Exhibit No. _____
Issue: Rate of Return
Witness: John C. Dunn
Sponsoring Party: Missouri Gas Energy
Case No.: GR-2001-292

BEFORE THE PUBLIC SERVICE COMMISSION
STATE OF MISSOURI

MISSOURI GAS ENERGY
CASE NO. GR-2001-292

DIRECT TESTIMONY

OF

JOHN C. DUNN

November 2000

DIRECT TESTIMONY OF JOHN C. DUNN
ON BEHALF OF
MISSOURI GAS ENERGY

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Q. Please state your name and business address.

A. My name is John C. Dunn. My business address is 7400 West 110th Street, Suite 750, Overland Park, Kansas 66210.

Q. What is your occupation?

A. I am an economist and partner in the firm of John C. Dunn and Company. I am an economic consultant specializing in the general area of public utility economics and corporate finance with special emphasis on the analysis of capital cost and rate of return.

Q. Have you prepared a statement of your qualifications and background?

A. Yes, I have. It is attached to my prepared testimony as Schedule 10.

Summary

Q. Please summarize the results of your rate of return determination.

A. Missouri Gas Energy ("MGE" or "Missouri Gas") is a division of Southern Union Company. As a division of Southern Union Company, MGE does not have its own capital structure and its own cost of debt. I have therefore analyzed a group of comparable companies to establish an appropriate capital structure for the division. I have assigned the Southern Union cost of debt for this rate proceeding.

Based on this group of comparable companies, the capital ratios used for MGE are 50% equity and 50% long term debt. The cost of long term debt is calculated at 8.3% and I have established that the appropriate cost of equity under current circumstances is a

minimum of 12.5%. Combining the capital ratios, the cost of debt and the cost of equity produces an overall rate of return requirement calculated as follows:

Cost of Capital
Missouri Gas Energy

	Ratio	Cost	Weighted Cost Of Capital
Long-term debt	50.0%	8.301%	4.151%
Common equity	50.0	12.500	6.250
Total	100.0%		10.401%

I believe that this rate of return and the return on equity it incorporates reflects the risks associated with the MGE natural gas utility system at the present time. It is, however, an absolute minimum return given the strong and continuing rise in the cost of capital for traditional economic ventures such as utilities. Furthermore, if the circumstances of the current capital markets continue to worsen, it will be necessary to increase the return.

I have also recommended that the rate of return be increased by .25 to reflect the customer service achievements of the company, as well as the company's overall operating efficiency.

Current Capital Market Conditions

Q. Mr. Dunn, can you compare the conditions of today's capital markets to previous conditions?

A. Several factors have combined to make the current marketplace for capital far different than at any time for at least the past twenty-five years and perhaps for our entire recent experience.

First, there has been a technological revolution which has divided the economy into the "old economy" and "new economy." Utilities are definitely viewed by investors today as a part of the old economy and are out of favor. Nonetheless, old economy companies, particularly utilities, continue to need capital even though investors seem to have lost interest in them. Simply put, investors have lost interest in the old economy because the risk-reward profile of the new economy is much better. To attract capital to utilities, the risk reward profile must be improved. Since virtually nothing can be done by the company alone to lower operating risk, this means returns must be improved.

Second, the Federal Reserve has expressed extreme concern about the level and growth in economic activity. This has caused the Federal Reserve to raise interest rates six times since June 1999 and more increases are possible. These changes in interest rates have a powerful impact on utilities because utilities are capital intensive. These interest rate changes have caused the cost for all other forms of capital, including equity capital, to also increase. The aggressive increases in the cost of debt have slowed primarily because of the pending election. There is divided opinion as to the prospects for continued changes in interest rates after the election. If the cost of energy declines, interest rates will likely begin to increase again. If the cost of energy does not decline, interest rates may actually be decreased slightly.

Third, these macro-economic trends are complicated and amplified by the special circumstances of the utility industry. The utility industry, and particularly the natural gas distribution industry, is perceived by investors to be moving into a competitive position. Generally this means that investors perceive that the protection that was often considered

a part of the regulatory process, the exclusivity that was considered a part of the franchising process, and the high level of predictability ascribed to utilities either no longer exists or has greatly diminished. This means that investors perceive greater risk which in turn means higher return requirements.

In sum, utility companies have fallen out of favor with the investing public. At the same time, the cost of capital is increasing as a result of the current actions of the Federal Reserve and the emergence of a new economy investment opportunity. Together, these forces impact the cost of capital in a very direct way for public utilities. Although intangible, these facts must be considered in the ultimate determination of rate of return.

Economic Background to Regulation

Q. How does the determination of rate of return fit into the regulatory proceeding?

A. One of the most important aspects of regulation is the process of rate review and authorization. By historic precedent (and statutory obligation), the Commission authorizes prices which a utility can charge customers for its services based on the actual costs incurred by the utility in delivering the services. The procedure used by the Commission involves the development of the utility's total cost of service or revenue requirement through the systematic step-by-step accumulation of its component parts. Then, through the process of rate design, this total cost is converted into prices for individual services for the various customer classes.

An important component of the total cost incurred by MGE to provide natural gas distribution service are payments made to the suppliers of capital. These payments include interest on borrowed capital and a competitive return for the ownership or equity

investment in the company. These payments constitute the cost of capital portion of the utility total cost or revenue requirement.

Q. Can the process used to develop the cost of service be stated as an equation?

A. Yes. Based on my experience, the specific procedure used by the Commission in developing the component costs and the overall revenue requirement can be symbolized as follows:

Cost of Service Equation

$$\text{Revenue Requirement} = E + D + T + R\,(V - AD + A)$$

Where:

E =Operating expense requirement
D =Depreciation on plant in rate base
T =Taxes including income tax related to return
R =Return requirement
(V-AD+A) =Rate base

Where:

V =Gross plant
AD =Accumulated depreciation
A =Other rate base items

This equation shows the revenue requirement as the sum of several elements including the return amount. The return requirement is calculated as the rate of return times the rate base. Key in this process is original cost of plant and the actual, precisely quantified rate of return.

Component Cost of Capital

Q. How is the rate of return calculated?

A. The process involves a determination of the capital structure or the amount of each type of capital used in financing the Company. Next, the percentage of each type of capital in

the capital structure is calculated. Then the cost of each type of capital is established. Finally, the capital ratios are multiplied by the cost of each of the capital components to develop a weighted average rate of return stated as a percentage. The average rate of return percentage multiplied by the rate base is the dollar return amount which is included in the cost of service.

Q. Can the calculation of the rate of return be stated as an equation?

A. The general formula used in the calculation of rate of return is as follows:

Rate of Return Equation

$$R = DK_D + PK_P + EK_E$$

Where:

R	=	Return requirement
D	=	Debt ratio
K_D	=	Cost of debt
P	=	Preference stock ratio
K_P	=	Cost of preference stock
E	=	Equity ratio
K_E	=	Cost of equity

This general formula is the weighted rate of return formula. The formula involves multiplying the cost of debt by the debt ratio, the cost of preferred by the preferred ratio, and the cost of equity by the equity ratio. The formula is a symbolic statement of the typical capital structure rate of return table.

Q. How important is the cost of capital determination for MGE?

A. The cost of capital determination is absolutely critical for MGE. MGE uses substantial facilities to provide service to its customers which for regulatory purposes are depreciated over long time periods. In the terminology of accounting and economics, the gas distribution business is capital intensive. This means all of the facilities used in providing

gas distribution service must be financed and because the facilities are costly and the amount of capital used by MGE is large. This makes the cost of capital a critical element of the rate determination.

Q. Who are the suppliers of MGE's capital?

A. Ultimately, all of the capital used by MGE, whether debt or equity, is supplied by individuals. Some of the capital is supplied directly by individuals through personal savings but most is supplied indirectly by institutions such as banks, pension funds, and mutual funds (investment intermediaries) who make investments on behalf of individuals. Regardless of the direct supplier of capital, every dollar of investment capital used to support MGE's rate base is ultimately supplied by individuals.

Q. Can individuals make a direct investment in MGE?

A. The process of investment in MGE involves investment in Southern Union Company because MGE is a division of Southern Union and is not a publicly-traded, separate corporation. Capital in the form of debt and equity is supplied by individuals and institutions to Southern Union which then assigns that capital to MGE and other corporate divisions and subsidiaries to finance needed facilities.

Q. How does MGE obtain the capital needed for its operation?

A. Southern Union assigns capital to MGE to assure that MGE can meet its obligations to its customers and service area. MGE now believes that it has achieved a level of service which meets or exceeds customer expectations.

Q. How is the cost of capital determined?

A. The cost of a component of capital is an opportunity cost. It is the amount of return or income foregone by the investor selecting or choosing one investment as compared to the next best investment alternative.

The idea behind the concept is the reality of limited resources including limited capital. Whenever scarce resources such as capital are committed to a specific investment, the same resources cannot be used for some other activity and cannot generate the profits which would have been associated with that other activity. To make the commitment, the activity which ultimately receives (or attracts) the investment must attract it away from the alternatives.

Investment Risk

Q. How do the investors make the investment decision?

A. Investors choose individual investments from the wide variety of investment alternatives available to produce a combination of the highest possible return with the lowest possible risk. These alternatives range from very low risk to very high risk along what is usually called a risk spectrum. Most investors focus on a segment of the spectrum. The individual choice of investment risk level is mostly determined by the investors' risk tolerance. It should be noted that the current market and the underlying technological drivers has caused investors to migrate away from traditional lower risk investments to new economy alternatives which investors perceive to offer much greater returns for a modest increase in risk.

Within a risk category, investors rank alternatives by estimating the risk of each investment and its related return potential. Investors rank these risk-return pairs with the best combination of risk and return available at the top of the list or the most desirable

investment. The best investment in this context is the combination of the lowest risk and highest return available within the risk class.

At any time, there are usually a number of investments which are similar but there are always slight differences in both risk and return -- either real or perceived by investors. It is within this group of near alternatives that the opportunity cost for a similar investment will be found.

Q. How does the success of the new economy impact investor thinking?

A. Investors were historically confronted with a number of investments which provided gradually increasing returns for parallel increases in risk. The emergence of the new economy sector has caused investors to believe that the potential for dramatic increases in return are available with only slight to modest increases in risk. As a consequence, many traditional low risk investors shifted at least some, and in many cases most, of their funds from traditional investments into new risk categories in the new economy investment alternatives.

Q. What are the implications for MGE?

A. At a minimum, to be an attractive investment alternative and to have access to the capital needed to meet customer demands, it is necessary for MGE to have risk-return characteristics ranking among the investment grade choices within the appropriate risk category. Since little can be done by MGE alone to lower or change the risk of MGE, the return must be set to match the risk of MGE. That risk is utility distribution risk plus or minus the risk effects of the specific MGE operations.

Q. Does the level of risk associated with a particular investment change through time?

A. Yes, it does. There may be changes in the level of risk associated with a long-term debt security such as a bond and these changes are usually signified by changes in bond rating. Changes in the risk of equities also take place. Changes in risk are usually precipitated by the overall increase or decrease in riskiness in the industry or specific changes in the company or its operations, a reduction in the company's equity ratio, or some other specific change. External change such as the emergence of inflation also changes risk levels. Also, current events in the energy markets are risk increasing for gas distribution companies.

Q. Do investors change risk categories or their portfolios' risk level from time to time?

A. Yes they do. As I indicated, investors tend to focus on a specific area of the risk spectrum. However, from time to time, the opportunities, promises and potential rewards of investing in higher risk areas sometimes become so great that even conservative investors move into high-risk categories. This is clearly happening today. Article after article has recently appeared which in sum state that "We are all 'dot com' investors now." What this really is saying is that the rewards of the "dot com" industry, the internet and the promise of the high tech new economy at least in the stock market have become so great that investors, even utility investors, have re-deployed some of their capital away from their traditional investments into the technology sector.

Q. What is the effect of this redeployment to the new economy companies on utilities such as MGE?

A. The redeployment of capital makes utility investment dollars less available and more costly to the company which must attract those dollars.

Macro-Economic Events

Q. Are there other trends in the economy which are impacting on the cost of capital to public utilities such as MGE?

A. Yes. The economy is operating in an extremely high level. The total level of economic activity is growing, unemployment is at historically low levels, and economic trends measured by almost any barometer are aggressively upward. This has tightened the market for capital.

Q. What is the effect on the capital market?

A. The first impact is an actual increase in the cost of money which is observable in the marketplace. This is a direct consequence of the application of an aggressive Federal Reserve policy and genuine investor concern about the future. Secondly, these changes tend to make investment in new economy securities more attractive than investment in old economy securities because the relative return potential appears so great in the new economy stocks. Third, the actions of the Federal Reserve in raising some interest rates moves the entire structure of interrelated capital costs up. This leads to an increase in the cost of equity.

In addition, there are some international events taking place which have impacted the cost of oil and, in a cascade effect, the cost of other forms of energy. This has led to significant price increases which have not been offset by improvements and productivity at this point. The price increases in energy have not changed the fundamentals of the economy particularly the new economy which is less energy dependent.

Determination of the Components of Capital and Their Costs

Q. Why are different types of capital used in financing a Company?

A. Different types of capital have different costs. Using the right blend of capital will attract the needed capital at the most reasonable overall cost.

Q. Why do different types of capital have different costs?

A. Because the terms and conditions of the investment for each of the different types of capital make the risk for each type of capital different. For example, the lowest cost, lowest risk permanent capital is long-term debt. It is the lowest cost, lowest risk because it has a fixed level of annual income, first claim on income each year, substantial remedies if the interest is not paid when due, and first claim on assets in a windup of the enterprise. The capital commitment is also for a fixed term with full repayment promised at the end of the term. Finally, almost none of the risk of the business is carried by the debt capital but rather concentrated in the equity investment. Thus, the equity investment directly impacts the risk of the debt investment.

Q. How does the risk of the operation get concentrated in the equity portion of the capital?

A. Business risk such as changes in demand and changes in weather cause net operating income or earnings for all capital to vary from year to year and sometimes to drop significantly. Regardless of the actual net operating income of the business during the year, normally the debt portion of the capital structure receives its interest payment because all of the impact of the above is absorbed by the equity investor. This means that the business activities of the company which translate into changes in earnings do not impact the debt investment which helps to support the utility assets.

Q. How are the costs of the different types of capital determined?

A. All capital costs are determined by measuring investor requirements. There are differences, however, in the methods used to measure investor requirements. The cost of debt is usually set for the term of the issue when the borrowing agreement is made. This makes the cost of debt determination a matter of calculation.

The cost of equity is quite different. The cost of equity is not a contractual cost. It is expectational. Investors have expectations concerning risk and return and make investments on the basis of those expectations. These expectations change from time to time. The cost, therefore, must be estimated by evaluating the current actions of investors and evaluating the costs of the similar alternatives. This is done to determine current investor expectations and return requirements.

Q. With this background, how did you determine the cost of capital for MGE?

A. MGE uses debt and common equity capital to permanently finance facilities. The cost of each type of capital is different. It is the weighted average cost of all types of permanent capital used which must be determined. As a result, the first step is to determine the capital structure or mix of capital used to finance the facilities. The next step is to determine the cost of each type of capital. The final step is to calculate the average cost of the total capital employed.

Capital Structure

Q. Please describe the capital structure which you have used in the calculation of rate of return for MGE.

A. I have calculated the rate of return using an average capital structure calculated from a subset of the natural gas distribution industry. The structure, based on analysis of industry averages, consists of 50% debt and 50% equity.

Q. How were the capital ratios determined for MGE?

A. The capital ratios were determined by using "proxy" analysis, which is also known in financial analysis as "pure play" analysis. Proxy analysis is a standard technique of financial analysis. In a proxy analysis, a group of companies, the activities of which are confined as nearly as possible to a single line of business (i.e. without diversification), is analyzed to determine the operational and financial characteristics associated with that line of business. These characteristics are then used to establish the requirements and performance of "lines of business" within a multi-business line company. This type of analysis is very similar to the "comparative company" analysis used in many regulatory reviews.

Q. Please describe your proxy analysis.

A. I selected a group of natural gas distribution companies. I intended to use that group, first to establish an appropriate equity ratio, and second to determine the cost of common equity. The group of utilities were selected natural gas distribution companies selected from the Value Line Investment Service.

Q. What is the Value Line Investment Survey?

A. The Value Line Investment Survey is a respected and authoritative source of financial, operating and security price statistics for publicly traded companies. The Survey, published weekly, covers ninety-five industry groups. It is widely used by investors, security analysts, and financial analysts in developing factual analyses of publicly traded companies. Data from the survey has been adopted by this Commission in many cases.

Q. Please describe how you selected the companies which you used to determine the natural gas distribution utility benchmark return requirement.

A. My selection process involved the identification of a group of companies that have all or practically all of their activities confined to the natural gas distribution utility business. To identify that group, I reviewed the business description of the natural gas distribution companies included in the September 22, 2000 Value Line Investment Survey. There were 21 companies in the Value Line report (down from 24 at the beginning of the year).

I eliminated companies that were many times larger than the typical gas distribution company (i.e. NICOR with revenue of $1.6 billion compared to the average of the group of $700 Million), companies which had less than a full ten years of history and all companies controlled by mergers. The review process left eleven companies in my proxy group. The companies are listed on Schedule 2, with revenues, customer count, debt ratio and equity ratio for each company as reported by Value Line for each company.

Q. Please describe the characteristics of your proxy group of ten companies.

A. The proxy companies constitute a reasonably homogenous group of natural gas distribution companies. The companies reflect the characteristics of reasonably sized, publicly traded, well known companies which can be used as the basis of an analysis to determine the required return on common equity for a similar nontraded natural gas distribution company.

Q. What is the average equity ratio of the proxy group?

A. The average equity ratio of the group from Schedule 2, at December 31, 1999 is 48.1 percent. The average equity ratio of the group for the period 1990 to 1999 was in the range of 50 percent until 1995 when UGI Corp. underwent a financial reorganization. The ten year history of the group equity ratio is shown on Schedule 3 without UGI, the 1999 year end equity ratio would be 51.0%.

Q. What does the ten year study show?

A. The average equity ratio for the group has been increasing very slightly through time. The average does not reveal that increase because of a significant adjustment to the equity ratio of UGI Corp. in 1994-1995. Absent that change, the equity ratio at year end 1999 would have been 51% compared to a starting equity ratio of 49% in 1990. It is reasonable to say that the average equity ratio of the group has been approximately 50% throughout the ten-year period.

Q. Is it important that the equity ratio used to set rates for MGE be comparable to the equity ratio of the proxy group used to determine the return on equity?

A. Yes, for two reasons. First, the proxy group represents a subset of the gas distribution business which is comparable to MGE. MGE should have capital ratios similar to its industry subset.

Second, there are two major kinds of risks associated with an equity investment -- financial risk and business risk. Since MGE is comparable but not identical to the proxy group, it is necessary to use the proxy group to establish a benchmark return for the industry subset and then adjust that return to the risk profile of MGE. Since the capital ratios of MGE are similar to the proxy group, the total adjustment necessary from the benchmark to the specifics of MGE is reduced by virtue of the fact that there is no significant difference in financial risk between MGE and the proxy group.

Q. What has been an historical pattern of equity ratio for Southern Union?

A. The Southern Union equity ratio declined with the acquisition of MGE. Since that time, the Southern Union equity ratio has increased to the point that the equity ratio at June 30,

1999, the end of Southern Union Company's most recent fiscal year, was approaching 50%. The actual consolidated capital structure and capital ratios were as follows:

Southern Union Company
Consolidated Capital Structure
June 30, 2000

	Amount (000)	Ratio
Long Term Debt	$ 733,774	46.7%
Preferred Stock	100,000	6.4
Common Equity	735,854	46.9
	$ 1,569,628	100.0%

Q. Does Southern Union intend to have a consolidated capital structure appropriate for the natural gas distribution business?

A. It is my opinion that Southern Union's historical activities show it intends to finance the company in total in an appropriate manner. After the MGE acquisition and before the non-utility commitments, Southern Union was predominately a natural gas distribution company. By implementing a certain financial policy, it built its equity ratio to an appropriate ratio for the industry, i.e. about 50%. Now the company is more complicated but I believe it will continue to obtain the appropriate mix of capital for the distribution business.

Q. Did you consider using the Southern Union consolidated capital structure?

A. I considered using the Southern Union consolidated capital structure but rejected it because it was inappropriate.

Q. Why is the Southern Union consolidated capital structure inappropriate for use in determining the revenue requirements of MGE?

A. A consolidated capital structure is only the summation of the financing of all of the individual division and subsidiary activities of a company, plus or minus accounting eliminations. With a diversified company such as Southern Union, the consolidated capital structure bears no particular relationship to any one of the individual lines of business.

Southern Union operates several natural gas distribution divisions. It also has investments in the non-utility business. It is these investments which diversify the capital arrangements of the company and combined with the appropriateness of adequate divisional accounting require the implementation of a division capital structure system. These non-utility investments are relatively recent commitments of the company in terms of their significance.

Q. Can you further explain the distinctions between Southern Union and the individual lines of business?

A. MGE is a medium sized natural gas distribution company operating in the Kansas City, Missouri area and western portions of the State of Missouri. It is a division of Southern Union. Southern Union also owns natural gas distribution operations in Florida, Pennsylvania, Texas and Mexico. Recently, Southern Union added gas distribution properties in Massachusetts and Rhode Island. In addition, the Company has investments in the non-utility area. While these investments are energy related, they are different in character and different in risk return profile than the investments in the operating natural gas distribution businesses of Southern Union, such as MGE.

Cost of Long Term Debt

Q. What is the cost of Missouri Gas Energy's long term debt?

A. The MGE cost of long term debt for the test year is 8.3%. The cost of long term debt is based on an assignment of Southern Union debt costs.

Cost of Common Equity

Q. What procedure did you use to calculate the cost of common equity?

A. I used the Discounted Cash Flow ("DCF") model to make my initial calculations and establish a benchmark, industry cost of capital. The DCF model is a well accepted tool of financial analysis which has been tested repeatedly over many years of application by this Commission and many others. After the DCF calculations were completed, I used that data and judgment in finalizing my recommendations.

Q. What is the conceptual basis of the DCF model?

A. The DCF model is based on the assumption that investors value and commit to investments based upon the future stream of income which is expected to be produced by the investments. Therefore, if the future stream of income can be quantified, the investor discount rate can be estimated by the price which the investor sets on the investment since the price set is the investors' discounted value of the future stream of income.

Q. Please summarize the steps you took in your DCF analysis.

A. Using the DCF model, I determined the cost of equity for a proxy group of natural gas distribution companies selected from the Value Line Investment Survey. This became an unadjusted natural gas distribution return on equity requirement. I then compared the level of MGE risk to the risk of the pure play or proxy group to establish the relative risk

vis-a-vis the proxy group. Based upon this analysis and my assessment of the near term future, I estimated the risk-adjusted cost of equity for MGE.

Q. Mr. Dunn, why didn't you determine a cost of common equity for Southern Union and use it for MGE?

A. The cost of common equity for MGE is very different from the cost of common equity for Southern Union for the same reasons the capital structure requirements are different. The Southern Union cost of common equity is the weighted average of the cost of common equity of all of its individual activities. The costs of common equity of the individual activities, including MGE, are related to the risks and opportunities of each of the specific business activities, not to the weighted average of Southern Union as a whole.

The Theory of the DCF Model

Q. Before discussing the schedules which examine the data used in this analysis, would you please describe the DCF approach?

A. The Commission is very familiar with the DCF model, so I will present only a brief outline of the foundations of the model. The primary premise of the DCF model is that the value of an equity security, i.e. a share of common stock, can be defined as the present value of the expected future stream of income, hence its association with discounted cash flow.

The model can be understood by considering the procedure for valuing a stream of payments. Under certain circumstances, the value of a stream of payments can be determined by dividing the stream of payments by a required return or discount factor. For example, if the stream of payments is $10 per year and the required return or discount

rate is 10 percent, the value of the stream of payments is $100. This can be stated mathematically as:

$$V = \frac{D}{K} \quad \text{or} \quad \$V = \frac{\$10}{10\%} = \$100$$

$$\text{or} \quad \text{Value} = \frac{\text{Dividend}}{\text{Discount Rate}}$$

This calculation of value assumed that the dividend or payment rate and the discount rate were known. The equation was then solved for value. If the value (price) and dividend rate are known, the equation can be solved for the required return as follows:

$$\text{For Value} \qquad V = \frac{D}{K} = \frac{\$10}{10\%} = \$100$$

$$\text{For Return} \qquad K = \frac{D}{V} = \frac{\$10}{\$100} = 10\%$$

To convert the formula to value stocks, the growth in the stream of payments must be added to the formula. In the context of a common equity investment, growth in overall value as caused by retention of earnings.

Incorporating growth into the formula and solving for the cost of common equity, the basic discounted cash flow formula is:

$$K = \frac{D_1}{P_o} + g$$

$$\text{or Return} = \frac{\text{Dividend (first year of ownership)}}{\text{Price (Today)}} + \text{growth in dividends}$$

Where:

D_1 = Dividends per share end of the first year of ownership

P_o = Price per share in the present time period

g = The rate of growth of common stock dividends per share

Finally, the formula is adjusted to incorporate the effect of flotation (new issuance) cost and pre-offering pressure into the analysis. This is accomplished by increasing the dividend yield component of the return by one minus the flotation expense or:

$$K = \frac{\frac{D_1}{P_o}}{1 - f} + g$$

Where:

f = Cost of issuance and pre-offering pressure

Impact of Industry Change on the DCF Analysis

Q. Will dividends play their prior prominent role in the DCF model as the natural gas distribution utility industry changes?

A. No. Dividends are used in the formula to capture and measure a part of the return received by investors. For utilities, this has historically been a very large part of the total return. Now and in the future, however, dividends are becoming less important and as dividends become less important, growth in dividends will be replaced by overall growth in earnings. This means that the best measure of future growth is not the pure growth in dividends but rather the growth in the company overall, particularly earnings.

Q. Please explain more about the changing role of dividends for utilities.

A. Historically, utilities paid out a large portion of earnings in the form of dividends and, to meet capital requirements, issued new capital on a very frequent basis. However, primarily in response to competition, investor demands and increased tax awareness, gas distribution utilities have stated and analysts have begun to assume that dividend growth will be lower in the future so that companies can retain more of their earnings and consequently grow more rapidly with fewer new issues of debt and equity. One such example of analysts assuming the existence of this trend and its impact is contained in the March 24, 2000 discussion of the natural gas distribution industry in the Value Line Investment Service, which states that: "Cautious management will probably maintain

slow dividend growth of 1 to 3% per year to bring the corporate payout ratio below 70%."

Q. Does this involve significant changes in the application of the DCF formula?

A. No. It only involves recognizing that growth in earnings will be the primary driver of investor return rather than growth in dividends as has historically been the case.

Q. Have recent events had an effect on the determination of the dividend yield which is included in the DCF formula?

A. Yes. There has been a substantial amount of merger activity in the natural gas distribution industry. The September 22, 2000 Value Line natural gas distribution industry currently includes 21 companies, one of which is a new addition from another Value Line publication. At year end 1998, there were 33 companies in the group. This is a drop of 12 companies from the previous list or about a third of the group, most of which became involved in mergers.

Secondly, the group of 21 companies involves at least three companies that are committed to an announced merger or widely rumored to be a committed merger candidate as yet unannounced (Providence, SEMCO and Southwest Gas). This means that the dividend yield is lower than what it would be otherwise because stock prices are supported by merger expectations thereby reducing yield from what it would be if unsupported by such forces.

Q. What is the result of these market and industry changes?

A. Market changes and changes in the natural gas distribution industry require a more critical approach to analysis. As a result, the use of historic data must be carefully evaluated simply because the future will be different than the past. This means that while historic

data must be used in the calculations (because it is all that is available), it cannot be used uncritically and judgment must supplement the traditional uncritical use of data. I will supplement the historic data with an analysis of earnings forecasts.

Q. Does the market data which you used in your analysis confirm the existence of a shift in dividend policy which demonstrates a reduction in dividend growth and an increase in earnings growth?

A. Yes. It is evident in the data used in the analysis.

Q. Please summarize the steps your cost of equity analysis based on the DCF techniques.

A. The analysis involves the calculation of each of the components of the model. This requires first developing a reasonable estimate of investor growth expectations, the available dividend yield and the cost of flotation and pre-offering pressure. The elements are then combined as indicated in the model.

Determination of Growth Rate

Q. Please describe your determination of the growth rate.

A. My determination of the growth rate is designed to parallel an investor's analysis. To accomplish this, I have based my analysis to data and reports which are available to investors to assist them in making investment decisions. Investors use both historic data and market reports and forecasts in making their decisions.

Schedule 4 is an analysis of the five and ten year growth in earnings, dividends and book value for 11 company proxy group. The analysis includes a detail of the growth rate for each of the companies in each of the three variables for both of the time periods. The data is taken from the Value Line Investment Survey dated September 22, 2000.

For the five and ten year periods, the average growth rates for the comparative group of natural gas distribution utilities are as follows:

MGE
Proxy Gas Utilities
Growth Rate Analysis

	Growth Rate	
	Ten Year	Five Year
Earnings per share	2.83%	4.64%
Dividends per share	2.82	2.50
Book value per share	3.85	4.35

This array of growth rates represents the historic pattern of growth for each of the variables for all of the companies in the study. The data for the five year term is distinctly different from the ten year data. The rate of dividend growth has obviously slowed from the ten year period to the five year period. This is expected because of the change in dividend policy previously discussed. Also, the earnings growth rate has increased significantly. The more recent growth rates are higher than the longer term growth rates. This is also to be expected because the retention rate is higher as a consequence of the slowing in dividend growth. If the dividend rate continues to slow, the impact of the slow down will be reflected in still higher earnings growth, and the future growth rate will be higher than the current five year historic rate.

Q. How are the growth rates in earnings, dividends and book value related?

A. Historically, utility investors were primarily interested in dividends. In the future, this will change to emphasis on growth in the value of stock which today is driven by growth in earnings. Growth in dividends is driven by growth in earnings, but growth in value is also driven by growth in earnings. In this context, growth in value is the same as growth

in share price and today it is most directly related to growth in earnings. In the past, this suggested, other things being equal, that all three variables must move in tandem over the long term. Now dividend growth will be replaced by earnings growth as the stock price driver, as is the case for many if not most nonutility companies. This means that in the future, all variables will not move in tandem to the same extent as in the past. Accordingly, a simple average of growth rates is no longer appropriate since investors will focus on growth in earnings.

Q. Is it reasonable to remove selected observations from the group even if doing so would increase the average growth rate?

A. Yes. That certainly is what investors do. In selecting a group of companies to set a standard, investors would prune the bottom of the group (the under-performers) and select an investment from the best. There is no requirement that the investor buy the average and certainly no requirement that an investor buy an "average" depressed by a few "bad" observations or poorly operating companies. In fact, in every case, the investor works to buy the best from every group. However, this is a pure play analysis and it is not necessary to prune the group because a risk adjustment will be made after the pure play studies are complete. It is, however, appropriate to eliminate negatives and zeros when calculating the averages and I have done so.

Q. Did you do any further growth rate analysis with the same group of companies?

A. I examined the growth in earnings, dividends and book value per share for each of the companies for the period 1990 to 1999. Schedule 5 contains an analysis of the dividends paid per share by each of the companies for each of the years from 1990 to 1999, and the calculation of an average of the one-year growth rates for the period 1990 to 1999.

Schedule 6 is a parallel analysis of growth in earnings for the comparative companies. Schedule 7 contains the same type of analysis of book value per share for the proxy companies.

The calculation used in Schedules 5, 6 and 7 is an additional method (in addition to the calculation used in Schedule 4 which is the Value Line method) to eliminate the effect of single year influences by averaging the results of each growth pair in the period to determine the period average.

Q. Have you considered any other growth rate data?

A. Yes I did. I examined the Multex Market Guide reported estimates of future growth for individual companies. Many investors use such forecasts and they are widely distributed on news programming concerning the stock market. The Market Guide report accumulates growth and earnings forecasts from independent investment analysts based on the analysts review of individual companies and individual industries.

For the individual companies in my proxy analysis, the expected growth ranges from 3.5% to over 12%. The individual estimates have been made by 2 to 6 analysts. The long term growth forecasts for the individual companies are as follows:

Market Guide
Expected Growth Rate

Company	Average Expected Growth
AGL Resources	6.22%
Atmos Energy	7.40
Cascade Natural	4.50
Energen	12.32
Laclede Gas	3.50
New Jersey Resources	6.63
Northwest Natural	4.78
Piedmont	7.00
South Jersey	5.60
UGI Corp.	8.50
Washington Gas Light ("WGL")	7.42
Average	6.71%

Q. Have you examined any other growth rate data?

A. Yes. Value Line Investment Service makes a forecast of future growth rates and earnings dividends and other key variables. I analyzed the Value Line forecasts for growth and earnings per share.

Q. What were the results of that analysis?

A. The average growth in earnings per share forecast by Value Line is 8.5%. The growth rate and earnings per share for the individual companies is as follows:

Value Line
Expected Growth Rate

Company	Average Expected Growth
AGL Resources	6.0%
Atmos Energy	10.5
Cascade Natural	10.5
Energen	13.0
Laclede Gas	7.5
New Jersey Resources	7.5
Northwest Natural	7.5
Piedmont	7.0
South Jersey	8.0
UGI Corp.	8.0
Washington Gas Light ("WGL")	7.5
Average	8.5%

Q. What conclusion did you reach as a result of this analysis of historic growth in dividends, earnings and book value per share?

A. Earnings growth rates are increasing and the increases are accelerating. The historic five year earnings growth rate for the proxy companies is clearly higher than the ten year earnings growth rate for the same companies. This means that the increase, if displayed graphically, would be trending upward and to the right.

Forecast earnings growth is also above historic earnings growth both for the ten year and five year periods. The Value Line forecast earnings growth for the companies is a substantial increase compared to historic ratios.

In contrast to the increasing growth in earnings, the rate of growth in dividends is slowing. This is to be expected in light of the dividend policy which has been enunciated by managements and repeated by analysts and which states that dividends will be increased more slowly in the future than in the past. This leads to an increase in retained

earnings and an acceleration in earnings growth. In this case, the facts and data actually correspond to the policy statements and analysts' comments on the industry.

Q. What do you conclude is a reasonable growth expectation for the future?

A. Based on the fact that the rates of growth are trending up and some forecasts are for much higher growth in earnings, I believe a reasonable investor growth expectation for a smaller natural gas distribution company such as MGE is at least 6%. This is lower than the industry forecast rate by Value Line. I believe similar measures taken a year from now would show a growth rate somewhat higher in the range of 6.25% to 6.5%, assuming that the current trends continue and that the retention in earnings produces the desired impact on earnings growth.

Q. You said for a smaller company. Is MGE a small company as compared to the proxy group?

A. Yes. MGE's gas sales revenue for fiscal year end June 30, 2000 were $363,340,390. The average proxy group revenue reported by Value Line was $704 Million as shown on Schedule 2.

Determination of Dividend Yield

Q. Please describe your analysis of dividend yield.

A. The first step in my analysis of dividend yield is contained on Schedule 5 of my exhibit. This schedule details the actual dividends paid by each of the 11 proxy companies for the years 1990 through 1999.

This information shows consistency of payment by each of the companies in each of the years. It also reveals steady growth in the dividends of the proxy group.

The next step in the dividend yield analysis is a review of the historic dividend yield calculated from the Wall Street Journal and the forecasted dividend yield from the Value Line Investment Survey. The data for that analysis is contained on Schedule 8.

Q. Please describe the analysis which is contained on Schedule 8.

A. Schedule 8 contains a calculation of the dividend from the Value Line Investment Survey, September 22, 2000. Schedule 8 also contains the calculation of dividend yield made from data from Commodity Systems, Inc (CSI) on December 31, 1999, June 30, 2000 and again on September 29, 2000.

The CSI dividend yields are calculated by dividing the reported annualized dividend by the reported price. The dividend yield for each company as calculated by Value Line based upon the dividend currently being paid plus a Value Line estimated increase in the dividend based upon the historic pattern of dividend payments and dividend increases for that company.

Q. What are the results of this dividend yield analysis?

A. The primary result is the indication that dividend yield is increasing on a regular basis through time. The dividend yield array by date is as follows:

Value Line 9-22-00	5.1%
Commodity Services:	
12-31-99	5.4
6-30-00	5.7
9-29-00	5.0

The dividend yield is fluctuating over 5.0%. The yield is also subject to some minor instability as a consequence of short run stock price changes and the loss of Government Bonds as a safe haven.

Q. Have you included any older dividend yield data in your analysis?

A. I have not. The older dividend yield data has little value in determining the current return on equity requirement. The effort in the discounted cash flow analysis is to determine a longer term or secular growth rate using historic data as a spring board. Current dividends and current dividend yields are combined with that longer term growth rate to produce the current and upcoming cost of equity. Combining older dividend yields would mismatch the process and produce a cost of common equity for some other point in time. This is because the investor knows what they require for return and after determining the growth rate over which they have no control, they collectively move the stock price to produce a yield which, when combined with the stock price, meets their return requirements.

Q. Have you made any further examination of dividend yield?

A. Yes, I have. The next step in my analysis was to review the dividend yield in the context of the overall structure of interest rates. At the present time, interest rates are relatively low, but increasing. It is reasonable to assume that the next permanent move in interest rates will be toward higher levels, particularly since the increase has been "pre-announced" by the Federal Reserve. I should point out, however, that there are differing views on the future of interest rates in 2001. If interest rates increase, it is almost certain since all capital costs are linked, the cost of utility equities will also increase which will be evidenced by further decreases in utility stock prices. When this change takes place, it will likely be reflected as an increase in individual companies dividend yield. This would increase the dividend yield of the proxy companies and the indicated DCF cost of equity.

Q. Have you made any other dividend yield calculation?

A. Yes, I have. I have taken the current yield from the Internet at October 16, 2000. That current yield for the individual companies is as follows:

Company	October 16, 2000 Spot Dividend Yield
AGL Resources	5.30%
Atmos Energy	5.50
Cascade Natural	5.30
Energen	2.00
Laclede Gas	5.80
New Jersey Resources	4.40
Northwest Natural	5.40
Piedmont Natural	5.00
South Jersey Industries	5.00
UGI Corp.	6.60
Washington Gas Light ("WGL")	4.80
Average	5.00%

Q. What does this indicate?

A. It indicates that dividend yields remain in the range of dividend yield reported and calculated for the recent past.

Q. After consideration of this data, what did you conclude is the appropriate dividend yield for the proxy group DCF cost of equity?

A. I concluded that the appropriate yield to include in my DCF calculation was 5.0 %. The current yield reflects the probability that additional returns are now expected by investors to take place on capital gains rather than amount taxable cash income. This is at the very bottom of the recent range of yields for the group.

Q. Is an adjustment to the reported yield necessary to reflect the increase in dividend which will take place during the next 12 months?

A. Yes. Such an adjustment is necessary. The adjustment is usually made by using the following form of the DCF model:

$$K = \frac{D_o (1 + g)}{P_o} + g$$

Where:

D_o = Dividend current period
g = Growth rate
P_o = Price current period

In this calculation, the current dividend was traditionally multiplied times one plus all or a part of the historic growth rate and then divided by the current market price. This calculation assumes future growth in the dividend. Since the growth in dividend has been de-emphasized and replaced with growth in value, the traditional calculation is not as large as in the past. Nonetheless, there will be future growth in dividends and that future growth must be reflected in the calculation. As a result, I have used 2 percent to make this calculation in the DCF estimate of return on equity to reflect the increase in dividend that will take place during the first year of ownership.

Q. Why is it necessary to reflect an increase in dividends during the first year of ownership?

A. The return on equity which is being established in a rate proceeding is first a return for the long term investor, not the day trader, and secondly, it is a return which looks forward for a reasonable period of time. Looking forward, an investor making a commitment today would assume that the components of return to be earned by that investment would include not only the current dividend paid in dollars but also any increase in that dividend paid in dollars during the first year of ownership. To ignore reasonably certain increases in dividend which are expected by investors evaluating securities is simply to understate the return on equity requirement.

Q. Did you make this calculation?

A. Yes. The dividend yield in my calculation is 5.0%. This rate was adjusted 2 percent. This produced an expected dividend yield of 5.1 % (5.0% x 1.020%).

Q. Please describe the adjustment for pre-offering pressure and expense.

A. Flotation costs and price pressures result from the sale of equity. The effect should be reflected in the cost of common equity. Such an adjustment is frequently based on a study contained in Public Utilities Fortnightly by Borun and Malley which indicates the average flotation cost of the common stock issued is 5.5 percent. With this adjustment, the calculated dividend yield component of the cost of equity should be increased to 5.4% (5.1% ÷ 94.5%).

Q. Is such an adjustment based on the actual anticipation of the sale of new common equity?

A. It is. I have been advised that Southern Union is committed to maintaining investment grade securities. This is not only a general commitment of the company, but a specific commitment related to specific acquisitions. To do so may require equity sales at some time in the future.

Q. Will MGE benefit directly from such an offering?

A. Yes it will.

Benchmark Cost of Common Equity

Q. Based upon your analysis of the dividend growth rate and your calculation of the dividend yield, what do you conclude is the discounted cash flow cost of common equity for the comparative group?

A. The calculated dividend yield is in the range of 5.0%. The adjusted dividend yield is 5.4%. My analysis of minimum growth indicates a growth rate in the range of 6.0 % to as much as 7.0%.

Combining the dividend yield with the dividend growth rate indicates the discounted cash flow estimate for the bare bones cost of common equity is 11.4% for the comparative group. A higher level of return at 12.4% is also indicated. It is calculated as follows:

	Proxy Companies Return on Equity Requirements	
Dividend yield	5.4%	5.4%
Growth	6.0	7.0
Total	11.4%	12.4%

Q. Do market conditions require consideration of any other factors?

A. Yes. The rates which will be established as a result of this procedure will go into effect sometime during 2001 and be effective for subsequent periods. It is very important that the rates be established anticipating the facts which will be in effect during the time that the rates will be in effect. It is reasonable to anticipate that the cost of equity will be increasing from its current lower levels to higher levels during the period these rates will be in effect. This leads me to believe that a higher return than that indicated by the raw DCF calculation is appropriate because the probability of a worsening of equity market conditions increases each day.

Q. Based upon this analysis, what do you conclude is the equity cost for the proxy segment of the natural gas distribution company?

A. I believe that a return on equity of 11.4% to 12.4% is the minimum level which would be appropriate to incorporate into a cost of service determination for the natural gas company which is equal in risk to the average of the group.

Risk Adjustment for MGE

Q. Should the cost of equity for the proxy group be adjusted in any way for the specifics of MGE?

A. Yes. The cost of equity of the proxy group is based on the average risk of that group. That cost of equity must be adjusted to reflect the risk differences for MGE as compared to the proxy group used in making this determination.

Q. How should that adjustment be made?

A. To make this risk adjustment, I examined the risk characteristics of MGE's natural gas distribution utility operations as compared to the proxy companies used in the DCF analysis. I also made calculations of statistical risk measures. I concluded, as a result, that MGE is significantly more risky than the average of the proxy group as the result of several factors including the smaller size of MGE, the regulatory risks experienced by MGE, and the significantly greater volatility of its earnings. In reaching this conclusion, I was also influenced by the now substantial body of research on small company risk which states that all other things equal, small companies are more risky than larger companies.

MGE Specific Risk

Q. How does MGE compare in size to the proxy group?

A. MGE is significantly smaller than the average of the proxy group. The average revenue for companies in the proxy group is shown on Schedule JCD-2. The companies average 610,537 customers, and an annual revenue of $704.664 Million Dollars. MGE's Fiscal 2000 revenue was $363,340,390.

Q. What is the nature of the research which indicates that smaller companies have greater risk than larger companies.

A. Ibbotson & Associates is a major provider of market data which is widely used in corporate financial analysis, both within corporations and within the financial industry.

Beginning in 1995, Ibbotson Research, a division of Ibbotson & Associates, funded through grants, research on the capital asset pricing model and the use of beta. Beta is a dominant variable in the capital asset pricing model and is a measure of relative volatility. It is considered in this context an overall measure of risk. Those initial studies indicated stratification in the level of beta based on size.

Subsequently, Ibbotson Research funded additional research into the impact of size on the cost of capital. Several articles which are maintained on the Ibbotson & Associates web site report on this research. Among those articles are: Roger G. Ibbotson, Ph.D., Paul D. Kaplan, Ph.D., CFF and James D. Peterson, Ph.D., Estimates of Small Stock Betas Are Much Too Low, Published in Journal of Portfolio Management, Summer 1997; Michael Annin, CFA, FAMA-French and Small Company Cost of Equity Calculations, March 1997 Business Valuation Review; Michael Annin, CFA and Dominic Falaschetti, CFA, Is There Still A Size Premium, published in Winter 1998 CPA Expert; Michael Annin, CFA and Dominic Falaschetti, CFA, Equity Risk Premium Still Produces Debate, January-February 1998 Issue of Valuation Strategies.

In addition to this research, there is a substantial body of research which appears in the Journal of Portfolio Management and, to a lesser extent, in the Financial Analyst Journal which supports the existence of a small company market premium, which means that small companies have a higher earnings level requirement than larger companies. All other things equal, this means that the smaller companies have more risk and a greater return requirement.

Q. What is the interest of Ibbotson & Associates in supporting research into the capital asset pricing model and related issues?

A. The company provides data used in economic and financial analysis. The company is academically based and was founded by individuals which recognized early in the development of the capital asset pricing model that reliable commercial sources of certain types of economic and financial data would be required to facilitate research into financial matters including research into the capital asset pricing model. This lead to the founding of Ibbotson & Associates and their funding of continued academic research.

Q. What are the specific business risks faced by MGE in providing gas service to its service areas in the State of Missouri?

A. MGE experiences a full range of business or operating risks. First, there is a risk that sales will be different than the expected level and, thus, earnings will also be different. This could happen because of changes in business conditions, fluctuations in the number of ultimate customers, variations in ultimate customer usage patterns, price competition from other types of energy and changes in weather. These risk factors are embedded in the business and tend to be reflected in the patterns of income over long periods of time. For these factors, past can be reasonably considered prologue to the future.

Second, MGE makes investments in facilities which have extremely long book investment and useful lives. This exposes the related capital to a number of business cycles, changes in public policy, and the effects of long-term inflation. It also exposes the capital to the long run risk of technological innovation, changing customer requirements and changing demographics. From an investor's perspective, many things, both good and

bad can happen during the 15 to 30 year period that represents the useful life of many natural gas distribution assets.

Now for example, there is an emerging energy crisis which will likely impact MGE volume and hence income.

Third, MGE needs large quantities of material, capital and labor to supply its services. This makes it vulnerable to inflation on operating expense, and to the availability and the price of labor, capital and material. Since the prices MGE charges its customers cannot be changed quickly, the impact of inflation and general price increases is first reflected as a decrease in earnings. Like other risks, MGE tends to be exposed to this complex of negative factors over long periods of time. In some time frames, labor will be scarce and inflation high. In others, labor abundant and inflation low and stable. So while these risks change through time they tend to always be present.

Another critical risk element for MGE is the fact that their substantial investment in facilities to serve customers is immobile. It is fixed in place and cannot be moved. On the other hand, a competitor, the propane industry, has mobile assets. The competitor also has price advantages from time to time and the ability to price freely so that it can compete on a different playing field than the one MGE must operate on. In addition to propane, there is also a pipeline bypass risk which continues.

Statistical Risk Analysis

Q. How does MGE's level of risk compare to the proxy group based on a statistical analysis?

A. MGE is significantly riskier than the proxy group.

Q. Please describe the statistical analysis of risk.

A. For a single investment opportunity, the appropriate measure of risk is the standard deviation which captures the effect of risk on one investment as compared to another. A standard deviation calculated on a series of historic returns measures the variability and dispersion of those returns about the average. The greater the standard deviation, all other things equal, the higher the risk or the less predictable or certain the expected return assuming that the pattern of future returns will be similar to the pattern of past returns.

To compensate for the fact that standard deviation is stated in the units being measured, i.e. return percentage points, I converted the standard deviation to a coefficient of variation and calculated those statistics for MGE's rate of return and for the industry average return on capital. The results of the calculations are as follows:

Missouri Gas Energy
Risk Measures
1995 - 1999

	Rate of Return 1995 - 1999	
	Standard Deviation	Coefficient of Variation
Natural gas distribution industry	.33	4.43%
MGE	1.08	10.51

Calculations of standard deviation of return dramatically indicate that MGE's risk was greater than the level of risk in the pure play industry group.

Q. What is the coefficient of variation?

A. The coefficient of variation converts the standard deviation into a percentage statement. The standard deviation is stated in the units being measured. The coefficient of variation is the standard deviation divided by the average of the series. It relates the deviations to the average a percentage. In the case of MGE, the variation amounts to 10% of the

average, whereas for the natural gas proxy group, the variation amounts to only 4.4% of the average. In other words, there is more than twice as much variation in the MGE return as in the proxy group return.

Q. What do you conclude as a result of this analysis?

A. The proxy group current cost of common equity is in the range of 11.5% to 12.5%. As a practical matter, the return component in the cost of service should not under any circumstances be lower than this amount. Given the greater risk of MGE's operations as compared to the industry group, and the probability of some unexpected negative events related to MGE, a minimum return on equity of 12.5 percent is appropriate. A higher return above the range would also be appropriate and may be required as economic events unfold.

Calculation of Rate of Return

Q. Did you calculate a rate of return to use in the cost of service determination?

A. I did. Based upon the capital structure previously discussed, the cost of debt and my estimate of the appropriate return on equity at 12.5%, I calculated the overall rate of return using the MGE division test year capital structure. The calculations are shown on Schedule 9.

Rate of Return Performance Adjustment

Q. Are there circumstances in this proceeding which you believe make an incentive adjustment to rate of return appropriate?

A. Yes there are.

Q. What are those circumstances?

A. In MGE's 1996 rate proceeding before the Missouri Public Service Commission in GR-96-285, the Commission found that MGE was deficient in customer service. As a consequence, the Commission made a penalty adjustment reducing the rate of return (to the low end of the Staff's return on equity range) to penalize the company for what the Commission determined to be poor service. In MGE's 1998 rate proceeding (GR-98-140), the Commission recognized the Company's improvement in customer service, and urged the Company to continue those efforts. In the 1998 proceeding, the Commission adopted the mid-range of the Staff's return on equity recommendation.

Q. Have circumstances changed?

A. Yes, radically. The company has materially improved its customer service and addressed all of the areas which the Commission found wanting. The company has improved each and every measure as reported in the direct testimony of Mr. Karen Czapewski. In addition, the company operates very efficiently as compared to other Missouri local distribution companies. As a consequence of both of these factors, I believe it is appropriate for the Commission to now adjust the return upward.

Q. What size adjustment do you believe is appropriate?

A. I believe it is appropriate to make an adjustment in the amount of .25% as an addition to the rate of return. I also believe that the Commission should identify this performance adjustment as such in its Order.

Q. Does that conclude your direct prefiled testimony at this time?

A. Yes sir, it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy's Tariff Sheets Designed to Increase Rates for Gas Service in the Company's Missouri Service Area.	))))	Case No. GR-2001-292

AFFIDAVIT OF JOHN C. DUNN

STATE OF KANSAS)
) ss.
COUNTY OF JOHNSON)

John C. Dunn, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, to be presented in the above case; that the answers in the foregoing Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.

JOHN C. DUNN

Subscribed and sworn to before me this 3rd day of November 2000.

Bernadine K. Farley
Notary Public

My Commission Expires: October 20, 2001

NOTARY PUBLIC STATE OF KANSAS
BERNADINE K. FARLEY
My Appt. Exp. 10/20/01

SCHEDULE JCD-1

MISSOURI GAS ENERGY
GAS DISTRIBUTION INDUSTRY
INDEX TO SCHEDULES

SCHEDULE JCD-2

MISSOURI GAS ENERGY
GAS DISTRIBUTION INDUSTRY
COMPARATIVE COMPANY PROFILE

COMPANY	REVENUE (000)	CUSTOMERS	DEBT RATIO	EQUITY RATIO
AGL RESOURCES, INC.	$1,068,600	1,400,000	45.3%	49.2%
ATMOS ENERGY CORP	690,200	1,029,000	50.0%	50.0%
CASCADE NATURAL GAS	208,600	185,000	50.9%	46.6%
ENERGEN CORP	497,500	470,000	50.7%	49.3%
LACLEDE GAS COMPANY	491,600	621,928	41.8%	57.8%
NEW JERSEY RESOURCES	904,300	407,325	48.7%	51.2%
NORTHWEST NATURAL GAS	455,800	507,756	46.0%	49.9%
PIEDMONT NATURAL GAS	686,500	710,000	46.2%	53.8%
SOUTH JERSEY INDUSTRIES	392,500	273,900	45.2%	45.6%
UGI CORP	1,383,600	265,000	78.6%	19.8%
WASHINGTON GAS LIGHT	972,100	846,000	41.5%	56.1%
AVERAGE	$704,664	610,537	49.5%	48.1%

Source: Value Investment Survey, September 22, 2000

SCHEDULE JCD-3

MISSOURI GAS ENERGY
GAS DISTRIBUTION INDUSTRY
EQUITY RATIO

COMPANY	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
AGL RESOURCES, INC.	47.8%	48.8%	58.1%	53.1%	45.8%	47.6%	48.9%	45.9%	47.1%	49.2%
ATMOS ENERGY CORP	48.3%	47.7%	50.3%	56.7%	52.0%	54.7%	58.5%	51.9%	48.2%	50.0%
CASCADE NATURAL GAS	46.3%	46.7%	45.6%	47.3%	44.8%	45.0%	50.0%	46.5%	48.7%	46.6%
ENERGEN CORP	58.7%	60.6%	58.4%	62.0%	58.5%	56.9%	49.1%	51.9%	46.9%	49.3%
LACLEDE GAS COMPANY	58.1%	52.5%	55.3%	53.1%	55.5%	59.3%	57.1%	61.6%	58.6%	57.8%
NEW JERSEY RESOURCES	42.7%	37.8%	44.8%	42.6%	42.0%	41.0%	45.8%	47.1%	45.6%	51.2%
NORTHWEST NATURAL GAS	47.0%	43.2%	43.9%	45.0%	45.1%	50.3%	52.8%	49.0%	50.6%	49.9%
PIEDMONT NATURAL GAS	53.0%	52.0%	53.4%	50.6%	49.1%	49.6%	49.7%	52.4%	55.3%	53.8%
SOUTH JERSEY INDUSTRIES	51.7%	53.3%	52.1%	48.9%	49.9%	47.9%	53.2%	44.8%	42.2%	45.6%
UGI CORP	32.2%	44.9%	50.7%	49.3%	51.6%	30.9%	30.0%	30.0%	28.7%	19.8%
WASHINGTON GAS LIGHT	56.4%	56.9%	57.3%	54.9%	56.7%	58.9%	59.4%	56.2%	57.1%	56.1%
AVERAGE	49.29%	49.49%	51.81%	51.23%	50.09%	49.28%	50.41%	48.85%	48.09%	48.12%

Source: Value Investment Survey, September 22, 2000

SCHEDULE JCD-4

MISSOURI GAS ENERGY
GAS DISTRIBUTION INDUSTRY
GROWTH ANALYSIS
FIVE AND TEN YEAR

COMPANY	10 YEAR GROWTH			5 YEAR GROWTH		
	EARNINGS	DIVIDENDS	BK VALUE	EARNINGS	DIVIDENDS	BK VALUE
AGL RESOURCES, INC.	2.00%	2.00%	3.00%	2.00%	1.00%	2.50%
ATMOS ENERGY CORP	2.00%	4.50%	4.00%	5.00%	4.50%	4.50%
CASCADE NATURAL GAS	1.00%	1.00%	3.00%	5.50%	0.50%	1.00%
ENERGEN CORP	5.50%	5.00%	7.50%	7.00%	3.50%	10.00%
LACLEDE GAS COMPANY	1.00%	2.00%	2.50%	3.00%	1.50%	4.00%
NEW JERSEY RESOURCES	5.00%	2.50%	3.00%	6.00%	1.50%	2.50%
NORTHWEST NATURAL GAS	1.00%	1.50%	4.00%	2.00%	1.00%	5.00%
PIEDMONT NATURAL GAS	5.00%	6.00%	6.00%	6.00%	6.00%	6.50%
SOUTH JERSEY INDUSTRIES	0.00%	1.00%	2.00%	2.50%	0.00%	2.50%
UGI CORP	-0.50%	3.00%	-0.50%	8.00%	3.50%	-4.00%
WASHINGTON GAS LIGHT	3.00%	2.50%	3.50%	4.00%	2.00%	5.00%
AVERAGE	2.83%	2.82%	3.85%	4.64%	2.50%	4.35%

Average does not include negative percentages or zero

Source: Value Investment Survey, September 22, 2000

SCHEDULE JCD-5

MISSOURI GAS ENERGY
GAS DISTRIBUTION INDUSTRY
DIVIDENDS PER SHARE

COMPANY	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	AVERAGE GROWTH
AGL RESOURCES, INC.	0.98	1.02	1.03	1.04	1.04	1.04	1.06	1.08	1.08	1.08	1.09%
ATMOS ENERGY CORP	0.77	0.80	0.83	0.86	0.88	0.92	0.96	1.01	1.06	1.10	4.05%
CASCADE NATURAL GAS	0.87	0.90	0.93	0.94	0.96	0.96	0.72	0.96	0.96	0.96	2.04%
ENERGEN CORP	0.46	0.48	0.51	0.53	0.55	0.57	0.59	0.61	0.63	0.65	3.92%
LACLEDE GAS COMPANY	1.18	1.20	1.20	1.22	1.22	1.24	1.26	1.30	1.32	1.34	1.43%
NEW JERSEY RESOURCES	1.44	1.50	1.52	1.52	1.52	1.52	1.55	1.60	1.64	1.68	1.74%
NORTHWEST NATURAL GAS	1.10	1.13	1.15	1.17	1.17	1.18	1.20	1.21	1.22	1.23	1.25%
PIEDMONT NATURAL GAS	0.83	0.87	0.91	0.95	1.01	1.09	1.15	1.21	1.28	1.36	5.65%
SOUTH JERSEY INDUSTRIES	1.40	1.41	1.41	1.43	1.44	1.44	1.44	1.44	1.44	1.44	0.31%
UGI CORP	1.17	1.23	1.29	1.32	1.36	1.39	1.41	1.43	1.45	1.47	2.58%
WASHINGTON GAS LIGHT	1.01	1.05	1.07	1.09	1.11	1.12	1.14	1.17	1.20	1.22	2.12%
AVERAGE	1.02	1.05	1.08	1.10	1.11	1.13	1.13	1.18	1.21	1.23	2.38%

Average does not include negative percentages or zero

Source: Value Investment Survey, September 22, 2000

SCHEDULE JCD-6

MISSOURI GAS ENERGY
GAS DISTRIBUTION INDUSTRY
EARNINGS PER SHARE

COMPANY	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	AVERAGE GROWTH
AGL RESOURCES, INC.	$1.01	$1.04	$1.13	$1.08	$1.17	$1.33	$1.37	$1.37	$1.41	$0.91	-0.04%
ATMOS ENERGY CORP	0.98	0.80	0.97	1.19	0.97	1.22	1.51	1.34	1.84	0.81	2.97%
CASCADE NATURAL GAS	1.26	1.14	0.63	1.05	0.60	0.80	0.39	0.93	0.84	1.24	14.23%
ENERGEN CORP	0.68	0.71	0.77	0.89	1.01	0.89	0.98	1.16	1.23	1.32	7.99%
LACLEDE GAS COMPANY	1.08	1.28	1.17	1.61	1.42	1.27	1.87	1.84	1.58	1.47	5.52%
NEW JERSEY RESOURCES	0.97	0.83	1.64	1.72	1.89	1.93	2.06	2.22	2.33	2.49	14.04%
NORTHWEST NATURAL GAS	1.62	0.67	0.74	1.74	1.63	1.61	1.97	1.76	1.02	1.70	12.86%
PIEDMONT NATURAL GAS	1.22	0.89	1.40	1.45	1.35	1.45	1.67	1.85	1.96	1.86	6.79%
SOUTH JERSEY INDUSTRIES	1.33	1.27	1.61	1.55	1.21	1.65	1.70	1.71	1.28	2.01	7.61%
UGI CORP	0.81	0.86	1.14	0.42	1.17	0.60	1.05	1.46	1.22	1.34	23.65%
WASHINGTON GAS LIGHT	1.26	1.14	1.27	1.31	1.42	1.45	1.85	1.85	1.54	1.47	2.42%
AVERAGE	$1.11	$0.97	$1.13	$1.27	$1.26	$1.29	$1.49	$1.59	$1.48	$1.51	9.81%

Average does not include negative percentages or zero

Source: Value Investment Survey, September 22, 2000

SCHEDULE JCD-7

MISSOURI GAS ENERGY
GAS DISTRIBUTION INDUSTRY
BOOK VALUE PER SHARE

COMPANY	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	AVERAGE GROWTH
AGL RESOURCES, INC.	$8.97	$9.42	$9.70	$9.90	$10.19	$10.12	$10.56	$10.99	$11.42	$11.59	2.90%
ATMOS ENERGY CORP	8.71	8.88	9.17	9.64	9.78	10.20	10.75	11.04	12.21	12.09	3.75%
CASCADE NATURAL GAS	8.33	8.63	9.09	9.96	9.81	9.76	10.09	10.16	10.07	10.36	2.51%
ENERGEN CORP	6.10	6.04	6.38	6.80	7.65	7.97	8.44	10.46	11.25	12.13	8.12%
LACLEDE GAS COMPANY	11.75	11.83	11.79	12.19	12.44	13.05	13.72	14.26	14.57	14.96	2.73%
NEW JERSEY RESOURCES	13.27	12.85	14.16	14.72	14.46	14.55	15.15	15.57	16.33	17.03	2.88%
NORTHWEST NATURAL GAS	12.61	12.23	12.41	13.08	13.63	14.55	15.37	16.02	16.59	17.12	3.49%
PIEDMONT NATURAL GAS	9.15	9.65	10.27	10.90	11.36	12.31	13.07	13.90	14.91	15.71	6.20%
SOUTH JERSEY INDUSTRIES	13.58	13.53	13.90	14.33	14.46	14.67	16.06	16.11	15.70	16.61	2.32%
UGI CORP	11.21	12.20	12.97	13.00	13.13	11.56	11.40	11.44	11.06	9.14	-1.92%
WASHINGTON GAS LIGHT	10.17	9.63	10.66	11.04	11.51	11.95	12.79	13.48	13.86	14.72	4.28%
AVERAGE	$10.35	$10.44	$10.95	$11.41	$11.67	$11.88	$12.49	$13.04	$13.45	$13.77	3.92%

Average does not include negative percentages or zero

Source: Value Investment Survey, September 22, 2000

SCHEDULE JCD-8

MISSOURI GAS ENERGY
GAS DISTRIBUTION INDUSTRY
DIVIDEND YIELD

	December 31, 1999			June 30, 2000			September 29, 2000			Value Line
COMPANY	Price	Dividend	Yield	Price	Dividend	Yield	Price	Dividend	Yield	Yield
AGL RESOURCES, INC.	17.00	1.08	6.35%	15.95	1.08	6.77%	20.08	1.08	5.38%	5.4%
ATMOS ENERGY CORP	20.44	1.14	5.58%	17.52	1.14	6.51%	20.63	1.14	5.53%	5.6%
CASCADE NATURAL GAS	16.13	0.96	5.95%	16.69	0.96	5.75%	17.50	0.96	5.49%	5.6%
ENERGEN CORP	18.06	0.66	3.65%	21.83	0.66	3.02%	29.75	0.68	2.29%	2.5%
LACLEDE GAS COMPANY	21.63	1.34	6.20%	19.27	1.34	6.96%	21.63	1.34	6.20%	6.2%
NEW JERSEY RESOURCES	39.06	1.68	4.30%	38.06	1.72	4.52%	40.63	1.72	4.23%	4.2%
NORTHWEST NATURAL GAS	21.94	1.24	5.65%	22.38	1.24	5.54%	22.77	1.24	5.45%	5.2%
PIEDMONT NATURAL GAS	30.13	1.38	4.58%	26.56	1.46	5.50%	30.64	1.46	4.76%	4.9%
SOUTH JERSEY INDUSTRIES	28.44	1.44	5.06%	26.02	1.46	5.61%	29.19	1.46	5.00%	5.2%
UGI CORP	20.44	1.50	7.34%	20.48	1.50	7.32%	24.25	1.55	6.39%	6.5%
WASHINGTON GAS LIGHT	27.50	1.22	4.44%	24.06	1.24	5.15%	26.88	1.24	4.61%	4.7%
AVERAGE			5.37%			5.70%			5.03%	5.09%

Source: Value Investment Survey, September 22, 2000
Commodity Systems, Inc.

Schedule JCD-9

MISSOURI GAS ENERGY
Recommended Rate of Return

Description	Ratio	Cost	Weighted Cost Capital
Long-Term Debt	50.00%	8.301%	4.151%
Common Equity	50.00%	12.500%	6.250%
Total	100.00%		10.401%

SCHEDULE JCD-10

STATEMENT OF QUALIFICATIONS
OF
JOHN C. DUNN

Q. Please state your name.

A. John C. Dunn.

Q. What is your educational background?

A. I graduated from the University of Missouri - Kansas City, in 1967 with a Bachelor's Degree in Economics and Minor in Mathematics. In 1970, I received a Master of Arts Degree in Economics from the University of Missouri - Kansas City.

Q. What is your experience in the area of public utility economics?

A. I have been an economic consultant for over 20 years. I have specialized in the general area of public utility economics and corporate finance with a special emphasis in the area of cost of capital and rate of return. Prior to the formation of John C. Dunn & Company, I was a partner in predecessor firms for approximately 15 years. Prior to becoming a consultant, I was Chief of Economic Research for the Missouri Public Service Commission. I left the Commission to become Director of Economic and Financial Services and a principal in the Certified Public Accounting firm of Troupe, Kehoe, Whiteaker and Kent.

I received the designation, Certified Rate of Return Analyst, after successfully completing a comprehensive examination on the body of knowledge involved in evaluation and determination of rate of return, capital structure and related matters.

Q. Have you written any articles in the field of economics?

A. I have published a statistical volume analyzing the gas distribution (both integrated and combinations) and gas transmission industries. This volume was published in early 1972. The volume was entitled, A Regulated Gas Utility Survey. Two other volumes, The Financial and Operating Analysis of Privately Owned Electric Utilities in the United States, 1961-1970, and The Inclusive Directory of Independent Operating Telephones, 1961-1970, were first published under my direction in 1971.

Shorter works include a presentation to the first annual Regulatory Information Systems Conference on the use of the computer as a tool of financial analysis; a presentation to the 1972 Regulatory Information Systems Conference on the use of the computer in augmenting traditional economic analysis; a presentation to the Missouri Valley Electric Association considered the capital requirements and the financial profile for the electric industry for the 1970's; a presentation on "The Independent Telephone Industry", and "The Future of the REA"; and a speech "The Regulation of ADR Deferrals" to a joint session of the Department of the Treasury and the Internal Revenue Service and a presentation on "The Use and Conservation of Helium" to a committee of the Kansas State Senate.

I lectured at Michigan State University NARUC courses from 1973 to 1976 on the use of the computer in regulation and quantitative methods. I was a discussant on rate design on the Missouri Energy Council program and I have been a panel moderator and chairperson on the Iowa State University conference on Public Utility Valuation and the Ratemaking Process and the chairman of the Capital Section of the 1979 Midwest Finance Association. I appeared before a select committee of the Indiana Senate on valuation methods in the ratemaking process.

I was a session chairman at the 1987 Western Economic Association International Conference and a panelist at the same conference. While attending the University of Missouri, I was awarded a fellowship and as a consequence participated in numerous research projects and papers of regional economic importance.

Q. Do you belong to any professional organizations or associations?

A. Yes. The American Economic Association, the American Finance Association, the Econometric Society, the Federation of Financial Analysts, and regional and local associations such as the Western Finance Association, the Southern Economic Association, the Kansas City Society of Financial Analysts and the Kansas City Council on Business Economics.

I am a past member of the Governor's Advisory Council on Comprehensive Health Planning and the State Advisory Board on Medical Service Cost, both in the state of Missouri. From its inception in 1970 until February 1972, I was a member of the National Association of Regulatory Utility Commissioners Subcommittee of Staff Experts on Economics. From its inception until February 1972, I was Chairman of the National Association of Regulatory Utility Commissioners Joint Subcommittee on Electronic Data Processing.

I am also a member of the Iowa State University Board of Directors Conference on Public Utility Valuation, a member of the Program Planning Committee of the same organization and a past member of the faculty of the NARUC Short Course at Michigan State University. I am past chairman of the Advising Faculty of the Regulatory Information Systems Conference.

Q. Have you previously testified before any state or federal regulatory agencies?

A. Yes. I have testified on economic matters, including rate of return determinations, value determinations and rate design before courts in several jurisdictions, utility regulatory agencies, both state and federal, and other regulatory bodies such as State Property Tax Boards. In particular, I have testified before the Federal Energy Regulatory Commission and its predecessor, the Federal Power Commission, the Interstate Commerce Commission and its successor on crude and product pipeline rates, the Federal Energy Regulatory Commission; and the state regulatory commissions of Kansas, Missouri, Mississippi, Illinois, Iowa, Michigan, Oklahoma, Indiana, Texas, Arkansas, Nevada, Colorado, Georgia, South Carolina, Tennessee and Louisiana, among others. I have testified before Federal District Courts in Nebraska, Kansas and Oklahoma and courts in the states of Mississippi, Kansas, Nebraska and Missouri.

Q. Does your background in finance and economics include special studies in the determination of appropriate capitalization and cost of capital?

A. It does.