Exhibit No.:	
Issue:	**Cost of Capital**
Witness:	**Donald A. Murry, Ph.D.**
Type of Exhibit:	**Direct Testimony**
Sponsoring Party:	**Laclede Gas Company**
Case No.:	**GR-2010-_____**
Date Testimony Prepared:	**December 4, 2006**

LACLEDE GAS COMPANY

GR-2010-_____

DIRECT TESTIMONY

OF

DONALD A. MURRY, Ph.D.

TABLE OF CONTENTS

I. POSITION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME, POSITION AND BUSINESS ADDRESS.

A. My name is Donald A. Murry. My business address is 5555 North Grand Boulevard, Oklahoma City, Oklahoma 73112.

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

A. I am a Vice President and economist with C. H. Guernsey & Company, an Oklahoma City company. 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 to 1998, 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. Since 1964, 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, Regulatory Commission of Alaska, 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.

II. SCOPE OF TESTIMONY

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

A. Laclede Gas Company ("Laclede" or the "Company") has retained me to analyze its current cost of capital and to recommend a rate of return that is appropriate in this proceeding. A utility market structure and the associated economic rationale implies that an allowed return for Laclede should be sufficient to recover its costs of providing service, but at the same time, not be higher than necessary to attract and maintain capital. This was the objective of my analysis. In developing the cost of capital of Laclede, I reviewed the capital structure and the cost of debt reported by

the Company and analyzed the cost of common equity for a group of comparable local gas distribution companies ("LDCs") as well as the Laclede Group. I especially noted the financial impacts of the current recession and the recent and current market conditions on the cost of capital of the companies that I studied.

Q. ARE YOU SPONSORING ANY EXHIBITS WITH YOUR TESTIMONY?

A. Yes. I am sponsoring Exhibits ___(DAM-1) through ___(DAM-24), which are attached to my testimony.

Q. WERE THESE EXHIBITS PREPARED BY YOU OR UNDER YOUR DIRECT SUPERVISION?

A. Yes.

III. UTILITY REGULATION

Q. DID REGULATORY POLICIES INFLUENCE YOUR ANALYSIS OF THE COST OF CAPITAL OF LACLEDE?

A. Yes. Throughout my analysis of the cost of capital of Laclede I considered the effect of regulatory policies and the influence of current markets on regulated utilities.

Q. HOW HAVE REGULATORY POLICIES AFFECTED YOUR ANALYSIS AND RECOMMENDATION OF THE COST OF CAPITAL IN THIS PROCEEDING?

A. Most importantly, I based my analysis on prevailing regulatory policies regarding the natural gas distribution industry. Economies of scale at the distribution level of utility service indicate that duplicative facilities can be economically inefficient. From an economic perspective, this is the

principal rationale for utility regulation.

Q. HOW DID THIS ECONOMIC RATIONALE FOR UTILITY REGULATION AFFECT YOUR ANALYSIS AND ULTIMATE RECOMMENDATIONS CONCERNING THE ALLOWED RETURN FOR LACLEDE IN THIS PROCEEDING?

A. As I stated previously, the utility market structure and the associated economic rationale imply that an allowed return for Laclede should be sufficient to recover its costs of providing service, and at the same time this return should not be higher than necessary to attract and maintain capital. I also believe that determining and recommending this return is consistent with my understanding of the legal standard of a fair rate of return in regulation.

Q. CAN YOU EXPLAIN WHAT YOU MEAN BY YOUR UNDERSTANDING OF THE LEGAL STANDARD AND THE TERM A "FAIR RATE OF RETURN?"

A. I used the term "fair rate of return," to describe a return that meets the standards set by the United States Supreme Court decisions in *Bluefield Water Works and Improvement Company vs. Public Service Commission*, 262 U.S. 679 (1923), and *Federal Power Commission vs. Hope Natural Gas Company*, 320 U.S. 591 (1944). My understanding of these decisions, as an economist, is that they characterize a "fair rate of return" as one that provides earnings to investors similar to returns on alternative investments in companies of equivalent risk. That is another way of saying that the return must be sufficient to attract and maintain capital. In addition to attracting capital, such a return will be sufficient to enable the company to

compensate investors for assumed risk and to operate successfully and maintain its financial integrity.

IV. CURRENT MARKET CONDITIONS

Q. YOU MENTIONED THAT YOU EXAMINED CURRENT MARKET CONDITIONS AND THE CURRENT INFLUENCES ON THE FINANCIAL MARKETS. WHAT FACTORS DID YOU CONSIDER IMPORTANT AS YOU EVALUATED THE COST OF CAPITAL OF LACLEDE IN THIS PROCEEDING?

A. The recession has been the deepest in many years and unemployment levels continue to grow, but the U.S. economy has shown signs of recovery in the third quarter of 2009. The federal stimulus policies, including the $787 billion American Recovery and Reinvestment Act (ARRA) of February 2009, are surely accounting for some of this response. For example, real GDP increased 3.6 percent in the third quarter of 2009 as compared to steady declines over the past year. The consensus forecast for Real GDP is a modest growth rate of approximately a 2.7 percent rate through the third quarter of 2010. (See the GDP declines and consensus forecast in Schedule DAM-1.)

Approximately 40 percent of consumer spending in the third quarter was directly related to vehicle sales, but this was largely because of the federal government's "cash for clunkers" stimulus program. Restocking auto inventories led to increases in auto and parts production as well as increased steel production in the third quarter, but consensus forecasts are for flat spending for the fourth quarter of 2009. Home sales also increased in the third quarter supported by the federal government's

tax-credit for first-time homebuyers; however, substantial foreclosures and short-sales continue to keep a lid on home prices.

Unemployment increased to 10.2 percent in October 2009, the highest level in 26 years, and wages were 5.2 percent lower than from a year earlier. Consumers, with relatively high debt loads, depreciating home values, and high unemployment, are not likely to be a major near-term contributor to a recovery.

Q, WITH THE FEDERAL STIMULUS POLICIES, WHAT ARE ANALYSTS' EXPECTATIONS REGARDING LEVELS OF INFLATION?

A. Although in the near-term most analysts expect consumer prices to remain subdued, the policies to stimulate economic recovery and the associated increasing federal deficit and financial liquidity threaten longer-term inflation. Despite the low level of economic activity and high unemployment, commodity prices have been rising. Crude oil rose above $80 per barrel on November 18, 2009, up from an average price of $69.47 in September 2009. Increasing commodity prices and record gold and silver prices are indications of investors' anticipations of increasing inflation. Concerns that the Federal Reserve will not be able to timely drain excess reserves resulting from stimulative policies are surely contributing to inflation fears.

Q. HOW HAS THE ECONOMIC SITUATION AFFECTED MARKET INTEREST RATES THAT ARE RELEVANT TO THIS PROCEEDING?

A. As shown on Schedule DAM-2, the U. S. Treasury Bill rate, which was only 0.4 percent one year ago, was forced to virtually zero by the Federal Reserve policies to stimulate liquidity in the capital markets. However, more significant for this analysis of the cost of capital of Laclede, the 30-year Treasury rate actually increased slightly over this same period. These bond rates are a better indication of the cost of permanent capital of regulated utilities than the short-term rates.

Q. WITH THE RECENT MONETARY AND FISCAL POLICIES AND THE UNCERTAINTY SURROUNDING ECONOMIC RECOVERY, WHAT ARE REPUTABLE FORECASTERS PREDICTING FOR THE FORECASTED LEVELS OF BOND INTEREST RATES?

A. In general, analysts expect that the Federal Reserve will increase its target rate by 100 basis points by the end of 2010. Also, the Blue Chip Financial Forecasts, which represent consensus forecasts of many analysts, projects a steady increase of about three-quarters of a percent for U. S. Treasury 10-year and 30-year bonds. I have illustrated this steady projected growth in Schedule DAM-3. Although one cannot directly discern the reasons for this forecasted growth in long-term interest rates despite the liberal Federal Reserve policies, the issuance of federal debt instruments is likely to create an overhang in the financial markets that will drive up the cost of these securities. The analysts also are forecasting increases in corporate rates. The *Blue Chip* forecasts show the Baa-corporate rate to increasing to 7.0 percent in 2010.

Perhaps more relevant background information regarding the cost of permanent capital of utilities, is *Value Line* which provides a longer-

term forecast for the 2010-12 period. I have shown this continued forecasted growth in interest rates in Schedule DAM-4. *Value Line* is predicting a growth of 10-year Treasuries of 1.5 percent and AAA corporate bonds of 1.2 percent over that period. Notably, as this schedule also shows, *Value Line* predicts that by 2010-12 the corporate high quality long-term rates will be more than a full percentage point higher than they have been at any time in the past five years. This shows increases in both short-term and long-term rates out to that period.

Q. CAN YOU SUMMARIZE HOW THE ECONOMIC ENVIRONMENT IS IMPORTANT TO YOUR RECOMMENDATION IN THIS PROCEEDING?

A. As an important background for my analysis, the rates set in this proceeding will be in effect during a period of rising interest rates. At present, most analysts expect inflation pressures to remain subdued, but in the longer-term, the stimulus policies present an inflationary threat, and rising inflation and interest rates together threaten to erode utility earnings. This would increase the cost of a utility's debt and equity.

V. METHODOLOGY

Q. CAN YOU OUTLINE THE STEPS THAT YOU FOLLOWED IN YOUR ANALYSIS?

A. As noted previously, I studied the current economic environment to provide a perspective for my analysis. I noted the importance of the analysts' expectations of rising inflation and commodity prices. I reviewed published financial information for Laclede and a group of comparable local gas distribution systems. Because Laclede Gas is a financial

component of the Laclede Group, I used the financial information for the comparable companies as a proxy for the Company at key points in my analysis. I also reviewed measures of financial and business risks of these same companies. I especially noted the current return on common stock equity earned by the comparable companies and Laclede.

In my market-derived analysis of the cost of common stock of the LDCs, I used the commonly accepted Discounted Cash Flow and Capital Asset Pricing Model methods. I applied these methods similarly to the common stock equities of the comparable companies, as well as Laclede.

Finally, as a test of financial integrity of my recommended allowed return I evaluated my prospective recommended return on common stock by comparing the After-Tax Interest Coverage ratio at that return for Laclede with similar coverages for the comparable LDCs.

Q. YOU SAID YOU USED A GROUP OF COMPARABLE LDCS TO LACLEDE IN YOUR ANALYSIS. HOW DID YOU SELECT THOSE PROXY LDCS?

A. I selected a group of comparable publicly traded LDCs. For this selection I reviewed the- gas distribution companies reported on by *Value Line*. Because size may be an important determinant of the cost of capital of a utility, I chose a group of distribution companies with market capitalizations of less than $2.0 billion. I wanted to identify LDCs that were financially healthy and useful proxies for determining the current cost of capital for such companies, so I chose only companies that currently pay common stock dividends.

Q. WHAT FINANCIAL DATA DID YOU RELY ON IN YOUR

ANALYSIS OF THE COST OF CAPITAL OF LACLEDE?

A. Of course, I inspected other data sources, but in order to use data that were reported as comparable, I relied extensively on the publicly available data published by *Value Line. Value Line* is a respected financial information source. It is readily available to investors and often found in libraries, so it is a source that is likely to influence investors' decisions. A second important consideration for selecting *Value Line* is that it is independent from the investment community. *Value Line* does not underwrite securities. It sells the data that it reports commercially and depends on the investment community's confidence in its data. On occasion, critics have justifiably condemned organizations that publish financial data while benefiting directly from a relationship with the company under review. *Value Line* does not have this conflict of interest.

Q. WHAT LDCS DID YOU SELECT FOR THE PROXY COMPANIES IN YOUR ANALYSIS OF LACLEDE?

A. The seven LDCs that are similar to Laclede are New Jersey Resources, Nicor, Inc., Northwest Natural Gas, Piedmont Natural Gas, South Jersey Industries, Southwest Gas and WGL Holdings.

VI. CAPITAL STRUCTURE

Q. WHAT WAS THE CAPITAL STRUCTURE THAT YOU CONSIDERED APPROPRIATE FOR LACLEDE IN THIS PROCEEDING?

A. Laclede has reported a permanent capital structure as of September 30, 2009 that is appropriated for estimating the cost of capital in this proceeding. This capital structure consists of long-term debt of $382,666

thousand or 42.5 percent. The common equity component of Laclede that is appropriate for this proceeding is $517,145 thousand, or 57.5 percent. The Company has no short-term debt in its permanent capital structure. I have shown this capital structure in Schedule DAM-5.

Q. DID YOU COMPARE THIS CAPITAL STRUCTURE OF LACLEDE WITH THE CAPITAL STRUCTURES OF THE LDCS THAT YOU DETERMINED WERE COMPARABLE TO LACLEDE?

A. Yes. I compared the common equity ratio of Laclede for ratemaking with current and forecasted common equity ratios of the comparable LDCs. As I have demonstrated in Schedule DAM-6, the common equity ratio of Laclede for ratemaking is similar to the 58.1 percent average in 2009 and the projected 58.6 percent average in 2010 for the comparable LDCs. As further verification that the common equity for Laclede in this proceeding is reasonable, even conservative, for ratemaking, *Value Line* has estimated that the average common equity ratio for the comparable LDCs will be 60.8 percent in the 2012-14 period.

Q. YOU MENTIONED THAT LACLEDE DOES NOT HAVE ANY SHORT-TERM DEBT IN ITS PERMANENT CAPITAL STRUCTURE. FROM YOUR EXPERIENCE, IS THAT A COMMON PRACTICE FOR LDCS?

A. Typically, LDCs finance the purchase of natural gas and other operating expenses with short-term debt. Because the acquisition and sale of natural gas supplies are seasonal, it is not unusual for an LDC's short-term debt balances to be large at the beginning of the heating season and virtually

depleted at its end. This variability, often falling to zero, confirms that short-term debt is not part of the LDC's permanent capital and cannot be considered a source of financing that supports long-term assets providing utility services.

Q. WHAT IS LACLEDE'S COST OF LONG-TERM DEBT?

A. The embedded weighted average cost of Laclede Group's long-term debt that is appropriate for this proceeding is 6.53 percent.

VII. FINANCIAL RISK

Q. YOU SAID YOU CONSIDERED "FINANCIAL RISKS." WHAT DO YOU MEAN BY THE TERM "FINANCIAL RISK"?

A. Financial risk is the risk to a company's common stockholders resulting from its use of financial leverage. This risk results from using fixed income securities, or debt, to finance the company. Any return to common stockholders is a residual return, and it is available to common stock only after a company pays its debt-holders. This means the return on common stock is less certain than the contracted return to debt-holders.

Q. CAN YOU IDENTIFY A MEASURE OF FINANCIAL RISK?

A. A common measure of financial risk is the common stock equity ratio. The lower the common equity ratio, the greater the relative prior obligation owed to debt holders and the greater the risk faced by common stockholders. On the basis of this basic comparison, Laclede's financial risk exposure appears consistent with the financial risks of the comparable LDCs.

Q. HAVE YOU IDENTIFIED ANY OTHER MEASURES OF FINANCIAL RISK THAT MIGHT BE IMPORTANT IN ANALYZING LACLEDE'S COST OF CAPITAL?

A. Yes. I reviewed some published measures that include recognition of the level of financial risk. These were *Value Line*'s "Financial Strength" and Standard & Poor's ("S&P's") "Bond Ratings." *Value Line*'s "Financial Strength" ranking places the Laclede Group toward the bottom of the comparable group. That is, *Value Line* ranks the Laclede Group a "B+", while it ranks four of the seven comparable LDCs as "A" and two of the group as a "B++". By this measure Southwest Gas has a *Value Line* Financial Strength measure of "B", which is exceptionally low for an LDC. Standard & Poor's bond rating for the Laclede Group of "A" places it in the middle of the group of comparable companies. S&P's bond rating for three of the comparable LDCs is AA- or AA. I have illustrated the comparisons of these in Schedule DAM-7.

VIII. BUSINESS RISK

Q. YOU SAID YOU INVESTIGATED THE "BUSINESS RISK" OF LACLEDE DURING YOUR ANALYSIS. HOW DO YOU DEFINE "BUSINESS RISK?"

A. Business risk to the common stockholders is the exposure of their returns to adverse consequences of business operations. For example, in several respects, the current recession is a risk to common stockholders.

Q. CAN YOU EXPLAIN HOW THE RECESSION MAY BE PERCEIVED BY COMMON EQUITY INVESTORS AS A RISK?

A. One obvious direct impact of the recession is the decline in industrial sales

as result of the broad recession. Common equity investors would be aware of the uncertainty of the timing, shape and speed of the economic recovery. To the extent that industrial customers pay a portion of the system's fixed costs in rates, a decline in sales directly impacts common equity returns. Specifically, Laclede recently lost its largest industrial customer, the Chrysler Plant in Fenton. Most investors probably consider a recovery of that load problematical. Additionally, investors would probably expect the rate of growth of sales to the residential and commercial classes to be lower for LDCs now than in more normal economic times. When sales will recover is also an uncertainty to investors. For example, the September 11, 2009 *Value Line* noted Laclede's relatively flat customer growth, "Annual customer growth for the natural gas distribution unit has been only around 1% for some time, and it appears that trend will continue."

Q. DID YOU REVIEW ANY PUBLISHED MEASURES OF BUSINESS RISK THAT PERMITTED YOU TO COMPARE LACLEDE AND THE COMPARABLE COMPANIES?

A. I reviewed two measures by *Value Line* that will undoubtedly imply some interpretation of a level of business risk, and, for that matter, regulatory risk. These measures are "Safety" and "Timeliness." The Safety ranking for the comparable companies ranges from "1" to "3," with a "1" being the highest ranking and a "5" the lowest. The Laclede Group is in the center of this group with a Safety rank of "2". For Timeliness, *Value Line* ranks the LDCs in the middle of all companies at a "3". I illustrate these rankings in Schedule DAM-8.

IX. FINANCIAL STATISTICS

Q. YOU STATED THAT YOU REVIEWED SOME FINANCIAL STATISTICS IN YOUR ANALYSIS. WHAT STATISTICS DID YOU REVIEW?

A. I reviewed key statistics that may reveal the financial health of the LDCs that I studied. Because the traded common stock is the common stock of the Laclede Group, I necessarily reviewed the statistics associated with the overall company. Although I noted the financial statistics of the Laclede Group, which required some interpretation, the data for the comparable LDCs provided an important proxy for Laclede Gas. The statistics that I reviewed were the common stock earnings, dividend histories and forecasts, dividends declared and the payout ratios and market-price earnings ratios for the comparable, proxy LDCs.

Q. WHEN YOU SAID THAT COMPARING THE FINANCIAL STATISTICS OF THE LACLEDE GROUP AND THE COMPARABLE LDCS REQUIRED SOME INTERPRETATION, WHAT DID YOU MEAN?

A. The financial community has noted recent favorable financial performance for Laclede Group, which was largely affected by the earnings of the non-regulated sector of the company. This is in contrast to the relatively less favorable financial performance of Laclede Gas. Consequently, in my analysis. I noted that the financial statistics applied primarily to the Laclede Group.

Q. WHAT DID YOUR ANALYSIS OF THE RECENT COMMON STOCK EARNINGS SHOW?

A. *Value Line* predicts that the comparable LDCs, which I have used here as a proxy for Laclede Gas, will earn an average of 11.4 percent on common equity in 2009. In reviewing the comparable 2009 earnings, I noted that the estimated return of common stock for Southwest Gas was just 7.0 percent; this low return lowered the average for the group considerably. In fact, the estimated 2009 return on common stock equity estimated by *Value Line* for the other six LDCs ranged from 11.0 percent to 13.0 percent. Notably, *Value Line* predicts an average return for the group of seven LDCs in 2010 of 11.7 percent. Again, the inordinately low estimated return for Southwest Gas lowers the average for the group. I have shown these earnings on common equity in Schedule DAM-9.

Q. ARE THE RETURNS ON COMMON STOCK THAT YOU NOTED FOR THE COMPARABLE LDCS IN 2009 AND ESTIMATED FOR 2010 SIMILAR TO RECENT AND FORECASTED RETURNS FOR THESE COMPANIES?

A. Yes. As the schedule illustrates, the returns on common equity of these LDCs has been similar over the past five years. Moreover, *Value Line* predicts that the returns will be similar through the 2012-14 period. This is a clear indication that this level of return on common equity of an LDC is a reasonable expectation of a LDC investor.

Q. WHAT DID YOUR ANALYSIS OF THE DIVIDENDS PAID OUT BY THE COMPARABLE LDCS SHOW?

A. The data that I reviewed for the comparable LDCs showed that their growth in dividends has been modest over the past five years. I have illustrated these dividend payments and growth in Schedule DAM-10.

Q. WHAT DID YOUR REVIEW OF THE DIVIDEND PAYOUTS OF THE LDCS SHOW?

A. According to *Value Line*, the current dividend payout ratios for the comparable LDCs ranges between 51 percent and 70 percent. Laclede Group's estimated dividend payout of 53 percent is toward the bottom of this range and is measurably lower than the comparable groups' average of 58.1 percent. (Schedule DAM-11).

Q. YOU STATED THAT YOU REVIEWED THE PRICE EARNINGS RATIO OF THE COMPANIES THAT YOU STUDIED. WHAT DID THIS SHOW?

A. As my Schedule DAM-12 shows, the current average price-earnings ("P/E") ratio as reported by *Value Line* for the comparable group is 14.0. With the volatility in the common equity markets over the past year, one probably should expect a distinction between current and earlier market valuations, and generally this seems to be the case. For example, the average P/E for this group of seven LDCs in 2008 was higher at 16.2.

X. COST OF COMMON STOCK

Q. CAN YOU EXPLAIN WHAT METHODS YOU USED TO ESTIMATE THE COST OF COMMON EQUITY OF LACLEDE AND THE COMPARABLE LDCS?

A. As market-based methods of the current cost of common equity, I used two common methods, the DCF and the CAPM. I used each of these methods to estimate the costs of common stock equity for the Laclede Group and for each of the comparable LDCs. For each of these two methods, I assessed their underlying assumptions and their analytical

strengths and weaknesses. Finally, I evaluated the results from these analyses in the context of current market conditions, the uncertainties regarding economic recovery and the relative business risks.

Q. CAN YOU DEFINE THE DISCOUNTED CASH FLOW, OR "DCF" METHODOLOGY FOR MEASURING THE COST OF COMMON EQUITY?

A. The following formula expresses the DCF calculation of an investor's required rate of return, as follows:

$$K = D/P + g$$

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. "D" is the current level of dividends paid to the common stock holders. "P" is the valuation of the common stock by the investors reflected by recent market prices. Consequently, the ratio "D/P" is the current dividend yield on an investment in the company's common stock. The "g" is the growth rate anticipated by the investor.

Q. WHAT ASSUMPTIONS UNDERLYING THE DCF METHOD ARE IMPORTANT WHEN ESTIMATING THE COST OF COMMON EQUITY IN PRACTICE?

A. I believe one can identify the following important underlying assumptions

associated with the basic annually compounded DCF model:

1. Investors are risk averse. That is, for a given return, investors will seek the alternative with the lowest amount of risk. In other words, the greater the risk that investors attribute to a given investment, the greater the return they require from that investment.

2. The discount rate must exceed the growth rate, *i.e.*, "K", in the stated expression, must exceed "*g*". The mathematics associated with the derivation of the basic annually compounded DCF model requires this assumption.

3. The payout and the price earnings ratios remain constant.

4. Expected cash flows consist of dividends and the future sale price of the stock. The sales price in any period will equal the present value of the dividends and the sales price expected after that period including any liquidating dividend. Consequently, the sales price in any period is equal to the present value of all expected future dividends.

5. Dividends are paid annually.

6. There is no external financing.

As noted in these assumptions, expected cash flows consist of dividends and the future sale price of common stock. Common stock earnings are the critical common denominator because earnings make paying dividends possible and retained earnings, invested in the company, provide for the future growth in stock value.

XI. STRENGTHS OF THE DCF

Q. WHAT ARE THE KEY STRENGTHS OF THE DCF METHOD THAT YOU THINK ARE IMPORTANT TO YOUR ANALYSIS?

A. The DCF method is theoretically sound, and this is its greatest strength. It relates an investor's expected return in the form of dividends and capital gains to the value that an 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. This relationship theoretically reveals the opportunity cost of investors' funds. In this way, 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. As a practical matter, the DCF is familiar to regulatory analysts who commonly use it, and participants in proceedings generally understand it.

Q. IS THIS ESTIMATE OF THE COST OF COMMON EQUITY CONSISTENT WITH THE REGULATORY OBJECTIVE OF SETTING AN ALLOWED RETURN EQUAL TO THE RETURNS OF EQUIVALENT RISK?

A. Yes. The DCF develops an estimate of the marginal cost of investing in a given utility, but this may not be sufficient to attract capital in subsequent markets. It is consistent with the principle of setting a return equal to returns of equivalent risk at the margin, but this cost of capital is not necessarily sufficient to assure that a return at this level will attract and maintain capital even in the near term.

XII. WEAKNESSES OF THE DCF

Q. WHAT WEAKNESSES OF THE DCF MAY BE IMPORTANT WHEN USED IN A RATEMAKING PROCEEDING?

A. A DCF analysis may have either conceptual or data problems or both. Conceptually, analysts may misinterpret and consequently misapply the DCF results because they do not understand the limits of the analysis. For example, a common conceptual problem is the use of historical growth rates in DCF calculations. Historical rates may not be accurate estimates of investors' expectations of the future returns. This is likely to be a problem when applying the DCF to current market data. Likewise, using dividend growth rates mechanically in a DCF formulation will be misleading if investors are purchasing and selling a stock because of anticipated changes in earnings and potential capital gains. That is, if an assumption (such as dividends being the sole source of value expectations of an investor) is not accurate, then analysts will err if they do not recognize this.

Also, as I stated previously, the DCF method calculates the marginal, or incremental, cost of common stock equity of a company. If analysts do not recognize the theoretical significance of this calculation, they may misapply the results of their calculations.

Q. FROM A PRACTICAL STANDPOINT, WHY IS THE MARGINAL COST NATURE OF THE DCF SIGNIFICANT IN A REGULATORY SETTING?

A. If a DCF-based cost of common equity, even if realistically developed, becomes the allowed return for a regulated utility, this will not provide

enough cushion so the realized return will be sufficient to attract and maintain capital. Analysts, when interpreting the results of the DCF calculations, may not recognize this. 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. DO YOU KNOW WHETHER REGULATORY COMMISSIONS HAVE RECOGNIZED THESE LIMITATIONS OF THE DCF?

A. Yes. Regulatory commissions have recognized the difficulties of relying on the raw, unadjusted DCF calculations. In one such example, a regulatory commission recognized that the assumptions underlying the DCF model rarely, if ever, hold true.[1] 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."[2]

Q. IN ADDITION TO AN ADJUSTMENT BASED ON "EXPERT" JUDGMENT, IN YOUR EXPERIENCE, ARE YOU AWARE OF ANY ATTEMPTS BY REGULATORS AND ANALYSTS TO COMPENSATE FOR THE MARGINAL COST NATURE OF THE DCF?

A. Yes. Both regulators and analysts have often applied compensating adjustments for the marginal cost nature of the DCF method, and they do so in a variety of ways. Although these various adjustments may differ greatly in their approaches, each addresses the inadequacy of the DCF's

[1] 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.

marginal cost estimates of the cost of capital in some manner. 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. WHAT IS A FLOTATION ADJUSTMENT?

A. It is a calculation adjustment applied to the DCF to compensate for costs associated with the issuance of new securities.

Q. WHY DO ANALYSTS USE A FLOTATION ADJUSTMENT AS ONE WAY OF ADDRESSING THE MARGINAL COST NATURE OF THE DCF?

A. Analysts apply a flotation adjustment because the market-based DCF estimate of the cost of capital does not account for the costs of issuing common stock. That is, the market-based DCF does not incorporate the unavoidable costs incurred when issuing securities, such as legal fees, investment banker fees and the publication costs of a prospectus. The flotation adjustment attempts to raise the market-measured cost of capital, which is the return required to attract the marginal investor, to the same level as the true cost of capital of the utility.

Q. WHAT IS A "MARKET PRESSURE" ADJUSTMENT?

A. A market pressure adjustment is compensation for the impact of a common stock issuance on the prices of that common stock. Analysts apply this adjustment because the DCF measured cost of common stock cannot account for the prospective price impact of additional, newly issued shares. This is another instance when the marginal cost of common

[2] Ibid, *In re Indiana Michigan Power Company,* 116 PUR4th 1, 17 (Ind. 1990).

stock measured prior to this issuance will fail to capture the true cost of capital necessary to attract investors.

Q. WHY WOULD AN ADJUSTMENT TO THE COST OF EQUITY TO REFLECT MARKET VALUES FOR DEBT AND EQUITY BE APPROPRIATE?

A. Regulatory convention dictates that an analyst should use the book values of securities when establishing the capital structure of a utility for ratemaking. However, some analysts adjust the cost of equity for ratemaking to compensate for the difference between market value and book value. Of course, investors must measure the marginal cost returns against the market values of their investment. Some analysts recognize the difference between market valuation and book valuation of common stock to recognize the marginal cost nature of the DCF method.

Q. DID YOU APPLY ANY OF THESE ADJUSTMENTS TO THE BASIC DCF CALCULATIONS OF THE COST OF COMMON EQUITY?

A. No, I did not. I do not believe that applying a mechanical adjustment to the DCF calculation is necessary if one is cognizant of the theoretical underpinnings of the method and takes this into account. For example, I believe that recognizing the higher end of the DCF results is usually an adequate compensation for the marginal cost nature of the DCF and the objective of setting an allowed return in a rate proceeding.

XIII. DATA USED IN DCF ANALYSIS

Q. YOU DEFINED THE VARIABLES USED IN THE DCF ANALYSIS. WHAT GROWTH RATE DATA DID YOU USE IN YOUR DCF

ANALYSIS?

A. I reviewed both dividend and earnings growth estimates as measures in my DCF analysis, but I concentrated on the broader measure of earnings per share growth. Forecasts of common stock earnings capture investors' expectations about future returns, and these are the expectations that affect their decisions to invest. The financial academic literature is replete with findings that analysts' forecasts are superior to historical performance for determining expected growth.

Q. YOU MENTIONED FINDINGS IN THE ACADEMIC LITERATURE. HAVE ANALYSTS PERFORMED STUDIES REGARDING WHICH DATA USED IN A DCF ANALYSIS ARE MOST LIKELY TO CAPTURE INVESTORS' EXPECTATIONS ABOUT FUTURE RETURNS?

A. Yes. As early as 1982, academic studies showed that analysts' forecasts were superior to historical, trended growth rates for DCF analyses.

Q. PLEASE EXPLAIN SOME OF THOSE STUDIES.

A. A number of authors have addressed the merits of analysts' forecasts in a DCF analysis of the cost of capital. For example, a well-known financial textbook by Brigham and Gapenski explains why 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.[3]

Research reported in the academic literature supports this position. For example, Gordon, Gordon and Gould found:

> … the superior performance by KFRG (forecasts of growth by security analysts) should come as no surprise. All four estimates of growth rely upon past data, but in the case of KFRG a larger body of past data is used, filtered through a group of security analysts who adjust for abnormalities that are not considered relevant for future growth.[4]

Q. ARE YOU FAMILIAR WITH ACADEMIC ARTICLES THAT APPLY SPECIFICALLY TO THE DCF GROWTH RATES USED IN REGULATORY PROCEEDINGS?

A. Yes. Timme and Eisemann examined the effectiveness of using analysts' forecasts rather than historical growth rates for determining investors' expectations in rate proceedings. 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.[5]

Q. DO YOU FIND THESE STATEMENTS BY THESE AUTHORS CREDIBLE?

A. Yes. These results are not surprising because investors, when contemplating an investment in a common stock, very frequently review

[3] 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.

[4] Gordon, David A., Myron J. Gordon, and Lawrence I. Gould, "Choice among methods of estimating share yield," *Journal of Portfolio Management;* Spring 1989, Volume 15, Number 3, pages 50-55.

reputable analysts' forecasts. Such information, available to them at the time they contemplate investing, will influence their decision to invest.

Q. WHAT DID YOUR REVIEW OF THE GROWTH RATES OF COMMON STOCK EARNINGS AND DIVIDEND HISTORIES SHOW?

A. Historically, the dividend growth rates for the comparable LDCs are lower than the earnings per share growth rates. This is indicative of conservative dividend policies of these companies, as earnings must be sufficient to support the dividend policies of the companies over time. This is not surprising given the recent volatile financial markets. I have shown these dividend and earnings per share growth rates in Schedule DAM-13. In the industry generally, the relatively stable dividend growth rates, as compared to common stock earnings, have been observable for many utilities for a number of years. One can determine that this differential reflects a consistent, relatively conservative dividend policy.

Q. WHAT WAS THE SOURCE OF THE COMMON STOCK PRICE DATA THAT YOU USED IN YOUR DCF ANALYSIS?

A. I used *YAHOO! Finance* as the source of market price information. I obtained current prices for a recent two-week period and the high and low share prices for a 52-week period. *YAHOO! Finance* is a widely-used internet portal that provides electronic financial information including daily prices. In my analysis, I used current market prices to reflect current market values and conditions. I used the longer time period in order to

[5] 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,

recognize the changing market conditions over time and to provide a longer-term, less volatile cost of capital perspective.

XIV. DCF CALCULATIONS

Q. WHAT WERE THE RESULTS OF YOUR DCF CALCULATIONS?

A. In one of my DCF calculations, for a longer-term perspective of the cost of common equity and to smooth the effects of the market volatility, I combined the historical and forecasted dividend growth rates and related this to the common stock prices for the past year. I also used the longer-term dividend growth rates and related them to market prices from a recent two-week period. I have illustrated these results in Schedules DAM-14 and DAM-15. As a measure of the volatility and unreliability of this dividend-based DCF calculation in current and recent markets, the Laclede Group DCF results from this measure are similar to the Baa utility bond rate discussed previously. For this reason, these are not relevant measures of the cost of capital for an LDC in current markets. The average DCF calculations for the comparable LDCs are slightly more credible, but they also have an insufficient differential with the lower risk corporate bond rate to be a credible measure of the cost of common equity in current markets. I also studied DCF results that used combined historical and forecasted earnings per share growth rates and forecasted growth rates.

Q. WHAT WERE THE RESULTS OF YOUR ANALYSIS USING EARNINGS PER SHARE GROWTH RATES?

A. Again, I took a longer-term view of the earnings per share growth, by

---

pp. 23-35.

combining the historical and forecasted earnings per share growth rates, and I related these earnings per share growth rates to both current and longer-term prices. These DCF results are more credible measures of the cost of common equity of LDCs in the current markets, although they are still lower than the recent realized returns on common equity noted previously. For example, the Laclede Group has a recent-price DCF result by this method of 10.53 percent to 10.66 percent. The average for the seven LDCs ranged between 9.67 and 9.76 percent. I have illustrated the DCF results with this relatively stable growth rate measure and recent and longer term prices in Schedules DAM-16 and DAM-17.

Q. WHAT WERE THE RESULTS OF YOUR DCF ANALYSIS USING FORECASTED EARNINGS PER SHARE GROWTH RATES?

A. The DCF results for the comparable LDCs using the longer price series ranged between 8.15 and 11.23 percent and at recent market prices, between 8.76 percent and 10.32 percent. Again, the lower ranges of DCF results, which are clearly a result of the market volatility in recent months, are rather similar to the cost of Baa corporate bonds. The higher returns may be more representative of the costs of common equity. I have shown these results in Schedules DAM-18 and DAM-19

XV. CAPITAL ASSET PRICING MODEL

Q. CAN YOU EXPLAIN THE CAPITAL ASSET PRICING MODEL THAT YOU USED IN YOUR ANALYSIS?

A. The CAPM is a risk premium method. It measures the cost of capital based on an investor's ability to diversify by combining securities of various risks into an investment portfolio, and 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 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

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.

XVI. STRENGTHS OF THE CAPM

Q. WHAT ARE THE NOTABLE STRENGTHS OF THE CAPM METHOD?

A. The CAPM provides a longer-term perspective of capital costs than the more market sensitive DCF, which is especially sensitive to market price volatility. The CAPM relates current debt costs to the cost of common stock by linking the incremental cost of capital of an individual company with the risk differential between that company and the market as a whole. In more normal times, the CAPM can be a stable measure; however,

Federal Reserve actions dominate the current valuations of debt instruments. I have used the CAPM as a benchmark of the cost of common stock of the companies that I analyzed, taking into account the activities of the Federal Reserve and U. S. Treasury. The CAPM, by its nature, will also typically produce relatively similar results for companies in the same industry.

XVII. WEAKNESSES OF THE CAPM

Q. DOES THE CAPM HAVE PROBLEMS THAT MAY BE IMPORTANT WHEN APPLYING IT IN A RATEMAKING PROCEEDING?

A. In current markets with rates directly influenced by federal policies, the CAPM results will be determined by the "risk free" benchmark rate used in the risk premium analysis. That is, when short-term rates are set near zero by federal policy, a CAPM analysis using that rate in the calculation will produce inordinately low results. These results will be more a function of current policy than of current market-determined valuations. Also, conceptually, the CAPM method is very sensitive to a company's beta. The beta is a single-dimension, market-volatility-over-time, measure of risk. For this reason, the CAPM cannot account for any risks not included as measures of market volatility. In this case, it will not identify significant market risks to investors. Mechanically, it may also understate or overstate the cost of capital. Most utilities have betas less than one, and a number of analysts have shown that the CAPM underestimates the cost of capital of companies with betas less than one. Finally, the academic literature has shown that the standard CAPM underestimates the cost of

capital of smaller companies, like Laclede, and this underestimation of capital costs may require an adjustment.

Q. CAN YOU CITE SOURCES IN THE ACADEMIC LITERATURE THAT RECOGNIZE THAT THE CAPM METHOD UNDERESTIMATES THE COST OF CAPITAL OF SMALLER COMPANIES?

A. Yes. For at least two decades, various authors have reached this conclusion, and together they reveal the empirical consistency of this finding. For example, R. W. Banz[6] and M. R. Reinganum[7] in the 1980's are good references which point out the size bias in the CAPM. 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 which 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 associated with smaller companies; 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 the expected return of investors.[8]

Q. WHAT DID YOU MEAN WHEN YOU SAID THAT THE CAPM

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

[7] 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.

[8] 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.

METHOD REQUIRES A SIZE ADJUSTMENT?

A. Although repeated studies showed that the CAPM method possesses a bias that understates the expected returns of small companies, for several years, this remained an empirical observation without a clear remedy. However, Ibbotson Associates developed an adjustment for this bias. Ibbotson clarified the size bias in the CAPM 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. [9]

Q. ARE YOU CERTAIN THAT AN ANALYST SHOULD APPLY THE CAPM SIZE PREMIUM WHEN ESTIMATING THE COST OF COMMON EQUITY OF A REGULATED UTILITY?

A. Yes. In fact, Ibbotson Associates used an electric utility as an example to illustrate how to apply the size premium when developing a CAPM. I have included a page from that publication that shows this illustration as my Schedule DAM-20.

Q. ARE YOU AWARE OF REGULATORY COMMISSIONS THAT HAVE ACCEPTED THIS SIZE ADJUSTMENT TO THE CAPM IN A UTILITY'S RATE PROCEEDING?

A. Of course, although I am not aware of all instances in which regulatory commissions have accepted the CAPM size adjustment. In addition to the instances when I have recognized the appropriateness of the size

---

[9] Chapter 7: Firm Size and Return, "Ibbotson Associates Stocks, Bonds, Bills, and Inflation: 2008 Yearbook Valuation Edition," edited by James Harrington, p. 129.

adjustment in cases where I participated, I am aware of some other instances where I was not a participant. For example, I believe that the size adjustment was introduced and accepted in an Interstate Power and Light Company case before the Minnesota Public Utilities Commission, Rulemaking Proceeding 00061398 before the Pennsylvania Public Utilities Commission, and Cause No. 40382 before the Indiana Utility Regulatory Commission.

XVIII. CAPM METHODOLOGY

Q. PLEASE EXPLAIN THE CAPM METHODOLOGY YOU USED IN YOUR ANALYSIS.

A. I applied two different, but complementary, approaches to estimate a CAPM cost of capital. One of these methods examines the historical risk premium of common stock over high grade corporate bonds. In this analysis, I used the long-term Aaa corporate bond rates as reported by the Federal Reserve and an arithmetic mean of the returns on Ibbotson small and large company stocks to estimate historical market returns. From this relationship, I calculated the differential as the historical market risk premium. The other method integrates the risk premium of common stocks to long-term government bonds in recent markets. The "risk free rate" is the current yield on 20-year Treasury bonds as reported by the Federal Reserve. The betas in both analyses are as reported by *Value Line*.

Q. ONE OF THE CAPM METHODS THAT YOU DEVELOPED USED HIGH GRADE GOVERNMENT BONDS AS REPRESENTATIVE OF THE MARKET RATES. WHY DID YOU USE THIS METHOD?

A. The Federal Reserve uses short-term Treasuries as a monetary policy

vehicle. The Feds market actions driving these rates to nearly zero preclude an accurate, unbiased measurement of market valuations. Even the longer-term government securities have been impacted directly by the "flight-to-quality" in the current volatile markets. Corporate bonds are a step removed from these direct federal policy influences and somewhat more representative of market-measured, benchmark measures for a risk premium analysis.

Q. HOW DID YOU CALCULATE THE ESTIMATED COST OF COMMON EQUITY USING THE MORE TRADITIONAL CAPM METHOD?

A. In this more traditional method, I used the risk premium of common stocks and the "risk free rate" of 20-year Treasury bonds in current markets as reported by the Federal Reserve. I used the company betas reported by *Value Line* to calculate the "Adjusted Equity Risk Premium". As this method requires an adjustment for the size bias that I described earlier, I applied the appropriate adjustment recommended by Ibbotson and Associates. The sum of these results is the estimated cost of common equity for the comparable LDCs. Using this method produced an average CAPM result of only 10.22 percent for the comparable LDC group. Clearly, this result is dominated by the very low current Treasury rate of 4.16 percent. I have illustrated these results in Schedule DAM-21.

Q. HOW DID YOU CALCULATE THE ESTIMATED COST OF COMMON EQUITY USING A CORPORATE RATE AS THE BENCHMARK RATE IN THE CAPM RISK PREMIUM ANALYSIS?

A. The second CAPM method is a method based on the relationship between corporate interest rates and market equities and is a more reliable estimate of the cost of common equities in the current markets. Also, it does not require a separate recognition of the size bias because it embodies the historical relationship between common equity and debt costs. In this analysis, I used the long-term Aaa corporate bond rates as reported by the Federal Reserve and an arithmetic mean of the returns on Ibbotson Associates' small and large company stocks to estimate the historical market returns. From this relationship, I calculated the differential as the historical market risk premium. Again, I used the betas for the respective companies as reported by *Value Line* to estimate the "Adjusted Risk Premium". Applying this method, the average CAPM estimate for the comparable LDCs was 10.36 percent. I show these results in Schedule DAM-22.

XIX. RECOMMENDED RETURN

Q. HOW DID YOU DETERMINE A RECOMMENDED ALLOWED RETURN ON COMMON STOCK FOR LACLEDE GAS?

A. As a background for my determining the allowed return on common equity for Laclede Gas, I noted that, despite the continuing recession, high levels of unemployment and federal policies to stimulate the economy, the financial markets were tending toward increasing long-term interest rates. This is a criterion for setting the cost of permanent capital of a utility in the current market. Additionally, the markets are showing fears of inflation, and this is an impending risk to common equity investors. With the continued volatile equities markets, not surprisingly, the market-based,

estimated cost of capital for the proxy LDC group varied considerably.

The most relevant DCF calculations are 10.67 percent and 11.23 percent, which were the result of calculations based on the projected earnings growth for the comparable LDCs. Because of Federal Reserve policies driving the benchmark short-term rates to nearly zero, the more traditional, single risk dimension CAPM does not produce a relevant measure of the risk premium for a common equity. A CAPM measuring a risk premium based on corporate bond rates, which produced a 10.36 percent is a more reliable indicator of current capital costs, but this single dimensional measure still does not account for the current market risks. I noted that *Value Line* has estimated an average actual return on common stock of the comparable LDCs of 11.4 percent for 2009 and 11.7 percent for 2010.

Q. WHAT IS YOUR RECOMMENDED RETURN ON COMMON EQUITY FOR LACLEDE IN THIS PROCEEDING?

A. Because the DCF results generally ranged from around 10.5 percent to 11.0 percent, I believe that a 10.5 percent return would be the minimum, reasonable allowed return on equity for Laclede were the Commission to rely primarily, or only, on the results produced by this method. I believe it is critical, however, for the Commission to take into account the uncertainties of the current economic environment and volatile financial markets, by authorizing a return for Laclede which encompasses the actual current market returns and the relevant market-based return estimates for the comparable LDCs. Based on this consideration, I am recommending an allowed return for Laclede in this proceeding in the range of 10.75

percent to 11.50 percent.

Q. GIVEN YOUR RECOMMENDED ALLOWED RETURN ON COMMON EQUITY, WHAT IS THE TOTAL COST OF CAPITAL THAT YOU ARE RECOMMENDING FOR LACLEDE GAS IN THIS PROCEEDING?

A. With Laclede's capital structure and cost of long-term debt, I am recommending a total cost of capital in the range of 8.96 percent to 9.39 percent. I have illustrated the calculation of this total cost of capital in Schedule DAM-23.

XX. FINANCIAL INTEGRITY TEST

Q. YOU SAID YOU TESTED YOUR RECOMMENDED RETURN TO VERIFY ITS ADEQUACY AND APPROPRIATENESS FOR LACLEDE. WHAT WAS THE NATURE OF THIS TEST?

A. I used the After-Tax Interest Coverage ratios for the comparable LDCs as a standard to determine if my recommended allowed return for Laclede Gas is reasonable. For example, as I have illustrated in Schedule DAM-24, at the low end of my recommended allowed return on common equity to the current After-Tax Interest Coverage ratio for Laclede is 3.22 times. For comparison, this estimated After-Tax Interest Coverage for the Laclede is well within the ranges of the coverages for the comparable LDCs. Since this is a measure of a company's ability to meet fixed interest obligations and a quick test of the financial integrity of my recommended allowed return, I determined that my recommended allowed return is appropriate.

XXI. SUMMARY

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. First, I studied the implications of the current economic recession and its impact on interest rates and risks to investors. I noted that analysts are anticipating that interest rates, which influence the cost of permanent capital of a utility, will increase. I also noted that the markets are currently demonstrating anticipated increases in inflation rates, and this is an added risk to equity investors. I then determined the appropriate capital structure and the cost of debt for this proceeding.

Because Laclede Gas is not publicly traded, I relied on the relevant financial and market information and current levels of returns of a proxy group of LDCs. I also developed two market-based measures of common stock, namely the Discounted Cash Flow and Capital Asset Pricing Models, to the group of proxy companies for my market analysis of the costs of common equity for Laclede. Although the volatile financial markets have produced some unreliable market-based rates, the earnings growth DCF and the corporate benchmark CAPM results, with interpretation, are indicative of current market conditions. The DCF results generally ranged from around 10.5 percent to 11.0 percent. As an important measure of current market returns, the average return on common stock for the comparable LDCs as measured by *Value Line* is 11.4 in 2009 and 11.7 percent estimated for 2010.

Taking into account this market information and recognizing the market volatility, inflationary pressures, and rising long-term corporate interest rates, I am recommending an allowed return on common equity in

the range of 10.75 to 11.50 percent for Laclede. Laclede's capital structure and cost of long-term debt produces a return on total capital in the range of 8.96 percent to 9.39 percent for Laclede. As verification that this recommended return is sufficient, but not excessive, I compared the After-Tax Interest Coverage for Laclede with the coverage for the comparable LDCs. At the low end of the range of my recommended allowed return, the After-Tax Interest Coverage for Laclede Gas will be 3.22 times which is representative of similar coverages for LDCs in the current markets.

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-2010-_____

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.

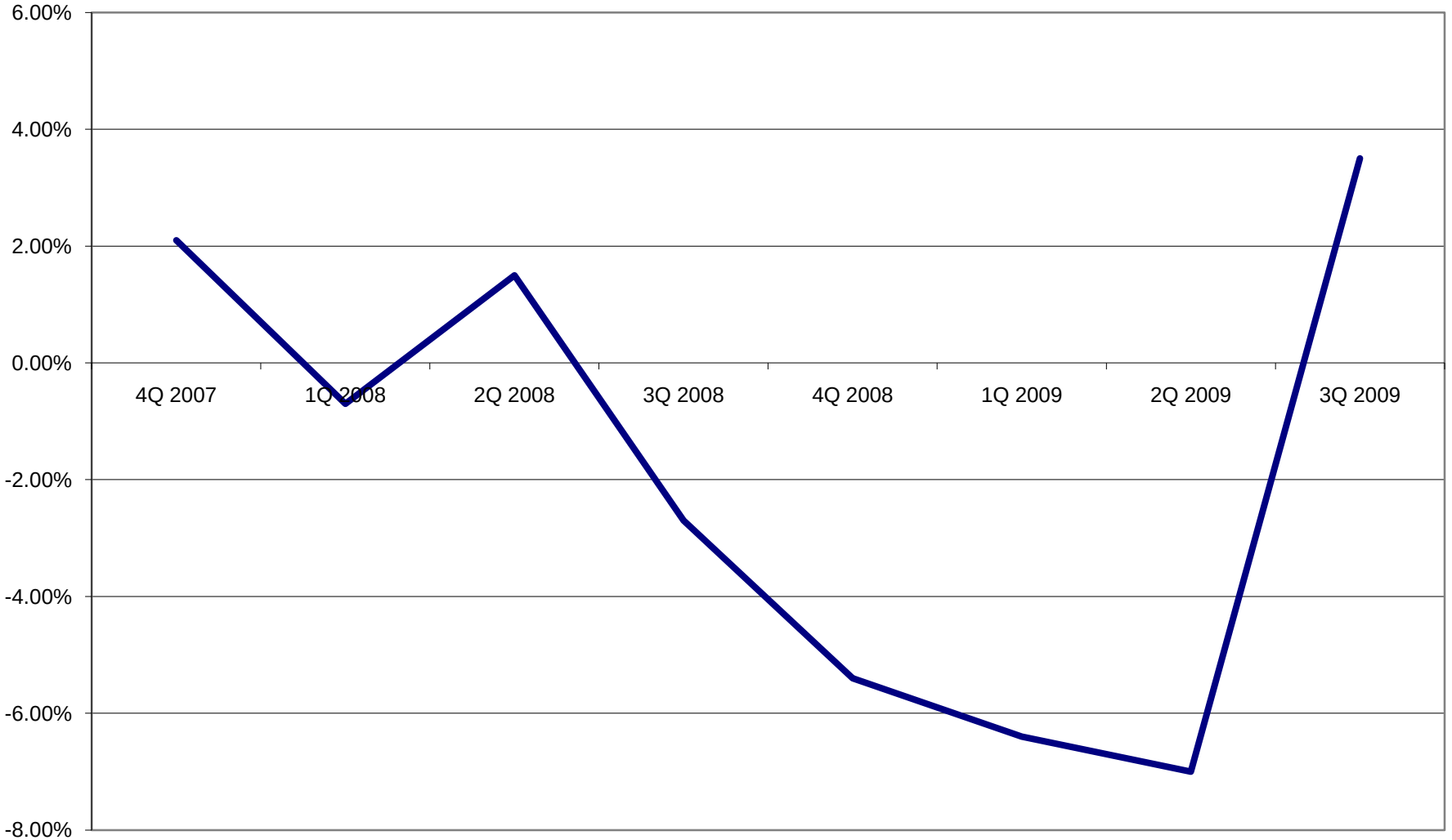
Donald A. Murry

Subscribed and sworn to before me this 4 day of December, 2009

Notary Public

LORA L HADSOCK
Notary Public - State of Florida
My Comm. Expires Mar 15, 2013
Commission # DD 870070
Bonded Through National Notary Assn.

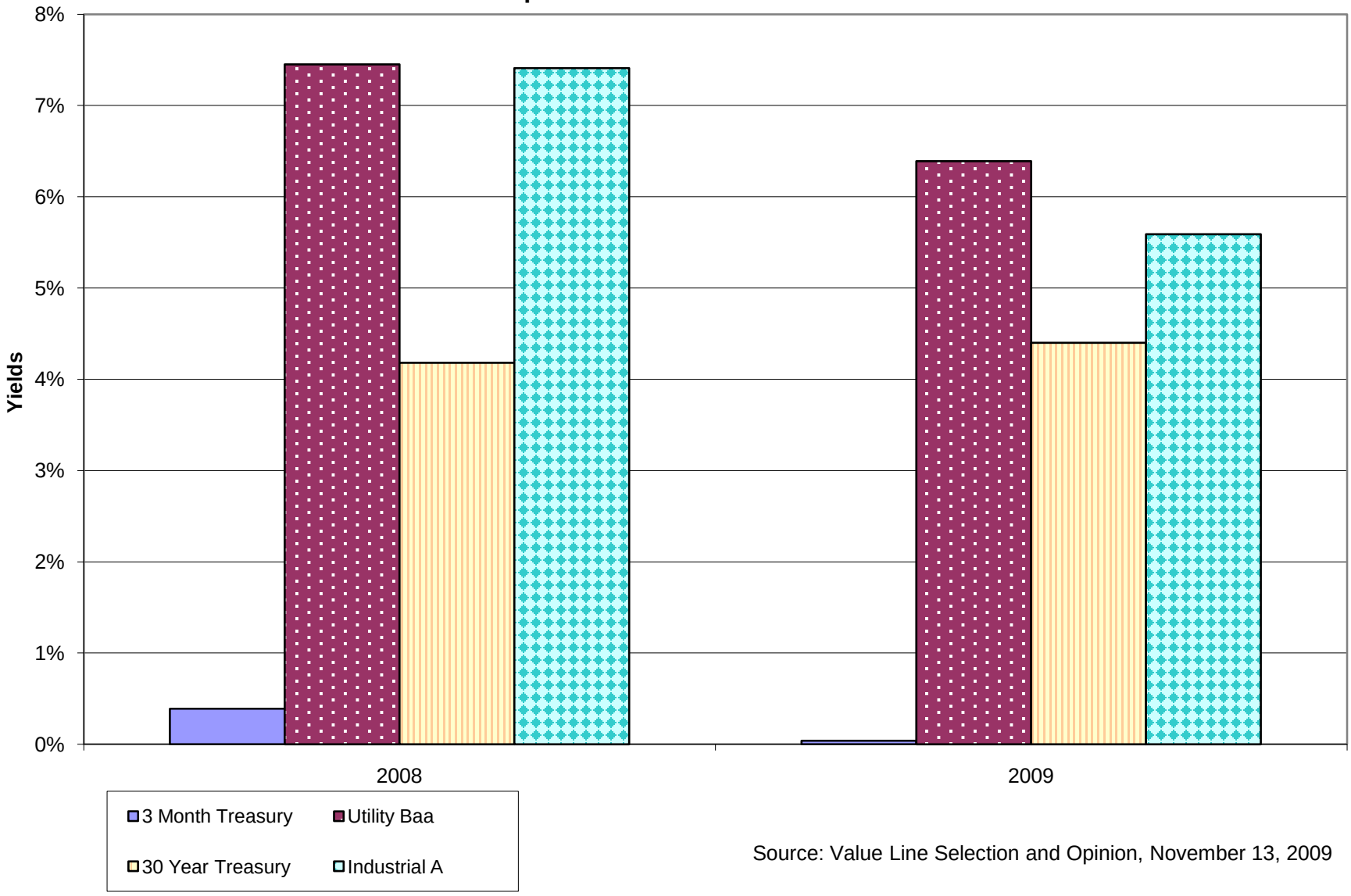
Laclede Gas Company
Real GDP Consensus Forecast



Source: Value Line Selection and Opinion, Nov. 13, 2009

Schedule DAM-1

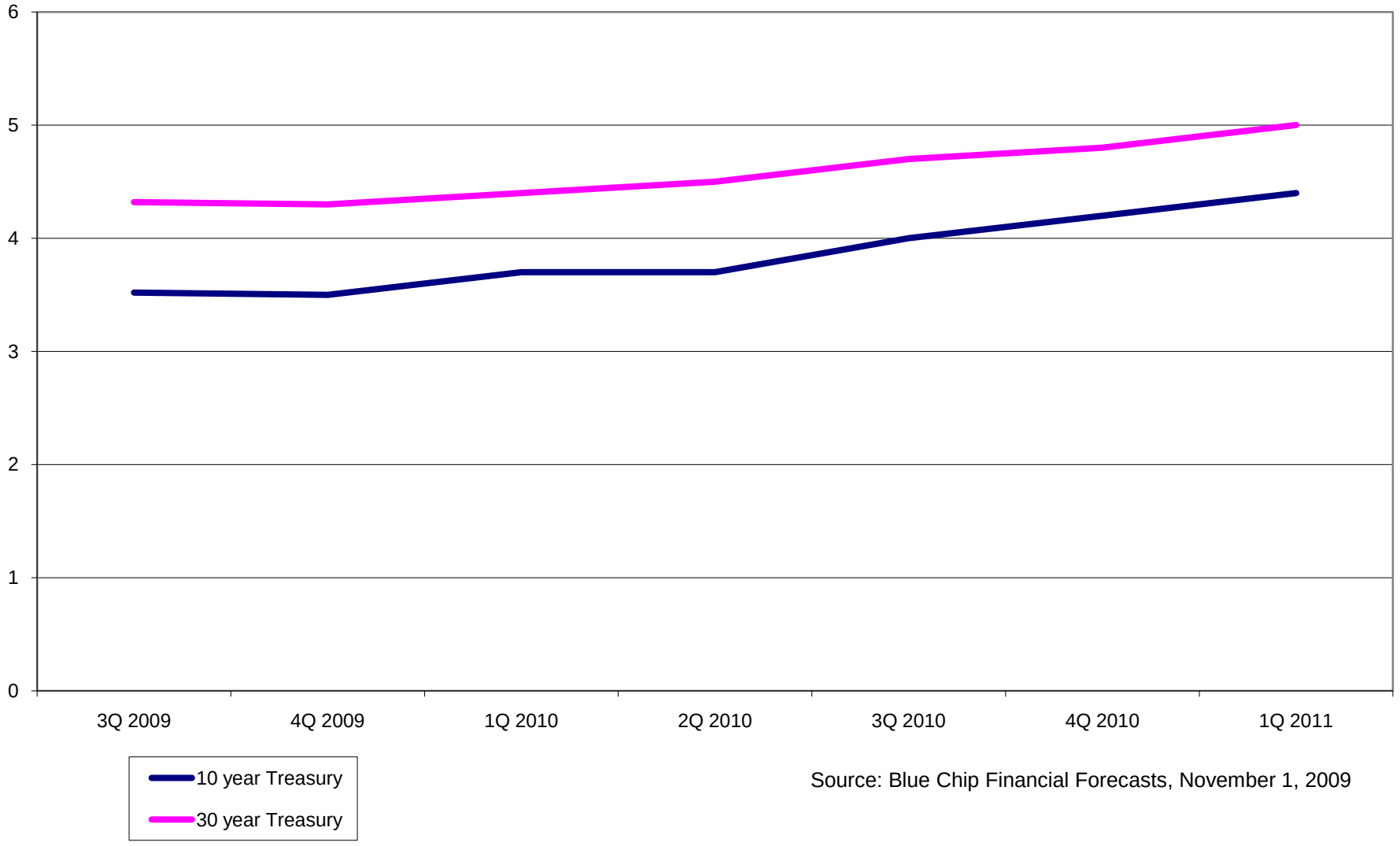
Laclede Gas Company
Comparison of Selected Bond Yields



Source: Value Line Selection and Opinion, November 13, 2009

Schedule DAM-2

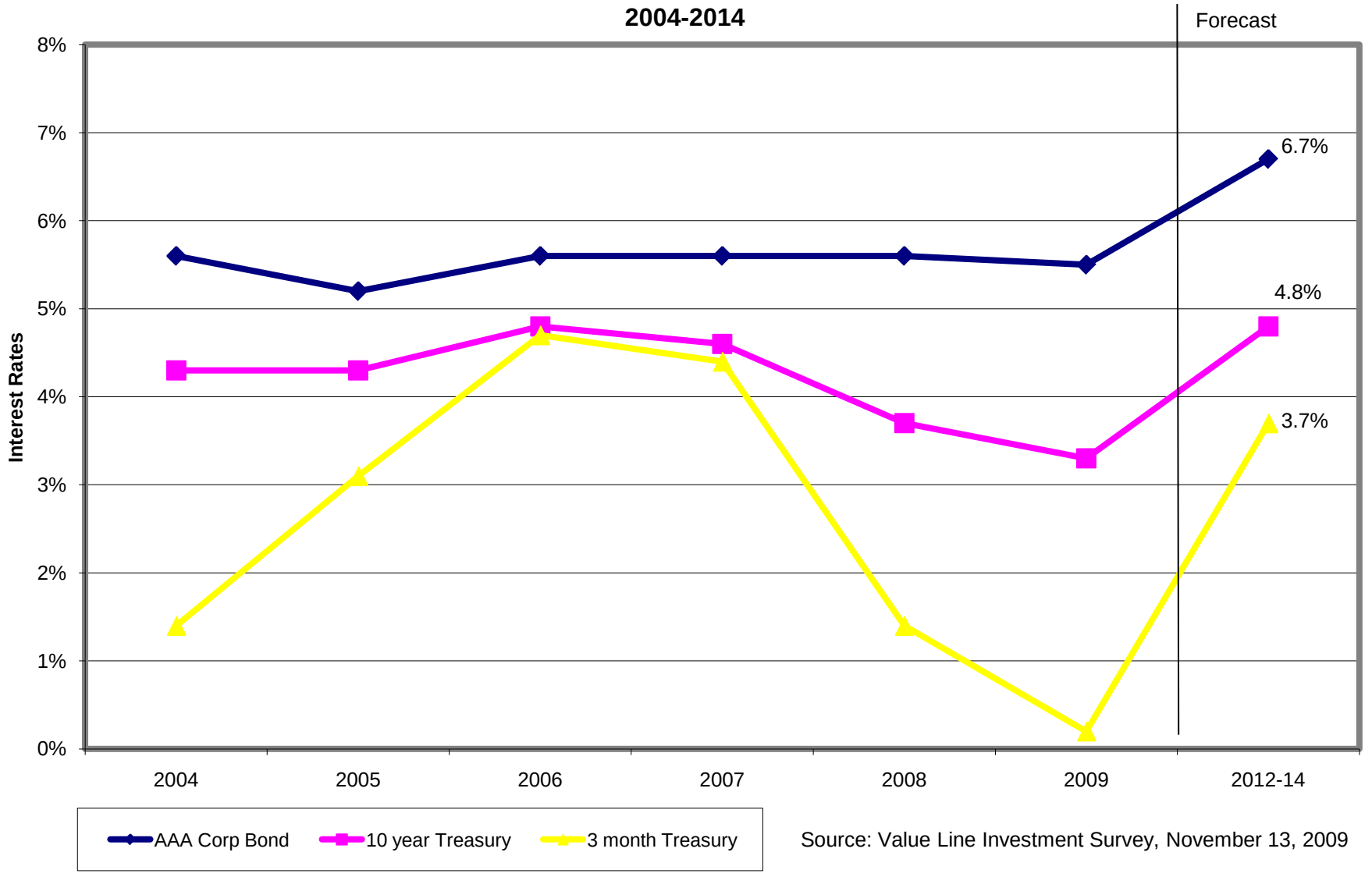
Laclede Gas Company
Blue Chip Treasury Forecasts



Source: Blue Chip Financial Forecasts, November 1, 2009

Schedule DAM-3

Laclede Gas Company
Value Line Interest Rates and Forecasts
2004-2014



Source: Value Line Investment Survey, November 13, 2009

Schedule DAM-4

Laclede Gas Company

Proposed Capital Structure

As of September 30, 2009
(in thousands)

	Amount	Percent of Total
Common Equity:		
Common Stock	$22,168	
Paid-in Capital	154,218	
Retained Earnings	342,810	
Accumulated other comprehensive income (loss)	(2,051)	
Total Common Stock Equity	$517,145	57.5%
Long-Term Debt:		
First Mortgage Bonds:		
6.5% Series Due November 15, 2010	25,000	
6.5% Series Due October 15, 2012	25,000	
5.5% Series Due May 1, 2019	50,000	
7% Series Due June 1, 2029	25,000	
7.9% Series Due September 15, 2030	30,000	
6% Series Due May 1, 2034	100,000	
6.15% Series Due June 1, 2036	55,000	
6.35 Series Due October 15, 2008	80,000	
Unamortized Discount, Expense, and Loss On Reacquired Debt	(7,334)	
Total Long-Term Debt	$382,666	42.5%
Short Term Debt:		
Average Short Term Debt	$0	0.0%
Total Capitalization	$899,811	100.0%

Laclede Gas Company

Comparable Gas Distribution Companies

Comparison of Common Equity Ratios

Company	2006	2007	2008	2009	2010E	Forecast '12-'14
Laclede Group	50.4%	54.6%	55.5%	57.5%	55.0%	53.0%
New Jersey Resources	65.2%	62.7%	61.5%	61.5%	63.0%	68.0%
Nicor, Inc.	63.7%	69.0%	68.4%	67.0%	70.0%	74.0%
Northwest Natural Gas Co.	53.7%	53.7%	55.1%	53.0%	53.0%	53.0%
Piedmont Natural Gas	51.7%	51.6%	52.8%	52.5%	52.0%	53.0%
South Jersey Industries, Inc.	55.3%	57.3%	60.8%	61.5%	60.0%	62.0%
Southwest Gas Corp.	39.4%	41.9%	44.7%	49.0%	49.5%	51.0%
WGL Holdings	60.4%	60.3%	62.4%	62.0%	63.0%	64.5%
Comparable Companies' Averages	55.6%	56.6%	58.0%	58.1%	58.6%	60.8%

Source: *Value Line Investment Survey*

Schedule DAM-6

Laclede Gas Company

Comparable Gas Distribution Companies

Comparison of Financial Strength and Bond Ratings

Company	Value Line Financial Strength	S&P Rating
Laclede Group	B+	A
New Jersey Resources	A	A
Nicor, Inc.	A	AA
Northwest Natural Gas Co.	A	AA-
Piedmont Natural Gas	B++	A
South Jersey Industries, Inc.	B++	BBB+
Southwest Gas Corp.	B	BBB
WGL Holdings	A	AA-

Sources: *Value Line Investment Survey*
www.standardandpoors.com

Laclede Gas Company

Comparable Gas Distribution Companies

Comparison of Value Line's Safety and Timeliness Rank

	Safety Rank	Timeliness Rank
Laclede Group	2	3
New Jersey Resources	1	3
Nicor, Inc.	3	3
Northwest Natural Gas Co.	1	3
Piedmont Natural Gas	2	3
South Jersey Industries, Inc.	2	3
Southwest Gas Corp.	3	3
WGL Holdings	1	3
Comparable Companies' Average	1.9	3.0

Source: *Value Line Investment Survey*

Laclede Gas Company

Comparable Gas Distribution Companies

Comparison of Returns on Common Equity

	2006	2007	2008	2009	2010E	Forecast '12-'14
Laclede Group	12.5%	11.6%	11.8%	12.0%	11.0%	11.0%
New Jersey Resources	12.6%	10.1%	15.7%	13.0%	13.0%	10.0%
Nicor, Inc.	14.7%	14.3%	12.3%	11.5%	12.5%	12.0%
Northwest Natural Gas Co.	10.9%	12.5%	10.9%	11.0%	11.0%	11.0%
Piedmont Natural Gas	11.0%	11.9%	12.4%	12.5%	13.0%	12.5%
South Jersey Industries, Inc.	16.3%	12.8%	13.1%	12.5%	13.5%	13.5%
Southwest Gas Corp.	8.9%	8.5%	5.9%	7.0%	7.5%	8.0%
WGL Holdings	10.3%	10.4%	11.6%	12.0%	11.5%	11.0%
Comparable Companies' Averages	12.1%	11.5%	11.7%	11.4%	11.7%	11.1%

Source: *Value Line Investment Survey*

Schedule DAM-9

Laclede Gas Company

Comparable Gas Distribution Companies

Comparison of Declared Dividends

	2005	2006	2007	2008	2009	Past 5-Year Growth Rate
Laclede Group	1.37	1.40	1.45	1.49	1.53	1.5%
New Jersey Resources	0.91	0.96	1.01	1.11	1.24	1.4%
Nicor, Inc.	1.86	1.86	1.86	1.86	1.86	0.5%
Northwest Natural Gas Co.	1.32	1.39	1.44	1.52	1.60	3.0%
Piedmont Natural Gas	0.91	0.95	0.99	1.03	1.07	4.5%
South Jersey Industries, Inc.	0.86	0.92	1.01	1.11	1.20	6.0%
Southwest Gas Corp.	0.82	0.82	0.86	0.90	0.95	1.0%
WGL Holdings	1.32	1.35	1.37	1.41	1.47	1.5%
Comparable Companies' Averages	1.14	1.18	1.22	1.28	1.34	2.6%

Source: *Value Line Investment Survey*

Schedule DAM-10

Laclede Gas Company

Comparable Gas Distribution Companies

Comparison of Dividend Payout Ratios

	2006	2007	2008	2009	2010E	Forecast '12-'14
Laclede Group	59%	63%	56%	53%	60%	55%
New Jersey Resources	50%	64%	40%	50%	47%	50%
Nicor, Inc.	65%	62%	71%	70%	65%	57%
Northwest Natural Gas Co.	59%	52%	59%	56%	59%	58%
Piedmont Natural Gas	74%	70%	69%	67%	65%	65%
South Jersey Industries, Inc.	37%	48%	49%	51%	50%	50%
Southwest Gas Corp.	42%	44%	63%	54%	52%	50%
WGL Holdings	69%	66%	57%	59%	59%	60%
Comparable Companies' Averages	56.6%	58.0%	58.3%	58.1%	56.7%	56%

Source: *Value Line Investment Survey*

Schedule DAM-11

Laclede Gas Company

Comparable Gas Distribution Companies

Comparison of Average Annual Price-Earnings Ratios

Company	2005	2006	2007	2008	Current	Five Year Average
Laclede Group	16.2	13.6	14.2	14.3	13.8	14.4
New Jersey Resources	16.8	16.1	21.6	12.3	14.2	16.2
Nicor, Inc.	17.3	15.0	15.0	15.1	13.5	15.2
Northwest Natural Gas Co.	17.0	15.9	16.7	18.1	14.7	16.5
Piedmont Natural Gas	17.9	19.2	18.7	18.2	14.8	17.8
South Jersey Industries, Inc.	16.6	11.9	17.2	15.9	14.3	15.2
Southwest Gas Corp.	20.6	15.9	17.3	20.3	13.5	17.5
WGL Holdings	14.7	15.5	15.6	13.7	13.2	14.5
Comparable Companies' Averages	17.3	15.6	17.4	16.2	14.0	16.1

Source: *Value Line Investment Survey*

Schedule DAM-12

Laclede Gas Company

Comparable Gas Distribution Companies

Discounted Cash Flow Growth Rate Summary

	Value Line						Projections		
	2003 TO 2012 Estimate			Five Year Historical			Value Line		Yahoo!
	EPS	DPS	Book Value	EPS	DPS	Book Value	EPS	DPS	EPS
Laclede Group	5.5%	2.6%	6.0%	9.5%	1.5%	5.5%	3.5%	2.5%	3.5%
New Jersey Resources	5.8%	5.4%	11.0%	7.5%	5.0%	11.5%	5.5%	5.5%	6.5%
Nicor, Inc.	4.4%	0.0%	4.9%	1.0%	0.5%	4.0%	2.5%	0.0%	4.4%
Northwest Natural Gas Co.	6.8%	4.9%	4.5%	8.0%	3.0%	3.5%	5.0%	5.5%	4.8%
Piedmont Natural Gas	4.9%	4.1%	3.9%	6.5%	4.5%	6.0%	5.5%	3.5%	6.6%
South Jersey Industries, Inc.	8.0%	6.9%	7.0%	13.0%	6.0%	11.0%	5.5%	7.0%	9.6%
Southwest Gas Corp.	6.1%	3.8%	4.5%	9.0%	1.0%	5.0%	4.5%	5.0%	6.0%
WGL Holdings	2.6%	2.5%	4.9%	4.0%	1.5%	4.5%	4.0%	3.0%	4.5%
Comparable Companies' Averages	5.53%	3.96%	5.81%	7.00%	3.07%	6.50%	4.64%	4.21%	6.05%

Sources:
Value Line Investment Survey
Yahoo! Finance

Schedule DAM-13

Laclede Gas Company

Comparable Gas Distribution Companies

Dividend Growth Rate DCF Using 52-Week Share Prices

	Share Prices		2010	52 Week Yields		2003-05	2012-14E	Growth	Cost of Capital	
	Low	High	Dividend	Low	High	DPS	DPS	Rate	Low	High
Laclede Group	29.26	54.45	1.57	2.88%	5.37%	1.35	1.70	2.57%	5.45%	7.93%
New Jersey Resources	29.95	42.37	1.28	3.02%	4.27%	0.87	1.40	5.43%	8.45%	9.70%
Nicor, Inc.	27.50	43.28	1.86	4.30%	6.76%	1.86	1.86	0.00%	4.30%	6.76%
Northwest Natural Gas Co.	37.71	51.44	1.68	3.27%	4.46%	1.30	2.00	4.93%	8.20%	9.39%
Piedmont Natural Gas	20.68	33.92	1.11	3.27%	5.37%	0.86	1.23	4.06%	7.33%	9.42%
South Jersey Industries, Inc.	31.98	40.78	1.28	3.14%	4.00%	0.82	1.50	6.94%	10.08%	10.94%
Southwest Gas Corp.	17.08	26.79	1.00	3.73%	5.85%	0.82	1.15	3.83%	7.56%	9.68%
WGL Holdings	28.59	37.08	1.51	4.07%	5.28%	1.30	1.63	2.55%	6.62%	7.83%
Comparable Companies' Averages	27.64	39.38	1.39	3.54%	5.14%	1.12	1.54	3.96%	7.50%	9.10%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Schedule DAM-14

Laclede Gas Company

Comparable Gas Distribution Companies

Dividend Growth Rate DCF Using Current Share Prices

	Share Prices		Current	Current Yields		2003-05	2012-14E	Growth	Cost of Capital	
	Low	High	Dividend	Low	High	DPS	DPS	Rate	Low	High
Laclede Group	30.67	31.46	1.57	4.99%	5.12%	1.35	1.70	2.57%	7.56%	7.69%
New Jersey Resources	35.12	35.89	1.28	3.57%	3.64%	0.87	1.40	5.43%	8.99%	9.07%
Nicor, Inc.	37.25	38.09	1.86	4.88%	4.99%	1.86	1.86	0.00%	4.88%	4.99%
Northwest Natural Gas Co.	41.90	42.74	1.68	3.93%	4.01%	1.30	2.00	4.93%	8.86%	8.94%
Piedmont Natural Gas	23.15	23.65	1.11	4.69%	4.79%	0.86	1.23	4.06%	8.75%	8.85%
South Jersey Industries, Inc.	35.01	35.69	1.28	3.59%	3.66%	0.82	1.50	6.94%	10.53%	10.60%
Southwest Gas Corp.	25.11	25.61	1.00	3.91%	3.98%	0.82	1.15	3.83%	7.73%	7.81%
WGL Holdings	33.13	33.77	1.51	4.47%	4.56%	1.30	1.63	2.55%	7.02%	7.10%
Comparable Companies' Averages	32.95	33.63	1.39	4.15%	4.23%	1.12	1.54	3.96%	8.11%	8.20%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Schedule DAM-15

Laclede Gas Company

Comparable Gas Distribution Companies

Earnings Growth Rate DCF Using 52-Week Share Prices

	Share Prices		2010	52 Week Yields		2003-05	2012-14E	Growth	Cost of Capital	
	Low	High	Dividend	Low	High	EPS	EPS	Rate	Low	High
Laclede Group	29.26	54.45	1.57	2.88%	5.37%	1.85	3.00	5.54%	8.42%	10.91%
New Jersey Resources	29.95	42.37	1.28	3.02%	4.27%	1.69	2.80	5.79%	8.81%	10.07%
Nicor, Inc.	27.50	43.28	1.86	4.30%	6.76%	2.20	3.25	4.43%	8.73%	11.19%
Northwest Natural Gas Co.	37.71	51.44	1.68	3.27%	4.46%	1.91	3.45	6.79%	10.06%	11.25%
Piedmont Natural Gas	20.68	33.92	1.11	3.27%	5.37%	1.23	1.90	4.92%	8.19%	10.29%
South Jersey Industries, Inc.	31.98	40.78	1.28	3.14%	4.00%	1.55	3.10	7.98%	11.12%	11.98%
Southwest Gas Corp.	17.08	26.79	1.00	3.73%	5.85%	1.35	2.30	6.13%	9.86%	11.98%
WGL Holdings	28.59	37.08	1.51	4.07%	5.28%	2.14	2.70	2.63%	6.71%	7.92%
Comparable Companies' Averages	27.64	39.38	1.39	3.54%	5.14%	1.72	2.79	5.53%	9.07%	10.67%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Schedule DAM-16

Laclede Gas Company

Comparable Gas Distribution Companies

Earnings Growth Rate DCF Using Current Share Prices

	Share Prices		Current	Current Yields		2003-05	2012-14E	Growth	Cost of Capital	
	Low	High	Dividend	Low	High	EPS	EPS	Rate	Low	High
Laclede Group	30.67	31.46	1.57	4.99%	5.12%	1.85	3.00	5.54%	10.53%	10.66%
New Jersey Resources	35.12	35.89	1.28	3.57%	3.64%	1.69	2.80	5.79%	9.36%	9.44%
Nicor, Inc.	37.25	38.09	1.86	4.88%	4.99%	2.20	3.25	4.43%	9.31%	9.42%
Northwest Natural Gas Co.	41.90	42.74	1.68	3.93%	4.01%	1.91	3.45	6.79%	10.72%	10.80%
Piedmont Natural Gas	23.15	23.65	1.11	4.69%	4.79%	1.23	1.90	4.92%	9.61%	9.71%
South Jersey Industries, Inc.	35.01	35.69	1.28	3.59%	3.66%	1.55	3.10	7.98%	11.57%	11.64%
Southwest Gas Corp.	25.11	25.61	1.00	3.91%	3.98%	1.35	2.30	6.13%	10.03%	10.11%
WGL Holdings	33.13	33.77	1.51	4.47%	4.56%	2.14	2.70	2.63%	7.11%	7.19%
Comparable Companies' Averages	32.95	33.63	1.39	4.15%	4.23%	1.72	2.79	5.53%	9.67%	9.76%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Schedule DAM-17

Laclede Gas Company

Comparable Gas Distribution Companies

Projected Growth Rate DCF Using 52-Week Share Prices

	Share Prices		2010	52 Week Yields		EPS Estimates		Cost of Capital	
	Low	High	Dividend	Low	High	Value Line	Yahoo!	Low	High
Laclede Group	29.26	54.45	1.57	2.88%	5.37%	3.50%	3.50%	6.38%	8.87%
New Jersey Resources	29.95	42.37	1.28	3.02%	4.27%	5.50%	6.50%	8.52%	10.77%
Nicor, Inc.	27.50	43.28	1.86	4.30%	6.76%	2.50%	4.35%	6.80%	11.11%
Northwest Natural Gas Co.	37.71	51.44	1.68	3.27%	4.46%	5.00%	4.75%	8.02%	9.46%
Piedmont Natural Gas	20.68	33.92	1.11	3.27%	5.37%	5.50%	6.60%	8.77%	11.97%
South Jersey Industries, Inc.	31.98	40.78	1.28	3.14%	4.00%	5.50%	9.63%	8.64%	13.63%
Southwest Gas Corp.	17.08	26.79	1.00	3.73%	5.85%	4.50%	6.00%	8.23%	11.85%
WGL Holdings	28.59	37.08	1.51	4.07%	5.28%	4.00%	4.50%	8.07%	9.78%
Comparable Companies' Averages	27.64	39.38	1.39	3.54%	5.14%	4.64%	6.05%	8.15%	11.23%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Schedule DAM-18

Laclede Gas Company

Comparable Gas Distribution Companies

Projected Growth Rate DCF Using Current Share Prices

	Share Prices		Current	Current Yields		EPS Estimates		Cost of Capital	
	Low	High	Dividend	Low	High	Value Line	Yahoo!	Low	High
Laclede Group	30.67	31.46	1.57	4.99%	5.12%	3.50%	3.50%	8.49%	8.62%
New Jersey Resources	35.12	35.89	1.28	3.57%	3.64%	5.50%	6.50%	9.07%	10.14%
Nicor, Inc.	37.25	38.09	1.86	4.88%	4.99%	2.50%	4.35%	7.38%	9.34%
Northwest Natural Gas Co.	41.90	42.74	1.68	3.93%	4.01%	5.00%	4.75%	8.68%	9.01%
Piedmont Natural Gas	23.15	23.65	1.11	4.69%	4.79%	5.50%	6.60%	10.19%	11.39%
South Jersey Industries, Inc.	35.01	35.69	1.28	3.59%	3.66%	5.50%	9.63%	9.09%	13.29%
Southwest Gas Corp.	25.11	25.61	1.00	3.91%	3.98%	4.50%	6.00%	8.41%	9.98%
WGL Holdings	33.13	33.77	1.51	4.47%	4.56%	4.00%	4.50%	8.47%	9.06%
Comparable Companies' Averages	32.95	33.63	1.39	4.15%	4.23%	4.64%	6.05%	8.76%	10.32%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Schedule DAM-19

Should the yield on a Treasury bond or a Treasury strip be used to represent the riskless rate? In most cases the yield on a Treasury coupon bond is most appropriate. If the asset being measured spins off cash periodically, the Treasury bond most closely replicates this characteristic. On the other hand, if the asset being measured provides a single payoff at the end of a specified term, the yield on a Treasury Strip would be more appropriate.

CAPM Modified for Firm Size

One of the important characteristics not necessarily captured by the Capital Asset Pricing Model is what is known as the size effect. This is discussed in detail in Chapter 7. The need for this premium when using the CAPM arises because, even after adjusting for the systematic (beta) risk of small stocks, they outperform large stocks. The betas for small companies tend to be greater than those for large companies; however, these higher betas do not account for all of the risks faced by those who invest in small companies.[2] This premium can be added directly to the results obtained using the CAPM:

$$k_s = r_f + (\beta_s \times ERP) + SP_s$$

where all of the variables are as given in the previous section on the CAPM, and $\mathbf{SP_s}$ is the appropriate size premium based on the firm's equity market capitalization. The market capitalization of company **s** will determine the relevant size premium: mid-cap, low-cap, or micro-cap.

Suppose we wish to calculate the cost of equity for a small electric utility company. To better account for both the industry risk and the firm size, we wish to use the modified CAPM approach. The company has a market capitalization of $135 million and falls within the micro-cap size group. Assume that the beta of the company is 0.53. The key variables for calculating the cost of equity using this size-premium-adjusted CAPM are:

Risk-free rate	= 4.5 percent
Expected equity risk premium	= 7.1 percent
The appropriate size premium	= 3.7 percent

Using the modified CAPM equation, the cost of equity for the electric utility company is:

$$k_s = r_f + (\beta_s \times ERP) + SP_s = 4.5\% + (0.53 \times 7.1\%) + 3.7\% = 12.0\%$$

The beta-adjusted size premium is the most appropriate for use with this model. Please note that the size premia commonly referred to in this publication are the beta-adjusted size premia, unless stated otherwise. The non-beta-adjusted size premia already account for the added return generally attributed to the higher betas of small companies. The non-beta-adjusted size premium makes the assumption that the beta of the company is the same as that of the small stock portfolio. If the non-beta-adjusted

2 In general, small company betas are expected to be higher than large company betas. This, however, does not hold for all time periods. Chapter 6 discusses in more detail the measurement of beta for small stocks.

Laclede Gas Company

Comparable Gas Distribution 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	4.16%	0.60	6.50%	3.90%	1.74%	9.80%
New Jersey Resources	4.16%	0.65	6.50%	4.23%	1.74%	10.13%
Nicor, Inc.	4.16%	0.70	6.50%	4.55%	1.74%	10.45%
Northwest Natural Gas Co.	4.16%	0.60	6.50%	3.90%	1.74%	9.80%
Piedmont Natural Gas	4.16%	0.65	6.50%	4.23%	1.74%	10.13%
South Jersey Industries, Inc.	4.16%	0.65	6.50%	4.23%	1.74%	10.13%
Southwest Gas Corp.	4.16%	0.75	6.50%	4.88%	1.74%	10.78%
WGL Holdings	4.16%	0.65	6.50%	4.23%	1.74%	10.13%
Comparable Companies' Average	4.16%	0.66	6.50%	4.32%	1.74%	10.22%

Sources :
Value Line Investment Survey
Ibbotson Associates 2009 SBBI Yearbook: Valuation Edition
Federal Reserve Statistical Release

Schedule DAM-21

Laclede Gas Company

Comparable Gas Distribution 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	14.05%	6.20%	7.85%	0.60	4.71%	5.15%	9.86%
New Jersey Resources	14.05%	6.20%	7.85%	0.65	5.10%	5.15%	10.25%
Nicor, Inc.	14.05%	6.20%	7.85%	0.70	5.50%	5.15%	10.65%
Northwest Natural Gas Co.	14.05%	6.20%	7.85%	0.60	4.71%	5.15%	9.86%
Piedmont Natural Gas	14.05%	6.20%	7.85%	0.65	5.10%	5.15%	10.25%
South Jersey Industries, Inc.	14.05%	6.20%	7.85%	0.65	5.10%	5.15%	10.25%
Southwest Gas Corp.	14.05%	6.20%	7.85%	0.75	5.89%	5.15%	11.04%
WGL Holdings	14.05%	6.20%	7.85%	0.65	5.10%	5.15%	10.25%
Comparable Companies' Average	14.05%	6.20%	7.85%	0.66	5.21%	5.15%	10.36%

Sources :
Value Line Investment Survey
Ibbotson Associates 2009 SBBI Yearbook: Valuation Edition
Federal Reserve Statistical Release

Laclede Gas Company

Proposed Cost of Capital

As of September 30, 2009

Item	Amount	Share	Embedded Cost	Weighted Cost	Embedded Cost	Weighted Cost
Short Term Debt	$0	0.00%	0.00%	0.00%	0.00%	0.00%
Long Term Debt	$382,666	42.53%	6.53%	2.78%	6.53%	2.78%
Common Equity	$517,145	57.47%	10.75%	6.18%	11.50%	6.61%
Totals	$899,811	100.00%		8.96%		9.39%

Schedule DAM-23

Laclede Gas Company

Comparable Gas Distribution Companies

Comparison of After-Tax Times Interest Earned Ratios

Laclede Gas Company	@10.75% ROE	3.22
Nicor, Inc.		NMF
New Jersey Resources		6.62
Northwest Natural Gas		2.97
Piedmont Natural Gas		2.98
South Jersey Industries		5.15
Southwest Gas		1.97
WGL Holdings		4.40
Comparable Companies' Average		4.01

Source : Value Line Investment Survey