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Witness:	Donald A. Murry, Ph.D.
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LACLEDE GAS COMPANY

GR-2007-0_____

DIRECT TESTIMONY

OF

DONALD A. MURRY, Ph.D.

DECEMBER 2006

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DIRECT TESTIMONY OF DONALD A. MURRY

POSITION AND QUALIFICATIONS

Q. Please state your name.

A. My name is Donald A. Murry.

Q. By whom are you employed and in what position?

A. I am a Vice President and economist with C. H. Guernsey & Company. I work out of the Oklahoma City office and the Tallahassee office. I am also a Professor Emeritus of Economics on the faculty of the University of Oklahoma.

Q. What is your educational background?

A. I have a B. S. in Business Administration, and a M.A. and a Ph.D. in Economics from the University of Missouri - Columbia.

Q. Please describe your professional background.

A. From 1964 to 1974, I was an Assistant and Associate Professor and Director of Research on the faculty of the University of Missouri - St. Louis. For the period 1974-98, I was a Professor of Economics at the University of Oklahoma, and since 1998 I have been Professor Emeritus at the University of Oklahoma. Until 1978, I also served as Director of the University of Oklahoma's Center for Economic and Management Research. In each of these positions, I directed and performed academic and applied research projects related to energy and regulatory policy. During this time, I also served on several state and national committees associated with energy policy and regulatory matters, and published and presented a number of papers in the field of regulatory economics in the energy industries.

Q. What is your experience in regulatory matters?

A. I have consulted for private and public utilities, state and federal agencies, and other industrial clients regarding energy economics and finance and other regulatory matters in the United States, Canada**,** and other countries. In 1971-72, I served as Chief of the Economic Studies Division, Office of Economics of the Federal Power Commission. From 1978 to early 1981, I was Vice President and Corporate Economist for Stone & Webster Management Consultants, Inc. I am now a Vice President with C. H. Guernsey & Company. In all of these positions, I have directed and performed a wide variety of applied research projects and conducted other projects related to regulatory matters. I have assisted both private and public companies and government officials in areas related to the regulatory, financial**,** and competitive issues associated with the restructuring of the utility industry in the United States and other countries.

Q. Have you previously testified before or been an expert witness in proceedings before regulatory bodies?

A. Yes, I have appeared before the U.S. District Court-Western District of Louisiana, U.S. District Court-Western District of Oklahoma, District Court-Fourth Judicial District of Texas, U.S. Senate Select Committee on Small Business, Federal Power Commission, Federal Energy Regulatory Commission, Interstate Commerce Commission, Alabama Public Service Commission, Alaska Public Utilities Commission, Arkansas Public Service Commission, Colorado Public Utilities Commission, Florida Public Service Commission, Georgia Public Service Commission, Illinois Commerce Commission, Iowa Commerce Commission, Kansas Corporation Commission, Kentucky Public Service Commission, Louisiana Public Service Commission, Maryland Public Service Commission, Mississippi Public Service Commission, Missouri Public Service Commission, Nebraska Public Service Commission, New Mexico Public Service

Commission, New York Public Service Commission, Power Authority of the State of New York, Nevada Public Service Commission, North Carolina Utilities Commission, Oklahoma Corporation Commission, South Carolina Public Service Commission, Tennessee Public Service Commission, Tennessee Regulatory Authority, The Public Utility Commission of Texas, the Railroad Commission of Texas, the State Corporation Commission of Virginia**,** and the Public Service Commission of Wyoming.

PURPOSE OF TESTIMONY

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

A. Laclede Gas, which I also refer to as "Laclede" or the "Company," retained me to analyze the current cost of capital and recommend a rate of return and capital structure that is appropriate for the operations in the State of Missouri.

Q. Are you sponsoring any exhibits with your testimony?

A. Yes. I have attached to my testimony an exhibit which includes Schedules DAM-1 through DAM-28.

Q. Was this exhibit prepared either by you or under your direct supervision?

A. Yes, it was.

SUMMARY OF TESTIMONY

Q. Can you summarize your analysis and testimony in this case?

A. Yes. I studied the current economic environment which is important for setting natural gas rates for the future. The recent economic expansion and accompanying inflationary pressures have, over the last several years, led to a series of rate increases by the Federal Reserve. Probably more important for setting rates for the future, the near-term economic conditions have led to forecasted increases in interest rates.

In my analysis of the cost of capital of Laclede, I first considered the appropriate capital structure for this proceeding. The relevant ratios are as follows: long-term debt, 49.16 percent, preferred stock, 0.12 percent, and common stock equity, 50.72 percent. I next determined that the embedded cost of long-term debt for this proceeding is 6.78 percent, and the embedded cost of preferred stock is 4.93 percent.

As a benchmark for my analysis of Laclede, I identified a group of Local Distribution Companies ("LDCs") that were comparable to Laclede. I studied the capital structure and the cost of common equity of each of these companies and compared them to Laclede.

Methodologically, to measure the cost of common stock equity, I applied the generally accepted, market-based Discounted Cash Flow ("DCF") method and Capital Asset Pricing Model ("CAPM") method to both Laclede and each utility that I determined was comparable to Laclede. In this way, I developed comparative analytical results. I also noted the current and historical returns of these companies as benchmarks for my analyses. *Value Line* predicts that Laclede will earn 11 percent on common stock and the comparable companies will earn an average of 11.9 percent on common stock in 2006. *Value Line* also forecasts that the gas distribution sector will earn 12.1 percent on common stock equity for the period 2009 to 2011.

To interpret the DCF and CAPM analyses, in addition to noting the relative risk of LDCs in current markets, I also evaluated several specific business risk factors of Laclede. One such factor, Laclede's common equity ratio of 50.72 percent is less than the average of 55.3 percent of a group of comparable companies. Taking this and other risk factors into account, I determined a recommended allowed return for Laclede. Based on

this analysis, I am recommending an allowed return for the Company in this proceeding in the range of 11.50 to 12.00 percent. The low end of this range is the minimal level necessary for Laclede to maintain an acceptable probability of acquiring capital. This common equity return results in a minimal recommended return on total capital of 9.19 percent. If the forecasted increase in interest rates materializes, I believe the midpoint is likely to be the return necessary to attract and maintain capital.

As a final step in my analysis, I tested my recommended return to verify that it was sufficient, but not larger than necessary, to attract and maintain capital. In this analysis, I compared the After-Tax Interest Coverage for Laclede, which is 2.75 times at my minimum recommended return level, to the coverages of the comparable companies. The average coverage for the comparable utilities is 3.66 times. Laclede's coverage is at the lower end of the coverage values for the financially healthy comparable utilities. This comparison shows that my recommended return is very conservative.

UTILITY REGULATION

Q. Did the policies and procedures of utility regulation affect your cost of capital testimony in any way?

A. Yes. I based my analyses and recommendations on my interpretation of the role of regulation in the natural gas distribution industry. Because economies of scale exist at the distribution level of utility service, economists have recognized the likely presence of market power in franchised utility markets. This is the standard economic rationale for utility regulation. I used this presumed market structure as a guide for my analysis. Consequently, the objective of my analysis was to determine an allowed return that is sufficient to allow Laclede to recover the costs of providing utility natural gas service,

but not higher than necessary to attract and maintain capital that provides this service. Furthermore, I believe that this economic rationale of an allowed return for Laclede is consistent with the legal standard of a "fair rate of return," as I understand its use in regulation.

Q. What did you mean by a "fair rate of return" as you understand its use in regulation?

A. My interpretation and use of the term "fair rate of return" is in compliance with the standards set by the United States Supreme Court decision in *Bluefield Water Works and Improvement Company vs. Public Service Commission, 262 U.S. 679 (1923) ("Bluefield")*, as further modified in *Federal Power Commission vs. Hope Natural Gas Company, 320 U.S. 591 (1944) ("Hope")*. As a summary relevant to this proceeding, my understanding of these decisions is that they define a "fair rate of return" as one that provides earnings to investors similar to returns on alternative investments in companies of equivalent risk.

Q. Can you expand on how you use the term "fair rate of return" in this proceeding?

A. Yes. I use the term, a "fair rate of return," in this proceeding, as a return sufficient to permit Laclede to operate successfully, maintain its financial integrity, attract capital, and compensate investors for the risks associated with the provision of natural gas service. Consequently, determining this "fair rate of return" is the objective of my analysis, and explaining its calculation is the purpose of my testimony.

ECONOMIC ENVIRONMENT

Q. What are the important economic factors when determining the cost of capital in this proceeding?

A. The key factors in the current economic environment that affect investors are the expectations regarding inflation and interest rates. Inflationary pressures are a cause of tighter federal monetary policy, which leads generally to higher interest rates. Higher interest rates, in turn, lead to higher costs of capital for regulated utilities. In the case of a regulated utility such as Laclede, the regulatory environment is also a critical component of the business environment. Anticipated regulatory actions and forecasts of inflation and interest rates affect investors' expectations of utility returns and their evaluations of the risks and returns on alternative investments. For these reasons, I reviewed both the current and forecasted levels of inflation and interest rates and noted recent regulatory decisions.

Q. Please explain the current economic environment and the reasons that it is important to your analysis of the cost of capital.

A. Economic activity is continuing to expand though at a decelerating rate. The consensus forecast, as provided by *Blue Chip Financial Forecasts ("Blue Chip")* predicts real Gross Domestic Product ("GDP") growth of 2.6 percent for the fourth quarter of 2006 and 2.7 percent for the first half of 2007. This is an increase from the 2.2 percent real GDP growth experienced in the third quarter of 2006 but lower than the 4.1 percent rate of growth experienced in the first half of 2006. Manufacturing activity is continuing to increase nationwide, putting pressure on labor costs and the labor markets, and health care and post-retirement costs continue to be a concern. The unemployment rate dropped to 4.4 percent in October—the lowest level in five years—as the economy added an average of 157,000 jobs per month over the last three months. Consumer spending, which accounts for two-thirds of economic activity, has been increasing, albeit slowly. Recently

it has slowed somewhat with sluggish sales of autos and housing-related goods. Housing markets and construction activity have softened, at least in part because of rising interest rates. For example, housing starts fell 14 percent in October to the lowest level in six years, and housing lowered the third quarter GDP by 1.1 percent. Schedule DAM-1 summarizes recent trends of GDP growth, unemployment and the Consumer Price Index ("CPI"). Together these statistics reveal recent inflationary pressures.

Q. You mentioned that you used information and forecasts from *Blue Chip Financial Forecasts* in your analysis. Can you explain why you used *Blue Chip?*

A. *Blue Chip Financial Forecasts* is a very respected publication that reports the consensus forecasts of financial forecasters. These consensus forecasts, and the predictions of the individual forecasters embodied in them, are available to knowledgeable investors. Consequently, these forecasts, which are from reliable sources, are very likely to affect investors' decisions.

Q. You mentioned inflation as a factor that you considered. How are the levels of recent and forecasted inflation rates important to your analysis?

A. The economy is showing signs of increasing inflation after several years of stable prices. The consensus forecast for December-over-December core CPI growth (which excludes food and energy costs) is 2.9 percent for 2006. The central bank, in the minutes from its October 24-25, 2006 Policy Meeting, stated, "All members agreed that the risks to achieving the anticipated reduction in inflation remained the greatest concern."

The Consumer Price Index increased 2.9 percent in September 2006 on a year-over-year basis—the highest rate in a decade. The expected 2.9 percent rate for core inflation for 2006 is almost twice that of the 1.5 percent rate of three years ago and

reveals a broadening of inflationary pressures in the economy. Core CPI inflation increased at an average annualized rate of 3.8 percent over each of the last six quarters. As shown in Schedule DAM-2, *Blue Chip* is forecasting an increase in the CPI to in the range between 2.3 and 2.7 percent in 2007. Increasing inflationary pressures are troubling to the financial markets and have the full attention of federal policymakers. At a recent conference in Frankfurt, Dallas Federal Reserve President Richard Fisher cautioned, "We have no tolerance for continued inflation above two percent."

Q. How has the economic activity affected interest rates?

A. The state of the economy and economic expectations provide an important background for my cost of capital analysis because increasing inflationary pressures almost certainly lead to actions by the Federal Reserve to increase interest rates. For example, the Federal Open Market Committee ("FOMC") has raised interest rates 17 times since June 2004. Although the FOMC recently has forgone raising short-term rates, it has indicated it will remain vigilant regarding inflation concerns. In its September 20, 2006, press release[1], the FOMC stated, for the second consecutive month:

> …the Committee judges that some inflation risks remain. The extent and timing of any additional firming that may be needed to address these risks will depend on the evolution of the outlook for both inflation and economic growth, as implied by incoming information.

Q. Can you summarize what you found to be the significant interest rate developments?

A. As the economy expands, the Federal Reserve has signaled it will raise interest rates as necessary to control inflation. Regarding the outlook for inflation and Federal Reserve action, Richmond Federal Reserve Bank President Andrew Lacker recently described the inflation outlook as, "…borderline acceptable and perhaps even beyond." Fed Chairman

[1] Federal Reserve Release, September 20, 2006.

Ben Bernanke also has stated, "there are some upside inflation risks in the economy" and "…some additional firming of policy might yet be needed."

Q. Did you study the recent and forecasted bond rates?

A. Yes. As shown on Schedule DAM-3, the 10-year Treasury Notes and the Baa-corporate rate are currently about 4.29 percent and 6.06 percent, respectively. Most significantly for setting an allowed return in this proceeding, as shown in Schedule DAM-4, analysts expect long-term bond rates to continue rising. The *Blue Chip* forecasts for the Baa-corporate rate and the 30-year Treasury rate are for continued increases to 6.8 percent and 5.1 percent respectively into 2008.

Q. Please explain the importance of the economic environment to this proceeding.

A. The rates set in this proceeding will be in effect during a period of rising inflation and interest rates. Rising inflation and interest rates erode earnings and adversely affect the cost of a utility's debt and equity. Utilities such as Laclede are particularly sensitive to the effects of increasing inflation and increasing interest rates because they are capital intensive with large interest payment obligations. That is, rising inflation and rising interest rates increase the risk that common stockholders will not achieve their anticipated returns on investment.

SELECTION OF COMPARABLE COMPANIES

Q. What criteria did you use to select your comparable gas distribution companies?

A. First, I started with *Value Line's* list of Gas Distribution companies, and then I eliminated the companies that have cut their dividends in the past five years. Reduced dividends are a sign of weakening financial health, and I was trying to select a group of financially healthy utilities that could serve as comparative benchmarks to set a standard for

measuring a fair rate of return. Second, I eliminated the gas companies that are involved actively in mergers, thus avoiding the impact of merger activities on in the share prices of the companies I studied. Investors' assessment of the merger prospects will affect stock prices, thus distorting the market-measured costs of capital. Share prices will reflect investors' views about the merger and not the prospective returns from utility operations, and these companies are not likely to be good standards for measuring a fair return. Third, I removed those companies that are not primarily LDCs, namely Southern Union and UGI. Finally, I narrowed the list to the smaller gas distributors, since Laclede is now the smallest gas company that *Value Line* covers. A firm's size affects its risk and earnings; so I selected companies of similar size to Laclede as they would be more representative of its risks. For this reason, I included only those companies with market capitalizations less than $2 billion.

Q. Why is using these criteria important in selecting the comparable companies for your analysis?

A. The reason for selecting companies with similar financial characteristics to Laclede is to develop a representative group of companies with similar risks. This is the same principle as drawing a representative sample for analysis of companies with similar risks. One can interpret the analytical results and draw meaningful interpretations from them, as they have characteristics similar to Laclede in many respects.

Q. What companies did you select for your analysis that are comparable to Laclede?

A. Using the set of criteria mentioned above, I selected seven LDCs that are similar to Laclede in key financial statistics as companies to include in my analysis. This group

includes: New Jersey Resources, NICOR, Northwest Natural Gas, Piedmont Natural Gas, South Jersey Industries, Southwest Gas and WGL Holdings, Inc.

CAPITAL STRUCTURE

Q. What is the appropriate capital structure for Laclede in this proceeding?

A. As I have illustrated in Schedule DAM-5, the Laclede Group has a book value capitalization of $793,830,000 at September 30, 2006. The Long-Term Debt is $390,248,000, or 49.16 percent of total capital, the Preferred Stock is $946,000, or 0.12 percent of total capital and the Common Stock Equity is $402,636,000, or 50.72 percent of total capital.

Q. You did not include any short-term debt in this capital structure that you are recommending for Laclede. Why did you not include short-term debt in your recommended capital structure?

A. I only included components of capital in the capital structure that are part of the permanent capital that supports physical assets providing utility services. This is for the current period and the period during which the rates set in this proceeding will be in effect. I understand that Laclede witness Glenn Buck will discuss reasons related to removal of short-term debt in his direct testimony.

Q. Did you compare the capital structure of Laclede that you are recommending in this proceeding to the capital structures of comparable LDCs?

A. To assess the appropriate capital structure of Laclede, I compared its current and historical common stock equity ratio to equity ratios of the comparable LDCs. I have illustrated this comparison in Schedule DAM-6, which shows the common equity ratios to these utilities as reported by *Value Line.* As this comparison shows, Laclede's common

equity ratio of 50.72 percent is lower than all of the comparable LDCs except Southwest Gas. Southwest Gas, which has had financial difficulties, is not a good benchmark for setting the rates for a financially healthy utility. A better standard for LDCs in the current market is the average common equity of the group of comparable companies which is 55.3 percent. *Value Line* also predicts, as this schedule shows, Laclede's relatively low common equity ratio will continue into the 2009-11 period.

COST OF LONG-TERM DEBT

Q. What is the appropriate cost of long-term debt for Laclede in this proceeding?

A. As shown in Schedule DAM-7, the embedded cost of long-term debt that is appropriate in this proceeding for Laclede is 6.78 percent. This is the embedded cost of Laclede's long-term debt that supports the long-term assets providing utility service. Consequently, this is the cost of this component of Laclede's permanent capital structure.

Q. What is the cost of the preferred stock of Laclede?

A. The embedded cost of preferred stock of Laclede is 4.93 percent. I have illustrated this cost of preferred in Schedule DAM-8.

FINANCIAL RISK

Q. One of the factors that you mentioned previously that you investigated is Laclede's "financial risk." What is financial risk to the common stockholders?

A. Financial risk is the risk to the common stockholders of a company as a result of using financial leverage. Financial leverage refers to the use of fixed income securities to finance the firm. The return to common stockholders is the available income after a company has paid debt holders. Therefore, the return to common stockholders is a residual return and is less certain than the contractual return to debt holders. Firms must

compensate common stockholders for this risk. In general, the lower the common stock equity ratio, the greater is the relative prior obligation owed to debt holders. Consequently, all things being equal, the risk faced by a company's common stockholders is greater if the common equity ratio is smaller.

Q. Is financial risk an important consideration in this proceeding?

A. Yes. Financial risk is an important determinant of the required return. As I noted previously, the common equity of Laclede is 50.72 percent as compared to the average of the comparable companies, which is 55.3 percent. Furthermore, this differential is likely to continue into the future during the period that the rates set in this proceeding are in effect. Consequently, this risk differential is a relevant and significant consideration in this proceeding.

Q. Did you review any other measures of financial risk?

A. Yes, I reviewed *Value Line's* measure of "Financial Strength" and Standard & Poor's "Credit Rating." These measures by independent financial analysts are consistent with my observations regarding the relative capital structures. Each measure shows that Laclede is slightly more risky than the comparable companies as a group. For example, Laclede's Financial Strength ranking is B+, and the median for the group of comparable companies is A. Similarly, the Standard & Poor's bond rating is A, and the median bond rating for the comparable companies is A+. I have illustrated these comparisons in Schedule DAM-9.

BUSINESS RISK

Q. You also stated previously that you reviewed the "business risk" of Laclede. What did you mean by business risk?

A. Laclede's business risk is the risk to its investors resulting from business operations. For example, the risks of achieving investors' anticipated returns include such factors as competition from other fuels, rising gas costs that reduce sales revenues, the impact of rising inflation and interest rates, and any uncertainty associated with the recovery of the costs of purchased gas. High gas costs have been a problem throughout the natural gas industry because they increase working capital and short-term debt requirements needed to pay suppliers. This is a cost and a risk to a utility because it increases the possibility that it may be unable to recover these costs through rates. Rising short-term interest rates add to the LDCs' costs. Furthermore, LDCs face rising, unanticipated bad debt expenses and accounts receivable in these markets. In my analysis, I considered these and other general business risks.

Q. Do you believe that business risk is an important consideration in this proceeding?

A. Yes, as discussed previously, business risk is an important consideration for any LDC, which is compounded because of current high-priced gas markets. Relatively high prices introduce a specific set of risks associated with the costs of doing business. For this reason, business risk currently is an especially important determinant of the required rate of return.

Q. Did you review any measures of business risk of Laclede?

A. Yes. I reviewed several indices of Laclede's business risk, as reported by financial analysts, which I reported in Schedule DAM-10. For example, I reviewed the "Safety," "Timeliness," "Stock's Price Stability," "Price Growth Persistence," "Earnings Predictability" of *Value Line* and the "Business Profile" of Standard & Poor's. Although these measures, in some respects, combine financial and business risks as a common

measure, they are likely to be closer to business risk than the credit measures mentioned previously. Taken together, these measures show that Laclede is at the high-risk end of the comparable group. I also reviewed generally some of the "Regulatory Compact" proposals that I understand are likely to be before the Commission in this proceeding to determine if they would affect my assessment of the risk of Laclede.

Q. Did you determine if these "Regulatory Compact" proposals impact the business risk of Laclede?

A. Although my review has been general, I believe that the overall impact on Laclede's business risk, at least so far as it affects my measurement of the cost of capital, is likely to be neutral. Some of these concepts raise the risk to investors that estimated sales volumes will not materialize and reduce the upside potential to expected returns, but some of the effects are likely to be offsetting.

COMPARISON OF EARNINGS AND DIVIDENDS

Q. Did you review financial information of Laclede?

A. Yes. I reviewed the recent earnings and dividends of Laclede and the comparable LDCs.

Q. When you reviewed the common stock earnings of the companies that you studied, what did this show?

A. As I have shown in Schedule DAM-11, according to *Value Line,* Laclede's common stock earnings have lagged behind the average of the comparable companies for each of the last three years by a significant amount. For example, in 2006, *Value Line* estimates that Laclede's returns on common stock will be 11.0 percent, but the average for the comparable LDCs is 11.9 percent. Because these comparable LDCs have risks similar to Laclede, 11.9 percent is indicative of the cost of capital in the market in which Laclede

must compete for investment funds. As stated previously, one requirement of *Hope* and *Bluefield* is that Laclede's returns must be competitive with firms of equivalent risks in order to attract and maintain capital, and the comparable group of LDCs includes companies with risk similarities to Laclede.

Q. You stated that you reviewed the dividends of Laclede and the comparable companies. What did this show?

A. As I have illustrated in Schedule DAM-12, Laclede's rate of dividend growth has been a modest 1.11 percent over the past five years. Only two of the comparable companies had dividend growth rates this low. Given the relatively low returns to common stock, this is not surprising. However, even with this relatively low dividend growth, because of the low common stock returns, the dividend payout ratio of Laclede is also declining. The Company's dividend payout is now in the middle of the group of comparable LDCs. I have shown this comparison in Schedule DAM-13.

COST OF COMMON STOCK

Q. You stated previously that you calculated the cost of common stock equity for Laclede and a group of comparable gas distribution companies. Can you expand on the two methods that you used in this analysis?

A. I used two common methods for estimating the cost of common stock in regulatory proceedings, the Discounted Cash Flow method and the Capital Asset Pricing Model. Together these methods provide a broader analytical insight to the cost of capital of the companies studied. For comparative purposes, I applied each of these methods to estimate the cost of common stock of Laclede and each of the comparable companies.

I also noted the advantages and disadvantages of these two methods to put them into context and to interpret the results. That is, I noted the underlying assumptions of the two methods as well as their strengths and weaknesses. I also evaluated these calculations in the context of current market conditions.

DISCOUNTED CASH FLOW METHOD

Q. Can you define the DCF methodology that you used to measure the cost of common equity?

A. The DCF calculation of the investor's required rate of return can be expressed by the following formula:

$$K = D/P + g$$

Where:
- K = cost of common equity
- D = dividend per share
- P = price per share and
- g = rate of growth of dividends, or alternatively, common stock earnings.

In this expression, K is the capitalization rate required to convert the stream of future returns into a current value.

Q. You mentioned that you noted the underlying assumptions of the cost of capital models. What assumptions underlying the DCF method did you find important in your analysis?

A. One example is from author David Parcell who set forth underlying assumptions of the DCF in *The Cost of Capital—A Practitioner's Guide.*[2] He states that the general DCF model has the following four key assumptions:

1. Investors evaluate common stocks in the classical economic framework.
2. Investors discount the expected cash flows at the same rate (K) in every future period.

[2] Parcell, David, *The Cost of Capital—A Practitioner's Guide,* Society of Utility and Regulatory Analysts, 1997, pp. 8-5, 8-6.

3. K corresponds only to the specific steam[sic] of future cash flows.
4. Dividends, rather than earnings, constitute the source of value.

When key underlying assumptions are not realized, this can lead to incorrect measures of the cost of common equity, and in such instances, the results are likely to be difficult, if not impossible, to interpret. Obviously, this may lead to misinterpretation of the results using the DCF method.

Q. What are the strengths of the DCF that you think are important to your analysis?

A. The DCF's principal strength is that it is theoretically sound because it relates an investor's expected return in the form of dividends and capital gains to the value that the investor is willing to pay for those returns. The DCF implies that an investor is willing to pay a market price that is equal to the present value of an anticipated stream of earnings. In this way, one can estimate the opportunity cost of investors' funds. This is also consistent with the regulatory objective of setting an allowed return equal to the returns on investments of equivalent risk.

On a more practical basis, the DCF relates known market price information and the company's dividend and earnings performance to determine the value that investors place on anticipated returns. Another advantage in using the DCF, to measure the cost of capital for ratemaking, is that regulatory proceedings commonly use it, and participants in proceedings generally understand it.

WEAKNESSES OF THE DCF

Q. You are using the DCF to estimate the cost of common equity in a utility rate proceeding. Are you aware of any important weaknesses of the DCF method that may be important in this application?

A. The DCF can have both conceptual and data problems that may lead to misinterpretation of the calculated results. Either or both can create problems in a ratemaking proceeding.

Q. What conceptual problems with the DCF may be important when you use it to estimate the cost of capital in a rate proceeding?

A. I believe that an important problem with the DCF method in a rate proceeding is that participants may misinterpret and misapply its results. For example, if an assumption, such as dividends being the sole source of value expectations of an investor, is not realized, then analysts may fail to take this into account. Obviously, this is a strong assumption; many investors seek capital gains potential that measured dividends may not reflect.

Perhaps even more important, the DCF estimates the marginal cost of common stock equity of a company, and often analysts using it do not recognize the theoretical significance of this characteristic. That is, the DCF provides an estimate of the minimal return necessary to attract marginal, or incremental, investment in the common stock equity. However, the method does not account for any other factors that may affect the ability of the company to earn that return, and this is obviously important in a regulatory setting.

Q. Can you explain why the marginal cost nature of the DCF is significant in a regulatory setting?

A. The DCF cost of capital is the cost of incremental investment, and, if this is set as the allowed return, this provides no cushion that the realized return will be sufficient to attract and maintain capital. Analysts interpreting the results of the DCF calculations may not recognize this. Consequently, the DCF-based calculations may be misleading. In fact,

this misunderstanding of the DCF results can virtually assure that a regulated company will not have the opportunity to earn its allowed return.

Q. To your knowledge, have regulatory commissions recognized these limitations of the DCF when used in rate proceedings to determine the cost of common equity?

A. Yes. Regulatory bodies have recognized the difficulties of relying on the raw, unadjusted DCF calculations. In one example addressing these factors directly, the Indiana commission, in a 1990 decision, recognized that the assumptions underlying the DCF model rarely, if ever, hold true.[3] This commission stated that an "…unadjusted DCF result is almost always well below what any informed financial analyst would regard as defensible and therefore requires an upward adjustment based largely on the expert witness' judgment."[4]

Q. In your experience, is it common for regulators and analysts to recognize the marginal cost nature of the DCF and attempt to compensate for it?

A. Yes, it is. Regulators and analysts often apply adjustments to compensate for the marginal cost nature of the DCF adjustment, and they do so in a variety of ways. Although these various adjustments may differ greatly in their approach, in fact, they really address the inadequacy of the marginal cost estimates of the cost of capital. For example, I have observed such practices as applying a "flotation adjustment," a "market pressure" adjustment or an adjustment to common equity to reflect the market values of debt and equity.

Q. How does a flotation adjustment address the marginal cost nature of the DCF?

[3] Phillips, Charles F., Jr. and Robert G. Brown, *Chapter 9: The Rate of Return,* The Regulation of Public Utilities: Theory and Practice, (1993: Public Utility Reports, Arlington, VA) p. 423.
[4] Ibid, *In re Indiana Michigan Power Company,* 116 PUR4th 1, 17 (Ind. 1990).

A. The flotation adjustment specifically recognizes that the measurement of the market-based DCF estimate of the cost of capital does not always incorporate the costs of issuing common stock. That is, the DCF does not account for legal fees, investment banker fees and publication costs of a prospectus. This is a direct recognition that an analyst should recognize the effects of market activities captured by the DCF estimates.

Q. Recognizing the marginal cost nature of the DCF and the need of a regulated utility to be active in the financial markets, do you recommend calculating a flotation adjustment?

A. No, I believe an analyst should focus on the high end of the DCF results to compensate for its marginal cost nature.

Q. What is the rationale of a "market pressure" adjustment to the marginal cost nature of the DCF?

A. Market pressure is the measured impact of an issuance of common stock on the prices of common stock of the regulated utility. The DCF measured cost of common stock does not account for the price impact of new issues. Consequently, the marginal cost of common stock, if set as the allowed return, will fail to provide a reasonable probability that the utility will achieve its allowed return.

Q. Do you recommend applying a market pressure adjustment to the DCF results in selecting a recommended allowed return in ratemaking?

A. No. Again, in most circumstances, I believe looking to the higher end of the DCF market-based results will supply a reasonable return on common stock for a regulated utility.

Q. What is the justification for adjusting the cost of equity to reflect market values for debt and equity?

A. Although regulatory convention dictates that one use the book value amounts of debt and equity to determine the weighted average cost of capital, when setting rates for regulated utilities, some analysts adjust these amounts to compensate for the difference between book values and market values. Market values reflect investors' perceptions of risks and returns and form the basis for determining the marginal cost of capital, or in other words, the cost of attracting the next dollar of investment.

Q. Can one adjust the cost of equity to recognize that the cost of equity estimates are based on market values of debt and equity?

A. Yes. The work of Nobel laureates Franco Modigliani and Merton Miller[5] provide some insight, which some authors use to adjust the cost of equity to reflect the market values of debt and equity. According to this argument, the overall cost of capital remains constant despite changes in the debt to equity ratio. This means that the increase in the required return on equity, resulting from the use of financial leverage, offsets the advantage of the increased use of lower cost of debt. In other words, firms with different equity ratios will have different costs of equity, even though they have the same business risk and the same overall cost of capital.

Q. Did you determine what the cost of common equity of Laclede would be if you adjusted the calculated common equity return because of its relatively low common equity ratio and high financial risk?

A. Yes. I estimated the market value debt and equity ratios for the comparable group and Laclede and assumed that the cost of common equity was 11 percent for the comparable

[5] Modigliani, F. and Miller, M.H., "The Cost of Capital, Corporation Finance and the Theory of Investment," American Economic Review, Vol. 48 (June 1958), pp. 261-297 and Modigliani, F. and Miller, M.H., "Taxes and the Cost of Capital: A Correction," American Economic Review, Vol. 53 (June 1963), pp. 433-443.

group. This results in an overall cost of capital using the market-valued capitalization for the comparable group of 8.56 percent. As shown on Schedule DAM-14, it is a relatively simple, mechanical calculation to determine the estimated cost of common equity for Laclede using the market value capitalization. As the calculation reveals, Laclede's cost of equity must be 1.42 percentage points higher than the comparable group to compensate for the greater financial risk of Laclede's lower common equity ratio.

DCF DATA

Q. Have analysts performed studies regarding which data used in a DCF analysis are most likely to capture investors' expectations about the future returns?

A. Yes. As early as 1982, published academic studies showed that analysts' forecasts were superior to historical trended growth rates as predictors of growth rates for DCF analyses. The economic and financial literature contain several reported studies where analysts have addressed the pros and cons of different growth rates in a DCF analysis, They generally contend that analysts' forecasts are the most reliable growth estimates to include in a DCF analysis. One example is the financial textbook of Brigham and Gapenski, which states that analysts' growth rate forecasts are the best source for growth measures in a DCF analysis. They state:

> Analysts' growth rate forecasts are usually for five years into the future, and the rates provided represent the average growth rate over the five-year horizon. Studies have shown that analysts' forecasts represent the best source for growth for DCF cost of capital estimates.[6]

Other research reported in the academic literature supports this position also. For example, Vander Weide and Carleton found:

[6] Brigham, Eugene F., Louis C. Gapenski, and Michael C. Ehrhardt, "Chapter 10: The Cost of Capital," Financial Management Theory and Practice, Ninth Edition (1999: Harcourt Asia, Singapore), p. 381.

> …overwhelming evidence that the consensus analysts' forecast of future growth is superior to historically oriented growth measures in predicting the firm's stock price….Our results are consistent with the hypothesis that investors use analysts' forecasts, rather than historically oriented growth calculations, in making stock buy-and-sell decisions.[7]

In another study that specifically considers the use of the DCF in utility regulatory proceedings, Timme and Eisemann compared the effectiveness of analysts' forecasted growth rates and historical growth rates. They concluded:

> The results show that all financial analysts' forecasts contain a significant amount of information used by investors in the determination of share prices not found in the historical growth rate….The results provide additional evidence that the historical growth rates are poor proxies for investor expectations; hence they should not be used to estimate utilities' cost of capital.[8]

Q. Are you aware of any other empirical information that focuses on the importance of common stock earnings?

A. Yes. In an "event analysis", a colleague and I compared the market reactions to dividend and common stock earnings announcements that were likely to be surprises to the market. That is, for a group of electric utilities, we compared the market reactions to dividend announcements and common stock earnings announcements. Specifically, we looked at the price impact of both earnings announcements and dividend announcements that exceeded *Value Line's* projected levels. Among these companies, there were eight dividend announcements and 19 common stock announcements that exceeded analysts' expectations during the period September 2001 to December 2003. By developing ratios of a utility's common stock price to the Dow Jones Utility Index, we statistically isolated the impact of these announcements, and linked them to contemporaneous price changes.

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

[8] Timme, Stephen G. and Peter C. Eisemann, "On the Use of Consensus Forecasts of Growth in the Constant Growth Model: The Case of Electric Utilities," *Financial Management*, Winter 1989, pp. 23-35.

As Schedule DAM-15 shows, the impact on market prices of the unexpected earnings per share announcement in these cases is obvious, and the impact of unexpected dividend announcements is seemingly less so.

Q. You studied recent common stock earnings and dividend payments of LDCs. Please explain what you did and your findings.

A. I reviewed the dividend and earnings histories of each of the companies that I studied. Notably, NICOR and Southwest Gas have each had declines in earnings over the past five years. For this reason alone, these are questionable benchmark companies in an analysis to measure the cost of common equity of a healthy utility. However, rather than removing them from further analysis, I took their earnings history into account when determining a recommended allowed return. For the comparable group as a whole, the dividends have grown at a lower rate than earnings per share in recent years, but this is not surprising in light of the increased competition in the gas distribution industry. Under these increasingly competitive circumstances, prudent boards of directors are likely to conserve cash and refrain from increasing dividends even as earnings grow. Although this relationship may change eventually following the 2003 tax reduction on dividends, the data for the comparable LDCs does not yet show this impact. I show the comparison of the recent and forecasted dividend and common stock earnings in Schedule DAM-16.

Q. Can you explain what common stock prices you used in your DCF analysis?

A. Because the rates set in this proceeding will be in effect for a number of years, I examined market prices over a longer time period as well as recent prices. For this reason, I obtained common stock prices for the past year reported by the *Wall Street*

Journal. I also selected current prices from a recent two-week period as reported by *YAHOO! Finance.*

Q. What were the results of your DCF analysis of Laclede and the comparable companies?

A. In an analysis using a dividend growth rate, I combined historical and forecasted dividend growth rates and used the common stock prices for the past year. This produced exceptionally low estimates for the comparable companies, which I illustrated in Schedule DAM-17. Using this growth measure, Southwest Gas has an estimated cost of common equity of 2.23 to 3.15 percent. The estimate for Laclede's cost of common stock is 5.17 to 6.12 percent. These results for Laclede are close to the current level of short-term debt rates and less than the current cost of the preferred stock of an A rated utility, which is 7.06 percent. These are not credible measures for ratemaking. I also used current common stock share prices and dividend growth rates in my DCF analysis, and the results of this calculation also were not credible. The estimate for Laclede is again lower than the cost of obviously lower risk securities in current markets. I have shown these results in Schedule DAM-18. I illustrated the DCF results using combined historical and forecasted earnings per share growth rates in Schedules DAM-19 and DAM-20. These results show a high-end estimate of the cost of common stock for Laclede of 11.62 percent and 10.83 percent. The high-end range of common stock returns for the comparable group is from 3.50 percent to 11.85 percent using these alternative price series. Applying the earnings per share forecasts to the two price time-series results in a high-end DCF result for Laclede of 9.85 percent and 9.06 percent. I have illustrated these results in Schedule DAM-21 and Schedule DAM-22.

CAPITAL ASSET PRICING MODEL

Q. Can you explain the Capital Asset Pricing Model?

A. The Capital Asset Pricing Model is a risk premium method that measures the cost of capital based on an investor's ability to diversify by combining securities of various risks into an investment portfolio. It measures the risk differential, or premium, between a given portfolio and the market as a whole. The diversification of investments reduces the investor's total risk. However, some risk is non-diversifiable, e.g., market risk, and investors remain exposed to that risk. The theoretical expression of the CAPM model is:

$$K = R_F + \beta (R_M - R_F)$$

Where:
- K = the required return.
- R_F = the risk-free rate.
- R_M = the required overall market return; and
- β = beta, a measure of a given security's risk relative to that of the overall market.

In this expression, the value of market risk is the differential between the market rate and the "risk-free" rate. Beta is the measure of the volatility, as a measure of risk, of a given security, relative to the risk of the market as a whole. By estimating the risk differential between an individual security and the market as a whole, an analyst can measure the relative cost of that security compared to the market as a whole.

Q. In your opinion, what are the advantages when one uses the CAPM in a ratemaking proceeding?

A. When applied in ratemaking, the CAPM, as a risk premium method, provides a longer-term, more stable perspective of the cost of capital than that of the more volatile DCF analysis. The CAPM takes current debt costs as a basis, or benchmark, for measuring the cost of common stock, which provides this analytical stability. In this way, the CAPM

links the incremental cost of capital of an individual company with the risk differential between that company and the market as a whole. Although this is a rather imprecise method, it is a good tool for estimating the general level of the cost of a security.

Q. How can you tell that the CAPM is a more stable measure of the cost of capital?

A. The CAPM results are likely to be similar for companies in the same industry with similar financial characteristics. In addition, the results are not likely to vary a great deal over time.

Q. What problems are important to consider when using the CAPM in a ratemaking proceeding?

A. The CAPM cost of capital calculations for a company is sensitive to the beta used in the analysis. This beta is a single measure of risk, so, consequently, the CAPM will not incorporate any risks not included in the measures of market volatility. Also, a number of analysts have shown that the CAPM overestimates the cost of capital of companies with betas greater than one and underestimates the cost of capital of companies with betas less than one. In regulation, this is important, because most utilities have beta estimates less than one. For example, all of the comparable LDCs, except NICOR, have *Value Line* betas between 0.75 and 0.85. NICOR has a *Value Line* beta of 1.20. Laclede has a beta of 0.85, which is at the upper end of the betas of the other comparable companies.

Q. Can you explain the CAPM methodology that you used in your analysis?

A. Yes. I applied two different CAPM approaches to estimate the cost of common stock of Laclede. One of these methods examines the historical risk premium in recent markets between common stock and high grade corporate bonds. The other estimates the risk premium of common stocks to long-term government bonds. This method requires an

adjustment for the bias of company size, as I mentioned previously. The financial literature has recognized this bias as an empirical problem for a long time, but correcting for this bias is a recent analytical development. I applied both of these methods to Laclede as well as to each of the comparable companies.

Q. You stated that the financial literature recognizes that the CAPM method may require an adjustment for a company's size. What is the nature of this recognized bias?

A. Studies by R. W. Banz[9] and M. R. Reinganum[10], in the 1980s are good references which point out this size bias. Reinganum examined the relationship between the size of the firm and its price-earnings ratio. He found that small firms experienced average returns greater than those of large firms that had equivalent risk as measured by the beta. Of course, the beta is the distinguishing measure of risk in the CAPM. Banz confirmed that beta does not explain all of the returns smaller companies' returns; hence, the CAPM would understate their cost of common equity. In the same time frame, Fama and French confirmed that the Banz analysis consistently rejected the central CAPM hypothesis that beta sufficed to explain investors' expected returns.[11]

Q. What did you mean when you said that the CAPM method requires an adjustment?

A. Although repeated studies showed that the CAPM method possesses a bias that understates the expected returns of small companies, this remained only an empirical observation without a clear remedy. However, now Ibbotson Associates, which is the

[9] Banz, R.W., "The Relationship Between Return and Market Value of Common Stock," *Journal of Financial Economics*, March 1981, pp. 3-18.

[10] Reinganum, M. R., "Misspecification of Capital Asset Pricing: Empirical Anomalies Based on Earnings, Yields, and Market Values," *Journal of Financial Economics*, March 1981, pp. 19-46.

[11] Fama, Eugene F., and Kenneth R. French, "The CAPM is Wanted, Dead or Alive," *The Journal of Finance*, Vol. LI, No. 5, pp. 1947-1958.

common source of data for the risk premium used in CAPM analyses, has developed an adjustment for this bias. Ibbotson Associates discusses the problem as follows:

> One of the most remarkable discoveries of modern finance is that of the relationship between firm size and return. The relationship cuts across the entire size spectrum but is most evident among smaller companies, which have higher returns on average than larger ones. Many studies have looked at the effect of firm size on return. [12]

To account for this empirical bias against smaller companies, Ibbotson Associates has prescribed quantitative adjustments to the CAPM, which it publishes in the same data source used by many analysts to estimate the risk premium in their CAPM analyses.

Q. Can you be certain that Ibbotson Associates intended the size adjustment to be applied to regulated utilities?

A. Absolutely. In a table entitled "Size Effect within Industries," Ibbotson Associates reported "Excess Returns" above the CAPM measured return for the small company industry group of "Electric, Gas & Sanitary" (which is SIC Code 49) of 3.08 percent.[13] I have included that table as Schedule DAM-23. As that schedule shows, the Center for Research in Security Prices at the University of Chicago found that depending on the industry group, some of the necessary adjustments were both below as well as above the CAPM estimates. As a further indication that this size adjustment applies to regulated industries, the same Ibbotson Associates' publication uses a small electric utility as the example when applying the size adjustment to the CAPM.[14]

Q. Did you apply the adjustment recommended by Ibbotson Associates in your analysis?

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[12] "Ibbotson Associates' Stocks, Bonds, Bills, and Inflation: 2006 Yearbook Valuation Edition," edited by James Harrington and Michael Barad, p. 129. For a detailed discussion of size and return to Chapter 7, "Firm Size and Return" in this publication.
[13] *Ibid.,* p. 155.
[14] *Ibid*, p. 60.

A. Yes. In my CAPM analysis, I followed the method recommended by Ibbotson Associates to compensate for this inherent data bias against smaller companies like Laclede and the comparable group.

Q. Have any regulatory commissions accepted this size adjustment to the CAPM in rate proceedings when determining the cost of common equity?

A. Yes. The Minnesota Public Utilities Commission recognized that the size of the firm is a factor in measuring return in an Interstate Power and Light Company case. The Commission observed:

> The Administrative Law Judge takes comfort from the fact that Ibbotson Associates is a widely-recognized statistical reporting firm that has a national reputation. He considers it to be in the same general category as Standard & Poor's or Moody's. There is no indication that the report in question was prepared for IPL, or the utility industry, to bolster arguments in rate cases. Instead, it appears that the report in question is part of an almanac-type yearbook that Ibbotson prepares without any particular focus on the utility industry. The Administrative Law Judge understands and shares the concerns of the Staff concerning the methodology used, and thinks the issue is worthy of pursuit in some other forum. But for purposes of this case, the Administrative Law Judge accepts the principal conclusion of the study – that size of a firm is a factor in determining risk and return.[15]

Q. What were the results of your CAPM analysis?

A. The result of the size-adjusted CAPM for Laclede was 12.79 percent, and the average for the comparable companies was 12.51 percent. The CAPM results for the comparable companies ranged from 11.64 percent to 14.48 percent. The estimated cost of common stock of Laclede, using the historical CAPM, was 12.86 percent, and the average for the comparable group was 12.80 percent. Schedules DAM-24 and DAM-25 show the results

[15] *In the Matter of the Petition of Interstate Power and Light Company for Authority to Increase its Electric Rates in Minnesota,* Docket No. E-001/GR-03-767, p. 7.

of my CAPM analyses for Laclede and the comparable companies. They are remarkably similar.

INTERPRETING THE DCF AND CAPM RESULTS

Q. What did you do to put DCF and CAPM results in their proper context?

A. First, to interpret the DCF and CAPM estimates, I put them in the context of the recent and forecasted interest rates and the returns on alternative investments; this included recognizing the actual returns to common stock of the comparable LDCs. I also noted the prevalent risks of LDCs such as Laclede in the current market place and the limitations and biases of the DCF and CAPM methods.

Q. You mentioned interest rates were important to your interpretation of the DCF and CAPM results. Why is this the case?

A. The level of interest rates is a measure of the returns that investors might expect from alternative investments. Forecasted rising interest rates mean that investors will require higher returns from their common stock investments in the future. That is, if the risk premium between common stock and debt remains relatively constant, the returns to common stock investments must necessarily increase to attract and maintain capital. Additionally, utilities are capital intensive. Rising interest costs erode the earnings of utilities and, therefore, are of greater concern to utility investors. Both of these factors are important considerations when estimating an allowed return.

Q. When you considered the actual returns of the comparable LDCs, how did this affect your determination of a recommended allowed return?

A. The actual returns of the comparable LDCs are a measure of investor expectations for investing in Laclede or any LDC. This is the background for any more detailed analysis

of Laclede's cost of common stock. I discussed the actual common stock returns for Laclede and the comparable LDCs previously. I presented a schedule that showed the 2006 *Value Line* estimates for the comparable companies' range from 9.5 percent for Southwest Gas to 16.0 percent for New Jersey Resources. The average for the comparable group is 11.9 percent. Of course, the actual returns are not market-measured estimates like the DCF and the CAPM, but these returns represent expectations of common stock investors. In that sense, they represent returns on alternative, similar investments, so this is relevant information for setting an allowed return in a regulatory proceeding. These are companies with obviously similar risks that Laclede must compete directly with for investment funds.

Q. What other market evidence did you review about returns to common equity in order to put your CAPM and DCF estimates in a current market context?

A. I reviewed the recent returns to common stock of some non-regulated industries to view returns to alternative equity investments. I illustrate some of these data in Schedule DAM-26. As expected, the range in recent and expected earnings varies considerably. However, one characteristic is relatively similar and important. These non-regulated industries are generally experiencing an increase in common equity returns, and their returns are generally higher than the LDC's returns.

Q. You previously discussed an increase in business risk because of high natural gas prices. How do high gas prices increase the business risk to investors of an LDC?

A. High natural gas prices create demand risk for the LDCs and their investors. That is, high prices cause customers to adjust their consumption patterns and LDCs' sales volumes will fall short of levels used to estimate revenue requirements set in a regulatory

proceeding. At higher prices**,** customers reduce their natural gas consumption, install more efficient equipment, and switch to alternative fuels. In addition, high natural gas prices will deter some new customers from even connecting to natural gas utility service. This reduction in gas volumes sold means that LDCs will not earn expected, allowed returns based on larger volumes, and this prospect is a business risk. High gas prices also cause receivables to increase, which reduces achieved margins.

Q. How did you determine a recommended return for Laclede in this proceeding?

A. As I noted, the most relevant DCF results for Laclede range between 11.62 percent and 9.06 percent. The CAPM estimates for Laclede are 12.79 percent and 12.86 percent. Recognizing the prevailing common stock returns for the LDCs and rising interest rates, I recommend an allowed return for Laclede in the range of 11.50 percent to 12.00 percent. At this time, I believe that the 11.50 percent is minimally acceptable to attract and maintain capital. I based this final determination also on my financial integrity test of my recommended range. Moreover, if the forecast for rising rates for 2007 and the predicted returns to LDCs materialize, this level may not keep Laclede within the boundaries of the financially healthy comparable LDCs.

Q. What is the total cost of capital represented by your recommended allowed return on common equity?

A. An 11.75 percent return on common stock, which is the middle of my recommended allowed return, will result in a total cost of capital for Laclede of 9.31 percent. I have illustrated the total cost of capital estimates in Schedule DAM-27.

FINANCIAL INTEGRITY TEST

Q. You stated that you tested the adequacy and appropriateness of your return recommendation. How did you test your recommended allowed return for Laclede?

A. To assure that my recommendation was adequate but not excessive, I compared the After-Tax Interest Coverage ratio of Laclede, at my recommended allowed return, to similar coverages of the comparable LDCs. The After-Tax Interest Coverage is a measure that implies the likelihood that a company will have sufficient funds to meet its fixed interest obligations. It is a ready measure that indicates the sufficiency of a recommended allowed return. The higher the coverage ratio, the more likely the allowed return will be sufficient to meet the future fixed interest obligations. If Laclede does earn at this level, this comparison shows how its interest coverage will compare to the coverages of comparable LDCs.

Q. How does the After-Tax Interest Coverage ratio for Laclede compare to the coverages of the comparable LDCs?

A. The After-Tax Interest Coverage ratio of Laclede, which would result from the 11.50 percent allowed return on common equity, is just 2.75 times. By comparison, the average interest coverage of the comparable companies is much higher at 3.66 times. Consequently, the low end of my recommended allowed return range is extremely low in today's market. For example, only Southwest Gas, which has been in financial difficulty, has a dangerously low 1.50 times after-tax coverage ratio. This is not a reasonable standard for ratemaking. At a 12.0 percent allowed return for Laclede, which is the high end of my recommended range, the After-Tax Interest Coverage ratio is only 2.83 times. This is also much lower than the average After-Tax Interest Coverage of the LDCs.

Laclede would require a return on equity of 17.55 percent to achieve the coverage ratio of the comparable companies. This further confirms that my recommended allowed return for Laclede is very conservative. I have shown these comparisons in Schedule DAM-28.

Q. Does this conclude your direct testimony?

A. Yes, it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Laclede Gas Company's	)	
Tariff to Revise Natural Gas Rate Schedules	)	Case No. GR-2007-0___

AFFIDAVIT

STATE OF OKLAHOMA	)	
	)	SS.
COUNTY OF OKLAHOMA	)	

Donald A. Murry, of lawful age, being first duly sworn, deposes and states:

1. My name is Donald A. Murry. My business address is 5555 North Grand Boulevard, Oklahoma City, Oklahoma 73112; and I am Vice-President and Economist with C. H. Guernsey and Company.

2. Attached hereto and made a part hereof for all purposes is my direct testimony on behalf of Laclede Gas Company.

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

Donald A. Murry

Subscribed and sworn to before me this 28 day of November, 2006

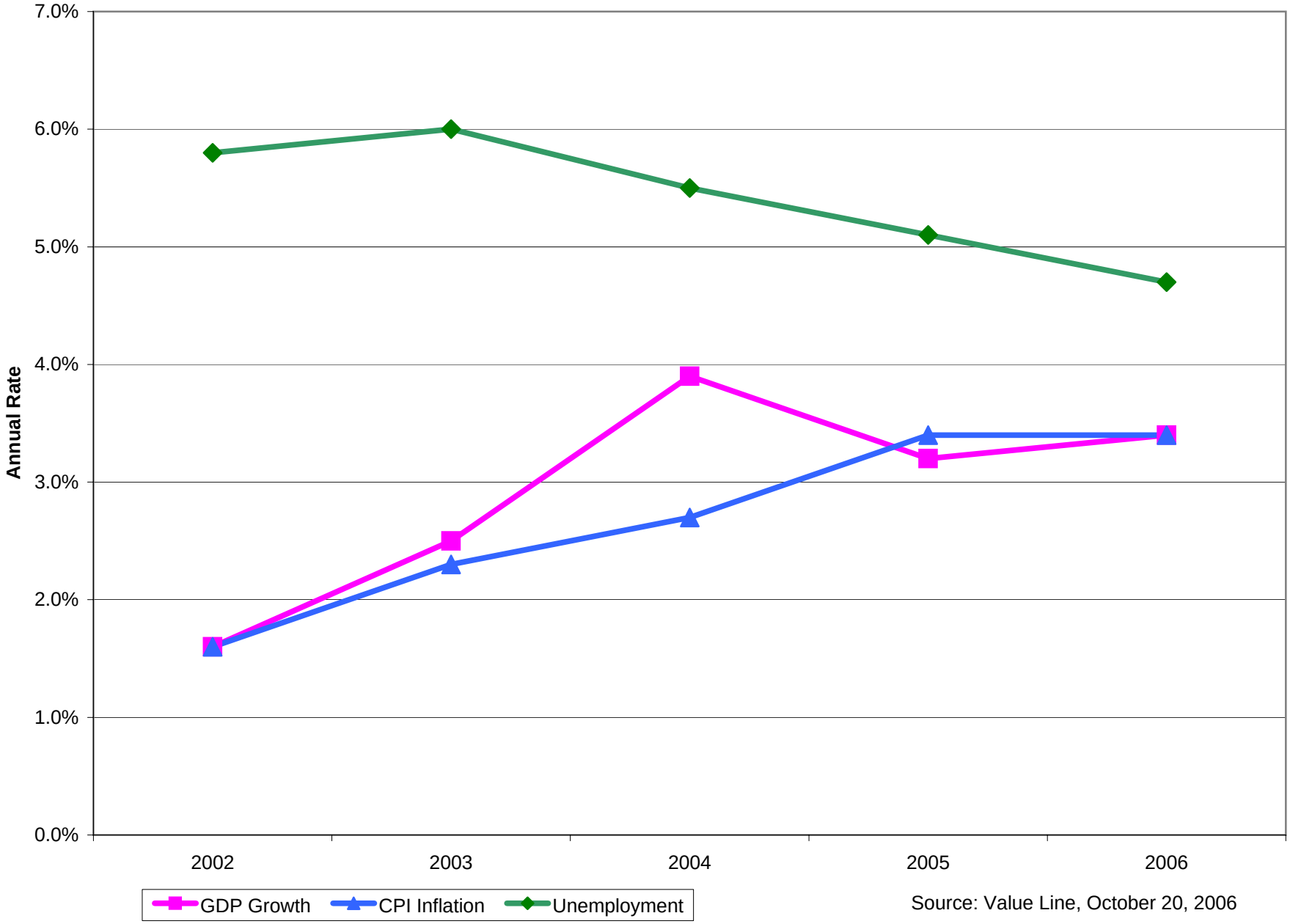
CAROLYN S. HANES NOTARY # 01019787 EXP. 12/04/09 PUBLIC STATE OF OKLAHOMA

Carolyn S. Hanes
Notary Public

Laclede Group

List of Schedules

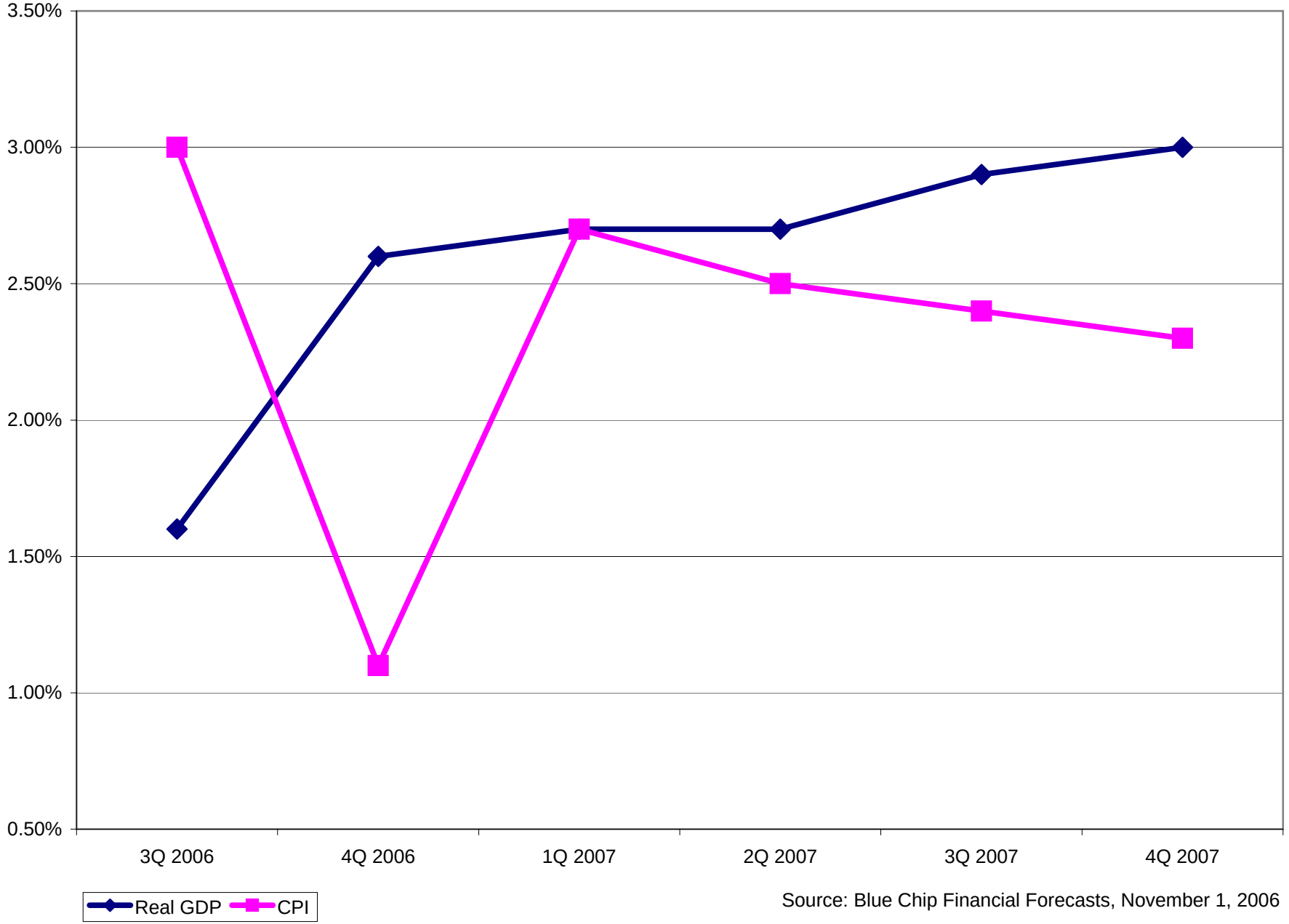
Laclede Group
Historical Economic Statistics
2002 to 2005



Source: Value Line, October 20, 2006

Schedule DAM - 1

Laclede Group
Blue Chip Economic Forecasts



Source: Blue Chip Financial Forecasts, November 1, 2006

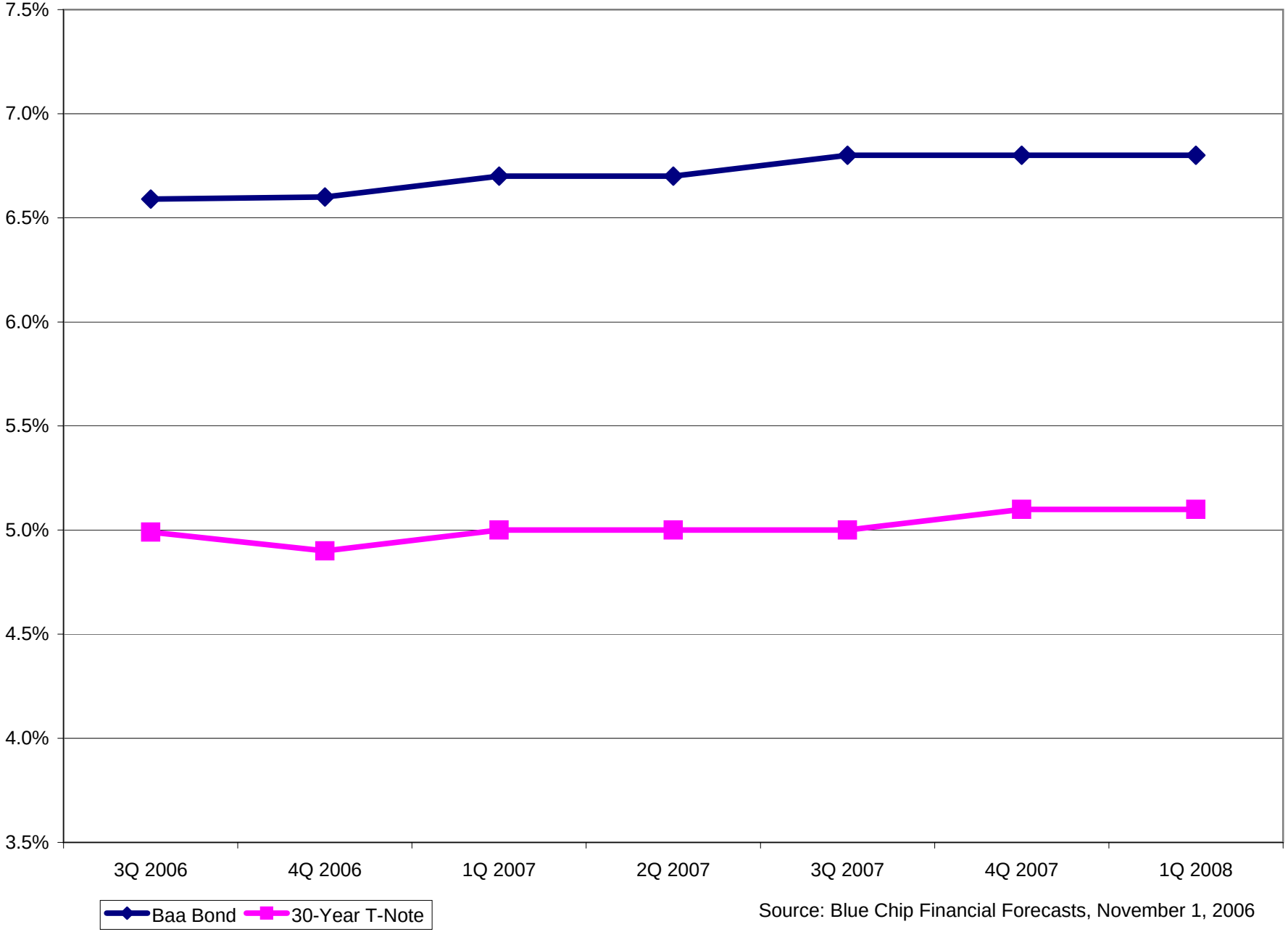
Schedule DAM - 2

Laclede Group
History of Long-Term Interest Rates

Source: www.FederalReserve.gov

Schedule DAM - 3

Laclede Group
Blue Chip Financial Forecasts



Source: Blue Chip Financial Forecasts, November 1, 2006

Schedule DAM - 4

Schedule DAM-5

Laclede Group

Test Year Capital Structure

September 30, 2006

	Amount Outstanding (In Thousands)	Percent of Total
Long Term Debt	$390,248	49.16%
Preferred Stock	$946	0.12%
Common Equity	$402,636	50.72%
Total Capitalization	$793,830	100.00%

Source :
Laclede Gas Work Papers

Laclede Group

Comparable Gas Companies

Comparison of Common Equity Ratios

Company	2002	2003	2004	2005	2006E	Forecast '09-'11
Laclede Group	52.3%	49.4%	48.3%	51.8%	51.0%	52.0%
New Jersey Resources	49.4%	61.9%	59.7%	58.0%	58.0%	63.0%
NICOR, Inc.	64.5%	60.3%	60.1%	62.5%	64.0%	68.0%
Northwest Natural Gas	51.5%	50.3%	54.0%	53.0%	53.0%	53.0%
Piedmont Natural Gas	56.1%	57.8%	56.4%	58.6%	56.5%	58.0%
South Jersey Industries, Inc.	46.1%	49.0%	51.0%	55.1%	57.0%	60.0%
Southwest Gas	34.1%	34.0%	35.8%	36.2%	39.3%	43.5%
WGL Holdings, Inc.	52.4%	54.3%	57.2%	58.6%	59.0%	59.0%
Comparable Companies' Averages	50.6%	52.5%	53.5%	54.6%	55.3%	57.8%

Source: Value Line Investment Survey

Schedule DAM-7

Laclede Group

Embedded Cost of Long-Term Debt

As of September 30, 2006

Issue	Interest Rate	Adjusted Amount (In Thousands)	Annual Interest (In Thousands)
7.5% Series Due November 1, 2007	7.50%	$40,000	$3,000
6.5% Series Due November 15, 2010	6.50%	$25,000	$1,625
5.5% Series Due May 1, 2019	5.50%	$50,000	$2,750
6% Series Due May 1, 2034	6.00%	$100,000	$6,000
6.5% Series Due October 15, 2012	6.50%	$25,000	$1,625
7% Series Due June 1, 2029	7.00%	$25,000	$1,750
7.9% Series Due September 15, 2030	7.90%	$30,000	$2,370
6.15% Series Due September 15, 2030	6.15%	$55,000	$3,383
Long-Term Debt to Unconsolidated Affiliate Trust	7.70%	$46,400	$3,573
Total Long Term Debt		$396,400	$26,075
Less Unamortized Discount, Expense, and Loss On Reacquired Debt		$6,152	
Annualized Amortization of Debt Exp. & Debt Discount			$365
Cost of Debt		$390,248	$26,440
Embedded Cost of Debt			6.78%

Source:
Laclede Gas Work Papers

Schedule DAM-8

Laclede Group

Embedded Cost of Preferred Stock

As of September 30, 2006

Issue	Interest Rate	Adjusted Amount (In Thousands)	Annual Interest (In Thousands)
5.0% Series B	5.00%	$799.00	$39.95
4.56% Series C	4.56%	$147.00	$6.70
Total Preferred Stock		$946.00	$46.65
Embedded Cost of Debt			4.93%

Source: Laclede Gas Work Papers

Laclede Group

Comparable Gas Companies

Comparison of Financial Risk Statistics

Company	Value Line's Financial Strength	Standard & Poor's Credit Rating
Laclede Group	B+	A
New Jersey Resources	A	A+
NICOR, Inc.	A	AA
Northwest Natural Gas	A	AA-
Piedmont Natural Gas	B++	A
South Jersey Industries, Inc.	B++	BBB+
Southwest Gas	B	BBB-
WGL Holdings, Inc.	A	AA-
Comparable Companies' Median	A	A+

Sources:
Value Line Investment Survey
www2.standardandpoors.com

Laclede Group

Comparable Gas Companies

Comparison of Business Risk Statistics

	Value Line					Standard & Poor's
Company	Safety Rank	Timeliness Rank	Stock's Price Stability	Price Growth Persistence	Earnings Predictability	Business Profile
Laclede Group	2	4	95	55	65	3
New Jersey Resources	1	4	100	85	100	2
NICOR, Inc.	3	3	55	35	80	3
Northwest Natural Gas	1	3	100	55	75	1
Piedmont Natural Gas	2	4	100	75	80	2
South Jersey Industries, Inc.	2	5	100	95	90	2
Southwest Gas	3	3	95	55	65	3
WGL Holdings, Inc.	1	4	100	70	60	3
Comparable Companies' Average	1.9	3.7	92.9	67.1	78.6	2.3

Sources:
Value Line Investment Survey
www2.standardandpoors.com

Laclede Group

Comparable Gas Companies

Comparison of Returns on Common Equity

	2002	2003	2004	2005	2006E	Forecast '09-'11
Laclede Group	7.8%	11.6%	10.1%	10.9%	11.0%	9.5%
New Jersey Resources	15.7%	15.6%	15.3%	17.0%	16.0%	14.5%
NICOR, Inc.	17.5%	12.3%	13.1%	12.5%	13.0%	13.0%
Northwest Natural Gas	8.5%	9.0%	8.9%	9.9%	10.0%	10.5%
Piedmont Natural Gas	10.6%	11.8%	11.1%	11.5%	12.0%	13.0%
South Jersey Industries, Inc.	12.5%	11.6%	12.5%	12.4%	13.0%	13.0%
Southwest Gas	6.5%	6.1%	8.3%	6.4%	9.5%	9.5%
WGL Holdings, Inc.	7.2%	14.0%	11.7%	12.0%	10.0%	11.0%
Comparable Companies' Averages	11.2%	11.5%	11.6%	11.7%	11.9%	12.1%

Source: Value Line Investment Survey

Laclede Group

Comparable Gas Companies

Comparison of Dividends per Share

Company	2002	2003	2004	2005	2006E	Growth '02-'06	Forecast '09-'11
Laclede Group	1.34	1.34	1.35	1.37	1.40	1.11%	1.50
New Jersey Resources	1.20	1.24	1.30	1.36	1.45	4.82%	1.70
NICOR, Inc.	1.84	1.86	1.86	1.86	1.86	0.18%	2.02
Northwest Natural Gas	1.26	1.27	1.30	1.32	1.38	2.19%	1.70
Piedmont Natural Gas	0.80	0.82	0.85	0.91	0.96	4.90%	1.17
South Jersey Industries, Inc.	0.75	0.78	0.82	0.86	0.92	5.17%	1.15
Southwest Gas	0.82	0.82	0.82	0.82	0.82	0.00%	0.82
WGL Holdings, Inc.	1.27	1.28	1.30	1.32	1.35	1.54%	1.48
Comparable Companies' Averages	1.13	1.15	1.18	1.21	1.25	2.69%	1.43

Source: Value Line Investment Survey

Laclede Group

Comparable Gas Companies

Comparison of Dividend Payout Ratios

Company	2002	2003	2004	2005	2006E	Five Year Average
Laclede Group	113%	74%	73%	72%	65%	79.4%
New Jersey Resources	56%	51%	49%	50%	52%	51.6%
NICOR, Inc.	63%	88%	84%	81%	75%	78.2%
Northwest Natural Gas	79%	72%	69%	63%	62%	69.0%
Piedmont Natural Gas	83%	74%	66%	68%	72%	72.6%
South Jersey Industries, Inc.	62%	57%	52%	50%	50%	54.2%
Southwest Gas	70%	72%	49%	65%	44%	60.0%
WGL Holdings, Inc.	112%	56%	65%	62%	74%	73.8%
Comparable Companies' Averages	75.0%	67.1%	62.0%	62.7%	61.3%	65.6%

Source: Value Line Investment Survey

Laclede Group

Marginal Cost of Capital Calculation

Using Market Capital Structure Ratios

Comparable Companies

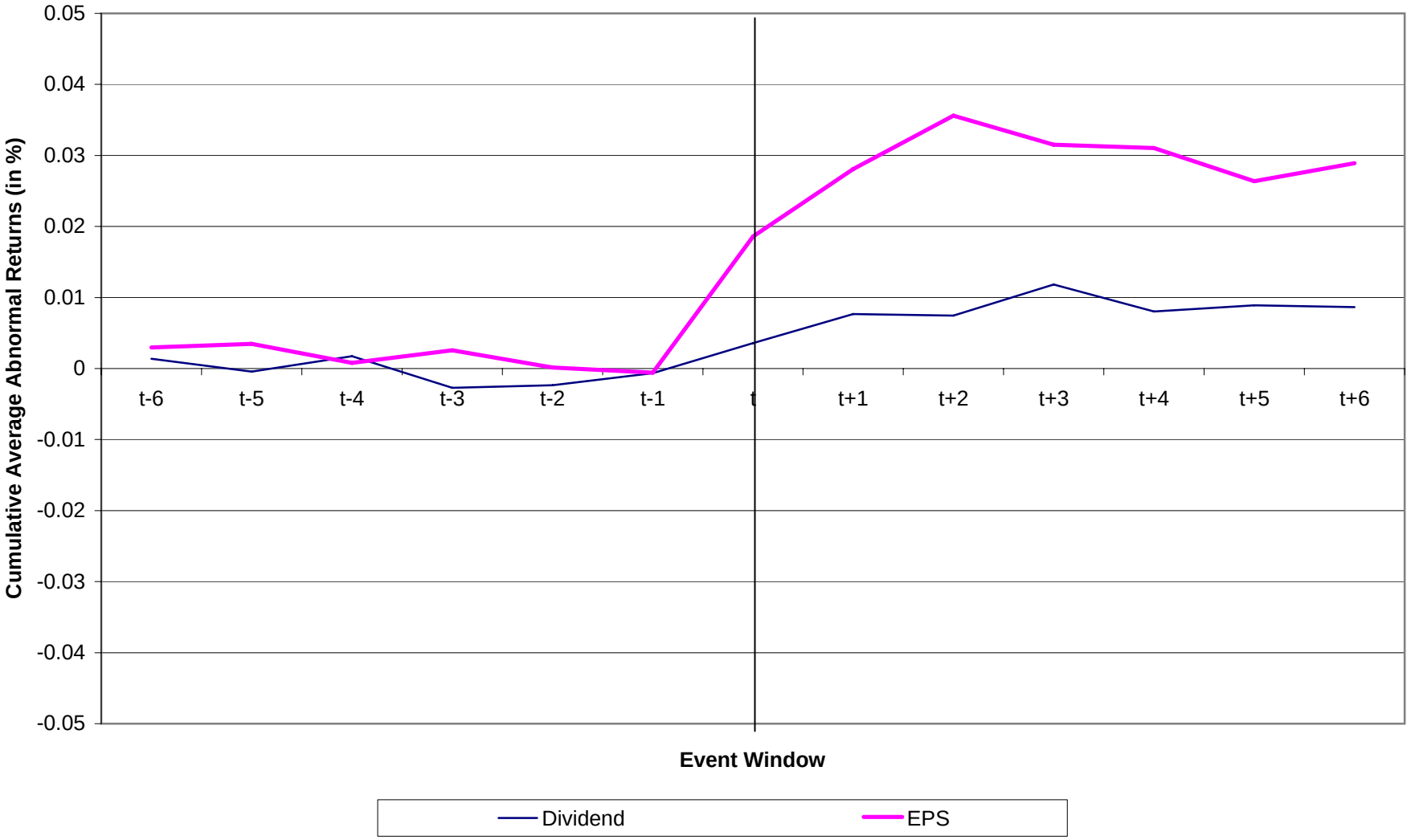
Item	Ratio	Market Cost	Tax Rate	Marginal Cost	Weighted Cost
Common Stock Equity	66.82%	11.00%	0.00%	11.00%	7.35%
Preferred Stock	0.18%	7.06%	0.00%	7.06%	0.01%
Total Debt	33.00%	5.70%	36.00%	3.65%	1.20%
Totals					8.56%

Laclede Group

Item	Ratio	Market Cost	Tax Rate	Marginal Cost	Weighted Cost
Common Stock Equity	56.50%	12.42%	0.00%	12.42%	7.02%
Preferred Stock	0.07%	7.06%	0.00%	7.06%	0.00%
Total Debt	43.43%	5.70%	38.00%	3.53%	1.53%
Totals					8.56%

Source: Value Line Investment Survey

Stock Price Responses to Positive Dividend and EPS Announcements Greater than Expected
(Cumulative Average Abnormal Returns)



Laclede Group

Comparable Gas Companies

Discounted Cash Flow Growth Rate Summary

	Value Line 2001 TO 2010 Estimate			Value Line Five Year Historical			Projections Value Line		S & P
	EPS	DPS	Book Value	EPS	DPS	Book Value	EPS	DPS	EPS
Laclede Group	6.77%	1.26%	6.22%	4.5%	0.5%	2.5%	5.0%	2.0%	NA
New Jersey Resources	6.06%	4.21%	6.72%	8.5%	3.0%	7.0%	4.5%	4.5%	5.0%
NICOR, Inc.	-0.55%	1.59%	3.27%	-3.5%	3.5%	1.5%	4.0%	1.5%	3.0%
Northwest Natural Gas	5.48%	3.48%	3.68%	5.0%	1.0%	3.5%	7.0%	4.0%	5.0%
Piedmont Natural Gas	6.53%	4.91%	4.47%	5.0%	5.0%	6.5%	6.0%	5.5%	4.0%
South Jersey Industries, Inc.	8.26%	5.02%	8.76%	11.5%	2.5%	13.0%	7.0%	6.0%	6.0%
Southwest Gas	7.50%	0.00%	3.68%	-0.5%	0.0%	3.0%	9.0%	0.0%	3.0%
WGL Holdings, Inc.	4.34%	1.83%	3.31%	6.0%	1.5%	3.0%	1.5%	2.0%	4.0%
Comparable Companies' Averages	5.38%	3.00%	4.84%	4.57%	2.36%	5.36%	5.57%	3.36%	4.29%

Sources:
Value Line Investment Survey
Standard & Poor's Earnings Guide

Laclede Group

Comparable Gas Companies

52-Week Discounted Cash Flow Using Dividend Growth Rates

	Share Prices		2006	52 Week Yields		2000-02	2009-11E	Growth	Cost of Capital	
	Low	High	Dividend	Low	High	DPS	DPS	Rate	Low	High
Laclede Group	28.84	35.83	1.40	3.91%	4.85%	1.34	1.50	1.26%	5.17%	6.12%
New Jersey Resources	41.37	52.62	1.45	2.76%	3.50%	1.17	1.70	4.21%	6.96%	7.71%
NICOR, Inc.	38.72	48.50	1.86	3.84%	4.80%	1.75	2.02	1.59%	5.42%	6.39%
Northwest Natural Gas	32.83	41.94	1.38	3.29%	4.20%	1.25	1.70	3.48%	6.77%	7.68%
Piedmont Natural Gas	21.26	27.27	0.96	3.52%	4.52%	0.76	1.17	4.91%	8.43%	9.43%
South Jersey Industries, Inc.	25.63	31.33	0.92	2.94%	3.59%	0.74	1.15	5.02%	7.96%	8.61%
Southwest Gas	26.00	36.74	0.82	2.23%	3.15%	0.82	0.82	0.00%	2.23%	3.15%
WGL Holdings, Inc.	27.04	33.02	1.35	4.09%	4.99%	1.26	1.48	1.83%	5.92%	6.83%
Comparable Companies' Averages	30.41	38.77	1.25	3.24%	4.11%	1.11	1.43	3.00%	6.24%	7.11%

Sources:
Value Line Investment Survey
Wall Street Journal

Laclede Group

Comparable Gas Companies

Current Discounted Cash Flow Using Dividend Growth Rates

	Share Prices		Current	Current Yields		2000-02	2009-11E	Growth	Cost of Capital	
	Low	High	Dividend	Low	High	DPS	DPS	Rate	Low	High
Laclede Group	34.47	35.17	1.40	3.98%	4.06%	1.34	1.50	1.26%	5.24%	5.32%
New Jersey Resources	51.04	51.70	1.45	2.80%	2.84%	1.17	1.70	4.21%	7.01%	7.05%
NICOR, Inc.	45.84	46.61	1.86	3.99%	4.06%	1.75	2.02	1.59%	5.58%	5.64%
Northwest Natural Gas	40.64	41.30	1.38	3.34%	3.40%	1.25	1.70	3.48%	6.82%	6.87%
Piedmont Natural Gas	26.56	27.01	0.96	3.55%	3.61%	0.76	1.17	4.91%	8.47%	8.52%
South Jersey Industries, Inc.	30.60	31.07	0.92	2.96%	3.01%	0.74	1.15	5.02%	7.98%	8.03%
Southwest Gas	35.43	36.03	0.82	2.28%	2.31%	0.82	0.82	0.00%	2.28%	2.31%
WGL Holdings, Inc.	32.24	32.69	1.35	4.13%	4.19%	1.26	1.48	1.83%	5.96%	6.02%
Comparable Companies' Averages	37.48	38.06	1.25	3.29%	3.35%	1.11	1.43	3.00%	6.30%	6.35%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Laclede Group

Comparable Gas Companies

52-Week Discounted Cash Flow Using Earnings Growth Rates

	Share Prices		2006	52 Week Yields		2000-02	2009-11E	Growth	Cost of Capital	
	Low	High	Dividend	Low	High	EPS	EPS	Rate	Low	High
Laclede Group	28.84	35.83	1.40	3.91%	4.85%	1.39	2.50	6.77%	10.68%	11.62%
New Jersey Resources	41.37	52.62	1.45	2.76%	3.50%	1.94	3.30	6.06%	8.82%	9.57%
NICOR, Inc.	38.72	48.50	1.86	3.84%	4.80%	2.94	2.80	-0.55%	3.28%	4.25%
Northwest Natural Gas	32.83	41.94	1.38	3.29%	4.20%	1.76	2.85	5.48%	8.77%	9.68%
Piedmont Natural Gas	21.26	27.27	0.96	3.52%	4.52%	0.99	1.75	6.53%	10.05%	11.05%
South Jersey Industries, Inc.	25.63	31.33	0.92	2.94%	3.59%	1.15	2.35	8.26%	11.20%	11.85%
Southwest Gas	26.00	36.74	0.82	2.23%	3.15%	1.17	2.25	7.50%	9.73%	10.66%
WGL Holdings, Inc.	27.04	33.02	1.35	4.09%	4.99%	1.60	2.35	4.34%	8.43%	9.33%
Comparable Companies' Averages	30.41	38.77	1.25	3.24%	4.11%	1.65	2.52	5.38%	8.61%	9.48%
Comparable Companies' Averages without NICOR Inc.									9.50%	10.36%

Sources:
Value Line Investment Survey
Wall Street Journal

Laclede Group

Comparable Gas Companies

Current Discounted Cash Flow Using Earnings Growth Rates

	Share Prices		Current	Current Yields		2000-02	2009-11E	Growth	Cost of Capital	
	Low	High	Dividend	Low	High	EPS	EPS	Rate	Low	High
Laclede Group	34.47	35.17	1.40	3.98%	4.06%	1.39	2.50	6.77%	10.75%	10.83%
New Jersey Resources	51.04	51.70	1.45	2.80%	2.84%	1.94	3.30	6.06%	8.86%	8.90%
NICOR, Inc.	45.84	46.61	1.86	3.99%	4.06%	2.94	2.80	-0.55%	3.44%	3.50%
Northwest Natural Gas	40.64	41.30	1.38	3.34%	3.40%	1.76	2.85	5.48%	8.82%	8.88%
Piedmont Natural Gas	26.56	27.01	0.96	3.55%	3.61%	0.99	1.75	6.53%	10.09%	10.15%
South Jersey Industries, Inc.	30.60	31.07	0.92	2.96%	3.01%	1.15	2.35	8.26%	11.23%	11.27%
Southwest Gas	35.43	36.03	0.82	2.28%	2.31%	1.17	2.25	7.50%	9.78%	9.82%
WGL Holdings, Inc.	32.24	32.69	1.35	4.13%	4.19%	1.60	2.35	4.34%	8.47%	8.53%
Comparable Companies' Averages	37.48	38.06	1.25	3.29%	3.35%	1.65	2.52	5.38%	8.67%	8.72%
Comparable Companies' Averages without NICOR Inc.									9.54%	9.59%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Laclede Group

Comparable Gas Companies

52-Week Discounted Cash Flow Using Projected Growth Rates

	Share Prices		2006	52 Week Yields		EPS Estimates		Cost of Capital	
	Low	High	Dividend	Low	High	Value Line	S&P	Low	High
Laclede Group	28.84	35.83	1.40	3.91%	4.85%	5.00%	NA	8.91%	9.85%
New Jersey Resources	41.37	52.62	1.45	2.76%	3.50%	4.50%	5.00%	7.26%	8.50%
NICOR, Inc.	38.72	48.50	1.86	3.84%	4.80%	4.00%	3.00%	6.84%	8.80%
Northwest Natural Gas	32.83	41.94	1.38	3.29%	4.20%	7.00%	5.00%	8.29%	11.20%
Piedmont Natural Gas	21.26	27.27	0.96	3.52%	4.52%	6.00%	4.00%	7.52%	10.52%
South Jersey Industries, Inc.	25.63	31.33	0.92	2.94%	3.59%	7.00%	6.00%	8.94%	10.59%
Southwest Gas	26.00	36.74	0.82	2.23%	3.15%	9.00%	3.00%	5.23%	12.15%
WGL Holdings, Inc.	27.04	33.02	1.35	4.09%	4.99%	1.50%	4.00%	5.59%	8.99%
Comparable Companies' Averages	30.41	38.77	1.25	3.24%	4.11%	5.57%	4.29%	7.09%	10.11%

Sources:
Value Line Investment Survey
Wall Street Journal
Standard & Poor's Earnings Guide

Laclede Group

Comparable Gas Companies

Current Discounted Cash Flow Using Projected Growth Rates

	Share Prices		Current	Current Yields		EPS Estimates		Cost of Capital	
	Low	High	Dividend	Low	High	Value Line	S&P	Low	High
Laclede Group	34.47	35.17	1.40	3.98%	4.06%	5.00%	NA	8.98%	9.06%
New Jersey Resources	51.04	51.70	1.45	2.80%	2.84%	4.50%	5.00%	7.30%	7.84%
NICOR, Inc.	45.84	46.61	1.86	3.99%	4.06%	4.00%	3.00%	6.99%	8.06%
Northwest Natural Gas	40.64	41.30	1.38	3.34%	3.40%	7.00%	5.00%	8.34%	10.40%
Piedmont Natural Gas	26.56	27.01	0.96	3.55%	3.61%	6.00%	4.00%	7.55%	9.61%
South Jersey Industries, Inc.	30.60	31.07	0.92	2.96%	3.01%	7.00%	6.00%	8.96%	10.01%
Southwest Gas	35.43	36.03	0.82	2.28%	2.31%	9.00%	3.00%	5.28%	11.31%
WGL Holdings, Inc.	32.24	32.69	1.35	4.13%	4.19%	1.50%	4.00%	5.63%	8.19%
Comparable Companies' Averages	37.48	38.06	1.25	3.29%	3.35%	5.57%	4.29%	7.15%	9.35%

Sources:
Value Line Investment Survey
Standard & Poor's Earnings Guide
Yahoo! FINANCE

Table 7-14 (continued)

Size Effect within Industries
Summary Statistics and Excess Returns

(Through Year-end 2005)

SIC Code	Description	Small Company Group: Geometric Mean	Arithmetic Mean	Standard Deviation	Excess Return
10	Metal Mining	8.31%	16.30%	46.05%	4.83%
13	Oil and Gas Extraction	12.81%	21.07%	46.60%	6.73%
15	Building Construction–General Contractors & Op. Builders	6.64%	15.87%	43.37%	–3.79%
16	Hvy. Construction Other than Bldg. Construction–Contractors	18.58%	23.57%	37.33%	12.65%
20	Food and Kindred Spirits	12.36%	15.95%	30.16%	3.44%
22	Textile Mill Products	9.77%	15.35%	34.60%	3.49%
23	Apparel & other Finished Products Made from Fabrics & Similar	5.72%	11.52%	37.95%	–1.12%
24	Lumber and Wood Products, Except Furniture	11.02%	21.19%	53.51%	8.93%
25	Furniture and Fixtures	9.12%	13.29%	29.62%	0.83%
26	Paper & Allied Products	14.21%	19.79%	42.06%	6.12%
27	Printing, Publishing and Allied Products	16.30%	19.15%	24.91%	6.34%
28	Chemicals and Allied Products	13.38%	18.87%	39.59%	4.95%
29	Petroleum Refining & Related Industries	13.21%	17.68%	31.92%	4.18%
30	Rubber & Miscellaneous Plastics Products	12.60%	17.05%	32.93%	3.52%
31	Leather & Leather Products	11.75%	16.79%	34.22%	–0.29%
32	Stone, Clay, Glass & Concrete Products	9.71%	14.54%	33.16%	2.08%
33	Primary Metal Industries	13.01%	18.76%	38.48%	6.75%
34	Fabricated Metal Products, Except Machinery & Trans. Equip.	11.77%	17.41%	37.42%	5.33%
35	Industrial & Commercial Machinery & Computer Equipment	12.20%	17.59%	35.60%	3.50%
36	Electrical Equipment & Components, Except Computer	12.01%	20.02%	45.90%	6.44%
37	Transportation Equipment	12.04%	18.32%	38.31%	3.25%
38	Measuring, Analyzing & Controlling Instruments	13.25%	18.19%	35.01%	4.05%
39	Miscellaneous Manufacturing Industries	8.07%	12.55%	31.90%	0.82%
40	Railroad Transportation	8.46%	14.82%	36.36%	2.15%
42	Motor Freight Transportation & Warehousing	7.21%	13.19%	38.93%	–0.04%
45	Transport by Air	8.71%	17.13%	48.27%	5.46%
48	Communications	17.30%	25.50%	46.18%	14.30%
49	Electric, Gas & Sanitary Services	10.34%	13.96%	29.63%	3.08%
50	Wholesale Trade–Durable Goods	11.01%	16.26%	36.38%	3.92%
51	Wholesale Trade–Nondurable Goods	8.64%	12.33%	28.69%	–0.56%
53	General Merchandise Stores	9.37%	16.84%	43.14%	3.75%
54	Food Stores	10.00%	13.82%	29.54%	0.03%
56	Apparel & Accessory Stores	11.87%	18.02%	38.93%	–0.16%
57	Home Furniture, Furnishings, and Equipment Stores	15.82%	26.33%	51.19%	2.64%
58	Eating and Drinking Places	2.03%	7.97%	36.84%	–7.39%
59	Miscellaneous Retail	12.11%	17.66%	36.52%	1.74%
60	Depository Institutions	15.33%	17.99%	25.10%	4.21%
61	Nondepository Credit Institutions	13.52%	17.44%	29.94%	1.78%
62	Security and Commod. Brokers, Dealers, Exchanges	14.58%	21.59%	42.10%	–2.96%
63	Insurance Carriers	13.39%	16.25%	24.02%	3.74%
64	Insurance Agents, Brokers, and Service	11.82%	19.26%	43.80%	3.01%
65	Real Estate	6.72%	11.65%	34.85%	–0.16%
67	Holding & Other Investment Offices	11.19%	15.46%	31.25%	2.28%
70	Hotels, Rooming Houses, Camps, & Other Lodging	6.42%	12.53%	37.23%	–3.16%
72	Personal Services	18.06%	22.49%	32.80%	9.09%
73	Business Services	13.95%	23.68%	59.91%	8.67%
78	Motion Pictures	6.18%	14.05%	45.60%	–2.62%
79	Amusement and Recreation Services	11.18%	15.10%	31.68%	–1.07%
80	Health Services	15.59%	22.05%	40.75%	3.13%

Source: Center for Research in Security Prices, University of Chicago.

Laclede Group

Comparable Gas Companies

Size Adjusted Capital Asset Pricing Model

	Risk Free Return	Beta	Equity Risk Premium	Adjusted Equity Risk Premium	Size Premium	Cost of Equity
Laclede Group	4.94%	0.85	7.10%	6.04%	1.81%	12.79%
New Jersey Resources	4.94%	0.80	7.10%	5.68%	1.81%	12.43%
NICOR, Inc.	4.94%	1.20	7.10%	8.52%	1.02%	14.48%
Northwest Natural Gas	4.94%	0.75	7.10%	5.33%	1.81%	12.08%
Piedmont Natural Gas	4.94%	0.80	7.10%	5.68%	1.02%	11.64%
South Jersey Industries, Inc.	4.94%	0.70	7.10%	4.97%	1.81%	11.72%
Southwest Gas	4.94%	0.85	7.10%	6.04%	1.81%	12.79%
WGL Holdings, Inc.	4.94%	0.80	7.10%	5.68%	1.81%	12.43%
Comparable Companies' Average	4.94%	0.84	7.10%	5.98%	1.58%	12.51%

Sources :
Value Line Investment Survey
Ibbotson Associates 2006 SBBI Yearbook: Valuation Edition
Federal Reserve Statistical Release

Laclede Group

Comparable Gas Companies

Historical Capital Asset Pricing Model

	Market Total Returns	Long-Term Corporate Bonds Return	Risk Premium	Beta	Adjusted Risk Premium	Aaa Corporate Bonds Return	Cost of Equity
Laclede Group	14.85%	6.20%	8.65%	0.85	7.35%	5.51%	12.86%
New Jersey Resources	14.85%	6.20%	8.65%	0.80	6.92%	5.51%	12.43%
NICOR, Inc.	14.85%	6.20%	8.65%	1.20	10.38%	5.51%	15.89%
Northwest Natural Gas	14.85%	6.20%	8.65%	0.75	6.49%	5.51%	12.00%
Piedmont Natural Gas	14.85%	6.20%	8.65%	0.80	6.92%	5.51%	12.43%
South Jersey Industries, Inc.	14.85%	6.20%	8.65%	0.70	6.06%	5.51%	11.57%
Southwest Gas	14.85%	6.20%	8.65%	0.85	7.35%	5.51%	12.86%
WGL Holdings, Inc.	14.85%	6.20%	8.65%	0.80	6.92%	5.51%	12.43%
Comparable Companies' Average	14.85%	6.20%	8.65%	0.84	7.29%	5.51%	12.80%

Sources :
Value Line Investment Survey
Ibbotson Associates 2006 SBBI Yearbook: Valuation Edition
Federal Reserve Statistical Release

Laclede Group

Recent Increase in Returns on Common Equity

By Industry Group

Industry	2004	2005	2006E	Percent Increase 2004-2006
Building Materials	15.30%	16.00%	16.00%	0.70%
Cement & Aggregates	14.50%	19.50%	22.50%	8.00%
Chemical/Diversified	16.20%	19.70%	19.50%	3.30%
Healthcare Information Services	16.10%	15.10%	15.50%	-0.60%
Household Products	34.60%	39.80%	18.50%	-16.10%
Insurance (Life)	9.60%	10.80%	11.00%	1.40%
Machinery	16.50%	19.20%	20.00%	3.50%
Railroad	9.30%	11.50%	11.50%	2.20%
Tire & Rubber	6.80%	18.90%	17.00%	10.20%

Sources: Value Line Investment Survey

Laclede Group

Proposed Cost of Capital

	Percent of Total	Embedded Cost			Cost of Capital		
		Low	Middle	High	Low	Middle	High
Long Term Debt	49.16%	6.78%	6.78%	6.78%	3.34%	3.34%	3.34%
Preferred Stock	0.12%	4.93%	4.93%	4.93%	0.01%	0.01%	0.01%
Common Equity	50.72%	11.50%	11.75%	12.00%	5.84%	5.96%	6.09%
Total Capital	100.00%				9.19%	9.31%	9.44%

Source:
Laclede Gas Work Papers

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Laclede Group

Comparable Gas Companies

Comparison of After-Tax Times Interest Earned Ratios

Laclede Group	@11.5% ROE	2.75
	@12.0% ROE	2.83
New Jersey Resources		4.56
NICOR, Inc.		5.91
Northwest Natural Gas		2.77
Piedmont Natural Gas		3.54
South Jersey Industries, Inc.		3.72
Southwest Gas		1.50
WGL Holdings, Inc.		3.62
Comparable Companies' Average		3.66

Source : Value Line Investment Survey