	New Jersey Resources	AA-	Aa3	2	65%	51%
7	NICOR	AA	A1	3	63%	51%
8	Northwest Natural Gas	AA-	A2	1	54%	48%
9	Piedmont Natural Gas	А	A3	2	52%	47%
10	South Jersey Industries	А	Baa1	3	55%	44%
11	WGL Holdings, Inc.	AA-	A2	3	62%	51%
12	Average	Α	A3	3	53%	48%
13	Laclede Group	А	A3	3	51%⁴	43% <sup>4</sup>

Sources:

<sup>1</sup> AUS Utility Reports; April, 2007.

<sup>2</sup> The Value Line Investment Survey; March 16, 2007.

<sup>3</sup> U.S. Utilities and Power Ranking List, January 26, 2007.

<sup>4</sup> Schedule MPG-3.

## Murry's Comparable Group

				Business	<u>2005</u>	5
			ured Ratings	Profile	<u>Common Equ</u>	ity Ratios
<u>Line</u>	<u>Gas Utility</u>	<u>S&amp;P<sup>1</sup></u>	<u>Moody's<sup>1</sup></u>	<u>Rating<sup>3</sup></u>	<u>Value Line<sup>2</sup></u>	AUS
		(1)	(2)	(3)	(4)	(5)
1	New Jersey Resources	AA-	Aa3	2	65%	51%
2	NICOR	AA	A1	3	63%	51%
3	Northwest Natural Gas	AA-	A2	1	54%	48%
4	Piedmont Natural Gas	А	A3	2	52%	47%
5	South Jersey Industries	А	Baa1	3	55%	44%
6	Southwest Gas	BBB-	Baa3	3	39%	41%
7	WGL Holdings, Inc.	AA-	A2	3	62%	51%
8	Average	A+	A3	2	56%	48%
9	Laclede Group	А	A3	3	51% <sup>4</sup>	43%⁴

Sources:

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<sup>1</sup> AUS Utility Reports; April, 2007.
<sup>2</sup> The Value Line Investment Survey; March 16, 2007.
<sup>3</sup> U.S. Utilities and Power Ranking List, January 26, 2007.

<sup>4</sup> Schedule MPG-3.

## **Growth Rate Estimates**

<u>Line</u>	<u>Gas Utility</u>	Zacks Estimated <u>Growth %<sup>1</sup></u> (1)	Zack <del>s</del> Number of <u>Estimates<sup>1</sup></u> (2)	Reuters Estimated <u>Growth %<sup>2</sup></u> (3)	Reuters Number of <u>Estimates<sup>2</sup></u> (4)	Thomson Estimated <u>Growth %<sup>3</sup></u> (5)	Thomson Number of <u>Estimates<sup>3</sup></u> (6)	AVG of Growth <u>Rates</u> (7)
1	AGL Resources	5.00%	2	4.66%	8	4.10%	5	4.59%
2	Atmos Energy	5.25%	4	5.19%	8	6.17%	3	5.54%
3	Cascade Natural Gas	N/A	N/A	3.00%	1	N/A	N/A	3.00%
4	KeySpan Corp.	3.50%	2	3.40%	5	3.00%	2	3.30%
5	Laclede Group	N/A	N/A	3.00%	1	3.00%	1	3.00%
6	New Jersey Resources	6.00%	2	5.20%	5	5.33%	3	5.51%
7	NICOR	2.00%	1	3.30%	5	1.50%	1	2.27%
8	Northwest Natural Gas	5.33%	3	5.33%	3	4.88%	4	5.18%
9	Piedmont Natural Gas	5.50%	4	4.64%	5	5.10%	2	5.08%
10	South Jersey Industries	6.50%	2	6.33%	3	6.75%	4	6.53%
11	WGL Holdings, Inc.	3.00%	1	3.33%	3	3.50%	4	3.28%
12	Average	4.68%	2	4.31%	4	4.33%	3	4.30%

Sources:

 <sup>&</sup>lt;sup>1</sup> www.zackselite.com, Detailed Research on April 23, 2007.
 <sup>2</sup> www.investor.reuters.com, Earnings Estimates on April 23, 2007.
 <sup>3</sup> http://ec.thomsonfn.com, Earnings Estimates on April 23, 2007.

## Growth Rate Estimates (Murry)

<u>Line</u>	<u>Gas Utility</u>	Zacks Estimated <u>Growth %<sup>1</sup></u> (1)	Zacks Number of <u>Estimates<sup>1</sup></u> (2)	Reuters Estimated <u>Growth %<sup>2</sup></u> (3)	Reuters Number of <u>Estimates<sup>2</sup></u> (4)	Thomson Estimated <u>Growth %<sup>3</sup></u> (5)	Thomson Number of <u>Estimates<sup>3</sup></u> (6)	AVG of Growth <u>Rates</u> (7)
1	New Jersey Resources	6.00%	2	5.20%	5	5.33%	3	5.51%
2	NICOR	2.00%	1	3.30%	5	1.50%	1	2.27%
3	Northwest Natural Gas	5.33%	3	5.33%	3	4.88%	4	5.18%
4	Piedmont Natural Gas	5.50%	4	4.64%	5	5.10%	2	5.08%
5	South Jersey Industries	6.50%	2	6.33%	3	6.75%	4	6.53%
6	Southwest Gas	5.00%	1	5.00%	2	N/A	N/A	5.00%
7	WGL Holdings, Inc.	3.00%	1	3.33%	3	3.50%	4	3.28%
8	Average	4.76%	2	4.73%	4	4.51%	3	4.69%

Sources:

<sup>1</sup> www.zackselite.com, Detailed Research on April 23, 2007.

<sup>2</sup> www.investor.reuters.com, Earnings Estimates on April 23, 2007.

<sup>3</sup> http://ec.thomsonfn.com, Earnings Estimates on April 23, 2007.

## **Constant Growth DCF Model**

<u>Line</u>	<u>Gas Utility</u>	 eek AVG <u>k Price<sup>1</sup></u> (1)	AVG (%) <u>Growth</u> (2)	Div	nnual <u>idend²</u> (3)	Adjusted <u>Yield</u> (4)	Constant <u>Growth DCF</u> (5)
1	AGL Resources	\$ 41.54	4.59%	\$	1.64	4.13%	8.72%
2	Atmos Energy	\$ 31.72	5.54%	\$	1.28	4.26%	9.80%
3	Cascade Natural Gas	\$ 26.13	3.00%	\$	0.96	3.78%	6.78%
4	KeySpan Corp.	\$ 41.05	3.30%	\$	1.90	4.78%	8.08%
5	Laclede Group	\$ 31.45	3.00%	\$	1.46	4.78%	7.78%
6	New Jersey Resources	\$ 49.24	5.51%	\$	1.52	3.26%	8.77%
7	NICOR	\$ 47.64	2.27%	\$	1.86	3.99%	6.26%
8	Northwest Natural Gas	\$ 43.91	5.18%	\$	1.42	3.40%	8.58%
9	Piedmont Natural Gas	\$ 26.29	5.08%	\$	0.96	3.84%	8.92%
10	South Jersey Industries	\$ 35.49	6.53%	\$	0.98	2.94%	9.47%
11	WGL Holdings, Inc.	\$ 31.87	3.28%	\$	1.36	4.41%	7.68%
12	Average	\$ 36.94	4.30%	\$	1.39	3.96%	8.3%

Sources:

<sup>1</sup> http://moneycentral.msn.com, downloaded on April 23, 2007. <sup>2</sup> The Value Line Investment Survey; March 16, 2007.

## **Constant Growth DCF Model (Murry)**

<u>Line</u>	<u>Gas Utility</u>	 /eek AVG <u>ck Price<sup>1</sup></u> (1)	AVG (%) <u>Growth</u> (2)	 nnual <u>idend<sup>2</sup></u> (3)	Adjusted <u>Yield</u> (4)	Constant <u>Growth DCF</u> (5)
1	New Jersey Resources	\$ 49.24	5.51%	\$ 1.52	3.26%	8.77%
2	NICOR	\$ 47.64	2.27%	\$ 1.86	3.99%	6.26%
3	Northwest Natural Gas	\$ 43.91	5.18%	\$ 1.42	3.40%	8.58%
4	Piedmont Natural Gas	\$ 26.29	5.08%	\$ 0.96	3.84%	8.92%
5	South Jersey Industries	\$ 35.49	6.53%	\$ 0.98	2.94%	9.47%
6	Southwest Gas	\$ 38.38	5.00%	\$ 0.86	2.35%	7.35%
7	WGL Holdings, Inc.	\$ 31.87	3.28%	\$ 1.36	4.41%	7.68%
8	Average	\$ 38.97	4.69%	\$ 1.28	3.46%	8.1%

Sources:

<sup>1</sup> http://moneycentral.msn.com, downloaded on April 23, 2007. <sup>2</sup> The Value Line Investment Survey; March 16, 2007.

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## **GDP and Dividend Growth Rates**

		1						
	Past	Past	3-5 Years	Past 5	Past 10	3-5 Years	Past	Past
Gas Utility	5 Years <sup>1</sup> (1)	<u>10 Years</u> (2)	<u>Projection<sup>1</sup> (3)</u>	<u>Years<sup>2</sup> (4)</u>	<u>Years<sup>2</sup> (5)</u>	Projection <sup>2</sup> (6)	5 Years <sup>1</sup> (7)	<u>10 Years</u> (8)
AGL Resources	2.0%	1.5%	5.5%					
Atmos Energy	2.0%	3.0%	1.5%					
Cascade Natural Gas	N/A	1.0%	0.5%					
KeySpan Corp.	1.5%	3.0%	2.5%					
Laclede Group	0.5%	1.0%	2.5%					
New Jersey Resources	3.5%	3.0%	3.0%					
NICOR	3.5%	4.0%	1.0%					
Northwest Natural Gas	1.0%	1.0%	4.0%					
Piedmont Natural Gas	5.0%	5.5%	4.0%					
South Jersey Industries	2.5%	1.5%	5.5%					
WGL Holdings, Inc.	1.5%	1.5%	1.5%					
Average	2.3%	2.4%	2.9%	2.6%	2.5%	2.2%	5.0%	5.4%
	Gas Utility AGL Resources Atmos Energy Cascade Natural Gas KeySpan Corp. Laclede Group New Jersey Resources New Jersey Resources NICOR Northwest Natural Gas South Jersey Industries WGL Holdings, Inc.		Past (1) (1) 2.0% 2.0% 3.5% 3.5% 1.5% 2.5% 2.3%	Past         Past           5 Years <sup>1</sup> (1)         (2)           (1)         (2)         (2)           2.0%         1.5%         3.0%           N/A         1.0%         3.0%           N/A         1.0%         3.0%           1.5%         3.0%         3.0%           3.5%         3.0%         3.0%           1.0%         1.0%         3.0%           3.5%         3.0%         3.0%           1.0%         1.0%         1.0%           2.5%         1.5%         1.5%           2.5%         2.5%         2.4%	PastPastPast3.5 Years5 Years(1)(2)(3)(1)(2)(3)(1)(2)(3)2.0%1.5%5.5%2.0%3.0%1.5%1.5%3.0%2.5%0.5%1.0%2.5%3.5%3.0%3.0%3.5%3.0%2.5%1.0%1.0%1.0%1.0%1.0%1.0%1.5%1.5%4.0%2.5%1.5%1.5%2.3%2.4%2.9%	PastPastPastPast 55 Years10 Years10 YearsYears(1)(2)(3)(4)(1)(2)(3)(4)(1)(2)(3)(4)(1)(2)(3)(4)(2)(3)(4)(4)(2)(3)(4)(4)(1)(1)(0)(1)(2)(1)(0)(1)(1)(1)(1)(1)(1)(1)(1)(4)(1)(1)(4)(1)(1)(4)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(1)(2)(1)(2)(2)(1)(2) <td>PastPastPast 5Past 105 Years10 Years10 YearsYears(1)(2)(3)(4)(5)(1)(2)(3)(4)(5)2.0%1.5%5.5%7.49(5)2.0%1.5%1.5%7.5%(4)(5)0.5%1.0%0.5%1.0%2.5%1.5%3.0%2.5%3.0%2.5%1.5%3.0%2.5%1.0%1.0%1.5%1.0%1.0%1.0%1.0%1.0%1.0%2.5%2.5%1.5%1.5%2.6%2.5%1.5%1.5%2.4%2.3%2.4%2.9%2.6%</td> <td>PastPast3.5 YearsPast 103.5 Years5 Years10(2)(3)(4)(5)(6)(1)(2)(3)(4)(5)(6)(1)(2)3.0%1.5%5.5%(4)(5)2.0%3.0%1.5%5.5%(4)(5)(6)2.0%3.0%1.5%2.5%(4)(5)(6)1.5%3.0%2.5%2.5%(4)(5)(6)1.5%3.0%2.5%4.0%1.0%2.5%3.5%4.0%1.0%1.0%2.5%1.0%1.0%1.0%2.5%4.0%1.0%1.0%5.5%2.5%4.0%1.0%1.0%2.5%2.5%2.5%1.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%1.5%2.5%2.5%2.5%2.5%2.3%2.4%2.5%2.3%2.4%2.5%2.3%2.4%2.5%2.3%2.4%2.5%2.3%2.4%2.5%2.3%2.5%2.5%2.3%2.5%2.5%2.3%2.5%2.5%2.3%2.5%2.5%2.3%2.5%2.5%2.3%2.5%2.5%2.3%2.5%2.5%2.3%2.4%2.5%2.3%2.4%2.5%2.3%&lt;</td>	PastPastPast 5Past 105 Years10 Years10 YearsYears(1)(2)(3)(4)(5)(1)(2)(3)(4)(5)2.0%1.5%5.5%7.49(5)2.0%1.5%1.5%7.5%(4)(5)0.5%1.0%0.5%1.0%2.5%1.5%3.0%2.5%3.0%2.5%1.5%3.0%2.5%1.0%1.0%1.5%1.0%1.0%1.0%1.0%1.0%1.0%2.5%2.5%1.5%1.5%2.6%2.5%1.5%1.5%2.4%2.3%2.4%2.9%2.6%	PastPast3.5 YearsPast 103.5 Years5 Years10(2)(3)(4)(5)(6)(1)(2)(3)(4)(5)(6)(1)(2)3.0%1.5%5.5%(4)(5)2.0%3.0%1.5%5.5%(4)(5)(6)2.0%3.0%1.5%2.5%(4)(5)(6)1.5%3.0%2.5%2.5%(4)(5)(6)1.5%3.0%2.5%4.0%1.0%2.5%3.5%4.0%1.0%1.0%2.5%1.0%1.0%1.0%2.5%4.0%1.0%1.0%5.5%2.5%4.0%1.0%1.0%2.5%2.5%2.5%1.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%2.5%1.5%2.5%2.5%2.5%2.5%2.3%2.4%2.5%2.3%2.4%2.5%2.3%2.4%2.5%2.3%2.4%2.5%2.3%2.4%2.5%2.3%2.5%2.5%2.3%2.5%2.5%2.3%2.5%2.5%2.3%2.5%2.5%2.3%2.5%2.5%2.3%2.5%2.5%2.3%2.5%2.5%2.3%2.4%2.5%2.3%2.4%2.5%2.3%<

Sources: <sup>1</sup> The Value Line Investment Survey; May 12, June 2, June 30, 2006. <sup>2</sup> The Value Line Investment Survey; March 16, 2007.

Schedule MPG-8 Page 1 of 2

# **GDP and Dividend Growth Rates (Murry)**

			Dividend Growth	wth		Inflation (CPI)*	CPI)*	Nominal GDP*	al GDP*
Line	Gas Utility	Past <u>5 Years</u> 1 (1)	Past <u>10 Years<sup>1</sup> (2)</u>	3-5 Years <u>Projection<sup>1</sup></u> (3)	Past 5 <u>Years<sup>2</sup> (4)</u>	Past 10 <u>Years<sup>2</sup> (5</u> )	3-5 Years <u>Projection<sup>2</sup></u> (6)	Past <u>5 Years<sup>1</sup> (7)</u>	Past <u>10 Years<sup>1</sup></u> (8)
Ţ						Ì			Ì
	New Jersey Resources	3.5%	3.0%	3.0%					
7	NICOR	3.5%	4.0%	1.0%					
ო	Northwest Natural Gas	1.0%	1.0%	4.0%					
4	Piedmont Natural Gas	5.0%	5.5%	4.0%					
ß	South Jersey Industries	2.5%	1.5%	5.5%					
9	Southwest Gas	N/A	0.5%	1.5%					
7	WGL Holdings, Inc.	1.5%	1.5%	1.5%					
ø	Average	2.8%	2.4%	2.9%	2.6%	2.5%	2.2%	5.0%	5.4%
Ιď	Sources.								

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Sources: <sup>1</sup>The Value Line Investment Survey; May 12, June 2, June 30, 2006. <sup>2</sup>The Value Line Investment Survey; March 16, 2007. Schedule MPG-8 Page 2 of 2

## **Two-Stage Growth DCF Model**

<u>Line</u>	<u>Gas Utility</u>	-	/eek AVG <u>ck Price<sup>1</sup></u> (1)	AVG (%) <u>Growth</u> (2)	Long-term <u>GDP Growth<sup>3</sup></u> (3)	nnual i <u>dend<sup>2</sup></u> (4)	Two-Stage <u>Growth DCF</u> (5)
1	AGL Resources	\$	41.54	4.59%	5.10%	\$ 1.64	9.15%
2	Atmos Energy	\$	31.72	5.54%	5.10%	\$ 1.28	9.42%
3	Cascade Natural Gas	\$	26.13	3.00%	5.10%	\$ 0.96	8.61%
4	KeySpan Corp.	\$	41.05	3.30%	5.10%	\$ 1.90	9.59%
5	Laclede Group	\$	31.45	3.00%	5.10%	\$ 1.46	9.55%
6	New Jersey Resources	\$	49.24	5.51%	5.10%	\$ 1.52	8.40%
7	NICOR	\$	47.64	2.27%	5.10%	\$ 1.86	8.71%
8	Northwest Natural Gas	\$	43.91	5.18%	5.10%	\$ 1.42	8.51%
9	Piedmont Natural Gas	\$	26.29	5.08%	5.10%	\$ 0.96	8.93%
10	South Jersey Industries	\$	35.49	6.53%	5.10%	\$ 0.98	8.18%
11	WGL Holdings, Inc.	\$	31.87	3.28%	5.10%	\$ 1.36	9.23%
12	Average	\$	36.94	4.30%	5.10%	\$ 1.39	8.9%

Sources:

- <sup>1</sup> http://moneycentral.msn.com, downloaded on April 23, 2007.
- <sup>2</sup> The Value Line Investment Survey; March 16, 2007.
- <sup>3</sup> Blue Chip Economic Indicators; March 10, 2007 at 15.

## Two-Stage Growth DCF Model (Murry)

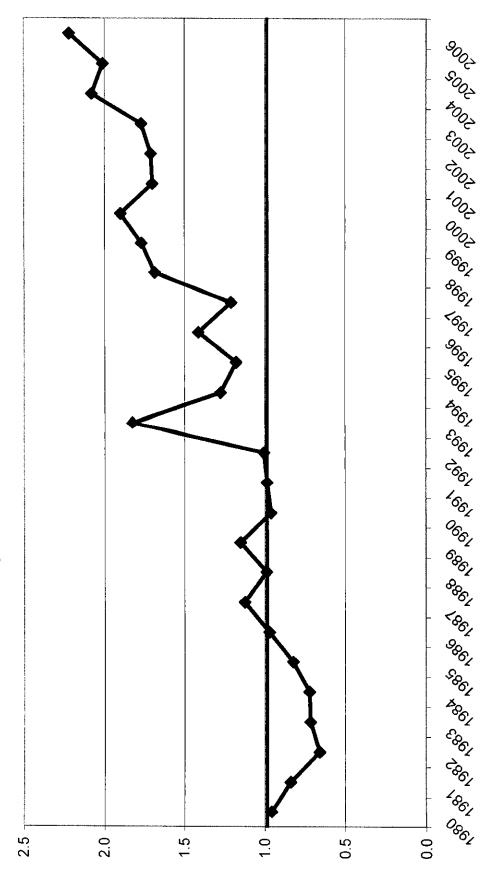
<u>Line</u>	<u>Gas Utility</u>	13-Week AVG <u>Stock Price<sup>1</sup></u> (1)		AVG (%) <u>Growth</u> (2)	Long-term <u>GDP Growth<sup>3</sup></u> (3)	Annual <u>Dividend<sup>2</sup></u> (4)		Two-Stage <u>Growth DCF</u> (5)	
1	New Jersey Resources	\$	49.24	5.51%	5.10%	\$	1.52	8.40%	
2	NICOR	\$	47.64	2.27%	5.10%	\$	1.86	8.71%	
3	Northwest Natural Gas	\$	43.91	5.18%	5.10%	\$	1.42	8.51%	
4	Piedmont Natural Gas	\$	26.29	5.08%	5.10%	\$	0.96	8.93%	
5	South Jersey Industries	\$	35.49	6.53%	5.10%	\$	0.98	8.18%	
6	Southwest Gas	\$	38.38	5.00%	5.10%	\$	0.86	7.41%	
7	WGL Holdings, Inc.	\$	31.87	3.28%	5.10%	\$	1.36	9.23%	
8	Average	\$	38.97	4.69%	5.10%	\$	1.28	8.5%	

Sources:

<sup>1</sup> http://moneycentral.msn.com, downloaded on April 23, 2007. <sup>2</sup> The Value Line Investment Survey; March 16, 2007.

<sup>3</sup> Blue Chip Economic Indicators; March 10, 2007 at 15.

## Gas Utility Index (Market/Book Ratio)



Sources: 2002-2006: AUS Utility Reports. 1980 - 2000: Mergent Public Utility Manual, 2003.

## Equity Risk Premium - Treasury Bond

<u>Line</u>	Date	Treasury <u>Bond Yield<sup>1</sup></u> (1)	Authorized Gas <u>Returns<sup>2</sup></u> (2)	Indicated Risk <u>Premium</u> (3)
1	1986	7.78%	13.46%	5.68%
2	1987	8.59%	12.74%	4.15%
3	1988	8.96%	12.85%	3.89%
4	1989	8.45%	12.88%	4.43%
5	1990	8.61%	12.67%	4.06%
6	1991	8.14%	12.46%	4.32%
7	1992	7.67%	12.01%	4.34%
8	1993	6.59%	11.35%	4.76%
9	1994	7.37%	11.35%	3.98%
10	1995	6.88%	11.43%	4.55%
11	1996	6.71%	11.19%	4.48%
12	1997	6.61%	11.29%	4.68%
13	1998	5.58%	11.51%	5.93%
14	1999	5.87%	10.66%	4.79%
15	2000	5.94%	11.39%	5.45%
16	2001	5.49%	10.95%	5.46%
17	2002	5.43%	11.03%	5.60%
18	2003	4.96%	10.99%	6.03%
19	2004	5.05%	10.59%	5.54%
20	2005	4.65%	10.46%	5.81%
21	2006	4.91%	10.44%	5.53%
22	Average	6.68%	11. <b>60</b> %	4.93%

Sources:

<sup>1</sup> Economic Report of the President 2007: Table 73 at 316. The yields from 2002 to 2005 represent the 20-Year Treasury yields obtained from the Federal Reserve Bank.

<sup>2</sup> Regulatory Research Associates, Inc., Regulatory Focus, Jan. 85 - Dec. 06.

## Equity Risk Premium - Utility Bond

<u>Line</u>	<u>Date</u>	Average "A" Rating Utility <u>Bond Yield<sup>1</sup></u> (1)	Authorized Gas <u>Returns<sup>2</sup></u> (2)	Indicated Risk <u>Premium</u> (3)
1	1986	9.58%	13.46%	3.88%
2	1987	10.10%	12.74%	2.64%
3	1988	10.49%	12.85%	2.36%
4	1989	9.77%	12.88%	3.11%
5	1990	9.86%	12.67%	2.81%
6	1991	9.36%	12.46%	3.10%
7	1992	8.69%	12.01%	3.32%
8	1993	7.59%	11.35%	3.76%
9	1994	8.31%	11.35%	3.04%
10	1995	7.89%	11.43%	3.54%
11	1996	7.75%	11.19%	3.44%
12	1997	7.60%	11.29%	3.69%
13	1998	7.04%	11.51%	4.47%
14	1999	7.62%	10.66%	3.04%
15	2000	8.24%	11.39%	3.15%
16	2001	7.76%	10.95%	3.19%
17	2002	7.37%	11.03%	3.66%
18	2003	6.58%	10.99%	4.41%
19	2004	6.16%	10.59%	4.43%
20	2005	5.65%	10.46%	4.81%
21	2006	6.07%	10.44%	4.37%
22	Average	8.17%	11.60%	3.53%

Sources:

<sup>1</sup> Mergent Public Utility Manual, Mergent Weekly News Reports, 2003. The utility yields for the period 2001-2006 were obtained from the Mergent Bond Record.

<sup>2</sup> Regulatory Research Associates, Inc., Regulatory Focus, Jan. 85 - Dec. 06.

## **Annual Average Yields**

			Public Utility Bond Yields				Corporate Bond Yields				
<u>Line</u>	Year	T-Bond <u>Yield<sup>1</sup></u>	<u>A<sup>2</sup></u>	<u>Baa<sup>2</sup></u>	A-T-Bond Spread	Baa-T-Bond Spread	<u>Aaa<sup>1</sup></u>	<u>Baa<sup>1</sup></u>	Aaa-T-Bond <u>Spread</u>	Baa-T-Bond Spread	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1	1980	11.27%	13.34%	13.95%	2.07%	2.68%	11.94%	13.67%	1.73%	2.40%	
2	1981	13.45%	15.95%	16.60%	2.50%	3.15%	14.17%	16.04%	1.87%	2.59%	
3	1982	12.76%	15.86%	16.45%	3.10%	3.69%	13.79%	16.11%	2.32%	3.35%	
4	1983	11.18%	13.66%	14.20%	2.48%	3.02%	12.04%	13.55%	1.51%	2.37%	
5	1984	12.41%	14.03%	14.53%	1.62%	2.12%	12.71%	14.19%	1.48%	1.78%	
6	1985	10.79%	12.47%	12.96%	1.68%	2.17%	11.37%	12.72%	1.35%	1.93%	
7	1986	7.78%	9.58%	10.00%	1.80%	2.22%	9.02%	10.39%	1.37%	2.61%	
8	1987	8.59%	10.10%	10.53%	1.51%	1.94%	9.38%	10.58%	1.20%	1.99%	
9	1988	8.96%	10.49%	11.00%	1.53%	2.04%	9.71%	10.83%	1.12%	1.87%	
10	1989	8.45%	9.77%	9.97%	1.32%	1.52%	9.26%	10.18%	0.92%	1.73%	
11	1990	8.61%	9.86%	10.06%	1.25%	1.45%	9.32%	10.36%	1.04%	1.75%	
12	1991	8.14%	9.36%	9.55%	1.22%	1.41%	8.77%	9.80%	1.03%	1.66%	
13	1992	7.67%	8.69%	8.86%	1.02%	1.19%	8.14%	8.98%	0.84%	1.31%	
14	1993	6.59%	7.59%	7.91%	1.00%	1.32%	7.22%	7.93%	0.71%	1.34%	
15	1994	7.37%	8.31%	8.63%	0.94%	1.26%	7.96%	8.62%	0.66%	1.25%	
16	1995	6.88%	7.89%	8.29%	1.01%	1.41%	7.59%	8.20%	0.61%	1.32%	
17	1996	6.71%	7.75%	8.17%	1.04%	1.46%	7.37%	8.05%	0.68%	1.34%	
18	1997	6.61%	7.60%	7.95%	0.99%	1.34%	7.26%	7.86%	0.60%	1.25%	
19	1998	5.58%	7.04%	7.26%	1.46%	1.68%	6.53%	7.22%	0.69%	1.64%	
20	1999	5.87%	7.62%	7.88%	1.75%	2.01%	7.04%	7.87%	0.83%	2.00%	
21	2000	5.94%	8.24%	8.36%	2.30%	2.42%	7.62%	8.36%	0.74%	2.42%	
22	2001	5.49%	7.78%	8.02%	2.29%	2.53%	7.08%	7.95%	0.87%	2.46%	
23	2002	5.42%	7.36%	8.02%	1.94%	2.60%	6.49%	7.80%	1.31%	2.38%	
24	2003	4.96%	6.57%	6.83%	1.61%	1.87%	5.67%	6.77%	1.10%	1.81%	
25	2004	5.05%	6.14%	6.37%	1.09%	1,32%	5.63%	6.39%	0.58%	1.34%	
26	2005	4.65%	5.66%	5.93%	1.01%	1.29%	5.24%	6.06%	0.59%	1.41%	
27	2006	4.91%	6.07%	6.32%	1.16%	1.41%	5.59%	6.48%	0.68%	1.57%	
28	Average	7.85%	9.44%	9.80%	1.58%	1.94%	8.66%	9.74%	1.07%	1.90%	

Treasury Vs. Corporate & Treasury Vs. Utility 4.00% 3.50% 3.00% 2.50% 2.00% 1.50% 1.00% 0.50% 0.00% 1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2002 2004 2006 2000 A-T-Bond Utility Spread Baa-T-Bond Utility Spread Aaa-T-Bond Corporate Stread Baa-T-Bond Corporate Spread

Yield Spreads

Notes:

<sup>1</sup> Economic Report of the President 2007: Table 73 at 316. The yields from 2002 to 2005

represent the 20-Year Treasury yields obtained from the Federal Reserve Bank.

<sup>2</sup> Mergent Public Utility Manual 2003. Moodys Daily News Reports.

## Series "A" and "Baa" Utility Bond Yields

<u>Line</u>	Date	"A" Rating Utility <u>Bond Yield</u> (1)	"Baa" Rating Utility <u>Bond Yield</u> (2)
1	04/20/07	5.94%	6.21%
2	04/12/07	6.02%	6.30%
3	04/05/07	5.99%	6.27%
4	03/30/07	5.97%	6.25%
5	03/22/07	5.91%	6.18%
6	03/16/07	5.82%	6.09%
7	03/09/07	5.85%	6.09%
8	03/02/07	5.77%	6.00%
9	02/23/07	5.90%	6.09%
10	02/16/07	5.87%	5.88%
11	02/09/07	5.96%	6.16%
12	02/02/07	6.01%	6.22%
13	01/26/07	6.07%	6.26%
14	Average	5.93%	6.15%

Source:

www.moodys.com, Bond Yields and Key Indicators.

## **Comparable Group Beta**

			_	Historia	al Beta			Current
<u>Line</u>	Electric Utility	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>5-Yr. AVG</u>	<u>Beta</u>
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	AGL Resources	0.70	0.75	0.80	0.85	0.95	0.81	0.95
2	Atmos Energy	0.60	0.65	0.65	0.70	0.75	0.67	0.80
3	Cascade Natural Gas	0.65	0.65	0.75	0.75	0.85	0.73	0.85
4	KeySpan Corp.	0.65	0.70	0.75	0.80	0.85	0.75	0.85
5	Laclede Group	0.60	0.65	0.70	0.75	0.85	0.71	0.85
6	New Jersey Resources	0.65	0.65	0.70	0.75	0.80	0.71	0.80
7	NICOR	0.80	0.95	1.00	1.10	1.20	1.01	1.30
8	Northwest Natural Gas	0.60	0.60	0.65	0.70	0.75	0.66	0.75
9	Piedmont Natural Gas	0.65	0.70	0.75	0.75	0.80	0.73	0.80
10	South Jersey Industries	0.50	0.50	0.55	0.60	0.70	0.57	0.70
11	WGL Holdings, Inc.	0.65	0.65	0.75	0.80	0.80	0.73	0.85
12	Average	0.64	0.68	0.73	0.78	0.85	0.73	0.86
13	Median	0.65	0.65	0.75	0.75	0.80	0.73	0.85

Source:

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The Value Line Investment Survey; March 16, 2007.

## Comparable Group Beta (Murry)

		Historical Beta						Current
<u>Line</u>	Electric Utility	<u>2002</u> (1)	<u>2003</u> (2)	<u>2004</u> (3)	<u>2005</u> (4)	<u>2006</u> (5)	<u>5-Yr. AVG</u> (6)	<u>Beta</u> (7)
1	New Jersey Resources	0.65	0.65	0.70	0.75	0.80	0.71	0.80
2	NICOR	0.80	0.95	1.00	1.10	1.20	1.01	1.30
3	Northwest Natural Gas	0.60	0.60	0.65	0.70	0.75	0.66	0.75
4	Piedmont Natural Gas	0.65	0.70	0.75	0.75	0.80	0.73	0.80
5	South Jersey Industries	0.50	0.50	0.55	0.60	0.70	0.57	0.70
6	Southwest Gas	0.70	0.70	0.80	0.75	0.85	0.76	0.85
7	WGL Holdings, Inc.	0.65	0.65	0.75	0.80	0.80	0.73	0.85
8	Average	0.65	0.68	0.74	0.78	0.84	0.74	0.86
9	Median	0.65	0.65	0.75	0.75	0.80	0.73	0.80

Source:

The Value Line Investment Survey; March 16, 2007.

## **CAPM Return Estimate**

<u>Line</u>	Description	Historical <u>Premium</u> (1)
1	Risk Free Rate <sup>1</sup>	5.0%
2	Risk Premium <sup>2</sup>	6.5%
3	Beta <sup>3</sup>	0.83
4	CAPM	10.4%
<u>Line</u>	<u>Description</u>	Prospective <u>Premium</u> (1)
<u>Line</u> 5	Description Risk Free Rate <sup>1</sup>	Premium
		<u>Premium</u> (1)
5	Risk Free Rate <sup>1</sup>	<u>Premium</u> (1) 5.0%
5	Risk Free Rate <sup>1</sup> Risk Premium <sup>2</sup>	<u>Premium</u> (1) 5.0% 6.6%

Sources:

<sup>1</sup> Blue Chip Financial Forecasts; April 1, 2007 at 2.
 <sup>2</sup> SBBI; 2007 at pp. 31 & 120.
 <sup>3</sup> The Value Line Investment Survey; March 16, 2007.

## S&P Credit Rating Financial Ratios at ROE of 9.8%

<u>Line</u>	Description	Equit	at 9.8% <u>γ Return</u> (1)	S&P "A" Rating (BP: 3) <u>Benchmark*</u> (2)	S&P "BBB" Rating (BP: 3) <u>Benchmark*</u> (3)	Reference (4)
1	Rate Base	\$	701,420			Schedule 1, Page 1 of 1
2	Weighted Common Return		4.16%			Page 2, Line 4, Col. 4.
3	Income to Common	\$	29,208			Line1 x Line 2.
4	Depreciation & Amortization	\$	34,666			Schedule 4, Page 1 of 1.
5	Deferred Income Tax Plus ITC	\$	2,043			Schedule 6, page 3 of 3
6	Funds from Operations (FFO)	\$	65,917			Sum of Line 3 though Line 5.
7	Weighted Interest Rate		3.51%			Page 2, Line 1 + Line 2 , Col. 4.
8	Interest Expense	\$	24,591			Line 1 x Line 7.
9	FFO Plus Interest	\$	90,508			Line 6 + Line 8.
10	FFO Interest Coverage		3.7x	3.5x - 2.5x	2.5x - 1.5x	Line 9 / Line 8.
11	Total Debt Ratio		57%	50% - 55%	55% - 65%	Page 2, Line 1 + Line 2, Col. 2.
12	FFO to Total Debt	L	16%	25% - 15%	15% - 10%	Line 6 / (Line 1 x Line 11).

Source:

\* Standard and Poors. New Business Profile Scores Assigned to U.S. Utility and Power Companies; Financial Guidelines Revised; June 2, 2004.