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Issue:

Cost of Capital

Witness:

Roberta A. McKiddy

Sponsoring Party:

MoPSC Staff
Direct Testimony

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MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

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DIRECT TESTIMONY

Missouri Public Service Commission

OF

ROBERTA A. MCKIDDY

LACLEDE GAS COMPANY

CASE NO. GR-2001-629

Jefferson City, Missouri October 2001

DIRECT TESTIMONY 1 2 **OF** ROBERTA A. MCKIDDY 3 LACLEDE GAS COMPANY 4 CASE NO. GR-2001-629 5 Q. Please state your name. 6 7 A. My name is Roberta A. McKiddy. Please state your business address. Q. 8 My business address is P.O. Box 360, Jefferson City, Missouri, 65102. 9 A. 01 Q. What is your present occupation? I am employed as a Financial Analyst for the Missouri Public Service 11 A. Commission (Commission). I accepted this position in May 1998. Prior to my appointment to 12 13 the Financial Analysis Department, I served in an administrative support position with the Utility 14 Services Division, Accounting Department. Were you employed before you joined the Commission's staff (Staff)? 15 Q. A, Yes, I was employed by the State Emergency Management Agency for the state 16 of Missouri. I also have previous experience in the areas of accounting, insurance, real estate 17 lending and consumer protection. 18 19 Q. What is your educational background? In July 1997, I earned a Bachelor of Science degree in Business Administration A. 20 with an emphasis in Finance from Columbia College. In June 2000, I graduated from William 21 22 Woods University with a Masters of Business Administration degree.

What is the purpose of your testimony in this case?

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A. The purpose of my testimony is to recommend a fair and reasonable rate of return to be applied to the Missouri jurisdictional rate base of Laclede Gas Company (Laclede) to the Commission.

- Q. Have you prepared any schedules to your analysis of the cost of capital for Laclede?
- A. Yes. I am sponsoring a study entitled "An Analysis of the Cost of Capital for Laclede Gas Company, Case No. GR-2001-629" consisting of 33 schedules which are attached to this direct testimony (see Schedule 1).
 - Q. Based on your analysis, what do you conclude is the cost of capital for Laclede?
- A. I conclude that the current cost of capital for Laclede is in the range of 7.70 to 8.11 percent.

Economic and Legal Rationale for Regulation

- Q. Why are the prices charged to customers by utilities such as Laclede regulated?
- A. A primary purpose of price regulation is to restrain the exercise of monopoly power. Monopoly power creates the ability to charge excessive or unduly discriminatory prices. Monopoly power may arise from the presence of economies of scale and/or from the granting of a monopoly franchise.

For services that operate efficiently and have the ability to achieve economies of scale, a monopoly is the most efficient form of market organization. Utility companies can supply service at lower costs if the duplication of facilities by competitors is avoided. This allows the use of larger and more efficient equipment and results in lower per unit costs. For instance, it may cost more to have two or more competing companies maintaining duplicate natural gas distribution systems and providing competing residential services to one household. This

situation could result in price wars and lead to unsatisfactory and perhaps irregular service. For these reasons, exclusive rights may be granted to a single utility to provide service to a given territory. This also creates a more stable environment for operating the utility company. Utility regulation acts as a substitute for the economic control of market competition and allows the consumer to receive adequate utility service at a reasonable price.

Natural gas distribution companies such as Laclede provide natural gas services essentially under a monopoly franchise. Therefore, it is clear that Laclede has monopoly power.

Another purpose of price regulation is to provide the utility company with an opportunity to earn a fair return on its capital, particularly on investments made as a result of a monopoly franchise.

- Q. Please discuss the legal basis for determining a fair and reasonable return for a public utility.
- A. Several landmark decisions by the U.S. Supreme Court provide the legal framework for regulation and for what constitutes a fair and reasonable rate of return for a public utility. Listed below are some of the cases:
 - 1. Munn v. People of Illinois Case (1877),
 - 2. Bluefield Water Works and Improvement Company Case (1923),
 - 3. Natural Gas Pipeline Company of America Case (1942), and
 - 4. Hope Natural Gas Company Case (1944).

In the case of Munn v. People of Illinois, 94 U.S. 113 (1877), the Court found that:

... when private property is "affected with a public interest, it ceases to be *juris privati* only"... Property does become clothed with a public interest when used in a manner to make it of public consequence, and affect the community at large. When, therefore, one devotes his property to a use in which the public has an interest, he, in effect, grants to the public an interest in that use, and must submit to

be controlled by the public for the common good, to the extent of the interest he has thus created. <u>Id.</u> at 126.

The Munn decision is important because it states the basis for regulation of both utility and nonutility industries.

In the case of <u>Bluefield Water Works and Improvement Company v. Public Service</u>

<u>Commission of the State of West Virginia</u>, 262 U.S. 679 (1923), the Supreme Court ruled that a fair return would be:

- 1. A return "generally being made at the same time" in that "general part of the country";
- 2. A return achieved by other companies with "corresponding risks and uncertainties"; and
- 3. A return "sufficient to assure confidence in the financial soundness of the utility".

The Court specifically stated:

A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise the money necessary for the proper discharge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally. <u>Id.</u> at 692-3.

In <u>Federal Power Commission et al. v. Natural Gas Pipeline Company of America</u>, 315 U.S. 575 (1942), the Court decided that:

The Constitution does not bind rate-making bodies to the service of any single formula or combination of formulas If the Commission's order, as applied to the facts before it and viewed in its

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entirety, produces no arbitrary result, our inquiry is at an end. <u>Id.</u> at 586.

The U.S. Supreme Court also discussed the reasonableness of a return for a utility in the case of <u>Federal Power Commission et al. v. Hope Natural Gas Company</u>, 320 U.S. 591 (1944). The Court stated that:

The rate-making process . . . , i.e., the fixing of "just and reasonable" rates, involves a balancing of the investor and the consumer interests. Thus we stated . . . that "regulation does not insure that the business shall produce net revenues" . . . it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock By that standard the return to the equity owner should be commensurate with returns on investments in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and to attract capital. <u>Id.</u> at 603.

The <u>Hope</u> case restates the concept of comparable returns to include those achieved by any other enterprises that have "corresponding risks." The Supreme Court also noted in this case that regulation does not guarantee profits to a utility company.

The aforementioned leading cases of the United States Supreme Court have been recognized and applied to utility regulation by courts in Missouri. In State ex rel. Associated Natural Gas Company v. Public Service Commission of Missouri, 706 S.W.2d 870, 873 (Mo. App., W.D. 1985), the Western District of the Court of Appeals noted that Bluefield Water Works, and the Hope, cases are instructive on what constitutes a just and reasonable rate of return. The Western District found that: "...the ratemaking function must provide sufficient income to cover the utility's operating expense and debt service." There must be enough revenue generated as a return to the company's stockholders to assure confidence in the continued financial services of the business and to attract equity investors. However the rate of

return should not be higher than is necessary to achieve these goals. Otherwise, utility customers will pay excessive prices, which is something that regulation seeks to prohibit.

A more recent case heard by the Supreme Court of Pennsylvania further discusses the Hope case decision as it relates to balancing the interests of the investors and the consumers. The Supreme Court of Pennsylvania stated that:

We do not believe, however, . . . that the end result of a rate-making body's adjudication *must* be the setting of rates at a level that will, in any given case, guarantee the continued financial integrity of the utility concerned In cases where the balancing of consumer interests against the interests of investors causes rates to be set at a "just and reasonable" level which is insufficient to ensure the continued financial integrity of the utility, it may simply be said that the utility has encountered one of the risks that imperil any business enterprise, namely the risk of financial failure. Pennsylvania Electric Company, v. Pennsylvania Public Utility Commission, 502 A.2d 130, 133-34 (1985), cert. denied, 476 U.S. 1137 (1986).

The <u>Pennsylvania Electric Company</u> case is included in my testimony to illustrate a point which is simply this: captive ratepayers of public utilities should not be forced to bear the brunt of wrongful management which results in unnecessarily higher costs. This statement is made in a general sense and should in no way be construed to suggest that a judgment has been made in this case regarding the actions of Laclede's management.

Through these and other court decisions, it has generally been recognized that public utilities can operate more efficiently when they operate as monopolies. It has also been recognized that regulation is required to offset the lack of competition and maintain prices at a reasonable level. It is the regulatory agency's duty to determine a fair rate of return and the appropriate revenue requirement for the utility, while maintaining reasonable prices for the public consumer.

Courts still believe that a fair return on common equity should be similar to the return for a business with similar risks, but not as high as a highly profitable or speculative venture

requires. The authorized return should provide a fair and reasonable return to the investors of the company, while ensuring that excessive earnings do not result from the utility's monopolistic powers. However, this fair and reasonable rate does not necessarily guarantee revenues or the continued financial integrity of the utility.

It should be noted that the courts have determined that a reasonable return may vary over time as economic and business conditions change. Therefore, the past, present and projected economic and business conditions must be analyzed in order to calculate a fair and reasonable rate of return,

Historical Economic Conditions

- Q. Please discuss the relevant historical economic conditions in which Laclede Gas Company has operated.
- A. One of the most commonly accepted indicators of economic conditions is the discount rate set by the Federal Reserve Board (Federal Reserve). The Federal Reserve tries to achieve its monetary policy objectives by controlling the discount rate (the interest rate charged by the Federal Reserve for loans of reserves to depository institutions) and the Fed Funds Rate (the overnight lending rate between banks). At the end of 1982, the U.S. economy was in the early stages of an economic expansion, following the longest post-World War II recession. This economic expansion began when the Federal Reserve reduced the discount rate seven times in the second half of 1982 in an attempt to stimulate the economy. This reduction in the discount rate led to a reduction in the prime interest rate (the rate charged by banks on short-term loans to borrowers with high credit ratings) from 16.50 percent in June 1982, to 11.50 percent in December 1982. The economic expansion continued for approximately eight years until July 1990, when the economy entered into a recession.

In December 1990, the Federal Reserve responded to the slumping economy by lowering the discount rate to 6.50 percent (see Schedule 2). Over the next year-and-a-half, the Federal Reserve lowered the discount rate another six times to a low of 3.00 percent, which had the effect of lowering the prime interest rate to 6.00 percent (see Schedule 3).

In 1993, newly elected President Clinton implemented a plan to raise additional revenues by increasing certain corporate and personal income tax rates, but perhaps the most important factor for the U.S. economy in 1993 was the passage of the North American Free Trade Agreement (NAFTA). NAFTA created a free trade zone consisting of the United States, Canada and Mexico. The rate of economic growth for the fourth quarter of 1993 was one the Federal Reserve believed could not be sustained without experiencing higher inflation. In the first quarter of 1994, the Federal Reserve took steps to try to restrict the economy by increasing interest rates. As a result, on March 24, 1994, the prime interest rate increased to 6.25 percent. On April 18, 1994, the Federal Reserve announced its intention to raise its targeted interest rates, which resulted in the prime interest rate being increased to 6.75 percent. The Federal Reserve took action on May 17, 1994, by raising the discount rate to 3.5 percent. The Federal Reserve took three additional restrictive monetary actions with the last occurring on February 1, 1995. These actions raised the discount rate to 5.25 percent, and in turn, banks raised the prime interest rate to 9.00 percent.

The Federal Reserve then reversed its policy in late 1995 by lowering its target for the Fed Funds Rate 0.25 percentage points on two different occasions. This had the effect of lowering the prime interest rate to 8.50 percent. On January 31, 1996, the Federal Reserve lowered the discount rate to a rate of 5 percent.

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The actions of the Federal Reserve over the last five years have been primarily focused on keeping the level of inflation under control, and they have been successful. The inflation rate, as measured by the *Consumer Price Index - All Urban Consumers* (CPI), was at a high of 3.70 percent in March 2000. The CPI stood at 2.70 percent for the period ending August 31, 2001 (see Schedule 4-1). In January 1993, the unemployment rate stood at 7.3 percent and gradually dropped to a level of 4.2 percent for the period ending February 28, 2001. The unemployment rate currently stands at 4.9 percent (see Schedule 7).

The combination of low inflation and low unemployment has led to a prosperous economy, as evidenced by the real gross domestic product of the United States. Over the time period of 1993 through the present, real GDP has increased every quarter. However, the most recent quarter posted a very minimal increase of only 0.30 percent for the quarter ended June 30, 2001. The stock market, as measured by the Dow Jones Composite Index, has increased by 71.89 percent between August 1, 1996 and August 23, 2001, while the Dow Jones Industrial Index has increased by 82.83 percent over that same time frame. The stock market has increased 10.62 percent as measured by The Value Line Geometric Averages Composite Index from August 1, 1996 through August 23, 2001. It should be noted that the Value Line Composite Index is an equally weighted geometric average of 1661 companies as compared to the Dow Jones Composite Index, which is a price-weighted arithmetic average of 65 companies.

- Q. What have been the economic conditions for the past twelve months?
- A. In both August and September 2000, energy (i.e., includes oil and natural gas companies) movements dominated the CPI. After falling by 2.9 percent in August, energy prices shot up 3.8 percent in September, the biggest advance since a 5.6 percent surge in June 2000. The big rise in energy, which consumers felt in sharply rising gasoline prices and home heating

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oil costs, prompted President Clinton to order a release of oil from the government's Strategic Petroleum Reserve. While steep increases have been contained in the energy sector, economists worried about a spillover effect that could send overall inflation higher, thus setting off alarms to the Federal Reserve. Despite the economy's downshift, there is as yet no sign that the labor markets are loosening up in a way that will take upward pressure off labor costs. In October 2000, the jobless rate held at 3.9 percent. A further sign of tight labor markets is the speedup in hourly earnings of production workers. For the total labor market, both sides of the equation appear to be at work, but a shrinking labor pool seems to be the chief reason for the recent slowdown in job growth for managerial and professional workers.

A key factor complicating the outlook for inflation and Fed policy for 2001 is productivity. While the structural trend in productivity growth has clearly shifted up, the cyclical slowdown is most likely to continue in 2001 since, in the short run, productivity growth tends to follow the pace of the economy. This year is shaping up to be a period of both slower growth and rising core inflation. Tight labor markets have the potential to lift inflation pressures, while at the same time softer output gains mean short-term productivity growth is likely to slow considerably.

After raising the federal funds rate six times in 1999 and 2000 to hold down inflation in a rapidly growing economy, Fed policy-makers began expressing concern about a slowdown in December 2000. On January 3, 2001, the Federal Open Market Committee decided to lower the federal funds rate by 50 basis points (from 6.5 percent) to 6 percent. In a related action, the Board of Governors approved a decrease in the discount rate to 5.75 percent. These actions were taken in light of further weakening of sales and production, and in the context of lower consumer confidence, tight conditions in some segments of financial markets, and high energy prices

sapping household and business purchasing power. On January 31, 2001, the Fed again lowered the federal funds rate by 50 basis points to 5.5 percent in an attempt to provide lower rates for many business and consumer loans. At the same time, the discount rate was also lowered by 50 basis points to 5 percent (see Schedule 2-1). In cutting its benchmark rate by a full point in the first month of 2001, the Fed has taken its most aggressive action to boost the economy since December 1991. The Fed justified its actions by citing eroding consumer and business confidence and rising energy costs.

Since January 31, 2001, the Fed has lowered the federal funds rate five more times for a total of 250 basis points. The last reduction came on September 16, 2001 when the Fed lowered the federal funds rate to 3.00 percent in reaction to the September 11, 2001 terrorist attacks on the World Trade Center and the Pentagon. The Fed cut rates in an attempt to ward off a steep drop in stock prices in the week the market reopened following the attacks. Despite its efforts, the attempt failed.

On October 2, 2001, the Fed lowered the federal funds rate, the rate charged by banks for overnight borrowing, yet one more time to 2.50 percent, the lowest rate in approximately 40 years. The Fed specifically stated, "The terrorist attacks have significantly heightened uncertainty in an economy that was already weak. Business and household spending as a consequence are being further damped." But the Fed concluded, "long-term prospects for economic growth remain favorable once the unusual forces restraining demand abate." [Source: MSNBC, http://www.msnbc.com/news]. The Fed also lowered the discount rate, by 50 basis points to 2 percent. Bank of America, one of the nation's largest commercial banks, followed the Fed by cutting the prime rate, charged for short-term borrowing to top business customers, as well by 50 basis points to 5.50 percent.

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These economic changes have resulted in cost of capital changes for utilities and are closely reflected in the yields on public utility bonds and yields of Thirty-Year U.S. Treasury Bonds (see Schedule 5-1 and 5-2). Schedule 5-3 shows how closely the Mergent's "Public Utility Bond Yields" have followed the yields of Thirty-Year U.S. Treasury Bonds during the period from 1986 to the present. The average spread for this time period between these two composite indices has been 131 basis points, with the spread ranging from a low of 80 basis points to a high of 241 basis points (see Schedule 5-4). These spread parameters can be utilized with numerous published forecasts of Thirty-Year U.S. Treasury Bond yields to estimate future long-term debt costs for utility companies. Mergent's "Public Utility Bond Yields" are also graphically compared to both Standard & Poor's "Utilities Stock Yields" and Standard & Poor's "Industrials Stock Yields" (see Schedule 6).

Economic Projections

- Q. What are the inflationary expectations for the remainder of 2001 and beyond?
- A. The latest inflation rate, as measured by the *Consumer Price Index-All Urban Consumers* (CPI), was 2.7 percent for the 12-months ended August 31, 2001. *The Value Line Investment Survey: Selection & Opinion*, August 31, 2001, predicts inflation to be 2.7 percent for 2001, 2.4 percent for 2002 and 2.6 percent for 2003.
 - Q. What are interest rate forecasts for 2001, 2002 and 2003?
- A. Short-term interest rates, those measured by Three-Month U.S. Treasury Bills, are expected to be 3.9 percent in 2001, 3.6 in 2002 and 4.0 percent in 2003 according to Value Line's predictions. Value Line expects long-term interest rates, those measured by the Thirty-Year U.S. Treasury Bond, are expected to average from 5.5 percent in 2001 to 5.7 percent in 2002 and 5.8 percent in 2003.

 The current rates for the period ending August 31, 2001 are 3.36 percent for 3-month T-Bills and 5.48 percent for 30-year T-Bonds, as noted on the Federal Reserve website, http://www.stls.frb.org/fred/data/rates.html.

- Q. What are the growth expectations for real Gross Domestic Product (GDP) in the future?
- A. GDP is a benchmark utilized by the Commerce Department to measure economic growth within the United States' borders. Real GDP is measured by the actual Gross Domestic Product; adjusted for inflation. Value Line stated that real GDP growth is expected to increase by 1.5 percent in 2001, 2.6 percent in 2002 and by 3.3 percent in 2003. The Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2002-2011*, stated that real GDP is expected to increase by 1.7 percent in 2001, 2.6 percent in 2002 and 3.2 percent in 2003 (see Schedule 7).
- Q. Please summarize the expectations of the economic conditions for the next few years.
- A. In summary, when combining the previously mentioned sources, inflation is expected to be in the range of 2.5 to 3.2 percent, increase in real GDP in the range of 1.5 to 3.3 percent and long-term interest rates are expected to range from 5.5 to 5.8 percent. <u>The Value Line Investment Survey: Selection & Opinion</u>, August 31, 2001, states that:

Three months ago, in our last "Quarterly Economic Review," we expressed the view that the U.S. economy was essentially marking time. We also observed that this directionless overall pattern and accompanying uncertain business outlook was not all that dissimilar to what we had seen three months earlier. In fact, all told, it has now been more than a year since the U.S. economy has shown any significant growth. Still, outside of the industrial sector, which has been in a decline since mid-2000, the economy has managed to so far avoid a recession, albeit just narrowly. Part of the credit for keeping a recession at bay to this point must go to rising real

estate values, with increasing home prices sustaining a positive wealth effect in this country. (emphasis added.)

Meanwhile, early in the year, we had forecast that the economy—which has shown negligible growth of 0.7% to 1.9% over the past four quarters—would begin strengthening again by the third quarter. More recently, we had come to believe that this likely revival in business activity would not get under way until somewhat later in the current half. Now, it looks as though even the timetable is a little optimistic. Indeed, we now think it will be early 2002 before the economy is again growing at a 3%, or greater, rate, on a quarterly basis.

S&P's Chief Economist, David Wyss, states the following in the September 26, 2001 issue of

The Outlook:

The world has changed. It had appeared that the economy was hitting bottom—as close to recession as possible—prior to the terrorist attacks. The data now suggest that the ice was even thinner than we thought, given the sharp drop in consumer sentiment and the 0.8% decline in industrial production. Inflation remains exceedingly calm, with the core producer price index (excluding food and energy) down another 0.1%, but the real economy is in trouble.

The events of September 11 clearly pushed us over the recession line. Economic activity was nearly halted in the week following the attacks, enough to turn the third quarter from the slight positive we had expected into a negative. The costs of transition to a new cold-war economy will be substantial. The federal surplus should be considered a thing of the past. Industries most affect by the crisis may see waves of bankruptcies.

...Business confidence may be more critical than household confidence. The near-recession has been caused entirely by an inventory correction and a drop in capital spending. The current crisis will exacerbate that problem. One positive factor is that orders and inventories have already dropped. This may spread the shock out somewhat, making the recession longer but less severe.

...Seasonal factors and military and recovery spending could make the fourth quarter positive, but if so, the first quarter of 2002 would probably slip into negative territory. It is possible we would not have two consecutive quarters of negative growth, but that is not the definition for the National Bureau of Economic Research. The depth, duration and dispersion of the downturn seems likely to make it an official recession.

With the recent cut in interest rates by one-half percentage point, the Fed has now reduced the federal funds rate by 3.5 percentage points since the beginning of the year. We expect rates to be cut by another one-half percentage point by November.

Trying to put numbers on the economy is very uncertain right now. We believe the recession will be mild, and over by early 2002, which would make it an average recession in length (10 months in the nine previous post-war recessions). The longest downturns have lasted 16 months (1974-1975 and 1981-1982).

Dr. Jeremy J. Siegel, Professor of Finance - the Wharton School of the University of Pennsylvania, gives the following example of another time when the economy entered "uncharted waters" in his book, <u>Stocks for the Long Run</u>:

In the summer of 1958, an event of great significance took place for those who followed long-standing indicators of stock market value. For the first time in history, the interest rate on long-term government bonds exceeded the dividend yield on common stocks.

Business Week noted this event in an August 1958 article entitled "An Evil Omen Returns," warning investors that when yields on stocks approached those on bonds, a major market decline was in the offing. The stock market crash of 1929 occurred in a year when stock dividend yields fell to the level of bond yields. The stock crashes of 1907 and 1891 also followed episodes when the yield on bonds came within one percent of the dividend yield on stocks.

Prior to 1958, the dividend yield on stocks had always been higher than long-term interest rates, and most analysts thought that this was the way it was supposed to be. Stocks were riskier than bonds and therefore should command a higher yield in the market. Under this reasoning, whenever stock prices went too high and brought dividend yields down to that of bonds, it was time to sell.

But things did not work that way in 1958. Stocks returned over 30 percent in the 12 months after dividend yields fell below bond yields, and continued to soar into the early 1960s. There were good economic reasons why this famous benchmark fell by the wayside. Inflation increased the yield on bonds to compensate lenders for rising prices, while investors regarded stocks as the best investment to protect against the eroding value of money. As early as September 1958, Business Week noted that "the relationship between stock and bond yields was clearly posting a warning signal, but investors still believe inflation is inevitable and stocks are the only hedge against it."

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Business Operations of Laclede Gas Company

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Q. Please describe Laclede's business operations.

A. Laclede Gas Company is a public utility engaged in the retail distribution of

natural gas. The Company serves an area in eastern Missouri, including the City of St. Louis,

St. Louis County, and parts of eight other counties. The Company also operates underground

natural gas storage fields and is engaged in the transportation and storage of liquid propane.

Laclede also has five nonregulated subsidiaries that engage in gas marketing, real estate

development, insurance services, and the compression of natural gas and financial investments.

These investments currently contribute less than one percent to Laclede's consolidated operating

income. In Laclede Gas Company's Annual Report 2000, Laclede states:

Laclede Gas is the largest natural gas distribution company in Missouri, serving more than 630,000 customers in St. Louis and southeastern Missouri. Our sales are driven primarily from residential and commercial heating requirements, which means, among other things, that our customer base is stable and not very susceptible to fuel switching. 70% of our utility operating revenues normally come from the residential segment. 98% of new homes in our service area are heated with natural gas, and, overall, we have more than an 85% saturation in the total heating market.

...Laclede Gas Company, the largest natural gas distribution company in Missouri with more than 630,000 customers, has paid dividends on a continuous basis since 1946.

...Since fiscal 1980, the Company has provided a dividend reinvestment plan for its common shareholders. Many shareholders have increased their investment in the Company by taking advantage of this plan.

Laclede's total operating revenues were \$999,159,115 for the 12-months ended July 31, 2001 with approximately 91.92 percent (\$918,411,721) coming from its Missouri jurisdictional natural gas operations. These revenues resulted in an overall net income applicable to common stock of \$33,791,500. These figures were taken from Laclede's response to Staff Data Information Request Nos. 3801 and 3808 for the period ending July 31, 2001.

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Q. Please describe the credit ratings of Laclede.

A. Currently, Standard & Poor's Corporation rates the senior secured debt of Laclede as "AA-" and its commercial paper as "A-1+2" and categorizes Laclede's business profile as "strong." Also, Mergent Bond Record rates Laclede's first mortgage bonds as "Aa3." All of these ratings are considered to be of "investment grade." It should be noted in the financial community that Standard & Poor's Corporation's "AA-" credit rating is comparable to Mergent Bond Record's "Aa3" credit rating.

- Q. Please provide Standard & Poor's Corporation's most recent outlook concerning the credit rating assigned to Laclede.
- A. <u>Standard & Poor's Corporation's Utilities Ratings Service</u>, provides a summary explaining the outlook. Specifically the report states:

OUTLOOK: The negative outlook reflects the challenges management faces to reduce debt leverage and improve its overall financial profile in the near term. Failure to rapidly strengthen measures of bondholder protection will likely result in lower ratings.

- Q. Please provide some historical financial information for Laclede.
- A. Schedules 8 and 9 present historical capital structures and selected financial ratios from 1996 to 2000 for Laclede. Laclede's common equity ratio has remained rather steady from 1996 through 2000 ranging from a high of 52.08 percent in 1997 to a low of 43.79 percent in 2000. Laclede=s lower common equity ratio in 1998 through 2000 is related in large part to their increased use of debt, specifically short-term debt, used to finance its gas supply inventories. Short-term debt comprised only 12.37 percent of Laclede's capital structure in 1996. In 2000, short-term debt comprised 19.65 percent of Laclede's capital structure and continues to increase in 2001.

Laclede's dividend payout ratio has continued to be high with it topping out at 97.81 percent in 2000. Laclede's payout ratio has ranged from 67.38 percent in 1996 increasing annually to its current high of 97.81 percent in 2000.

Laclede's return on year-end common equity (ROE) has continued to decline from 13.59 percent in 1996 to 9.14 percent in 2000. Staff believes this decline is due primarily to Laclede's increasing debt leverage coupled with several successive warmer-than-normal winters resulting in an overall decline in net income available to common shareholders. This belief is supported by information reported by Standard and Poor's in its March 15, 2001 summary review of the Company. The Company supports this belief further with evidence presented in its Annual Report 2000, specifically, in its Statement of Consolidated Income found at page 19 of that report.

Laclede's earnings per share for fiscal year 2000 were \$1.37 [Source: Laclede Gas Company's Annual Report 2000]. Laclede's return on year-end common equity for fiscal year 2000 of 9.14 percent was below the average earned by other natural gas distributors of 11.30 percent for the year ending December 31, 2000, according to *The Value Line Investment Survey: Ratings & Reports*, June 22, 2001. Value Line estimates that Laclede's return on common equity for 2001 will be 12.00 percent and projects a return on common equity of 11.50 percent for the time period 2004-2006. It should be noted that the return on common equity reported by Value Line Investment Survey is an "earned" return on common equity rather than an "authorized" return on common equity.

Laclede's market-to-book ratio decreased from 1.77 times for year-end 1996 to 1.44 times for year-end 2000.

In summary, Staff believes the deterioration of Laclede's financial statistics reflect the impact of the company's increasing debt leverage coupled with several successive warmer-than-normal winters. This belief is supported by information reported by Standard and Poor's in its March 15, 2001 summary review of the Company. Staff's belief is further supported by evidence presented in Laclede's Annual Report 2000.

Determination of the Cost of Capital

- Q. Please describe the cost of capital approach for determining a utility company's cost of capital.
- A. The total dollars of capital for the utility company are determined for a specific point in time. This total dollar amount is weighted as a percentage of the total capitalization for each specific capital component (e.g., common equity, preferred stock, long-term debt and short-term debt). A weighted cost for each capital component is determined by multiplying each capital component ratio by the appropriate embedded cost or the estimated cost of common equity component. The individual weighted costs are summed to arrive at a total weighted cost of capital. This total weighted cost of capital is synonymous with the fair rate of return for the utility company.
 - Q. Why is a total weighted cost of capital synonymous with a fair rate of return?
- A. From a financial viewpoint, a company employs different forms of capital to support or fund the assets of the company. These funds are invested proportionately to support each dollar of the company's assets. Each different form of capital has a cost and these costs are weighted proportionately to fund each dollar invested in the assets.

Assuming that the various forms of capital are within a reasonable balance and are costed correctly, the resulting total weighted cost of capital, when applied to rate base, will provide the

funds necessary to service the various forms of capital. Thus, the total weighted cost of capital corresponds to a fair rate of return for the utility company.

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Capital Structure and Embedded Costs

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What capital structure have you employed in developing a weighted cost of Q. capital for Laclede?

I have employed a capital structure as of July 31, 2001 for Laclede. Schedule 10

presents Laclede's capital structure and associated capital ratios. The resulting capital structure

consists of 40.82 percent common stock equity, 0.23 percent preferred stock, 38.52 percent long-

term debt and 20.43 percent short-term debt.

As of July 31, 2001, Laclede had \$149,083,405 of short-term debt outstanding. Staff derived this number by calculating a 13-month average of Laclede's monthly short-term debt balances less a 13-month average of Laclede's monthly Construction Work in Progress (CWIP) balances in order to accurately reflect a full twelve months of activity in the short-term debt account. Staff has traditionally considered Gas Safety Deferrals as an extension of CWIP. Therefore, Staff has also made allowance for a 13-month average of Laclede's monthly Gas Safety Deferrals financed at construction short-term debt rates (see Schedule 12).

- What was the embedded cost of long-term debt for Laclede at July 31, 2001? Q.
- I determined the embedded cost of long-term debt at July 31, 2001 for Laclede to Α. be 7.60 percent (see Schedule 11).

Cost of Equity

How do you propose to analyze those factors by which the cost of equity for Q. Laclede may be determined?

A. I have selected the discounted cash flow (DCF) model as the primary tool to determine the cost of equity for Laclede. Staff believes the DCF model is a very reliable tool in estimating the cost of common equity and one that is widely recognized and most commonly used by regulatory commissions including the Missouri Public Service Commission.

The DCF Model

- Q. Please describe the DCF model.
- A. The DCF model is a market-oriented approach for deriving the cost of equity. The return on equity calculated from the DCF model is inherently capable of attracting capital. This results from the theory that security prices adjust continually over time, so that an equilibrium price exists, and the stock is neither under-valued nor over-valued. It can also be stated that stock prices continually fluctuate to reflect the required and expected return for the investor.

The continuous growth form of the DCF model was used in estimating the cost of equity for Laclede. This model relies upon the fact that a company's common stock price is dependent upon the expected cash dividends and upon cash flows received through capital gains or losses that result from stock price changes. The rate which discounts the sum of the future expected cash flows to the current market price of the common stock is the calculated cost of equity. This can be expressed algebraically as:

Since the expected price of a stock in one year is equal to the present price multiplied by one plus the growth rate, equation (1) can be restated as:

Present Price = Expected Dividends + Present Price
$$(1+g)$$
 (2)
 $(1+k)$ $(1+k)$

where g equals the growth rate, and k equals the cost of equity. Letting the present price equal P_0 and expected dividends equal D_1 , the equation appears as:

$$P_0 = \frac{D_1}{(1+k)} + \frac{P_0(1+g)}{(1+k)}$$
(3)

The cost of equity equation may also be algebraically represented as:

$$k = \frac{D_1}{L} + g \tag{4}$$

Thus, the cost of common stock equity, k, is equal to the expected dividend yield (D_1/P_0) plus the expected growth in dividends (g) continuously summed into the future. The growth in dividends and implied growth in earnings will be reflected in the current price. Therefore, this model also recognizes the potential of capital gains or losses associated with owning a share of common stock.

The discounted cash flow method is a continuous stock valuation model. The DCF theory is based on the following assumptions:

- 1. Market equilibrium,
- 2. Perpetual life of the company,
- 3. Constant payout ratio,
- 4. Payout of less than 100% earnings,
- 5. Constant price/earnings ratio,
- 6. Constant growth in cash dividends,
- 7. Stability in interest rates over time,
- 8. Stability in required rates of return over time, and

9. Stability in earned returns over time.

Flowing from these, it is further assumed that an investor's growth horizon is unlimited and that earnings, book values and market prices grow hand-in-hand. Even though the entire list of above assumptions is rarely met, the DCF model is a reasonable working model describing an actual investor's expectations and resulting behaviors.

- Q. Can you directly analyze the cost of equity for Laclede?
- A. Yes. In order to arrive at a company-specific DCF result, the company must have common stock that is market-traded and must pay dividends. Laclede's stock is publicly traded on the New York Stock Exchange under the ticker symbol of "LG" and Laclede has paid cash dividends each year since 1946.
- Q. Please explain how you determined a value range for the growth term of the DCF formula for Laclede.
- A. I reviewed Laclede's actual dividends per share (DPS), earnings per share (EPS) and book values per share (BVPS) as well as projected growth rates for Laclede. Schedule 14 lists annual compound growth rates and trend line growth rates calculated for DPS, EPS and BVPS for the periods of 1990 through 2000 and 1995 through 2000. Schedule 15 presents the five- and ten-year historical EPS, DPS and BVPS growth rates as well as the projected growth rates for Laclede. The projected growth rates were obtained from four outside sources: *IBES*Inc. 's Institutional Brokers Estimate System, August 16, 2001; Zacks Investment Research, Inc. 's

 Earnings Estimates, August 23, 2001; Standard & Poor's Corporation's Earnings Guide, July 2001; and Value Line Investment Survey: Ratings and Reports, June 22, 2001. IBES Inc. projects a five-year EPS growth rate of 3.33 percent for Laclede. Zack's Investment Research, Inc. projects a five-year EPS growth rate of 3.00 percent. Standard and Poor's projects a five-

Reports, June 22, 2001, projects the compound annual rate of growth for EPS during the next three to five years will be 6.50 percent for Laclede. The average of the four outside sources produces a projected growth rate of approximately 4.00 percent. Combining the historical EPS, DPS and BVPS growth rates with the projected growth rates produces a reasonable growth rate range of 3.00 percent to 4.00 percent (see Schedule 15). This range of growth (g) is the range that I used in the DCF model to calculate a cost of common equity for Laclede.

- Q. Please explain how you determined the yield term of the DCF formula for Laclede.
- A. The expected yield term (D_1/P_0) of the DCF model is calculated by dividing the amount of common dividends per share expected to be paid over the next twelve months (D_1) by the current market price per share of the firm's common stock (P_0) . Even though the model requires the use of a current spot market price, I have chosen to use a monthly high/low average market price of Laclede's common stock for the period of March 2001 through August 2001. This averaging technique is an attempt to minimize the effects on the dividend yield, which can occur due to daily volatility in the stock market.

Schedule 16 presents the monthly high/low average stock market prices from March 2001 through August 2001 for Laclede. Laclede's common stock price has ranged from a low of \$21.750 per share to a high of \$25.480 per share for the above mentioned time period. This has produced a range for the monthly average high/low market price of \$23.360 per share to \$24.530 per share and reflects the most recent market conditions for the price term (P₀) in the DCF model.

The Value Line Investment Survey: Ratings & Reports, June 22, 2001, states that Laclede's common dividend declared per share is projected to be \$1.35 for 2001 and \$1.36 per share for 2001. Therefore, I have chosen to use the value of \$1.355 for the amount of common dividends per share (D₁) expected-to-be paid by Laclede for purposes of my analysis, which is an average of the projected dividends for 2001 and 2002.

Combining the expected dividend of \$1.355 per share and a market price range of \$23.360 per share to \$24.530 per share produces an approximate expected dividend yield of 5.75 percent. This is the dividend yield I used as the yield portion (D_1/P_0) in the DCF model.

- Q. Please summarize the results of your expected dividend yield and growth rate analysis for the DCF return on equity for Laclede.
 - A. The summarized DCF cost of equity estimate for Laclede is presented as follows:

Yield
$$(D_1/P_0)$$
 + Growth Rate (g) = Cost of Equity (k)
 5.75% + 3.00% = 8.75%
 5.75% + 4.00% = 9.75%

This range of return on common equity of 8.75 percent to 9.75 percent is the company specific cost of equity range for Laclede (see Schedule 17).

Reasonableness of DCF Returns for Laclede

- Q. What analysis was performed to determine the reasonableness of your DCF model derived return on common equity for Laclede?
- A. I performed a risk premium cost of equity analysis for Laclede. The risk premium concept implies that the required return on equity is found by adding an explicit premium for risk to a current interest rate. Schedule 19 shows the average risk premium above the yield of "30-

year U.S. Treasury Bonds" for Laclede's expected return on common equity. This analysis shows, on average, Laclede's expected return on equity, as reported by *The Value Line Investment Survey: Ratings & Reports*, is 450 basis points higher than the average yield on "30-year U.S. Treasury Bonds" for the period of January 1990 to December 2000.

The Federal Reserve web site reports the average yield for "30-year U.S. Treasury Bonds for August 2001 was 5.48 percent. Adding 450 basis points to this "30-year U.S. Treasury Bond" yield produces an estimated cost of equity of 9.98 percent (see Schedule 20). This supports the high end of my cost of equity range derived using the DCF model.

- Q. Did you perform the Capital Asset Pricing Model (CAPM) to check the reasonableness of your DCF model derived return on common equity for Laclede?
- A. Yes. I performed a CAPM cost of equity analysis for Laclede. The CAPM describes the relationship between a security's investment risk and its market rate of return. This relationship identifies the rate of return which investors expect a security to earn so that its market return is comparable with the market returns earned by other securities that have similar risk. The general form of the CAPM is as follows:

$$k = R_f + \beta (R_m - R_f)$$

where:

k = the expected return on equity for a specific security;

 R_f = the risk free rate;

 β = beta; and

 $R_m - R_f =$ the market risk premium.

The first term of the CAPM is the risk free rate (R_f) . The risk free rate reflects the level of return, which can be achieved without accepting any risk. In reality, there is no such risk-free

asset, but it is generally represented by U.S. Treasury securities. For purposes of this analysis, the risk-free rate was represented by the yield on 30-Year U.S. Treasury Bonds. The appropriate rate was determined to be the high/low range of 5.34 percent to 5.78 percent for the 6-month period ending August 31, 2001 as published on the Federal Reserve web site, http://www.stls.frb.org/fred/data/irates/gs30.

The second term of the CAPM is beta (β). Beta is an indicator of a security's investment risk. It represents the relative movement and relative risk between a particular security and the market as a whole (where beta for the market equals 1.00). Securities with betas greater than 1.00 exhibit greater volatility than do securities with betas less than 1.00. This causes a higher beta security to be less desirable and therefore requires a higher return in order to attract investor capital away from a lower beta security. For purposes of this analysis, the appropriate beta was determined to be 0.50 as published in *The Value Line Investment Survey: Ratings & Reports*, June 22, 2001.

The final term of the CAPM is the market risk premium (R_m - R_f). The market risk premium represents the expected return from holding the entire market portfolio less the expected return from holding a risk free investment. For purposes of this analysis, the appropriate market risk premium was determined to be 7.80 percent as calculated in *Ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and Inflation: 2000 Yearbook* for the period 1926-1999.

Schedule 18 presents the CAPM analysis with regard to Laclede. The CAPM analysis produces an estimated cost of equity range of 9.24 percent to 9.65 percent for Laclede. Again, this supports both the low end and midpoint of my cost of equity range derived using the DCF model.

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- Q. Based on your analysis of the DCF, risk premium and CAPM cost of equity results, what is your return on common equity estimate for Laclede?
- A. Based on my DCF, risk premium and CAPM analyses, I believe a return on common equity range of 8.75 percent to 9.75 percent is appropriate for Laclede.
- Q. Did you perform an analysis on Laclede's resulting pre-tax interest coverage ratios?
- A. Yes. A pro forma pre-tax interest coverage calculation was completed for Laclede. It reveals that the cost of equity range of 8.75 percent to 9.75 percent would yield a pre-tax interest coverage ratio in the range of 2.42 times to 2.58 times (see Schedule 31). Looking solely at pre-tax interest coverage ratios, this would tend to support a rating somewhere between "A" and "BBB+." However, Standard and Poor's looks at many different ratios before assigning corporate credit rating.

It may be helpful to explain further by defining how Standard and Poor's (S&P) assesses a credit rating Outlook. A Standard & Poor's Rating Outlook assesses the potential direction of a long-term credit rating over the intermediate to longer term. In determining a rating Outlook, S&P considers any changes in the economic and/or fundamental business conditions. A rating is not necessarily a precursor of a rating change or future CreditWatch action. CreditWatch highlights the potential direction of a short- or long-term rating. It focuses on identifiable events and short-term trends that cause the rating to be placed under special surveillance by Standard & Poor's analytical staff. These may include mergers, recapitalizations, voter referendums, regulatory action, or anticipated operating developments. Ratings appear on CreditWatch when such an event or a deviation from an expected trend occurs and additional information is necessary to evaluate the current rating. The "positive" designation indicates that a rating may

be raised; "negative" indicates a rating may be lowered; and "developing" indicates that a rating may be raised, lowered or affirmed. It may also be helpful to define the true role of a credit rating as defined by S&P:

A Standard & Poor's issue credit rating is a current opinion of the creditworthiness of an obligor with respect to a specific financial obligation, a specific class of financial obligations or a specific financial program (including ratings on medium-term note programs and commercial paper programs.) It takes into consideration the creditworthiness of guarantors, insurers, or other forms of credit enhancement on the obligation and takes into account the currency in which the obligation is denominated.

The credit rating is not a recommendation to purchase, sell or hold a particular security. The rating performs the isolated function of credit risk evaluation, which is only one element of the investment decision-making process. A rating cannot constitute a recommendation inasmuch as it does not take into consideration other factors, such as market price and risk preference of the investor.

Ratings do not create a fiduciary relationship between S&P and users of the ratings since there is no legal basis for the existence of such a relationship.

It is commonplace for companies to structure financing transactions to reflect S&P's credit criteria so they qualify for higher ratings...Many companies go one step further and incorporate specific rating objectives as corporate goals...S&P does not encourage companies to manage themselves with an eye toward a specific rating. The more appropriate approach is to operate for the good of the business as management sees it, and to let the rating follow.

- Q. Specifically, what factors does S&P consider when performing a corporate credit analysis?
- A. According to the <u>Corporate Ratings Criteria 2000</u> published by Standard & Poor's, S&P considers a number of factors when assigning a corporate credit rating. Such factors include the following:

Business Risk

Industry Characteristics Competitive Position (e.g., Marketing, Technology, Efficiency, Regulation) Management

Financial Risk

Financial Characteristics
Financial Policy
Profitability
Capital Structure
Cash Flow Protection
Financial Flexibility

S&P goes on to explain how this corporate rating criterion is employed. S&P states:

Standard and Poor's uses a format that divides the analytical task into several categories, providing a framework that ensures all salient issues are considered. For corporates, the first several categories are oriented to fundamental business analysis; the remainder relate to financial analysis. As further analytical discipline, each is scored in the course of the ratings process, and there are also scores for the overall business risk profile and the overall financial risk profile.

There are no formulae for combining scores to arrive at a rating conclusion. Bear in mind that ratings represent an art as much as a science. A rating is, in the end, an opinion. Indeed, it is critical to understand that the rating process is not limited to the examination of various financial measures. Proper assessment of debt protection levels requires a broader framework, involving a thorough review of business fundamentals, including judgments about the company's competitive position and evaluation of management and its strategies. Clearly, such judgments are highly subjective; indeed, subjectivity is at the heart of every rating.

At times, a rating decision may be influenced strongly by financial measures. At other times, business risk factors may dominate. If a firm is strong in one respect and weak in another, the rating will balance the different factors. Viewed differently, the degree of a firm's business risk sets the expectations for the financial risk it can afford at any rating level. The analysis of industry characteristics and how a firm is positioned to succeed in that environment establish the financial benchmarks used in the quantitative part of the analysis.

The low end of the recommended return on equity range allows enough earnings power for Laclede to meet its Net Earnings Requirement of two times the amount of the annual interest requirements pursuant to provisions of its Supplemental Indenture (Source: Company Response to Staff Data Request No. 3805). Thus, the pro forma pre-tax interest coverage test shows that there will be enough earnings potential for Laclede to meet its capital costs based upon the above referenced return on equity range for Laclede.

- Q. Did you perform any cost of equity analysis on other utility companies?
- A. Yes. I have selected a group of natural gas distribution companies to analyze for determining the reasonableness of the company specific DCF results for Laclede. Schedule 21 presents a list of fourteen publicly traded natural gas distribution companies monitored by Value Line. This list was reviewed for the following criteria:
 - 1. Pre-tax Interest Coverage Ratio of greater than 2.7 times: This criterion eliminated one company;
 - 2. Natural Gas Distribution Revenues to Total Revenues greater than 90 percent: This criterion eliminated no additional companies;
 - 3. Long-term Debt to Total Capital less than 50 percent: This criterion eliminated four additional companies;
 - 4. Positive Dividends Per Share Annual Compound Growth Rate for the period of 1990 through 2000: This criterion eliminated no additional companies; and
 - 5. No Missouri Operations: This criterion eliminated Laclede Gas Company and Atmos Energy Corporation.

On average, this final group of seven publicly traded natural gas distribution companies (comparable natural gas distribution companies) is comparable to Laclede because of similar business operations. The seven comparable natural gas distribution companies are listed on Schedule 22.

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Q. Please explain how you approached the determination of the cost of equity for the comparable natural gas distribution companies.

A. I have calculated a DCF cost of equity for each of the seven natural gas distribution companies. The first step was to calculate a growth rate. Basically, I used the same approach of obtaining a growth rate estimate for the seven natural gas distribution companies as I used in calculating a growth rate for Laclede, except that I utilized the average of the historical EPS, DPS and BVPS growth rates as well as projected growth rates (see Schedules 23 and 24). The seven natural gas distribution companies' average historical growth rates ranged from 1.93 percent to 5.62 percent with an overall average of 3.33 percent for the group. The projected growth rates ranged from 4.55 percent to 8.50 percent with an average of 6.42 percent. Taking into account the projected and historical growth rates, a proposed range of growth of 5.00 percent to 6.50 percent was used in the DCF calculation for the comparable companies (see Schedule 24). The proposed growth rate range for Laclede falls significantly below the proposed range of growth for the comparable companies.

The next step was to calculate an expected dividend yield for each of the seven comparable natural gas distribution companies. Schedule 25 presents the average high/low stock price for the period of April 2001 through August 2001 for each of the seven comparable natural gas distribution companies. Column 3 of Schedule 26 shows that the projected dividend yields ranged from 4.00 percent to 5.21 percent for the seven comparable natural gas distribution companies with the average at 4.67 percent. A proposed dividend yield 4.75 percent was used in the DCF calculation for the comparable natural gas distribution companies. The proposed dividend yield of 5.75 percent for Laclede falls 100 basis points (i.e., 1 percent) above the proposed dividend yield for the comparable natural gas distribution companies.

The estimated growth rates and projected dividend yields were then added together to reach an estimated DCF cost of equity for each of the seven comparable natural gas distribution companies (see Column 5 of Schedule 26). These estimates produced a DCF cost of equity ranging from 10.17 percent to 11.92 percent for the comparable natural gas distribution companies with an average of 11.08 percent. However, adding the proposed range of growth from Schedule 24 to the proposed dividend yield from Schedule 26, you arrive at an estimated range for cost of equity for the nine comparable electric utility companies of 9.75 percent to 11.25 percent (see Schedule 25). The significant difference in estimated range for cost of equity between Laclede and the comparable natural gas distribution companies is accounted for by the difference in estimated growth rates as identified earlier in this testimony.

- Q. Did you do any other analysis in determining the cost of common equity for the comparable natural gas distribution companies?
- A. Yes. I performed a CAPM cost of equity analysis for the comparable natural gas distribution companies. The betas for the comparable electric utility companies averaged 0.56, which is above Laclede's beta of 0.50. The CAPM analysis implies that the required return on equity for the comparable natural gas distribution companies falls within the range of 9.29 percent to 10.85 percent (see Schedule 29). The results from the CAPM analysis show the effect of the higher betas for the comparable natural gas distribution companies than Laclede. I believe this supports the high end of my estimated cost of common equity for Laclede derived from using the DCF model.
- Q. What additional analysis was performed to determine the reasonableness of your DCF model derived returns for the comparable natural gas distribution companies?

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A. An analysis was performed on the reported returns on equity. These figures were compared to the market-to-book ratios to provide some insight into the DCF cost of equity results (see Schedule 30).

- Q. Please describe the analysis completed on the reported returns on equity and market-to-book values for the nine comparable electric utility companies.
- A. The market-to-book ratio is an important valuation ratio. It indicates the value that the financial markets attach to the management and organization of the company. It also measures, from an investor's viewpoint, the potential earnings power of a company. A well run company with strong management and an organization that functions efficiently should have a market value at least equal to the book value of its physical assets. Market-to-book ratios having values greater than 1.0 times are one indication that investors are satisfied with the potential returns and that the investors believe the company's expected earnings will be more than its cost of capital. It is difficult to predict future values for market-to-book ratios because they are affected by the overall market conditions and factors that determine stock prices.

Schedule 30 reports market-to-book values for Laclede and the seven comparable natural gas distribution companies, along with projected returns on common equity for 2001. The comparable companies had projected returns on common equity ranging from 9.50 percent to 13.50 percent and my recommended return on common equity for Laclede in the case is 8.75 percent to 9.75 percent. The seven comparable natural gas distribution companies had market-to-book ratios ranging from 1.33 times to 2.06 times, where Laclede's market-to-book ratio at March 31, 2001 was 1.55 times.

Q. Do you have any other evidence as to the reasonableness of your recommended cost of equity figure for the natural gas distribution industry?

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A. Yes. <u>The Value Line Investment Survey: Ratings & Reports</u>, June 22, 2001, predicts the natural gas distribution industry will earn 11.00 percent on common equity for 2001 and projects 11.50 percent for 2004 through 2006. In my opinion, the market views Laclede as less risky than the industry due to its "stable and secure customer base, low market risk, competitive gas space-heating rates, efficient operations, and management's continuing efforts to control costs." [Source: <u>Standard and Poor's Summary of Laclede Gas</u>, Ratings Direct, March 15, 2001.]

Rate of Return for Laclede

- Q. Please explain how the returns developed for each capital component are used in the ratemaking approach you have adopted to be applied to Laclede's Missouri natural gas distribution operations.
- A. The cost of service ratemaking method was adopted in this case. This approach develops the public utility's revenue requirement. The cost of service (revenue requirement) is based on the following components: prudent operation costs, rate base and a return allowed on the rate base (see Schedule 33).

It is my responsibility to calculate and recommend a rate of return that should be authorized on the Missouri jurisdictional natural gas distribution rate base for Laclede. Under the cost of service ratemaking approach, a weighted cost of capital in the range of 7.70 percent to 8.11 percent was developed for Laclede's Missouri natural gas distribution operations (see Schedule 33). This rate was calculated by applying an embedded cost of preferred stock of 4.96 percent, an embedded cost of long-term debt of 7.60 percent, an embedded cost of short-term debt of 5.84 percent and a return on common equity range of 8.75 percent to 9.75 percent to a capital structure consisting of 20.43 percent short-term debt, 38.52 percent long-term debt, 0.23

Direct Testimony of Roberta A. McKiddy

percent preferred stock and 40.82 percent common equity. Therefore, I am recommending that Laclede Gas Company's Missouri natural gas distribution operations be allowed to earn a return on its original cost rate base in the range of 7.70 percent to 8.11 percent.

Through my analysis, I believe that I have developed a fair and reasonable return and when applied to Laclede Gas Company's Missouri jurisdictional natural gas distribution rate base will allow Laclede the opportunity to earn the revenue requirement developed in this rate case.

Adjustments

- Q. Are you sponsoring any adjustment to Staff's revenue requirement run?
- A. Yes. I am sponsoring adjustment S-15.17 (\$225,337) to the Income Statement. During April 1999, Laclede issued 1,250,000 shares of common stock. In doing so, the Company incurred costs totaling \$1,126,684. It is Staff's position that these costs be recovered through rates as an above-the-line adjustment to operating expenses. I recommend these costs be amortized over five years for purposes of this case.

True-up Audit

- Q. Is the Staff proposing a true-up audit in this case?
- A. Yes. I am recommending a true-up audit be performed for the purpose of updating the capital structure and associated embedded costs through December 31, 2001. This would be in conjunction to those items recommended for true-up by Staff witness Doyle Gibbs of the Accounting Department in his direct testimony.
 - O. Does this conclude your prepared 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 Rates)	Case No. GR-2001-629
AFFIDAVIT OF ROBERTA A. MO	CKIDDY
STATE OF MISSOURI) ss.	
COUNTY OF COLE)	
Roberta A. McKiddy, being of lawful age, on her oath in the preparation of the foregoing Direct Testimony consisting of pages to be presented in the above foregoing Direct Testimony were given by her; that she he forth in such answers; and that such matters are true knowledge and belief.	in question and answer form, e case; that the answers in the as knowledge of the matters set
Roberta A. M	a. McKildy IcKiddy
Subscribed and sworn to before me this day of Octo	ober 2001.

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TONI M. CHARLTON NOTARY PUBLIC STATE OF MISSOURI COUNTY OF COLE My Commission Expires December 28, 2004

AN ANALYSIS OF THE COST OF CAPITAL

FOR

LACLEDE GAS COMPANY

CASE NO. GR-2001-629

SCHEDULES

BY

ROBERTA A. MCKIDDY

UTILITY SERVICES DIVISION

MISSOURI PUBLIC SERVICE COMMISSION

October 2001

List of Schedules

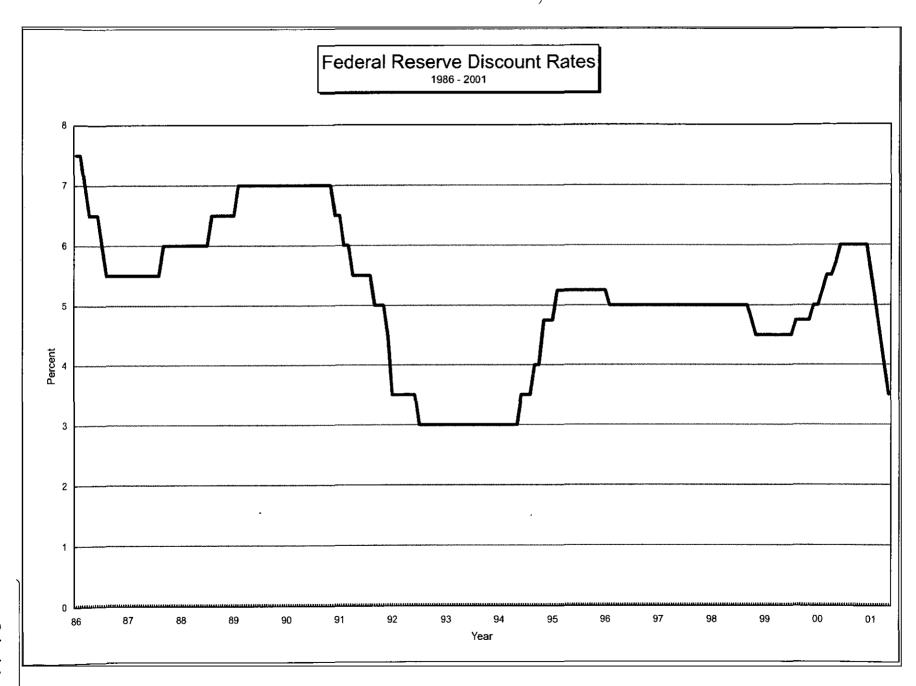
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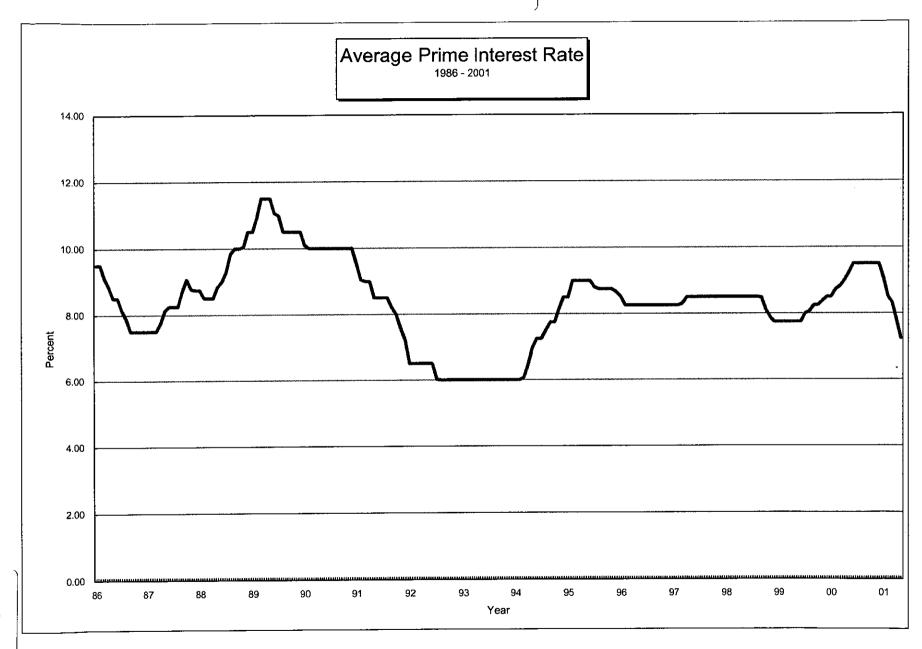
Federal Reserve Discount Rate Changes

	Discount
Date	Rate
05/20/85	7.50%
03/07/86	7.00%
04/21/86	6.50%
07/11/86	6.00%
08/21/86	5.50%
09/04/87	6.00%
08/09/88	6.50%
02/24/89	7.00%
12/19/90	6.50%
02/01/91	6.00%
04/30/91	5.50%
09/13/91	5.00%
11/06/91	4.50%
12/20/91	3.50%
07/02/92	3.00%
01/01/93	3.00%
12/31/93	3.00%
05/17/94	3.50%
08/16/94	4.00%
11/15/94	4.75%
02/01/95	5.25%
01/31/96	5.00%
12/12/97	5.00%
01/09/98	5.00%
03/06/98	5.00%
10/15/98	4.75%
11/17/98	4.50%
06/30/99	4.50%
08/24/99	4.75%
11/16/99	5.00%
02/02/00	5.25%
03/21/00	5.50%
05/16/00	5.50%
05/19/00	6.00%
01/03/01	5.75%
01/04/01	5.50%
01/05/01	5.50%
01/31/01	5.00%
02/01/01	5.00%
03/20/01	4.50%
03/21/01	4.50%
04/18/01	4.00%
04/20/01	4.00%
05/15/01	3.50%
06/27/01	3.25%
08/21/01	3.00%
09/16/01	2.50%



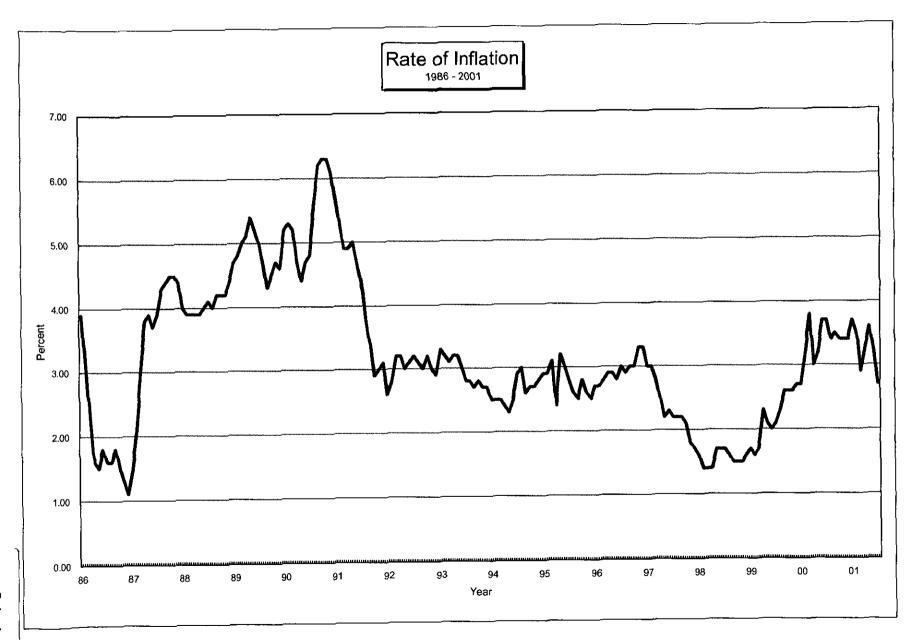
Average Prime Interest Rates

Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%)
Jan 1986	9.50	Jan 1990	10.11	Jan 1994	6.00	Jan 1998	8.50
Feb	9.50	Feb	10.00	Feb	6.00	Feb	8.50
Mar	9.10	Mar	10.00	Mar	6.06	Mar	8.50
Apr	8.83	Apr	10.00	Apr	6.45	Apr	8.50
Мау	8.50	May	10.00	May	6.99	May	8.50
Jun	8.50	Jun	10.00	Jun	7.25	Jun	8.50
Jul	8.16	Jul	10.00	Jul	7.25	Jul	8.50
Aug	7.90	Aug	10.00	Aug	7.51	Aug	8.50
Sep	7.50	Sep	10.00	Sep	7.75	Sep	8.49
Oct	7.50	Oct	10.00	Oct	7.75	Oct	8.12
Nov	7.50	Nov	10.00	Nov	8.15	Nov	7.89
Dec	7.50	Dec	10.00	Dec	8.50	Dec	7.75
Jan 1987	7.50	Jan 1991	9.52	Jan 1995	8.50	Jan 1999	7.75
Feb	7.50	Feb	9.05	Feb	9.00	Feb	7.75
Mar	7.50	Mar	9.00	Mar	9.00	Mar	7.75
Apr	7.75	Apr	9.00	Apr	9.00	Арг	7.75
May	8.14	May	8.50	May	9.00	May	7.75
Jun	8.25	Jun	8.50	Jun	9.00	Jun	7.75
Jul	8.25	Jul	8.50	Jul	8.80	Jul	8.00
Aug	8.25	Aug	8.50	Aug	8.75	Aug	8.06
Sep	8.70	Sep	8.20	Sep	8.75	Sep	8.25
Oct	9.07	Oct	8.00	Oct	8.75	Oct	8.25
Nov	8.78	Nov	7.58	Nov	8.75	Nov	8.37
Dec	8.75	Dec	7.21	Dec	8.65	Dec	8.50
Jan 1988	8.75	Jan 1992	6.50	Jan 1996	8.50	Jan 2000	8.50
Feb	8.51	Feb	6.50	Feb	8.25	Feb	8.73
Mar	8.50	Mar	6.50	Mar	8.25	Mar	8.83
Apr	8.50	Apr	6.50	Apr	8.25	Apr	9.00
May	8.84	May	6.50	May	8.25	May	9.24
Jun	9.00	Jun	6.50	Jun	8.25	Jun	9.50
lut	9.29	Jul	6.02	Jul	8.25	Jul	9.50
Aug	9.84	Aug	6.00	Aug	8.25	Aug	9.50
Sep	10.00	Sep	6.00	Sep	8.25	Sep	9.50
Oct	10.00	Oct	6.00	Oct	8.25	Oct	9.50
Nov	10.05	Nov	6.00	Nov	8.25	Nov	9.50
Dec	10.50	Dec	6.00	Dec	8.25	Dec	9.50
Jan 1989	10.50	Jan 1993	6.00	Jan 1997	8.26	Jan 2001	9.05
Feb	10.93	Feb	6.00	Feb	8.25	Feb	8.50
Mar	11.50	Mar	6.00	Mar	8.30	Mar	8.32
Apr	11.50	Apr	6.00	Apr	8 <i>.</i> 50	Apr	7.80
May	11.50	May	6.00	May	8.50	May	7.24
Jun	11.07	Jun	6.00	Jun	8.50	Jun	6.98
Jul	10.98	Jul	6.00	Jul	8.50	Jul	6.75
Aug	10.50	Aug	6.00	Aug	8.50		
Sep	10.50	Sep	6.00	Sep	8.50		
Oct	10.50	Oct	6.00	Oct	8.50		
Nov	10.50	Nov	6.00	Nov	8.50		
Dec	10.50	Dec	6.00	Dec	8.50		



Rate of Inflation

Mo/Year	Rate (%)						
Jan 1986	3.90	Jan 1990	5.20	Jan 1994	2.50	Jan 1998	1.60
Feb	3.10	Feb	5.30	Feb	2.50	Feb	1.40
Mar	2.30	Mar	5.20	Mar	2.50	Mar	1.40
Арг	1.60	Apr	4.70	Apr	2.40	Apr	1.40
May	1.50	May	4.40	May	2.30	May	1.70
Jun	1.80	Jun	4.70	Jun	2.50	Jun	1.70
Jul	1.60	Jul	4.80	Jul	2.90	Jul	1.70
Aug	1.60	Aug	5.60	Aug	3.00	Aug	1.60
Sep	1.80	Sep	6.20	Sep	2.60	Sep	1.50
Oct	1.50	Oct	6.30	Oct	2.70	Oct	1.50
Nov	1.30	Nov	6.30	Nov	2.70	Nov	1.50
Dec	1.10	Dec	6.10	Dec	2.80	Dec	1.60
Jan 1987	1.50	Jan 1991	5.70	Jan 1995	2.90	Jan 1999	1.70
Feb	2.10	Feb	5.30	Feb	2.90	Feb	1.60
Mar	3.00	Mar	4.90	Mar	3.10	Mar	1.70
Apr	3.80	Apr	4.90	Apr	2.40	Apr	2.30
May	3.90	May	5.00	May	3.20	May	2.10
Jun	3.70	Jun	4.70	Jun	3.00	Jun	2.00
Jul	3.90	Jul	4.40	Jul	2.80	Jul	2.10
Aug	4.30	Aug	3.80	Aug	2.60	Aug	2.30
Sep	4.40	Sep	3.40	Sep	2.50	Sep	2.60
Oct	4.50	Oct	2.90	Oct	2.80	Oct	2.60
Nov	4.50	Nov	3.00	Nov	2.60	Nov	2.60
Dec	4.40	Dec	3.10	Dec	2.50	Dec	2.70
Jan 1988	4.00	Jan 1992	2.60	Jan 1996	2.70	Jan 2000	2.70
Feb	3.90	Feb	2.80	Feb	2.70	Feb	3.20
Mar	3.90	Mar	3.20	Mar	2.80	Mar	3.70
Арг	3.90	Apr	3.20	Apr	2.90	Apr	3.00
May	3.90	May	3.00	May	2.90	May	3.20
Jun	4.00	Jun	3.10	Jun	2.80	Jun	3.70
Jul	4.10	Jul	3.20	Jul	3.00	Jul	3.70
Aug	4.00	Aug	3.10	Aug	2.90	Aug	3.40
Sep	4.20	Sep	3.00	Sep	3.00	Sep	3.50
Oct	4.20	Oct	3.20	Oct	3.00	Oct	3.40
Nov	4.20	Nov	3.00	Nov	3.30	Nov	3.40
Dec	4.40	Dec	2.90	Dec	3.30	Dec	3.40
Jan 1989	4.70	Jan 1993	3.30	Jan 1997	3.00	Jan 2001	3.70
Feb	4.80	Feb	3.20	Feb	3.00	Feb	3.50
Mar	5.00	Mar	3.10	Mar	2.80	Mar	2.90
Apr	5.10	Apr	3.20	Apr	2.50	Apr	3.30
May	5.40	May	3.20	May	2.20	May	3.60
Jun	5.20	Jun	3.00	Jun	2.30	Jun	3.20
Jul	5.00	Jul	2.80	Jul	2.20	Jul	2.70
Aug	4.70	Aug	2.80	Auġ	2.20	Aug	2.70
Sep	4.30	Sep	2.70	Sep	2.20		
Oct	4.50	Oct	2.80	Oct	2.10		
Nov	4.70	Nov	2.70	Nov	1.80		
Dec	4.60	Dec	2.70	Dec	1.70		



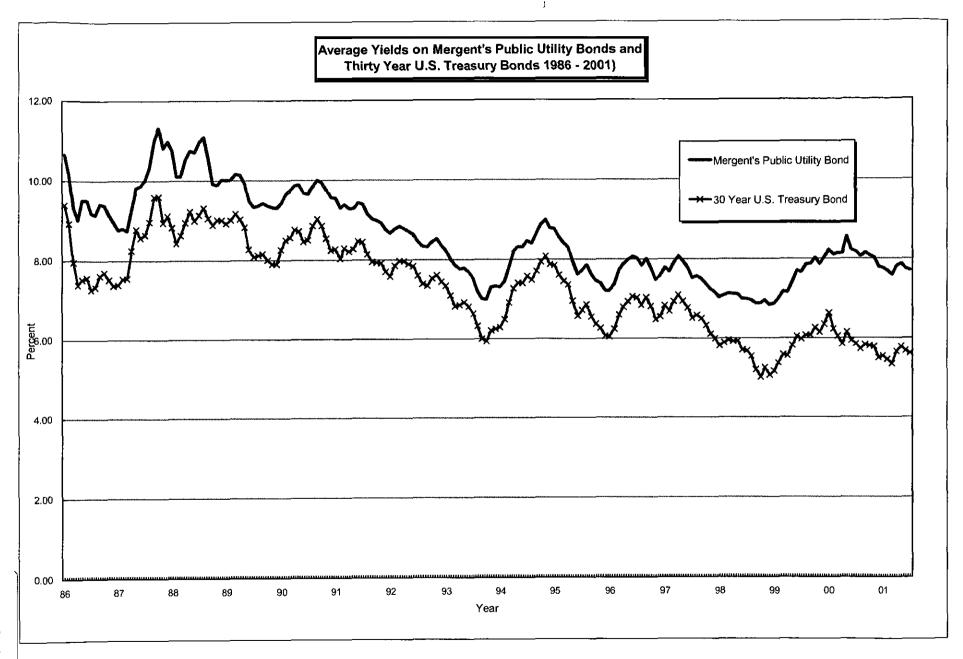
Average Yields on Mergent's Public Utility Bonds

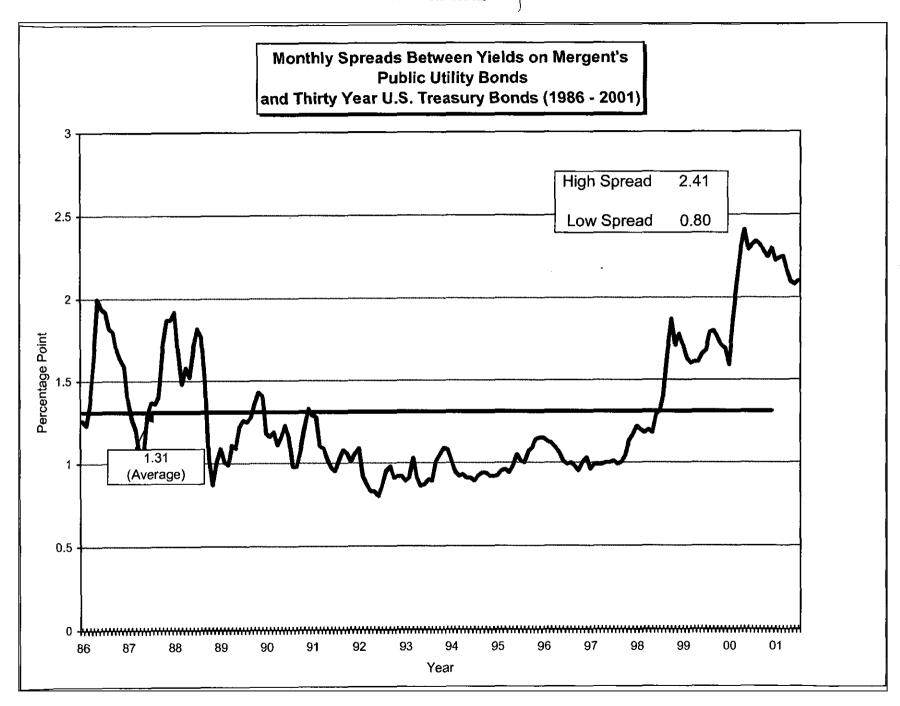
Mo/Year	Rate (%)						
Jan 1986	10.66	Jan 1990	9.44	Jan 1994	7.31	Jan 1998	7.03
Feb	10.16	Feb	9.66	Feb	7.44	Feb	7.09
Маг	9.33	Mar	9.75	Mar	7.83	Mar	7.13
Apr	9.02	Apr	9.87	Apr	8.20	Apr	7.12
May	9.52	May	9.89	May	8.32	May	7.11
Jun	9.51	Jun	9.69	Jun	8.31	Jun	6.99
Jul	9.19	Jul	9.66	Jul	8.47	Jul	6.99
Aug	9.15	Aug	9.84	Aug	8.41	Aug	6.96
Sep	9.42	Sep	10.01	Sep	8.65	Sep	6.88
Oct	9.39	Oct	9.94	Oct	8.88	Oct	6.88
Nov	9.15	Nov	9.76	Nov	9.00	Nov	6.96
Dec	8.96	Dec	9.57	Dec	8.79	Dec	6.84
Jan 1987	8.77	Jan 1991	9.56	Jan 1995	8.77	Jan 1999	6.87
Feb	8.81	Feb	9.31	Feb	8.56	Feb	7.00
Mar	8.75	Mar	9.39	Mar	8.41	Mar	7.18
Apr	9.30	Apr	9.30	Apr	8.30	Apr	7.16
May	9.82	May	9.29	May	7.93	May	7.42
Jun	9.87	Jun	9.44	Jun	7.62	Jun	7.70
Jul	10.01	Jul	9.40	Jul	7.73	ليال	7.66
Aug	10.33	Aug	9.16	Aug	7.86	Aug	7.86
Sep	11.00	Sep	9.03	Sep	7.62	Sep	7.87
Oct	11.32	Oct	8.99	Oct	7.46	Oct	8.02
Nov	10.82	Nov	8.93	Nov	7.40	Nov	7.86
Dec	10.99	Dec	8.76	Dec	7.21	Dec	8.04
Jan 1988	10.75	Jan 1992	8.67	Jan 1996	7.20	Jan 2000	8.22
Feb	10.11	Feb	8.77	Feb	7.37	Feb	8.10
Mar	10.11	Mar	8.84	Mar	7.72	Маг	8.14
Apr	10.53	Apr	8.79	Apr	7.88	Apr	8.14
May	10.75	May	8.72	May	7.99	May	8.55
Jun	10.71	Jun	8.64	Jun	8.07	Jun	8.22
Jul	10.96	Jul	8.46	Jul	8.02	Jul	8.17
Aug	11.09	Aug	8.34	Aug	7.84	Aug	8.05
Sep	10.56	Sep	8.32	Sep	8.01	Sep	8.16
Oct	9.92	Oct	8.44	Oct	7.76	Oct	8.08
Nov	9.89	Nov	8.53	Nov	7.48	Nov	8.03
Dec	10.02	Dec	8.36	Dec	7.58	Dec	7.79
Jan 1989	10.02	Jan 1993	8.23	Jan 1997	7.79	Jan 2001	7.76
Feb	10.02	Feb	8.00	Feb	7.68	Feb	7.69
Mar	10.16	Mar	7.85	Mar	7.92	Mar	7.59
Apr	10.14	Apr	7.76	Apr	8.08	Apr	7.81
May	9.92	May	7.78	May	7.94	May	7.88
Jun	9.49	Jun	7.68	Jun	7.77	Jun	7.75
Jul	9.34	Jul	7.53	Jul	7.52	Jul	7.71
Aug	9.37	Aug	7.21	Aug	7.57		
Sep	9.43	Sep	7.01	Sep	7.50		
Oct	9.37	Oct	6.99	Oct	7.37		
Nov	9.33	Nov	7.30	Nov	7.24		
Dec	9.31	Dec	7.33	Dec	7.16		

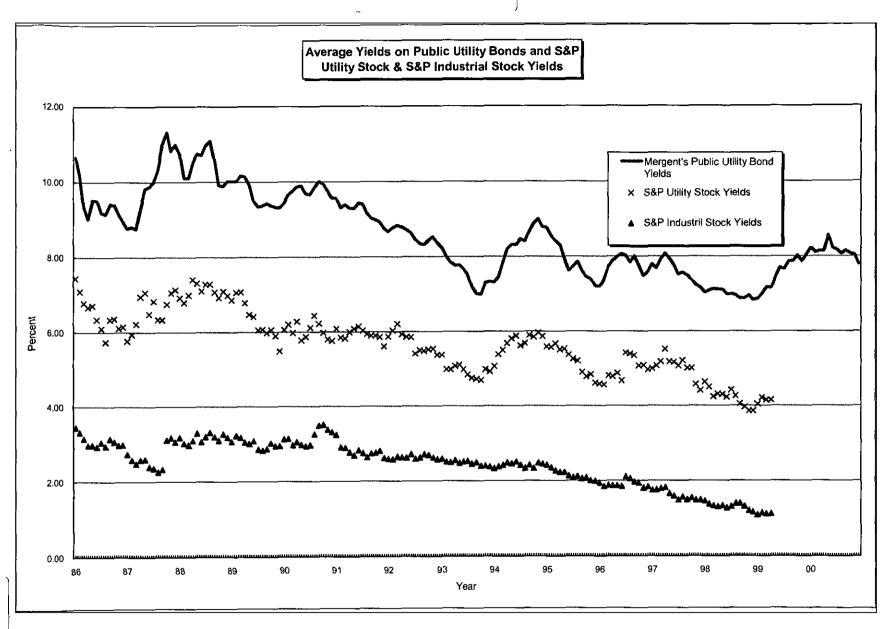
Source: Mergent Bond Record

Average Yields on Thirty Year U.S. Treasury Bonds

Mo/Year	Rate (%)	Mo/Year	_Rate (%)	Mo/Year	Rate (%)	Mo/Year	Rate (%
Jan 1986	9.40	Jan 1990	8.26	Jan 1994	6.29	Jan 1998	5.81
Feb	8.93	Feb	8.50	Feb	6.49	Feb	5.89
Mar	7.96	Mar	8.56	Mar	6.91	Mar	5,95
Apr	7.39	Apr	8.76	Apr	7.27	Apr	5.92
May	7.52	May	8.73	May	7.41	May	5.93
Jun	7.57	Jun	8.46	Jun	7.40	Jun	5.70
Jul	7.27	Jul	8.50	Jul	7.58	Jul	5.68
Aug	7.33	Aug	8.86	Aug	7.49	Aug	5.54
Sep	7.62	Sep	9.03	Sep	7.71	Sep	5.20
Oct	7.70	Oct	8.86	Oct	7.94	Oct	5.01
Nov	7.52	Nov	8.54	Nov	8.08	Nov	5.25
Dec	7,37	Dec	8.24	Dec	7.87	Dec	5.06
Jan 1987	7.39	Jan 1991	8.27	Jan 1995	7.85	Jan 1999	5.16
Feb	7.54	Feb	8.03	Feb	7.61	Feb	5.37
Mar	7.55	Mar	8.29	Mar	7.45	Mar	5.58
Apr	8.25	Apr	8.21	Apr	7.36	Apr	5.55
May	8.78	May	8.27	May	6.95	May	5.81
Jun	8.57	Jun	8.47	Jun	6.57	Jun	6.04
Jui	8.64	Jul	8.45	Jul	6.72	Jul	5.98
Aug	8.97	Aug	8.14	Aug	6.86	Aug	6.07
Sep	9.59	Sep	7.95	Sep	6.55	Sep	6.07
Oct	9.61	Oct	7.93	Oct	6.37	Oct	6.26
Nov	8.95	Nov	7.92	Nov	6.26	Nov	6.15
Dec	9.12	Dec	7.70	Dec	6.06	Dec	6.35
Jan 1988	8.83	Jan 1992	7.58	Jan 1996	6.05	Jan 2000	6.63
Feb	8.43	Feb	7.85	Feb	6.24	Feb	6.23
Mar	8.63	Mar	7.97	Mar	6.60	Mar	6.05
Apr	8.95	Apr	7.96	Apr	6.79	Apr	5.85
May	9.23	May	7.89	May	6.93	May	6.15
Jun	9.00	Jun	7.84	Jun	7.06	Jun	5.93
Jul	9.14	Jul	7.60	Jul	7.03	Jul	5.85
Aug	9.32	Aug	7.39	Aug	6.84	Aug	5.72
Sep	9.06	Sep	7.34	Sep	7.03	Sep	5.83
Oct	8.89	Oct	7.53	Oct	6.81	Oct	5.80
Nov	9.02	Nov	7.61	Nov	6.48	Nov	5.78
Dec	9.01	Dec	7.44	Dec	6.55	Dec	5.49
Jan 1989	8.93	Jan 1993	7.34	Jan 1997	6.83	Jan 2001	5.54
Feb	9.01	Feb	7.09	Feb	6.69	Feb	5.45
Mar	9,17	Mar	6.82	Mar	6.93	Mar	5.34
Apr	9.03	Apr	6.85	Apr	7.09	Apr	5.65
May	8.83	May	6.92	May	6.94	May	5.78
Jun	8.27	Jun	6.81	Jun	6.77	Jun	5.67
Jul	8.08	Jul	6.63	Jul	6.51	Jul	5.61
	8.12	Aug	6.32	Aug	6.58	oui	0.01
Aug Sep	8.15	Sep	6.00	Sep	6.50		
Oct	8.00	Oct	5.94	Oct	6.33		
	7.90	Nov	6.21	Nov	6.11		
Nov	7.90 7.90	Dec	6.25	Dec	5.99		
Dec	06.1	Dec	0.20	DEC	5.55		







Economic Estimates and Projections, 2001-2003

		Inflation Rate			Real GDP			Unemployment			3-Mo. T-Bill Rate			30-Yr, T-Bond Rate	i
Source	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003	2001	2002	2003
Velus Line Investment Survey (8/31/2001)	2.7%	2.4%	2.6%	1.5%	2.6%	3.3%	4.6%	5.2%	5.0%	3.9%	3.6%	4.0%	5.5%	5.7%	5.8%
The Budget end Economic Outlook FY2002-2011 (8/31/2001)	3.2%	2.5%	2.5%	1.7%	2.6%	3.2%	4.6%	5.2%	5.2%	3.9%	3.8%	4.9%	N.A.	N.A.	N.A.
Current rate	2.70%			0.30%			4.90%			3.36%			5.48%		

Notes: N.A. = Not Available.

* Reflects growth in the April-June quarter of 2001.

** Rate reported by Bureau of Labor Statistics for the period anding August 2001.

Sources of Current Rates:

The Bureau of Labor Statistics, Consumer Price Index - All Urban Consumers, 12-Month Period Ending August 31, 2001, http://stats.bls.gov/blshome.htm.

Federal Reserve website, http://www.stls.frb.org/fred/date/rates.html, for the 12-month period ending August 2001.

U.S. Department of Commerce, Bureau of Economic Analysis for the 12-month ending August 29, 2001, http://www.bea.doc.gov.

Other Sources:

The Congressional Budget Office, The Budget and Economic Outlook: Fiscal Years 2002-2011, August 31, 2001 as published on

http://www.cbo.gov/showdoc.cfm?index=3019&sequence=1 at September 19, 2001.

Historical Capital Structures for Laclede Gas Company

(Thousands of Dollars)

Capital Component	1996	1997	1998	1999	2000
Common Equity	\$240,843.0	\$250,387.0	\$256,785.0	\$282,324.0	\$282,985.0
Preferred Stock	\$1,960.0	\$1,960.0	\$1,960.0	\$1,958.0	\$1,813.0
Long-Term Debt	\$179,346.0	\$154,413.0	\$179,238.0	\$204,323.0	\$234,408.0
Short-Term Debt	\$59,600.0	\$74,000.0	\$98,500.0	_\$84,700.0_	\$127,000.0
Total	\$481,749.0	\$480,760.0	\$536,483.0	\$573,305.0	\$646,206.0

1996	1997	1998	1999	2000
49.99%	52.08%	47.86%	49.24%	43.79%
0.41%	0.41%	0.37%	0.34%	0.28%
37.23%	32.12%	33.41%	35.64%	36.27%
12.37%	15.39%	18.36%	14.77%	19.65%
100.00%	100.00%	100.00%	100.00%	100.00%
	49.99% 0.41% 37.23% 12.37%	49.99% 52.08% 0.41% 0.41% 37.23% 32.12% 12.37% 15.39%	49.99% 52.08% 47.86% 0.41% 0.41% 0.37% 37.23% 32.12% 33.41% 12.37% 15.39% 18.36%	49.99% 52.08% 47.86% 49.24% 0.41% 0.41% 0.37% 0.34% 37.23% 32.12% 33.41% 35.64% 12.37% 15.39% 18.36% 14.77%

Notes: The amount of Long-Term Debt includes Current Maturities.

Source: Laclede Gas Company's Stockholders Annual Reports.

Schedule 8

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Selected Financial Ratios for Laclede Gas Company

Financial Ratios	1996	1997	1998	1999	2000
Return on Year-End Common Equity	13.59%	12.93%	10.82%	9.20%	9.14%
Earnings Per Common Share	\$1.87	\$1.84	\$1.58	\$1.43	\$1.37
Cash Dividends Per Common Share	\$1.26	\$1.30	\$1.32	\$1.34	\$1.34
Common Dividend Payout Ratio	67.38%	70.65%	83.54%	93.71%	97.81%
Year-End Market Price Per Common Share	\$24.250	\$24.312	\$23.062	\$22.750	\$21.625
Year-End Book Value Per Common Share	\$13.72	\$14.26	\$14.57	\$14.96	\$14.99
Year-End Market to Book Ratio	1.77 x	1.70 x	1.58 x	1.52 x	1.44 x
Senior Debt Rating	AA-	AA-	AA-	AA-	AA-

Notes: Return on Year-End Common Equity = Net Income Applicable to Common Stock / Year-End Common Stockholders' Equity.

Common Dividend Payout Ratio = Cash Dividends Per Common Share / Earnings Per Common Share.

Year-End Market to Book Ratio = Year-End Market Price Per Common Share / Year-End Book Value Per Common Share.

All per share amounts reflect a two-for-one stock split effective February 11, 1994.

All per share amounts are as of September 30 fiscal year end.

All Year-End Market Price Per Common Share are as of September 30 fiscal year end.

Sources: Laclede Gas Company's Stockholders Annual Report for 2000 and Wallstreet City web site,

http://www.wallstreetcity.com/

Capital Structure as of July 31, 2001 for Laciede Gas Company

Capital Component	Amount in Dollars	Percentage of Capital	
Common Stock Equity	\$297,815,571	40.82%	
Preferred Stock	\$1,666,525	0.23%	
Long-Term Debt	\$281,089,183	38.52%	
Short-Term Debt	\$149,083,405	20.43%	
Total Capitalization	\$729,654,684	100.00%	

Gas Distribution Utility Financial Ratio Benchmarks

Total Debt / Total Capital - Including Preferred Stock

Standard & Poor's Corporation's	AA	Α
Utilities Rating Service	(Mean)	(Mean)_
Financial Statistics, July 2000		
(Average Business Position)	39 %	38 %

Notes: See Schedule 13 for the amount of Preferred Stock outstanding at July 31, 2001.

See Schedule 11-1 for the amount of Long-Term Debt outstanding at July 31, 2001.

See Schedule 12 for the average amount of Short-term Debt outstanding net of Construction Work in Progress.

Source: Laclede Gas Company's Response to Data Request Nos. 3801.

Embedded Cost of Long-Term Debt as of July 31, 2001 for Laclede Gas Company

	(1)	(2)	(3)
Long-Term Debt	Interest Rate	Prinicipal Amount Outstanding (7/31/01)	Annualized Cost to Company (1 * 2)
			<u>, , , , , , , , , , , , , , , , , , , </u>
First Mortgage Bonds:			
6-1/4% Series due May 1, 2003	6.250%	\$25,000,000	\$1,562,500
8-1/2% Series due Novermber 15, 2004	8.500%	\$25,000,000	\$2,125,000
8-5/8% Series due May 15, 2006	8.625%	\$40,000,000	\$3,450,000
7-1/2% Series due November 1, 2007	7.500%	\$40,000,000	\$3,000,000
6-1/2% Series due November 15, 2010	6.500%	\$25,000,000	\$1,625,000
6-1/2% Series due October 15, 2012	6.500%	\$25,000,000	\$1,625,000
7.00% Series due June 1, 2029	7.000%	\$25,000,000	\$1,750,000
7.90% Series due September 15, 2030	7.900%	\$30,000,000	\$2,370,000
6 5/8% Series due June 15, 2016	6.625%	\$50,000,000	\$3,312,500
Less: Unamortized Net Premium or Discount			
Expense and Debt Issuance Expense		(\$3,910,817)	
Add: Annual Amortization of Net Premium or Discount			
Expense and Debt Issuance Expense			\$537,274
Total		\$281,089,183	\$21,357,274

7.60%

Notes: Principal Amount Outstanding as of July 31, 2001 includes Current Maturities.

See Schedule 11-2 for the amount of the Annual Amortization of Net Premium or Discount Expense and Debt Issuance Expense.

Source: Laclede Gas Company's response to Staff's Data Information Request Nos. 3802.

Annual Amortization of Net Premium or Discount Expense and Debt Issuance Expense as of July 31, 2001 for Laclede Gas Company

(1) (2)

_ong-Term Debt	Maturity Date	Number of Months to Maturity (07/31/01)	Unamortized Net Premium or Discount Expense and Debt Issuance Expense (7/31/01)	Annual Amortization of Net Premium or Discount Expense and Debt Issuance Expense
First Mortgage Bonds:				
6-1/4% Series due May 1, 2003	(05/01/03)	21.3	\$73,329	\$41,312
8-1/2% Series due Novermber 15, 2004	(11/15/04)	40.1	\$79,174	\$23,693
8-5/8% Series due May 15, 2006	(05/15/06)	58.3	\$226,552	\$46,632
7-1/2% Series due November 1, 2007	(11/01/07)	76.1	\$253,043	\$39,884
6-1/2% Series due November 15, 2010	(11/15/10)	113.1	\$124,892	\$13,247
6-1/2% Series due October 15, 2012	(11/15/10)	113.1	\$368,824	\$39,121
7.00% Series due June 1, 2029	(06/01/29)	338.9	\$174,015	\$6,162
7.90% Series due September 15, 2030	(09/15/30)	354.6	\$386,295	\$13,073
6 5/8% Series due June 15, 2016	(06/15/16)	181.1	\$1,636,250	\$108,421
Reacquired First Mortgage Bonds:				
9.00% Series due May 1, 2011 (*)	(05/01/03)	21.3	\$326,264	\$183,811
9-5/8% Series due May 15, 2013	(05/15/13)	143.5	\$262,180	\$21,919
Total			\$3,910,817	 \$537,274

Note: Column 3 = [(Column 2 / Column 1) * 12].

Debt issuance Expense includes Losses on Reacquired Debt.

The Reacquired 9% Series due May 1, 2011, is being amortized over the life of the 6-1/4% Series due May 1, 2003, which was used to refinance the 9% Series due May 1, 2011.

Source: Laclede Gas Company's response to Staff's Data Information Request Nos. 3802 & 3804.

Average Net Short-Term Debt Outstanding for Laclede Gas Company

	(1)	(2)	(3)	(3)
	Short-Term	Construction	Gas	Net
	Debt	Work-In	Safety	Short-Term
Month	(End of Month)	Progress	Deferrals (AAOs)	Debt
July 2000	\$119,500,000	\$ 5,445. 9 49	\$1,025,585	\$113,028,466
August	\$144,500,000	\$9,176,212	\$1,025,365 \$1,084,969	\$134,238.819
September	\$127,000,000	\$6,811,755	\$1,144,800	\$119,043,445
October	\$159,550,000	\$11,480,869	\$1,214,338	\$146,854,793
November	\$189,100,000	\$9,033,262	\$1,284,865	\$178,781,873
December	\$198,800,000	\$7,738,155	\$1,359,994	\$189,701,851
January 2001	\$179,800,000	\$5,363,840	\$1,441,639	\$172,994,521
February	\$222,200,000	\$4 ,184,639	\$1,548,894	\$216,466,467
March	\$195,700,000	\$4,274,136	\$1,944,298	\$189,481,566

\$4,932,373

\$5,831,165

\$6,304,611

\$6,381,582

\$6,689,119

\$2,332,044

\$2,469,323

\$2,600,744

\$2,755,688

\$1,708,245

\$164,535,583

\$136,799,512

\$81,294,645

\$94,862,730

\$149,083,405

Notes:

April

May

June

July

13-Month Average

\$171,800,000

\$145,100,000

\$90,200,000

\$104,000,000

\$157,480,769

Source: Laclede Gas Company's Month Ending General Ledgers and Data Request No. 3803.

⁽¹⁾ Column 4 = Column 1 - (Column 2 + Column 3)

^{(2) 13-}month average was utilized in order to reflect a full 12 months of activity.

⁽³⁾ Column 3 represents Allowance for Gas Safety Deferrals financed at construction short-term debt rate.

Embedded Cost of Preferred Stock as of July 31, 2001 for Laclede Gas Company

	(1)	(2)	(3)
Preferred Stock	Dividend Rate	Prinicipal Amount Outstanding (7/31/01)	Annualized Cost to Company (1 * 2)
Redeemable Preferred Stock: Stated Par Value of \$25 Per Share	_		
5% Series B	5.000%	\$1,518,875	\$75,944
4.56% Series C	4.560%	\$147,650	\$6,733
Less: Net Unamortized Premium and Issuance Expense		\$0	
Total		\$1,666,525	\$82,677
	Ent. Hadour (Day	formal Organia	\$82,677
	Embedded Cost of Pre	terred Stock	\$1,666,525
			= 4.96%

Note:

The amount of Preferred Stock includes the amount redeemable within one year.

Source: Laclede Gas Company's response to Staff's Data Information Request No. 3802.

Dividends Per Share, Earnings Per Share & Book Value Per Share Growth Rates for Laclede Gas Company

	Dividends	Earnings	Book Value
Year	Per Share	Per Share	Per Share
1990	\$1.18	\$1.08	\$11.75
1991	\$1.20	\$1.28	\$11.83
1992	\$1.20	\$1.17	\$11.79
1993	\$1.22	\$1.61	\$12.19
1994	\$1.22	\$1.42	\$12.44
1995	\$1.24	\$1.27	\$13.05
1996	\$1.26	\$1.87	\$13.72
1997	\$1.30	\$1.84	\$14.26
1998	\$1.32	\$1.58	\$14.57
1999	\$1.34	\$1.47	\$14.96
2000	\$1.34	\$1.37	\$14.99

Annual Compound Growth Rates

	<u>DPS</u>	EPS	BVPS
1990 - 2000	1.28%	2.41%	2.47%
1995 - 2000	1.56%	1.53%	2.81%

Trend Line Growth Rates

	DPS	EPS	BVPS
1990 - 2000	1.39%	2.94%	2.95%
1995 - 2000	1.69%	-1.41%	2.82%

-	DPS	<u>EPS</u>	BVPS
Average of Historical Growth Rates:	1.48%	1.37%	2.76%
Standard Deviation:	0.16%	1.68%	0.18%

Source: Value Line Invetment Survey: Ratings and Reports, June 22, 2001.

Historical and Projected Growth Rates for Laclede Gas Company

Historical Growth Rates	
Average DPS Annual Compound & Trend Line Growth	1.48%
Average EPS Annual Compound & Trend Line Growth	1.37%
Average BVPS Annual Compound & Trend Line Growth	2.76%
Average of Historical Growth Rates	1.87%
Projected Growth Rates from Outside Sources	
Frojected Glowth Rates from Outside Sources	
5 Year Growth Forecast (Mean) I/B/E/S Inc.'s Institutional Brokers Estimate System August 16, 2001	3.33%
5-Year Projected EPS Growth Rate (120-day Concensus - Mean) Zack's Investment Research, Inc. August 23, 2001	3.00%
5-Year Projected EPS Growth Rate Standard & Poor's Corporation's Earnings Guide July 2001	3.00%
Projected EPS Growth Rate (3 to 5 Years) Value Line's Ratings and Reports June 22, 2001	6.50%
Average of Projected Growth Rates	3.96%

Proposed Range of Growth for Laclede Gas Company

3.00% to 4.00%

Monthly High / Low Average Dividend Yields for Laclede Gas Company

	(1)	(2)	(3)	(4)	(5)
Month / Year	High Stock Price	Low Stock Price	Average High / Low Price	Expected Dividend (Average)	Projected Dividend Yield
March 2001	24.480	22.240	\$23.360	\$1.355	5.80%
April 2001	24.480	23.100	\$23.790	\$1.355	5.70%
May 2001	25.300	23.100	\$24.200	\$1.355	5.60%
June 2001	25.480	23.580	\$24.530	\$1.355	5.52%
July 2001	25.400	21.750	\$23.575	\$1.355	5.75%
August 2001	25.350	21.950	\$23.650	\$1.355	5.73%
Average		•			5.68%

Proposed Dividend Yield for Laclede Gas Company:

5.75%

Notes:

Column 3 = [(Column 1 + Column 2)/2].

Column 4 = Estimated Dividends Declared per share represents the average projected dividends for 2001/2002.

Column 5 = (Column 4 / Column 3).

Sources: WallStreet City, http://www.wallstreetcity.com as of September 27, 2001.

Discounted Cash Flow (DCF) Costs of Common Equity Estimates for Laclede Gas Company

EDE's Cost of Common Equity		Dividend Yield	+	Expected Growth
8.75%	=	5.75%	+	3.00%
9.75%	=	5.75%	+	4.00%

Discounted Cash Flow (DCF) Model Derivation

Cost of Common Equity

Present Price = Expected Dividends + Present Price (1 + g) Discounted by k

where:
$$g = \text{estimated growth rate and } k = \text{cost of common equity.}$$

Letting: $P0 = \text{present price and } D1 = \text{expected dividends, then}$

P0 = $\frac{D1}{(1+k)}$ + $\frac{P0(1+g)}{(1+k)}$ or

k = $\frac{D1}{P0}$ + $\frac{D1}{P0}$ + $\frac{D1}{P0}$ + $\frac{D1}{P0}$ Thus:

Notes: See Schedule 16 for calculation of proposed range of dividend yield for The Empire District Electric Company.

See Schedule 15 for calculation of proposed range of growth for The Empire District Electric Company.

Expected Growth

Dividend Yield

Capital Asset Pricing Model (CAPM) Cost of Equity Estimates for Laclede Gas Company

LG's Cost of Common Equity	Risk Free = Rate +			LG's Beta *			Market Risk Premium (1926 - 1999)		
9.24%	=	5.34%	+	(0.50	*	7.80%)	
9.65%	=	5.78%	+	(0.50	*	7.80%)	

The capital asset pricing model (CAPM) describes the relationship between a security's investment risk and its market rate of return. This relationship identifies the rate of return which investors expect a security to earn so that its market return is comparable with the market returns earned by other securities that have similar risk. The general form of the CAPM is as follows:

Cost of Common Equity = Risk Free Rate + | Beta * Market Risk Premium | 1

where:

The Risk Free Rate reflects the level of return which can be achieved without accepting any risk. The Risk Free Rate is represented by the yield on 30-Year U.S. Treasury Bonds. The appropriate rate was determined to be the high / low range of 5.78% to 5.34% for the six-month period ending August 31, 2001. as published on the Federal Reserve website, http://www.stls.frb.org/fred/data/irates/gs30.

The Beta represents the relative movement and relative risk between a particular stock and the market. The appropriate Beta for Laclede Gas Company was determined to be 0.50 as published in The Value Line Investment Survey: Ratings & Reports, June 22, 2001.

The Market Risk Premium represents the expected return from holding the entire market portfolio less the expected return from holding a risk free investment. The appropriate Market Risk Premium was determined to be 7.80% as calculated in Ibbotson Associates, Inc's Stocks, Bonds, Bills, and Inflation: 2000 Yearbook for the period 1926-1999.

Average Risk Premium Above the Yields of 30-Year U.S. Treasury Bonds for Ladede Cas Company's Expected Returns on Common Equity

Sep Noct Noct In May Mar 1991 Feb 1991 Apr Apr Apr Noct Noct Noct Noct Noct Noct Noct Noct	MO/Year Jan 1990 Feb Mar Apr Apr Jun Jun Jun Jun Jun Jun
10.00% 10.00% 10.00% 10.00% 10.00% 11.50% 11	LG's Expected ROE 12,50% 12,50% 11,00% 11,00% 11,00% 10,00% 10,00%
9.03% 8.86% 8.124% 8.224% 8.224% 8.227% 8.227% 8.227% 8.227% 8.227% 8.227% 8.227% 8.227% 8.227% 8.227% 8.227% 8.227% 8.227% 8.227% 7.268% 8.268% 8.268% 7.268% 8.26	30-year U.S. Treasury Bond Yelids 8.35% 8.35% 8.45% 8.73% 8.73% 8.13% 8.46% 8.46% 8.80%
0.97% 1.46% 1.46% 1.46% 2.23% 2.23% 2.23% 2.25% 2.26%	LC's Risk Premilum 4,29% 4,00% 3,94% 2,24% 2,27% 2,27% 1,50% 1,14%
Sep oct Nov	MO/Yes Jan 198 Feb Mar Mar Apr Apr May Jun Jun
13.00% 14.00% 14.00% 14.00% 14.00% 12.00% 13	0
5.03% 6.63%	30-Year U.S. Treasury Bond Yields 0.52% 6.52% 6.62% 6.70% 7.00% 5.80%
๛๐๐๐๐๗๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛๛	ry LC's Risk Premium 2,25% 2,76% 5,27% 5,27% 5,27% 5,97% 6,16%

Sources: The Value Line Investment Survey: Ratings & Reports and the Federal Reserve web Site http://www.sta.tb.org/fred.claus/sees/gs20
--

Low Risk Premium: (September 1990)

0.97%

7.99%

High Risk Premium: (October 1998) Summary Information Average Risk Premium: (Jan 1990 - Aug 2001)

> (1990-2001) 4.50%

Risk Premium Costs of Equity Estimates for Laclede Gas Company

		30-Year U.S. Treasury		
LG's Cost of Common Equity	=	Bond Yield (8/31/01)	+_	Equity Risk Premium (Jan 1990 - Aug 2001)
9.98%	=	5.48%	+	4.50%

The risk premium approach is based upon the proposition that common stocks are more risky than debt and, as a result, investors require a higher expected return on stocks than bonds. In this approach, the cost of common equity is computed by the following formula:

Cost of Common Equity = Current Cost of Debt + Equity Risk Premium

where:

The Current Cost of Debt is represented by the yield on the 30-Year U.S. Treasury Bond. The appropriate rate was determined by using the yield on 30-Year U.S. Treasury Bonds at August 31, 2001 as stated on the Federal Reserve web site, http://www.stls.frb.org/fred/data/irates/gs30.

The Equity Risk Premium represents the difference between EDE's expected return on common equity (ROE) as projected in the Value Line Investment Survey and the 30-Year U.S. Treasury Bond Yield as stated on the Federal Reserve web site, http://www.stls.frb.org/fred/data/irates/gs30. The appropriate Equity Risk Premium was determined to be the average risk premium for the period January 1990 through August 2001. See Schedule 19 for the calculation of the Equity Risk Premium of 4.50%.

Criterion for Selecting Natural Gas Distribution Companies

		(1)	(2)	(3)	(4)	(5)	(6)	(7)
		Publicly		Distribution	Long-Term			Natural Gas
		Traded	Pre-Tax	Revenues	pebt to	Positive DPS		Distribution
		&	Interest	to	Total	Annual		Company
		Information	Coverage	Total	Capital	Compound	No	
	Ticker	Printed In	as 3/31/01	Revenues	as of 3/31/01	Growth Rate	Missouri	Met All
Natural Gas Distribution Company	Symbol	Value Line	> 2.7 X	> 90%	≤ 50%	(1990 - 2000)	Operations	Criteria
AGL Resources, Inc. (AGL)	ATG	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Atmos Energy Corporation	ATO	Yes	Yes	Yes	Yes	Yes	No	
Cascade Natural Gas Corporation	CGC	Yes	Yes	Yes	_No			
EnergySouth, Inc. (ENSI)	ENSI	Yes	Yes	Yes	_No			
Laclede Cas Company (LG)	LG	Yes	Yes	Yes	Yes	Yes	No	
New Jersey Resources Corporation	NJR	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Northwest Natural Gas Company (NWNG)	NWN	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NUI Corporation	NUI	Yes	Yes	Yes	No			
Peoples Energy Corporation (PGL)	PGL	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Piedmont Natural Gas Company, Inc. (PNY)	PNY	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RGC Resources, Inc.	RGCO	Yes	Yes	Yes	No			
South Jersey Industries, Inc.	IL2	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Southern Union Company	SUG	Yes	No					
WGL Holdings, Inc.	WCL	Yes	Yes	Yes	Yeş	Yes	Yes	Yes

Sources: Columns 1, 5 & 6 = Value Line Investment Survey: Ratings & Reports, June 22, 2001.

Columns 2 & 3 = Edward Jones & Co.'s Natural Gas Industry Summary: Quarterly Financial & Common Stock Information, June 30, 2001. Column 4 = Company Specific SEC Filings for the Quarter ending March 31, 2001.

Seven Comparable Natural Gas Distribution Companies for Laclede Gas Company

	Ticker	
Number	Symbol	Company Name
1	ATG	AGL Resources, Inc.
2	NJR	New Jersey Resources
3	NWN	Northwest Natural Gas Company
4	PGL	Peoples Energy Corporation
5	PNY	Piedmont Natural Gas Company, Inc.
6	SJI	South Jersey Industries
7	WGL	WGL Holdings, Inc.

	Dividend	s Per Share	Earnings	Per Share	Book Value Per Share		
Company Name	1990	2000	1990	2000	1990	2000	
AGL Resources, Inc.	\$0.98	\$1.08	\$1.01	\$1.29	\$8.97	\$11.50	
New Jersey Resources	\$1.44	\$1.72	\$0.97	\$2.69	\$13.27	\$18.65	
Northwest Natural Gas Company	\$1.10	\$1.24	\$1.62	\$1.79	\$12.61	\$17.93	
Peoples Energy Corporation	\$1.65	\$2.00	\$2.07	\$2.71	\$16.61	\$22.02	
Piedmont Natural Gas Company, Inc.	\$0.83	\$1.44	\$1.22	\$2.01	\$9,15	\$16.52	
South Jersey Industries	\$1.40	\$1.46	\$1.33	\$2.16	\$13,58	\$17.54	
Washington Cas Light Company	\$1.01	\$1.24	\$1.26	\$1.79	\$10.17	\$15.31	

Annual Compound Growth Rates -----

	DPS	EPS	BVPS
Company Name	1990-2000	1990-2000	1990-2000
AGL Resources, Inc.	0.98%	2.48%	2.52%
New Jersey Resources	1.79%	10. 74 %	3.46%
Northwest Natural Gas Company	1.21%	1.00%	3.58%
Peoples Energy Corporation	1.94%	2.73%	2.86%
Piedmont Natural Gas Company, Inc.	5.66%	5.12%	6.09%
South Jersey Industries	0.42%	4.97%	2.59%
WGL Holdings, Inc.	2.07 %	<u>3.57%</u>	4.18%
Average	2.01%	<u>4.37%</u>	<u>3.61%</u>
Standard Deviation	1.59%	2.92%	1.15%

Source: The Value Line Investment Survey: Ratings & Reports, June 22, 2001.

	(1)	(2)	(3)	(4)	(5)	(6)
	Average					
	Positive	Projected	Projected	Projected		••
	Historical	5 Year	5 Year	3-5 Year		
	Annual	Growth	EPS	EPS	Average	Historical
	Growth	IBES	Growth	Growth	Projected	& Projected
Company Name	Rate	(Mean)	(S&P)	Value Line	Growth	Growth
AGL Resources, Inc.	1.99%	7.16%	7.00%	7.50%	7.22%	4.60%
New Jersey Resources	5.33%	6.38%	7.00%	7.50%	6.96%	4.45%
Northwest Natural Gas Company	1.93%	4.55%	5.00%	8.50%	6.02%	4.26%
Peoples Energy Corporation	2.51%	5.57%	6.00%	8.50%	6.69%	6.16%
Piedmont Natural Gas Company, Inc.	5.62%	5.00%	5.00%	8.00%	6.00%	4.33%
South Jersey Industries	2.66%	5.67%	6.00%	7.50%	6.39%	4.83%
WGL Holdings, Inc.	3.27%	4.40%	4.00%	8.50%	5.63%	4.48%
Average	3.33%	5.53%	5.71%	8.00%	6.42%	4.73%

Proposed Range of Growth

5.00 - 6.50%

Notes:

Column 5 = 1 (Column 2 + Column 3 + Column 4 / 31.

Column 6 = I(Column 1 + Column 5)/2I.

Sources

Column 1 = Average of 10 Year Annual Compound Growth Rates from Schedule 22.

Column 2 = I/B/E/S Inc.'s Institutional Brokers Estimate System, Utility Industry/Company Long-term Growth Report, August 16, 2001.

Column 3 = Standard & Poor's Corporation's Earnings Guide, September 2001.

Column 4 = Value Line Investment Survey: Ratings and Report, June 22, 2001.

Average High/Low Stock Price for April 2001 through August 2001 for the Seven Comparable Natural Gas Distribution Companies

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	-— Apri	il 2001	Мау 2	001	Jun	ne 2001	Ju	ly 2001	August	2001	Average High/Low
	High	Low	High	Low	High	FOM	High	Low	High	Low	Stock
	Stock	Price									
Company Name	Price	(April-August 2001)									
AGL Resources, Inc.	\$22,860	\$20.900	\$24.250	\$22,100	\$24.090	\$22,500	\$24.220	\$22.180	\$25,150	\$21.390	\$22.964
New Jersey Resources	\$43,400	\$40.200	\$46.000	\$42,530	\$45.960	\$42,270	\$45.330	\$41.000	\$45.810	\$42.850	\$43.535
Northwest Natural Gas Company	\$24,100	\$22.000	\$24.250	\$21,650	\$25,250	\$23.850	\$25.150	\$23.580	\$25.490	\$23.810	\$23.913
Peoples Energy Corporation	\$41,120	\$37.800	\$41.150	\$38,450	\$42.300	\$38.630	\$40.750	\$34.350	\$39.910	\$36.560	\$39.102
Piedmont Natural Gas Company, Inc.	\$36,550	\$34.200	\$36.000	\$34.020	\$35.900	\$33.560	\$35.800	\$32.150	\$34.110	\$31.900	\$34.419
South Jersey Industries	\$30.950	\$29.050	\$31.550	\$29.950	\$31.500	\$29.950	\$31.950	\$30.650	\$32.300	\$30,750	\$30.860
WGL Holdings, Inc.	\$29,100	\$26.300	\$29.400	\$27.900	\$28.650	\$26.000	\$28.400	\$25.260	\$28.100	\$26.600	\$27.571

Notes: Column 11 = I (Column 1 + Column 2 + Column 3 + Column 4 + Column 5 + Column 6 + Column 7 + Column 8 + column 9 + Column 10 / 10).

Sources: Wall Street City Web Site, http://www.wallstreetcity.com/ as of September 25, 2001.

	(1)	(2)	(3)	(4)	(5)
		Average			
		High/Low		Average	Estimated
	Expected	Stock	Projected	Projected	Cost of
	Dividend	Price	Dividend	Growth	Common
Company Name	(average)	(4/30-8/31/01)	Yield	Rate	Equity
AGL Resources, Inc.	\$1.08	\$22,964	4.70%	7.22%	11.92%
New Jersey Resources	\$1.74	\$43.535	4.00%	6.96%	10.96%
Northwest Natural Gas Company	\$1.25	\$23.913	5.21%	6.02%	11.22%
Peoples Energy Corporation	\$2.02	\$39.102	5.17%	6.69%	11.86%
Piedmont Natural Gas Company, Inc.	\$1.48	\$34.419	4.30%	6.00%	10.30%
South Jersey Industries	\$1.47	\$30.860	4.76%	6.39%	11.15%
WGL Holdings, Inc.	\$1.25	\$27.571	4.53%	5.63%	10.17%
Average			4.67%	6.42%	11.08%

Proposed Dividend Yield

4.75%

Proposed Range of Growth

5.00 - 6.50%

Estimated Cost of Common Equity

9.75 - 11.25%

Notes:

Column 1 = Estimated Dividends Declared per share represents the average projected dividends for 2000 and 2001.

Column 3 = (Column 1 / Column 2).

Column 5 = (Column 3 + Column 4).

Sources: Column 1 = The Value Line Investment Survey: Ratings & Reports, June 22, 2001.

Column 2 = Schedule 25.

Column 4 = Schedule 24.

Average Risk Premium Above the Yields of 30-Year U.S. Treasury Bonds for AGL Resources, Inc.'s Expected Returns on Common Equity

		30-Year				30-year	
	AGL'5	U.S. Treasury	AGL'S		AGL'S	U.S. Treasury	AGL'S
Mo/Year	Expected ROE	Bond Yields	Risk Premlum	Mo/Year	Expected ROE	Bond Yields	Risk Premium
Jan 1990	12.50%	8.26%	4.24%	Jan 1996	13.00%	6.05%	6.95%
Feb	12.50%	8.50%	4.00%	Feb	13.00%	6.24%	6.76%
Mar	12.50%	8.56%	3.94%	Mar	13.00%	6.60%	6.40%
Apr May	12.00% 12.00%	8.76% 8.73%	3.24% 3.27%	Apr May	13.50% 13.50%	6.79% 6.93%	6.71% 6.57%
Jun	12.00%	8.46%	3.54%	Jun	13.50%	7.06%	6.44%
Jul	12.50%	8.50%	4.00%	ابرز	14.00%	7.03%	6.97%
Aug	12.50%	8.86%	3.64%	AUG	14.00%	6.84%	7.16%
Sep	12.50%	9.03%	3.47%	sep	14.00%	7.03%	6.97% 7.19%
Oct Nov	12.00% 12.00%	8.86% 8.54%	3.14% 3.46%	oct Nov	14.00% 14.00%	6.81% 6.48%	7,52%
Dec	12.00%	8.24%	3.76%	Dec	14.00%	6.55%	7,45%
Jan 1991	11.50%	8.27%	3.23%	Jan 1997	14.50%	6.83%	7.67%
Feb	11.50%	8.03%	3.47%	Feb	14.50%	6.69%	7.81%
Mar	11.50%	8.29%	3.21% 3.29%	Mar Apr	14.50% 14.00%	6.93% 7.09%	7,57% 6,91%
Apr May	11.50% 11.50%	8.21% 8.27%	3.23%	Way	14.00%	6.94%	7,06%
Jun	11.50%	8.47%	3.03%	Jun	14.00%	6.77%	7.23%
Jttl	11.50%	8.45%	3.05%	Jul	14.00%	6.51%	7.49%
Aug	11.50%	8.14%	3.36%	Aug	14.00%	6.58%	7.42% 7.50%
Sép Oct	11.50% 10.50%	7.95% 7.93%	3.55% 2.57%	sep oct	14.00% 13.50%	6.50% 6.33%	7,17%
Nov	10.50%	7.92%	2.58%	Nov	13.50%	6.11%	7,39%
Dec	10.50%	7.70%	2.80%	Dec	13.50%	5.99%	7.51%
Jan 1992	11.50%	7.58%	3.92%	Jan1998	11.50%	5.81%	5.69%
Feb	11.50%	7.85%	3.65%	Feb	11.50%	5.89% 5.95%	5.61% 5.55%
Mar Apr	11.50% 11.00%	7.97% 7.96%	3.53% 3.04%	mar Apr	11.50% 11.00%	5.92%	5.08%
May	11.00%	7.89%	3.11%	May	11.00%	5.93%	5.07%
Jun	11.00%	7.84%	3.16%	Jun	11.00%	5.70%	5.30%
Jul	11.00%	7.60%	3.40%	וטג	10.50%	5.68%	4.82%
Aug	11.00%	7.39%	3.61% 3.66%	Aug Sep	10.50% 10.50%	5.54% 5.20%	4,96% 5,30%
Sep Oct	11.00% 11.00%	7.34% 7.53%	3.47%	oct	10.50%	5.01%	5.49%
Nov	11.00%	7.61%	3.39%	Nov	10.50%	5.25%	5.25%
Dec	11.00%	7.44%	3.56%	Dec	10.50%	5.06%	5.44%
Jan 1993	11.50%	7.34%	4.16%	Jan 1999	12.00%	5.16%	6.84% 6.63%
Feb Mar	11.50% 11.50%	7.09% 6.82%	4.41% 4.68%	Feb Mar	12.00% 12.00%	5.37% 5.58%	6,42%
Apr	11.50%	6.85%	4.65%	Apr	12.00%	5.55%	6.45%
May	11.50%	6.92%	4.58%	May	12.00%	5.81%	6.19%
Jun	11.50%	6.81%	4.69%	Jun	12.00%	6.04%	5.96%
Jul	11.50%	6.63%	4.87% 5.18%	Jul Aug	11.50% 11.50%	5.98% 6.07%	5.52% 5.43%
Aug Sep	11.50% 11.50%	6.32% 6.00%	5.50%	Sep	11.50%	6.07%	5.43%
Oct	10.50%	5.94%	4.56%	oct	9.50%	6.26%	3.24%
Nov	10.50%	6.21%	4.29%	Nov	9.50%	6.15%	3.35%
Dec	10.50%	6.25%	4.25%	Dec	9.50%	6.35%	3.15%
Jan 1994 Feb	11.00% 11.00%	6.29% 6.49%	4.71% 4.51%	Jan 2000 Feb	9.50% 9.50%	6.63% 6.23%	2.87% 3.27%
Mar	11.00%	6.91%	4.09%	Mar	9.50%	6.05%	3,45%
Apr	10.50%	7.27%	3.23%	Apr	10.00%	5.85%	4.15%
May	10.50%	7.41%	3.09%	May	10.00%	6.15%	3.85%
Jun	10.50%	7.40%	3.10%	Jun	10.00%	5.93%	4.07% 4.65%
lul Aug	11.00% 11.00%	7.58% 7.49%	. 3.42% 3.51%	Jtrl Aug	10.50% 10.50%	5.85% 5.72%	4.78%
Aug Sep	11.00%	7.71%	3.29%	Sep	10.50%	5.83%	4.67%
Oct	11.00%	7.94%	3.06%	oct	10.50%	5.80%	4.70%
Nov	11.00%	8.08%	2.92%	Nov	10.50%	5.78%	4.72%
Dec	11.00%	7.87%	3.13%	Dec	10.50%	5.49% 5.64%	5.01%
Jan 1995 Feb	11.00% 11.00%	7.85% 7.61%	3.15% 3.39%	Jan 2001 Feb	11.50% 11.50%	5.54% 5.45%	5.96% 6.05%
Mar	11.00%	7.45%	3.55%	Mar	11.50%	5.34%	6.16%
Apr	12.00%	7.36%	4.64%	Apr	12.00%	5.65%	6.35%
May	12.00%	6.95%	5.05%	May	12.00%	5.78%	6.22% 6.33%
Jun	12.00% 11.50%	6.57% 6.72%	5.43% 4.78%	inf Մոն	12.00% 13.00%	5.67% 5.61%	7.39%
Jul Aug	11.50%	6.86%	4.64%	Aug	13.00%	5.48%	7.52%
Sep	11.50%	6.55%	4.95%	• • • •			
Oct	12.50%	6.37%	6.13%				
Nov	12.50%	6.26%	6.24%				
Dec	12.50%	6.06%	6.44%				

Summary Information	(1990-2000)
Average Risk Premium: Uan 1990 - Aug 2001)	4.86%
High Risk Premium: (February 1997)	7.81%
Low Risk Premium: (October 1991)	2.57%

Average Risk Premium Above the Yields of 30-Year U.S. Treasury Bonds for New Jersey Resources's Expected Returns on Common Equity

		30-Year				30-Year	
	NJR's	U.S. Treasury	NJR'S		NJR'S	U.S. Treasury	NJR's
Managar	Expected	Bond	Risk		Expected	Bond	RISK
Mo/year Jan 1990	ROE 11.50%	Yields 8.26%	Premlum	Mo/Year	ROE	_Yields	Premium
Feb	11.00%	8.50%	3.24% 2.50%	Jan 1996 Feb	13.50% 13.50%	6.05% 6.24%	7.45% 7.26%
Mar	11.00%	8.56%	2.44%	Mar	13.50%	6.60%	6.90%
Apr	11.00%	8.76%	2,24%	Apr	13.50%	6.79%	6.71%
May	8.00%	8.73%	-0.73%	May	13.50%	6.93%	6.57%
Jun Jul	8.00% 8.00%	8.46%	-0.46%	Jun	13.50%	7.06%	6.44%
Aug	7.00%	8.50% 8.86%	-0.50% -1.86%	Jul Aug	13.50% 13.50%	7.03% 6.84%	6.47% 6.66%
Sep	7.00%	9.03%	-2.03%	Sep	13.50%	7.03%	6.47%
Oct	7.00%	8.86%	-1.86%	Oct	13.50%	6.81%	6.69%
Nov	7.00%	8.54%	-1.54%	Nov	13.50%	6.48%	7.02%
Dec Jan 1991	7. 00 % 10.00%	8.24% 8.27%	·1.24%	Dec	13.50%	6.55%	6.95%
Feb	9.00%	8.27%	1.73% 0.97%	Jan 1997 Feb	14.50% 14.50%	6.83% 6.69%	7.67% 7.81%
Mar	9.00%	8.29%	0.71%	Mar	14.50%	6.93%	7.57%
Apr	9.00%	8.21%	0.79%	Apr	14.00%	7.09%	6.91%
May	7.50%	8.27%	-0.77%	May	14.00%	6.94%	7.06%
Jun Jul	7.50% 7.50%	8.47%	-0.97%	Jun	14.00%	6.77%	7.23%
Aug	8.00%	8.45% 8.14%	-0.95% -0.14%	Jul Aug	14.50% 14.50%	6.51% 6.58%	7.99% 7.92%
Sep	8.00%	7.95%	0.05%	Sep	14.50%	6.50%	8.00%
Oct	8.00%	7.93%	0.07%	Oct	14.50%	6.33%	8.17%
Nov	7.50%	7.92%	-0.42%	Nov	14.50%	6.11%	8.39%
Dec Jan 1992	7.50% 11.00%	7.70%	-0.20%	Dec	14.50%	5.99%	8.51%
Feb	10.50%	7.58% 7.85%	3.42% 2.65%	Jan1998 Feb	14.50% 14.50%	5.81% 5.89%	8.69% 8.61%
Mar	10.50%	7.97%	2.53%	Mar	14.50%	5.95%	8.55%
Apr	10.50%	7.96%	2.54%	Арг	14.50%	5.92%	8.58%
May	9.00%	7.89%	1.11%	May	14.50%	5.93%	8.57%
Jun	9.00% 9.00%	7.84%	1.16%	Jun	14.50%	5.70%	8.80%
Jul Aug	10.50%	7.60% 7.39%	1.40% 3.11%	Jul Aug	15.00% 15.00%	5.68% 5.54%	9.32% 9.46%
Sep	10.50%	7.34%	3.16%	Sep	15.00%	5.20%	9.80%
Oct	10.50%	7.53%	2.97%	Oct	15.00%	5.01%	9.99%
Nov	11.50%	7.61%	3.89%	Nov	15.00%	5.25%	9.75%
Dec	11.50%	7.44%	4.06%	Dec	15.00%	5.06%	9.94%
Jan 1993 Feb	12.00% 11.50%	7.34%	4.66% 4.41%	Jan 1999	14.50%	5.16%	9.34%
Mar	11.50%	7.09% 6.82%	4.41%	Feb Mar	14.50% 14.50%	5.37% 5.58%	9.13% 8.92%
Apr	11.50%	6.85%	4.65%	Apr	14.50%	5.55%	8.95%
May	12.00%	6.92%	5.08%	May	14.50%	5.81%	8.69%
าักม	12.00%	6.81%	5.19%	Jun	14.50%	6.04%	8.46%
Jul Aug	12.00% 11.50%	6.63%	5.37% 5.18%	Jul	14.50%	5.98%	8.52%
Sep	11.50%	6.32% 6.00%	5.50%	Aug Sep	14.50% 14.50%	6.07% 6.07%	8.43% 8.43%
Oct	11,50%	5.94%	5.56%	Oct	14.50%	6.26%	8.24%
Nov	11.50%	6.21%	5.29%	Nov	14.50%	6.15%	8.35%
Dec	11.50%	6.25%	5.25%	Dec	14.50%	6.35%	8.15%
Jan 1994 Feb	12.00% 12.00%	6.29%	5.71%	Jan 2000	15.00%	6.63%	8.37%
Mar	12.00%	6.49% 6.91%	5.51% 5.09%	Feb Mar	15.00% 15.00%	6.23% 6.05%	8.77% 8.95%
Apr	12.00%	7.27%	4.73%	Apr	15.00%	5.85%	9.15%
May	12.00%	7.41%	4.59%	May	15.00%	6.15%	8.85%
Jun	12.00%	7.40%	4.60%	Jun	15.00%	5.93%	9.07%
Jul Aug	12. 00 % 12. 00 %	7.58%	4.42%	Jul	15.00%	5.85%	9.15%
Sep	12.00%	7.49% 7.71%	4.51% 4.29%	Aug Sep	15.00% 15.00%	5.72% 5.83%	9.28% 9.17%
oct	12.00%	7.94%	4.06%	Oct	15.00%	5.80%	9.20%
Nov	12.00%	8.08%	3.92%	Nov	15.00%	5.78%	9.22%
Dec	12.00%	7.87%	4.13%	Dec	15.00%	5.49%	9.51%
Jan 1995 Feb	11.50% 11.50%	7.85% 7.61%	3.65% 3.89%	Jan 2001 Feb	14.50%	5.54% 5.45%	8.96% 9.05%
Mar	11.50%	7.45%	4.05%	Mar	14.50% 14.50%	5.45% 5.34%	9.05% 9.16%
Apr	12.50%	7.36%	5.14%	Apr	14.50%	5.65%	8.85%
May	12.50%	6.95%	5.55%	May	14.50%	5.78%	8.72%
Jun	12.50%	6.57%	5.93%	Jun	14.50%	5.67%	8.83%
Jul Aug	12.50% 12.50%	6.72% 6.86%	5.78% 5.64%	Jul guA	12.50%	5.61% 5.48%	6.89%
Sep	12.50%	6.55%	5.95%	Aug	12.50%	3.48%	7.02%
Oct	13.00%	6.37%	6.63%				
Nov	13.00%	6.26%	6.74%				
Dec	13.00%	6.06%	6.94%				

Summary Information	(1990-2000
Average Risk Premium: Uan 1990 - Aug 2001)	7.08%
High Risk Premium: (Feb 1995)	9.99%
Low Risk Premium: (Jan 2000)	1.11%

Sources: The Value Line investment Survey: Ratings & Reports and Federal Reserve web site http://www.stis.frb.org/fred/data/irates/gs30

Average Risk Premium Above the Yields of 30-Year U.S. Treasury Bonds for Northwest Natural Gas Company's Expected Returns on Common Equity

		30-Year				30-Year	
	NWN's	U.S. Treasury	NWN's		NWN's	U.S. Treasury	NWN's
Mo/Year	Expected ROE	Bond Yields	Risk Premium	Mo/year	Expected ROE	Bond Yields	Risk Premium
Jan 1990	12.50%	8.26%	4.24%	Jan 1996	11.50%	6.05%	5.45%
Feb	12.50%	8.50%	4.00%	Feb	11.50%	6.24%	5.26%
Mar	12.50%	8,56%	3.94%	Mar	11.50%	6.60%	4.90%
Apr	12.50%	8.76%	3.74%	Apr	11.50%	6.79%	4.71%
May Jun	12.00% 12,00%	8.73% 8.46%	3.27% 3.54%	May Jun	11.50% 11.50%	6.93% 7.06%	4.57% 4.44%
Jul	12,00%	8.50%	3.50%	Jul	11.50%	7.03%	4.47%
Aug	12.00%	8.86%	3.14%	Aug	11.50%	6.84%	4.66%
Sep	12.00%	9.03%	2.97%	Sep	11.50%	7.03%	4.47%
Oct	12.00%	8.86%	3.14%	Oct	12.00%	6.81% 6.48%	5.19% 5.52%
Dec	11,50% 11,50%	8.54% 8.24%	2.96% 3.26%	Dec Nov	12.00% 12.00%	6.48% 6.55%	5.45%
Jan 1991	12,50%	8.27%	4.23%	Jan 1997	12.00%	6.83%	5.17%
Feb	12,50%	8.03%	4,47%	Feb	12.00%	6.69%	5.31%
Mar	12.50%	8.29%	4.21%	Mar	12.00%	6.93%	5.07%
Apr	12.50%	8.21%	4,29%	Apr	12.00%	7.09%	4.91%
May Jun	11.50% 11,50%	8.27% 8.47%	3,23% 3,03%	May Jun	12.00% 12.00%	6.94% 6.77%	5.06% 5.23%
Jul	11.50%	8.45%	3.05%	Jul	12.00%	6.51%	5.49%
Aug	12.00%	8.14%	3.86%	Aug	12.00%	6.58%	5.42%
Sep	12,00%	7.95%	4.05%	Sep	12.00%	6.50%	5.50%
Oct	12.00%	7.93%	4.07%	Oct	12.00%	6.33%	5.67%
Nov Dec	12.50% 12.50%	7.92 % 7.70 %	4,58% 4,80%	Nov Dec	12.00% 12.00%	6.11% 5.99%	5.89% 6.01%
Jan 1992	12.50%	7.58%	4.92%	Jan 1998	11,50%	5.81%	5.69%
Feb	12,00%	7.85%	4.15%	Feb	11,50%	5.89%	5.61%
Mar	12.00%	7.97%	4,03%	Mar	11.50%	5.95%	5.55%
Apr	12,00%	7.96%	4.04%	Арг	10.00%	5.92%	4.08%
May	11.00%	7.89%	3.11%	May Jun	10.00% 10.00%	5.93% 5. 70%	4.07% 4.30%
Jun Jul	11.00% 11,00%	7.84% 7.60%	3,16% 3,40%	Jun Jul	9.50%	5.68%	3.82%
Aug	9,00%	7.39%	1.61%	Aug	9.50%	5.54%	3.96%
Sep	9.00%	7.34%	1,66%	Sep	9.50%	5.20%	4.30%
Oct	9.00%	7.53%	1.47%	Oct	9.50%	5.01%	4.49%
Nov	7.50%	7.61%	-0.11%	Nov	9.50%	5.25% 5.06%	4.25% 4.44%
Dec Jan 1993	7.50% 7.50%	7.44% 7.34%	0,06% 0,16%	Dec Jan 1999	9.50% 11.00%	5.16%	5.84%
Feb	12.00%	7.09%	4,91%	Feb	11.00%	5.37%	5.63%
Mar	12.00%	6.82%	5.18%	Mar	11.00%	5.58%	5.42%
Apr	12.00%	6.85%	5.15%	Apr	8.50%	5.55%	2.95%
May	12.50%	6.92%	5.58% 5.69%	May nut	8.50 % 8.50%	5.81% 6.04%	2.69% 2.46%
Jun Jul	12.50% 12.50%	6.81% 6.63%	5,87%	Jul	9.50%	5.98%	3.52%
Aug	13.00%	6.32%	6.68%	Aug	9.50%	6.07%	3.43%
Sep	13.00%	6.00%	7,00%	Sep	9.50%	6.07%	3.43%
Oct	13.00%	5.94%	7.06%	Oct	10.50%	6.26%	4.24%
Nov	13.50% 13.50%	6.21%	7.29% 7.25%	Nov Dec	10.50% 10.50%	6.15% 6.35%	4.35% 4.15%
Dec Jan 1994	12.50%	6.25% 6.29%	6.21%	Jan 2000	10.50%	6.63%	3.87%
Feb	12.50%	6.49%	6,01%	Feb	10.50%	6.23%	4.27%
Mar	12.50%	6.91%	5,59%	Mar	10.50%	6.05%	4.45%
Apr	12.50%	7.27%	5.23%	Apr	10.00%	5.85%	4.15%
May Jun	11.50% 11.50%	7.41% 7.40%	4.09% 4.10%	May Jun	10.00% 10.00%	6.15% 5.93%	5.85% 4.07%
וער הטכ	11.50%	7.58%	3.92%	Jul	10.50%	5.85%	4.65%
Aug	9.50%	7.49%	2,01%	Aug	10.50%	5.72%	4.78%
Sep	9.50%	7.71%	1.79%	Sep	10.50%	5.83%	4.67%
Oct	10.50%	7.94%	2.56%	Oct	10.00%	5.80%	4.20%
Nov	10.50% 10.50%	8.08% 7.87%	2,42% 2,63%	Nov Dec	10.00% 10.00%	5.78% 5.49%	4.22% 4.51%
Dec Jan 1995	11.50%	7.35%	3.65%	Jan 2001	10.50%	5.54%	4.96%
Feb	11.50%	7.61%	3.89%	Feb	10.50%	5.45%	5.05%
Mar	11.50%	7.45%	4.05%	Mar	10.50%	5.34%	5.16%
Apr	11.00%	7.36%	3.64%	Apr	10.50%	5.65% 5.78%	4.85% 4.72%
May Jun	11. 90% 11. 00 %	6.95% 6.57%	4.05% 4.43%	May Jun	10.50% 10.50%	5.78% 5. 67 %	4.72%
Jul	10.50%	6.72%	4.45% 3.78%	Jul	9.50%	5.61%	3.89%
Aug	10.50%	6.86%	3.64%	Aug	9.50%	5.48%	4.02%
Sep	10.50%	6.55%	3.95%	•			
Oct	10.50%	6.37%	4.13%				
Nov Dec	10.50% 10.50%	6.26% 6.06%	4.24% 4.44%				
Dec	10.3070	0.0079					

Summary Information	(1990 - 2001)
Average Risk Premium: (Jan 1990 - Aug 2001)	4.28%
High Risk Premium: (November 1993)	7.29%
Low Risk Premium: (November 1992)	-0.11%

Sources: The Value Line Investment Survey: Ratings & Reports and Federal Reserve Web Site, http://www.stis.frb.org/fred/data/irates/gs30.

Average Risk Premium Above the Yields of 30-Year U.S. Treasury Bonds for Peoples Energy Corporation's Expected Returns on Common Equity

		30-Year				30-Year	
	PGL'S	U.S. Treasury	PGL's		PGL's	U.S. Treasury	PGL'S
	Expected	Bond	Risk		Expected	Bond	Risk
Mo/Year	ROE	<u>Yields</u>	<u>Premium</u>	<u>Mo/Ye</u> ar	ROE	<u>Yields</u>	<u>Premium</u>
Jan 1990	14.00%	8.26%	5.74%	Jan 1996	12.00%	6.05%	5.95%
Feb	14.00%	8.50%	5.50%	Feb	12.00%	6.24%	5.76%
Mar	14.00%	8.56%	5.44%	Mar	12.00%	6.60%	5.40%
Арг	14.00%	8.76%	5.24%	Apr	12.00%	6.79%	5.21% 5.07%
May Jun	14.00% 14.00%	8.73% 8.46%	5.27%	May Jun	12. 00 % 12. 00 %	6.93% 7.06%	4.94%
Juli	13,50%	8.50%	5.54% 5. 00 %	ווטל	13,50%	7.06%	6.47%
Aug	13.50%	8.86%	4.64%	Aug	13,50%	6.84%	6.66%
Sep	13.50%	9.03%	4.47%	Sep	13.50%	7.03%	6.47%
Oct	13.50%	8.86%	4.64%	Oct	15.00%	6.81%	8,19%
Nov	13.50%	8.54%	4.95%	Nov	15.00%	6.48%	8.52%
Dec	13,50%	8.24%	5.26%	Dec	15.00%	6.55%	8.45%
Jan 1991	14,00%	8.27%	5.73%	Jan 1997	12.00%	6.83%	5.17%
Feb	14.00%	8.03%	5.97%	Feb	12.00%	6.69%	5.31%
Mar	14.00%	8.29%	5.71%	Mar	12.00%	6.93%	5.07%
Apr	12.00%	8.21%	3.79%	Apr	12,00%	7.09%	4.91%
May	12.00%	8.27%	3.73%	May	12,00%	6.94%	5.06%
Jun	12.00%	8.47%	3.53%	Jun	12.00%	6.77%	5.23%
Jul	12.00%	8.45%	3.55%	Ju!	12.50%	6.51%	5.99%
Aug	12.00%	8.14%	3.86%	Aug	12.50%	6.58%	5.92%
Sep	12.00%	7.95%	4.05%	Sep	12.50%	6.50%	6.00%
Oct	11.50%	7.93%	3.57%	Oct	14.00%	6.33%	7.67%
Nov	11.50%	7.92%	3.58%	Nov	14.00%	6.11%	7.89%
Dec	11.50%	7.70%	3,80%	Dec	14.00%	5.99%	8.01%
Jan 1992	12.00%	7.58%	4.42%	Jan 1998	12.50%	5.81%	6.69%
Feb	12.00%	7.85%	4.15%	Feb	12.50%	5.89%	6.61%
Mar	12.00%	7.97%	4.03%	Mar	12.50%	5.95%	6.55%
Apr	11.50%	7.96%	3.54%	Apr	11.50%	5.92%	5.58%
May	11,50%	7.89%	3.61%	May	11.50%	5.93%	5.57%
Jun	11.50%	7.84%	3.66%	jun	11.50%	5.70%	5.80% 5.32%
Jul	11.50%	7.60%	3.90%	Jul ****	11.00%	5.68%	
Aug	11.50%	7.39%	4.11%	Aug	11.00%	5.54%	5,46%
Sep Oct	11.50% 11.50%	7.34% 7.53%	4.16% 3.97%	Sep Oct	11. 00 % 11. 00 %	5.20% 5.01%	5.80% 5.99%
Nov Dec	11.50% 11.50%	7.61% 7,44%	3.89% 4.06%	Nov Dec	11.00% 11.00%	5.25% 5.06%	5.75% 5.94%
					12.00%	5.16%	6.84%
Jan 1993 Feb	12.50%	7.34% 7.09%	5.16% 5.41%	Jan 1999 Feb	12,00%	5.37%	6.63%
Mar	12.50% 12.50%	6.82%	5.68%	Mar	12.00%	5.58%	6.42%
Apr	12.50%	6.85%	5.65%	Apr	10.50%	5.55%	4.95%
May	12.50%	6.92%	5.58%	May	10.50%	5.81%	4.69%
Jun	12.50%	6.81%	5.69%	Jun	10.50%	6.04%	4.46%
Jul	12.50%	6.63%	5.87%	Jui	10.50%	5.98%	4.52%
Aug	12.50%	6.32%	6.18%	Aug	10.50%	6.07%	4.43%
Sep	12.50%	6.00%	6.50%	Sep	10.50%	6.07%	4.43%
Oct	11.50%	5.94%	5.56%	Oct	10.50%	6.26%	4.24%
Nov	11.50%	6.21%	5.29%	Nov	10.50%	6.15%	4.35%
Dec	11.50%	6.25%	5.25%	Dec	10.50%	6.35%	4,15%
Jan 1994	12.00%	6.29%	5.71%	Jan 2000	12.00%	6.63%	5.37%
Feb	12.00%	6,49%	5.51%	Feb	12.00%	6.23%	5.77%
Mar	12.00%	6.91%	5.09%	Mar	12.00%	6.05%	5.95%
Apr	12.50%	7.27%	5.23%	Apr	11.50%	5.85%	5.65%
May	12.50%	7.41%	5.09%	 May 	11.50%	6.15%	5.35%
Ju n	12.50%	7.40%	5.10%	Jun	11.50%	5.93%	5.57%
Jul	11.50%	7.58%	3.92%	lut	12,00%	5.85%	6.15%
Aug	11.50%	7.49%	4.01%	Aug	12.00%	5.72%	6.28%
Sep	11.50%	7.71%	3.79%	Sep	12.00%	5.83%	6.17%
Oct	11.50%	7.94%	3.56%	Oct	12.00%	5.80%	6.20%
Nov	11.50%	8.08%	3.42%	Nov	12.00%	5.78%	6.22%
Dec	11.50%	7.87%	3.63%	Dec	12.00%	5.49%	6.51%
Jan 1995	11.00%	7.85%	3.15%	Jan 2001	12.50%	5.54% 5.45%	6.96% 7.05%
Feb	11.00%	7.61%	3.39%	Feb	12.50% 12.50%	5.45% 5.34%	7.05% 7.16%
Mar	11.00% 10.00%	7.45%	3.55%	Mar	12.50% 13.50%	5.65%	7.16% 7.85%
Apr Mav	10.00%	7.36% 6.95%	2.64% 3.05%	Apr May	13.50%	5.78%	7.85% 7.72%
May Jun	10.00%	6.57%	3.43%	may Jun	13.50%	5.67%	7.83%
Jul	9.50%	6.72%	2.78%	Jul	13.50%	5.61%	7.89%
Aug	9.50%	6.86%	2,64%	Aug	13.50%	5.48%	8.02%
Sep	9.50%	6.55%	2.95%	Aug	.3.3070	5.7070	5.52.1
Oct	9.50%	6.37%	3,13%				
Nov	9.50%	6.26%	3.24%				
Dec	9.50%	6.06%	3.44%				

Summary Information	(1990-2001)
Average Risk Premium: (Jan 1990 - Aug 2001)	5.23%
High Risk Premium: (November 1996)	8.52%
Low Risk Premium:	2.64%

Source: The Value Line investment Survey: Ratings & Reports and Federal Reserve web site, http://www.sts.frb.org/fred/data/irates/gs30.

Average Risk Premiunm Above the Yields of 30-Year U.S. Treasury Bonds for Piedmont Natural Gas Company's Expected Returns on Common Equity

		30-Year				30-Year	
	PNY'S	U.S. Treasury	PNY'S		PNY'S	U.S. Treasury	PNY's
	Expected	Bond	Risk		Expected	Bond	Risk
Mo/Year Jan 1990	ROE 13.00%	<u>Yleids</u> 8.26%	Premium	<u>_Mo/Year</u> Jan 1996	ROE 12.00%	<u>Yields</u>	Premium
Feb	13.00%	8.50%	4.74% 4.50%	Feb	12.00%	6.05% 6.24%	5.95% 5.76%
Mar	13.00%	8.56%	4.44%	Mar	12.00%	6.60%	5.40%
Apr	13.00%	8.76%	4.24%	Apr	12.00%	6.79%	5.21%
May	13.00%	8.73%	4.27%	May	12.00%	6.93%	5.07%
Jun	13.00%	8.46%	4.54%	Jun	12.00%	7.06%	4.94%
วุนโ	12.50%	8.50%	4.00%	Jul	12.50%	7.03%	5.47%
Aug	12.50%	8.86%	3.64%	Aug	12.50%	6.84%	5.66%
Sep Oct	12.50% 13.50%	9.03% 8.86%	3.47% 4.64%	sep oct	12.50% 12.50%	7.03% 6.81%	5. 47 % 5. 69 %
Nov	13.50%	8.54%	4.96%	Nov	12.50%	6.48%	6.02%
Dec	13.50%	8.24%	5.26%	Dec	12.50%	6.55%	5.95%
Jan 1991	13.50%	8.27%	5.23%	Jan 1997	12.00%	6.83%	5.17%
Feb	13.50%	8.03%	5.47%	Feb	12.00%	6.69%	5.31%
Mar	13.50%	8.29%	5.21%	Mar	12.00%	6.93%	5.07%
Apr	10.00%	8.21%	1.79%	Apr	12.50%	7.09%	5.41%
May	10.00%	8.27%	1.73% 1.53%	May	12.50%	6.94%	5.56% 5.73%
Jun Jul	10. 00 % 9.50%	8.47% 8.45%	1.05%	Jun Jul	12.50% 12.50%	6.77% 6.51%	5.75% 5.99%
Aug	9.50%	8.14%	1.36%	Aug	12.50%	6.58%	5.92%
Sep	9.50%	7.95%	1.55%	Sep	12.50%	6.50%	6.00%
Oct	8.50%	7.93%	0.57%	oct	13.00%	6.33%	6.67%
Nov	8.50%	7.92%	0.58%	Nov	13.00%	6.11%	6.89%
Dec	8.50%	7.70%	0.80%	Dec	13.00%	5.99%	7.01%
Jan 1992	11.50%	7.58%	3.92%	Jan 1998	13.00%	5.81%	7.19%
Feb	11.50%	7.85%	3.65%	Feb	13.00%	5.89%	7.11%
Mar	11.50%	7.97%	3.53%	Mar	13.00%	5.95%	7.05% 7.08%
Apr	13. 00 % 13. 00 %	7.96%	5.04% 5.11%	Apr	13.00% 13.00%	5.92% 5.93%	7.08% 7.0 7 %
May טעל	13.00%	7.89% 7.84%	5.16%	May Jun	13.00%	5.70%	7.30%
Jul	13.00%	7.60%	5.40%	Jul	13.50%	5.68%	7.82%
Aug	13.00%	7.39%	5.61%	Aug	13.50%	5.54%	7.96%
Sep	13.00%	7.34%	5.66%	sep	13.50%	5.20%	8.30%
Oct	13.00%	7.53%	5.47%	oct	13.50%	5.01%	8.49%
Nov	13. 00 %	7.61%	5.39%	NOV	13.50%	5.25%	8.25%
Dec	13.00%	7.44%	5.56%	Dec	13.50%	5.06%	8.44%
Jan 1993	13.50%	7.34%	6.16%	Jan 1999	13.50%	5.16%	8.34%
Feb	13.50%	7.09%	6.41%	Feb Mar	13.50%	5.37%	8.13% 7.92%
Mar Apr	13.50% 13.50%	6.82% 6.85%	6.68% 6.65%	Mai Apr	13.50% 13.00%	5.58% 5.55%	7.45%
May	13.50%	6.92%	6.58%	Way	13.00%	5.81%	7.19%
Jun	13.35%	6.81%	6.54%	Jun	13.00%	6.04%	6.96%
Jul	14.00%	6.63%	7.37%	Jul	12.50%	5.98%	6.52%
Aug	14.00%	6.32%	7.68%	Aug	12.50%	6.07%	6.43%
Sep	14.00%	6.00%	8.00%	sep	12.50%	6.07%	6.43%
Oct	13.00%	5.94%	7.06%	oct	12.00%	6.26%	5.74%
Nov	13.00%	6.21%	6.79%	NOV	12.00%	6.15%	5.85%
Dec	13.00%	6.25%	6.75%	Dec	12.00%	6.35%	5.65%
Jan 1994 Feb	10.00% 10.00%	6.29% 6.49%	3.71% 3.51%	Jan 2000 Feb	13.00% 13.00%	6.63% 6.23%	6.37% 6.77%
Mar	10.00%	6.91%	3.09%	Mar	13.00%	6.05%	6.95%
Apr	10.00%	7.27%	2,73%	Apr	12.50%	5.85%	6.65%
May	10.00%	7.41%	2.59%	Way	12.50%	6.15%	6.35%
Jun	10.00%	7.40%	2.60%	Jun	12.50%	5.93%	6.57%
Jul	11.00%	7.58%	3.42%	اپر	12.50%	5.85%	6.65%
Aug	1 1.00 %	7.49%	3.51%	Aug	12.50%	5.72%	6.78%
Sep	11.00%	7.71%	3.29%	sep	12,50%	5.83%	6.67%
Oct	11.50%	7.94%	3.56%	oct	12.50%	5.80%	6.70%
Nov	11.50%	8.08%	3.42%	Nov	12.50%	5.78%	6.72% 7.01%
Dec Jan 1995	11.50% 11.50%	7.87% 7.85%	3.63% 3.65%	Dec Jan 2001	12.50% 12.50%	5.49% 5. 5 4%	6.96%
Feb	11.50%	7.61%	3.89%	Feb	12.50%	5.45%	7.05%
Mar	11.50%	7.45%	4.05%	Mar	12.50%	5.34%	7.16%
Арг	12.00%	7.36%	4.64%	Apr	12.50%	5.65%	6.85%
May	12.00%	6.95%	5.05%	May	12.50%	5.78%	6.72%
Jun	12.00%	6.57%	5.43%	Jun	12.50%	5.67%	6.83%
ווול	11.50%	6.72%	4.78%	Jul	12.00%	5.61%	6.39%
Aug	11.50%	6.86%	4.64%	Aug	12.00%	5.48%	6.52%
Sep	11.50%	6.55% 6.37%	4.95%				
OCT NOV	11.50% 11.50%	6.37% 6.26%	5.13% 5.24%				
Dec	11.50%	6.06%	5.44%				
		2.0070					

Summary Information	(1990-2001)
Average Risk Premium: Uan 1990 - Aug 2001)	5.46%
High Risk Premium: (October 1998)	8.49%
Low Risk Premium:	0.57%

Average Risk Premium Above the Yields of 30-Year U.S. Treasury Bonds for South Jersey Industries' Expected Returns on Common Equity

		30-Year			-4,	70.1/24-	
	s'it.8	U.S. Treasury	\$JI's		s'ILS	30-Year U.S. Treasury	SJI's
	Expected	Bond	Risk		Expected	Bond	Risk
Mo/Year	ROE	Yields	Premium	Mo/Year	ROE	Yields	Premium
Jan 1990	14.00%	8.26%	5.74%	Jan 1996	10.50%	6.05%	4.45%
Feb	13.00%	8.50%	4.50%	Feb	10.50%	6.24%	4.26%
Mar	13.00%	8.56%	4.44%	Mar	10.50%	6.60%	3.90%
Apr May	13.00% 12.00%	8.76% 8.73%	4,24% 3.27%	Apr	10.50%	6.79%	3.71%
Jun	12.00%	8.46%	3.54%	May YeM	10.50% 10.50%	6.93% 7.06%	3.57% 3.44%
Jul	12.00%	8.50%	3.50%	Jul	10.50%	7.03%	3.47%
Aug	10.50%	8.86%	1.64%	Aug	10.50%	6.84%	3.66%
Sep	10.50%	9.03%	1.47%	Sep	10.50%	7.03%	3.47%
Oct	10.50%	8.86%	1.64%	Oct	11.00%	6.81%	4.19%
Nov	10.50%	8.54%	1,96%	Nov	11.00%	6.48%	4.52%
Dec Jan 1991	10.50% 12.00%	8.24%	2.26%	Dec	11.00%	6.55%	4.45%
Feb	12.00%	8.27% 8.03%	3.73% 3.97%	Jan 1997 Feb	12.00% 12.00%	5.83% 6.69%	5.17%
Mar	12.00%	8.29%	3.71%	Mar	12.00%	6.93%	5.31% 5.07%
Apr	12.00%	8.21%	3.79%	Apr	10.50%	7.09%	3.41%
May	12.00%	8.27%	3.73%	May	10.50%	6.94%	3.56%
Jun	12.00%	8.47%	3.53%	Jun	10.50%	6.77%	3.73%
Jul	12.00%	8.45%	3.55%	Jul	10.50%	6.51%	3.99%
Aug	10.50%	8.14%	2.36%	Aug	10.50%	6.58%	3.92%
Sep Oct	10.50% 10.50%	7.95%	2.55%	Sep	10.50%	6.50%	4.00%
Nov	9.50%	7.93% 7.92%	2.57% 1.58%	Oct Nov	10.50%	6.33%	4.17%
Dec	9.50%	7.70%	1,80%	Dec	10.50% 10.50%	6.11% 5.99%	4.39% 4.51%
Jan 1992	12.50%	7.58%	4.92%	Jan 1998	11.50%	5.81%	5.69%
Feb	10.50%	7.85%	2.65%	Feb	11.50%	5.89%	5.61%
Маг	10.50%	7.97%	2.53%	Mar	11.50%	5.95%	5.55%
Apr	10.50%	7.96%	2.54%	Apr	11.00% -	5.92%	5.08%
May	10.50%	7.89%	2.61%	May	11.00%	5.93%	5.07%
Jun Jul	10.50% 10.50%	7.84% 7. 5 0%	2,66% 2.90%	Jun	11.00%	5.70%	5.30%
Aug	12.00%	7.39%	4,61%	Jul Aug	9.50% 9.50%	5.68% 5.54%	3.82% 3.96%
Sep	12.00%	7.34%	4.66%	Sep	9.50%	5.20%	4.30%
Oct	12.00%	7.53%	4.47%	Oct	9.00%	5.01%	3.99%
Nov	12.00%	7.61%	4.39%	Nov	9.00%	5.25%	3.75%
Dec	12.00%	7.44%	4.56%	Dec	9.00%	5.06%	3.94%
Jan 1993	11.50%	7.34%	4.16%	Jan 1999	10.50%	5.16%	5.34%
Feb Mar	11.50% 11.5 0 %	7.09% 6.82%	4.41%	Feb	10.50%	5.37%	5.13%
Apr	11.50%	6.85%	4.68% 4.65%	Mar Apr	10.50% 11.00%	5.58% 5.55%	4.92% 5.45%
May	11.50%	6.92%	4,58%	May	11.00%	5.81%	5,19%
Jun	11.50%	6.81%	4.69%	Jun	11.00%	6.04%	4.96%
וטל	11.50%	6.63%	4.87%	Jul	12.00%	5.98%	6.02%
Aug	11.50%	6.32%	5.18%	Aug	12.00%	6.07%	5.93%
Sep	11.50%	6.00%	5.50%	Sep	12.00%	6.07%	5.93%
Oct Nov	10.50% 10.50%	5.94% 6.21%	4.56% 4.29%	Oct	12.00%	6.26%	5.74%
Dec	10.50%	6.25%	4.25%	Nov Dec	12.00% 12.00%	6.15% 6.35%	5.85% 5.65%
Jan 1994	10.50%	6.29%	4.21%	Jan 2000	11.50%	6.63%	4.87%
Feb	10.50%	6.49%	4.01%	Feb	11.50%	6.23%	5.27%
Mar	10.50%	6.91%	3.59%	Mar	11.50%	6.05%	5.45%
Apr	10.50%	7.27%	3.23%	Apr	11.50%	5.85%	5.65%
May	10.50%	7.41%	3.09%	May	11.50%	6.15%	5.35%
Jun Jul	10.50% 9.50%	7.40% 7.58%	3.10%	Jun	11.50% 11.50%	5.93%	5.57%
Aug	9.50%	7.49%	1.92% 2.01%	Jul Aug	11.50%	5.85% 5.72%	5.65% 5.78%
Sep	9.50%	7.71%	1.79%	Sep	11.50%	5.83%	5.67%
Oct	9.50%	7.94%	1.56%	Oct	11.50%	5.80%	5.70%
Nov	9.50%	8.08%	1.42%	Nov	11.50%	5.78%	5.72%
Dec	9.50%	7.87%	1.63%	Dec	11.50%	5.49%	6.01%
Jan 1995	12.00%	7.85%	4.15%	Jan 2001	12.00%	5.54%	6.46%
Feb Mac	12.00%	7.61%	4.39%	Feb	12.00%	5.45%	6.55%
Mar Apr	12,00% 12.00%	7.45% · 7.36%	4.55% 4.64%	Mar Apr	12. 00 % 12.00%	5.34% 5.65%	6.66% 6.35%
May	12.00%	6.95%	5.05%	May	12.00%	5.78%	6.22%
Jun	12.00%	6.57%	5.43%	Jun	12.00%	5.67%	6.33%
lut	12. 00 %	6.72%	5.28%	Jul	12.00%	5.61%	6.39%
Aug	12.00%	6.86%	5.14%	Aug	12.00%	5.48%	6.52%
Sep	12.00%	6.55%	5.45%				
Oct Nov	13.00%	6.37%	6.63%				
Dec	13.00% 13.00%	6.26% 6.06%	6.74% 6.94%				
		2.0070	0,0479				

Summary Information	(1990-2000)
Average Risk Premium: (Jan 1990 - Aug 2001)	4.35%
High Risk Premium: (October 1998)	6.94%
Low Risk Premium: (October 1991)	1.42%

Source: The Value Line Investment Survey: Ratings & Reports and Federal Reserve web site, http://www.stis.frb.org/fred/data/krates/gs30.

Average Risk Premium Above the Yields of 30-Year U.S. Treasury Bonds for WGL Holdings, Inc.'s Expected Returns on Common Equity

		30-Year				30-Year	
	WGL's	U.S. Treasury	WGL's		WGL's	U.S. Treasury	WGL's
	Expected	Bond	Risk		Expected	Bond	Rísk
Mo/Year	ROE	Yields	Premium	Mo/Year	ROE	_Yields	Premium
Jan 1990	12.50%	8.26%	4.24%	Jan 1996	12.00%	6.05%	5.95%
Feb	12,50%	8.50%	4.00%	Feb	12.00%	6.24%	5.76%
Mar	12.50%	8.56%	3.94%	Mar	12.00%	6.60%	5.40%
Apr	12,00%	8.76%	3.24%	Apr	13.00%	6.79%	6.21%
May	12.00%	8.73%	3.27%	May	13.00%	6.93%	6.07%
Jun	12,00%	8.46%	3.54%	Jun	13.00%	7.06%	5.94%
Jul	12.00%	8.50%	3.50%	Jul	14.00%	7.03%	6.97%
Aug	12,00%	8.86%	3.14%	Aug	14.00%	6.84%	7,16%
Sep	12.00%	9.03%	2.97%	Sep	14.00%	7.03%	6.97%
oct	12.00%	8.86%	3.14%	Oct	14.50%	6.81%	7.69%
Nov	12.00%	8.54%	3.46%	Nov	14.50%	6.48%	8.02%
Dec	12,00%	8.24%	3.76%	Dec	14.50%	6.55%	7.95%
Jan 1991	13.00%	8.27%	4.73%	Jan 1997	14.50%	6.83%	7.67%
Feb	13.00%	8.03%	4.97%	Feb	14.50%	6.69%	7.81%
Mar	13,00%	8.29%	4.71%	Mar	14.50%	6.93%	7,57%
Apr	11.50%	8.21%	3.29%	Apr	12.50%	7.09%	5.41%
May	11,50%	8.27%	3.23%	May	12.50%	6.94%	5.56%
Jun	11.50%	8.47%	3.03%	Jun	12.50%	6.77%	5.73%
Jul	11.50%	8.45%	3.05%	Jul	13.00%	6.51%	6.49%
Aug	11.50%	8.14%	3.36%	Aug	13.00%	6.58%	6.42%
Sep	11.50%	7.95%	3.55%	Sep	13.00%	6.50%	6.50%
Oct	11, 00 %	7.93%	3.07%	Oct	13.50%	6.33%	7.17%
Nov	11,00%	7.92%	3.08%	Nov	13.50%	6.11%	7.39%
Dec	11.00%	7.70%	3.30%	Dec	13.50%	5.99%	7.51%
Jan 1992	12.50%	7.58%	4.92%	Jan 1998	13.50%	5.81%	7.69%
Feb	12.50%	7.85%	4.65%	Feb	13.50%	5.89%	7.61%
Mar	12,50%	7.97%	4.53%	Mar	13.50%	5.95%	7.55%
Apr	12.00%	7.96%	4.04%	Apr	12.00%	5.92%	6.08%
May	12.00%	7.89%	4.11%	May	12.00%	5.93%	6.07%
Jun	12.00%	7.84%	4.16%	jun	12.00%	5.70%	6.30%
Jul	12.00%	7.60%	4.40%	Jul	12.00%	5.68%	6.32%
Aug	12.00%	7.39%	4.61%	Aug	12.00%	5.54%	6.46%
Sep	12.00%	7.34%	4.66%	Sep	12.00%	5.20%	6.80%
Oct	12.00%	7.53%	4.47%	Oct	11.50%	5.01%	6.49%
Nov	12.00%	7.61%	4.39%	NOV	11.50%	5.25%	6.25%
Dec	12.00%	7.44%	4.56%	рес	11.50%	5.06%	6.44%
Jan 1993	12.00%	7.34%	4.66%	Jan 1999	10.50%	5.16%	5.34%
Feb	12.00%	7.09%	4.91%	Feb	10.50%	5.37%	5.13%
Mar	12.00%	6.82%	5.18%	Mar	10.50%	5.58%	4.92%
Арг	12.50%	6.85%	5.65%	Арг	9.00%	5.55%	3.45%
May	12,50%	6.92%	5.58%	May	9.00%	5.81%	3.19%
Jun	12,50%	6.81%	5.69%	Jun	9.00%	6.04%	2.96%
Jul	13.00%	6.63%	6.37%	Jul	9.50%	5.98%	3.52%
Aug	13.00%	6.32%	6.68%	Aug	9.50%	6.07%	3.43%
Sep	13.00%	6.00%	7.00%	Sep	9.50%	6.07%	3.43%
Oct	12.50%	5.94%	6.56%	Oct	10.00%	6.26%	3.74%
Nov	12.50%	6.21%	6.29%	Nov	10.00%	6.15%	3.85%
Dec	12.50%	6.25%	6.25%	Dec	10.00%	6.35%	3.65%
Jan 1994	11,50%	6.29%	5.21%	Jan 2000	12.00%	6.63%	5.37%
Feb	11.50%	6.49%	5.01%	Feb	12.00%	6.23%	5.77%
Mar	11.50%	6.91%	4.59%	Mar	12.00%	6.05%	5.95%
Apr	12.00%	7.27%	4.73%	Apr	12.00%	5.85%	6.15%
May	12.00%	7.41%	4.59%	May	12.00%	6.15%	5.85%
Jun	12,00%	7.40%	4.60%	jun	12.00%	5.93%	6.07%
Jul	12.50%	7.58%	4.92%	Jul	12.00%	5.85%	6.15%
Aug	12,50%	7.49%	5.01%	Aug	12.00%	5.72%	6.28%
Sep	12.50%	7.71%	4.79%	Sep	12.00%	5.83%	6.17%
Oct	12.00%	7.94%	4.06%	oct	12.00%	5.80%	6.20%
Nov	12.00%	8.08%	3.92%	Nov	12.00%	5.78%	6.22%
Dec .	12.00%	7.87%	4.13%	Dec	12.00%	5.49%	6.51%
Jan 1995	11.00%	7.85%	3.15%	Jan 2001	12.50%	5.54%	6.98%
Feb	11.00%	7.61%	3.39%	Feb	12.50%	5.45%	7.05%
Mar	11,00%	7.45%	3.55%	Маг	12.50%	5.34%	7.16%
Apr	11,00%	7.36%	3.64%	Apr	13.50%	5.65%	7.85%
May	11.00%	6.95%	4.05%	May	13.50%	5.78%	7.72%
Jun	11.00%	6.57%	4.43%	กมโ	13.50%	5.67%	7.83%
Jul	11.50%	6.72%	4.78%	Jul	12.50%	5.61%	6.89%
Aug	11.50%	6.86%	4.64%	Aug	12.50%	5.48%	7.02%
Sep	11.50%	6.55%	4.95%				
Oct	11.50%	6.37%	5.13%				
Nov	11.50%	6.26%	5.24%				
Dec	11.50%	8.06%	5.44%				

Summary Information	(1990-2000)
Average Risk Premium: Uan 1990 - Aug 2001)	5.26%
High Risk Premium: (November 1996)	8.02%
Low Risk Premium: (June 1999)	2.96%

Risk Premium Costs of Equity Estimates for the Seven Comparable Natural Gas Distribution Companies

	(1)	(2)	(3)	(4)
				Cost of
	Bond	Appropriate	Equity	Common
Company Name_	Rating	_ Yeild	Premium	Equity
AGL Resources, Inc.	A-	5.48%	4.86%	10.34%
New Jersey Resources	Α	5.48%	7.08%	12.56%
Northwest Natural Gas Company	Α	5.48%	4.28%	9.76%
Peoples Energy Corporation	A+	5.48%	5.23%	10.71%
Piedmont Natural Gas Company, Inc.	Α	5.48%	5.46%	10.94%
South Jersey Industries	BBB+	5.48%	4.35%	9.83%
WGL Holdings, Inc.	AA-	5.48%	5.26%	10.74%
Average				10.70%

NOTES:

Column 1 = The bond rating is from Standard & Poor's Utilities and Perspectives, September 24, 2001.

Column 2 = The appropriate yield is equal to the rate quoted on the Federal Reserve web site for 30-Year U.S. Treasury Bonds as of August 2001.

Column 3 = The equity premium represents the average difference between the Company's expected return on common equity as reported in The Value Line Investment Survey: Ratings & Report and the average yield on equally rated 30-Year U.S. Treasury Bonds from January 1990 through August 2001. (See Schedules 27-1 through 27-7)

Column 4 = Column 2 + Column 3.

Capital Asset Pricing Model (CAPM) Costs of Common Equity Estimates for the Seven Comparable Natural Gas Distribution Companies

	(1)	(2)	(3)	(4)	(5)	(6)
	Risk Free	Risk Free	Company's	Market	CAPM Cost of Common	CAPM Cost of Common
_	Rate	Rate	Value Line	Risk	Equity	Equity
Company Name	(Low)	(High)	Beta	<u>Premium</u>	(LOW)	(High)
AGL Resources, Inc.	5.34%	5.78%	0.55	7.80%	9.63%	10.07%
New Jersey Resources	5.34%	5.78%	0.55	7.80%	9.63%	10.07%
Northwest Natural Gas Company	5.34%	5.78%	0.55	7.80%	9.63%	10.07%
Peoples Energy Corporation	5.34%	5.78%	0.65	7.80%	10.41%	10.85%
Piedmont Natural Gas Company, Inc.	5.34%	5.78%	0.55	7.80%	9.63%	10.07%
South Jersey Industries	5.34%	5.78%	0.45	7.80%	8.85%	9,29%
WGL Holdings, Inc.	5.34%	5.78%	0.60	7.80%	10.02%	10.46%
Average			0.56		9.69%	10.13%

Notes: Column 5

Column 5 = { Column 1 + (Column 3 * Column 4)].

Column 6 = [Column 2 + (Column 3 * Column 4)].

Sources: Column 1 & 2 = The Risk Free Rate which is equal to the six month high and low of the 30-year U.S. Treasury Rate as quoted on the Federal Reserve web site, http://www.stis.frb.org/fred/data/irates/gs30.

Column 3 = Beta is a measure of the movement and relative risk on an individual stock to the market as a whole as reported by The Value Line Survey:

Ratings & Reports, June 22, 2001.

Column 4 = The Market Risk Premium is the amount over the Risk Free Rate that is demanded by investors for holding a portfolio of equal risk to the market and was reported by ibbotson Associates, Inc.'s Stocks, Bonds, Bills, and inflation: 2000 Yearbook for the period 1926 - 1999.

Selected Financial Ratios for the Seven Comparable Natural Gas Distribution Companies

Company Name	Date of Information	Common Equity to Total Capital Ratio	Market- to-Book Value (9/30/00)	Pre-Tax Interest Coverage Ratio	2001 Projected Return on Common Equity
AGL Resources, Inc.	3/31/2001	41.00%	1.92 x	3.44 x	13.00%
New Jersey Resources	3/31/2001	57.00%	2.06 x	5.23 x	12.50%
Northwest Natural Gas Company	3/31/2001	52.00%	* 1.33 X	3.10 x	9.50%
Peoples Energy Corporation	3/31/2001	57.00%	1.75 X	3.33 x	13.50%
Piedmont Natural Gas Company, Inc.	3/31/2001	48.00%	** 1.90 x	3.83 x	12.00%
South Jersey Industries	3/31/2001	56.00%	* 1.64 x	3.18 x	12.00%
WGL Holdings, Inc.	3/31/2001	<u>56.00%</u>	<u> 1.58</u>	3.00 x	<u>12.50%</u>
Average		52.43%	<u>1.74</u> ×	3.59 x	12.14%
Laclede Gas Company	3/31/2001	57.00 %	1.55 x	3.03 x	12.00%

Sources: The Value Line Investment Survey: Ratings & Reports, June 22, 2001.

Edward Jones' Natural Cas Industry Summary: Quarterly Financial and Common Stock Information, June 30, 2001.

^{*} For the period ending 12/31/00 ** For the period ending 10/31/00

Pro Forma Pre-Tax Interest Coverage Ratios for Laclede Gas Company

		8.75%	9.25%	9.75%
1.	Common Equity (Schedule 10)	\$297,815,571	\$297,815,571	\$297,815,571
2.	Earnings Allowed (ROE * [1])	\$26,058,862	\$27,547,940	\$29,037,018
3.	Preferred Dividends (Schedule 13)	\$82,677	\$82,677	\$82,677
4.	Net Income Available (121 + 131)	\$26,141,539	\$27,630,617	\$29,119,695
5.	Tax Multiplier (1/{1-Tax Rate})	1.6296	1.6296	1.6296
6.	Pre-Tax Earnings ({4}*{5})	\$42,600,080	\$45,026,671	\$47,453,263
7.	Annual Interest Costs [\$21,357,274 + (\$149,083,405*5.8 (Interest on Long-term debt + 1		\$30,063,745 erm debt)	\$30,063,745
8.	Avail. for Coverage	\$72,663,825	\$75,090,416	\$77,517,008
9.	Pro Forma Pre-Tax Interest Coverage ([8]/[7])	2.42 x	2.50 x	2.58 x
		Utility Financial Ratio E	Benchmarks Pretax Inter	est Coverage (x)
Ut	andard & Poor's Corporation's ilities Rating Service nancial Statistics	AA	A	BBB+
Ju	ly 2000 g. Business Position	4.9x	3.6x	2.2x

NOTE: Item 7 = (Total from Column 3 on Schedule 11-1) + (Net Short-term debt from Schedule 12 * Average Interst Rate on ST Debt)

Public Utility Revenue Requirement

or

Cost of Service

The formula for the revenue requirement of a public utility may be stated as follows:

Equation 1: Revenue Requirement = Cost of Service

or

Equation 2: RR = O + (V - D)R

The symbols in the second equation are represented by the following factors:

R R = Revenue Requirement

O = Prudent Operating Costs, including Depreciation and Taxes

V = Gross Valuation of the Property Serving the Public

D = Accumulated Depreciation

(V-D) = Rate Base (Net Valuation)

(V-D)R = Return Amount (\$\$) or Earnings Allowed on Rate Base

R = iL + dP + kE or Overall Rate of Return (%)

i = Embedded Cost of Debt

= Proportion of Debt in the Capital Structure

d = Embedded Cost of Preferred Stock

P = Proportion of Preferred Stock in the Capital Structure

k = Required Return on Common Equity (ROE)

E = Proportion of Common Equity in the Capital Structure

Schedule 32

Weighted Cost of Capital as of July 31, 2001 for Laclede Gas Company

Weighted Cost of Capital Using Common Equity Return of:

	Dorcentage	Emboddod	common admit, worth or			
Capital Component	Percentage Embedded of Capital Cost	<u>8.75</u> %	9.25%	9.75%		
Common Stock Equity	40.82%		3.57%	3.78%	3,98%	
Preferred Stock	0.23%	4.96%	0.01%	0.01%	0.01%	
Long-Term Debt	38.52%	7.60%	2.93%	2.93%	2.93%	
Short-Term Debt	20.43%	5.84%	1.19%	1.19%	1.19%	
Total	100.00%		7.70%	7.91%	8.11%	

Notes: See Schedule 10 for the Capital Structure Ratios

See Schedule 13 for the Embedded Cost of Preferred Stock

See Schedule 11-1 for the Embedded Cost of Long-Term Debt.

Laclede's Embedded Cost of Short-Term Debt is the average Short-Term Debt Interest Rate Paid for the 12 month Period Ended July 31, 2001, and was taken from the Company's Response to Staff's Data Information Request No. 3803.