BEFORE THE TENNESSEE REGULATORY AUTHORITY
NASHVILLE, TENNESSEE

IN RE:	)	
	)	
PETITION OF ATMOS ENERGY	)	**Docket No. 07-**
CORPORATION FOR APPROVAL OF	)	
ADJUSTMENT OF ITS RATES AND	)	
REVISED TARIFF	)	

DR. DONALD A. MURRY

I. POSITION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME.

A. My name is Donald A. Murry.

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

A. I am a Vice President and economist with C. H. Guernsey & Company. I work out of the Oklahoma City, Oklahoma office at 5555 North Grand Boulevard, 73112, and the Tallahassee, Florida office. I am also a Professor Emeritus of Economics on the faculty of the University of Oklahoma.

Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?

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

Q. PLEASE DESCRIBE YOUR PROFESSIONAL BACKGROUND.

A. From 1964 to 1974, I was an Assistant and Associate Professor and Director of Research on the faculty of the University of Missouri - St. Louis. For the period 1974-98, I was a Professor of Economics at the University of Oklahoma, and

since 1998, I have been Professor Emeritus at the University of Oklahoma. Until 1978, I also served as Director of the University of Oklahoma's Center for Economic and Management Research. In each of these positions, I directed and performed academic and applied research projects related to energy and regulatory policy. During this time, I also served on several state and national committees associated with energy policy and regulatory matters, published, and presented a number of papers in the field of regulatory economics in the energy industries.

Q. WHAT IS YOUR EXPERIENCE IN REGULATORY MATTERS?

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

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE OR BEEN AN EXPERT WITNESS IN PROCEEDINGS BEFORE REGULATORY BODIES?

A. Yes, I have appeared before the U.S. District Court-Western District of Louisiana, U.S. District Court-Western District of Oklahoma, District Court-Fourth Judicial District of Texas, U.S. Senate Select Committee on Small Business, Federal Power Commission, Federal Energy Regulatory Commission, Interstate Commerce Commission, Alabama Public Service Commission, Alaska Public Utilities Commission, Arkansas Public Service Commission, Colorado Public Utilities Commission, Florida Public Service Commission, Georgia Public Service Commission, Illinois Commerce Commission, Iowa Commerce Commission, Kansas Corporation Commission, Kentucky Public Service Commission, Louisiana Public Service Commission, Maryland Public Service Commission, Mississippi Public Service Commission, Missouri Public Service Commission, Nebraska Public Service Commission, New Mexico Public Service Commission, New York Public Service Commission, Power Authority of the State of New York, Nevada Public Service Commission, North Carolina Utilities Commission, Oklahoma Corporation Commission, South Carolina Public Service Commission, Tennessee Public Service Commission, Tennessee Regulatory Authority, The Public Utility Commission of Texas, the Railroad Commission of Texas, the State Corporation Commission of Virginia, and the Public Service Commission of Wyoming.

II. PURPOSE OF TESTIMONY

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

A. Atmos Energy Corporation ("Atmos Energy") retained me to analyze the current cost of capital and to recommend a rate of return and capital structure that are appropriate for the Tennessee operating division in this proceeding. In this

testimony, I refer to the Tennessee operating division of Atmos Energy as "Atmos" or the "Company."

Q. ARE YOU SPONSORING ANY EXHIBITS WITH YOUR TESTIMONY?

A. Yes. I am sponsoring an exhibit that I have attached to my testimony which includes Schedules DAM-1 through DAM-31.

Q. WAS THIS EXHIBIT PREPARED EITHER BY YOU OR UNDER YOUR DIRECT SUPERVISION?

A. Yes, it was.

III. SUMMARY

Q. WHAT SUBJECT AREAS DO YOU INTEND TO COVER IN YOUR TESTIMONY?

A. I will testify concerning the following subject areas:

1. Utility Regulation and Fair Rate of Return.
2. The Economic Environment.
3. Selection and Analysis of Comparable Companies to Atmos Energy.
4. The Capital Structure of Atmos Energy.
5. Cost of Long-Term Debt for Atmos Energy.
6. Financial risks to Atmos Energy's common equity investors.
7. Business risks to Atmos Energy's common equity investors.
8. Financial Statistics for Atmos Energy and Comparable Gas Distribution Companies.
9. Cost of Common Stock for Atmos Energy.

10. The Discounted Cash Flow ("DCF") Method and its Strengths, its Weaknesses, Methodology and Results.

11. The Capital Asset Pricing Model ("CAPM") and its Strengths, Weaknesses, Methodology and Results.

12. Interpretation of the DCF and CAPM results.

13. Recommended Allowed Return on Common Stock for Atmos Energy.

14. Financial integrity test--Comparison of After-Tax Interest Coverage Ratio for Atmos Energy with Comparable Gas Distribution Companies.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. My testimony addresses the following issues:

- I was retained by Atmos Energy to analyze the current cost of capital and to recommend a rate of return and capital structure appropriate for the Tennessee operating division in this proceeding.
- I studied the current economic environment and, in particular, the current and forecasted level of interest rates.
- I studied Atmos Energy's capital structure, cost of debt, and cost of common stock appropriate for setting rates in this case.
- Atmos Energy's current capital structure reflects a relatively high amount of leverage and low common equity ratio when compared to its historical capital structure.
- The common equity ratio of Atmos Energy is lower than the common equity ratios of other typical gas distribution utilities.

- Atmos Energy's current common equity ratio has been influenced by a large debt issue used to finance an acquisition. Therefore, one can view it as a transitional common equity ratio.
- Consistent with the management of Atmos Energy's announced intention for a recent common stock issuance, the Company's common equity ratio has been increasing.
- In this rate case, I am recommending a projected capital structure for Atmos Energy of 51.50 percent long-term debt and 48.50 percent common equity.
- Atmos Energy's appropriate cost of debt for this proceeding is the embedded weighted average cost of long-term debt of 6.10 percent.
- To assess the cost of Atmos Energy's common stock equity, I reviewed indicators of financial and business risks for Atmos Energy and compared them to a group of comparable natural gas distribution utilities.
- Although the business risk of Atmos Energy appears to be similar to the business risk faced by a typical natural gas distribution utility in today's markets, Atmos Energy's financial risk is decidedly greater, due to its relatively low common stock equity.
- My review of applicable financial statistics showed that *Value Line* forecasts a return on common stock for a group of comparable local gas distribution companies ("LDCs") of 12.3 percent in 2007. At the same time, *Value Line* predicts only a 9.0 percent return for Atmos

Energy. Even with a relatively low common equity ratio, Atmos Energy's common stock earnings are significantly lower than the average of the group of comparable LDCs.

- The combination of a low common equity ratio and a low realized equity return means that Atmos Energy has a relatively low weighted average cost of capital. A comparison of Atmos Energy's total capital costs to a group of comparable utilities shows this to be the case.
- I used two methods, the Discounted Cash Flow ("DCF") and Capital Asset Pricing Model ("CAPM") for my market analysis of the costs of common equity for Atmos Energy and for each of the comparable natural gas distribution utilities.
- From this analysis, the relevant common equity results for Atmos Energy for the CAPM method ranged from 11.46 percent to 12.22 percent and the DCF method range for a group of comparable companies with bond ratings similar to Atmos was 11.40 percent to 12.00 percent.
- These results centered on a range of 11.5 percent to 12.0 percent, and I am therefore recommending a return to common equity for Atmos Energy of 11.75 percent. My recommended total cost of capital for Atmos Energy is 8.84 percent.
- To verify the adequacy of my recommended return for Atmos Energy, I compared the After-Tax Interest Coverage for Atmos Energy, at this return, to the current After-Tax Interest Coverage for the comparable

LDCs. My recommended allowed return for Atmos Energy will result in an After-Tax Interest Coverage of just 2.81 times. This compares to an average coverage for the comparable companies of 3.80 times. It further confirms that my recommended allowed return is a very conservative recommendation.

IV. UTILITY REGULATION

Q. HOW DID THE POLICIES AND PROCEDURES OF UTILITY REGULATION AFFECT YOUR OPINION IN REGARD TO COST OF CAPITAL?

A. I based my analysis and recommendations on the role of regulation in the natural gas distribution industry. Economies of scale at the distribution level of utility service indicate that the duplication of facilities by more than one firm may be economically inefficient. For this reason, analysts have long recognized the likely presence of market power in a franchised utility market. This is the principal economic rationale for utility regulation.

Recognizing this market structure, the objective of my analysis was to determine an allowed return for the Company which would be sufficient to recover the costs of providing service. Furthermore, the allowed return should not be higher than necessary to attract and maintain invested capital that provides utility service. From my perception as an economist, I also believe that these analytical objectives are consistent with the legal standard of a "fair rate of return" in regulation.

Q. WHAT DID YOU MEAN BY USING THE TERM "LEGAL STANDARD" WHEN YOU REFERRED TO THE CONCEPT OF A "FAIR RATE OF RETURN?"

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

Q. IS THE TERM A "FAIR RATE OF RETURN" IMPORTANT TO YOUR ANALYSIS?

A. Yes. The term "fair rate of return" is important in ratemaking because it sets a standard for the rate of return, and this was the objective of my analysis and recommendation. Generally, a return is sufficient if it enables the company to operate successfully and provide utility services, attract capital, maintain its financial integrity, and compensate investors for the associated risks of investment. This interpretation, I believe, is consistent with the regulatory standard I discussed previously.

V. ECONOMIC ENVIRONMENT

Q. WHAT ECONOMIC FACTORS WERE IMPORTANT TO YOUR ANALYSIS OF ATMOS' COST OF CAPITAL IN THIS PROCEEDING?

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

Q. CAN YOU SUMMARIZE THE CURRENT ECONOMIC ENVIRONMENT?

A. Yes. Through the first quarter of 2007, economic activity is expanding at a moderate pace and *Blue Chip Financial Forecasts (Blue Chip)* predicts real Gross Domestic Product (GDP) will increase to 3.0 percent by the fourth quarter and grow at an approximately 2.6 percent rate in 2007. (See Schedule DAM-1) Manufacturing activity is increasing nationwide causing labor markets to remain tight with some businesses having a difficult time finding skilled and professional workers. Factory production rose 0.7 percent in March, up from 0.1 percent in February. The Federal Open Market Committee predicts unemployment will

average 4.5 percent to 4.75 percent in the fourth quarter of 2007 as compared to 4.6 percent in December 2006.

The housing market remains soft, with some recent signs of improvement, and analysts expect high inventories of new homes to keep residential construction in check. In contrast, commercial real estate markets are strong. Lending activity is up in the commercial and industrial sectors, while residential lending and refinancing continues to weaken.

Q. WHAT ARE SOME OF THE CONSEQUENCES OF THIS ECONOMIC GROWTH?

A. Strong manufacturing activity, spurred by economic growth abroad and increasing exports, should keep labor markets tight. Many forecasters predict low unemployment will offset negative consumer confidence associated with the housing slump and any decline in home prices. Significantly, the jobless rate fell to 4.4 percent in March—matching the lowest rate in five years.

Housing starts rose a stronger-than-expected 0.8 percent in March to an annual rate of 1.52 million units. Building permits also rose 0.8 percent in March, indicating good expected future construction activity. Generally, many forecasters anticipate that real GDP growth will improve into 2008 as the drag from slow residential investment ebbs and capital spending improves.

Q. YOU MENTIONED THAT YOU USED INFORMATION AND FORECASTS FROM *BLUE CHIP FINANCIAL FORECASTS* IN YOUR ANALYSIS. CAN YOU EXPLAIN WHY YOU USED *BLUE CHIP?*

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

Q. YOU MENTIONED THE INFLATION RATE AS AN IMPORTANT FACTOR TO EXAMINE. WHAT ARE THE CURRENT INFLATION CONSIDERATIONS?

A. The economy currently shows definite signs of increasing inflation after several years of relatively stable prices. In the first quarter 2007, overall consumer prices increased at a 4.7 percent seasonally adjusted annual rate. Significantly, this rate is nearly twice the 2.5 percent rate for all of 2006. Additionally, the Federal Reserve's preferred measure of inflation, the Commerce Department's Personal Consumption Expenditures Price Index, was up 2.4 percent in February from a year earlier. This is above the Fed "comfort zone" of 1 percent to 2 percent. As though in confirmation of the relative importance of this development, the minutes from the March 20-21 Open Market Committee meeting of the Federal Reserve state, "Further policy firming might prove necessary to foster lower inflation." Inflation pressures that lead to tighter money imply a rising cost of capital generally. As Schedule DAM-2 illustrates, increasing inflationary pressures are troubling to the financial markets and have the full attention of federal policymakers.

Q. HOW HAVE THE GENERAL LEVEL OF ECONOMIC ACTIVITY AND INFLATION EXPECTATION AFFECTED INTEREST RATES?

A. The state of the economy and economic expectations provide an important background for my cost of capital analysis because inflationary pressures almost certainly lead to actions by the Federal Reserve to increase interest rates. For example, the Federal Open Market Committee ("FOMC") raised interest rates 17 times between June 2004 and June 2006. Although the FOMC recently has forgone raising short-term rates further, it has indicated it will remain vigilant regarding inflation concerns. For example, in a speech at Rutgers University on April 17, Philadelphia Federal Reserve Bank President Charles Plosser said inflation remains too high for the central bank's comfort.

Q. YOU DISCUSSED SOME FACTORS CURRENTLY AFFECTING INTEREST RATES. WHAT ARE THE RECENT AND CURRENT LEVELS OF BOND RATES?

A. As shown on Schedule DAM-3, according to the Federal Reserve, the yields on 10-year Treasury Notes bottomed out in 2003 but have been increasing ever since. Currently, the 10-year Treasury notes and Baa-corporate rate are about 4.56 percent and 6.27 percent, respectively.

Q. WHAT IS THE FORECASTED LEVEL OF BOND INTEREST RATES?

A. Generally, analysts expect long-term bond rates to continue rising. The *Blue Chip* forecasts for the Baa-corporate rate and the 30-year Treasury rate are for continued increases to 6.7 percent and 5.0 percent respectively into 2008. (See Schedules DAM-4.1 and DAM-4.2.) *Value Line* provides a longer-term forecast

for the 2010-12 period and also shows interest rate increases out to that period. I have shown this continued forecasted growth in interest rates in Schedules DAM-5.1 and 5.2.

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

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

VI. SELECTION OF COMPARABLE COMPANIES

Q. YOU STATED THAT YOU COMPARED YOUR ANALYTICAL RESULTS FOR ATMOS ENERGY TO THE RESULTS FROM SIMILAR CALCULATIONS FOR A GROUP OF COMPARABLE NATURAL GAS DISTRIBUTION COMPANIES. WHAT CRITERIA DID YOU USE TO SELECT THE UTILITIES THAT YOU IDENTIFIED AS COMPARABLE TO ATMOS ENERGY FOR YOUR ANALYSIS?

A. I identified criteria that were similar to the characteristics of Atmos Energy. Using these criteria, I selected a group of local gas distribution utilities for comparative analysis. I first selected the comparable companies from a group of gas distribution companies reported on by *Value Line.* These companies are all publicly traded utilities. Second, because of the importance of size in determining the cost of capital of a utility, I limited the group of distribution companies to firms with a market capitalization of at least $1 billion. Third, as a measure of financial health and similar investor expectations, I excluded companies that do not pay a dividend. Finally, I limited this group to companies that are primarily gas distributors.

Q. YOU USED SELECTION CRITERIA SIMILAR TO ATMOS ENERGY WHEN SELECTING A GROUP OF COMPANIES TO STUDY. WHAT WAS THE REASON FOR THIS?

A. I selected a group of companies for analysis that were comparable to Atmos Energy in many respects, so their financial risks and the associated costs of common stock equity would be similar. In this way, I could use the results from analysis of the comparable group as a surrogate for Atmos Energy analytically.

Q. BASED ON YOUR SELECTION CRITERIA, WHAT COMPANIES DID YOU SELECT AS COMPARABLE TO ATMOS ENERGY FOR YOUR ANALYSIS?

A. I selected eight natural gas distribution utilities that are similar in many respects to Atmos Energy. These are AGL Resources, New Jersey Resources, NICOR,

Inc., Northwest Natural Gas, Piedmont Natural Gas, South Jersey Industries, Southwest Gas, and WGL Holdings, Inc.

VII. CAPITAL STRUCTURE

Q. WHAT IS THE CAPITAL STRUCTURE THAT YOU ARE RECOMMENDING FOR ATMOS IN THIS PROCEEDING?

A. Atmos Energy raises and provides the capital to the Tennessee operating division. I believe that the capital structure of the parent company is appropriate for calculating the cost of capital in this proceeding. I have illustrated this capital structure in Schedule DAM-6. Long-Term Debt is 51.50 percent of total capital, and Common Equity is 48.50 percent of total capital.

Q. HOW DOES YOUR RECOMMENDED CAPITAL STRUCTURE FOR ATMOS COMPARE TO THE HISTORICAL CAPITAL STRUCTURE OF ATMOS ENERGY?

A. I am recommending a common equity ratio for ratemaking for Atmos in this proceeding that is within the range of Atmos Energy's recent, historical common equity ratios. For example, in 2004, which was just prior to issuing debt to finance a significant acquisition, the common stock equity level was 56.8 percent. Then following that acquisition, the common equity ratio of Atmos Energy was exceptionally low, but it appears to be increasing to more typical levels. *Value Line* data forecast the average common stock equity of the comparable gas distribution utilities in 2007 at 55.4 percent. This comparison further demonstrates that the common equity ratio estimated by Atmos and proposed in this proceeding

is a reasonable one for setting rates which will be in effect during the next several years. I have illustrated these equity comparisons in Schedule DAM-7.

Q. IS THE CAPITAL STRUCTURE THAT YOU PROPOSE FOR RATEMAKING IN THIS PROCEEDING CONSISTENT WITH YOUR UNDERSTANDING OF ATMOS ENERGY'S PLANNED FINANCING?

A. Yes. For example, Atmos Energy's 10-K Report for the Fiscal Year 2006, at page 52, describes the planned future capitalization levels, as follows:

> Within three to five years, we intend to reduce our capitalization ratio to a target range of 50 to 55 percent through cash flow generated from operations, continued issuance of new common stock under our Direct Stock Purchase Plan and Retirement Savings Plan, and access to the equity capital markets.

This stated objective is consistent with the capital structure that I am recommending for the purpose of setting rates in this proceeding.

Q. ARE YOU AWARE OF EVIDENCE THAT ATMOS ENERGY WILL ISSUE AN AMOUNT OF COMMON STOCK SUFFICIENT TO RETURN TO ITS PRIOR COMMON EQUITY LEVELS?

A. Following other acquisitions, Atmos Energy has issued common stock over time and brought its common equity ratio back to a level which is close to my recommended level in this proceeding. As Schedule DAM-8 shows, *Value Line* predicts that Atmos Energy's common stock outstanding will grow at a rate which is many times faster than any of the comparable LDCs. In fact, a recent common stock issuance yielding net proceeds of approximately $192 million by Atmos Energy is consistent with these *Value Line* forecasts. Therefore, financing to date by Atmos Energy supports these forecasts. At the time of this issue, Atmos

Energy's management stated that the purpose of this offering was to pay down outstanding debt.

Q. YOU RECOMMENDED A CAPITAL STRUCTURE FOR RATEMAKING IN THIS PROCEEDING THAT DID NOT INCLUDE ANY SHORT-TERM DEBT. WHAT WAS YOUR REASON FOR NOT INCLUDING ANY SHORT-TERM DEBT IN THIS CAPITAL STRUCTURE?

A. I did not include short-term debt because it is not part of Atmos Energy's permanent capital structure. Atmos Energy does not use short-term debt to support its long-term assets which provide utility service to its customers. Atmos Energy's short-term debt fluctuates greatly and even disappears for months at a time. It is obvious that Atmos Energy uses its short-term debt to support such variable operating expenses as the cost of purchased gas.

Q. DID YOU INVESTIGATE WHETHER ATMOS ENERGY'S SHORT-TERM DEBT SUPPORTS LONG-TERM ASSETS WHICH PROVIDE UTILITY SERVICE TO ITS CUSTOMERS?

A. Yes. I reviewed the historical end of month short-term debt balances of Atmos Energy. As Schedule DAM-9 clearly illustrates, Atmos Energy uses short-term debt to meet the fluctuating costs of gas and other operating expenses. Because the short-term debt of Atmos Energy frequently falls to zero and remains at that level for months at a time, it cannot be supporting the long-term assets of the utility.

VIII. COST OF LONG-TERM DEBT

Q. YOU SAID THAT YOU DETERMINED THE COST OF LONG-TERM DEBT OF ATMOS ENERGY. WHAT DID YOU DETERMINE IS THE WEIGHTED AVERAGE COST OF LONG-TERM DEBT APPROPRIATE FOR SETTING RATES IN THIS PROCEEDING?

A. Atmos Energy's embedded weighted average cost of long-term debt as of October 31, 2008, is 6.10 percent. I have illustrated this calculation in Schedule DAM-10.

IX. FINANCIAL RISK

Q. YOU MENTIONED THAT YOU INVESTIGATED ATMOS ENERGY'S "FINANCIAL RISK" TO ITS COMMON EQUITY INVESTORS. WHAT IS FINANCIAL RISK?

A. Financial risk is the risk to a company's common stockholders that is a consequence of its use of financial leverage. This risk results from using fixed income securities to finance the firm. Because the return to common stockholders is the income available after a company pays its debt holders, it is a residual return. This means it is less certain than the contracted return to debt holders.

Q. CAN YOU READILY DETERMINE THE LEVELS OF FINANCIAL RISK FACED BY COMMON STOCKHOLDERS FROM THE FINANCIAL INFORMATION THAT YOU STUDIED?

A. In general, the lower the common stock equity ratio, the greater the relative prior obligation owed to debt holders. Consequently, all things being equal, the risk faced by common stockholders is greater if the common equity ratio is smaller.

Q. DO YOU BELIEVE FINANCIAL RISK IS IMPORTANT FOR AN ANALYST TO CONSIDER WHEN ESTIMATING THE COST OF CAPITAL IN A RATE PROCEEDING?

A. Yes. Of course, in order to attract and maintain capital, firms must compensate common stock investors for this risk. Financial risk is a very basic determinant of the cost of capital, and consequently, it affects the required return necessary and sufficient in a rate proceeding.

Q. HOW DID FINANCIAL RISK ENTER INTO YOUR DETERMINATION OF THE COST OF COMMON EQUITY OF ATMOS IN THIS PROCEEDING?

A. As I noted previously, the common equity of Atmos Energy, which is appropriate for this proceeding, is 48.50 percent. Also, as I noted earlier, the estimated average common equity ratio for the comparable companies is 55.4 percent. The capital structures of the comparable utilities are less risky than the capital structure of Atmos Energy as indicated by the respective equity ratios. Consequently, even at my recommended capital structure, financial risk is a very significant factor for setting an allowed return in this proceeding. As a corollary to this high risk common equity ratio, for ratemaking purposes, this is also relevant because common equity is the highest cost component of permanent capital.

Q. DID YOU REVIEW ANY OTHER MEASURES OF FINANCIAL RISK REPORTED BY THIRD PARTIES?

A. Yes, I reviewed some widely recognized measures of financial health that are largely influenced by the level of financial risk. For example, I specifically

compared *Value Line's* measure of "Financial Strength," Standard & Poor's ("S&P's") Credit Ratings, and S&P's "Business Position" ratings for Atmos Energy with those of the comparable companies. These measures by independent financial analysts are consistent with my conclusions about financial risks when I compared Atmos Energy's common equity ratio to the common equity ratios of the comparable companies.

Q. PLEASE EXPLAIN YOUR FINDINGS WHEN YOU COMPARED THE VALUE LINE AND THE S&P FINANCIAL RISK MEASURES.

A. Atmos Energy's "Financial Strength," according to *Value Line,* is "B+". By comparison, the median rating for the group of comparable companies is "B++". Only Southwest Gas, a LDC with recent financial difficulties, and a "B" rating, has a lower rating than Atmos Energy. Similarly, Standard & Poor's credit rating for Atmos Energy is "BBB", but for the comparable companies, the median rating is "A". Likewise, Standard & Poor's "Business Position" measures Atmos Energy as one of only two of these LDCs with a rating as low as "4"; the median for the comparable LDCs is a "3". Consequently, each one of these measures by *Value Line* and S&P shows Atmos Energy's securities to be more risky than those of the group. In fact, when reviewing these risk measures, including the bond rates, a clear distinction is obvious among these LDCs. South Jersey Industries, Southwest Gas and Atmos Energy have the lowest risk profiles of this group. I have illustrated these comparisons in Schedule DAM-11.

X. BUSINESS RISK

Q. YOU ALSO STATED THAT YOU INVESTIGATED THE "BUSINESS RISK" OF ATMOS. WHAT IS BUSINESS RISK?

A. Business risk is the exposure of the returns to common stockholders that results from business operations. LDCs experience heightened business risk because declining sales threaten margins, and generally, LDCs' sales have fallen recently because of rising gas costs and keener competition from other fuels. Additionally, recent increasing operating costs as a result of inflation and rising interest rates narrow margins available to investors.

Q. CAN YOU EXPLAIN MORE FULLY HOW HIGH GAS COSTS INCREASE THE BUSINESS RISK OF INVESTORS?

A. High gas costs lead to increases in working capital and short-term debt required to pay suppliers. Since high gas costs lead to lower consumption and rising bad debt expenses, a LDC's accounts receivables and short-term debt levels also increase.

Q. DID YOU CONSIDER BUSINESS RISK IN YOUR ANALYSIS IN THIS PROCEEDING?

A. Yes. As is the case for all LDCs, Atmos Energy's division in Tennessee has similar business risks to those LDCs operating in the U. S. To the holders of common equities of a LDC, the business risk associated with the current high gas costs is whether the company will recover these costs in a timely manner.

Q. DID YOU ALSO REVIEW ANY FINANCIAL MEASURES SHOWING THE RELATIVE BUSINESS RISKS OF ATMOS ENERGY AND THE COMPARABLE COMPANIES?

A. I compared some *Value Line* measures for Atmos Energy and the comparable LDCs that incorporate the analysts' assessments of business risks of the companies. *Value Line* ranks the "Safety" of an investment in Atmos Energy as a "2". The average for the comparable LDCs is virtually the same at "1.9." By this ranking, a "1" is the highest and a "5" is the lowest. *Value Line* determined that Atmos Energy is only a slightly more "timely" investment than the average of the comparable LDCs. I illustrate these rankings in Schedule DAM-12.

XI. FINANCIAL STATISTICS

Q. PREVIOUSLY YOU MENTIONED THAT YOU REVIEWED KEY FINANCIAL STATISTICS OF ATMOS ENERGY. WHAT FINANCIAL STATISTICS DID YOU REVIEW THAT WERE RELEVANT TO YOUR RECOMMENDATION?

A. I compared earnings, dividend histories and forecasted dividends for Atmos Energy and the comparable LDCs. From these comparisons, I was able to discern the relative financial performance of Atmos Energy in recent markets relative to these comparable LDCs.

Q. EARLIER YOU STATED THAT ATMOS ENERGY'S LOW COMMON EQUITY RATIO INDICATED A RELATIVELY HIGH LEVEL OF FINANCIAL RISK. DID ATMOS ENERGY'S FINANCIAL PERFORMANCE SHOW THAT THE COMPANY EARNED HIGHER RETURNS ON ITS COMMON EQUITY BECAUSE OF THIS HIGHER FINANCIAL RISK?

A. No. Paradoxically, although the common equity ratio of Atmos Energy is low relative to the comparable LDCs, its return to common stock is lower than the average return for the group. In fact, in each of the last five years, Atmos Energy's return to common stock has been lower than the average for the comparable group. Moreover, *Value Line* is predicting that Atmos Energy will earn only 9.0 percent on common stock equity in 2007 as compared to the estimated average for the comparable LDCs in 2007 of 12.3 percent. In fact, despite its relatively low common equity ratio, *Value Line* predicts that Atmos Energy's return to common equity in 2007 will be lower than every one of the LDCs in this comparable group. I show these comparisons in Schedule DAM-13.

Q. DID YOU VERIFY THAT THE LOW COMMON EQUITY RATIO AND LOW RETURN TO COMMON EQUITY RESULT IN A LOW RETURN TO TOTAL CAPITAL FOR ATMOS ENERGY?

A. Yes. Atmos Energy's low common equity ratio and low return on common stock together result in a low total cost of capital. Atmos Energy's cost of total capital of 6.0 percent for 2007, as estimated by *Value Line,* is much lower than the 8.3 percent average cost of total capital of the comparable LDCs. I illustrated this comparison of the cost of total capital in Schedule DAM-14.

Q. DID YOU DETERMINE WHETHER ATMOS ENERGY'S LOW COMMON STOCK EARNINGS HAVE HAMPERED ITS ABILITY TO MAINTAIN ITS DIVIDEND?

A. I cannot determine the direct cause and effect relationship between Atmos Energy's common stock earnings and dividends. However, I did compare Atmos

Energy's dividend growth rate to that of the comparable companies. Atmos Energy's dividend growth was only 1.63 percent over the past five years. By comparison, the average for the comparable gas distribution utilities is more than twice the rate of Atmos Energy, or 4.23 percent. I have shown these dividend changes in Schedule DAM-15.

Q. ATMOS ENERGY HAS A RELATIVELY LOW RETURN ON COMMON STOCK. HOW DOES ATMOS ENERGY'S DIVIDEND PAYOUT RATIO COMPARE TO THE PAYOUT RATIOS OF THE COMPARABLE COMPANIES?

A. Atmos Energy's dividend payout has averaged 69.4 percent over the most recent five-year period, which is higher than the 60.3 percent average for the comparable companies. Notably, the average dividend payout ratio for the comparable LDCs has been relatively flat in recent years. Schedule DAM-16 shows these relative payout ratios of Atmos Energy and the comparable LDCs.

Q. IN YOUR COMPARATIVE ANALYSIS OF DIVIDENDS AND EARNINGS, DID YOU EVALUATE THE RELATIVE MARKET ACCEPTANCE OF THE COMMON STOCK OF ATMOS ENERGY AND THE OTHER GAS DISTRIBUTION COMPANIES?

A. Yes, I reviewed the common stock price earnings ("P/E") ratios of Atmos Energy and the comparable companies. This comparison showed that, at present, Atmos Energy's market price earnings ratio of 15.6 times is similar to the average P/E ratios for the comparable LDCs. I have shown these comparisons in Schedule DAM-17.

XII. COST OF COMMON STOCK

Q. YOU ALSO STATED PREVIOUSLY THAT YOU CALCULATED THE COST OF COMMON STOCK EQUITY FOR ATMOS. PLEASE EXPLAIN THE METHODOLOGIES THAT YOU USED IN THIS ANALYSIS.

A. For my cost of capital analysis, as I stated previously, I used the two more common and accepted market-based methods for estimating the cost of common stock in regulatory proceedings, namely the Discounted Cash Flow method and the Capital Asset Pricing Model. I applied each of these methods to a group of comparable companies to estimate the cost of common stock for Atmos. I used these methods to calculate the cost of common equity as a comparison to the results of the analysis for Atmos Energy. Interpreting the results in these calculations is obviously a critical step in the analysis. Consequently, I investigated the underlying assumptions of each of these methods to determine if they were satisfied and to assess the likely results if circumstances prevented them from being satisfied in this instance. To put my analysis into perspective, I also reviewed academic literature related to the use of these two techniques. In this way, I interpreted the results while taking into account the relative strengths and weaknesses of these methods. Finally, to put the results of these calculations into perspective, I evaluated them in the context of current market conditions.

XIII. DISCOUNTED CASH FLOW METHOD

Q. YOU MENTIONED THAT YOU USED THE DCF METHOD FOR DETERMINING THE COST OF COMMON STOCK. CAN YOU DEFINE

THE DCF METHODOLOGY FOR MEASURING THE COST OF COMMON EQUITY?

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

$$K = D/P + g$$

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

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

Q. YOU MENTIONED THE UNDERLYING ASSUMPTIONS OF THE COST OF CAPITAL MODELS. WHAT ASSUMPTIONS UNDERLYING THE DCF METHOD ARE IMPORTANT WHEN ESTIMATING THE COST OF COMMON STOCK EQUITY IN PRACTICE?

A. I believe one can identify the following important underlying assumptions associated with the basic annually compounded DCF model:

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

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

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

4. Expected cash flows consist of dividends and the future sale price of the stock. The sales price in any period will equal the present value of the dividends and the sales price expected after that period

including any liquidating dividend. Consequently, the sales price in any period is equal to the present value of all expected future dividends.

5. Dividends are paid annually.

6. There is no external financing.

As noted in these assumptions, expected cash flows consist of dividends and the future sale price of the stock, but actually, earnings drive both.

XIV. STRENGTHS OF THE DCF

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

A. The DCF's principal strength is that it is theoretically sound; it relates an investor's expected return in the form of dividends and capital gains to the value that the investor is willing to pay for those returns. The DCF implies that an investor is willing to pay a market price that is equal to the present value of an anticipated stream of earnings. In this way, one can estimate the opportunity cost of investors' funds. The DCF relates known market price information and the company's dividend and earnings performance to determine the value that investors place on anticipated returns. Other advantages in using the DCF to measure the cost of capital for ratemaking, is that regulatory analysts commonly use it, and participants in proceedings generally understand it.

Q. IN YOUR OPINION, IS THIS ESTIMATE OF THE COST OF COMMON EQUITY CONSISTENT WITH THE REGULATORY OBJECTIVE OF

SETTING AN ALLOWED RETURN EQUAL TO THE RETURNS OF EQUIVALENT RISK?

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

XV. WEAKNESSES OF THE DCF

Q. DOES THE DCF METHOD POSSESS ANY WEAKNESSES THAT MAY BE IMPORTANT IN THIS APPLICATION?

A. Yes. The DCF can have conceptual and data problems. In either instance, they may lead to misinterpretation of the calculated results.

Q. YOU MENTIONED CONCEPTUAL PROBLEMS. IN YOUR EXPERIENCE, WHAT CONCEPTUAL PROBLEMS MAY BE IMPORTANT WHEN YOU USE THE DCF TO ESTIMATE THE COST OF CAPITAL IN A RATE PROCEEDING?

A. When using the DCF method in a rate proceeding, there is a danger that participants will misinterpret and misapply its results. For example, results from using dividend growth rates in the DCF will be misleading if investors are purchasing and selling a stock because of anticipated changes in earnings and potential capital gains rather than just near-term dividend growth. That is, if an assumption (such as dividends being the sole source of value expectations of an

investor) is not accurate, then analysts will error if they do not recognize this distinction.

Also, as I stated previously, the DCF method calculates the marginal, or incremental, cost of common stock equity of a company. If analysts do not recognize the theoretical significance of this calculation, they may misapply the results of their calculations. As a marginal cost estimate, the DCF produces an estimate of the minimal return necessary to attract or maintain investment funds in a company's common stock equity. Stated differently, this means that the DCF method does not account for any other factors that may affect the ability of the company to earn that return. This practical recognition is obviously critically important in a regulatory setting.

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

A. If a DCF-based cost of common equity, even if realistically developed, becomes the allowed return for a regulated utility, this will not provide enough cushion so the realized return will be sufficient to attract and maintain capital. Analysts, interpreting the results of the DCF calculations, may not recognize this. Consequently, the DCF-based calculations may be misleading. In fact, this misunderstanding of the DCF results can virtually assure that a regulated company will not have the opportunity to earn its allowed return.

Q. ARE YOU AWARE IF REGULATORY COMMISSIONS RECOGNIZE THESE LIMITATIONS OF THE DCF?

A. Yes. Regulatory commissions have recognized the difficulties of relying on the raw, unadjusted DCF calculations. In one such example, a regulatory commission recognized that the assumptions underlying the DCF model rarely, if ever, hold true.[1] This commission stated that an "...unadjusted DCF result is almost always well below what any informed financial analyst would regard as defensible and therefore requires an upward adjustment based largely on the expert witness' judgment."[2]

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

A. Yes. Both regulators and analysts have often applied compensating adjustments for the marginal cost nature of the DCF adjustment, and they do so in a variety of ways. Although these various adjustments may differ greatly in their approaches, each addresses the inadequacy of the marginal cost estimates of the cost of capital in some manner. For example, I have observed such practices as applying a "flotation" adjustment, a "market pressure" adjustment or an adjustment to common equity to reflect the market values of debt and equity.

Q. YOU MENTIONED THAT A FLOTATION ADJUSTMENT IS ONE WAY THAT ANALYSTS ADDRESS THE MARGINAL COST NATURE OF THE DCF. EXPLAIN WHY THIS IS THE CASE.

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

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

Q. RECOGNIZING THE MARGINAL COST NATURE OF THE DCF AND THE NEED OF A REGULATED UTILITY TO BE ACTIVE IN THE FINANCIAL MARKETS, DO YOU RECOMMEND CALCULATING A FLOTATION ADJUSTMENT?

A. No, I do not. Instead, I believe it is an adequate recognition of the marginal cost nature of the DCF for an analyst to focus on the higher end of the DCF results. In my opinion, this will provide adequate compensation to attract and maintain investment in a utility's common stock.

Q. WHAT IS THE RATIONALE OF A "MARKET PRESSURE" ADJUSTMENT TO THE MARGINAL COST NATURE OF THE DCF?

A. Market pressure is the measured impact of an issuance of common stock on the prices of that common stock. The DCF measured cost of common stock does not account for the price impact of additional, newly issued shares placed on the market. Consequently, the marginal cost of common stock measured prior to this issuance, if set as the allowed return, will fail to capture the true cost of capital necessary to attract investors.

Q. DO YOU RECOMMEND APPLYING A MARKET PRESSURE ADJUSTMENT TO THE DCF RESULTS IN SELECTING A RECOMMENDED ALLOWED RETURN IN RATEMAKING?

A. No. Again, in most circumstances, I believe looking to the higher end of the DCF market-based results will supply a reasonable return on common stock for a regulated utility. This should also provide an adequate return to compensate for the impact of newly issued securities and to attract investors to newly issued common stock.

Q. PLEASE EXPLAIN THE ADJUSTMENT TO THE COST OF EQUITY TO REFLECT MARKET VALUES FOR DEBT AND EQUITY?

A. Regulatory convention dictates that an analyst should use the book values of securities, when establishing the capital structure of a utility for ratemaking. Some analysts adjust the cost of equity for ratemaking to compensate for the difference between market value and book value. Theoretically, market values should be used to calculate the cost of capital because they values reflect investors' perceptions of risks and returns and form the basis for determining the marginal cost of capital, or in other words, the cost of attracting the next dollar of investment. An analyst should recognize the difference between market valuation and book valuation in a recommended allowed return.

XVI. DATA FOR THE DCF ANALYSIS

Q. ARE YOU AWARE OF STUDIES REGARDING DATA USED IN A DCF ANALYSIS THAT ARE MORE LIKELY TO PRODUCE RELIABLE ESTIMATES OF THE COST OF CAPITAL?

A. Yes. Academic studies have shown that, at least at certain times, analysts' forecasts are superior to historically trended growth rates as predictors of growth rates for DCF analyses.

Q. CAN YOU CITE SOME OF THE STUDIES THAT DEMONSTRATED THAT INVESTORS LOOK TO ANALYSTS' FORECASTS WHEN MAKING INVESTMENT DECISIONS?

A. Yes. A number of authors have addressed the merits of analysts' forecasts in a DCF analysis of the cost of capital. For example, a well-known financial textbook, by Brigham and Gapenski, argues that financial analysts' growth rate forecasts are the best source for growth measures in a DCF analysis. They state:

> Analysts' growth rate forecasts are usually for five years into the future, and the rates provided represent the average growth rate over the five-year horizon. Studies have shown that analysts' forecasts represent the best source for growth for DCF cost of capital estimates.[3]

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

> ...overwhelming evidence that the consensus analysts' forecast of future growth is superior to historically oriented growth measures in predicting the firm's stock price....Our results are consistent with the hypothesis that investors use analysts' forecasts, rather than historically oriented growth calculations, in making stock buy-and-sell decisions.[4]

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

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

As to the use of the DCF in utility regulatory proceedings, Timme and Eisemann examined the effectiveness of using analysts' forecasts rather than historical growth rates. They concluded:

> The results show that all financial analysts' forecasts contain a significant amount of information used by investors in the determination of share prices not found in the historical growth rate....The results provide additional evidence that the historical growth rates are poor proxies for investor expectations; hence they should not be used to estimate utilities' cost of capital.[5]

Q. ARE YOU AWARE OF ANY OTHER EMPIRICAL INFORMATION THAT FOCUSES ON THE IMPORTANCE OF COMMON STOCK EARNINGS?

A. Yes. In an "event analysis," a colleague and I compared the market reactions to dividend announcements and common stock earnings announcements for a group of electric utilities. Specifically, we looked at announcements that were likely to be a surprise to the market. We looked at the price impact of both earnings announcements and dividend announcements that exceeded *Value Line's* projected levels. Among these companies, there were 8 dividend announcements and 19 earnings announcements that exceeded analysts' expectations from September 2001 to December 2003. By developing ratios of a utility's common stock price to the Dow Jones Utility Index, we statistically isolated the impact of these announcements and linked them to contemporaneous price changes. As Schedule DAM-18 shows, the impact on market prices of the unexpected earnings per share announcements in these cases is obvious and of unexpected dividend announcements seemingly less so.

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

Q. WHAT HAS BEEN THE RECENT RELATIONSHIP BETWEEN COMMON STOCK EARNINGS AND DIVIDEND GROWTH FOR LDCS?

A. In recent years, dividends generally have grown more slowly than earnings per share for both Atmos Energy and the comparable utilities. I have illustrated these recent growth figures in Schedule DAM-19; they also show that *Value Line* expects this lower dividend growth rate to continue for the next few years.

Q. CAN YOU EXPLAIN WHY THE RECENT DIVIDEND GROWTH HAS TRAILED EARNINGS PER SHARE GROWTH FOR THESE LDCS?

A. Of course, I cannot be certain as to why boards of directors have not raised dividends at the same rate that earnings per share have increased. However, industry developments provide a clue. The LDCs have faced increasing competitive pressures in the last few years because of restructuring in the industry and competition for alternative fuels. Boards of directors are likely to be more conservative in this environment. This is likely to lead to conserving cash and refraining from very large dividend increases. This is a form of investment in the company even when earnings may appear to warrant increasing dividends to common stockholders.

Q. HOW DID YOU DETERMINE COMMON STOCK PRICES FOR YOUR DCF ANALYSIS?

A. I was interested in current market valuations, and I studied recent prices for Atmos Energy as well as the comparable LDCs. In addition, because utility rates set in this proceeding will be in effect for a number of years, I also took a longer view regarding market prices. I developed price information from *YAHOO!*

Finance for the past year and also for a recent two-week period. As a consequence, I developed DCF results using these different price estimates.

XVII. DCF CALCULATIONS

Q. WHAT WERE THE RESULTS OF YOUR DCF ANALYSES?

A. I combined historical and forecasted dividend growth rates to take into account the influence of recent financial results and forecasts. Using these growth rates and the common stock prices for the past year produced very low estimates for both Atmos Energy and the comparable LDCs. These resulting DCF calculations are, in fact, so low that they are not useful for setting an allowed return for Atmos Energy in this proceeding. I illustrate these DCF results in Schedule DAM-20. For the comparable companies, the average higher DCF cost of common return is only 7.57 percent. For Atmos Energy, despite its lower common equity ratio and relatively higher financial risk, the high-end DCF common equity estimate is only 6.52 percent. To illustrate that this is not a credible DCF result, as a comparison, the current forecasted Baa bond rate, which is a lower risk instrument than the common equities of Atmos Energy and the LDCs, is 6.4 percent. So, these DCF results are not reasonable standards for setting rates for an LDC such as Atmos. Current prices result in even lower, less credible estimates of the cost of common equity. For Atmos Energy, the current prices result in a high–end estimate of only 5.58 percent. I have illustrated these results in Schedule DAM-21.

Q. WHAT RESULTS DID YOUR DCF ANALYSIS PRODUCE WHEN YOU USED EARNINGS GROWTH RATES?

A. Combining the historical and forecasted earnings per share growth rates produced more credible DCF results. For Atmos Energy, using prices over the past year, the high end of the cost of common equity estimates is 10.52 percent. As previously noted, the group of comparable LDCs had distinctively different financial risk measures such as bond ratings. For example, the comparable LDCs with bond ratings below A+, like Atmos Energy, had DCF results of 12.00 percent. I have shown the results of these calculations in Schedule DAM-22. Using current price levels, the corresponding DCF estimates for Atmos Energy are 9.58 percent and 11.20 percent for the comparable A or lower rated utilities. I show these calculations in Schedule DAM-23. Using only the forecasted earnings per share growth rate, the high-end DCF estimates for Atmos Energy are 10.01 percent using prices over the past year and 10.44 percent for the comparable LDCs. I illustrate this calculation in Schedule DAM-24. As I illustrate in DAM-25, using more recent prices, the similar DCF result is 9.07 percent for Atmos Energy and 9.65 percent for the comparable LDCs.

Q. THE FINANCIAL RISK DIFFERENCE OF ATMOS ENERGY AND THE COMPARABLE COMPANIES IS OBVIOUSLY IMPORTANT. DID YOU IDENTIFY WHETHER THE FINANCIAL RISK DIFFERENCES APPEARED TO AFFECT THE DCF RESULTS?

A. Yes. Among the comparable LDCs, I noted that the lower bond rated companies had distinctly higher DCF results. I have illustrated this difference in Schedule DAM-26.

XVIII. CAPITAL ASSET PRICING MODEL

Q. YOU STATED THAT YOU USED THE CAPITAL ASSET PRICING MODEL IN YOUR ANALYSIS. WHAT IS THE CAPITAL ASSET PRICING MODEL?

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

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

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

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

XIX. STRENGTHS OF THE CAPM

Q. WHAT, IN YOUR OPINION, ARE THE STRENGTHS OF THE CAPM METHOD?

A. As a risk premium method, the CAPM provides a relatively long-term perspective. It takes current debt costs as a basis for measuring the cost of common stock. It links the incremental cost of capital of an individual company with the risk differential between that company and the market as a whole. Although it is a less refined calculation, it is a good tool for assessing the general level of the cost of a security. As a comparison to DCF methods, which are more sensitive to changes in market prices and earnings, the CAPM produces much more stable results over short time periods. Also, the CAPM will typically produce relatively similar results for companies in the same industry, whereas, the DCF method may produce wide-ranging calculations among companies in the same industry.

XX. WEAKNESSES OF THE CAPM

Q. WHAT PROBLEMS DO YOU PERCEIVE TO BE IMPORTANT WHEN ONE USES THE CAPM TO MEASURE THE COST OF CAPITAL IN A RATEMAKING PROCEEDING?

A. The CAPM results for a company are very sensitive to the company's beta used in the analysis. Commonly, the beta differential is the determining factor regarding whether a cost of capital estimate is high or low. However, since beta is a single measure of risk, the CAPM cannot account for any risks not included as measures

of market volatility. Consequently, on occasion, the CAPM has failed to identify significant market risks to investors. This is one important problem when interpreting the CAPM results.

Q. ARE YOU AWARE OF PROBLEMS WITH THE CAPM THAT HAVE SPECIAL IMPLICATIONS FOR SETTING THE COST OF CAPITAL IN RATEMAKING?

A. Yes. Most utilities have betas less than one, and a number of analysts have shown that the CAPM underestimates the cost of capital of companies with betas less than one. For example, Atmos Energy's *Value Line* beta is 0.80. All of the comparable LDCs except NICOR also have betas less than one, ranging from 0.70 to 0.95. NICOR's beta is 1.30. The same analysis has also shown that the CAPM overestimates the cost of capital of companies with betas greater than one, but this is a less important finding as far as ratemaking is concerned. In addition, the academic literature has shown overwhelmingly that the standard CAPM method will underestimate the cost of capital of smaller companies, and this underestimation of capital costs may require an adjustment.

Q. YOU STATED THAT THE FINANCIAL LITERATURE RECOGNIZES THAT THE CAPM METHOD MAY REQUIRE AN ADJUSTMENT FOR A COMPANY'S SIZE. WHAT IS THE NATURE OF THIS RECOGNIZED BIAS?

A. R. W. Banz[6] and M. R. Reinganum[7] in the 1980's, for example, is a good reference which points out a size bias in the CAPM. Reinganum examined the relationship between the size of the firm and its price-earnings ratio. He found that small firms experienced average returns greater than those of large firms which had equivalent risk as measured by the beta. Of course, the beta is the distinguishing measure of risk in the CAPM. Banz confirmed that beta does not explain all of the returns associated with smaller companies; hence, the CAPM would understate their cost of common equity. In the same time frame, Fama and French confirmed that the Banz analysis consistently rejected the central CAPM hypothesis that beta sufficed to explain the expected return of investors.[8]

Q. WHAT DID YOU MEAN WHEN YOU SAID THAT THE CAPM METHOD REQUIRES AN ADJUSTMENT?

A. Although repeated studies showed that the CAPM method possesses a bias that understates the expected returns of small companies, this remained only an empirical observation without a clear remedy. However, Ibbotson Associates, which is the common source of data for the risk premium used in CAPM analyses, has now developed an adjustment for this bias. Ibbotson Associates discusses the problem as follows:

> One of the most remarkable discoveries of modern finance is that of the relationship between firm size and return. The relationship cuts across the entire size spectrum but is most evident among smaller companies, which

[6] Banz, R.W., "The Relationship Between Return and Market Value of Common Stock," *Journal of Financial Economics*, March 1981, pp. 3-18.
[7] Reinganum, M. R., "Misspecification of Capital Asset Pricing: Empirical Anomalies Based on Earnings, Yields, and Market Values," *Journal of Financial Economics*, March 1981, pp. 19-46.
[8] Fama, Eugene F., and Kenneth R. French, "The CAPM is Wanted, Dead or Alive," *The Journal of Finance*, Vol. LI, No. 5, pp. 1947-1958.

have higher returns on average than larger ones. Many studies have looked at the effect of firm size on return.[9]

Q. HAVE ANY REGULATORY COMMISSIONS ACCEPTED THIS SIZE ADJUSTMENT TO THE CAPM IN RATE PROCEEDINGS WHEN DETERMINING THE COST OF COMMON EQUITY?

A. Yes. The Minnesota Public Utilities Commission has done so in an Interstate Power and Light Company case. The Commission observed:

> The Administrative Law Judge takes comfort from the fact that Ibbotson Associates is a widely-recognized statistical reporting firm that has a national reputation. He considers it to be in the same general category as Standard & Poor's or Moody's. There is no indication that the report in question was prepared for IPL, or the utility industry, to bolster arguments in rate cases. Instead, it appears that the report in question is part of an almanac-type yearbook that Ibbotson prepares without any particular focus on the utility industry. The Administrative Law Judge understands and shares the concerns of the Staff concerning the methodology used, and thinks the issue is worthy of pursuit in some other forum. But for purposes of this case, the Administrative Law Judge accepts the principal conclusion of the study – that size of a firm is a factor in determining risk and return.[10]

XXI. CAPM METHODOLOGY

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

A. I applied two different, but complementary, approaches to estimate a CAPM cost of capital. One of these methods examines the historical risk premium of common stock over high grade corporate bonds. The other integrates the risk premium of common stocks to long-term government bonds in recent markets. This second

[9] Chapter 7: Firm Size and Return, "Ibbotson Associates' Stocks, Bonds, Bills, and Inflation: 2006 Yearbook Valuation Edition," edited by James Harrington and Michael Barad, p. 129.
[10] *In the Matter of the Petition of Interstate Power and Light Company for Authority to Increase its Electric Rates in Minnesota,* Docket No. E-001/GR-03-767, p. 7.

method requires an adjustment for the bias because of company size as I mentioned previously. For some time the financial literature has recognized this bias as an empirical problem, but a method for compensating for this bias is a recent analytical development. To account for this empirical bias against smaller companies, Ibbotson Associates has prescribed quantitative adjustments to the CAPM. Ibbotson publishes this in the same data source, which many analysts use to estimate the risk premium in their CAPM analyses.

Q. DID YOU APPLY THE ADJUSTMENT RECOMMENDED BY IBBOTSON ASSOCIATES IN YOUR ANALYSIS?

A. Yes. In my CAPM analysis, I followed the method recommended by Ibbotson Associates to compensate for this inherent data bias.

XXII. CAPM RESULTS

Q. WHAT ARE THE RESULTS OF YOUR CAPM ANALYSES?

A. The results of my two CAPM analyses for Atmos are 11.46 percent and 12.22 percent. For the comparable companies, these results average 12.59 percent and 12.87 percent. I illustrate these calculations in Schedules DAM-27 and DAM-28. As I discussed, the CAPM identifies the single risk component embodied in market volatility, and this comparison reveals the failure of the CAPM to isolate the higher financial risk of Atmos Energy than the comparable LDCs. Only Northwest Natural Gas and South Jersey Industries currently have *Value Line* betas less than Atmos Energy's 0.80.

XXIII. INTERPRETING THE DCF AND CAPM RESULTS

Q. HOW DID YOU INTEGRATE YOUR DCF AND CAPM CALCULATIONS INTO YOUR OVERALL ANALYSIS?

A. The recent and forecasted interest rates and returns on alternative investments provide a perspective for interpreting the DCF and CAPM calculations.

Q. HOW ARE INTEREST RATES IMPORTANT TO YOUR INTERPRETATION OF THE DCF AND CAPM RESULTS?

A. Significantly, the levels of interest rates are a measure of the return that investors in utility equities might expect from alternative investments. Consequently, forecasted rising interest rates mean that investors will require higher returns from their common stock investments in the near-term. Relatively speaking, if the risk premium between common stock and debt remains relatively constant, the returns to common stock investments must increase in order to attract and maintain capital. This is an important consideration when establishing an allowed return.

Q. DID YOU CONSIDER HOW ANY TARIFF PROVISIONS, SUCH AS A WEATHER NORMALIZATION ADJUSTMENT (WNA) OR A CUSTOMER UTILIZATION (CUA) OF YOUR COMPARABLE COMPANIES, SHOULD AFFECT YOUR RECOMMENDED ALLOWED RETURN?

A. Yes, I did. I reviewed the some tariff provisions of the group of comparable LDCs that I studied. For example, Atlanta Gas Light, AGL Resources' distribution subsidiary, has a provision that it calls the Dedicated Design Day Capacity (DDDC) charge. This assigns capacity charges based on the peak day

consumption.[11] New Jersey Natural Gas has what it calls the weather normalization clause in its tariff.[12] Northwest Natural Gas has a WNA that started in October 2006 in Oregon.[13] In North Carolina, Piedmont's tariff has a "Customer Utilization Tracker" which adjusts for actual weather.[14] Southwest Gas' California Division has the "Core Fixed Cost Adjustment Mechanism," to stabilize the recovery of authorized margins.[15] In Maryland, WGL's Washington Gas Light has a Revenue Normalization Adjustment that accounts for actual temperatures and promotes conservation.[16] Because these companies have these tariff provisions, this further confirms that they represent good companies for a benchmark analysis of Atmos in this proceeding.

Q. YOU STATED THAT YOU LOOKED AT ALTERNATIVE RETURNS. WHAT DID THIS REVIEW SHOW?

A. Notably, the recent economic expansion, which I discussed previously, has resulted in sizable returns to a number of industries in the non-regulated sectors. Of course, industrial firms are alternatives available to potential utility investors, and, in that sense, their earnings are relevant to this analysis. In addition to experiencing returns greater than in the gas distribution sector, many of these non-regulated industries' earnings have also grown during this economic expansion. I show this comparison in Schedule DAM-29.

[11] www.atlantagaslight.com/RatesRegulations/CustomerCharges.aspx
[12] New Jersey Resources, Form 10-K, November 29, 2005, p. 4.
[13] Northwest Natural Gas Company, Form 10-Q, November2, 2006, p. 23..
[14] Piedmont Natural Gas Company: North Carolina Service Regulations, Appendix C.
[15] Southwest Gas Tariff: California Division, Cal. PUC Sheet No. 6001-G and Sheet No. 6390-G
[16] WGL Holdings, Form 10-Q, August 9, 2006, pp. 19 & 25.

XXIV. RECOMMENDED RETURN

Q. HOW DID YOU GO ABOUT DETERMINING A RECOMMENDED ALLOWED RETURN ON COMMON STOCK FOR ATMOS ENERGY?

A. First, as a predicate for determining the cost of capital, I determined the appropriate capital structure for ratemaking. I determined that Atmos Energy's projected common equity ratio of 48.50 percent and long-term debt ratio of 51.50 percent is the appropriate capital structure for ratemaking for the Tennessee operating division in this proceeding. I took special note of the relatively low common stock equity, and, by inference, the relatively high financial risk of Atmos Energy. Based on the history and stated plans of Atmos, my recommended capital structure is the capital structure that investors are likely to anticipate when investing in the company. Consequently, I based my recommended allowed return on equity on the assumption of this capital structure. Other background assumptions for my recommendation are persistent inflationary pressures and forecasted rising interest rates. I also observed the current common stock earnings of comparable LDCs in current markets and Atmos Energy's relatively low common equity returns in comparison. Despite Atmos Energy's relatively high financial risk, *Value Line* predicts that the company can expect relatively low common equity earnings in 2007. For example, *Value Line* predicts a common equity return for the eight comparable LDCs ranging from 9.5 percent to 17.0 percent and averaging 12.3 percent. Its estimate for Atmos Energy is below that range, or just 9.0 percent. Also, I noted that Atmos Energy had a relatively high dividend payout ratio as compared to the eight gas distribution companies.

The relevant DCF results for Atmos Energy were in the broad range of 10.01 percent to 10.52 percent. The relevant results were 9.95 percent and 10.44 percent for all comparable LDCs, with lower financial risk. The LDCs with lower bond ratings had DCF results of 12.00 percent and 11.40 percent. The two CAPM analyses provided return on common equity estimates of 11.46 to 12.22 percent for Atmos Energy. Despite the higher financial risk, the comparable LDCs have higher betas, and consequently they had higher CAPM estimates at 12.59 percent and 12.87 percent.

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

A. Based on the analysis of Atmos and assuming that the Authority adopts my recommended capital structure, I am recommending an allowed return for Atmos in this proceeding of 11.75 percent. This is lower than the current estimated common equity returns of the comparable LDCs. Because these LDCs have lower financial risk than Atmos Energy, this is further confirmation of my recommended allowed return.

Q. USING YOUR RECOMMENDED CAPITAL STRUCTURE, COST OF DEBT AND COST OF COMMON STOCK EQUITY, WHAT TOTAL COST OF CAPITAL ARE YOU RECOMMENDING FOR ATMOS IN THE PROCEEDING?

A. My recommended allowed return on common equity of 11.75 percent and a cost of debt of 6.10 percent at my recommended capital structure will result in a total cost of capital of 8.84 percent. I illustrate this calculation in Schedule DAM-30.

XXV. FINANCIAL INTEGRITY TEST

Q. YOU STATED THAT YOU TESTED YOUR RECOMMENDED RETURN TO VERIFY ITS ADEQUACY AND APPROPRIATENESS FOR THIS PROCEEDING. HOW DID YOU TEST FOR ITS ADEQUACY AND APPROPRIATENESS?

A. I compared Atmos' After-Tax Interest Coverage ratio, at various recommended allowed returns, to the After-Tax Interest Coverage ratios of the comparable LDCs that I studied. The After-Tax Interest Coverage is a meaningful measure for this purpose because it shows whether funds from operations will be sufficient to meet a company's fixed interest obligations. For example, the higher the coverage ratio, the greater the likelihood that the returns from operations will be sufficient to meet the fixed interest obligations. Using the existing coverage ratios of the comparable LDCs as a standard, and by calculating the coverage ratio for Atmos at alternative recommended return levels, I can determine whether they will produce coverages higher than, less than or in line with this standard.

Q. WHAT DID YOUR CALCULATION OF THE AFTER-TAX INTEREST COVERAGE OF ATMOS REVEAL?

A. As a standard for my recommended allowed return, the After-Tax Interest Coverage ratio for the comparable LDCs currently averages 3.80 times. At my recommended allowed return of 11.75 percent, the After-Tax Interest Coverage of Atmos Energy would be only 2.81 times. By this comparison, my recommended allowed return would produce an After-Tax Interest Coverage that is much lower than the current level among comparable LDCs. Using the After-Tax Interest

Coverage average of the comparable LDCs as a standard, my recommendation is very conservative and low-cost.

Q. WHAT DID YOU CONCLUDE FROM THIS COMPARISON OF INTEREST COVERAGES OF THE COMPARABLE LDCS AND ATMOS?

A. I show this comparison in Schedule DAM-31. This test of financial integrity verifies the reasonableness under current market conditions of my recommended capital structure of 48.5 percent common stock equity and 51.5 percent long-term debt and an allowed return on common equity of 11.75 percent.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

BEFORE THE TENNESSEE REGULATORY AUTHORITY
NASHVILLE, TENNESSEE

IN RE:	)	
	)	
PETITION OF ATMOS ENERGY	)	
CORPORATION FOR APPROVAL OF	)	
ADJUSTMENT OF ITS RATES AND	)	
REVISED TARIFF	)	**DOCKET NO. 07-_____**

VERIFICATION

STATE OF OKLAHOMA)
)
COUNTY OF OKLAHOMA)

I, Dr. Donald A. Murry, being first duly sworn, state that I am a Vice President and economist with C.H. Guernsey & Company, that I am authorized to testify on behalf of Atmos Energy Corporation in the above referenced docket, that the Testimony of Dr. Donald A. Murry in support of Atmos Energy's Petition and the Exhibits thereto pre-filed in this docket on the date of filing of this Petition are true and correct to the best of my knowledge, information and belief.

Donald A. Murry

Sworn and subscribed before me this 17th day of April, 2007.

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

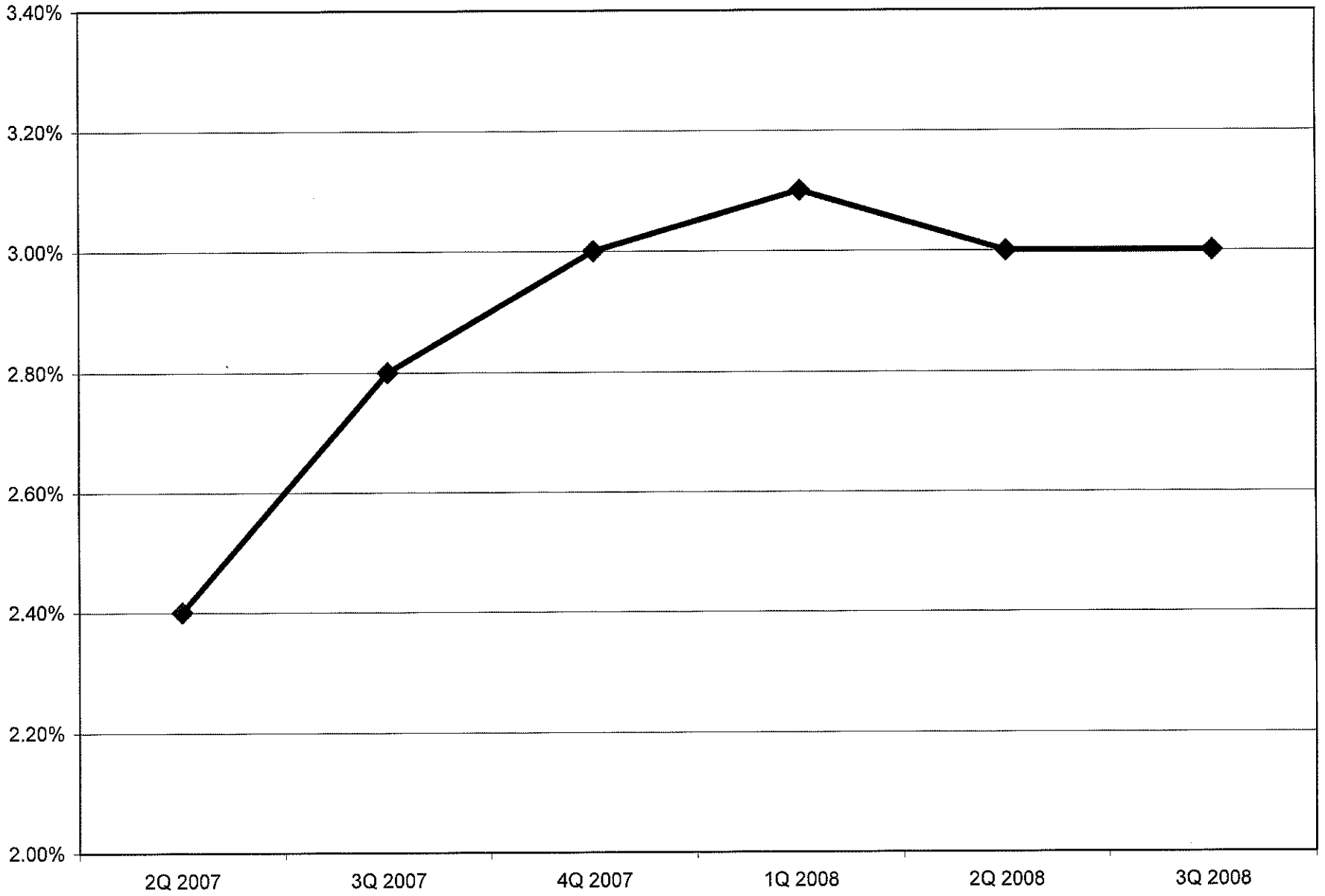
Carolyn S. Hanes
Notary Public

My Commission Expires: 12-4-09

Atmos Energy Corporation

List of Schedules

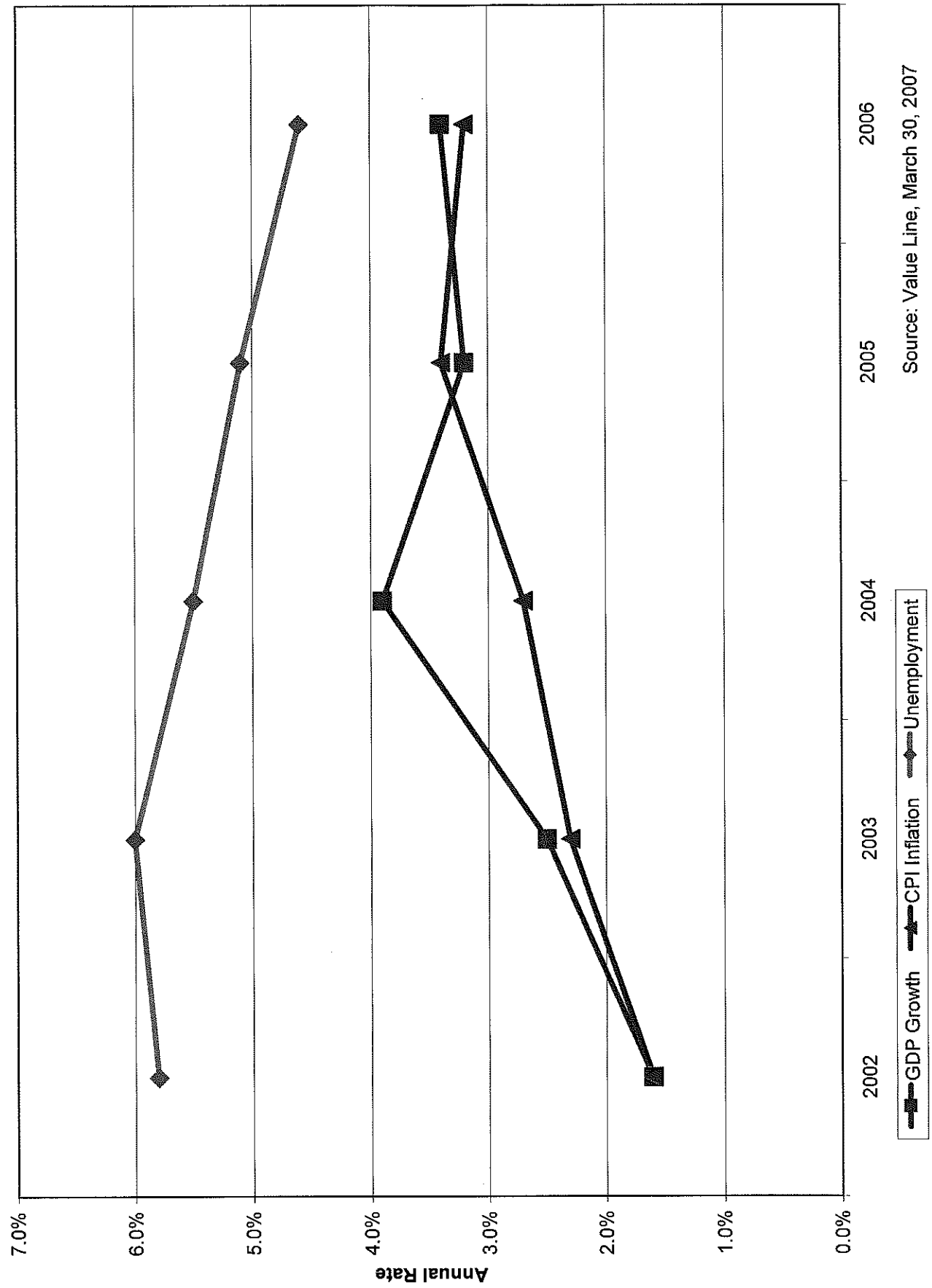
Atmos Energy Corporation
Real GDP Consensus Forecast



Source: Blue Chip Financial Forecasts, April 1, 2007

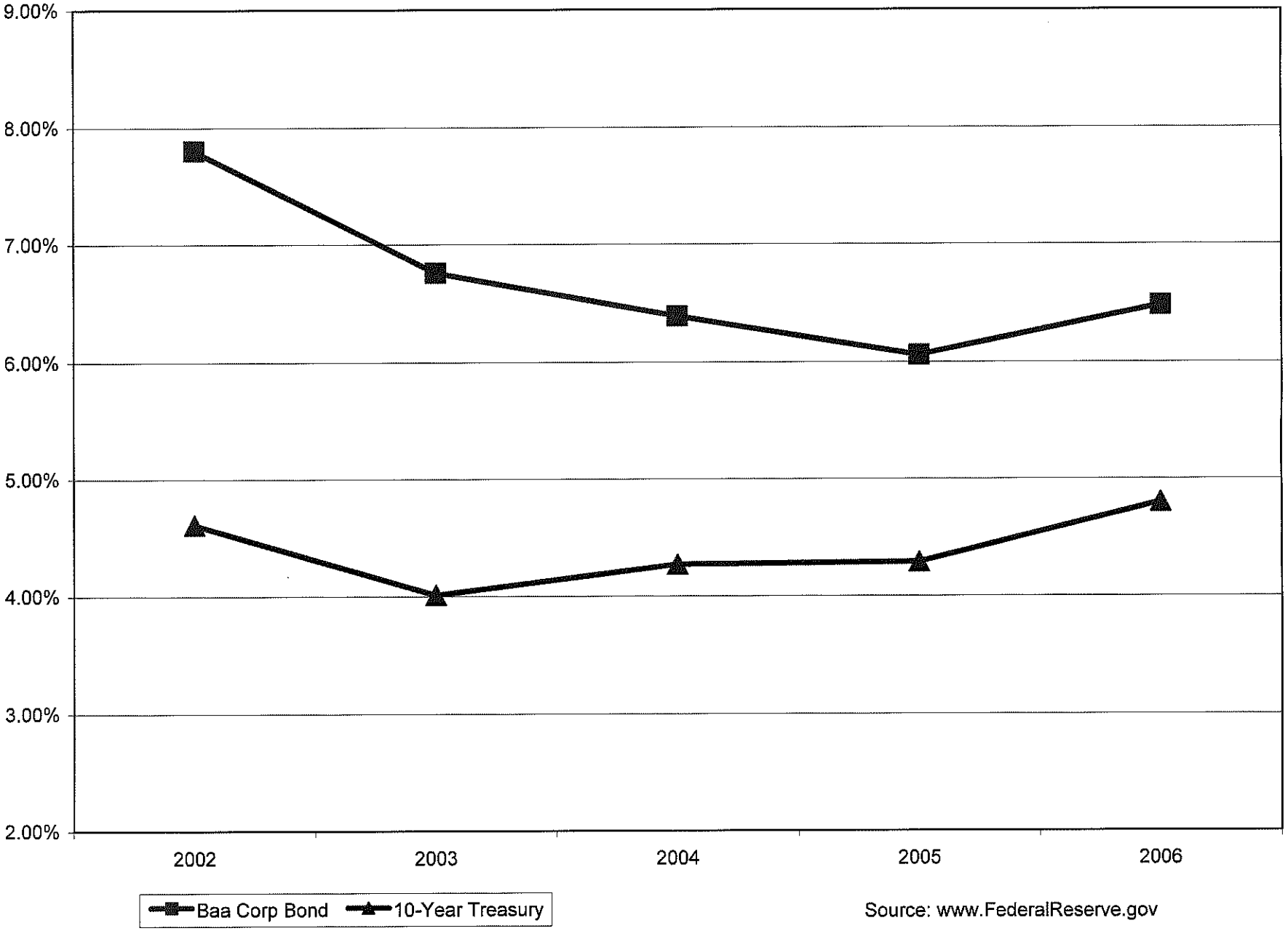
Schedule DAM - 1

Atmos Energy Corporation
Historical Economic Statistics
2002 to 2006



Source: Value Line, March 30, 2007

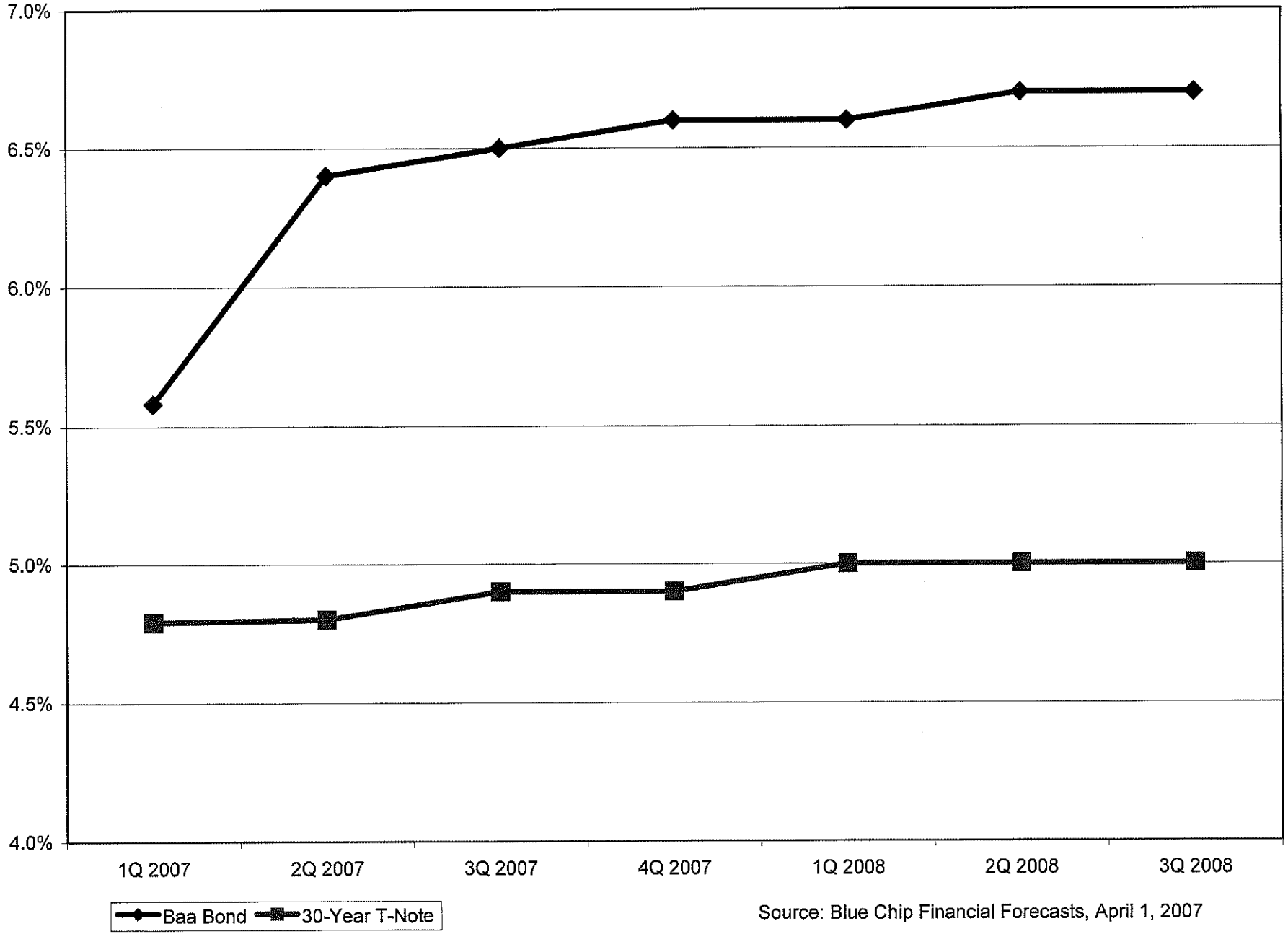
Atmos Energy Corporation
History of Long-Term Bond Interest Rates



Source: www.FederalReserve.gov

Schedule DAM - 3

Atmos Energy Corporation
Bond Interest Rate Forecasts



Source: Blue Chip Financial Forecasts, April 1, 2007

Schedule DAM - 4.1

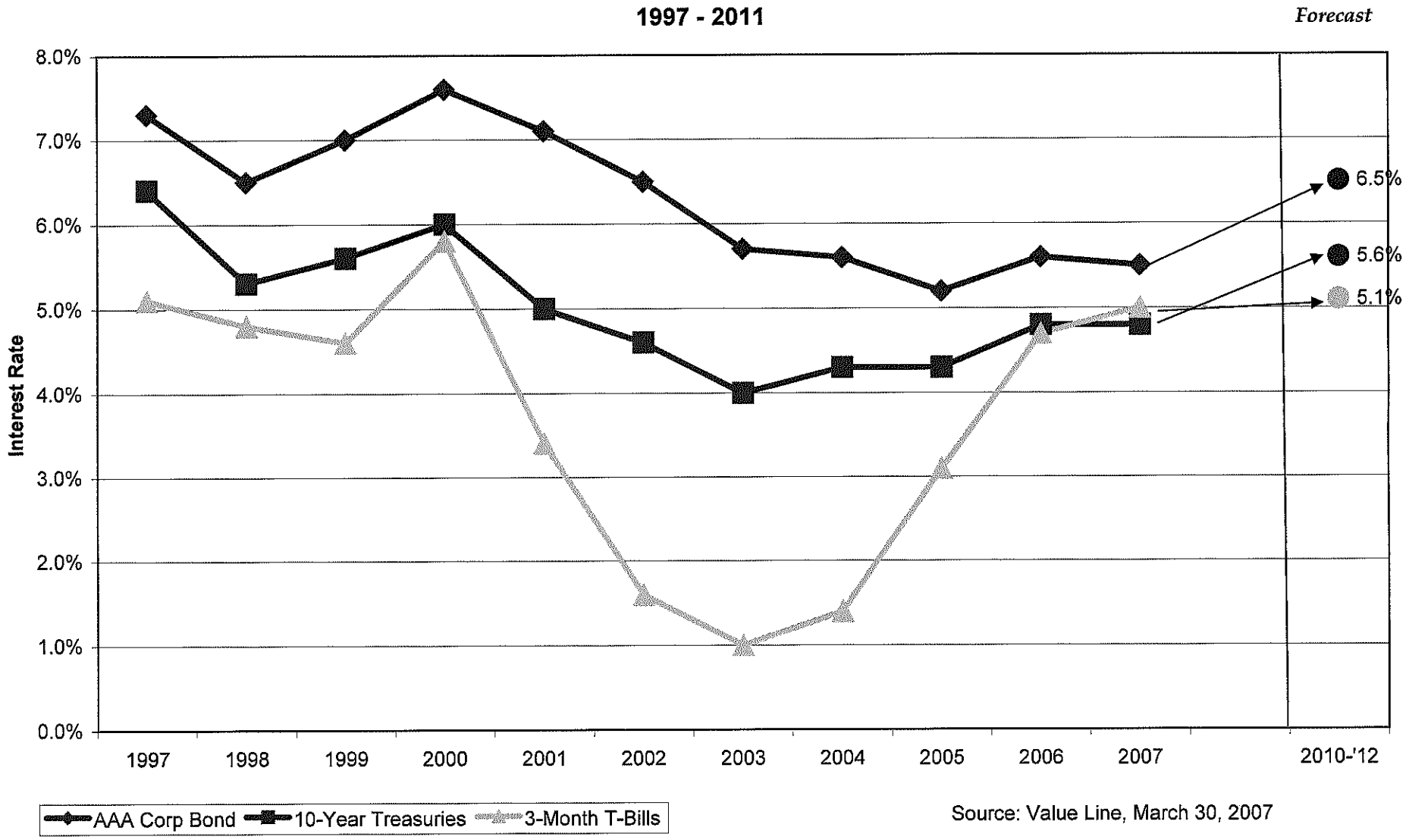
Atmos Energy Corporation

Bond Interest Rate Forecasts

Quarter	Baa Bond	30-Year T-Note
1Q 2007	5.6%	4.8%
2Q 2007	6.4%	4.8%
3Q 2007	6.5%	4.9%
4Q 2007	6.6%	4.9%
1Q 2008	6.6%	5.0%
2Q 2008	6.7%	5.0%
3Q 2008	6.7%	5.0%

Source: Blue Chip Financial Forecasts, April 1, 2007

Atmos Energy Corporation
Value Line Interest Rates and Forecasts
1997 - 2011



Source: Value Line, March 30, 2007

Schedule DAM - 5.1

Atmos Energy Corporation

Comparison of Value Line's Interest Rates

Year	AAA Corp Bond	10-Year Treasuries	3-Month T-Bills
1997	7.3%	6.4%	5.1%
1998	6.5%	5.3%	4.8%
1999	7.0%	5.6%	4.6%
2000	7.6%	6.0%	5.8%
2001	7.1%	5.0%	3.4%
2002	6.5%	4.6%	1.6%
2003	5.7%	4.0%	1.0%
2004	5.6%	4.3%	1.4%
2005	5.2%	4.3%	3.1%
2006	5.6%	4.8%	4.7%
2007	5.5%	4.8%	5.0%
2010-'12	6.5%	5.6%	5.1%

Source: Value Line Investment Survey

Atmos Energy Corporation

Projected Capital Structure

Thirteen Month Average as of October 31, 2008

	Percent of Total
Long Term Debt	51.50%
Common Equity	48.50%
Total	100.00%

Source :
Atmos Energy Corporation Work Papers

Atmos Energy Corporation

Comparable Gas Companies

Comparison of Common Equity Ratios

Company	2003	2004	2005	2006	2007E	Forecast '10-'12
Atmos Energy Corp.	49.8%	56.8%	42.3%	43.0%	51.0%	49.0%
AGL Resources	49.7%	46.0%	48.1%	49.8%	50.0%	50.8%
New Jersey Resources	61.9%	59.7%	58.0%	65.2%	65.5%	68.5%
NICOR, Inc.	60.3%	60.1%	62.5%	66.0%	67.0%	71.0%
Northwest Natural Gas	50.3%	54.0%	53.0%	53.6%	53.0%	52.0%
Piedmont Natural Gas	57.8%	56.4%	58.6%	51.7%	51.0%	51.0%
South Jersey Industries	49.0%	51.0%	55.1%	55.3%	55.6%	57.5%
Southwest Gas	34.0%	35.8%	36.2%	39.4%	40.0%	43.0%
WGL Holdings, Inc.	54.3%	57.2%	58.6%	61.5%	61.0%	64.0%
Comparable Companies' Averages	52.2%	52.5%	53.8%	55.3%	55.4%	57.2%

Source: Value Line Investment Survey

Atmos Energy Corporation

Comparable Gas Companies

Comparison of Common Shares Outstanding

Company	2003	2004	2005	2006	2007E	Forecast '10-'12	Growth 08-'12
Atmos Energy Corp.	51.48	62.80	80.54	81.74	89.50	107.00	19.55%
AGL Resources	64.50	76.70	77.70	77.75	78.00	80.00	2.56%
New Jersey Resources	27.23	27.74	27.55	27.63	28.00	29.50	5.36%
NICOR, Inc.	44.04	44.10	44.18	44.70	44.60	45.00	0.90%
Northwest Natural Gas	25.94	27.55	27.58	27.28	27.50	29.00	5.45%
Piedmont Natural Gas	67.31	76.67	76.70	74.61	73.80	71.80	-2.71%
South Jersey Industries	26.46	27.76	28.98	29.30	29.60	31.00	4.73%
Southwest Gas	34.23	36.79	39.33	41.77	43.00	47.50	10.47%
WGL Holdings, Inc.	48.63	48.67	48.65	48.89	48.91	49.00	0.18%

Source: Value Line Investment Survey

Schedule DAM - 8

Atmos Energy Corporation

History of Short - Term Debt

End of Month Balances

Month	Outstanding Balance
January, 2003	$102,240,000
February, 2003	$98,700,000
March, 2003	$29,700,000
April, 2003	$33,400,000
May, 2003	$32,650,000
June, 2003	$700,000
July, 2003	$53,850,000
August, 2003	$75,350,000
September, 2003	$118,600,000
October, 2003	$153,325,000
November, 2003	$195,450,000
December, 2003	$191,850,000
January, 2004	$148,800,000
February, 2004	$29,900,000
March, 2004	$0
April, 2004	$0
May, 2004	$0
June, 2004	$0
July, 2004	$0
August, 2004	$0
September, 2004	$0
October, 2004	$16,575,000
November, 2004	$29,700,000
December, 2004	$28,800,000
January, 2005	$58,875,000
February, 2005	$0
March, 2005	$0
April, 2005	$0
May, 2005	$0
June, 2005	$0
July, 2005	$34,725,000
August, 2005	$39,775,000
September, 2005	$144,875,000
October, 2005	$292,500,000
November, 2005	$346,255,000
December, 2005	$399,450,000
January, 2006	$407,275,000
February, 2006	$346,900,000
March, 2006	$262,475,000
April, 2006	$238,875,000
May, 2006	$222,350,000
June, 2006	$297,550,000
July, 2006	$298,225,000
August, 2006	$292,086,000
September, 2006	$383,386,000
October, 2006	$406,125,000
November, 2006	$393,475,000
December, 2006	$154,650,000

Source: Atmos Energy Work Papers

Atmos Energy Corporation

Schedule DAM - 10

Embedded Costs of Long - Term Debt

Thirteen Month Average as of October 31, 2008

Debt Series	13 Month Average Amount Outstanding	Interest Rate	Effective Interest Cost
10.43% First Mortgage Bond P due 2017 (eff 2012)	$6,346,154	10.430%	$661,904
10% Senior Notes due Dec 2011	$1,151,654	10.000%	$115,165
10% Senior Notes due Dec 2011	$1,151,654	10.000%	$115,165
6.75% Debentures Unsecured due July 2028	$150,000,000	6.750%	$10,125,000
7.38% Senior Notes due May 2011	$350,000,000	7.375%	$25,812,500
5.125% Senior Notes due Feb 2013	$250,000,000	5.125%	$12,812,500
6.67% MTN A1 due Dec 2025	$10,000,000	6.670%	$667,000
6.27% MTN A2 due Dec 2010	$10,000,000	6.270%	$627,000
Projected 6.00% Refinancing Issuance	$300,000,000	6.000%	$18,000,000
4.00% Sr Note due 10/15/2009	$400,000,000	4.000%	$16,000,000
4.95% Sr Note due 10/15/2014	$500,000,000	4.950%	$24,750,000
5.95% Sr Note due 10/15/2034	$200,000,000	5.950%	$11,900,000
Industrial Develop Revenue Bond 07/13	$715,200	7.900%	$56,501
Atmos Power Sys - Wells Fargo 05/08	$558,950	5.650%	$31,581
US Bancorp - 04/09	$1,105,513	5.290%	$58,482
Pulaski -- Ingas, Ingram & Carvell 06/08	$38,462	8.000%	$3,077
Total Long-Term Debt Outstanding	$2,181,067,586		$121,735,875
Less Unamortized Debt Discount	$2,627,285		
Amortization of Debt Discount			$11,103,566
Total	$2,178,440,301		$132,839,441
Embedded Cost of Long-Term Debt			6.10%

Source: Atmos Energy Work Papers

Atmos Energy Corporation

Comparable Gas Companies

Comparison of Standard and Poor's and Value Line Financial Ratings

Company	Value Line Financial Strength	S&P Rating	S&P Business Position
Atmos Energy Corp.	B+	BBB	4
AGL Resources	B++	A-	4
New Jersey Resources	A	A+	2
NICOR, Inc.	A	AA	3
Northwest Natural Gas	A	AA-	1
Piedmont Natural Gas	B++	A	2
South Jersey Industries	B++	BBB+	3
Southwest Gas	B	BBB-	3
WGL Holdings, Inc.	A	AA-	3
Comparable Companies' Median	B++	A	3.0

Sources: Value Line Investment Survey
www.standardandpoors.com

Atmos Energy Corporation

Comparable Gas Companies

Comparison of Value Line's Safety and Timeliness Rank

	Safety Rank	Timeliness Rank
Atmos Energy Corp.	2	3
AGL Resources	2	4
New Jersey Resources	1	5
NICOR, Inc.	3	3
Northwest Natural Gas	1	3
Piedmont Natural Gas	2	4
South Jersey Industries	2	3
Southwest Gas	3	3
WGL Holdings, Inc.	1	4
Comparable Companies' Average	1.9	3.6

Source: Value Line Investment Survey

Atmos Energy Corporation

Comparable Gas Companies

Comparison of Returns on Common Equity

	2003	2004	2005	2006	2007E	Five Year Average
Atmos Energy Corp.	9.3%	7.6%	8.5%	9.9%	9.0%	8.9%
AGL Resources	14.0%	11.0%	12.9%	13.0%	13.5%	12.9%
New Jersey Resources	15.6%	15.3%	17.0%	12.6%	12.5%	14.6%
NICOR, Inc.	12.3%	13.1%	12.5%	14.0%	13.0%	13.0%
Northwest Natural Gas	9.0%	8.9%	9.9%	10.6%	10.5%	9.8%
Piedmont Natural Gas	11.8%	11.1%	11.5%	11.0%	11.5%	11.4%
South Jersey Industries	11.6%	12.5%	12.4%	16.3%	17.0%	14.0%
Southwest Gas	6.1%	8.3%	6.4%	9.0%	9.5%	7.9%
WGL Holdings, Inc.	14.0%	11.7%	12.0%	10.2%	10.5%	11.7%
Comparable Companies' Averages	11.8%	11.5%	11.8%	12.1%	12.3%	11.9%

Source: Value Line Investment Survey

Atmos Energy Corporation

Comparable Gas Companies

Comparison of Returns on Total Capital

Company	2003	2004	2005	2006	2007E
Atmos Energy Corp.	6.2%	5.8%	5.3%	6.1%	6.0%
AGL Resources	8.9%	6.3%	7.9%	8.0%	8.0%
New Jersey Resources	10.7%	10.1%	11.2%	9.6%	9.5%
NICOR, Inc.	8.3%	8.8%	9.4%	10.9%	10.5%
Northwest Natural Gas	5.7%	5.9%	6.5%	7.5%	7.0%
Piedmont Natural Gas	8.6%	7.8%	8.2%	7.1%	7.0%
South Jersey Industries	7.3%	7.9%	8.3%	10.2%	10.5%
Southwest Gas	4.2%	5.0%	4.3%	5.5%	6.0%
WGL Holdings, Inc.	9.1%	8.2%	8.5%	7.7%	7.5%
Comparable Companies Averages	7.9%	7.5%	8.0%	8.3%	8.3%

Source: Value Line Investment Survey

Atmos Energy Corporation

Comparable Gas Companies

Comparison of Dividends per Share

Company	2003	2004	2005	2006	2007E	Growth '03-'07
Atmos Energy Corp.	1.20	1.22	1.24	1.26	1.28	1.63%
AGL Resources	1.11	1.15	1.30	1.48	1.64	11.35%
New Jersey Resources	1.24	1.30	1.36	1.44	1.52	5.23%
NICOR, Inc.	1.86	1.86	1.86	1.86	1.90	0.36%
Northwest Natural Gas	1.27	1.30	1.32	1.39	1.44	3.26%
Piedmont Natural Gas	0.82	0.85	0.91	0.95	0.99	5.12%
South Jersey Industries	0.78	0.82	0.86	0.92	0.98	5.90%
Southwest Gas	0.82	0.82	0.82	0.82	0.86	0.81%
WGL Holdings, Inc.	1.28	1.30	1.32	1.34	1.38	1.78%
Comparable Companies' Averages	1.15	1.18	1.22	1.28	1.34	4.23%

Source: Value Line Investment Survey

Atmos Energy Corporation

Comparable Gas Companies

Comparison of Dividend Payout Ratios

Company	2003	2004	2005	2006	2007E	Five Year Average
Atmos Energy Corp.	70%	77%	73%	63%	64%	69.4%
AGL Resources	53%	49%	52%	57%	58%	53.8%
New Jersey Resources	51%	49%	50%	50%	49%	49.8%
NICOR, Inc.	88%	84%	81%	68%	71%	78.4%
Northwest Natural Gas	72%	69%	63%	61%	60%	65.0%
Piedmont Natural Gas	74%	66%	68%	75%	72%	70.9%
South Jersey Industries	57%	52%	50%	37%	36%	46.4%
Southwest Gas	72%	49%	65%	41%	41%	53.6%
WGL Holdings, Inc.	56%	65%	62%	70%	68%	64.2%
Comparable Companies' Averages	65.4%	60.4%	61.4%	57.3%	56.9%	60.3%

Source: Value Line Investment Survey

Atmos Energy Corporation

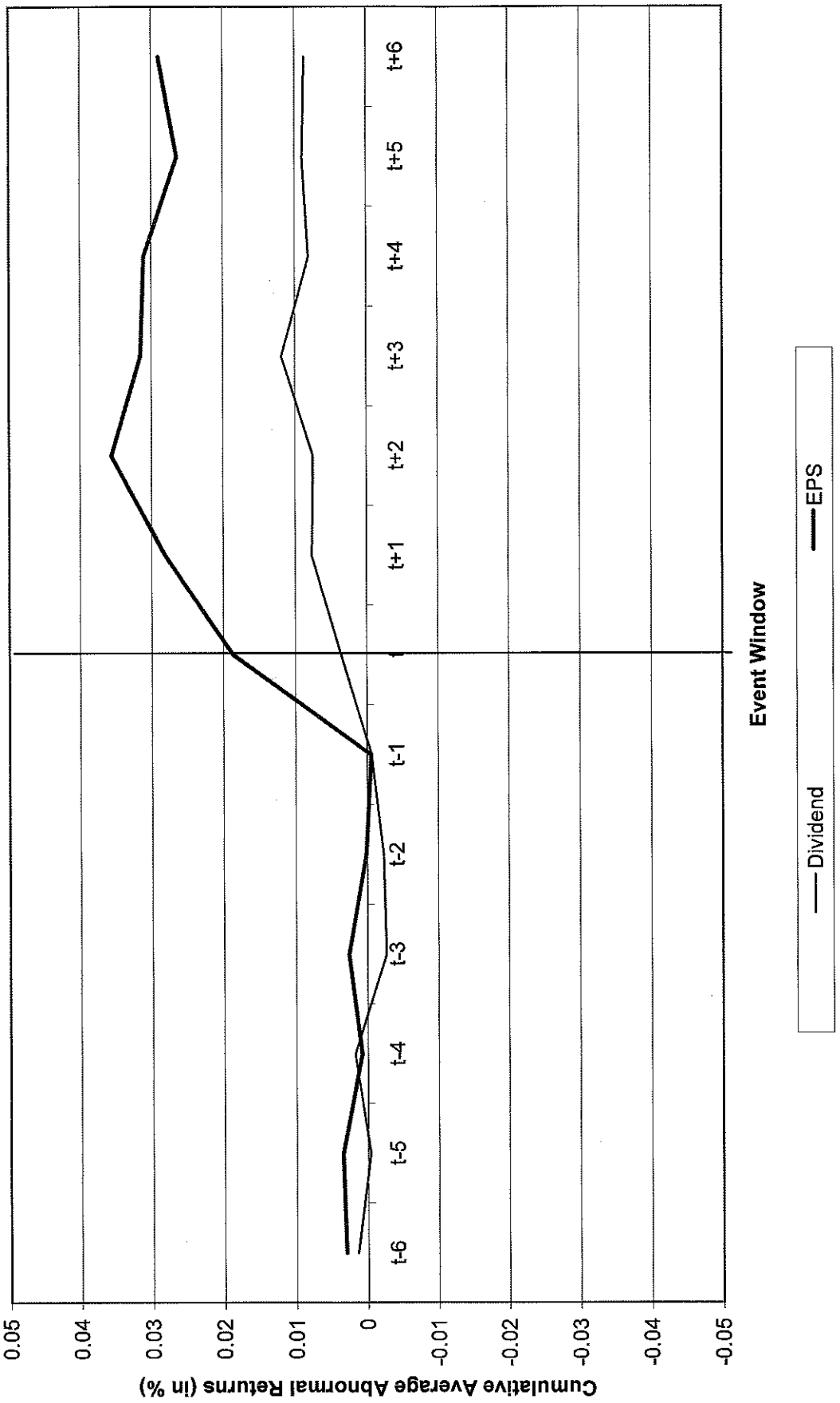
Comparable Gas Companies

Comparison of Average Annual P/E Ratio

Company	2002	2003	2004	2005	2006	Current
Atmos Energy Corp.	15.2	13.4	15.9	16.1	13.5	15.6
AGL Resources	12.5	12.5	13.1	14.3	13.5	14.6
New Jersey Resources	14.7	14.0	15.3	16.8	16.1	17.1
NICOR, Inc.	13.1	15.8	15.9	17.3	13.3	15.4
Northwest Natural Gas	17.2	15.8	16.7	17.0	16.3	18.1
Piedmont Natural Gas	18.4	16.7	16.6	17.9	19.4	18.0
South Jersey Industries	13.5	13.3	14.1	16.6	14.9	12.7
Southwest Gas	19.9	19.2	14.3	20.6	15.9	17.3
WGL Holdings, Inc.	23.1	11.1	14.2	14.7	15.5	15.7
Comparable Companies' Averages	16.6	14.8	15.0	16.9	15.6	16.1

Source: Value Line Investment Survey

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



Atmos Energy Corporation

Comparable Gas Companies

Discounted Cash Flow Growth Rate Summary

	Value Line 2002 TO 2011 Estimate			Value Line Five Year Historical			Projections Value Line		S & P
	EPS	DPS	Book Value	EPS	DPS	Book Value	EPS	DPS	EPS
Atmos Energy Corp.	5.51%	1.51%	6.01%	10.0%	2.0%	8.5%	5.0%	1.5%	6.0%
AGL Resources	6.23%	5.73%	6.17%	13.5%	2.0%	8.5%	3.5%	5.5%	4.0%
New Jersey Resources	4.39%	3.78%	8.32%	8.0%	3.5%	8.5%	2.5%	3.0%	5.0%
NICOR, Inc.	0.94%	1.05%	4.17%	-3.5%	3.5%	1.5%	4.0%	1.0%	4.0%
Northwest Natural Gas	5.95%	4.04%	3.49%	5.0%	1.0%	3.5%	7.0%	4.0%	5.0%
Piedmont Natural Gas	4.72%	4.21%	4.56%	5.0%	5.0%	6.5%	3.0%	4.0%	4.0%
South Jersey Industries	11.42%	5.26%	7.62%	11.5%	2.5%	13.0%	9.5%	5.5%	7.0%
Southwest Gas	9.52%	1.04%	3.92%	-0.5%	0.0%	3.0%	8.0%	1.5%	12.0%
WGL Holdings, Inc.	2.42%	1.48%	3.54%	6.0%	1.5%	3.0%	1.0%	1.5%	4.0%
Comparable Companies' Averages	5.70%	3.32%	5.22%	5.63%	2.38%	5.94%	4.81%	3.25%	5.63%

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

Atmos Energy Corporation

Comparable Gas Companies

Dividend Growth Rate DCF Using 52-Week Share Prices

	Share Prices		2007	52 Week Yields		2001-03	2010-12E	Growth	Cost of Capital	
	Low	High	Dividend	Low	High	DPS	DPS	Rate	Low	High
Atmos Energy Corp.	25.55	33.09	1.28	3.87%	5.01%	1.18	1.35	1.51%	5.37%	6.52%
AGL Resources	34.43	42.90	1.64	3.82%	4.76%	1.09	1.80	5.73%	9.55%	10.49%
New Jersey Resources	42.85	53.16	1.52	2.86%	3.55%	1.20	1.68	3.78%	6.64%	7.32%
NICOR, Inc.	38.72	49.92	1.90	3.81%	4.91%	1.82	2.00	1.05%	4.86%	5.96%
Northwest Natural Gas	33.30	46.30	1.44	3.11%	4.32%	1.26	1.80	4.04%	7.15%	8.37%
Piedmont Natural Gas	23.21	28.44	0.99	3.48%	4.27%	0.79	1.15	4.21%	7.69%	8.48%
South Jersey Industries	25.63	38.56	0.98	2.54%	3.82%	0.76	1.20	5.26%	7.80%	9.08%
Southwest Gas	26.46	39.95	0.86	2.15%	3.25%	0.82	0.90	1.04%	3.19%	4.29%
WGL Holdings, Inc.	27.04	33.55	1.38	4.11%	5.10%	1.27	1.45	1.48%	5.60%	6.59%
Comparable Companies' Averages	31.46	41.60	1.34	3.24%	4.25%	1.13	1.50	3.32%	6.56%	7.57%
Comparable Companies' Averages for Bond Ratings of A+ and Above									6.06%	7.06%
Comparable Companies' Averages for Bond Ratings Below A+									7.06%	8.09%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Schedule DAM - 20

Atmos Energy Corporation

Comparable Gas Companies

Dividend Growth Rate DCF Using Current Share Prices

	Share Prices Low	Share Prices High	Current Dividend	Current Yields Low	Current Yields High	2001-03 DPS	2010-12E DPS	Growth Rate	Cost of Capital Low	Cost of Capital High
Atmos Energy Corp.	31.44	31.93	1.28	4.01%	4.07%	1.18	1.35	1.51%	5.52%	5.58%
AGL Resources	40.50	41.12	1.64	3.99%	4.05%	1.09	1.80	5.73%	9.72%	9.78%
New Jersey Resources	49.02	49.75	1.52	3.06%	3.10%	1.20	1.68	3.78%	6.83%	6.88%
NICOR, Inc.	47.13	47.97	1.90	3.96%	4.03%	1.82	2.00	1.05%	5.01%	5.08%
Northwest Natural Gas	44.25	44.99	1.44	3.20%	3.25%	1.26	1.80	4.04%	7.24%	7.30%
Piedmont Natural Gas	26.06	26.72	0.99	3.71%	3.80%	0.79	1.15	4.21%	7.92%	8.01%
South Jersey Industries	35.58	36.72	0.98	2.67%	2.75%	0.76	1.20	5.26%	7.93%	8.01%
Southwest Gas	37.64	38.42	0.86	2.24%	2.28%	0.82	0.90	1.04%	3.28%	3.32%
WGL Holdings, Inc.	31.29	31.75	1.38	4.35%	4.41%	1.27	1.45	1.48%	5.83%	5.89%
Comparable Companies' Averages	38.93	39.68	1.34	3.40%	3.46%	1.13	1.50	3.32%	6.72%	6.79%
Comparable Companies' Averages for Bond Ratings of A+ and Above									6.23%	6.29%
Comparable Companies' Averages for Bond Ratings Below A+									7.21%	7.28%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Schedule DAM - 21

Atmos Energy Corporation

Comparable Gas Companies

Earnings Growth Rate DCF Using 52-Week Share Prices

	Share Prices Low	Share Prices High	2007 Dividend	52 Week Yields Low	52 Week Yields High	2001-03 EPS	2010-12E EPS	Growth Rate	Cost of Capital Low	Cost of Capital High
Atmos Energy Corp.	25.55	33.09	1.28	3.87%	5.01%	1.54	2.50	5.51%	9.37%	10.52%
AGL Resources	34.43	42.90	1.64	3.82%	4.76%	1.80	3.10	6.23%	10.05%	10.99%
New Jersey Resources	42.85	53.16	1.52	2.86%	3.55%	2.14	3.15	4.39%	7.25%	7.94%
NICOR, Inc.	38.72	49.92	1.90	3.81%	4.91%	2.67	2.90	0.94%	4.74%	5.84%
Northwest Natural Gas	33.30	46.30	1.44	3.11%	4.32%	1.75	2.95	5.95%	9.06%	10.28%
Piedmont Natural Gas	23.21	28.44	0.99	3.48%	4.27%	1.02	1.55	4.72%	8.20%	8.99%
South Jersey Industries	25.63	38.56	0.98	2.54%	3.82%	1.25	3.30	11.42%	13.96%	15.25%
Southwest Gas	26.46	39.95	0.86	2.15%	3.25%	1.15	2.60	9.52%	11.68%	12.77%
WGL Holdings, Inc.	27.04	33.55	1.38	4.11%	5.10%	1.77	2.20	2.42%	6.54%	7.53%
Comparable Companies' Averages	31.46	41.60	1.34	3.24%	4.25%	1.69	2.72	5.70%	8.94%	9.95%
Comparable Companies' Averages for Bond Ratings of A+ and Above									6.90%	7.90%
Comparable Companies' Averages for Bond Ratings Below A+									10.97%	12.00%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Atmos Energy Corporation

Comparable Gas Companies

Earnings Growth Rate DCF Using Current Share Prices

	Share Prices Low	Share Prices High	Current Dividend	Current Yields Low	Current Yields High	2001-03 EPS	2010-12E EPS	Growth Rate	Cost of Capital Low	Cost of Capital High
Atmos Energy Corp.	31.44	31.93	1.28	4.01%	4.07%	1.54	2.50	5.51%	9.51%	9.58%
AGL Resources	40.50	41.12	1.64	3.99%	4.05%	1.80	3.10	6.23%	10.21%	10.28%
New Jersey Resources	49.02	49.75	1.52	3.06%	3.10%	2.14	3.15	4.39%	7.44%	7.49%
NICOR, Inc.	47.13	47.97	1.90	3.96%	4.03%	2.67	2.90	0.94%	4.90%	4.97%
Northwest Natural Gas	44.25	44.99	1.44	3.20%	3.25%	1.75	2.95	5.95%	9.15%	9.21%
Piedmont Natural Gas	26.06	26.72	0.99	3.71%	3.80%	1.02	1.55	4.72%	8.43%	8.52%
South Jersey Industries	35.58	36.72	0.98	2.67%	2.75%	1.25	3.30	11.42%	14.09%	14.18%
Southwest Gas	37.64	38.42	0.86	2.24%	2.28%	1.15	2.60	9.52%	11.76%	11.81%
WGL Holdings, Inc.	31.29	31.75	1.38	4.35%	4.41%	1.77	2.20	2.42%	6.77%	6.83%
Comparable Companies' Averages	38.93	39.68	1.34	3.40%	3.46%	1.69	2.72	5.70%	9.09%	9.16%
Comparable Companies' Averages for Bond Ratings of A+ and Above									7.07%	7.12%
Comparable Companies' Averages for Bond Ratings Below A+									11.12%	11.20%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Schedule DAM - 23

Atmos Energy Corporation

Comparable Gas Companies

Projected Growth Rate DCF Using 52-Week Share Prices

	Share Prices		2007	52 Week Yields		EPS Estimates		Cost of Capital	
	Low	High	Dividend	Low	High	Value Line	S&P	Low	High
Atmos Energy Corp.	25.55	33.09	1.28	3.87%	5.01%	5.00%	6.00%	8.87%	10.01%
AGL Resources	34.43	42.90	1.64	3.82%	4.76%	3.50%	4.00%	7.32%	8.76%
New Jersey Resources	42.85	53.16	1.52	2.86%	3.55%	2.50%	5.00%	5.36%	8.55%
NICOR, Inc.	38.72	49.92	1.90	3.81%	4.91%	4.00%	4.00%	7.81%	8.91%
Northwest Natural Gas	33.30	46.30	1.44	3.11%	4.32%	7.00%	5.00%	8.11%	11.32%
Piedmont Natural Gas	23.21	28.44	0.99	3.48%	4.27%	3.00%	4.00%	6.48%	8.27%
South Jersey Industries	25.63	38.56	0.98	2.54%	3.82%	9.50%	7.00%	9.54%	13.32%
Southwest Gas	26.46	39.95	0.86	2.15%	3.25%	8.00%	12.00%	10.15%	15.25%
WGL Holdings, Inc.	27.04	33.55	1.38	4.11%	5.10%	1.00%	4.00%	5.11%	9.10%
Comparable Companies' Averages	31.46	41.60	1.34	3.24%	4.25%	4.81%	5.63%	7.49%	10.44%
Comparable Companies' Averages for Bond Ratings of A+ and Above								6.60%	9.47%
Comparable Companies' Averages for Bond Ratings Below A+								8.37%	11.40%

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

Atmos Energy Corporation

Comparable Gas Companies

Projected Growth Rate DCF Using Current Share Prices

	Share Prices		Current	Current Yields		EPS Estimates		Cost of Capital	
	Low	High	Dividend	Low	High	Value Line	S&P	Low	High
Atmos Energy Corp.	31.44	31.93	1.28	4.01%	4.07%	5.00%	6.00%	9.01%	9.07%
AGL Resources	40.50	41.12	1.64	3.99%	4.05%	3.50%	4.00%	7.49%	8.05%
New Jersey Resources	49.02	49.75	1.52	3.06%	3.10%	2.50%	5.00%	5.56%	8.10%
NICOR, Inc.	47.13	47.97	1.90	3.96%	4.03%	4.00%	4.00%	7.96%	8.03%
Northwest Natural Gas	44.25	44.99	1.44	3.20%	3.25%	7.00%	5.00%	8.20%	10.25%
Piedmont Natural Gas	26.06	26.72	0.99	3.71%	3.80%	3.00%	4.00%	6.71%	7.80%
South Jersey Industries	35.58	36.72	0.98	2.67%	2.75%	9.50%	7.00%	9.67%	12.25%
Southwest Gas	37.64	38.42	0.86	2.24%	2.28%	8.00%	12.00%	10.24%	14.28%
WGL Holdings, Inc.	31.29	31.75	1.38	4.35%	4.41%	1.00%	4.00%	5.35%	8.41%
Comparable Companies' Averages	38.93	39.68	1.34	3.40%	3.46%	4.81%	5.63%	7.65%	9.65%
Comparable Companies' Averages for Bond Ratings of A+ and Above								6.77%	8.70%
Comparable Companies' Averages for Bond Ratings Below A+								8.53%	10.60%

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

Atmos Energy Corporation

Comparable Gas Companies

Discounted Cash Flow Analysis By Bond Rating

	Standard & Poor's A+ Rating or Higher		Below Standard & Poor's A+ Rating	
	Low	High	Low	High
Dividend Growth DCF Analysis	6.06%	7.06%	7.06%	8.09%
Earnings Growth DCF Analysis	6.90%	7.90%	10.97%	12.00%
Projected Growth DCF Analysis	6.60%	9.47%	8.37%	11.40%

Sources: Schedules DAM-20 through DAM-25

Atmos Energy Corporation

Comparable Gas Companies

Size Adjusted Capital Asset Pricing Model

	Risk Free Return	Beta	Equity Risk Premium	Adjusted Equity Risk Premium	Size Premium	Cost of Equity
Atmos Energy Corp.	4.81%	0.80	7.10%	5.68%	0.97%	11.46%
AGL Resources	4.81%	0.95	7.10%	6.75%	0.97%	12.53%
New Jersey Resources	4.81%	0.80	7.10%	5.68%	1.76%	12.25%
NICOR, Inc.	4.81%	1.30	7.10%	9.23%	0.97%	15.01%
Northwest Natural Gas	4.81%	0.75	7.10%	5.33%	1.76%	11.90%
Piedmont Natural Gas	4.81%	0.80	7.10%	5.68%	1.76%	12.25%
South Jersey Industries	4.81%	0.70	7.10%	4.97%	1.76%	11.54%
Southwest Gas	4.81%	0.85	7.10%	6.04%	1.76%	12.61%
WGL Holdings, Inc.	4.81%	0.85	7.10%	6.04%	1.76%	12.61%
Comparable Companies' Average	4.81%	0.88	7.10%	6.21%	1.56%	12.59%

Sources :
Value Line Investment Survey
Ibbotson Associates 2007 SBBI Yearbook: Valuation Edition
Federal Reserve Statistical Release

Atmos Energy Corporation

Comparable Gas Companies

Historical Capital Asset Pricing Model

	Market Total Returns	Long-Term Corporate Bonds Return	Risk Premium	Beta	Adjusted Risk Premium	Aaa Corporate Bonds Return	Cost of Equity
Atmos Energy Corp.	14.85%	6.20%	8.65%	0.80	6.92%	5.30%	12.22%
AGL Resources	14.85%	6.20%	8.65%	0.95	8.22%	5.30%	13.52%
New Jersey Resources	14.85%	6.20%	8.65%	0.80	6.92%	5.30%	12.22%
NICOR, Inc.	14.85%	6.20%	8.65%	1.30	11.25%	5.30%	16.55%
Northwest Natural Gas	14.85%	6.20%	8.65%	0.75	6.49%	5.30%	11.79%
Piedmont Natural Gas	14.85%	6.20%	8.65%	0.80	6.92%	5.30%	12.22%
South Jersey Industries	14.85%	6.20%	8.65%	0.70	6.06%	5.30%	11.36%
Southwest Gas	14.85%	6.20%	8.65%	0.85	7.35%	5.30%	12.65%
WGL Holdings, Inc.	14.85%	6.20%	8.65%	0.85	7.35%	5.30%	12.65%
Comparable Companies' Average	14.85%	6.20%	8.65%	0.88	7.57%	5.30%	12.87%

Sources :
Value Line Investment Survey
Ibbotson Associates 2007 SBBI Yearbook: Valuation Edition
Federal Reserve Statistical Release

Atmos Energy Corporation

Recent Increase in Returns on Common Equity

By Industry Group

Industry	Earnings 2003	2004	2005	2006	Percent Increase 2003-2006
Atmos	9.30%	7.60%	8.50%	9.90%	0.60%
Building Materials	13.50%	15.30%	16.00%	16.00%	2.50%
Cement & Aggregates	9.40%	14.50%	19.50%	22.50%	13.10%
Chemical/Diversified	15.20%	16.20%	19.70%	19.50%	4.30%
Healthcare Information	11.70%	14.40%	14.40%	15.50%	3.80%
Household Products	33.50%	34.60%	39.80%	18.50%	-15.00%
Insurance (Life)	9.30%	9.60%	10.80%	11.00%	1.70%
Machinery	12.10%	16.50%	19.20%	20.50%	8.40%
Railroad	8.60%	9.30%	11.60%	10.50%	1.90%
Three Month Treasury Security	1.01%	1.37%	3.15%	4.73%	3.72%

Sources: Value Line Investment Survey
Federal Reserve

Atmos Energy Corporation

Projected Cost of Capital

Thirteen Month Average as of October 31, 2008

	Percent of Total	Embedded Cost			Weighted Cost of Capital		
		Low	Middle	High	Low	Middle	High
Long Term Debt	51.50%	6.10%	6.10%	6.10%	3.14%	3.14%	3.14%
Common Equity	48.50%	11.50%	11.75%	12.00%	5.58%	5.70%	5.82%
Total Capital	100.00%				8.72%	8.84%	8.96%

Source:
Atmos Energy Corporation Work Papers

Atmos Energy Corporation

Comparable Gas Companies

Comparison of After-Tax Times Interest Earned Ratios

Atmos Energy Corp.	@11.50% ROE	2.78
	@11.75% ROE	2.81
	@12.00% ROE	2.85
AGL Resources		2.68
New Jersey Resources		4.20
NICOR, Inc.		7.57
Northwest Natural Gas		2.97
Piedmont Natural Gas		2.97
South Jersey Industries		4.63
Southwest Gas		1.90
WGL Holdings, Inc.		3.45
Comparable Companies' Average		3.80

Source : Value Line Investment Survey