Exhibit No.:
Issue(s):
Witness/Type of Exhibit:
Sponsoring Party:
Case No.:

Rate of Return
Burdette/Direct
Public Counsel
GR-98-374

DIRECT TESTIMONY

OF

MARK BURDETTE

FILED

AUG 14 1998

Missouri Public
Service Commission

Submitted on Behalf of
the Office of the Public Counsel

LACLEDE GAS COMPANY

Case No. GR-98-374

August 14, 1998

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Laclede Gas Company's)
Tariff Sheets Designed to Increase Rates)   Case No. GR-98-374
for Gas Service Provided to Customers in)
the Missouri Service Area of the Company)

AFFIDAVIT OF MARK BURDETTE
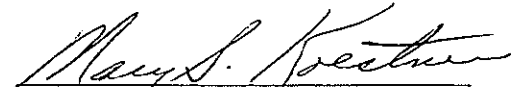
STATE OF MISSOURI   )
) ss
COUNTY OF COLE   )

Mark Burdette, of lawful age and being first duly sworn, deposes and states:

1.   My name is Mark Burdette. I am a Financial Analyst for the Office of the Public Counsel.

2.   Attached hereto and made a part hereof for all purposes is my direct testimony consisting of pages 1 through 23 and Schedules MB-1 through MB-23.

3.   I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

_____
Mark Burdette

Subscribed and sworn to me this 14th day of August, 1998.

_____
Mary S. Koestner
Notary Public

My commission expires August 20, 2001.

<center>

DIRECT TESTIMONY

OF

MARK BURDETTE

LACLEDE GAS COMPANY

CASE NO. GR-98-374

INTRODUCTION

</center>

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. Mark Burdette, P.O. Box 7800, Ste. 250, Jefferson City, Missouri 65102-7800.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am employed by the Office of the Public Counsel of the State of Missouri (OPC or Public Counsel) as a Public Utility Financial Analyst.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND.

A. I received a Bachelor of Science in Electrical Engineering from the University of Iowa in Iowa City, Iowa in May 1988. I received a Master's in Business Administration with an emphasis in Finance from the University of Iowa Graduate School of Management in December 1994.

Additionally, I have been awarded the professional designation Certified Rate of Return Analyst (CRRA) by the Society of Utility and Regulatory Financial Analysts. This designation is awarded based upon work experience and successful completion of a written examination.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION?

A. Yes.

1   Q.   WHAT IS THE PURPOSE OF THIS TESTIMONY?

2   A.   I will present a cost-of-capital analysis for the Laclede Gas Company (Laclede, the

3   Company). I will recommend and testify to the capital structure, embedded cost rates, fair

4   return on common equity, and weighted average cost of capital that should be allowed in this

5   proceeding.

6   Q.   HAVE YOU PREPARED SCHEDULES IN SUPPORT OF YOUR TESTIMONY?

7   A.   Yes. I have prepared an analysis consisting of 23 Schedules that is attached to this testimony

8   (MB-1 through MB-23). This analysis was prepared by me and is correct to the best of my

9   knowledge and belief.

10

11   **SUMMARY OF FINDINGS**

12   Q.   PLEASE SUMMARIZE YOUR FINDINGS CONCERNING THE OVERALL COST OF
13   CAPITAL FOR THE LACLEDE GAS COMPANY.

14   A.   Laclede Gas Company should be allowed an overall return of 8.80% on its net original cost

15   rate base. This return has been determined using Laclede's capital structure at 30 June 1998.

16   Q.   PLEASE PROVIDE BACKGROUND INFORMATION ON LACLEDE GAS COMPANY.

17   A.   From the Laclede Gas Company's 1997 Annual Report to Shareholders:

18   Laclede Gas Company is a public utility engaged in the retail distribution of
19   natural gas. The Company serves an area in eastern Missouri, with a
20   population of approximately 2.0 million, including the City of St. Louis, St.
21   Louis County, and parts of eight other counties. As an adjunct to its gas
22   distribution business, the Company operates underground natural gas
23   storage fields and is engaged in the transportation and storage of liquid
24   propane. Since 1968, the Company has also made investments in some non-
25   utility businesses as part of a diversification program.
26
27   Selected five year historical financial data for Laclede is shown on Schedule MB-1.

2

1   **CAPITAL STRUCTURE**

2   Q.   HOW IS LACLEDE GAS COMPANY CURRENTLY CAPITALIZED?

3   A.   At 30 June 1998, Laclede's capital structure consisted of 52.66% common equity, 0.39%

4   preferred stock, 35.37% long term debt, and 11.58% short term debt. This capital structure

5   was utilized for calculations and is shown on schedule MB-2.

6   Q.   IS THE CURRENT CAPITAL STRUCTURE CONSISTENT WITH HOW LACLEDE
7   HAS BEEN CAPITALIZED IN THE PAST?

8   A.   Generally, yes. Not including short term debt, Laclede's end-of-year common equity level

9   over the past 5 years has averaged 57.3% (see Schedule MB-3). For comparison purposes,

10   the current capital structure, not including short term debt, contains 59.56% common equity

11   (Schedule MB-2). The common equity ratio has been variable over the past five years,

12   ranging from a high of 61.6% in 1997 to a low of 53.1% in 1993. Absent short term debt,

13   Laclede's capital structure tends to have a higher common equity ratio than the comparison

14   LDCs, and the current capital structure continues that trend.

15   Q.   HOW DOES LACLEDE'S CURRENT CAPITAL STRUCTURE COMPARE WITH
16   OTHER GAS DISTRIBUTION UTILITIES?

17   A.   Laclede has a higher common equity ratio than the Value Line average for LDCs, and a

18   correspondingly lower ratio of long term debt. According to Value Line Composite

19   Statistics, the common equity ratio for Natural Gas (Distribution) companies has averaged

20   48.4% for the years 1994 through 1997 (the years data are available, see Schedule MB-3).

21   Over these same years, Laclede's common equity ratio has averaged 58.4%. The 47 Natural

22   Gas Distribution and Integrated Natural Gas Companies covered by C.A. Turner Utility

23   Reports have an average common equity ratio of 48%.

1   This higher level of common equity for Laclede indicates a relatively lower level of

2   financial risk due to capital structure for Laclede's shareholders than the average LDC

3   covered by Value Line and C.A. Turner.

4 Q. HOW DOES LACLEDE'S CAPITAL STRUCTURE COMPARE WITH THE CAPITAL
5   STRUCTURE OF YOUR GROUP OF COMPARISON COMPANIES?

6 A. As shown on Schedule MB-3, over the past five years Laclede has had a higher common

7   equity ratio than the average for the ten comparison companies. The range has tended to

8   broaden in the past five years, but remains variable. A higher common equity ratio tends to

9   indicate a relatively lower level of financial risk due to capital structure for Laclede's

10   shareholders as compared to the group of ten comparison LDCs.

11 Q. COULD YOU DEFINE RISK AND EXPAND ON THE CONCEPT OF RISK?

12 A. Yes. Risk can be defined as the possibility that actual earnings from an asset or an

13   investment may differ from expected earnings. The wider the range of possible earnings, the

14   greater the risk associated with that asset or investment.

15   Total risk can be divided into two categories: business risk and financial risk.

16   **Business risk** is the uncertainty (variability) associated with earnings due to

17   fundamental business conditions faced by the company, such as cyclical markets, weather-

18   sensitive sales, changing technology, unforeseen events, or competition. Business risk is the

19   *inherent riskiness of a firm's assets* if that firm uses no financial leverage (i.e. no debt in the

20   firm's capital structure) because every dollar earned is available to common shareholders. In

21   other words. business risk is not connected to the way the firm finances its assets.

22   **Financial risk** is the uncertainty associated with earnings available to common

23   shareholders due to debt and/or preferred stock being used to finance the firm's assets. This

24   additional risk stems from the fact that cash flows to common shareholders are subordinate to

25   a firm's required debt service (i.e. a firm must pay its debt service and any preferred

4

1   dividends before it can pay common dividends.) From a common shareholder's perspective,

2   a firm with less debt and preferred stock in its capital structure has fewer bills to pay before

3   it can allocate earnings to common dividends, and is therefore less risky.

4   Q.   PLEASE SHOW THE CAPITAL STRUCTURE THAT YOU RECOMMEND.

5   A.   I recommend the following capital structure be used in this proceeding:

6
7
8
9
10
11

	Percent
Common Equity	52.66%
Preferred Stock	0.39%
Long term debt	35.37%
Short term debt	11.58%

12   Q.   DO YOU HAVE SPECIFIC CRITERIA TO DETERMINE WHETHER TO INCLUDE
13   SHORT TERM DEBT IN A COMPANY'S CAPITAL STRUCTURE?

14   A.   Yes. When determining whether to include short term debt, I consider the level of short term

15   debt in the capital structure (less construction work in progress (CWIP) amounts) and

16   whether the level of short term debt is consistent. Laclede not only has a significant portion

17   of it's capital structure as short term debt (11.58%, Schedule MB-2) on 30 June 1998, but

18   maintains that significant level throughout the year (as opposed to having just a couple of

19   months with a short term debt balance.)

20   Q.   IS THERE SUPPORT IN FINANCIAL LITERATURE FOR INCLUSION OF SHORT
21   TERM DEBT CAPITAL STRUCTURE?

22   A.   Yes. Standard & Poor's Corporate Finance Criteria states:

23   Seasonal, self-liquidating debt is excluded from the permanent debt amount,
24   but this situation is rare - with the exception of certain gas utilities. Given
25   the long life of almost all utility assets, short-term debt may expose these
26   companies to interest-rate volatility, remarketing risk, bank line backup risk,
27   and regulatory exposure that cannot be readily offset. The lower cost of
28   short-term obligations (assuming a positively sloped yield curve) is a
29   positive factor that partially mitigates the risk of interest-rate volatility. As
30   a rule of thumb, a level of short-term debt that exceeds 10% of total capital
31   is cause for concern.
32

1   As shown on Schedule MB-2 (and calculated on Schedule MB-6), Laclede's short term debt

2   made up 11.58% of the capital structure on 30 June 1998, and is therefore appropriately

3   included.

4

5   **EMBEDDED COST RATES**

6   Q.   WHAT IS THE APPROPRIATE EMBEDDED COST RATE FOR LACLEDE'S
7   PREFERRED STOCK?

8   A.   The embedded cost rate is 4.96% for Laclede's preferred stock. Calculation of the embedded

9   cost of preferred stock is shown on Schedule MB-4.

10   Q.   WHAT IS THE APPROPRIATE EMBEDDED COST RATE FOR LACLEDE'S LONG
11   TERM DEBT?

12   A.   The embedded cost rate is 7.77% for Laclede's long term debt. Calculation of the embedded

13   cost of long term debt is shown on Schedule MB-5.

14   Q.   WHAT IS THE APPROPRIATE EMBEDDED COST RATE FOR LACLEDE'S SHORT
15   TERM DEBT?

16   A.   The embedded cost rate is 5.70% for Laclede's short term debt as of 30 June 1998.

17   Calculation of the embedded cost of short term debt is shown on Schedule MB-6.

18

19   **COST OF COMMON EQUITY**

20   Q.   WHAT IS YOUR RECOMMENDED COST OF COMMON EQUITY FOR LACLEDE?

21   A.   Laclede Gas Company should be allowed a return on common equity of 10.2%. This return

22   on common equity was determined using the Discounted Cash Flow (DCF) method and is

23   based on a dividend yield of 5.67% and a sustainable growth rate of approximately 4.5%.

1 Q. PLEASE EXPLAIN IN DETAIL HOW YOU ARRIVED AT YOUR RECOMMENDED
2   COST OF COMMON EQUITY FOR LACLEDE.

3 A. I relied primarily on a Discounted Cash Flow (DCF) analysis to calculate a cost of common

4   equity for Laclede.

5   The reasonableness of my calculation was substantiated by performing a similar

6   DCF analysis on a group of ten comparison LDCs.

7   Additionally, I checked the reasonableness of my calculated cost of common equity

8   by performing a Capital Asset Pricing Model analysis for Laclede and the group of

9   comparison companies.

10

11   **DISCOUNTED CASH FLOW MODEL**

12 Q. PLEASE DESCRIBE THE STANDARD DISCOUNTED CASH FLOW (DCF) MODEL
13   YOU USED TO ARRIVE AT THE APPROPRIATE COST OF EQUITY CAPITAL.

14 A. The model is represented by the following equation:

15          $k = D/P + g$

16   where "k" is the cost of equity capital (i.e. investors' required return), "D/P" is the current

17   dividend yield (dividend (D) divided by the stock price (P)) and "g" is the expected

18   sustainable growth rate.

19   If future dividends are expected to grow at a constant rate (i.e., the constant growth

20   assumption) and dividends, earnings and stock price are expected to increase in proportion to

21   each other, the sum of the current dividend yield (D/P) and the expected growth rate (g)

22   equals the required rate of return, or the cost of equity, to the firm. This form of the DCF

23   model is commonly used in the regulatory arena and is known as the constant growth, or

24   Gordon, DCF model. The constant growth DCF model is based on the following

25   assumptions:

7

1   1) A constant rate of growth,

2   2) The constant growth will continue for an infinite period,

3   3) The dividend payout ratio remains constant,

4   4) The discount rate must exceed the growth rate, and

5   5) The stock price grows proportionately to the growth rate.

6   Although all of these assumptions do not always hold in a technical sense, the relaxation of

7   these assumptions does not make the model unreliable.

8   The DCF model is based on two basic financial principals. First; the current market

9   price of any financial asset, including a share of stock, is equivalent to the value of all

10   expected future cash flows associated with that asset discounted back to the present at the

11   appropriate discount rate. The discount rate that equates anticipated future cash flows and

12   the current market price is defined as the rate of return or the company's cost of equity

13   capital.

14   Cash flows associated with owning a share of common stock can take two forms:

15   selling the stock and dividends. Just as the current value of a share of stock is a function of

16   future cash flows (dividends), the *future* price of the stock at any time is also a function of

17   future dividends. When a share of stock is sold, what is given up is the right to receive all

18   future dividends. Therefore, the DCF model, using expected future dividends as the cash

19   flows. is appropriate regardless of how long the investor plans to hold the stock.

20   Determination of a holding period and an associated terminal price is unnecessary. The

21   irrelevance of investors' time horizons is emphasized by Brealey and Myers:

22   How far out could we look? In principle the horizon period H could be
23   infinitely distant. Common Stocks do not expire of old age. Barring such
24   corporate hazards as bankruptcy or acquisition, they are immortal. As H
25   approaches infinity. the present value of the terminal price ought to approach
26   zero.... We can. therefore, forget about the terminal price entirely and
27   express today's price as the present value of a perpetual stream of cash
28   dividends. (Principles of Corporate Financing, Fourth Edition, page 52).

8

1

2 The other basic financial principal on which the DCF is grounded is the "time value of

3 money." Investors view a dollar received today as being worth more than a dollar received in

4 the future because a dollar today can immediately be invested. Therefore, future cash flows

5 are discounted. The rate used by investors to discount future cash flows to the present is the

6 discount rate or opportunity cost of capital.

7

8 **DETERMINATION OF SUSTAINABLE GROWTH**

9 Q. TO WHAT DOES THE GROWTH COMPONENT OF THE DCF FORMULA REFER?

10 A. The growth rate variable, g, in the traditional DCF model is the dividend growth rate

11 investors expect to continue into the *indefinite future* (i.e., the <u>sustainable</u> growth rate).

12 Q. HOW IS THE SUSTAINABLE GROWTH RATE DETERMINED?

13 A. The sustainable growth rate is determined by analyzing historical and projected financial and

14 economic information for the Company. A variety of growth rate parameters and calculation

15 methods are sometimes used by analysts to measure and forecast growth.

16 Q. COULD YOU DESCRIBE THE VARIOUS PARAMETERS AND METHODS WHICH
17   CAN BE USED TO CALCULATE SUSTAINABLE GROWTH?

18 A. Yes. Methods sometimes used for determining the investor-expected sustainable growth

19 rate utilized in the DCF model include: 1) *historical* growth rates, and 2) analysts'

20 *projections* of expected growth rates. Three commonly-employed historic growth parameters

21 are: 1) earnings per share (EPS), 2) dividends per share (DPS), and 3) book value per share

22 (BVPS). Additionally, analysts' projections of future growth in earnings per share, dividends

23 per share, and book value per share are sometimes used as an estimate of the sustainable

24 growth rate.

1   As a matter of completeness, I utilized all of the above-mentioned techniques for

2   measuring growth in order to calculate a sustainable growth rate.

3 Q.   DID YOU USE ANY OTHER METHODS OF CALCULATING GROWTH?

4 A.   Yes. I did. I calculated both historical and projected retention growth. It is important to

5   recognize the fundamentals of long-term investor-expected growth when developing a

6   sustainable growth rate. Future dividends will be generated by future earnings and the

7   primary source of growth in future earnings is the reinvestment of present earnings back into

8   the firm. This reinvestment of earnings also contributes to the growth in book value.

9   Furthermore. it is the earned return on reinvested earnings and existing capital (i.e., book

10   value) that ultimately determines the basic level of future cash flows. Therefore, one proxy

11   for the future growth rate called for in the DCF formula is found by multiplying the future

12   expected earned return on book equity (r) by the percentage of earnings expected to be

13   retained in the business (b). This calculation, known as the "b*r" method, or *retention*

14   *growth rate*. results in one measure of the sustainable growth rate called for in the Discounted

15   Cash Flow formula. While the retention growth rate can be calculated using historic data on

16   earnings retention and equity returns, this information is relevant only to the extent that it

17   provides a meaningful basis for determining the future sustainable growth rate.

18   Consequently. projected data on earnings retention and return on book equity are generally

19   more representative of investors' expectations.

20 Q.   CAN YOU PROVIDE AN EXAMPLE THAT ILLUSTRATES THE FUNDAMENTALS
21   OF RETENTION GROWTH AS A PROXY FOR SUSTAINABLE GROWTH?

22 A.   Yes. To better understand the principles of sustainable growth, it is helpful to compare the

23   growth in a utility's cash flows to the fundamental causes of growth in an individual's

24   passbook account. For an individual who has $1,000 in a passbook account paying 5.0%

25   interest. earnings will be $50 for the first year. If this individual leaves 100% of the earnings

1   in the passbook account (retention ratio equals 100%), the account balance at the end of the

2   first year will be $1,050. Total earnings in the second year will be $52.50 ($1,050 x 5.0%),

3   and the growth rate of the account in year two is 5.0% [100%(b) x 5%(r)]. On the other

4   hand, if the individual withdraws $30 of the earnings from the first year and reinvests only

5    $20 (retention ratio equals 40%) earnings in the second year will be only $51.00 ($1,020 x

6   5.0%), with growth equaling 2.0% [($1,020-$1,000)/$1,000 = 2.0% = 40%(b) x 5%(r)]. In

7   both cases, the return, along with the level of earnings retained, dictate future earnings.

8   These exact principles regarding growth apply to a utility's common stock. When

9   earnings are retained, they are available for additional investment and, as such, generate

10   future growth. When earnings are distributed in the form of dividends, they are unavailable

11   for reinvestment in those assets that would ultimately produce future growth. Either way, for

12   both a utility's common stock or an individual's passbook account, the level of earnings

13   retained, along with the rate of return, determine the level of sustainable growth.

14   Q.   ARE THERE ANY OTHER FACTORS THAT INFLUENCE INVESTOR-EXPECTED
15   SUSTAINABLE GROWTH?

16   A.   Yes. Stock financing will cause investors to expect additional growth if a company is

17   expected to issue new shares at a price above book value. The excess of market price over

18   book value would benefit current shareholders, increasing their per share book equity.

19   Therefore, if stock financing is expected at prices above book value, shareholders will expect

20   their book value to increase, and that adds to the growth expectation stemming from earnings

21   retention, or "b*r" growth. A more thorough explanation of "external" growth is included in

22   Appendix (I). This external growth factor has been included in all historic and projected

23   retention growth rate calculations for the group of comparable utilities.

11

1 Q. DID YOU EXCLUDE ANY OF YOUR CALCULATED GROWTH RATES FROM THE
2   DETERMINATION OF AVERAGES?

3 A. Yes, I did. I excluded any negative growth rates from my calculations.

4   Also, I excluded any compound earnings per share (EPS) growth rates which

5   included a year when the payout ratio was greater than one (the dividend paid out was greater

6   than earnings for that year.) In those circumstances, the calculated compound growth rate

7   was artificially high. Any particular growth rate excluded from calculations is shown in

8   italics on Schedules MB-9-19.

9 Q. IS THE HISTORIC GROWTH RATE IN DIVIDENDS PER SHARE AN APPROPRIATE
10   PROXY FOR DETERMINING THE SUSTAINABLE GROWTH RATE?

11 A. Not usually. The historic growth rate in dividends per share will tend to overstate

12   (understate) the sustainable growth rate when the dividend payout ratio has increased

13   (decreased) over the measurement period. For an extended discussion and illustration of this

14   phenomenon, please see Appendix I.

15

16 **SUSTAINABLE GROWTH FOR LACLEDE AND THE COMPARISON COMPANIES**

17 Q. WHAT GROWTH RATE DO YOU CONSIDER TO BE REFLECTIVE OF THE
18   INVESTOR-EXPECTED GROWTH FOR LACLEDE GAS COMPANY?

19 A. Based on the growth rate calculations for Laclede and the comparison group, I believe a

20   sustainable growth rate of 4.0% to 5.0% is a reasonable representation of investors'

21   expectations for Laclede's sustainable growth rate. I chose a value in the middle of this

22   range (approximately 4.5%), which I consider generous to the Company.

23 Q. WHAT GROWTH RATE PARAMETERS HAVE YOU EXAMINED IN ORDER TO
24   ESTABLISH INVESTOR-EXPECTED GROWTH FOR LACLEDE?

25 A. The following growth parameters have been reviewed for Laclede: 1) my calculations of

26   historic compound growth in earnings, dividends, and book value based on data from Value

1   Line: 2) average of five-year and ten-year historic growth in EPS, DPS, and BVPS; 3)

2   projected growth rate in EPS, DPS, and BVPS; 4) historic retention growth rate; and 5)

3   projected retention growth rate.

4   As mentioned previously, for completeness all of the above-mentioned techniques for

5   measuring growth were utilized in order to calculate a sustainable growth rate.

6 Q. DID YOU RELY ON DATA FROM LACLEDE ONLY TO ARRIVE AT A
7   RECOMMENDATION OF SUSTAINABLE GROWTH?

8 A. No. I analyzed a group of utilities with similar characteristics and risk profiles to Laclede to

9   provide some insight as to the reasonableness of the sustainable growth rate calculated for

10   Laclede.

11   Appendix G. attached to this testimony, describes the selection criteria used to

12   develop a group of LDCs with risk characteristics similar to those of Laclede. The following

13   companies met the selection criteria: 1) AGL Resources, Inc. (AGL, ticker ATG); 2) Bay

14   State Gas Company (Bay State, ticker BGC); 3) Connecticut Energy Corporation (Conn.

15   Energy, ticker CNE): 4) CTG Resources, Inc. (CTG, ticker CTG); 5) Indiana Energy,

16   Inc.(Indiana, ticker IEI): 6) New Jersey Resources Corp. (NJR, ticker NJR); 7) Northwest

17   Natural Gas Co.(NWNG, ticker NWNG); 8) Peoples Energy Corporation (Peoples, ticker

18   PGL): 9) Piedmont Natural Gas Company (Piedmont, ticker PNY); and 10) Washington Gas

19   Light Company (WGL, ticker WGL). Schedule MB-7 shows my comparison companies, the

20   selection criteria. and a list of risk measures. Schedules MB-9-19 contain growth rate

21   calculations for Laclede and the group of comparison companies. These calculations are

22   summarized on Schedule MB-8.

1 Q. PLEASE EXPLAIN IN MORE DETAIL HOW THE HISTORIC GROWTH RATES OF
2   EARNINGS, DIVIDENDS, AND BOOK VALUE WERE DETERMINED.

3 A. Historic rates of growth in earnings per share (EPS), dividends per share (DPS), and book

4   value per share (BVPS) were analyzed using two methods. First, compound growth rates

5   were calculated for five-year periods ending 1995, 1996, and 1997. These three five-year

6   compound growth rates were then averaged and are labeled "Ave. Compound Gr." on line 16

7   of Schedules MB-9-19.

8   The second measure of historic growth was taken from Value Line. The historic

9   rates of growth furnished by Value Line are included in this analysis because:

10   1) The Value Line growth rates are readily available for investor use;

11   2) The Value Line rates of growth reflect both a five-year and ten-year time frame;

12   and

13   3) The Value Line rates are measured from an average of three base years to an

14   average of three ending years, smoothing the results and limiting the impact of nonrecurring

15   events.

16   The Value Line growth rates are found on line 19 of Schedules MB-9-19.

17 Q. PLEASE DISCUSS YOUR ANALYSIS OF PROJECTED GROWTH RATE DATA.

18 A. Projected growth rates in EPS, DPS, and BVPS were taken from Value Line and are found

19   on line 30 of Schedules MB-9-19. Projected growth in EPS was also taken from Zack's

20   Analyst Watch, Inc., and is listed on line 33. Zack's "gathers data from more than 2,500

21   security analysts at 210 brokerage firms who make 15,000 earnings per share and

22   Buy/Hold/Sell ratings revisions each week," and this information is available to the average

23   investor. The projected growth in EPS found on line 36 of Schedules MB-9-19 is the

24   average of earnings growth projections furnished by Value Line and Zack's. Value Line's

25   projected growth in dividends and book value are listed again on line 36.

1 Q. PLEASE DISCUSS YOUR ANALYSIS OF HISTORIC AND PROJECTED RETENTION
2   GROWTH RATES.

3 A   Historic retention growth was determined using the product of return (r) and retention rate (b)

4   for the years 1993-97, and the average was calculated (line 10). The projected retention

5   growth data, found on Schedules MB-9-19 lines (25-27), is based on information from Value

6   Line. Projected retention growth was calculated for 1998, 1999, and the period 2001-03. An

7   average of these three growth rates was calculated and compared to the growth rate for the

8   2001-03 period alone. The *larger* value, either the average of the three values or the 2001-

9   03 rate, was utilized as the projected retention growth rate. For all industry companies, the

10   projected retention growth rate which appears on line 30 of the appropriate schedule is either

11   the three-time-period average or the 2001-03 projection, whichever was largest.

12   Investors' expectations regarding growth from external sources (i.e. sales of

13   additional stock at prices above book value) has been included in the determination of both

14   historic and projected growth (lines 13 and 33, respectively).

15 Q. PLEASE SUMMARIZE YOUR HISTORIC AND PROJECTED GROWTH RATE
16   ANALYSIS FOR LACLEDE GAS COMPANY.

17 A. The following table outlines the results of the analysis of growth rates for Laclede found on

18   Schedule MB-9. The high growth rate is 7.00% (Value Line historic EPS) and the low

19   growth rate is 1.22% (compound DPS). The overall average of all analyzed growth rates for

20   Laclede is 3.35%.

21 **Growth rate summary for Laclede:**
22
23
	EPS	DPS	BVPS
Historic Compound Growth	3.39%	1.22%	3.45%
Historic Value Line Growth	7.00%	2.00%	2.75%
Projected Growth	3.14%	2.50%	3.50%

	Historic	Projected
Retention Growth	3.51%	4.38%

1   Q.   PLEASE SUMMARIZE YOUR HISTORIC AND PROJECTED GROWTH RATE
2   ANALYSIS FOR YOUR GROUP OF COMPARISON COMPANIES.

3   A.   The following table outlines the results of the analysis of growth rates for the comparison

4   group. The high average growth rate is 5.90% (projected EPS) and the low average growth

5   rate is 2.00% (historic compound DPS). The overall average of all growth rates for all ten

6   companies is 4.34% (Schedule MB-8). In all cases, negative growth rates were *not* included

7   in the calculation of averages.

8   **Comparison group growth rate summary:**
9

	EPS	DPS	BVPS
Historic Compound Growth	5.79%	2.00%	4.03%
Historic Value Line Growth	5.28%	2.85%	4.25%
Projected Growth	5.90%	3.06%	4.85%
	Historic	Projected	
Retention Growth	4.07%	5.61%	

18   Q.   WHAT GROWTH RATE DO YOU CONSIDER TO BE REFLECTIVE OF THE
19   INVESTOR-EXPECTED GROWTH FOR YOUR COMPARISON COMPANIES?

20   A.   I would expect a sustainable growth rate for this group of traditional gas utilities to be in the

21   range of 4.0% to 6.0%.

22   Q.   WHAT GROWTH RATE DO YOU CONSIDER TO BE REFLECTIVE OF THE
23   INVESTOR-EXPECTED SUSTAINABLE GROWTH RATE FOR LACLEDE?

24   A.   Based on the growth rate calculations for Laclede and the comparison group, I believe a

25   sustainable growth rate of 4.0% to 5.0% is a reasonable representation of investors'

26   expectations for Laclede's sustainable growth rate.

1   **DIVIDEND YIELDS FOR LACLEDE AND THE COMPARISON COMPANIES**

2   Q.   WHAT IS THE APPROPRIATE DIVIDEND YIELD TO USE IN THE DCF?

3   A.   The appropriate dividend yield to use in the DCF is the *expected* dividend yield calculated

4   from a current stock price. I chose to use the estimated 1999 dividends (from Value Line) for

5   my calculations. For Laclede and all ten comparison companies, the expected 1999 dividend

6   is either the same as or larger than the 1998 dividend. Using the 1998 dividend (or a

7   combination of 1998 and 1999) would lower the calculated yield or leave it unchanged.

8   Q.   PLEASE EXPLAIN YOUR CALCULATION OF THE DIVIDEND YIELD.

9   A.   Dividend yield is equal to the expected dividend divided by stock price. Schedule MB-20

10   shows the average stock prices for a recent six-week period, the expected 1999 dividends (as

11   taken from Value Line), and the calculation of the dividend yields for Laclede and the group

12   of comparison companies.

13   I used a six-week period for determining the average stock price because I believe

14   that period of time is long enough to avoid daily fluctuations and recent enough so that the

15   stock price captured is representative of current expectations. The stock price for each

16   company is the average of the Friday closing price from 7/2/98 through 8/7/98. This time

17   period accurately reflects investor's current expectations for the companies' stock. Non-

18   current stock prices simply do not capture investor's current expectations and are

19   inappropriate to use in the DCF. Stock prices and dividends from, for example, 1996, are

20   irrelevant to the dividend yield portion of a DCF analysis performed in 1998.

21   Q.   WHAT IS THE APPROPRIATE DIVIDEND YIELD FOR LACLEDE?

22   A.   The dividend yield for Laclede is 5.67%, based on expected 1999 dividend of $1.35 and

23   Laclede's average stock price of $23.800. Laclede's average stock price calculation is

24   shown on Schedule MB-20.

17

1 Q.   HAVE YOU CALCULATED THE DIVIDEND YIELDS FOR THE COMPARISON
2   GROUP?

3 A.   Yes. The average expected dividend yield for my comparison group is 4.80%, shown on

4   Schedule MB-20. For the group, the high dividend yield was 5.61% (AGL Resources) and

5   the low was 4.28% (CTG and Indiana). The method used to calculate dividend yield is

6   identical to the method used for Laclede.

7

8   **DCF COST OF EQUITY FOR LACLEDE AND THE COMPARISON COMPANIES**

9 Q.   WHAT IS THE COST-OF-EQUITY RANGE FOR LACLEDE BASED ON THE
10   PREVIOUSLY DETERMINED DIVIDEND YIELD AND GROWTH RATES?

11 A.   The following table, using data from Schedule MB-21, outlines the cost of equity range for

12   Laclede using my recommended growth rate range:

13 | | Dividend Yield | Growth | Cost of Equity |
   |------|----------------|--------|----------------|
14 | Low | 5.67% | 4.00% | 9.67% |
15 | Mid | 5.67% | 4.50% | 10.17% |
16 | High | 5.67% | 5.00% | 10.67% |

17 Q.   WHAT RETURN ON COMMON EQUITY DO YOU RECOMMEND FOR LACLEDE?

18 A.   I believe Laclede's allowed return on common equity should be set at no more than 10.2%

19   which is based on a dividend yield of 5.67% and an investor-expected sustainable growth rate

20   of approximately 4.50% (I chose to round my recommendation from 10.17% to 10.2%). I

21   consider this growth rate reasonable when compared to the growth rate calculations for the

22   comparison companies.

23 Q.   WHAT IS THE DCF COST OF EQUITY FOR YOUR COMPARISON GROUP BASED
24   ON THE PREVIOUSLY DETERMINED DIVIDEND YIELDS AND GROWTH RATES?

25 A.   The DCF cost of equity capital for the comparison group is found on Schedule MB-21. The

26   following table shows the average high and low cost of common equity for my comparable

27   group:

18

	Dividend Yield	Growth	Cost of Equity
Low	4.80%	2.49%	7.90%
High	4.80%	6.55%	11.96%

The average DCF cost of common equity for the group is 9.56%.

Q. DOES THE COST OF EQUITY CALCULATED FOR YOUR COMPARISON GROUP SUPPORT THE REASONABLENESS OF YOUR RECOMMENDATION FOR LACLEDE?

A. Yes. I believe the cost of equity calculated for my comparison group supports my recommendation for Laclede. The group of LDCs in my comparison group are similar in risk to Laclede. In general, the growth rate averages for the comparison group are higher than those for Laclede. However, Laclede's dividend yield is 83 basis points (0.83%) greater than the average for the group.

CAPITAL ASSET PRICING MODEL

Q. PLEASE DESCRIBE THE CAPITAL ASSET PRICING MODEL YOU USED TO SUBSTANTIATE YOUR RECOMMENDED RETURN ON COMMON EQUITY.

A. The Capital Asset Pricing Model (CAPM) is described by the following equation:

$$K = Rf + \beta(Rm - Rf)$$

where,

K = the cost of common equity for the security being analyzed,

Rf = the risk free rate,

β = beta = the company or industry-specific beta risk measure,

Rm = market return, and

(Rm - Rf) = market premium.

The formula states that the cost of common equity is equal to the risk free rate of interest, plus, beta multiplied by the difference between the return on the market and the risk free rate (the market premium).

1   The formula says that the cost of common equity is equal to the risk free rate plus

2   some proportion of the market premium - that proportion being equal to beta. The market

3   overall has a beta of 1.0. Firms with beta less than 1.0 are assumed to be less risky than the

4   market; firms with beta greater than 1.0 are assumed to be more risky than the market. The

5   appropriate beta to use in the CAPM formula is the beta that represents the risk of the

6   company (or project) being analyzed. Laclede Gas Company's beta is 0.55. Beta for my

7   group of comparison companies ranges from 0.50 to 0.85, with an average of 0.66. Gas

8   utilities are generally viewed as relatively safe investments, and this is reflected in beta values

9   below 1.0.

10 Q.   DO YOU SUBSCRIBE TO THE CAPM AS AN ACCURATE MEASURE OF MARKET-
11   BASED COST OF EQUITY?

12 A.   I believe the CAPM - and its dependence on the single risk measure, beta - has limitations in

13   its ability to accurately take into account the risk factors faced by a company, and therefore

14   that company's cost of equity. However, some investors continue to rely on the CAPM.

15   Therefore, I included the analysis as a check on and to provide support for my DCF analysis.

16 Q.   HOW DID YOU ARRIVE AT THE VALUES OF THE RISK FREE RATE AND THE
17   MARKET RETURN (OR MARKET PREMIUM) USED IN YOUR ANALYSIS?

18 A.   The risk free rate I utilized for my CAPM analysis (6.0%) is near the current rate on the U.S.

19   Government's 30-year Treasury Bond (5.7%) as reported by the Value Line Investment

20   Survey, July 30, 1998. Value Line also reports a 13-week range for the 30-year bond of 5.6

21   – 6.0%. Therefore, I chose to use 6.0%, which is within that range and slightly above the

22   current rate. It would not be unreasonable to use a risk free rate of 5.8% or even the current

23   5.7%, which would *lower* the CAPM-calculated costs of equity.

24   The 7.3% value I used for the market premium (Rm-Rf) is equal to the market

25 premium calculated by Ibbotson and Associates, calculated using arithmetic means.

1 Q. WHAT DOES YOUR CAPM ANALYSIS SHOW?

2 A. As can be seen on Schedule MB-22, I performed a CAPM analysis on Laclede and the group

3 of ten comparison LDCs. The CAPM cost of common equity for Laclede is 10.02%. The

4 average CAPM cost of common equity for the group is 10.78%, with a high of 12.21% and a

5 low of 9.65%.

6 Given the CAPM's reliance on the single risk-measure beta, I believe this analysis

7 lends support to and shows the reasonableness of my recommended cost of common equity of

8 10.2% for Laclede. The average beta for the group is 0.66, which is greater (and indicates

9 relatively greater risk as measured by beta) than Laclede's beta of 0.55, and leads directly to

10 the greater cost of equity calculated for the group.

1 ‖ **WEIGHTED AVERAGE COST OF CAPITAL**

2 Q. WHAT OVERALL. OR WEIGHTED AVERAGE, COST OF CAPITAL IS INDICATED
3 BY YOUR ANALYSIS?

4 A. The weighted average cost of capital I calculated for Laclede is 8.80%. This is based on a

5 10.2% return on equity, 4.96% embedded cost of preferred stock, 7.77% embedded cost of

6 long-term debt, and a 5.70% embedded cost of short term debt. The capital structure

7 contains 52.66% common equity, 0.39% preferred stock, 35.37% long-term debt, and

8 11.58% short term debt. The WACC calculation is shown on Schedule MB-23.

9 Q. WHAT PRE-TAX COVERAGE RATIO IS IMPLIED BY YOUR RECOMMENDATION?

10 A. Based on a WACC of 8.80% and an assumed tax factor of 1.6296 (from Staff), the pre-tax

11 coverage ratio (for both long AND short term debt) is approximately 3.58 times. The pre-tax

12 coverage ratio for long term debt only is 4.43 times. The derivation of pre-tax coverage is

13 shown on Schedule MB-23.

14 Q. DOES THIS CONCLUDE YOUR TESTIMONY?

15 A. Yes. it does.

1   **APPENDIX A**

2   **DEVELOPMENT & PURPOSES OF REGULATION**

3   Q.   WHY ARE PUBLIC UTILITIES REGULATED?

4   A.   The nature of public utility services generally requires a monopolistic mode of operation.

5   Only a limited number of companies (and quite often only one) are normally allowed to

6   provide a particular utility service in a specific geographic area. Public utilities are often

7   referred to as "natural" monopolies; a state created by such powerful economies of scale or

8   scope that only one firm can or should provide a given service. Even when a utility is not a

9   pure monopoly, it still has substantial market power over at least some of its customers.

10   In order to secure the benefits arising from monopolistic-type operations, utilities are

11   generally awarded an exclusive franchise (or certificate of public convenience) by the

12   appropriate governmental body. Since an exclusive franchise generally protects a firm from

13   the effects of competition, it is critical that governmental control over the rates and services

14   provided by public utilities is exercised. Consequently, a primary objective of utility

15   regulation is to produce market results that closely approximate the conditions that would be

16   obtained if utility rates were determined competitively. Based on this competitive standard,

17   utility regulation must: 1) secure safe and adequate service; 2) establish rates sufficient to

18   provide a utility with the opportunity to cover all reasonable costs, including a fair rate of

19   return on the capital employed; and 3) restrict monopoly-type profits.

APPENDIX B

CALCULATION OF THE WEIGHTED AVERAGE COST OF CAPITAL

Q. PLEASE EXPLAIN HOW THE WEIGHTED AVERAGE COST OF CAPITAL IS USED IN TRADITIONAL RATEMAKING AND HOW IT IS DERIVED.

A. The basic standard of rate regulation is the revenue-requirement standard, often referred to as the rate base-rate of return standard. Simply stated, a regulated firm must be permitted to set rates which will cover operating costs and provide an opportunity to earn a reasonable rate of return on assets devoted to the business. A utility's total revenue requirement can be expressed as the following formula:

$$R = O + (V - D + A)r$$

where R = the total revenue required,

O = cost of operations,

V = the gross value of the property,

D = the accrued depreciation, and

A = other rate base items,

r = the allowed rate of return/weighted average cost of capital.

This formula indicates that the process of determining the total revenue requirement for a public utility involves three major steps. First, allowable operating costs must be ascertained. Second, the net depreciated value of the tangible and intangible property, or net investment in property, of the enterprise must be determined. This net value, or investment (V - D), along with other allowable items is referred to as the rate base. Finally, a "fair rate of return" or weighted average cost of capital (WACC) must be determined. This rate, expressed as a percentage, is multiplied by the rate base. The weighted average cost of capital (WACC) is applied to the rate base (V-D+A) since it is generally recognized the rate

1 base is financed with the capital structure and these two items are normally similar in size.

2 The allowed rate of return, or WACC, is typically defined as follows:

3 $$r = i(D/C) + l(P/C) + k(E/C)$$

4 where i = embedded cost of debt capital,

5 D = amount of debt capital,

6 l = embedded cost of preferred stock,

7 P = amount of preferred stock,

8 k = cost of equity capital,

9 E = amount of equity capital, and

10 C = amount of total capital.

11 This formula indicates that the process of determining WACC involves separate

12 determinations for each type of capital utilized by a utility. Under the weighted cost

13 approach, a utility company's total invested capital is expressed as 100 percent and is divided

14 into percentages that represent the capital secured by the issuance of long-term debt,

15 preferred stock, common stock, and sometimes short-term debt. This division of total capital

16 by reference to its major sources permits the analyst to compute separately the cost of both

17 debt and equity capital. The cost rate of each component is weighted by the appropriate

18 percentage that it bears to the overall capitalization. The sum of the weighted cost rates is

19 equal to the overall or weighted average cost of capital and is used as the basis for the fair

20 rate of return that is ultimately applied to rate base.

1

APPENDIX C

2

ECONOMIC PRINCIPLES OF REGULATION

3
4

Q. BRIEFLY DESCRIBE THE ECONOMIC RATIONALE FOR RATE BASE-RATE OF
RETURN REGULATION.

5

A. Rate base-rate of return regulation is based, in part, on basic economic and financial theory

6

that applies to both regulated and unregulated firms.

7
8
9
10
11
12
13

> Although it is well recognized that no form of economic regulation can ever
> be a perfect substitution for competition in determining market prices for
> goods and services, there is nearly unanimous acceptance of the principle
> that regulation should act as a substitute for competition in utility markets.
> (Parcell, The Cost of Capital Manual p.1-4).

14

It is the interaction of competitive markets forces that holds the prices an unregulated firm

15

can charge for its products or services in line with the actual costs of production. In fact,

16

competition between companies is generally viewed as the mechanism that allows consumers

17

to not only purchase goods and services at prices consistent with the costs of production but

18

also allows consumers to receive the highest quality product. Since regulated utilities are

19

franchised monopolies generally immune to competitive market forces, a primary objective of

20

utility regulation is to produce results that closely approximate the conditions that would

21

exist if utility rates were determined in a competitive atmosphere.

22

Under basic financial theory, it is generally assumed the goal for all firms is the

23

maximization of shareholder wealth. Additionally, capital budgeting theory indicates that, in

24

order to achieve this goal, an unregulated firm should invest in any project which, given a

25

certain level of risk, is expected to earn a rate of return at or above its weighted average cost

26

of capital.

27

Competition, in conjunction with the wealth maximization goal, induces firms to

28

increase investment as long as the expected rate of return on an investment is greater that the

1   cost of capital. Competitive equilibrium is achieved when the rate of return on the last

2   investment project undertaken just equals the cost of capital. When competitive equilibrium

3   is achieved. the price ultimately received for goods or services reflects the full costs of

4   production. Therefore, not only does competition automatically drive unregulated firms to

5   minimize their capital costs (investment opportunities are expanded and competitive position

6   is enhanced when capital costs can be lowered). it also ensures that the marginal return on

7   investment just equals the cost of capital.

8   　　　Given that regulation is intended to emulate competition and that, under competition,

9   the marginal return on investment should equal the cost of capital, it is crucial for regulators

10   to set the authorized rate of return equal to the **actual** cost. If this is accomplished, the

11   marginal return on prudent and necessary investment just equals cost and the forces of

12   competition are effectively emulated.

1	**APPENDIX D**
2	**LEGAL REQUIREMENT FOR A FAIR RATE OF RETURN**

3 Q. IS THERE A JUDICIAL REQUIREMENT RELATED TO THE DETERMINATION OF
4   THE APPROPRIATE RATE OF RETURN FOR A REGULATED UTILITY?

5 A. Yes. The criteria established by the U.S. Supreme Court closely parallels economic thinking

6   on the determination of an appropriate rate of return under the cost of service approach to

7   regulation. The judicial background to the regulatory process is largely contained in two

8   seminal decisions handed down in 1923 and 1944. These decisions are,

9   Bluefield Water Works and Improvement
10   Company v. Public Service Commission,
11   262 U.S. 679 (1923), and
12
13   FPC v. Hope Natural Gas Co., 320 U.S.
14   591 (1944)
15
16   In the Bluefield Case, the Court states,

17   A public utility is entitled to such rates as will permit it to earn a return on
18   the value of the property which it employs for the convenience of the public
19   equal to that generally being made at the same time and in the same general
20   part of the country on investments in other business undertakings which are
21   attended by corresponding risks and uncertainties; but has no constitutional
22   right to profits such as are realized or anticipated in highly profitable
23   enterprises or speculative ventures. The return should be reasonably
24   sufficient to assure confidence in the financial soundness of the utility, and
25   should be adequate, under efficient and economical management, to maintain
26   and support its credit and enable it to raise the money necessary for the
27   proper discharge of its public duties. A rate of return may be reasonable at
28   one time, and become too high or too low by changes affecting opportunities
29   for investment, the money market, and business conditions generally.
30

31   Together, Hope and Bluefield have established the following standards,

32   1). A utility is entitled to a return similar to that available to other enterprises with

33   similar risks:

34   2). A utility is entitled to a return level reasonably sufficient to assure financial

35   soundness and support existing credit, as well as raise new capital; and

1   3). A fair return can change along with economic conditions and capital markets.

2   Furthermore. in <u>Hope</u>. the Court makes clear that regulation does not guarantee utility profits

3   and. in <u>Permian Basin Area Rate Cases</u>, 390 US 747 (1968), that, while investor interests

4   (profitability) are certainly pertinent to setting adequate utility rates, those interests do not

5   exhaust the relevant considerations.

1 **APPENDIX E**

2 **REGULATION IN MISSOURI**

3 Q. WHAT IS THE ORIGIN AND RATIONALE FOR THE REGULATION OF PUBLIC
4 UTILITIES IN THE STATE OF MISSOURI?

5 A. All investor owned public utilities operating in the state of Missouri are subject to the Public

6 Service Commission Act, as amended. The Public Service Commission Act was initially

7 passed by the Forty-Seventh General Assembly on April 15, 1913. (Laws of 1913 pp.557-

8 651. inclusive).

9 In State ex rel Kansas City v. Kansas City Gas Co. 163 S.W. 854 (Mo.1914), the

10 case of first impression pertaining to the Public Service Commission Act, the Missouri

11 Supreme Court described the rationale for the regulation of public utilities in Missouri as

12 follows:

13 That act (Public Service Commission Act) is an elaborate law bottomed on
14 the police power. It evidences a public policy hammered out on the anvil of
15 public discussion. It apparently recognizes certain generally accepted
16 economic principles and conditions, to wit: That a public utility (like gas,
17 water, car service, etc.) is in its nature a monopoly; that competition is
18 inadequate to protect the public, and, if it exists, is likely to become an
19 economic waste: that regulation takes the place of and stands for
20 competition: that such regulation to command respect from patron or utility
21 owner, must be in the name of the overlord, the state, and, to be effective,
22 must possess the power of intelligent visitation and the plenary supervision
23 of every business feature to be finally (however invisible) reflected in rates
24 and quality of service. (Kansas City Gas Co. at 857-58).
25

26 The General Assembly has determined that the provisions of the Public Service Commission

27 Act "shall be liberally construed with a view to the public welfare, efficient facilities and

28 substantial justice between patrons and public utilities" (See: 386.610 RSMo 1978).

29 Pursuant to the above legislative directive, when developing the cost of equity capital for a

30 public utility operating in Missouri, it is appropriate to do so with a view toward the public

1   welfare; giving the utility an amount that will allow for efficient use of its facilities and the

2   proper balance of interests between the ratepayers and the utility.

APPENDIX F

MARKET-TO-BOOK RATIO ILLUSTRATION

Q. COULD YOU PROVIDE AN EXAMPLE ILLUSTRATING THE IMPORTANCE OF MARKET-TO-BOOK RATIOS AND THEIR RELATIONSHIP TO THE COST OF EQUITY CAPITAL?

A. Yes. Assume that a utility's equity has a book value of $10 per share and that, for simplicity, this utility pays out all its earnings in dividends. If regulators allow the utility a 12% return, investors will expect the company to earn (and pay out) $1.20 per share. If investors require a 12% return on this investment, they will be willing to provide a market price of $10 per share for this stock ($1.20 dividends/$10 market price = 12%). In that case, the allowed/expected return is equal to the cost of capital and the market price is equal to the book value.

Now, assume the investors' required return is 10%. Investors would be drawn to a utility stock in a risk class for which they require a 10% return but was expected to pay out a 12% return. The increased demand by investors would result in an increase in the market price of the stock until the total share yield equaled the investors' required return. In our example, that point would be $12 per share ($1.20 dividends/$12 market price = 10%). As such, the allowed/expected return (12%) is greater than the required return (10%) and the per share market price ($12/share) exceeds book value ($10/share), producing a market-to-book ratio greater than one ($12/$10 = 1.20). Consequently, when the market-to-book ratio for a given utility is greater than one, the earned or projected return on book equity is greater than the cost of capital.

32

1   **APPENDIX G**

2   **DEVELOPMENT OF A COMPARISON GROUP**

3 Q. PLEASE EXPLAIN HOW YOU DEVELOPED A GROUP OF GAS UTILITIES WITH
4   FINANCIAL RISK CHARACTERISTICS SIMILAR TO MGE.

5 A. The following selection criteria have been used to develop a group of comparable gas

6   utilities:

7   1). Publicly traded company;

8   2). No Missouri-regulated operations;

9   3). Greater than 85% of total revenues from regulated sales of gas;

10   4). Total capitalization less than 1.5 billion;

11   5). Standard & Poor's Bond Rating of at least A-;

12   6). Covered by Value Line;

13   The following companies met the selection criteria: 1) AGL Resources, Inc. (AGL, ticker

14   ATG); 2) Bay State Gas Company (Bay State, ticker BGC); 3) Connecticut Energy

15   Corporation (Conn. Energy, ticker CNE); 4) CTG Resources, Inc. (CTG, ticker CTG); 5)

16   Indiana Energy. Inc.(Indiana, ticker IEI); 6) New Jersey Resources Corp. (NJR, ticker NJR);

17   7) Northwest Natural Gas Co.(NWNG, ticker NWNG); 8) Peoples Energy Corporation

18   (Peoples, ticker PGL); 9) Piedmont Natural Gas Company (Piedmont, ticker PNY); and 10)

19   Washington Gas Light Company (WGL, ticker WGL).

20 Q. HAVE YOU MADE ANY RISK EVALUATIONS FOR THE COMPARISON GROUP?

21 A. Yes. As shown on Schedule MB-2, I have examined several measures that typically act as

22   indicators of relative risk.

23   The beta coefficient;

24   Fixed charge coverage;

25   Value Line Safety rating;

1   Bond Rating from Standard & Poor's;

2   Average common equity ratio;

3   Value Line Financial Strength.

4   Also, many of the selection criteria also act as risk measures, such as the level of revenues

5   from regulated gas operations.

6   Q.   WHAT CONCLUSIONS CAN BE DRAWN FROM THIS ANALYSIS?

7   A.   Generally, the level of overall, or total, risk for the industry companies is representative of

8   the risks faced by Laclede as a regulated natural gas distributor.

1

APPENDIX H

2

EFFICIENT NATURE OF THE CAPITAL MARKETS

3 Q. IS THE DISCOUNTED CASH FLOW MODEL INHERENTLY CAPABLE OF
4 ADJUSTING FOR THE LEVEL OF REAL OR PERCEIVED RISKINESS TO A GIVEN
5 SECURITY?

6 A. Yes. It is impossible for any one analyst to systematically interpret the impact that each and

7 every risk variable facing an individual firm has on the cost of equity capital to that firm.

8 Fortunately, this type of risk-by-risk analysis is not necessary when determining the

9 appropriate variables to be plugged into the DCF formula.

10 As stated earlier, the DCF model can correctly identify the cost of equity capital to a

11 firm by adding the current dividend yield (D/P) to the correct determination of investor-

12 expected growth (g). Thus, the difficult task of determining the cost of equity capital is made

13 easier, in part, by the relative ease of locating dividend and stock price information and the

14 efficient nature of the capital markets.

15 Q. PLEASE EXPLAIN THAT STATEMENT.

16 A. The DCF model is based on the assumption that investors (1) calculate intrinsic values for

17 stocks on the basis of their interpretation of available information concerning future cash

18 flows and risk, (2) compare the calculated intrinsic value for each stock with its current

19 market price, and (3) make buy or sell decisions based on whether a stock's intrinsic value is

20 greater or less than its market price.

21 Only if its market price is equal to or lower than its intrinsic value as calculated by

22 the marginal investor will a stock be demanded by that investor. If a stock sells at a price

23 significantly above or below its calculated intrinsic value, buy or sell orders will quickly push

24 the stock towards market equilibrium. The DCF model takes on the following form when

25 used by investors to calculate the intrinsic value of a given security,

1           $P^\wedge = D/k\text{-}g$

2   where $P^\wedge$= the intrinsic value of the security,

3   D = the current dividend,

4   g = the expected growth rate, and

5   k = the required return on the security

6   Since the required rate of return for any given investor is based on both the perceived

7   riskiness of the security and return opportunities available in other segments of the market, it

8   can be easily demonstrated that when perceived riskiness is increased, the investors' required

9   return is also increased and the market value of the investment falls as it is valued less by the

10   marginal investor. Returning to the form of the DCF model used to determine the cost of

11   equity capital to the firm.

12          $k = D/P + g$

13   we see that the required return rises as an increase in the perceived risk associated with a

14   given security drives the price down. Within this context, the DCF formula incorporates all

15   known information. including information regarding risks, into the cost of equity capital

16   calculation. This is known as the "efficient market" hypothesis.

17 Q. IS THE "EFFICIENT MARKET" HYPOTHESIS SUPPORTED IN THE FINANCIAL
18   LITERATURE?

19 A. Yes. Modern investment theory maintains that the U.S. capital markets are efficient and, at

20   any point in time. the prices of publicly traded stocks and bonds reflect all available

21   information about those securities. Additionally, as new information is discovered, security

22   prices adjust virtually instantaneously. This implies that, at any given time, security prices

23   reflect "real" or intrinsic values. This point is further clarified by Brealey and Myers in

24   Principles of Corporate Finance, Fourth Edition:

36

When economists say that the security market is efficient, they are not talking about whether the filing is up-to-date or whether the desktops are tidy. They mean that information is widely and cheaply available to investors and that all relevant and ascertainable information is already reflected in security prices. (pg. 290)

Suppose. e.g.. that you wish to sell an antique painting at an auction but you have no idea of its value. Can you be sure of receiving a fair price? The answer is that you can if the auction is sufficiently competitive. In other words. you need to satisfy yourself that it is to be properly conducted (that includes no collusion among bidders), that there is no substantial cost involved in submitting a bid, and that the auction is attended by a reasonable number of skilled potential bidders, each of whom has access to the available information. In this case, no matter how ignorant *you* may be, competition among experts will ensure that the price you realize fully reflects the value of the painting.

In just the same way, competition among investment analysts will lead to a stock market in which prices at all times reflect true value. But what do we mean by *true value*? It is a potentially slippery phrase. True value does not mean ultimate *future* value -- we do not expect investors to be fortune-tellers. It means an equilibrium price which incorporates *all* the information available to investors at that time. That was our definition of an efficient market. (pg. 293-294)

1

APPENDIX I

2
DETERMINATION OF RETENTION (BR + SV) GROWTH &
3
SUSTAINABLE GROWTH VS. EARNINGS AND DIVIDEND GROWTH RATES

4 Q.   PREVIOUSLY YOU STATED THAT IT IS CRITICAL TO UNDERSTAND THE
5   SOURCES OF GROWTH WHEN DEVELOPING A SUSTAINABLE GROWTH RATE
6   RECOMMENDATION.   PLEASE PROVIDE AN EXAMPLE THAT ILLUSTRATES
7   HOW SUSTAINABLE GROWTH IS MEASURED.

8 A.   To understand how investors develop a growth rate expectation, it is helpful to look at an

9   illustration that shows how expected growth is measured.   To do this, assume that a

10   hypothetical utility has a first period common equity, or book value per share of $20.00; the

11   investor-expected return on that equity is 12 percent; and the stated company policy is to pay

12   out 50 percent of earnings in dividends. The first period earnings per share are expected to

13   be $2.40 ($20 per share book equity x 12% equity) and the expected dividend is $1.20. The

14   amount of earnings not paid out to shareholders ($1.20), referred to as retained earnings,

15   raises the book value of the equity to $21.20 in the second period. The following table

16   continues the hypothetical for a three-year period and illustrates the underlying determinants

17   of growth.

18 | | Year 1 | Year 2 | Year 3 | Gr. |
   | ----------- | ------- | ------- | ------- | ----- |
19 | Book Value | $20.00 | $21.20 | $22.47 | 6.00% |
20 | Equity Return | 12% | 12% | 12% | |
21 | Earnings/Sh. | $2.40 | $2.54 | $2.67 | 6.00% |
22 | Payout Ratio | 50% | 50% | 50% | |
23 | Dividend/Sh. | $1.20 | $1.27 | $1.34 | 6.00% |
24

25   As can be seen, earnings, dividends, and book value all grow at the same rate when the

26   payout ratio and return on equity remain stable. Moreover, key to this growth is the amount

27   of earnings retained or reinvested in the firm and the return on equity.

1   Letting "b" equal the retention ratio of the firm (or 1 minus the payout ratio) and

2   letting "r" equal the firm's expected return on equity, the DCF growth rate "g" (also referred

3   to as the sustainable growth rate) is equal to their product, or

4                   $g = br$.

5   As shown in the example, the growth rate for the hypothetical company is 6.00 percent (12%

6   ROE x 50% payout ratio).

7   Dr. Gordon has determined that this equation embodies the underlying fundamentals

8   of growth and. therefore. is a primary measure of growth to be used in the DCF model

9   (Gordon, The Cost of Capital to a Public Utility, 1974, p.81). It should be noted, however,

10   Dr. Gordon's research also indicates that analysts' growth rate projections are useful in

11   estimating investors' expectations. As a result, analysts' published growth rate projections,

12   along with other historic and projected growth rates, are considered in this analysis for the

13   purpose of reaching an accurate estimation of the expected sustainable growth rate.

14 Q.   CAN THE RETENTION GROWTH RATE MODEL BE FURTHER REFINED IN ORDER
15   TO BEST REPRESENT INVESTORS' EXPECTATIONS?

16 A.   Yes. The above hypothetical example does not allow for the existence of external sources of

17   equity financing (i.e., sales of common stock). Stock financing will cause investors to expect

18   additional growth if the company is expected to issue additional shares at a market price

19   which exceeds book value.

20   The excess of market value over book value per share would benefit current

21   shareholders by increasing their per share equity value. Therefore, if the company is expected

22   to continue to issue stock at a price that exceeds book value per share, the shareholders

23   would continue to expect their book value to increase and would add that growth expectation

24   to that stemming from the retention of earnings. or internal growth.

1   On the other hand, if a company is expected to issue new common equity at a price

2   below book value, that would have a negative effect on shareholders' current growth rate

3   expectations. Finally, with little or no expected equity financing or a market-to-book ratio at

4   or near one, investors would expect the long-term sustainable growth rate for the company to

5   equal the growth from earnings retention.

6   Dr. Gordon identifies the growth rate which includes both expected internal and

7   external financing as,

8        $g = br + sv$

9   where, g = DCF expected growth rate,

10   r = return on equity,

11   b = retention ratio,

12   v = fraction of new common stock sold that accrues to the current shareholder,

13   s = funds raised from the sale of stock as a fraction of existing equity.

14   Additionally,

15        $v = 1 - BV/MP$

16   where,

17   MP = market price,
18   BV = book value.
19
20   The second term (sv), which represents the external portion of the expected growth rate, does

21   not normally represent a major source of growth when compared to the expected growth

22   attributed to the retention of earnings. For example, the FERC Generic Rate of Return

23   Model estimates the (sv) component in the range of 0.1% to 0.2%. However, I have used this

24   equation as the basis for determining sustainable growth for the comparable group.

1 Q. IS HISTORIC OR PROJECTED GROWTH IN EARNINGS OR DIVIDENDS
2   APPROPRIATE FOR DETERMINING THE DCF GROWTH RATE?

3 A. No. not always. As I have stated, growth derived from earnings or dividends alone can be

4   unreliable for ratemaking purposes due to external influences on these parameters such as

5   changes in the historic or expected rate of return on common equity or changes in the payout

6   ratio. An extended example will demonstrate this point.

7   If we take the example above and assume that, in year two, the expected return on

8   equity rises from 12 percent to 15 percent, the resulting growth rate in earnings and dividends

9   per share dramatically exceeds what the company could sustain indefinitely. The error that

10   can result from exclusive reliance on earnings or dividends growth is illustrated in the

11   following table:

12
13 | | Year 1 | Year 2 | Year 3 | Gr. |
   | ------------ | -------- | -------- | -------- | ------- |
14 | Book Value | $20.00 | $21.20 | $22.79 | 6.75% |
15 | Equity Return| 12% | 15% | 15% | |
16 | Earnings/Sh. | $2.40 | $3.18 | $3.42 | 19.37% |
17 | Payout Ratio | 50% | 50% | 50% | |
18 | Dividends/Sh.| $1.20 | $1.59 | $1.71 | 19.37% |
19

20   Due to the change in return on equity in year two, the compound growth rate for dividends

21   and earnings is greater than 19 percent, which is the result only of a short-term increase in

22   the equity return rather than the intrinsic ability of the firm to grow continuously at a 19

23   percent annual rate.

24   For year one. the sustainable rate of growth (g=br) is 6.00 percent, just as it was in

25   the previous example. On the other hand, in years two and three, the sustainable growth rate

26   increases to 7.50 percent. (15% ROE x 50% retention rate = 7.50%). Consequently, if the

27   utility is expected to continually earn a 15 percent return on equity and retain 50 percent of

28   earnings for reinvestment. a growth rate of 7.50 percent would be a reasonable estimate of

41

1   the long-term sustainable growth rate. However, the compound growth rate in earnings and

2   dividends. which is over 19 percent, dramatically exceeds the actual investor-expected

3   growth rate.

4   As can be seen in the hypothetical, the 19 percent growth rate is simply the result of

5   the change in return on equity from year one to year two, not the firm's ability to grow

6   sustainably at that rate. Consequently, this type of growth rate cannot be relied upon to

7   accurately measure investors' sustainable growth rate expectations. In this instance, to rely

8   on either earnings or dividend growth would be to assume the return on equity could continue

9   to increase indefinitely. This, of course, is a faulty assumption; the recognition of which

10   emphasizes the need to analyze the fundamentals of actual growth.

11   Q.   IS HISTORIC GROWTH IN DIVIDENDS AN ACCURATE INDICATOR OF
12   INVESTORS' GROWTH EXPECTATIONS WHEN THE HISTORICAL PAYOUT RATIO
13   HAS BEEN ERRATIC OR TRENDED DOWNWARD OVER TIME?

14   A.   As stated. no. It can also be demonstrated that a change in our hypothetical utility's payout

15   ratio makes the past rate of growth in dividends an unreliable basis for predicting investor-

16   expected growth. If we assume the hypothetical utility consistently earns its expected equity

17   return but in the second year changes its payout ratio from 50 percent to 75 percent, the

18   resulting growth rate in dividends far exceeds a reasonable level of sustainable growth.

19
	Year 1	Year 2	Year 3	Gr.
Book Value	$20.00	$21.20	$21.84	4.50%
Equity Return	12%	12%	12%	
Earnings/Sh.	$2.40	$2.54	$2.62	4.50%
Payout Ratio	50%	75%	75%	
Dividends/Sh.	$1.20	$1.91	$1.97	28.13%

26   Although the company has registered a high dividend growth rate (28.13%), it is not

27   representative of the growth that could be sustained, as called for in the DCF model. In

28   actuality. the sustainable growth rate (br) has declined due to the increased payout ratio. To

1   utilize a 28 percent growth rate in a DCF analysis for this hypothetical utility would be to

2   assume that the payout ratio could continue to increase indefinitely and lead to the unlikely

3   result that the firm could consistently pay out more in dividends than it earns. The problems

4   associated with sole reliance on historic dividend growth has been recognized in the financial

5   literature. According to Brigham and Gapenski,

6
7
8
9
10
11
12

> If earnings and dividends are growing at the same rate, there is no problem,
> but if these two growth rates are unequal, we do have a problem. First, the
> DCF model calls for the expected dividend growth rate. However, if EPS
> and DPS are growing at different rates, something is going to have to
> change: these two series cannot grow at two different rates indefinitely
> (Intermediate Financial Management, p.145).

13

BURDETTE - DIRECT

GR-98-374   Laclede Gas Company

Laclede Gas Company
Historical Financial Information

	1997	1996	1995	1994	1993	Average
Return on Equity	12.40%	12.60%	10.70%	10.90%	12.00%	11.72%
Earnings per share	$ 1.84	$ 1.87	$ 1.27	$ 1.42	$ 1.61	$ 1.60
Dividends per share	$ 1.30	$ 1.26	$ 1.24	$ 1.22	$ 1.215	$ 1.247
Payout Ratio	70.65%	67.38%	97.64%	85.92%	75.47%	79.41%
Book Value per share	$ 14.26	$ 13.72	$ 13.05	$ 12.44	$ 12.19	$ 13.13

Source: Laclede Gas Company 1997 Annual Report to Shareholders
Value Line Investment Survey; OPC data requests 2011, 2012.

BURDETTE - DIRECT

GR-98-374   Laclede Gas Company

Laclede Gas Company
Capital Structure

As of 6/30/98

	Amount	Percent
Common Stock Equity	$265,414,384	52.66%
Preferred Stock	$ 1,960,000	0.39%
Long Term Debt	$178,278,724	35.37%
Short Term Debt	$ 58,385,011	11.58%
	$504,038,119	100.00%

No Short Term Debt
For Historical Comparison Purposes Only

	Jun-98 Without Short Term Debt	
	Amount	%
Common Stock Equity	$265,414,384	59.56%
Preferred Stock	$1,960,000	0.44%
Long Term Debt	$178,278,724	40.00%
	$445,653,108	100.00%

Source: Schedules MB-3, MB-4, MB-5, OPC data request 2001.

Schedule MB-2

BURDETTE - DIRECT

GR-98-374   Laclede Gas Company

Percent Common Equity for Laclede and Comparison Group - No short term debt
Value Line Investment Survey Composite Index

	1997	1996	1995	1994	1993	Average
AGL Resources Inc.	45.9%	48.9%	47.6%	45.8%	53.1%	48.3%
Bay State Gas Company	50.0%	53.1%	51.8%	52.3%	51.9%	51.8%
Connecticut Energy Corp.	51.9%	49.9%	52.4%	51.2%	45.2%	50.1%
CTG Resources, Inc.	57.0%	55.2%	49.8%	47.3%	45.9%	51.0%
Indiana Energy	65.0%	62.5%	61.4%	63.1%	61.1%	62.6%
New Jersey Resources	47.1%	45.8%	41.0%	42.0%	42.6%	43.7%
Northwest Natural Gas	49.0%	52.8%	50.3%	45.1%	45.0%	48.4%
People's Energy Corp.	42.4%	43.6%	49.2%	49.4%	45.7%	46.1%
Piedmont Natural Gas Co.	52.4%	49.7%	49.6%	49.1%	50.6%	50.3%
Washington Gas Light Company	56.2%	59.4%	58.9%	56.7%	54.8%	57.2%
Comparables Average	**51.7%**	**52.1%**	**51.2%**	**50.2%**	**49.6%**	**51.0%**
Laclede Gas Company	**61.6%**	**57.1%**	**59.3%**	**55.5%**	**53.1%**	**57.3%**
Laclede Gas Company	**61.6%**	**57.1%**	**59.3%**	**55.5%**		**58.4%**
Value Line Composite Index	**49.6%**	**49.1%**	**47.4%**	**47.6%**		**48.4%**
Natural Gas (Distribution)						

Source: Value Line Investment Survey

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GR-98-374   Laclede Gas Company

Laclede Gas Company
Embedded Cost of Preferred Stock

	Amount	Coupon Rate	Dividend Requirement
Issue:			
5.00% Series B	$1,797,250	5.00%	$89,863
4.56% Series C	$162,750	4.56%	$7,421
TOTAL:	$1,960,000		$97,284

Amount Outstanding	$1,960,000
Dividend Requirement:	$97,284

Embedded Cost Rate: | **4.96%** |

Source: Company response to OPC data request 2003

BURDETTE - DIRECT
GR-98-374   Laclede Gas Company

Laclede Gas Company
Embedded Cost of Long Term Debt

Description:	Issue Date	Maturity Date	Principal Original Issue	Amount Outstanding	Interest Rate	Annual Interest	Annual Amortization Issuance Expenses Discnts/Prems.		Unamortized Issuance Expense Discnts/Prems.	Annual Cost	Carrying Value	Embedded Cost Rate
6.25% Series	05/01/93	05/01/03	$25,000,000	$25,000,000	6.25%	$1,562,500	$	41,902	$ 216,496	$1,604,402	$24,783,504	6.47%
8.5% Series	11/15/89	11/15/04	25,000,000	25,000,000	8.50%	$2,125,000	$	23,295	$ 156,273	$2,148,295	$24,843,727	8.65%
8.625% Series	05/15/91	05/15/06	40,000,000	40,000,000	8.63%	$3,450,000	$	47,280	$ 388,093	$3,497,280	$39,611,907	8.83%
7.50% Series	11/01/92	11/01/07	40,000,000	40,000,000	7.50%	$3,000,000	$	40,487	$ 391,372	$3,040,487	$39,608,628	7.68%
6.50% Series	11/15/95	11/15/10	25,000,000	25,000,000	6.50%	$1,625,000	$	13,441	$ 170,817	$1,638,441	$24,829,183	6.60% ·
6.50% Series	10/16/97	10/15/12	25,000,000	25,000,000	6.50%	$1,625,000	$	34,067	$ 398,225	$1,659,067	$24,601,775	6.74%
Reacquired LTD							$	208,330	$ 829,362			
							$	200,473	$ 1,721,276			
TOTAL:			$180,000,000	$180,000,000		$13,387,500		$408,803	$2,550,638	$13,587,973	$178,278,724	

Total Cost: $13,796,303
Total Carrying Value: $178,278,724

Embedded Cost Rate: | 7.77% |

Laclede Gas Company
Embedded Cost of Short Term Debt through 6/30/98

	Wtd. Avg. Effective Interest Rate	Balance Outstanding End of Month	Dec-97 Weight	Year ended Dec-97 Weighted Cost	Jun-98 Weight	Year ended Jun-98 Weighted Cost	CWIP	Balance less CWIP
Jan-97	5.321%	$100,500,000	12.75%	0.679%			$ 4,089,687	$96,410,313
Feb-97	5.430%	$ 83,000,000	10.53%	0.572%			$ 3,819,625	$79,180,375
Mar-97	5.467%	$ 56,000,000	7.11%	0.389%			$ 3,649,772	$52,350,228
Apr-97	5.611%	$ 40,000,000	5.08%	0.285%			$ 4,075,934	$35,924,066
May-97	5.614%	$ 31,500,000	4.00%	0.224%			$ 4,064,843	$27,435,157
Jun-97	5.668%	$ 34,500,000	4.38%	0.248%			$ 5,472,559	$29,027,441
Jul-97	5.650%	$ 43,000,000	5.46%	0.308%	5.44%	0.31%	$ 5,845,332	$37,154,668
Aug-97	5.624%	$ 55,500,000	7.04%	0.396%	7.02%	0.39%	$ 6,459,514	$49,040,486
Sep-97	5.636%	$ 74,000,000	9.39%	0.529%	9.36%	0.53%	$ 4,895,437	$69,104,563
Oct-97	5.641%	$ 70,500,000	8.95%	0.505%	8.91%	0.50%	$ 6,590,149	$63,909,851
Nov-97	5.728%	$ 97,000,000	12.31%	0.705%	12.26%	0.70%	$ 6,339,125	$90,660,875
Dec-97	5.867%	$102,500,000	13.01%	0.763%	12.96%	0.76%	$ 7,364,543	$95,135,457
		$ 788,000,000	100.00%	5.603%				

Average Monthly Lev $ 65,666,667   Average Monthly Level less CWIP (1997): $60,444,457

	Wtd. Avg. Effective Interest Rate	Balance Outstanding End of Month			Jun-98 Weight	Jun-98 Weighted Cost	CWIP	Balance less CWIP
Jan-98	5.797%	$ 89,500,000			11.31%	0.66%	$ 7,266,124	$82,233,876
Feb-98	5.630%	$ 63,500,000			8.03%	0.45%	$ 7,197,007	$56,302,993
Mar-98	5.647%	$ 34,500,000			4.36%	0.25%	$ 7,337,487	$27,162,513
Apr-98	5.643%	$ 33,000,000			4.17%	0.24%	$10,580,902	$22,419,098
May-98	5.631%	$ 63,000,000			7.96%	0.45%	$ 8,482,186	$54,517,814
Jun-98	5.652%	$ 65,000,000			8.22%	0.46%	$12,022,064	$52,977,936
		$ 791,000,000			100.00%	5.70%		

Average Monthly Level ($ 65,916,667   Average Monthly Level less CWIP (ending 6/98): $58,385,011

Source: Company response to OPC data request 2004

BURDETTE - DIRECT
GR-98-374   Laclede Gas Company

Comparison Companies

C.A. Turner Utility Reports - June 1998: Statistical Information
Natural Gas Distribution and Integrated Natural Gas Companies

	Public	Revenue	% Rev Gas	S&P	Payout Ratio	Dividend Yield	MTB	Common Equity	Missouri Reg.?
AGL Resources Inc.	yes	$1,310.3	100.0%	A-	0.84	5.5%	1.75	42.0%	No
Bay State Gas Company	yes	$ 489.9	100.0%	A	0.87	4.2%	2.12	42.0%	No
Connecticut Energy Corp.	yes	$ 253.6	100.0%	A	0.79	4.9%	1.61	51.0%	No
CTG Resources, Inc.	yes	$ 308.7	94.0%	A-	0.56	4.3%	1.66	35.0%	No
Indiana Energy	yes	$ 475.9	100.0%	AA-	0.60	4.1%	2.29	56.0%	No
New Jersey Resources	yes	$ 728.3	81.0%	A+	0.71	4.6%	2.23	43.0%	No
Northwest Natural Gas	yes	$ 363.1	97.0%	A	0.72	4.6%	1.71	43.0%	No
People's Energy Corp.	yes	$1,128.9	100.0%	AA-	0.84	5.4%	1.68	56.0%	No
Piedmont Natural Gas Co.	yes	$ 776.2	100.0%	A	0.65	4.0%	2.15	52.0%	No
Washington Gas Light Company	yes	$1,078.3	100.0%	AA-	0.64	4.6%	1.86	50.0%	No
Average		$ 691.3	97.2%	A/A-	0.72	4.6%	1.91	47.0%	
Laclede		$ 608.6	100.0%	AA-	0.78	5.7%	1.56	46.0%	

Value Line Investment Survey

	Beta	Fixed Charge Coverage	Timeliness	Financial Strength	Safety
AGL Resources Inc.	0.70	2.80	4	B+	2
Bay State Gas Company	0.50	3.03	-	B++	2
Connecticut Energy Corp.	0.65	2.77	4	B++	2
CTG Resources, Inc.	0.55	3.51	4	B+	2
Indiana Energy	0.70	4.62	4	A	2
New Jersey Resources	0.60	3.32	3	B++	2
Northwest Natural Gas	0.65	2.48	4	B++	2
People's Energy Corp.	0.85	5.00	5	A	1
Piedmont Natural Gas Co.	0.60	3.81	3	B++	2
Washington Gas Light Company	0.75	4.31	5	A	1
Average	0.66	3.57	4.00	B++/A	2
Laclede	0.55	2.91	4	A	1

Source: C.A. Turner Utility Reports June 1998, Value Line Investment Survey

BURDETTE - DIRECT
GR-98-374 Laclede Gas Company

Summary and Ranges - Growth for Comparison Companies

Historic Growth	Retention	Calculated Compound Growth			Value Line		
COMPANY	br + sv	EPS	DPS	BVPS	EPS	DPS	BVPS
Laclede Gas Company	3.51%	3.39%	1.22%	3.45%	7.00%	2.00%	2.75%
AGL Resources Inc.	3.21%	5.80%	0.72%	2.20%	4.25%	2.50%	3.00%
Bay State Gas Company	2.90%	5.27%	2.89%	3.68%	3.25%	4.00%	4.75%
Connecticut Energy Corp.	4.04%	4.33%	0.98%	4.42%	4.25%	1.25%	4.00%
CTG Resources, Inc.	3.02%	1.17%	1.15%	3.88%	0.75%	1.50%	4.00%
Indiana Energy	5.25%	10.10%	3.79%	5.08%	7.00%	4.50%	5.50%
New Jersey Resources	3.83%	6.23%	0.70%	2.09%	9.50%	2.25%	3.75%
Northwest Natural Gas	5.15%	0.29%	1.00%	5.04%	7.75%	1.50%	4.25%
People's Energy Corp.	3.59%	8.46%	1.12%	2.55%	3.00%	2.50%	3.00%
Piedmont Natural Gas Co.	5.47%	7.92%	6.02%	6.25%	7.50%	6.00%	6.25%
Washington Gas Light Company	4.27%	8.36%	1.67%	5.11%	5.50%	2.50%	4.00%
Average	4.07%	5.79%	2.00%	4.03%	5.28%	2.85%	4.25%

Projected Growth	Retention	Value Line / Zack's		
COMPANY	br + sv	EPS	DPS	BVPS
Laclede Gas Company	4.38%	3.14%	2.50%	3.50%
AGL Resources Inc.	4.14%	4.02%	1.50%	4.50%
Bay State Gas Company	4.26%	7.67%	3.50%	5.00%
Connecticut Energy Corp.	4.23%	5.67%	4.00%	4.00%
CTG Resources, Inc.	6.84%	6.17%	-	3.00%
Indiana Energy	6.11%	6.07%	3.50%	5.00%
New Jersey Resources	7.07%	6.74%	3.50%	6.00%
Northwest Natural Gas	5.92%	5.26%	2.00%	5.00%
People's Energy Corp.	5.44%	4.80%	2.00%	4.50%
Piedmont Natural Gas Co.	6.72%	7.42%	4.50%	6.00%
Washington Gas Light Company	5.32%	5.25%	3.00%	5.50%
Average	5.61%	5.90%	3.06%	4.85%

Growth Rate Ranges	Overall			Hi/Low	
COMPANY	Average	Low*	High	Average	Median
Laclede Gas Company	3.35%	1.22%	7.00%	4.11%	3.39%
AGL Resources Inc.	3.26%	0.72%	5.80%	3.26%	3.21%
Bay State Gas Company	4.29%	2.89%	7.67%	5.28%	4.00%
Connecticut Energy Corp.	3.74%	0.98%	5.67%	3.32%	4.04%
CTG Resources, Inc.	3.15%	0.75%	6.84%	3.79%	3.01%
Indiana Energy	5.63%	3.50%	10.10%	6.80%	5.25%
New Jersey Resources	4.70%	0.70%	9.50%	5.10%	3.83%
Northwest Natural Gas	3.92%	0.29%	7.75%	4.02%	5.00%
People's Energy Corp.	3.72%	1.12%	8.46%	4.79%	3.00%
Piedmont Natural Gas Co.	6.37%	4.50%	7.92%	6.21%	6.25%
Washington Gas Light Company	4.59%	1.67%	8.36%	5.01%	5.11%
Comparison Company Average	4.34%	1.71%	7.81%	4.76%	4.27%

Note: Negative growth rates are not included in averages and are excluded from determination of "Low".
Source: Schedules MB-10-19

BURDETTE - DIRECT
GR-98-374   Laclede Gas Company

Discounted Cash Flow Growth Parameters

Laclede Gas Company

		Compound Growth			Retention Growth		
					Retention	Equity	Growth
	Historic Data	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
1	1991	1.28	1.20	11.83	0.063		
2	1992	1.17	1.20	11.79	-0.026		
3	1993	1.61	1.22	12.19	0.242	13.20%	3.20%
4	1994	1.42	1.22	12.44	0.141	11.30%	1.59%
5	1995	1.27	1.24	13.05	0.024	9.20%	0.22%
6	1996	1.87	1.26	13.72	0.326	13.60%	4.44%
7	1997	1.84	1.30	14.26	0.293	12.90%	3.79%
8							
9		Compound Growth Rates				Ave. Internal	
10	'91-95	-0.20%	0.82%	2.48%		Growth (br):	2.65%
11							
12	'92-96	12.44%	1.23%	3.86%		ADD: External	
13						Growth (sv):	0.86%
14	'93-97	3.39%	1.60%	4.00%			
15		.				Historic	
16	Ave.Compound Gr.	3.39%	1.22%	3.45%		"br + sv" Gr.	3.51%
17							
18	Value Line	EPS	DPS	BVPS			
19	Historic Gr.	7.00%	2.00%	2.75%			
20	(Avg of 5 and 10 yr if both are available)						
21							
22		Projected Growth					
23					Retention	Equity	Growth
24	Projections	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
25	1998 est'd	$1.50	$1.32	$14.45	0.120	10.50%	1.26%
26	1999 est'd	1.90	1.35	14.90	0.289	13.00%	3.76%
27	01-03 est'd	2.15	1.45	16.65	0.326	13.00%	4.23%
28							
29	Value Line					Projected	
30	Proj'd Growth	4.50%	2.50%	3.50%		Growth (br):	4.23%
31							
32	Zack's 5 yr.					ADD: External	
33	Proj'd Growth	1.77%				Growth (sv):	0.15%
34							
35	Average					Projected	
36	Proj'd Growth	3.14%	2.50%	3.50%		"br + sv" Gr.	4.38%

Note: Negative (b*r) growth is not included in retention growth averages.

SOURCE: The Value Line Investment Survey, C.A. Turner Utility Reports - June 1998
               Zack's Analyst Watch

BURDETTE - DIRECT
GR-98-140   Missouri Gas Energy

Discounted Cash Flow Growth Parameters

AGL Resources, Inc.

		Compound Growth				Retention Growth	
					Retention	Equity	Growth
	Historic Data	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
1	1991	1.04	1.02	9.42	0.019		
2	1992	1.13	1.03	9.70	0.088		
3	1993	1.08	1.04	9.90	0.037	10.80%	0.40%
4	1994	1.17	1.04	10.19	0.111	11.30%	1.26%
5	1995	1.33	1.04	10.12	0.218	12.50%	2.73%
6	1996	1.37	1.06	10.56	0.226	12.10%	2.74%
7	1997	1.37	1.08	10.99	0.212	11.30%	2.39%
8							
9		Compound Growth Rates				Ave. Internal	
10	'91-95	6.34%	0.49%	1.81%		Growth (br):	1.90%
11							
12	'92-96	4.93%	0.72%	2.15%		ADD: External	
13						Growth (sv):	1.31%
14	'93-97	6.13%	0.95%	2.65%			
15						Historic	
16	Ave.Compound Gr.	5.80%	0.72%	2.20%		"br + sv" Gr.	3.21%
17							
18	Value Line	EPS	DPS	BVPS			
19	Historic Gr.	4.25%	2.50%	3.00%			
20	(Avg of 5 and 10 yr. if both are available)						
21							
22		Projected Growth					
23					Retention	Equity	Growth
24	Projections	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
25	1998 est'd	$1.20	$1.08	$11.25	0.100	10.50%	1.05%
26	1999 est'd	1.30	1.08	11.55	0.169	11.00%	1.86%
27	01-03 est'd	1.65	1.15	13.65	0.303	12.00%	3.64%
28							
29	Value Line					Projected	
30	Proj'd Growth	3.50%	1.50%	4.50%		Growth (br):	3.64%
31							
32	Zack's 5 yr.					ADD: External	
33	Proj'd Growth	4.53%				Growth (sv):	0.51%
34							
35	Average					Projected	
36	Proj'd Growth	4.02%	1.50%	4.50%		"br + sv" Gr.	4.14%

Note: Negative (b*r) growth is not included in retention growth averages.
SOURCE: The Value Line Investment Survey, C.A. Turner Utility Reports - June 1997
            Zack's Analyst Watch

BURDETTE - DIRECT
GR-98-140   Missouri Gas Energy

Discounted Cash Flow Growth Parameters

Bay State Gas Company

		Compound Growth				Retention Growth	
					Retention	Equity	Growth
	Historic Data	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
1	1991	1.32	1.31	13.60	0.008		
2	1992	1.41	1.36	14.90	0.035		
3	1993	1.75	1.40	15.52	0.200	11.10%	2.22%
4	1994	1.85	1.44	16.20	0.222	11.20%	2.48%
5	1995	1.71	1.48	16.46	0.135	10.40%	1.40%
6	1996	2.00	1.52	16.98	0.240	11.70%	2.81%
7	1997	1.85	1.56	17.35	0.157	10.60%	1.66%
8							
9		Compound Growth Rates				Ave. Internal	
10	'91-95	6.69%	3.10%	4.89%		Growth (br):	2.11%
11							
12	'92-96	9.13%	2.82%	3.32%		ADD: External	
13						Growth (sv):	0.78%
14	'93-97	1.40%	2.74%	2.83%			
15						Historic	
16	Ave.Compound Gr.	5.27%	2.89%	3.68%		"br + sv" Gr.	2.90%
17							
18	Value Line	EPS	DPS	BVPS			
19	Historic Gr.	3.25%	4.00%	4.75%			
20	(Avg of 5 and 10 yr if both are available)						
21							
22		Projected Growth					
23					Retention	Equity	Growth
24	Projections	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
25	1998 est'd	$1.70	$1.62	$17.75	0.047	9.50%	0.45%
26	1999 est'd	1.95	1.68	18.30	0.138	11.00%	1.52%
27	01-03 est'd	2.65	1.88	20.50	0.291	13.00%	3.78%
28							
29	Value Line					Projected	
30	Proj'd Growth	9.50%	3.50%	5.00%		Growth (br):	3.78%
31							
32	Zack's 5 yr.					ADD: External	
33	Proj'd Growth	5.83%				Growth (sv):	0.48%
34							
35	Average					Projected	
36	Proj'd Growth	7.67%	3.50%	5.00%		"br + sv" Gr.	4.26%

Note: Negative (b*r) growth is not included in retention growth averages.

SOURCE: The Value Line Investment Survey, C.A. Turner Utility Reports - June 1997
                Zack's Analyst Watch

BURDETTE - DIRECT
GR-98-140   Missouri Gas Energy

Discounted Cash Flow Growth Parameters

Connecticut Energy Corporation

		Compound Growth				Retention Growth	
					Retention	Equity	Growth
	Historic Data	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
1	1991	1.38	1.24	12.49	0.101		
2	1992	1.43	1.26	12.80	0.119		
3	1993	1.50	1.28	13.33	0.147	11.00%	1.61%
4	1994	1.58	1.30	14.45	0.177	10.20%	1.81%
5	1995	1.60	1.30	14.84	0.188	10.70%	2.01%
6	1996	1.70	1.31	15.31	0.229	11.00%	2.52%
7	1997	1.81	1.32	15.76	0.271	11.40%	3.09%
8							
9		Compound Growth Rates				Ave. Internal	
10	'91-95	3.77%	1.19%	4.40%		Growth (br):	2.21%
11							
12	'92-96	4.42%	0.98%	4.58%		ADD: External	
13						Growth (sv):	1.83%
14	'93-97	4.81%	0.77%	4.28%			
15						Historic	
16	Ave.Compound Gr.	4.33%	0.98%	4.42%		"br + sv" Gr.	4.04%
17							
18	Value Line	EPS	DPS	BVPS			
19	Historic Gr.	4.25%	1.25%	4.00%			
20	(Avg of 5 and 10 yr if both are available)						
21							
22		Projected Growth					
23					Retention	Equity	Growth
24	Projections	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
25	1998 est'd	$1.85	$1.34	$17.05	0.276	11.00%	3.03%
26	1999 est'd	2.00	1.40	17.65	0.300	11.50%	3.45%
27	01-03 est'd	2.40	1.68	19.60	0.300	12.00%	3.60%
28							
29	Value Line					Projected	
30	Proj'd Growth	6.00%	4.00%	4.00%		Growth (br):	3.60%
31							
32	Zack's 5 yr.					ADD: External	
33	Proj'd Growth	5.33%				Growth (sv):	0.63%
34							
35	Average					Projected	
36	Proj'd Growth	5.67%	4.00%	4.00%		"br + sv" Gr.	4.23%

Note: Negative (b*r) growth is not included in retention growth averages.

SOURCE: The Value Line Investment Survey, C.A. Turner Utility Reports - June 1997
             Zack's Analyst Watch

BURDETTE - DIRECT
GR-98-140   Missouri Gas Energy

Discounted Cash Flow Growth Parameters

CTG

		Compound Growth			Retention Growth		
					Retention	Equity	Growth
	Historic Data	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
1	1991	1.44	1.40	12.77	0.028		
2	1992	1.75	1.44	13.26	0.177		
3	1993	1.76	1.46	14.29	0.170	12.30%	2.10%
4	1994	1.85	1.48	14.62	0.200	12.60%	2.52%
5	1995	1.52	1.48	15.12	0.026	10.10%	0.27%
6	1996	1.82	1.50	15.90	0.176	10.90%	1.92%
7	1997	1.60	1.52	15.89	0.050	10.00%	0.50%
8							
9		Compound Growth Rates				Ave. Internal	
10	'91-95	1.36%	1.40%	4.31%		Growth (br):	1.46%
11							
12	'92-96	0.99%	1.03%	4.64%		ADD: External	
13						Growth (sv):	1.56%
14	'93-97	-2.35%	1.01%	2.69%			
15						Historic	
16	Ave.Compound Gr.	1.17%	1.15%	3.88%		"br + sv" Gr.	3.02%
17							
18	Value Line	EPS	DPS	BVPS			
19	Historic Gr.	0.75%	1.50%	4.00%			
20	(Avg of 5 and 10 yr if both are available)						
21							
22		Projected Growth					
23					Retention	Equity	Growth
24	Projections	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
25	1998 est'd	$1.80	$1.00	$14.25	0.444	13.00%	5.78%
26	1999 est'd	2.05	1.00	14.65	0.512	13.00%	6.66%
27	01-03 est'd	2.40	1.20	18.40	0.500	13.00%	6.50%
28							
29	Value Line					Projected	
30	Proj'd Growth	6.50%	-3.50%	3.00%		Growth (br):	6.50%
31							
32	Zack's 5 yr.					ADD: External	
33	Proj'd Growth	5.83%				Growth (sv):	0.34%
34							
35	Average					Projected	
36	Proj'd Growth	6.17%	-	3.00%		"br + sv" Gr.	6.84%

Note: Negative (b*r) growth is not included in retention growth averages.

Schedule MB 13

BURDETTE - DIRECT
GR-98-140   Missouri Gas Energy

Discounted Cash Flow Growth Parameters

Indiana Energy, Inc.

		Compound Growth				Retention Growth	
					Retention	Equity	Growth
	Historic Data	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
1	1991	1.11	0.92	9.97	0.171		
2	1992	1.16	0.96	10.22	0.172		
3	1993	1.28	0.99	11.52	0.227	10.90%	2.47%
4	1994	1.53	1.02	12.03	0.333	12.70%	4.23%
5	1995	1.46	1.07	12.44	0.267	11.70%	3.13%
6	1996	1.87	1.11	13.18	0.406	14.20%	5.77%
7	1997	1.91	1.15	12.96	0.398	14.80%	5.89%
8	-						
9		Compound Growth Rates				Ave. Internal	
10	'91-95	7.09%	3.85%	5.69%		Growth (br):	4.30%
11							
12	'92-96	12.68%	3.70%	6.57%		ADD: External	
13						Growth (sv):	0.95%
14	'93-97	10.52%	3.82%	2.99%			
15						Historic	
16	Ave.Compound Gr.	10.10%	3.79%	5.08%		"br + sv" Gr.	5.25%
17							
18	Value Line	EPS	DPS	BVPS			
19	Historic Gr.	7.00%	4.50%	5.50%			
20	(Avg of 5 and 10 yr if both are available)						
21							
22		Projected Growth					
23					Retention	Equity	Growth
24	Projections	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
25	1998 est'd	$1.80	$1.20	$13.55	0.333	13.00%	4.33%
26	1999 est'd	2.10	1.24	14.35	0.410	14.00%	5.73%
27	01-03 est'd	2.45	1.38	17.25	0.437	14.00%	6.11%
28							
29	Value Line					Projected	
30	Proj'd Growth	6.00%	3.50%	5.00%		Growth (br):	6.11%
31							
32	Zack's 5 yr.					ADD: External	
33	Proj'd Growth	6.13%				Growth (sv):	0.00%
34							
35	Average					Projected	
36	Proj'd Growth	6.07%	3.50%	5.00%		"br + sv" Gr.	6.11%

Note: Negative (b*r) growth is not included in retention growth averages.

SOURCE: The Value Line Investment Survey, C.A. Turner Utility Reports - June 1997
            Zack's Analyst Watch

BURDETTE - DIRECT
GR-98-140   Missouri Gas Energy

Discounted Cash Flow Growth Parameters

New Jersey Resources Corp.

		Compound Growth			Retention Growth		
					Retention	Equity	Growth
	Historic Data	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
1	1991	0.83	1.50	12.85	-0.807		
2	1992	1.64	1.52	14.16	0.073		
3	1993	1.72	1.52	14.72	0.116	11.50%	1.34%
4	1994	1.89	1.52	14.46	0.196	12.90%	2.53%
5	1995	1.93	1.52	14.55	0.212	13.10%	2.78%
6	1996	2.06	1.55	15.15	0.248	13.50%	3.34%
7	1997	2.22	1.60	15.57	0.279	14.30%	3.99%
8							
9		Compound Growth Rates				Ave. Internal	
10	'91-95	23.49%	0.33%	3.15%		Growth (br):	2.80%
11							
12	'92-96	5.87%	0.49%	1.70%		ADD: External	
13						Growth (sv):	1.04%
14	'93-97	6.59%	1.29%	1.41%			
15						Historic	
16	Ave.Compound Gr.	6.23%	0.70%	2.09%		"br + sv" Gr.	3.83%
17							
18	Value Line	EPS	DPS	BVPS			
19	Historic Gr.	9.50%	2.25%	3.75%			
20	(Avg of 5 and 10 yr if both are available)						
21							
22		Projected Growth					
23					Retention	Equity	Growth
24	Projections	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
25	1998 est'd	$2.35	$1.64	$15.85	0.302	15.00%	4.53%
26	1999 est'd	2.50	1.70	16.85	0.320	14.50%	4.64%
27	01-03 est'd	3.30	1.90	21.40	0.424	15.00%	6.36%
28							
29	Value Line					Projected	
30	Proj'd Growth	9.00%	3.50%	6.00%		Growth (br):	6.36%
31							
32	Zack's 5 yr.					ADD: External	
33	Proj'd Growth	4.48%				Growth (sv):	0.70%
34							
35	Average					Projected	
36	Proj'd Growth	6.74%	3.50%	6.00%		"br + sv" Gr.	7.07%

Note: Negative (b*r) growth is not included in retention growth averages.

SOURCE: The Value Line Investment Survey, C.A. Turner Utility Reports - June 1997
           Zack's Analyst Watch

Discounted Cash Flow Growth Parameters

Northwest Natural Gas Company

		Compound Growth				Retention Growth	
					Retention	Equity	Growth
	Historic Data	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
1	1991	0.67	1.13	12.23	-0.687		
2	1992	0.74	1.15	12.41	-0.554		
3	1993	1.74	1.17	13.08	0.328	13.20%	4.32%
4	1994	1.63	1.17	13.63	0.282	11.80%	3.33%
5	1995	1.61	1.18	14.55	0.267	10.90%	2.91%
6	1996	1.97	1.20	15.37	0.391	12.70%	4.96%
7	1997	1.76	1.21	16.02	0.313	11.00%	3.44%
8							
9		Compound Growth Rates				Ave. Internal	
10	'91-95	24.51%	1.09%	4.44%		Growth (br):	3.79%
11							
12	'92-96	27.73%	1.07%	5.49%		ADD: External	
13						Growth (sv):	1.36%
14	'93-97	0.29%	0.84%	5.20%			
15						Historic	
16	Ave.Compound Gr.	0.29%	1.00%	5.04%		"br + sv" Gr.	5.15%
17							
18	Value Line	EPS	DPS	BVPS			
19	Historic Gr.	7.75%	1.50%	4.25%			
20	(Avg of 5 and 10 yr. if both are available)						
21							
22		Projected Growth					
23					Retention	Equity	Growth
24	Projections	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
25	1998 est'd	$1.70	$1.22	$17.20	0.282	9.50%	2.68%
26	1999 est'd	2.10	1.24	18.00	0.410	11.50%	4.71%
27	01-03 est'd	2.45	1.35	20.75	0.449	12.00%	5.39%
28							
29	Value Line					Projected	
30	Proj'd Growth	5.50%	2.00%	5.00%		Growth (br):	5.39%
31							
32	Zack's 5 yr.					ADD: External	
33	Proj'd Growth	5.01%				Growth (sv):	0.54%
34							
35	Average					Projected	
36	Proj'd Growth	5.26%	2.00%	5.00%		"br + sv" Gr.	5.92%

Note: Negative (b*r) growth is not included in retention growth averages.

SOURCE: The Value Line Investment Survey, C.A. Turner Utility Reports - June 1997
            Zack's Analyst Watch

BURDETTE - DIRECT
GR-98-140   Missouri Gas Energy

Discounted Cash Flow Growth Parameters

People's Energy Company

		Compound Growth				Retention Growth	
					Retention	Equity	Growth
	Historic Data	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
1	1991	2.05	1.71	16.95	0.166		
2	1992	2.06	1.76	17.72	0.146		
3	1993	2.11	1.78	18.02	0.156	11.70%	1.83%
4	1994	2.13	1.80	18.39	0.155	11.60%	1.80%
5	1995	1.78	1.80	18.38	-0.011	9.70%	-0.11%
6	1996	2.96	1.82	19.49	0.385	15.20%	5.85%
7	1997	2.81	1.87	20.43	0.335	13.70%	4.58%
8	--						
9		Compound Growth Rates				Ave. Internal	
10	'91-95	-3.47%	1.29%	2.05%		Growth (br):	3.52%
11							
12	'92-96	9.49%	0.84%	2.41%		ADD: External	
13						Growth (sv):	0.07%
14	'93-97	7.43%	1.24%	3.19%			
15						Historic	
16	Ave.Compound Gr.	8.46%	1.12%	2.55%		"br + sv" Gr.	3.59%
17							
18	Value Line	EPS	DPS	BVPS			
19	Historic Gr.	3.00%	2.50%	3.00%			
20	(Avg of 5 and 10 yr if both are available)						
21							
22		Projected Growth					
23					Retention	Equity	Growth
24	Projections	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
25	1998 est'd	$2.30	$1.91	$20.85	0.170	11.00%	1.87%
26	1999 est'd	2.65	1.95	21.60	0.264	12.50%	3.30%
27	01-03 est'd	3.30	2.08	25.10	0.370	13.00%	4.81%
28							
29	Value Line					Projected	
30	Proj'd Growth	4.50%	2.00%	4.50%		Growth (br):	4.81%
31							
32	Zack's 5 yr.					ADD: External	
33	Proj'd Growth	5.09%				Growth (sv):	0.64%
34							
35	Average					Projected	
36	Proj'd Growth	4.80%	2.00%	4.50%		"br + sv" Gr.	5.44%

Note: Negative (b*r) growth is not included in retention growth averages.
SOURCE: The Value Line Investment Survey, C.A. Turner Utility Reports - June 1997
Zack's Analyst Watch

BURDETTE - DIRECT
GR-98-140   Missouri Gas Energy

Discounted Cash Flow Growth Parameters

Piedmont Natural Gas Company

		Compound Growth				Retention Growth	
					Retention	Equity	Growth
	Historic Data	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
1	1991	0.89	0.87	9.65	0.022		
2	1992	1.40	0.91	10.27	0.350		
3	1993	1.45	0.95	10.90	0.345	13.20%	4.55%
4	1994	1.35	1.01	11.36	0.252	11.80%	2.97%
5	1995	1.45	1.09	12.31	0.248	11.40%	2.83%
6	1996	1.67	1.15	13.07	0.311	12.60%	3.92%
7	1997	1.85	1.21	13.90	0.346	13.10%	4.53%
8							
9		Compound Growth Rates				Ave. Internal	
10	'91-95	12.98%	5.80%	6.28%		Growth (br):	3.76%
11							
12	'92-96	4.51%	6.03%	6.21%		ADD: External	
13						Growth (sv):	1.71%
14	'93-97	6.28%	6.23%	6.27%			
15						Historic	
16	Ave.Compound Gr.	7.92%	6.02%	6.25%		"br + sv" Gr.	5.47%
17							
18	Value Line	EPS	DPS	BVPS			
19	Historic Gr.	7.50%	6.00%	6.25%			
20	(Avg of 5 and 10 yr if both are available)						
21							
22		Projected Growth					
23					Retention	Equity	Growth
24	Projections	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
25	1998 est'd	$1.95	$1.28	$14.65	0.344	13.50%	4.64%
26	1999 est'd	2.10	1.35	15.40	0.357	13.50%	4.82%
27	01-03 est'd	2.55	1.50	18.55	0.412	14.00%	5.76%
28							
29	Value Line					Projected	
30	Proj'd Growth	7.50%	4.50%	6.00%		Growth (br):	5.76%
31							
32	Zack's 5 yr.					ADD: External	
33	Proj'd Growth	7.33%				Growth (sv):	0.95%
34							
35	Average					Projected	
36	Proj'd Growth	7.42%	4.50%	6.00%		"br + sv" Gr.	6.72%

Note: Negative (b*r) growth is not included in retention growth averages.
SOURCE: The Value Line Investment Survey, C.A. Turner Utility Reports - June 1997
                 Zack's Analyst Watch

BURDETTE - DIRECT
GR-98-140   Missouri Gas Energy

Discounted Cash Flow Growth Parameters

Washington Gas Light Company

		Compound Growth				Retention Growth	
	Historic Data	EPS	DPS	BVPS	Retention Ratio (b)	Equity Return (r)	Growth (b*r)
1	1991	1.14	1.05	9.63	0.079		
2	1992	1.27	1.07	10.66	0.157		
3	1993	1.31	1.09	11.04	0.168	11.70%	1.96%
4	1994	1.42	1.11	11.51	0.218	12.20%	2.66%
5	1995	1.45	1.12	11.95	0.228	12.00%	2.73%
6	1996	1.85	1.14	12.79	0.384	14.40%	5.53%
7	1997	1.85	1.17	13.48	0.368	13.70%	5.04%
8							
9		Compound Growth Rates				Ave. Internal	
10	'91-95	6.20%	1.63%	5.54%		Growth (br):	3.58%
11							
12	'92-96	9.86%	1.60%	4.66%		ADD: External	
13						Growth (sv):	0.68%
14	'93-97	9.01%	1.79%	5.12%			
15						Historic	
16	Ave.Compound Gr.	8.36%	1.67%	5.11%		"br + sv" Gr.	4.27%
17							
18	Value Line	EPS	DPS	BVPS			
19	Historic Gr.	5.50%	2.50%	4.00%			
20	(Avg of 5 and 10 yr if both are available)						
21							
22		Projected Growth					
23					Retention	Equity	Growth
24	Projections	EPS	DPS	BVPS	Ratio (b)	Return (r)	(b*r)
25	1998 est'd	$1.65	$1.20	$13.95	0.273	12.00%	3.27%
26	1999 est'd	2.00	1.23	14.90	0.385	13.50%	5.20%
27	01-03 est'd	2.35	1.40	17.65	0.404	13.00%	5.26%
28							
29	Value Line					Projected	
30	Proj'd Growth	5.50%	3.00%	5.50%		Growth (br):	5.26%
31							
32	Zack's 5 yr.					ADD: External	
33	Proj'd Growth	4.99%				Growth (sv):	0.07%
34							
35	Average					Projected	
36	Proj'd Growth	5.25%	3.00%	5.50%		"br + sv" Gr.	5.32%

Note: Negative (b*r) growth is not included in retention growth averages.
SOURCE: The Value Line Investment Survey, C.A. Turner Utility Reports - June 1997
            Zack's Analyst Watch

BURDETTE - DIRECT
GR-98-374   Laclede Gas Company

Historical Stock Prices and Calculation of Expected Dividend Yield

Laclede Gas Company	Fri 7/2/98	Fri 7/10/98	Fri 7/17/98	Fri 7/24/98	Fri 7/31/98	Fri 8/7/98	Average
Close	$ 24.875	$ 24.500	$ 24.625	$ 23.563	$ 23.313	$ 23.000	$ 23.800

	Fri 7/2/98	Thu 7/10/98	Fri 7/17/98	Fri 7/24/98	Fri 7/31/98	Fri 8/7/98	Average
AGL Resources Inc.	$ 20.3125	$ 19.7500	$ 19.6875	$ 18.9375	$ 18.8125	$ 19.0000	$ 19.2375
Bay State Gas Company	$ 38.2500	$ 38.1875	$ 38.8750	$ 38.5625	$ 38.6250	$ 38.9375	$ 38.6375
Connecticut Energy Corp	$ 27.6875	$ 28.8750	$ 29.1250	$ 29.0000	$ 25.6250	$ 25.5625	$ 27.6375
CTG Resources, Inc.	$ 23.7500	$ 23.5000	$ 23.2500	$ 23.3750	$ 23.1875	$ 23.3750	$ 23.3375
Indiana Energy	$ 30.2500	$ 29.2500	$ 29.5000	$ 29.9375	$ 27.5000	$ 28.8125	$ 29.0000
New Jersey Resources	$ 35.9375	$ 34.1875	$ 34.1875	$ 34.2500	$ 34.2500	$ 34.0000	$ 34.1750
Northwest Natural Gas	$ 27.6250	$ 26.8750	$ 26.7500	$ 26.6562	$ 26.2500	$ 26.8750	$ 26.6812
People's Energy Corp.	$ 37.6875	$ 35.8750	$ 36.0000	$ 35.0625	$ 35.0000	$ 35.7500	$ 35.5375
Piedmont Natural Gas Co.	$ 34.0000	$ 32.6875	$ 32.1875	$ 29.8750	$ 29.1250	$ 30.2500	$ 30.8250
shington Gas Light Company	$ 27.3750	$ 25.0000	$ 25.8125	$ 24.5625	$ 23.7500	$ 24.8750	$ 24.8000

Current and Expected Dividends and Dividend Yields

	Average Stock Price	1999 Expected Dividend	Expected Dividend Yield
Laclede Gas Company	$ 23.800	$ 1.35	5.67%
AGL Resources Inc.	$ 19.238	$ 1.08	5.61%
Bay State Gas Company	$ 38.638	$ 1.68	4.35%
Connecticut Energy Corp.	$ 27.638	$ 1.40	5.07%
CTG Resources, Inc.	$ 23.338	$ 1.00	4.28%
Indiana Energy	$ 29.000	$ 1.24	4.28%
New Jersey Resources	$ 34.175	$ 1.70	4.97%
Northwest Natural Gas	$ 26.681	$ 1.24	4.65%
People's Energy Corp.	$ 35.538	$ 1.95	5.49%
Piedmont Natural Gas Co.	$ 30.825	$ 1.35	4.38%
shington Gas Light Company	$ 24.800	$ 1.23	4.96%
Average	$ 28.987	$ 1.387	4.80%

Source: Value Line Investment Survey; Wall Street Journal.

BURDETTE - DIRECT

GR-98-374   Laclede Gas Company

DCF Cost of Common Equity Calculations for Laclede and Comparison Group

	Dividend Yield	Growth Low	Growth High	Cost of Equity Low	Cost of Equity High
Laclede Gas Company	5.67%	1.22%	7.92%	6.89%	13.59%
(using Laclede's Overall Average Growth)	5.67%	3.76%		9.43%	
Recommended growth rate range	5.67%	4.00%	5.00%	9.67%	10.67%

Comparison Group	Dividend Yield	Growth Low	Growth High	Cost of Equity Low	Cost of Equity High
AGL Resources Inc.	5.61%	0.72%	5.80%	6.33%	11.41%
Bay State Gas Company	4.35%	2.89%	7.67%	7.23%	12.01%
Connecticut Energy Corp.	5.07%	0.98%	5.67%	6.04%	10.73%
CTG Resources, Inc.	4.28%	0.75%	6.84%	5.03%	11.12%
Indiana Energy, Inc.	4.28%	3.50%	10.10%	7.78%	14.37%
New Jersey Resources	4.97%	0.70%	9.50%	5.68%	14.47%
Northwest Natural Gas	4.65%	0.29%	7.75%	4.93%	12.40%
Piedmont Natural Gas Co.	5.49%	1.12%	8.46%	6.61%	13.94%
Providence Energy Corp.	4.38%	4.50%	7.92%	8.88%	12.30%
Washington Gas Light Company	4.96%	1.67%	8.36%	6.63%	13.32%
Average	**4.80%**	**1.71%**	**7.81%**	**6.52%**	**12.61%**

Overall average for comparison group: 9.56%

Source: Schedules MB-8, MB-20

Schedule MB-21

BURDETTE - DIRECT

GR-98-374   Laclede Gas Company

Capital Assest Pricing Model Cost of Common Equity (Ke)

Formula: $Ke = Rf + beta(Rm - Rf)$

Risk Free Rate (Rf) =   6.00%

Market Premium (Rm - Rf) =   7.30%

	Beta	CAPM Ke
Laclede Gas Company	0.55	**10.02%**
AGL Resources Inc.	0.70	11.11%
Bay State Gas Company	0.50	9.65%
Connecticut Energy Corp.	0.65	10.75%
CTG Resources, Inc.	0.55	10.02%
Indiana Energy, Inc.	0.70	11.11%
New Jersey Resources	0.60	10.38%
Northwest Natural Gas	0.65	10.75%
Piedmont Natural Gas Co.	0.85	12.21%
Providence Energy Corp.	0.60	10.38%
Washington Gas Light Company	0.75	11.48%
Average	**0.66**	**10.78%**

Risk Free Rate as Reported by Value Line Selection and Opinion (7/30/98)

Security	7/30/98	13-week range
30-year Treasury Bond yield	5.70%	5.6-6.0%

Source: Value Line Investment Survey; Ibbotson and Associates

BURDETTE - DIRECT
GR-98-374   Laclede Gas Company

Laclede Gas Company
Weighted Average Cost of Capital

	Amount	Percent	Cost Rate	Weighted Cost
Common Stock Equity	$265,414,384	52.66%	10.20%	5.37%
Preferred Stock	$1,960,000	0.39%	4.96%	0.02%
Long Term Debt	$178,278,724	35.37%	7.77%	2.75%
Short Term Debt	$58,385,011	11.58%	5.70%	0.66%
	$504,038,119	100.00%		8.80%

Weighted Average Cost of Capital: | 8.80% |

Pre-Tax Interest Coverage

	Weighted Cost	Pre-tax Weighted Cost	Tax Factor:
Common Stock Equity	5.37%	8.75%	1.6296
Preferred Stock	0.02%	0.03%	
Long Term Debt	2.75%	2.75%	
Short Term Debt	0.66%	0.66%	
Total	8.80%	12.19%	

Pre-tax weighted cost:	12.19%
Cost of Debt:	3.41%

Pre-Tax Interest Coverage (Long term and Short term debt):	**3.58**	**times**
Pre-Tax Interest Coverage (Long term debt only):	**4.43**	

Pre-Tax Interest Coverage calculated as follows: After-tax costs of common equity and preferred stock were grossed up by the tax rate to arrive at pre-tax weighted costs. Total pre-tax weighted cost of capital was then divided by cost of long and short term debt to calculate number of times total pre-tax return covered debt expense.

Source: Schedules MB-2, MB-4-6, MB-21.

Schedule MB-23