BEFORE THE

TENNESSEE REGULATORY AUTHORITY

DOCKET NO. 05-00258

PREPARED DIRECT TESTIMONY

OF

DONALD A. MURRY, Ph.D.

On Behalf of

ATMOS ENERGY CORPORATION

July 2006

TESTIMONY OF DONALD A. MURRY

POSITION AND QUALIFICATIONS

Q. Please state your name.

A. My name is Donald A. Murry.

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

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

Q. What is your educational background?

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

Q. Please describe your professional background.

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

and presented a number of papers in the field of regulatory economics in the energy industries.

Q. What is your experience in regulatory matters?

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

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

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

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

PURPOSE OF TESTIMONY

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

A. Atmos Energy Corporation ("Atmos Energy,") retained me to analyze the current cost of capital and recommend a rate of return and capital structure that is appropriate for the Tennessee operating division in this proceeding. In this testimony, I will 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-32.

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

A. Yes, it was.

SUMMARY OF TESTIMONY

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

A. Yes, I can describe the analysis that I undertook. My testimony is an explanation of this analysis and my recommended allowed return for the Company.

I began my analysis with a study of the current economic environment. I took note of the recent economic expansion and the associated accelerating inflation. In turn, these inflationary pressures have led to Federal Reserve action to raise interest rates. For this case--because of the time period that rates set in this proceeding are likely to be in effect--forecasted further increases in interest rates are even more important. This implies that the capital costs of regulated utilities have recently increased and that they will continue to increase into the foreseeable future.

For my analysis of the Company, I investigated the appropriate capital structure, cost of debt, and cost of common stock appropriate for setting rates in this case. As to the capital structure, I note that the current common stock equity ratio of Atmos Energy is temporarily much lower than it has been historically and much lower than other, typical gas distribution utilities. This low common equity ratio is an anomaly because of recent debt issuance and not appropriate for setting rates in this proceeding. Atmos Energy's management has set a target of a more reasonable and balanced capital structure of 50 percent common stock and 50 percent long-term debt. This capital structure is consistent with the Company's historical capital structure, and is appropriate for setting an allowed return in this proceeding. This target common stock equity ratio is still relatively low, with the attendant higher financial risk, when compared to other similar gas distribution utilities.

The appropriate cost of debt for this proceeding is the embedded cost of long-term debt of Atmos Energy of 6.03 percent. As to the measurement of the cost of common stock equity, I reviewed the financial statistics of Atmos Energy, and I compared these statistics to similar statistics for a group of comparable natural gas distribution utilities. I

note that *Value Line* predicts a return on common stock for the comparable companies of 11.5 percent in 2006 and 11.5 percent for the entire industry sector. In the same publication, *Value Line* forecasts a return of only 8.5 percent for Atmos Energy. In short, the common stock earnings of Atmos Energy are currently significantly lower than the average of a group of comparable gas distribution companies and the average of the gas distribution industry covered by *Value Line.* I also studied the total return on capital of Atmos Energy, which includes debt costs. I determined that Atmos Energy's total return was lower than the average total return of the comparable companies and also lower than the average for the entire gas distribution industry.

For my market analyses of the cost of common stock I used the Discounted Cash Flow ("DCF") method and Capital Asset Pricing Model ("CAPM"). I estimated the cost of common stock of Atmos Energy and each of comparable natural gas distribution utilities. Focusing on the most growth DCF and CAPM results for Atmos Energy, I identify a cost of equity range of 11.70 percent to 12.42 percent. The comparable companies' DCF results are lower than those for Atmos Energy, but the comparable companies' CAPM results are higher.

To interpret the DCF and CAPM analyses, in addition to noting the relatively high financial risk of Atmos, I evaluated several specific business risk factors from third-party sources. Taking into account the historically low common stock earnings of Atmos, the rising interest rates and the implications of these risk factors, I determined a recommended allowed return for the Company in this proceeding. I noted the risks to local gas distribution utilities ("LDCs") because of high gas costs and the related failure to recover margins through rates, declining per customer sales, and forecasted rising

interest rates, and, most important, I confirmed that these risks clearly apply in this case for Atmos in Tennessee.

Based on this analysis, I am recommending an allowed return for the Company in this proceeding of 12.0 percent. This common equity return results in a recommended return on total capital of 9.01 percent.

As a test of the sufficiency of my recommended return, I compared the After-Tax Interest Coverage for Atmos Energy at this return level (3.01 times) to the average After-Tax interest Coverage for a group of comparable gas distribution utilities (3.48 times). Consequently, I conclude that my recommended allowed return for Atmos is very reasonable, and perhaps even conservative, in current markets.

UTILITY REGULATION

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

A. Yes. I based my analysis and recommendations on my interpretation of the role of regulation in the natural gas distribution industry. Because of the nature of the industry, analysts have recognized the likely presence of market power in a franchised utility market. Economies of scale at the distribution or retail level of utility service indicate that the duplication of facilities by more than one firm may be economically inefficient. This is the principal economic rationale for utility regulation, and I used this as a guide for my analysis and recommendations in this proceeding. Consequently, I predicated my analysis on the objective to set an allowed return in a regulatory proceeding that is sufficient to allow a utility to recover the costs of providing service, but not higher than necessary to attract and maintain invested capital that provides utility service. As an economist, I

believe that these analytical objectives are consistent with the legal standard of a "fair rate of return" in regulation.

Q. Can you define what you mean when you mention the "legal standard" that you used to measure the "fair rate of return?"

A. Yes, I am applying the term "fair rate of return" in a manner that 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")*, 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 similar to returns on alternative investments in companies of equivalent risk.

Q. Can you explain the concept of a "fair rate of return" in more detail?

A. I am using the term a "fair rate of return" consistent with my understanding that such a return is one that is sufficient to enable the company to operate successfully, maintain its financial integrity, attract capital, and compensate investors for the associated risks of investment. Throughout my analysis, I was very sensitive to both the financial and business risks of Atmos in providing gas distribution service in Tennessee.

ECONOMIC ENVIRONMENT

Q. What did you determine are the current economic factors that may be important for setting the cost of capital in this proceeding?

A. The key factors in the current economic environment that affect investors are expectations about inflation and interest rates. Forecasts of inflation and interest rate increases affect investors' expectations of returns and their evaluations of the risks and

returns on alternative investments. For these reasons, I reviewed both the current and forecasted levels of inflation and interest rates.

Q. What about the current economic environment did you find important for your analysis of the cost of capital in this proceeding?

A. The U. S. economy is experiencing healthy growth, but it also shows signs of inflation after several years of stable prices. The economy is in an expansionary phase, characterized by tightening monetary policy by the Federal Reserve and increasing interest rates. For example, the U.S. economy expanded at a rate of 5.3 percent in the first quarter of 2006—a marked improvement over the 1.7 percent annualized growth in real GDP experienced in the fourth quarter of 2005. However, *Blue Chip Financial Forecasts (Blue Chip)* expects the pace of real GDP growth to moderate to 2.9 percent in the second quarter of 2006 and to 2.9 to 3.1 percent over the following six quarters. Economic expansion is being driven by business capital spending, productivity enhancements, and job creation. According to the Federal Reserve press release issued May 10th of this year:

> Economic growth has been quite strong so far this year. The (Federal Open Market) Committee sees growth as likely to moderate to a more sustainable pace, partly reflecting a gradual cooling of the housing market and the lagged effects of increases in interest rates and energy prices.

Q. You mentioned inflation levels. Can you elaborate upon recent and forecasted inflation rates, and why they were important to your analysis?

A. The May 2006 core Consumer Price Index ("CPI") jumped 0.3 percent for the third consecutive month. This is the largest consecutive three-month increase in over ten years, and it reveals a broadening of inflationary pressures in the economy. *Blue Chip* is forecasting the CPI to increase in a range between 2.5 percent and 4.4 percent in 2006.

Consistent with the annual forecasts, the standard CPI rose 0.4 percent in May following the 0.6 percent increase experienced in April. Sharp increases in crude oil and gasoline prices in May are likely to exert upward pressure on the prices of other goods and services throughout the coming year. At this time, crude oil prices on the New York Mercantile Exchange are up over 20 percent year-over-year. Increasing inflationary pressures are troubling to the financial markets and have the full attention of Federal policymakers.

Manufacturing activity is increasing nationwide, putting pressure on the labor markets, and health care and post-retirement costs continue to be a concern. Housing market activity is softening, at least in part because of rising interest rates, and this could lead to a generalized slowdown in consumer spending as home price appreciation slows.

Schedule DAM-1 shows the historical trends of GDP growth, unemployment and inflation statistics that are likely to be the types of statistics that the Federal Reserve would evaluate when moving to a tighter monetary policy.

Q. How has this economic activity affected interest rates?

A. The economic expansion is important background for my cost of capital analysis because the inflationary pressures almost certainly lead to actions by the Federal Reserve to increase interest rates. For example, the Federal Open Market Committee ("FOMC") has raised interest rates 17 times since June 2004. On June 29th the FOMC raised the overnight bank rate to 5.25 percent from 5.00 percent.

In the Federal Reserve's semi-annual monetary policy report to Congress on February 15th, new Federal Reserve Chairman Ben Bernanke stated,

> The risk exists that, with aggregate demand exhibiting considerable momentum, output could overshoot its sustainable path, leading ultimately—in the absence of countervailing monetary policy action—to further upward pressure on inflation. In these circumstances, the FOMC judged that some further firming of monetary policy may be necessary, an assessment with which I concur.

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

A. As the economy expanded, the Federal Reserve signaled it will raise interest rates to keep inflation at bay. Regarding the outlook for inflation and Federal action, Richmond Federal Reserve Bank President, Andrew Lacker, recently stated the inflation outlook is, "...borderline acceptable and perhaps even beyond" and Fed Chairman Ben Benanke stated, "there are some upside inflation risks in the economy" and "...some additional firming of policy might yet be needed." Bond prices have decreased substantially in 2006, thereby raising yields on bonds to their highest level since 2002. As shown on Schedule DAM-2, the 10-year Treasury Bond and the Aaa-corporate rate are currently about 5.0 percent and 6.0 percent respectively. Most significantly, as shown in Schedule DAM-3, analysts expect long-term bond rates to continue rising. The *Blue Chip* forecasts for the Baa-corporate rate and the 10-year Treasury rate are for continuing increases to 7.1 percent and 5.2 percent respectively through the third quarter 2007.

Q. Why are these economic conditions important to this proceeding?

A. The rates set in this proceeding will be in effect during a period of rising inflation and interest rates. During this period, the Company has plans to issue common stock over the time that these rates will be in effect. Rising inflation and rising interest rates adversely affect a gas utility's debt and securities, thereby increasing the risk to common stockholders that they will achieve their anticipated returns on investment. As the FOMC

increases short-term rates, the cost of short-term debt that funds natural gas purchases increases, and the high natural gas prices are also a significant business risk to investors.

Q. How are high gas costs a "significant business risk to investors?"

A. High gas costs lead to increases in working capital and short-term debt required to pay suppliers until the LDC recovers the cost of gas. Also, when customers' gas bills are high, bad debt expense increases, thereby further increasing LDCs' short-term debt and accounts receivable. High gas prices are difficult for LDC customers and investors alike.

SELECTION OF COMPARABLE COMPANIES

Q. What criteria did you use to select the utilities that you identified as comparable to Atmos Energy for your analysis?

A. Using criteria that were similar to the characteristics of Atmos Energy, 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 by *Value Line.* 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, I excluded companies that do not pay a dividend, and finally, I limited this group to LDCs that have common equity ratios of at least thirty percent.

Q. Why is using criteria similar to Atmos Energy important for selecting a group of companies?

A. Methodologically, it is important to determine the risks and the associated costs of common stock equity of gas distribution utilities that are as similar to Atmos Energy as possible. Holding some key characteristics constant in selecting companies for comparison is important analytically. If the companies are not comparable, one would

need to measure the cost of the risk differential between Atmos Energy and the comparable companies in order to make the comparison analytically valid and useful. As stated previously, the regulatory objective is to determine the cost of investing in securities of equivalent risks, and selecting companies with similar financial characteristics to Atmos Energy provides a benchmark for comparison and interpretation of various analytical results.

Q. What companies did you select as comparable to Atmos Energy and suitable for your analysis?

A. I selected a group of seven natural gas companies that are similar in many respects to Atmos Energy. This group includes: AGL Resources, New Jersey Resources, NICOR, Inc., Peoples Energy Corporation, Piedmont Natural Gas, Southwest Gas, and WGL Holdings, Inc.

CAPITAL STRUCTURE

Q. What is the current capital structure for Atmos Energy in this proceeding?

A. As I have illustrated in Schedule DAM-4, the Company has a total capitalization of $4,106,868,211 at April 30, 2006. The Long-Term Debt was $2,177,537,758, or 53.02 percent of total capital, and the Common Equity was $1,690,490,078, or 41.16 percent of total capital. The Short-Term Debt balance at that time was $238,840,375 or 5.82 percent of total capital. From my experience in observing current capital structures, this is a very low common equity ratio for an LDC in the current market.

Q. You did not include any short-term debt in this capital structure. Why did you not include short-term debt in this capital structure?

A. I did not include short-term debt in the capital structure because Atmos Energy's use of short-term debt clearly shows that it is not part of the Company's permanent capital. Atmos Energy's short-term debt fluctuates greatly, and even disappears for periods of time. Consequently, it cannot be permanent capital that supports physical utility assets. I have illustrated how frequently Atmos Energy's level of short-term has fallen to zero in recent years in Schedule DAM-5. By observing the historical fluctuations of Atmos Energy's short-term debt, it is easy to see that it supports such variable operating expenses as the cost of purchased gas.

Q. Is this current capital structure of Atmos Energy the capital structure that you are recommending for ratemaking in this proceeding?

A. No. The common equity ratio in this current capital structure is too low for ratemaking for Atmos because it is a temporary capital structure. The common equity ratio is lower than the Company's historical common equity ratio, and it is lower than the projected common equity ratio. This current common equity ratio is unusually low simply because Atmos Energy made a recent, large acquisition with debt, and the Company has plans to issue common stock over time to return the common equity ratio to more normal levels for an LDC.

Q. What is the common equity ratio that you are recommending for Atmos in this proceeding?

A. I am recommending using Atmos Energy's stated target, 50 percent common equity and 50 percent debt, as the appropriate capital structure for this proceeding. As Schedule DAM-6 shows, Atmos Energy's target common equity ratio is lower than its common equity ratio has been historically and is still lower than the typical common equity ratios

of comparable utilities. For example, *Value Line* data show that Atmos Energy's common equity was 56.8 percent as recently as 2004 before the recent acquisition. Also, *Value Line* data show the actual common stock equity of 43.0 percent in 2006 for Atmos Energy, is significantly lower than the average of the comparable gas distribution utilities, which is 53.6 percent. Atmos Energy's current common equity ratio is temporary, inconsistent with the industry average and inappropriate for setting rates for the future. The common equity that the Company will be moving towards during the period that these rates will be in effect is the appropriate capital structure for ratemaking.

Q. What is the basis for your selecting a target 50 percent common equity as appropriate for ratemaking in this proceeding?

A. First, 50 percent common equity is reasonable and is comparable to the industry average. Second, Atmos Energy executives have announced to its stockholders and the public that it has set a target of approximately 50 percent common equity, which is even less than its historical common equity level, for the future. For example, in Atmos' quarterly report (10-Q) for the 2nd Q 2006, the Company stated, as follows (at 43):

> Within two to four 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, access to the equity capital markets and reduced annual maintenance and capital expenditures.

COST OF SHORT-TERM DEBT

Q. What is Atmos Energy's cost of short-term debt?

A. The cost of short-term borrowing of Atmos Energy that I have reviewed showed a cost of 5.21 percent in May 2006. The Company reports that it has risen to 5.50 percent since

then. The rising cost of debt of Atmos Energy is consistent with the earlier discussion of the Federal Reserve policy and rising short-term interest rates.

COST OF LONG-TERM DEBT

Q. What did you determine is the appropriate cost of long-term debt for setting rates in this proceeding?

A. The appropriate calculated cost of long-term debt is Atmos Energy's embedded cost of long-term debt of 6.03 percent. I have illustrated this calculation in Schedule DAM-7. This represents the cost of long-term debt that Atmos Energy used to acquire the long-term assets that provide utility service to Tennessee customers.

BUSINESS AND FINANCIAL RISK

Q. You stated previously that you investigated the "financial risk" to Atmos Energy's common stock holders. How do you define financial risk?

A. Financial risk to the common stock holders of a company is the risk that they incur because the claims of the debt instruments must be paid prior to any returns accruing to common stock. In general, the lower the common stock equity ratio, the greater is the relative prior obligation owed to debt holders and the residual risk faced by holders of a company's common stock.

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

A. As I stated previously, Atmos Energy's current common stock equity ratio of approximately 43 percent is significantly lower than the average common equity ratio of the comparable companies of 53.6 percent. By any measure, this demonstrates an exposure by Atmos Energy's common stock holders to much greater financial risk than the common stockholders of the comparable utilities. However, I have compensated for

this higher financial risk by recommending a higher common equity for ratemaking. If the Authority does not adopt this higher capital structure, then one must adjust the allowed common stock return to compensate for this higher financial risk.

Q. You also stated that you investigated the "business risk" of Atmos. How did you define business risk?

A. Business risk is the exposure of the returns to common stockholders resulting from the vagaries of business operations. In many respects, the most important business risks for LDCs are competition from other fuels and rising gas costs that reduce sales, the impact of rising inflation, and interest rates and the recovery of the costs of purchased gas. In my analysis, I considered these and other general business risks, and I also reviewed indices of business risk as reported by financial analysts.

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

A. Yes. The Tennessee operations of Atmos Energy have the business risk of any LDC in the current markets.

FINANCIAL STATISTICS

Q. Did you compare the common equity returns of Atmos to those of the comparable companies?

A. Yes, I did.

Q. In spite of the anomalous, low common equity ratio, did you learn that Atmos Energy's return to common equity was relatively high?

A. No. I found that, to the contrary, the return to common stock of Atmos were exceptionally low when compared to the returns of the comparable LDCs. Moreover, this low return extended over the entire five-year period that I studied, which was since 2002.

As this schedule shows, *Value Line* is predicting that Atmos Energy will earn only 8.5 percent on common stock equity in 2006. This is lower than six of the comparable gas utilities. Only Southwest Gas, which has a recent history of financial difficulties, has a forecasted return on common equity that is as low. By comparison, the average of all of the comparable utilities, including Southwest Gas, is 11.5 percent. I also learned that the forecasted returns to common equity are much lower than the comparable LDCs. I have illustrated these comparisons in Schedule DAM-8.

Q. Did you compare Atmos Energy's returns to any broader group of gas distribution utilities?

A. Yes. I also compared Atmos Energy's return on common equity to all distribution companies listed by *Value Line*. Atmos Energy's recent returns have also been much lower than this broader industry average. Schedule DAM-9 illustrates the differences between the recently earned returns of Atmos Energy and the *Value Line* natural gas distribution companies, which have widened in recent years.

Q. Did you also compare Atmos' return to total capital to that of the comparable LDCs?

A. Yes. Atmos Energy's return to total capital of 5.5 percent is also much lower than the average of the comparable LDCs. I illustrated this return in Schedule DAM-10.

Q. Did you determine whether Atmos Energy's low common stock earnings have hampered the Company's ability to maintain its dividend?

A. Although I could not determine the precise cause, when I reviewed the recent dividends of Atmos Energy, I noted that its dividend growth was lower than the average of the comparable companies. As Schedule DAM-11 shows, when compared to the comparable

LDCs, Atmos Energy has a low dividend growth rate of just 1.65 percent over the past five years. The average for the comparable gas distribution utilities is almost twice that, 3.06 percent, over the same period.

Q. Given the relatively low return on common stock and relative flat dividend growth, how does Atmos Energy's dividend payout ratio compare to the payout ratios of the comparable companies?

A. As Schedule DAM-12 shows, Atmos Energy's dividend payout has averaged 74.2 percent over the most recent five-year period. This dividend payout was somewhat higher than the payouts of the comparable companies. Maintaining earnings sufficient to support a stable dividend is important to many utility investors. Atmos Energy's relatively conservative dividend growth has resulted in a relatively stable payout ratio.

Q. In your 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 that you analyzed in your comparative analysis?

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 14.6 times is at the low end of the range of the P/E ratios of the comparable LDCs. Moreover, *Value Line* is predicting a decline in Atmos Energy's price earnings ratio to 13.0 times by the 2009-2011 period. By comparison, *Value Line* forecasts an average price earnings ratio of 16.6 times for the comparable companies. I have shown these comparisons in Schedule DAM-13. This projected decline in price earnings ratio is important as the Company increases common equity from the current levels.

Q. Do the projected financial statistics show that Atmos Energy will increase its common stock outstanding in the near term?

A. Yes, as reported by *Value Line,* Atmos Energy's expected growth in common stock outstanding is much higher than the comparable LDCs. As shown in Schedule DAM-14, *Value Line* has estimated that Atmos Energy's common shares outstanding will grow over the period from the present to the year 2011 by 22 percent. By comparison, three comparable companies are showing no growth in common shares outstanding, and two show a decline in shares outstanding. Along with Atmos Energy's relatively low common stock earnings, these comparisons emphasize the importance for Atmos Energy to maintain an adequate return on common stock in order to issue common stock at favorable prices. Likewise, the projected growth in common stock underscores the importance of using the targeted common equity ratio in this proceeding rather than the current, anomalously low one.

COST OF COMMON STOCK

Q. You also stated previously that you calculated the cost of common stock equity for Atmos. Explain the methods you used.

A. I employed two common market-based methods for estimating the cost of common stock in regulatory proceedings. These are the Discounted Cash Flow analysis, which is probably the most commonly referenced method in regulatory proceedings, and the Capital Asset Pricing Model. I applied each of these methods to estimate the cost of common stock of Atmos and each of the comparable companies. Of course, just mechanically applying either of these methods is a sterile analysis, so I investigated the assumptions underlying the methods in order to interpret the results should conditions not

satisfy these assumptions in this case. I also reviewed academic literature related to the use of these two techniques. In this way, I interpreted the results in the context of their strengths and weaknesses of these methods, and, to put them into perspective, I evaluated these calculations in the context of current market conditions.

DISCOUNTED CASH FLOW METHOD

Q. You mentioned that you used the DCF method for determining cost of common stock. Can you define the DCF methodology for measuring 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. As an example of underlying assumptions of the DCF, David Parcell stated in *The Cost of Capital—A Practitioner's Guide,*[1] that the general DCF model has the following four key assumptions:

1. Investors evaluate common stocks in the classical economic framework.

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

2. Investors discount the expected cash flows at the same rate (K) in every future period.
3. K corresponds only to the specific steam[sic] of future cash flows.
4. Dividends, rather than earnings, constitute the source of value.

These key assumptions are important; when not realized in practice, they can lead to incorrect measures of the cost of common equity. In turn, this may lead to misinterpretation of the results using the DCF method.

Q. What do you see as strengths of the DCF method?

A. The DCF is theoretically sound. Recognizing that an investor expects a return on investment in the form of dividends and capital gains, the DCF implies that the investor is willing to pay a market price that is equal to the present value of that stream of earnings to acquire the common stock. Using these market relationships, an analyst can estimate the opportunity cost of an investor's funds, which is consistent with the regulatory objective of setting an allowed return equal to the returns to investments of equivalent risk. As a market-based measure recognizing investors' expectations, it applies market price information and the company's dividend and earnings performance to determine the value that investors places on anticipated returns.

Also, the DCF is the most common method that one encounters for measuring the cost of common equity in regulatory proceedings.

WEAKNESSES OF THE DCF

Q. When used in a utility rate proceeding, what do you see as important weaknesses of the DCF method?

A. The DCF has both conceptual and data issues that can lead to misinterpretation of the calculated results. Either or both can create problems when one uses the DCF in a

ratemaking proceeding. Understanding the important conceptual issues and selecting and understanding the data can reduce, but not entirely remove, the risk of misinterpretation of the DCF results.

Q. What conceptual problems of the DCF may be important when an analyst uses it to estimate the cost of capital in a rate proceeding?

A. Although it is theoretically sound, one problem of the DCF method that can lead to a misinterpretation in a rate proceeding is the very nature of the DCF method. The DCF estimates the marginal cost of common stock equity of a company. In that way, it is an estimate of the minimal return necessary to attract marginal, or incremental, investment in the common stock equity. However, the method does not account for any other factors that may affect the ability of the company to earn that return. Unfortunately, analysts sometimes do not interpret the results of the DCF calculations in the context of what they truly represent. Consequently, the DCF-based calculations may be misleading when an analyst misinterprets the results. For example, the DCF calculated cost of common equity may not provide any cushion that a regulated company has a reasonable probability to earn its allowed return. In fact, this misunderstanding of the DCF results can virtually assure that a regulated company will not earn its allowed return.

Q. In your experience is it common for regulators and analysts to recognize this characteristic of the DCF method?

A. Yes, it is. Regulators and analysts often use adjustments to compensate for the marginal cost nature of the DCF adjustment. For example, some analysts specifically apply a flotation adjustment. Some apply an adjustment for "market pressure" associated with the sale of securities.

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

A. No, I believe that focusing on the high end of the DCF results is adequate compensation for the regulated utility because of costs of flotation and any effects of market pressure. This, in my opinion, directly recognizes the marginal cost nature of the DCF method.

Q. Have regulatory commissions recognized these limitations of the DCF when used in rate proceedings to determine the cost of common equity?

A. Yes, of course, commissions have recognized some of these difficulties. For example, the Indiana commission in a 1990 decision recognized that the assumptions underlying the DCF model rarely, if ever, hold true.[2] 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."[3]

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

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

Q. Can you cite some of the studies that demonstrated that investors look to analysts' forecasts when making investment decisions?

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

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 explains why analysts' growth rate forecasts are the best source for growth measures in a DCF analysis. They state:

> Analysts' growth rate forecasts are usually for five years into the future, and the rates provided represent the average growth rate over the five-year horizon. Studies have shown that analysts' forecasts represent the best source for growth for DCF cost of capital estimates.[4]

Research reported in the academic literature supports this position also. 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.[5]

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.[6]

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

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[4] 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.

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

[6] 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.

A. Yes. In an "event analysis", a colleague and I compared the market reactions of announced dividends and common stock earnings that were likely to be a surprise to the market. That is, for a group of electric utilities we compared the market reactions to dividend announcements and common stock earnings announcements. Specifically, we looked at the price impact of both earnings announcements and dividend announcements that exceeded *Value Line's* projected levels. Among these companies there were 8 dividend announcements and 19 common stock announcements that exceeded analyst's expectations during the period 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-15 shows, the impact on market prices of the unexpected earnings per share announcement in these cases is dramatic and obvious, and the impact of unexpected dividend announcements is seemingly less so.

Q. When developing your DCF analysis, did you also review historical common stock earnings and dividend information?

A. Yes. I reviewed the dividend and earnings history of the companies studied. As I have illustrated in Schedule DAM-16, the dividends have grown at less than earnings per share in recent years, but this is not surprising in light of the increased competition in the gas distribution industry. Under these increasingly competitive circumstances, prudent boards of directors are likely to conserve cash and refrain from increasing dividends even as earnings grow. Although this relationship may change eventually following the tax reduction on dividends in 2003, the data that I reviewed concerning the comparable LDCs does not yet show this impact.

Q. How did you determine common stock prices for your DCF analysis?

A. Of course I was interested in current market valuations. However, recognizing that rates from this proceeding will be in effect for a number of years, I also recognized prices over a longer time period. I obtained common stock prices for the past year reported by the *Wall Street Journal*, and I also selected current prices from a recent two-week period as reported by *YAHOO! Finance.*

Q. Please explain the findings from your DCF analysis.

A. The combined historical and forecasted dividend growth rates and the common stock prices for the past year produced low estimates for both Atmos Energy and the comparable companies. I show the results of this DCF calculation in Schedule DAM-17. These results, which range from 6.44 percent to 7.32 percent as an average for the comparable companies, are close to the current level of short-term debt rates, and less than the coupon bond rate of some of the comparable companies. Consequently, they are not credible estimates of the cost of common equity for ratemaking purposes for a gas distribution company. Likewise, with a recent short-term debt cost for Atmos of 5.21 percent and rising, the 5.90 percent to 6.74 percent for Atmos Energy is not credible. As Schedule DAM-18, shows the results using current prices are even less credible. Combining the historical and forecasted earnings per share growth rates, which I illustrate in Schedules DAM-19 and DAM-20 for Atmos, range from 11.59 percent to 12.42 percent. Using current price levels, the DCF estimates for Atmos are 12.42 percent to 12.16 percent. The high end of the projected earnings per share growth rate DCFs for Atmos of 12.04 percent and 11.78 percent are probably the most valuable for setting a

ratemaking standard for the Company. I have illustrated these results in Schedules DAM-21 and DAM-22.

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; and
- $\beta =$ beta, a measure of a given security's risk relative to that of the overall market.

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

Q. In your opinion, what are the benefits from using the CAPM in your analysis?

A. The CAPM method primarily provides a longer-term perspective than that of the more volatile DCF analysis. As a risk premium method, it takes current debt costs as a basis, or

benchmark, for measuring the cost of common stock. In this way, the CAPM links the incremental cost of capital of an individual company with the risk differential between that company and the market as a whole. This is a rather imprecise method, but it is a good tool for assessing the general level of the cost of a security. The CAPM results are likely to be similar for companies with similar financial characteristics in the same industry, and they are not likely to vary a great deal over time.

Q. What problems do you perceive to be important when one uses the CAPM in a ratemaking proceeding?

A. The cost of capital calculations for a company are sensitive to the beta used in the analysis. This beta is a single measure of risk, so, consequently, the CAPM will not incorporate any risks not included in the measures of market volatility. Also, a number of analysts have shown that the CAPM overestimates the cost of capital of companies with betas greater than one and underestimates the cost of capital of companies with betas less than one. In regulation this is important, because most utilities have beta estimates less than one. For example, Atmos Energy has a beta of 0.75, In addition, analysts have shown that the standard CAPM method will underestimate the cost of capital of smaller companies.

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 method requires an adjustment for the bias because of company size that I mentioned previously. The

financial literature has recognized this bias as an empirical problem for a long time, but correcting for this bias is a recent analytical development.

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[7] and M. R. Reinganum[8] in the 1980s, for example, is a good reference pointing out this size bias. Reinganum examined the relationship between the size of the firm and its price-earnings ratio, finding that small firms experienced average returns greater than those of large firms that had equivalent risk as measured by the beta. Of course, the beta is the distinguishing measure of risk in the CAPM. Banz confirmed that beta does not explain all of the returns 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 expected the return of investors[9].

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

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

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

[8] 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.

[9] 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.

> One of the most remarkable discoveries of modern finance is that of the relationship between firm size and return. The relationship cuts across the entire size spectrum but is most evident among smaller companies, which have higher returns on average than larger ones. Many studies have looked at the effect of firm size on return. [10]

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

Q. 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.

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."[11]

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[10] 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.

[11] *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.

Q. Please describe the results of your CAPM analysis.

A. My two CAPM studies provide comparative calculations, based on slightly different assumptions. In this way, they serve as benchmarks for the DCF analysis that I had developed previously. The results of my CAPM analyses are shown in Schedules DAM-23 and DAM-24. For Atmos the estimated costs of common stock are 11.70 percent and 12.44 percent from these two CAPM analyses. For the comparable companies these results are 13.26 percent and 13.80 percent.

Q. You mentioned Atmos Energy's relatively low common equity ratio relative to the comparable companies and higher financial risk. Under these circumstances, why are the CAPM results for Atmos Energy lower than for the comparable companies?

A. That result is an example of the unique characteristics of the CAPM methodology. As a risk premium method, it is a measure of the market relationship of an individual security relative to the market as a whole, and as I noted, analysts have shown that this market measure of risk does not account for all of the risks associated with investing in a common stock. Moreover, Atmos Energy's relatively low beta of 0.75 means that the resulting measure will be lower than LDCs with higher betas and a greater probability that the CAPM will underestimate the cost of capital.

Q. Have you prepared a summary of the results of your DCF and CAPM analyses?

A. Yes. I have summarized these results on Schedule DAM-25.

INTERPRETING THE DCF AND CAPM RESULTS

Q. What factors did you consider when you interpreted your DCF and CAPM results for this proceeding?

A. I considered the recent and forecasted interest rates, returns on alternative investments, the identifiable risks of Atmos Energy, and the limitations and biases of the DCF and CAPM methods.

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, rising interest rates mean that investors will require higher returns from their common stock investments. Relatively speaking, if the risk premium between common stock and debt remains relatively constant, the returns to common stock investments must necessarily increase to attract and maintain capital, and this is an important consideration when establishing an allowed return.

Q. In addition to debt instruments, are you aware of market evidence that returns of other alternative investments also have increased?

A. Yes. I also looked at the growth of returns of alternative common stock investments. For example, from 2003 through 2005, a period when short-term interest rates grew by approximately 220 basis points, the common stock returns for a number of U.S. industries grew by equivalent amounts or more. Using the *Value Line* measures of industry returns, I compared the growth in common stock earnings over the same period for a group of U. S. industries. I illustrated this comparison in Schedule DAM-26. I note that over this period, the return to common stock for Atmos *declined* by 0.8 percent. As I observed previously, this was a period of economic expansion, so this growth in industrial returns during this period is not surprising.

Also of note, the actual returns to common stock of these non-regulated companies in many cases are much higher than returns to the common stock of LDCs.

RISK STATISTICS

Q. Did you review any third party financial metrics when you conducted your analysis?

A. Yes, I did. I examined statistics and measures published by *Value Line* and Standard & Poor's. The metrics from *Value Line* were ranks for safety and timeliness and indexes of financial strength, stock price stability, price growth persistence, and earning predictability. I also evaluated Standard & Poor's measure for the business profile and corporate credit rating. As these various risk measures show, as evidenced by the statistics in Schedule DAM-27, the financial press generally ranks Atmos Energy's securities as more risky than those of the comparable LDCs.

Q. What does *Value Line's* Safety Rank measure?

The Safety Rank is "a measurement of potential risk associated with individual common stocks. The value shows where an individual stock is in relation to the entire universe of Value Line's stocks.[12]" Atmos Energy's safety is 2 and the comparable companies' average is 2.1 indicating that they are both above average in comparison to all other stocks.

Q. What does *Value Line's* Timeliness Rank measure?

A. The Timeliness rank is:

> ...the rank of a stock's probable relative market performance in the year ahead. It is derived via a computer program using as input the long-term price and earnings

[12] "How to Invest in Common Stocks: The Complete Guide to Using the Value Line Investment Survey," (2003: Value Line Publishing, Inc., New York), p. 41.

history, recent price and earnings momentum, and earnings surprise. All data are known and actual. Stocks ranked 1 (Highest) and 2 (Above Average) are likely to outpace the year-ahead market. Those ranked 4 (Below Average) and 5 (Lowest) are expected to underperform most stocks over the next 12 months. Stocks ranked 3 (Average) will probably advance or decline with the market in the year ahead.[13]

Atmos Energy is 4 meaning not only will the market outperform it, so will the comparable gas utilities.

Q. What does *Value Line's* Financial Strength Index measure?

A. The Financial Strength Index "is a relative measure of financial strength of the companies reviewed by *Value Line*. The relative ratings range from A++ (strongest) down to C (weakest), in nine steps.[14]" *Value Line* rate Atmos Energy at B+ which is average when compared to all stocks but below average in contrast to the comparable companies.

Q. What does *Value Line's* Stock's Price Stability Index measure?

A. The Stock's Price Stability is "a relative ranking of the standard deviation of weekly percent changes in the price of a stock over the past five years. The ranks go from 100 for the most stable to 5 for the least stable.[15]" Atmos Energy's value is 100 indicating that it has among the most stable stock price of the securities in the *Value Line* universe. This is not necessarily a good thing as investors tend to expect some share price appreciation in their investments.

Q. What does *Value Line's* Price Growth Persistence Index measure?

A. The Price Growth Persistence is "a measurement of the historic tendency of a stock to show persistent price growth compared to the average stock. *Value Line* Persistence

[13] Ibid, p. 43.
[14] Ibid, p. 34.
[15] Ibid, p. 42.

ratings range from 100 (highest) to 5 (lowest).[16]" Atmos Energy's rating is 25 placing it the bottom quartile of all stocks that *Value Line* covers. This is in contrast to the gas distribution companies which rank in the top third of stocks indicating much greater risk of Atmos Energy.

Q. What does *Value Line's* Earnings Predictability Index measure?

A. Earnings Predictability is:

> a measure of the reliability of an earnings forecast. Predictability is based upon the stability of year-to-year comparisons, with recent years being weighted more heavily that earlier ones. The most reliable forecasts tend to be those with the highest rating (100); the least reliable, the lowest (5). The earnings stability is derived from the standard deviation of percentage changes in quarterly earnings over an eight-year period. Special adjustments are made for comparisons around zero and from plus to minus.[17]

Atmos Energy's rating is 65 indicating that *Value Line* has a fairly good track record of predicting its earnings, but not nearly as well as the comparable gas companies. As such, Atmos Energy is slightly more risky.

Q. What does Standard & Poor's Business Profile measure?

A. S&P categorizes utility business profiles from '1' (Strong) to '10' (Weak). To determine a utility's business profile, Standard & Poor's analyzes the following qualitative business or operating characteristics typical of a utility: markets and service area economy; competitive position; fuel and power supply; operations; asset concentration; regulation; and management.[18]

S&P assigned Atmos a profile of 4 which is weaker than the comparable gas utilities.

Q. What is the Standard & Poor's Corporate Credit Rating?

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[16] Ibid, p. 40.
[17] Ibid, p. 33.
[18] "Research: U.S. Utility and Power Ranking List," *Standard & Poor's Rating Direct,* (2005: McGraw-Hill, New York).

A. It is "Standard & Poor's opinion of the general creditworthiness of an obligor, or the creditworthiness of an obligor with respect to a particular debt security or other financial obligation, based on relevant risk factors.[19]" Standard & Poor's has assigned Atmos Energy a credit rating of BBB indicating that is investment-grade, but riskier than the comparable gas distribution companies.

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

A. High natural gas prices create demand risk for the LDCs and their investors. That is, high prices cause customers to adjust their consumption patterns and an LDC's sales volumes will fall short of levels upon which rates were developed. At higher prices, customers reduce their natural gas consumption, install more efficient equipment, and switch to alternative fuels where possible. In addition, high natural gas prices will deter some new customers from even connecting to natural gas utility service in the first place. This reduction in gas volumes sold means that LDCs will not earn expected, allowed returns based on larger, anticipated historical volumes. Investors perceive this threat to projected returns as a business risk. High gas prices also cause receivables to increase and, in turn, result in reduced margins. These reduced margins decrease returns to levels less than those anticipated by the allowed returns set by regulators. To investors this is a business risk.

Q. Do you know if higher gas costs have reduced the margins for gas sales of the Tennessee operating division of Atmos Energy?

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[19] "Standard & Poor's Corporate Credit Ratings Criteria: 2005," (2005: McGraw-Hill, New York), p.8.

A. Yes. Very strong empirical evidence exists that as gas costs have risen, the margins for the residential, commercial and industrial customers of Atmos in Tennessee have steadily declined. I reviewed the rising gas prices and the margins for these classes of Atmos over a recent period. For example, in Schedules DAM-28, DAM-29 and DAM-30 I show the deseasonalized, weather normalized average gas costs per customer for each month from December 2002 until March 2006. The increasing trend of gas costs is evident for each of these classes. As these schedules also demonstrate, along with the increasing trend in natural gas costs, the deseasonalized, weather normalized trend in the margin collected for each of these classes has a definite negative trend during this same period. This reveals the increasing risk exposure of the Tennessee operations of Atmos Energy to the high gas costs.

Q. In addition to the limitations and biases of the DCF and CAPM methods that you mentioned, what other factors influenced your interpretation of these market-measured costs of capital?

A. As I stated one of the influencing factors was the nature of market-based measures. For example, the reason for a flotation adjustment is necessary to provide investors a reasonable likelihood of achieving the allowed return; however, rather than calculating an adjustment, I concentrated on the higher end of the calculated returns. Flotation costs are especially important in the case because of Atmos Energy's need to issue common stock.

RECOMMENDED RETURN

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

A. Because I recommended using Atmos' target common equity ratio of 50 percent, I did not add a special return increment for the financial risk of the Company's very low

common equity ratio. Atmos Energy has maintained only a nominal growth in dividends and very low returns on common stock in recent years. This resulted in a relatively high dividend payout ratio. In evaluating the calculations of the cost of common equity of Atmos Energy, the results of the DCF analysis using the common stock earnings forecasts were higher than the comparable LDCs. Because of rising interest rates, the marginal cost nature of the DCF results, the absence of a specific flotation adjustment, and the current risks to LDC investors, I disregard the lowest DCF calculations.

The relevant DCF results for Atmos Energy were the estimates of 11.78 percent and 12.04 percent for the forecasted earnings per share growth rates, using current yield estimates for Atmos Energy. In addition, I used the two CAPM analyses, which provided ROE estimates of 11.70 to 12.44 percent for Atmos Energy. The CAPM analyses estimated the returns of the comparable gas distribution companies to range between 13.26 and 13.80 percent, which I think are higher than necessary for ratemaking given current markets. I recommend that Atmos be granted an allowed rate of return on common equity of 12.0 percent. Using my recommended capital structure and 6.03 percent cost of long-term debt, this return on common equity recommendation results in a weighted average cost of capital of between 9.01 percent. I have illustrated this cost of capital in Schedule DAM-31.

FINANCIAL INTEGRITY TEST

Q. You stated previously that you tested the adequacy and appropriateness of your return recommendation. What did your test of adequacy and appropriateness show?

A. I compared an After-Tax Interest Coverage ratio, which is a measure that implies the likelihood that a company will have sufficient funds available to meet its fixed interest obligations, at my recommended allowed return for Atmos Energy to the existing coverages for the comparable utilities. The higher the coverage ration the greater the likelihood that the allowed return will provide funds to meet the fixed interest obligations. The After-Tax Interest Coverage ratio for Atmos at the allowed return on equity will be 2.99 times. By comparison, the average After-Tax Interest Coverage of the comparable companies is 3.48. This verifies that my recommendation is relatively conservative, but I believe that it should be sufficient to raise the additional common equity as proposed by the Company. I show this comparison in Schedule DAM-32.

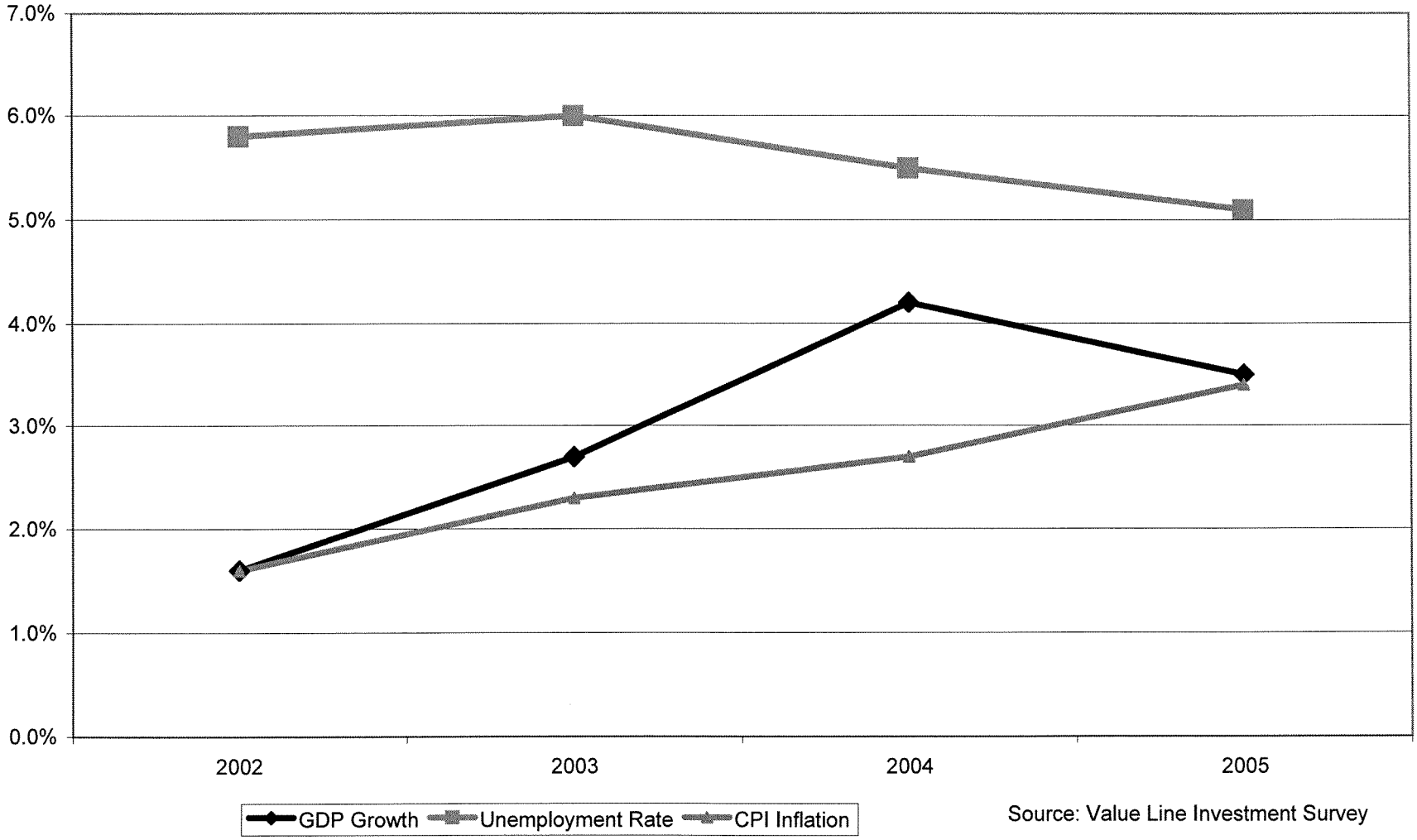
Q. Does this conclude your direct testimony?

A. Yes, it does.

Atmos Energy Corporation

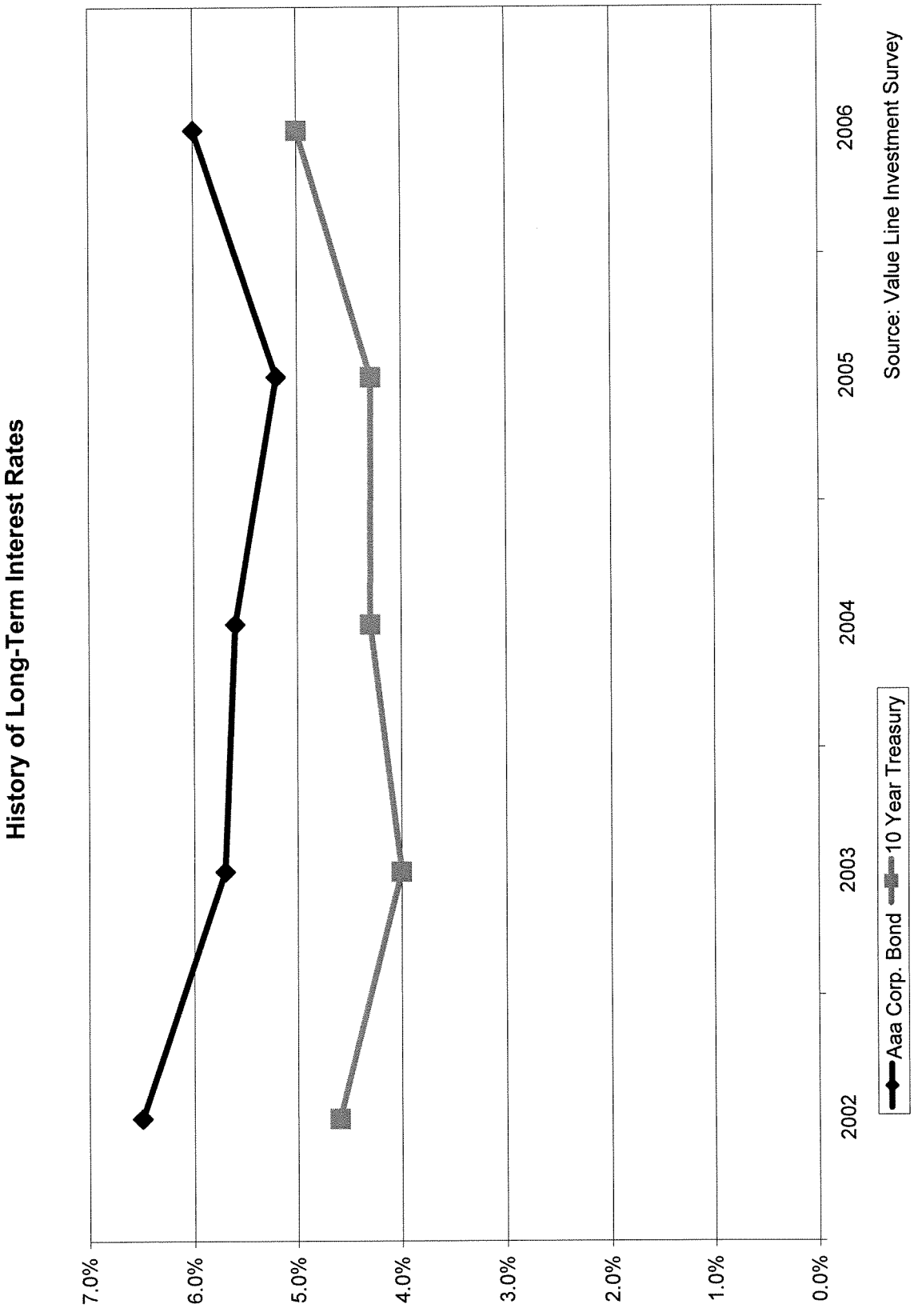
List of Schedules

Historical Economic Indicators
2002 to 2005

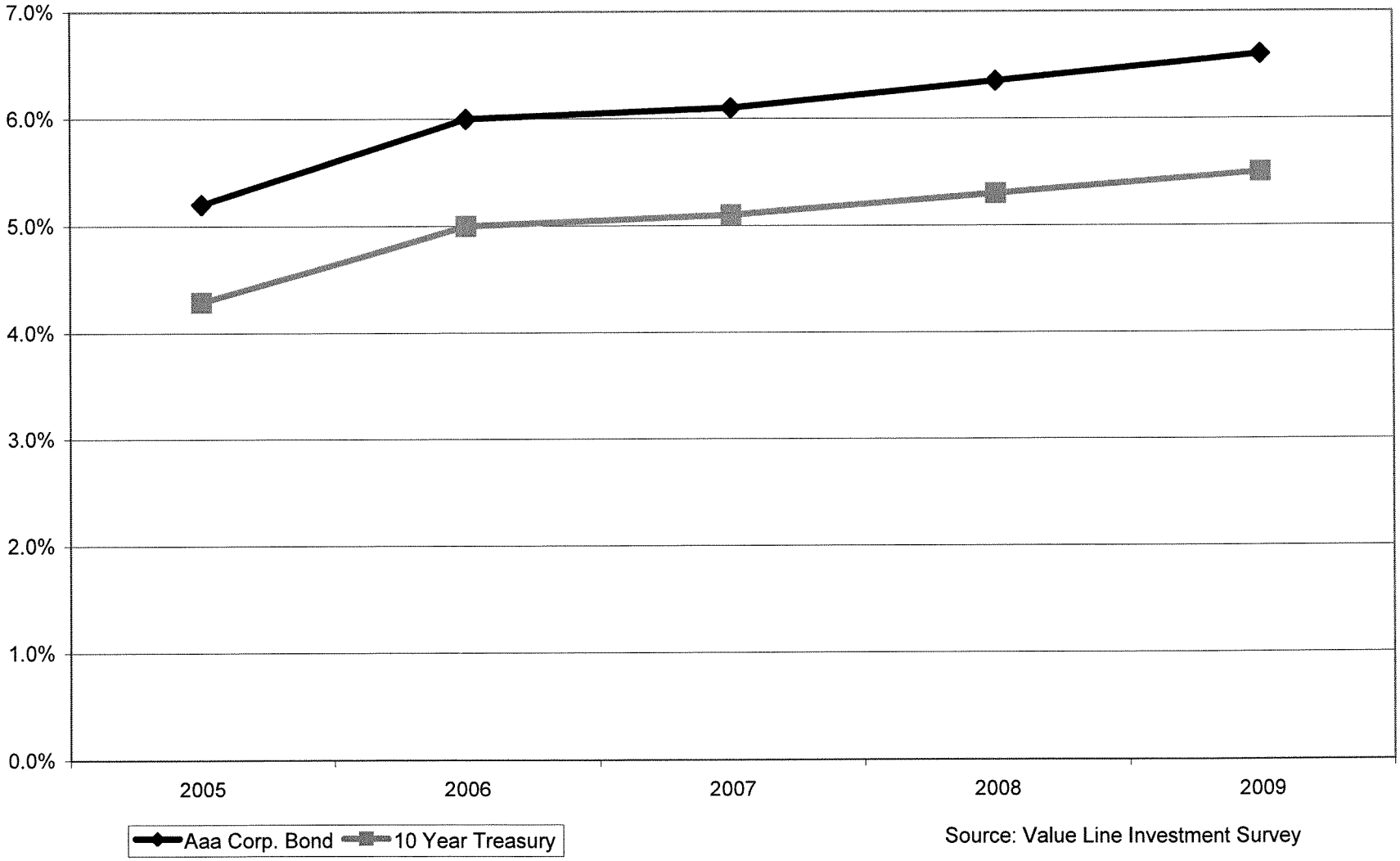


Source: Value Line Investment Survey

Schedule DAM-1


History of Long-Term Interest Rates
7.0%
6.0%
5.0%
4.0%
3.0%
2.0%
1.0%
0.0%
2002
2003
2004
2005
2006
Aaa Corp. Bond
10 Year Treasury
Source: Value Line Investment Survey

Long Term Interest Rate Forecasts



Source: Value Line Investment Survey

Schedule DAM-3

Schedule DAM-4

Atmos Energy Corporation

Utility Only Capital Structure

At April 30, 2006

	Amount Outstanding	Percent of Total
Long Term Debt	$2,177,537,758	53.02%
Short-Term Debt	$238,840,375	5.82%
Common Equity	$1,690,490,078	41.16%
Total	$4,106,868,211	100.00%

Source :
Atmos Energy Corporation Work Papers

Schedule DAM-5

ATMOS ENERGY CORPORATION

Short Term Debt Balances

Month	Outstanding Balance	Avg Interest Rate
January, 2003	$102,240,000	1.62%
February, 2003	$98,700,000	1.43%
March, 2003	$29,700,000	1.42%
April, 2003	$33,400,000	1.40%
May, 2003	$32,650,000	1.40%
June, 2003	$700,000	1.35%
July, 2003	$53,850,000	1.13%
August, 2003	$75,350,000	1.13%
September, 2003	$118,600,000	1.12%
October, 2003	$153,325,000	1.14%
November, 2003	$195,450,000	1.13%
December, 2003	$191,850,000	1.17%
January, 2004	$148,800,000	1.15%
February, 2004	$29,900,000	1.11%
March, 2004	$0	0.00%
April, 2004	$0	0.00%
May, 2004	$0	0.00%
June, 2004	$0	0.00%
July, 2004	$0	0.00%
August, 2004	$0	0.00%
September, 2004	$0	0.00%
October, 2004	$16,575,000	1.93%
November, 2004	$29,700,000	2.28%
December, 2004	$28,800,000	2.52%
January, 2005	$58,875,000	2.62%
February, 2005	$0	0.00%
March, 2005	$0	0.00%
April, 2005	$0	0.00%
May, 2005	$0	0.00%
June, 2005	$0	0.00%
July, 2005	$34,725,000	3.53%
August, 2005	$39,775,000	3.65%
September, 2005	$144,875,000	3.92%
October, 2005	$292,500,000	4.14%
November, 2005	$346,255,000	4.32%
December, 2005	$399,450,000	4.53%
January, 2006	$407,275,000	4.67%
February, 2006	$346,900,000	4.75%
March, 2006	$262,475,000	4.82%
April, 2006	$238,875,000	5.04%
May, 2006	$222,350,000	5.21%

Source: Atmos Energy Company Work Papers

Atmos Energy Corporation

Comparable Gas Companies

Comparison of Common Equity Ratios

Company	2002	2003	2004	2005	2006E	Forecast '09-'11
Atmos Energy	46.1%	49.8%	56.8%	42.3%	43.0%	45.0%
AGL Resources	41.7%	49.7%	46.0%	48.1%	50.0%	52.0%
New Jersey Resources	49.4%	61.9%	59.7%	58.0%	58.0%	63.0%
NICOR, Inc.	64.5%	60.3%	60.1%	62.5%	63.5%	65.5%
Peoples Energy	59.3%	53.3%	49.2%	47.2%	46.7%	47.4%
Piedmont Natural Gas Company	56.1%	57.8%	56.4%	58.6%	59.0%	60.0%
Southwest Gas	34.1%	34.0%	35.8%	36.2%	36.5%	41.1%
WGL Holdings, Inc.	52.4%	54.3%	57.2%	58.6%	59.0%	59.0%
Comparable Companies' Averages	51.1%	53.0%	52.1%	52.7%	53.2%	55.4%

Source: Value Line Investment Survey

Schedule DAM-6

Schedule DAM-7

Atmos Energy Corporation

Embedded Cost of Long-Term Debt

Ending April 30, 2006

Assigned Long Term Debt Issues	Outstanding	Effective Rate %	Annualized Interest Expense
10% Senior Notes due Dec 2011	$2,303,308	10.00%	$230,331
7.38% Senior Notes due May 2011	$350,000,000	7.38%	$25,812,500
6.75% Debentures Unsecured due July 2028	$150,000,000	6.75%	$10,125,000
5.125% Senior Notes due Feb 2013	$250,000,000	5.13%	$12,812,500
10.43% First Mortgage Bond P due 2017 (eff 2012)	$8,750,000	10.43%	$912,625
6.67% MTN A2 due Dec 2025	$10,000,000	6.67%	$667,000
6.27% MTN A2 due Dec 2010	$10,000,000	6.27%	$627,000
2.465% Sr Note 3Yr Floating due 10/15/2007	$300,000,000	5.45%	$16,356,000
4.00% Sr Note due 10/15/2009	$400,000,000	4.00%	$16,000,000
4.95% Sr Note due 10/15/2014	$500,000,000	4.95%	$24,750,000
5.95% Sr Note due 10/15/2034	$200,000,000	5.95%	$11,900,000
Subtotal -- Utility Long-Term Debt	$2,181,053,308		$120,192,956
United Cities Propane Gas, Inc.			
Evensville, TN -- E-Con due 06/08	168,125	7.00%	$11,769
Pulaski -- Ingas, Ingram & Carvell 06/08	250,000	6.00%	$15,000
Total Propane	$418,125		$26,769
Atmos Leasing, Inc.			
Industrial Develop Revenue Bond 07/13	982,142	7.90%	$77,589
Atmos Power Sys - Wells Fargo 05/08	2,235,203	5.65%	$126,289
US Bancorp - 04/09	3,156,741	5.29%	$166,992
Total Leasing	$6,374,086		$370,870
Total Long Term Debt	$2,187,845,519		$120,590,594
Less Unamortized Debt Discount	$3,515,550		
Annualized Amortization of Debt Exp. & Debt Dsct.			$11,101,012
Effective Average Cost of Consolidated Debt	$2,184,329,969		$131,691,606
Embedded Cost of Debt			6.03%

Source:
Atmos Energy Corporation Work Papers

Atmos Energy Corporation

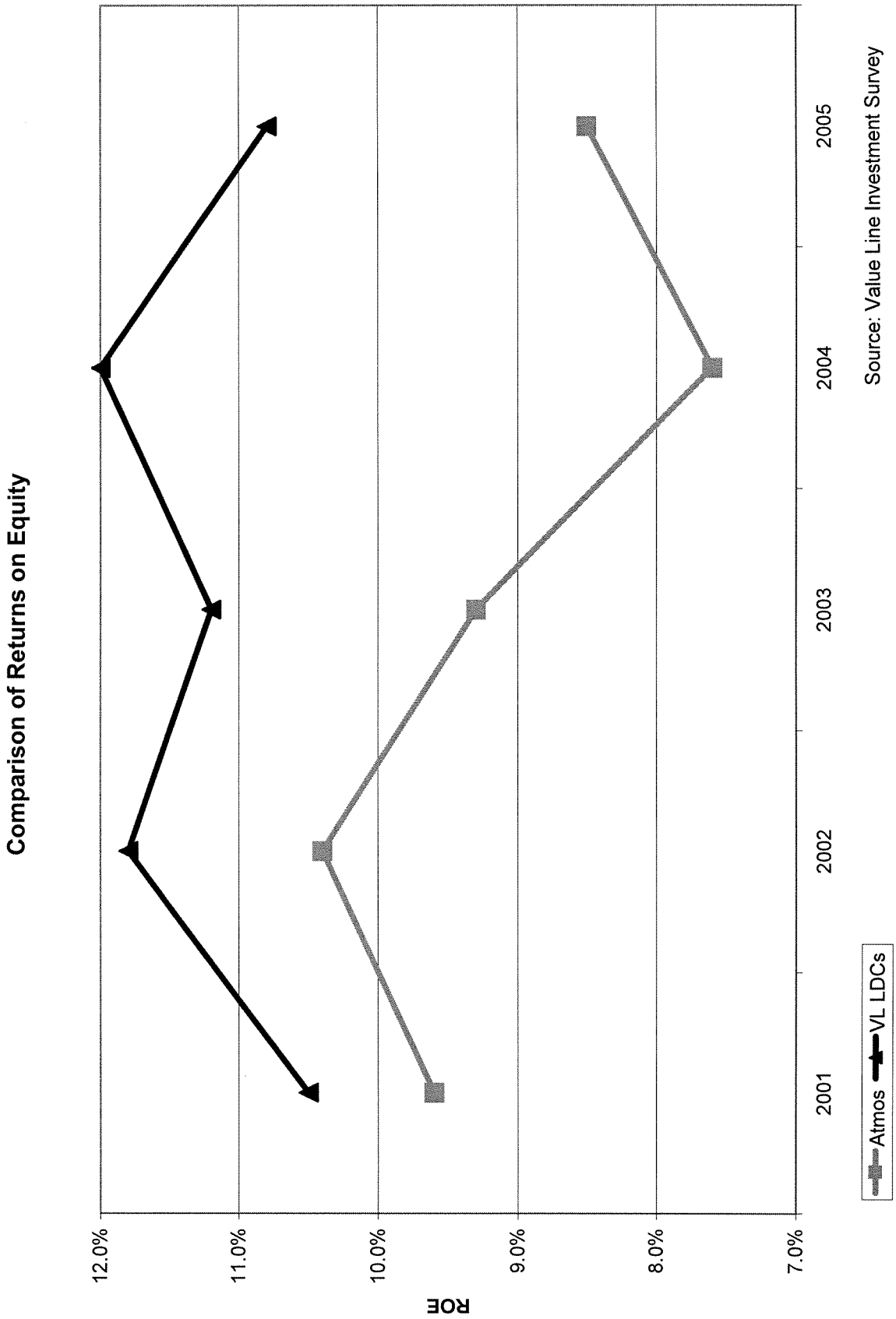
Comparable Gas Companies

Comparison of Returns on Common Equity

Company	2002	2003	2004	2005	2006E	Five Year Average	Forecast '09-'11
Atmos Energy	10.4%	9.3%	7.6%	8.5%	8.5%	8.9%	10.5%
AGL Resources	14.5%	14.0%	11.0%	12.9%	13.0%	13.1%	12.0%
New Jersey Resources	15.7%	15.6%	15.3%	17.0%	16.0%	15.9%	14.5%
NICOR, Inc.	17.5%	12.3%	13.1%	12.5%	13.0%	13.7%	13.5%
Peoples Energy	12.3%	12.3%	9.4%	10.8%	9.0%	10.8%	14.5%
Piedmont Natural Gas Company	10.6%	11.8%	11.1%	11.5%	11.0%	11.2%	12.5%
Southwest Gas	6.5%	6.1%	8.3%	6.4%	8.5%	7.2%	9.5%
WGL Holdings, Inc.	7.2%	14.0%	11.7%	12.0%	10.0%	11.0%	11.0%
Comparable Companies' Averages	12.0%	12.3%	11.4%	11.9%	11.5%	11.8%	12.5%

Source: Value Line Investment Survey

Schedule DAM-8


Comparison of Returns on Equity
ROE
12.0%
11.0%
10.0%
9.0%
8.0%
7.0%
2001
2002
2003
2004
2005
Atmos
VL LDCs
Source: Value Line Investment Survey

Atmos Energy Corporation

Comparable Gas Distribution Companies

Return on Total Capital

Company	2002	2003	2004	2005	2006E
Atmos Energy	6.8%	6.2%	5.8%	5.3%	5.5%
AGL Resources	8.1%	8.9%	6.3%	7.9%	8.5%
New Jersey Resources	8.7%	10.7%	10.1%	11.2%	10.5%
NICOR, Inc.	12.2%	8.3%	8.8%	9.4%	10.0%
Peoples Energy	8.4%	8.1%	6.0%	6.6%	5.5%
Piedmont Natural Gas Company	7.8%	8.6%	7.8%	8.2%	8.0%
Southwest Gas	4.3%	4.2%	5.0%	4.3%	5.0%
WGL Holdings, Inc.	5.3%	9.1%	8.2%	8.5%	6.0%
Comparable Companies Averages	7.8%	8.3%	7.5%	8.0%	7.6%

Source: Value Line Investment Survey

Schedule DAM-10

Atmos Energy Corporation

Comparable Gas Companies

Comparison of Dividends per Share

Company	2002	2003	2004	2005	2006E	Growth '02-'06	Forecast '09-'11
Atmos Energy	1.18	1.20	1.22	1.24	1.26	1.65%	1.35
AGL Resources	1.08	1.11	1.15	1.30	1.50	8.54%	1.75
New Jersey Resources	1.20	1.24	1.30	1.36	1.46	4.94%	1.70
NICOR, Inc.	1.84	1.86	1.86	1.86	1.86	0.18%	2.02
Peoples Energy	2.07	2.12	2.16	2.18	2.18	1.33%	2.24
Piedmont Natural Gas Company	0.80	0.82	0.85	0.91	0.96	4.90%	1.17
Southwest Gas	0.82	0.82	0.82	0.82	0.82	0.00%	0.82
WGL Holdings, Inc.	1.27	1.28	1.30	1.32	1.35	1.54%	1.45
Comparable Companies' Averages	1.30	1.32	1.35	1.39	1.45	3.06%	1.59

Source: Value Line Investment Survey

Schedule DAM-11

Atmos Energy Corporation

Comparable Gas Companies

Comparison of Dividend Payout Ratios

Company	2002	2003	2004	2005	2006E	Five Year Average
Atmos Energy	82%	70%	77%	73%	69%	74.2%
AGL Resources	52%	53%	49%	52%	57%	52.6%
New Jersey Resources	56%	51%	49%	50%	52%	51.6%
NICOR, Inc.	63%	88%	84%	81%	75%	78.2%
Peoples Energy	73%	73%	97%	95%	121%	91.8%
Piedmont Natural Gas Company	83%	74%	66%	68%	73%	72.8%
Southwest Gas	70%	72%	49%	65%	47%	60.6%
WGL Holdings, Inc.	112%	56%	65%	62%	76%	74.2%
Comparable Companies' Averages	72.7%	66.7%	65.6%	67.6%	71.6%	68.8%

Source: Value Line Investment Survey

Schedule DAM-12

Atmos Energy Corporation

Comparable Gas Companies

Comparison of Average Annual P/E Ratio

Company	2002	2003	2004	2005	Current	Five Year Average	Forecast '09-'11
Atmos Energy	15.2	13.4	15.9	16.1	14.6	15.0	13.0
AGL Resources	12.5	12.5	13.1	14.3	13.8	13.2	15.0
New Jersey Resources	14.7	14.0	15.3	16.8	16.6	15.5	17.0
NICOR, Inc.	13.1	15.8	15.9	17.3	16.5	15.7	16.0
Peoples Energy	13.3	13.4	19.1	18.9	19.8	16.9	17.0
Piedmont Natural Gas Company	18.4	16.7	16.6	17.9	18.6	17.6	19.0
Southwest Gas	19.9	19.2	14.3	20.6	17.0	18.2	18.0
WGL Holdings, Inc.	23.1	11.1	14.2	14.7	15.6	15.7	14.0
Comparable Companies' Averages	16.4	14.7	15.5	17.2	16.8	16.1	16.6

Source: Value Line Investment Survey

Schedule DAM-13

Atmos Energy Corporation

Comparable Gas Companies

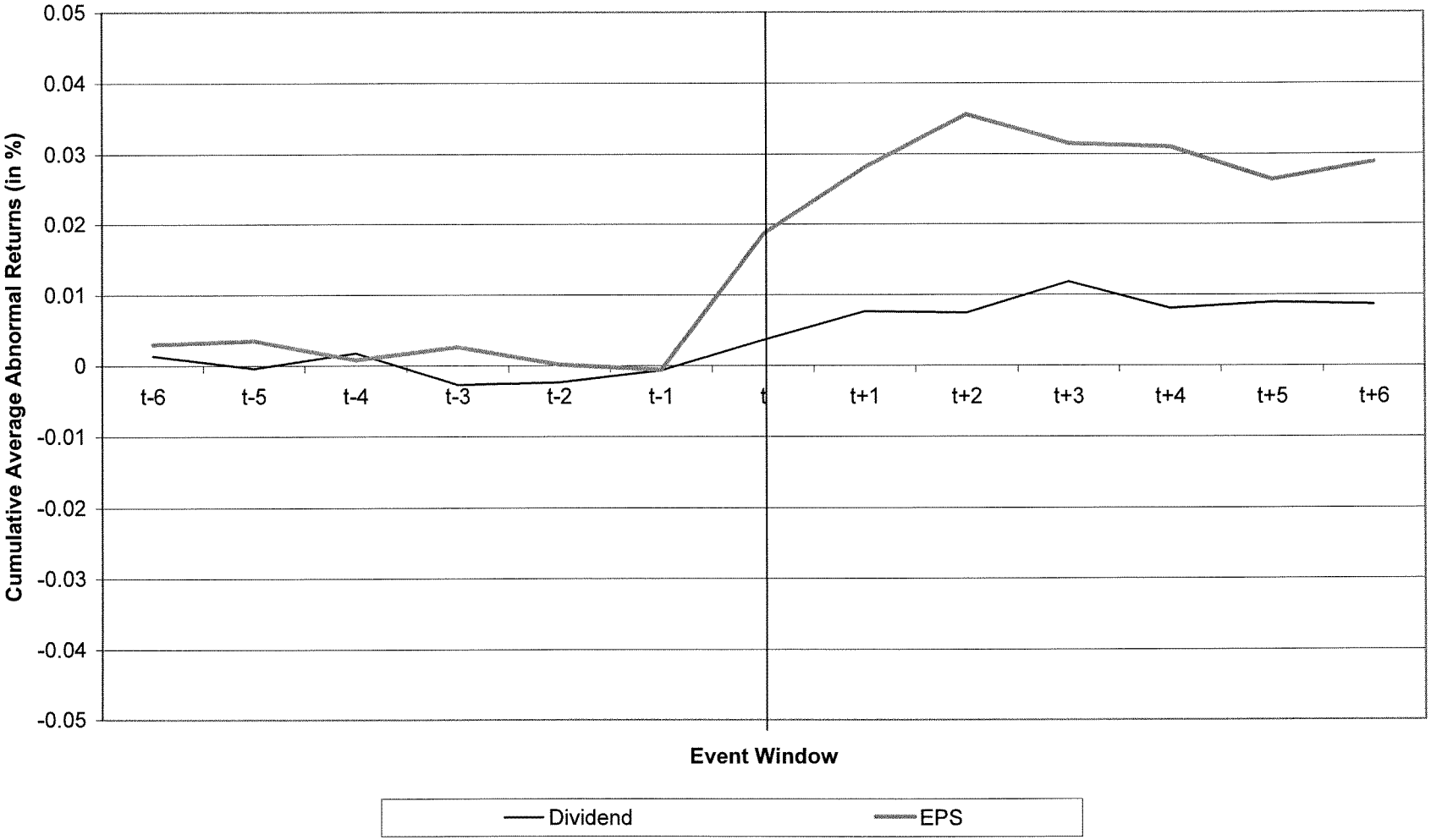
Comparison of Common Shares Outstanding

Company	2001	2002	2003	2004	2005	2006E	Forecast '09-'11	Growth 2006-2010E
Atmos Energy	40.79	41.68	51.48	62.80	80.54	82.00	100.00	22.0%
AGL Resources	55.10	56.70	64.50	76.70	77.70	77.90	78.30	0.5%
New Jersey Resources	26.66	27.67	27.23	27.74	27.55	28.10	28.50	1.4%
NICOR, Inc.	44.40	44.01	44.04	44.10	44.18	44.50	44.90	0.9%
Peoples Energy	35.40	35.46	36.69	37.73	38.16	39.00	42.00	7.7%
Piedmont Natural Gas Company	64.93	66.18	67.31	76.67	76.70	76.00	72.50	-4.6%
Southwest Gas	32.49	33.29	34.23	36.79	39.33	41.00	45.00	9.8%
WGL Holdings, Inc.	48.54	48.56	48.63	48.67	48.65	48.70	48.80	0.2%

Source: Value Line Investment Survey

Schedule DAM-14

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



Schedule DAM-15

Atmos Energy Corporation

Comparable Gas Companies

Discounted Cash Flow Growth Rate Summary

	Value Line 2000 TO 2009 Estimate			Value Line Five Year Historical			Projections Value Line		S & P
	EPS	DPS	Book Value	EPS	DPS	Book Value	EPS	DPS	EPS
Atmos Energy Corporation	7.38%	1.70%	6.70%	6.5%	2.0%	8.5%	7.0%	2.0%	6.0%
AGL Resources	7.31%	5.51%	8.38%	13.5%	2.0%	8.5%	4.0%	6.5%	4.0%
New Jersey Resources	6.06%	4.21%	6.72%	8.5%	3.0%	7.0%	4.5%	4.5%	6.0%
NICOR, Inc.	-0.55%	1.59%	2.78%	-3.5%	3.5%	1.5%	4.0%	1.5%	3.0%
Peoples Energy	-0.75%	1.06%	-1.78%	0.0%	2.0%	0.5%	1.5%	0.5%	5.0%
Piedmont Natural Gas Company	6.53%	4.91%	5.44%	5.0%	5.0%	6.5%	6.0%	5.5%	5.0%
Southwest Gas	7.77%	0.00%	3.68%	-0.5%	0.0%	3.0%	9.5%	0.0%	0.0%
WGL Holdings, Inc.	4.58%	1.60%	3.39%	6.0%	1.5%	3.0%	2.0%	2.0%	4.0%
Comparable Companies' Averages	4.42%	2.70%	4.09%	4.14%	2.43%	4.29%	4.50%	2.93%	3.86%

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

Schedule DAM-16

Atmos Energy Corporation

Comparable Gas Companies

Dividend Growth Rate Discounted Cash Flow Using 52-Week Share Prices

	Share Prices		2006	52 Week Yields		2000-02	2009-11E	Growth	Cost of Capital	
	Low	High	Dividend	Low	High	DPS	DPS	Rate	Low	High
Atmos Energy Corporation	25.00	29.97	1.26	4.20%	5.04%	1.16	1.35	1.70%	5.90%	6.74%
AGL Resources	32.23	39.32	1.50	3.81%	4.65%	1.08	1.75	5.51%	9.32%	10.16%
New Jersey Resources	40.68	49.34	1.46	2.96%	3.59%	1.17	1.70	4.21%	7.16%	7.79%
NICOR, Inc.	37.42	43.12	1.86	4.31%	4.97%	1.75	2.02	1.59%	5.90%	6.56%
Peoples Energy	34.34	45.52	2.18	4.79%	6.35%	2.04	2.24	1.06%	5.85%	7.41%
Piedmont Natural Gas Company	21.26	25.80	0.96	3.72%	4.52%	0.76	1.17	4.91%	8.63%	9.43%
Southwest Gas	25.00	29.94	0.82	2.74%	3.28%	0.82	0.82	0.00%	2.74%	3.28%
WGL Holdings, Inc.	27.04	34.79	1.35	3.88%	4.99%	1.26	1.45	1.60%	5.48%	6.60%
Comparable Companies' Averages	31.14	38.26	1.45	3.75%	4.62%	1.27	1.59	2.70%	6.44%	7.32%

Sources:
Value Line Investment Survey
Wall Street Journal

Schedule DAM-17

Atmos Energy Corporation

Comparable Gas Companies

Dividend Growth Rate Discounted Cash Flow Using Current Share Prices

	Share Prices		Current	Current Yields		2000-02	2009-11E	Growth	Cost of Capital	
	Low	High	Dividend	Low	High	DPS	DPS	Rate	Low	High
Atmos Energy Corporation	26.37	26.75	1.26	4.71%	4.78%	1.16	1.35	1.70%	6.41%	6.48%
AGL Resources	36.10	36.69	1.50	4.09%	4.16%	1.08	1.75	5.51%	9.60%	9.66%
New Jersey Resources	44.40	45.21	1.46	3.23%	3.29%	1.17	1.70	4.21%	7.44%	7.49%
NICOR, Inc.	40.18	40.94	1.86	4.54%	4.63%	1.75	2.02	1.59%	6.13%	6.21%
Peoples Energy	35.91	36.50	2.18	5.97%	6.07%	2.04	2.24	1.06%	7.03%	7.13%
Piedmont Natural Gas Company	23.84	24.24	0.96	3.96%	4.03%	0.76	1.17	4.91%	8.87%	8.94%
Southwest Gas	28.69	29.34	0.82	2.79%	2.86%	0.82	0.82	0.00%	2.79%	2.86%
WGL Holdings, Inc.	28.09	28.63	1.35	4.71%	4.81%	1.26	1.45	1.60%	6.32%	6.41%
Comparable Companies' Averages	33.89	34.51	1.45	4.19%	4.26%	1.27	1.59	2.70%	6.88%	6.96%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Schedule DAM-18

Atmos Energy Corporation

Comparable Gas Companies

Earnings Growth Rate Discounted Cash Flow Using 52-Week Share Prices

	Share Prices		2006	52 Week Yields		2000-02	2009-11E	Growth	Cost of Capital	
	Low	High	Dividend	Low	High	EPS	EPS	Rate	Low	High
Atmos Energy Corporation	25.00	29.97	1.26	4.20%	5.04%	1.32	2.50	7.38%	11.59%	12.42%
AGL Resources	32.23	39.32	1.50	3.81%	4.65%	1.54	2.90	7.31%	11.13%	11.97%
New Jersey Resources	40.68	49.34	1.46	2.96%	3.59%	1.94	3.30	6.06%	9.02%	9.65%
NICOR, Inc.	37.42	43.12	1.86	4.31%	4.97%	2.94	2.80	-0.55%	3.76%	4.42%
Peoples Energy	34.34	45.52	2.18	4.79%	6.35%	2.89	2.70	-0.75%	4.04%	5.60%
Piedmont Natural Gas Company	21.26	25.80	0.96	3.72%	4.52%	0.99	1.75	6.53%	10.26%	11.05%
Southwest Gas	25.00	29.94	0.82	2.74%	3.28%	1.17	2.30	7.77%	10.50%	11.05%
WGL Holdings, Inc.	27.04	34.79	1.35	3.88%	4.99%	1.60	2.40	4.58%	8.46%	9.58%
Comparable Companies' Averages	31.14	38.26	1.45	3.75%	4.62%	1.87	2.59	4.42%	8.17%	9.04%
Comparable Companies' Averages without NICOR and Peoples Energy									9.87%	10.66%

Sources:
Value Line Investment Survey
Wall Street Journal

Schedule DAM-19

Atmos Energy Corporation

Comparable Gas Companies

Current Discounted Cash Flow Using Earnings Growth Rates

	Share Prices		Current	Current Yields		2000-02	2009-11E	Growth	Cost of Capital	
	Low	High	Dividend	Low	High	EPS	EPS	Rate	Low	High
Atmos Energy Corporation	26.37	26.75	1.26	4.71%	4.78%	1.32	2.50	7.38%	12.09%	12.16%
AGL Resources	36.10	36.69	1.50	4.09%	4.16%	1.54	2.90	7.31%	11.40%	11.47%
New Jersey Resources	44.40	45.21	1.46	3.23%	3.29%	1.94	3.30	6.06%	9.29%	9.35%
NICOR, Inc.	40.18	40.94	1.86	4.54%	4.63%	2.94	2.80	-0.55%	3.99%	4.08%
Peoples Energy	35.91	36.50	2.18	5.97%	6.07%	2.89	2.70	-0.75%	5.22%	5.32%
Piedmont Natural Gas Company	23.84	24.24	0.96	3.96%	4.03%	0.99	1.75	6.53%	10.50%	10.56%
Southwest Gas	28.69	29.34	0.82	2.79%	2.86%	1.17	2.30	7.77%	10.56%	10.62%
WGL Holdings, Inc.	28.09	28.63	1.35	4.71%	4.81%	1.60	2.40	4.58%	9.30%	9.39%
Comparable Companies' Averages	33.89	34.51	1.45	4.19%	4.26%	1.87	2.59	4.42%	8.61%	8.68%
Comparable Companies' Averages without NICOR and Peoples Energy									10.21%	10.28%

Sources:
Value Line Investment Survey
Yahoo! FINANCE

Schedule DAM-20

Atmos Energy Corporation

Comparable Gas Companies

Projected Growth Rate Discounted Cash Flow Using 52-Week Share Prices

	Share Prices		2006	52 Week Yields		EPS Estimates		Cost of Capital	
	Low	High	Dividend	Low	High	Value Line	S&P	Low	High
Atmos Energy Corporation	25.00	29.97	1.26	4.20%	5.04%	7.00%	6.00%	10.20%	12.04%
AGL Resources	32.23	39.32	1.50	3.81%	4.65%	4.00%	4.00%	7.81%	8.65%
New Jersey Resources	40.68	49.34	1.46	2.96%	3.59%	4.50%	6.00%	7.46%	9.59%
NICOR, Inc.	37.42	43.12	1.86	4.31%	4.97%	4.00%	3.00%	7.31%	8.97%
Peoples Energy	34.34	45.52	2.18	4.79%	6.35%	1.50%	5.00%	6.29%	11.35%
Piedmont Natural Gas Company	21.26	25.80	0.96	3.72%	4.52%	6.00%	5.00%	8.72%	10.52%
Southwest Gas	25.00	29.94	0.82	2.74%	3.28%	9.50%	0.00%	2.74%	12.78%
WGL Holdings, Inc.	27.04	34.79	1.35	3.88%	4.99%	2.00%	4.00%	5.88%	8.99%
Comparable Companies' Averages	31.14	38.26	1.45	3.75%	4.62%	4.50%	3.86%	6.60%	10.12%

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

Schedule DAM-21

Atmos Energy Corporation

Comparable Gas Companies

Projected Growth Rate Discounted Cash Flow 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 Corporation	26.37	26.75	1.26	4.71%	4.78%	7.00%	6.00%	10.71%	11.78%
AGL Resources	36.10	36.69	1.50	4.09%	4.16%	4.00%	4.00%	8.09%	8.16%
New Jersey Resources	44.40	45.21	1.46	3.23%	3.29%	4.50%	6.00%	7.73%	9.29%
NICOR, Inc.	40.18	40.94	1.86	4.54%	4.63%	4.00%	3.00%	7.54%	8.63%
Peoples Energy	35.91	36.50	2.18	5.97%	6.07%	1.50%	5.00%	7.47%	11.07%
Piedmont Natural Gas Company	23.84	24.24	0.96	3.96%	4.03%	6.00%	5.00%	8.96%	10.03%
Southwest Gas	28.69	29.34	0.82	2.79%	2.86%	9.50%	0.00%	2.79%	12.36%
WGL Holdings, Inc.	28.09	28.63	1.35	4.71%	4.81%	2.00%	4.00%	6.71%	8.81%
Comparable Companies' Averages	33.89	34.51	1.45	4.19%	4.26%	4.50%	3.86%	7.04%	9.76%

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

Schedule DAM-22

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 Corporation	5.35%	0.75	7.10%	5.33%	1.02%	11.70%
AGL Resources	5.35%	0.95	7.10%	6.75%	1.02%	13.12%
New Jersey Resources	5.35%	0.80	7.10%	5.68%	1.81%	12.84%
NICOR, Inc.	5.35%	1.20	7.10%	8.52%	1.02%	14.89%
Peoples Energy	5.35%	0.90	7.10%	6.39%	1.81%	13.55%
Piedmont Natural Gas Company	5.35%	0.85	7.10%	6.04%	1.02%	12.41%
Southwest Gas	5.35%	0.85	7.10%	6.04%	1.81%	13.20%
WGL Holdings, Inc.	5.35%	0.80	7.10%	5.68%	1.81%	12.84%
Comparable Companies' Average	5.35%	0.91	7.10%	6.44%	1.47%	13.26%

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

Schedule DAM-23

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 Corporation	14.85%	6.20%	8.65%	0.75	6.49%	5.95%	12.44%
AGL Resources	14.85%	6.20%	8.65%	0.95	8.22%	5.95%	14.17%
New Jersey Resources	14.85%	6.20%	8.65%	0.80	6.92%	5.95%	12.87%
NICOR, Inc.	14.85%	6.20%	8.65%	1.20	10.38%	5.95%	16.33%
Peoples Energy	14.85%	6.20%	8.65%	0.90	7.79%	5.95%	13.74%
Piedmont Natural Gas Company	14.85%	6.20%	8.65%	0.85	7.35%	5.95%	13.30%
Southwest Gas	14.85%	6.20%	8.65%	0.85	7.35%	5.95%	13.30%
WGL Holdings, Inc.	14.85%	6.20%	8.65%	0.80	6.92%	5.95%	12.87%
Comparable Companies' Average	14.85%	6.20%	8.65%	0.91	7.85%	5.95%	13.80%

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

Schedule DAM-24

Schedule DAM-25

Atmos Energy Corporation

Comparable Gas Companies

Summary of Financial Models' Analysis

	Comparable Gas Companies		Atmos Energy Corporation	
	Low	High	Low	High
Capital Asset Pricing Model	13.26%	13.80%	11.70%	12.44%
Current Discounted Cash Flow Analysis	7.04%	9.76%	10.71%	11.78%
52-Week Discounted Cash Flow Analysis	6.60%	10.12%	10.20%	12.04%

Sources: Schedules DAM-16 through DAM-24

Schedule DAM-26

Atmos Energy Corporation

Recent Increase in Returns on Common Equity

By Industry Group

Industry	2003	2004	Earnings 2005	Percent Increase 2003-2005
Atmos Energy Corporation	9.30%	7.60%	8.50%	-0.80%
Building Materials	13.50%	15.30%	15.00%	1.50%
Cement & Aggregates	8.90%	11.10%	15.00%	6.10%
Chemical/Diversified	15.20%	16.20%	19.00%	3.80%
Healthcare Information	3.40%	7.20%	5.00%	1.60%
Household Products	33.80%	35.00%	34.70%	0.90%
Insurance (Life)	10.50%	10.50%	12.00%	1.50%
Machinery	11.60%	16.50%	19.00%	7.40%
Railroad	8.60%	9.30%	10.90%	2.30%
Tire & Rubber	0.30%	6.80%	15.00%	14.70%
Three Month Treasury Bills	1.03%	1.40%	3.22%	2.19%

Sources: Value Line Investment Survey
Federal Reserve

Atmos Energy Corporation

Comparable Gas Companies

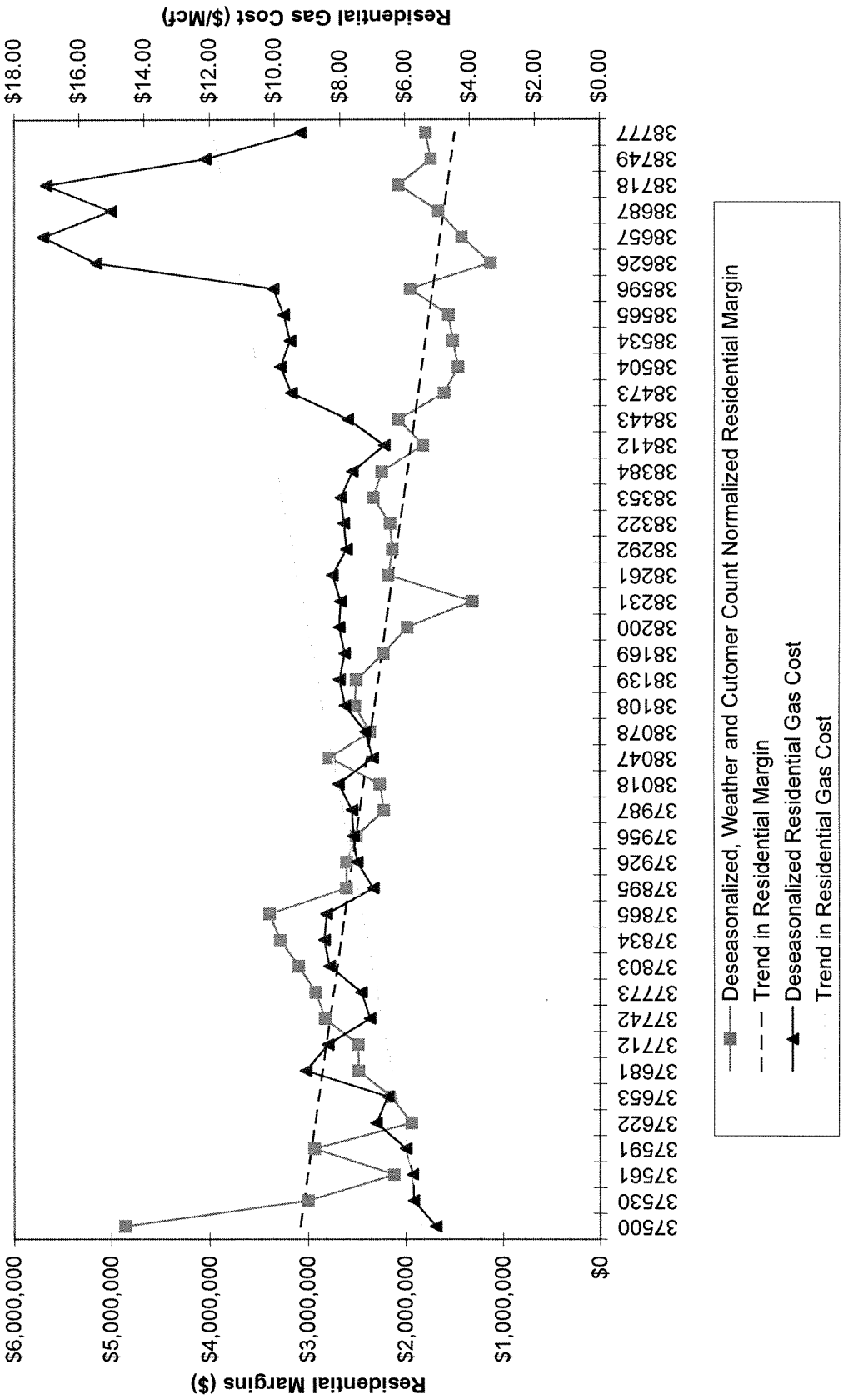
Comparison of Financial Risk Statistics

	Value Line						Standard & Poor's	
Company	Safety Rank	Timeliness Rank	Company's Financial Strength	Stock's Price Stability	Price Growth Persistence	Earnings Predictability	Credit Rating	Business Profile
Atmos Energy	2	4	B+	100	25	65	BBB	4
AGL Resources	2	3	B++	95	60	70	A-	4
New Jersey Resources	2	4	B++	100	90	100	A+	2
NICOR, Inc.	3	4	A	55	45	75	AA	3
Peoples Energy	2	3	B++	95	40	80	A-	5
Piedmont Natural Gas Company	2	4	B++	100	80	80	A	2
Southwest Gas	3	3	B	95	50	65	BBB-	3
WGL Holdings, Inc.	1	5	A	100	70	60	AA-	3
Comparable Companies' Average	2.1	3.7	B++	91.4	62.1	75.7	A	3

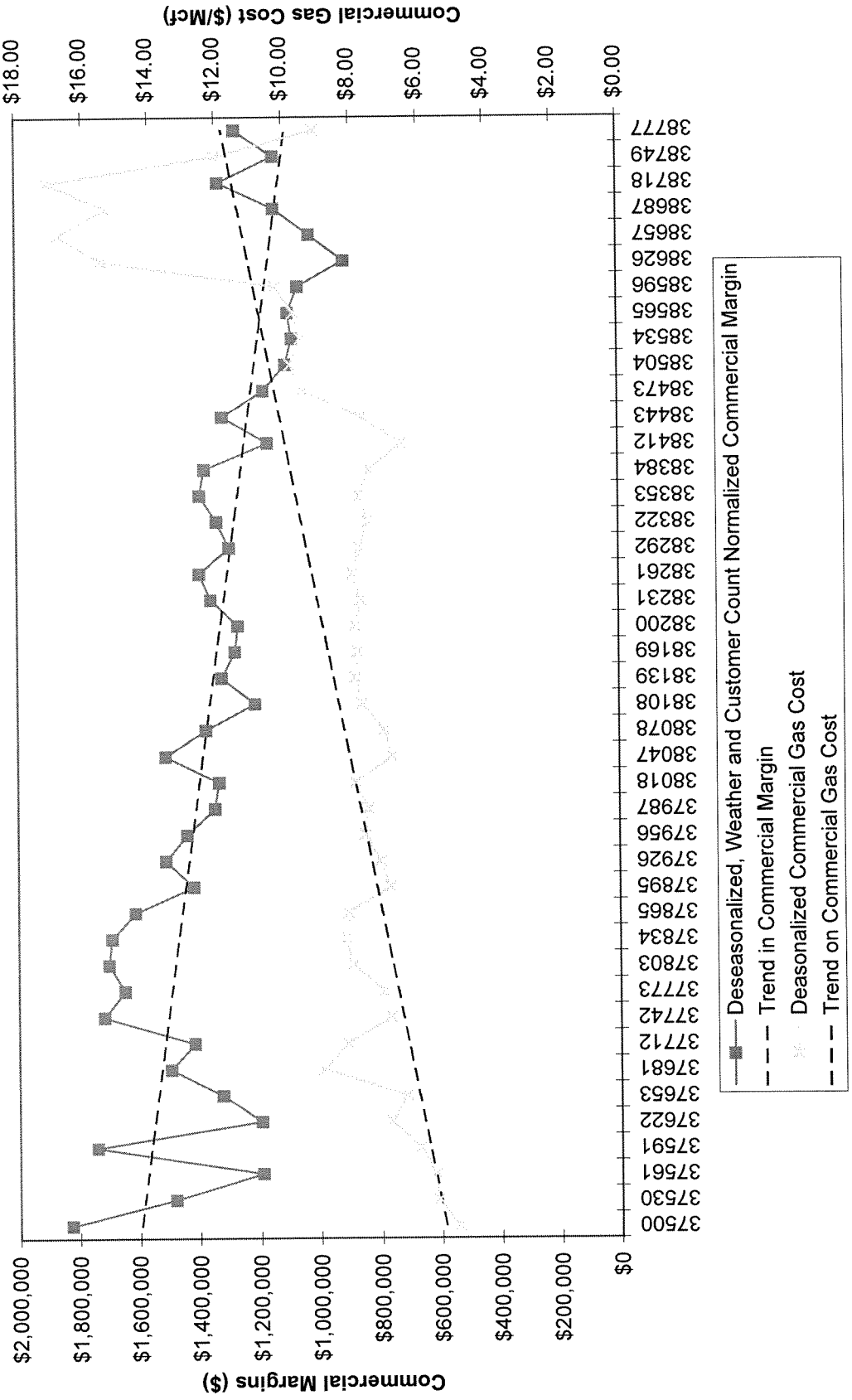
Sources:
Value Line Investment Survey
www2.standardandpoors.com

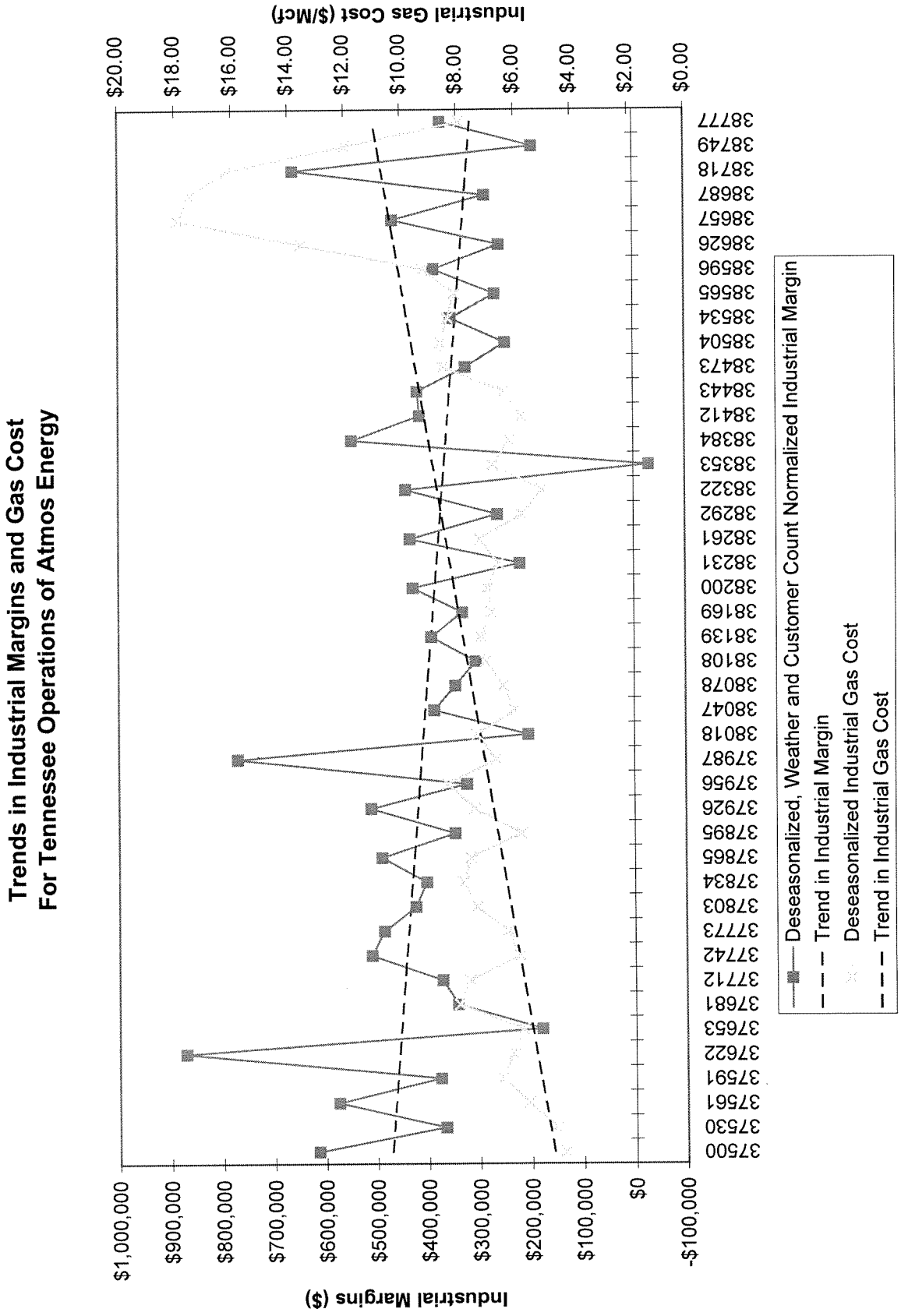
Schedule DAM-27

Trends in Residential Margins and Gas Cost
For Tennessee Operations of Atmos Energy



Trend in Commercial Margins and Gas Cost
For Tennessee Operations of Atmos Energy




Trends in Industrial Margins and Gas Cost
For Tennessee Operations of Atmos Energy
Industrial Margins ($)
$1,000,000
$900,000
$800,000
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
-$100,000
Industrial Gas Cost ($/Mcf)
$20.00
$18.00
$16.00
$14.00
$12.00
$10.00
$8.00
$6.00
$4.00
$2.00
$0.00
37500
37530
37561
37591
37622
37653
37681
37712
37742
37773
37803
37834
37865
37895
37926
37956
37987
38018
38047
38078
38108
38139
38169
38200
38231
38261
38292
38322
38353
38384
38412
38443
38473
38504
38534
38565
38596
38626
38657
38687
38718
38749
38777
Deseasonalized, Weather and Customer Count Normalized Industrial Margin
Trend in Industrial Margin
Deseasonalized Industrial Gas Cost
Trend in Industrial Gas Cost

Schedule DAM-31

Atmos Energy Corporation

Proposed Cost of Capital

	Percent of Total	High	High
Long Term Debt	50.00%	6.03%	3.01%
Common Equity	50.00%	12.00%	6.00%
Total Capital	100.00%		9.01%

Source :
Atmos Energy Corporation Work Papers

Schedule DAM-32

Atmos Energy Corporation

Comparable Gas Companies

Comparison of After-Tax Times Interest Earned Ratios

Atmos Energy Corporation	@12.0% ROE	2.99
AGL Resources		2.90
New Jersey Resources		4.20
NICOR, Inc.		6.43
Peoples Energy		2.36
Piedmont Natural Gas Company		3.47
Southwest Gas		1.76
WGL Holdings, Inc.		3.23
Comparable Companies' Average		3.48

Source : Value Line Investment Survey