DIRECT TESTIMONY

of

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Illinois Commerce Commission

Illinois Gas Company

Proposed General Increase in Gas Rates

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WITNESS IDENTIFICATION

Q1. Please state your name and business address.

A1. My name is Michael McNally. My business address is 527 East Capitol Avenue, Springfield, IL 62701.

Q2. What is your current position with the Illinois Commerce Commission ("Commission")?

A2. I am presently a Senior Financial Analyst in the Finance Department of the Financial Analysis Division.

Q3. Please describe your qualifications and background.

A3. In May of 1993, I received a Bachelor of Arts degree in Economics from the University of Illinois at Urbana-Champaign. In May of 1999, I received a Master of Business Administration degree, with a concentration in Finance, from the University of Illinois at Urbana-Champaign. I have been employed by the Commission since June of 1999.

Q4. Please state the purpose of your testimony in this proceeding.

A4. The purpose of my testimony is to present my analysis of the cost of capital of, and recommend an overall rate of return for, the natural gas distribution operations of Illinois Gas Company ("Illinois Gas" or the "Company").

COST OF CAPITAL

Q5. Please summarize your cost of capital findings.

A5. The overall cost of capital for Illinois Gas equals 7.81%, as shown on Schedule 3.1.

Q6. Please define the overall cost of capital for a public utility.

A6. The overall cost of capital equals the sum of the component costs of the capital structure (i.e., debt, preferred stock, and common equity) after each is weighted by its proportion to total capital. It represents the rate of return the utility needs to earn on its assets to satisfy contractual obligations to, or the market requirements of, its investors.

Q7. Why must one determine an overall cost of capital for a public utility?

A7. Under the traditional regulatory model, ratepayer and shareholder interests are balanced when the Commission authorizes a rate of return on rate base equal to the public utility's overall cost of capital, as long as that overall cost of capital is not unnecessarily expensive. If the authorized rate of return exceeds the cost of capital, then ratepayers bear the burden of excessive prices. Conversely, if the authorized rate of return is lower than the overall cost of capital, the financial strength of the utility could deteriorate, making it difficult for the utility to raise capital at a reasonable cost. Ultimately, the utility's inability to raise sufficient capital would impair service quality. Therefore, ratepayer interests are best served when the authorized rate of return on rate base equals the utility's overall cost of capital.

In authorizing a rate of return on rate base equal to the overall cost of capital, all costs of service are assumed reasonable and accurately measured. If unreasonable costs continue to be incurred, or if any reasonable cost of service component is measured inaccurately, then the allowed rate of return on rate base will not balance ratepayer and investor interests.

Capital Structure

Q8. What capital structure did the Company propose for setting rates?

A8. The Company proposed using a March 31, 2008 capital structure comprising 14.85% short-term debt, 36.87% long-term debt, and 48.29% common equity, as shown on Schedule 3.1.[1]

Q9. What capital structure do you propose for setting rates?

A9. I propose using a March 31, 2008 capital structure comprising 21.63% short-term debt, 33.89% long-term debt, and 44.48% common equity, as shown on Schedule 3.1.

Q10. How did you measure the balance of short-term debt for Illinois Gas?

A10. Since short-term debt balances tend to fluctuate substantially during a year, any single balance might not be representative of the typical amount employed throughout the year. Therefore, I used an average balance. To calculate the balance of short-term debt, I first calculated the monthly ending balance of short-term debt outstanding from September 2007 through September 2008.[2] Next, I

[1] Schedule D-1.
[2] Illinois Gas has no CWIP, thus allocation of short-term debt to CWIP is unnecessary. Company responses to Staff data requests MGM 1.02 and 2.01.

calculated twelve monthly averages from the thirteen monthly ending net balances of short-term debt. Finally, I averaged the twelve monthly average net balances of short-term debt for October 2007 through September 2008, which produced a short-term debt balance of $1,660,417. Schedule 3.2 presents the calculation of the average balance of short-term debt.

Q11. What balance of long-term debt did you use?

A11. I used a long-term debt balance of $2,601,632, as presented on Schedule 3.3.

Q12. Why does your long-term debt balance differ from that presented in Schedule D-3?

A12. The $2,607,569 long-term debt balance the Company proposes represents the face amount outstanding as of March 31, 2008. In contrast, my recommended long-term debt balance of $2,601,632 represents the March 31, 2008 carrying value of Illinois Gas's long-term debt, which equals the $2,607,569 face amount outstanding less $5,937 of unamortized debt expense. The carrying value represents the amount of debt capital the Company has to invest in its operations after debt expenses. In contrast, face amount outstanding represents the amount of principal of the loan that remains to be retired. Utilities recover the difference between carrying value and face amount outstanding through amortization of the debt expense over the life of the loan.

Q13. How did you calculate the $5,937 of unamortized debt expense presented on Schedule 3.3?

A13. The Company's balance of unamortized debt expense was $6,069.88 as of December 31, 2007.[3] The straight-line amortization of that unamortized debt expense over the remaining life of the loan is approximately $531 per year. Since ¼ of a year passed between December 31, 2007 and March 31, 2008, I subtracted ¼ of the annual debt expense amortization, or approximately $133, from the December 31, 2007 unamortized balance to calculate the March 31, 2008 balance ($6,070 - $133 = $5,937).

Q14. Did you make any changes to the Company's proposed common equity balance?

A14. No.

Q15. Does capital structure affect the overall cost of capital?

A15. Yes. Financial theory suggests capital structure affects the value of a firm and, therefore, its cost of capital, to the extent it affects the expected level of cash flows that accrue to outside parties (i.e., other than debt and stock holders). Employing debt as a source of capital reduces a company's income taxes,[4] thereby reducing the cost of capital; however, as reliance on debt as a source of capital increases, so does the probability of default. As default becomes more probable, expected payments to attorneys, trustees, accountants, and other

[3] Company response to Staff data request MGM 1.09.

[4] The tax advantage debt has over equity at the corporate level is partially offset at the individual investor level. Debt investors receive returns largely in the form of current income (i.e., interest). In contrast, equity investors receive returns in the form of both current income (i.e., dividends) and capital appreciation (i.e., capital gains). Taxes on common dividends and capital gains are lower than taxes on interest income because common dividends and capital gains tax rates are lower and taxes on capital gains are deferred until realized.

outside parties increase. Simultaneously, the expected value of the income tax shield provided by debt financing declines. Beyond a certain point, a growing dependence on debt as a source of funds increases the overall cost of capital. Therefore, the Commission should not determine the overall rate of return from a utility's actual capital structure if the Commission concludes that capital structure adversely affects the overall cost of capital.

An optimal capital structure would minimize the cost of capital and maintain a utility's financial integrity. Unfortunately, determining whether a capital structure is optimal remains problematic because (1) the cost of capital is a continuous function of the capital structure, rendering its precise measurement along each segment of the range of possible capital structures problematic; (2) the optimal capital structure is a function of operating risk, which is dynamic; and (3) the relative costs of the different types of capital vary with dynamic market conditions. Consequently, one should determine whether the capital structure is consistent with the financial strength necessary to access the capital markets under most conditions, and if so, whether the cost of that financial strength is reasonable.

Towards that end, I compared the Company's March 31, 2008 capital structure to those of other utility companies. Standard & Poor's ("S&P") categorizes debt securities on the basis of the risk that a company will default on its interest or principal payment obligations. The resulting credit rating reflects both the operating and financial risks of a utility.[5] S&P states that "an obligor rated 'BBB'

[5] Standard & Poor's Utilities Rating Service, "Industry Commentary: Utilities Rating Criteria," May 20, 1996, p. 1.

has adequate capacity to meet its financial commitments," while "an obligor rated 'A' has strong capacity to meet its financial commitments."[6] Based on end-of-year 2007 data from the S&P *Utility Compustat* database, the average common equity ratio for utilities in the gas distribution industry with an S&P credit rating in the A range was 47.57%. Furthermore, the mean four quarter average common equity ratio for the entire gas distribution industry in the first quarter of 2008 was 52.81% with a standard deviation of 8.88%.[7] In addition, the gas company sample from which I derived my cost of equity estimate, which has an average S&P credit rating of A/A-, had a four quarter average common equity ratio of 49.83% as of the 1st quarter of 2008. My proposed capital structure for Illinois Gas indicates a risk level similar to the average for that group, with 44.48% common equity as of March 31, 2008. Thus, I conclude that my proposed capital structure for Illinois Gas is reasonable for rate-making purposes.

Cost of Short-term Debt

Q16. What is Illinois Gas's cost of short-term debt?

A16. Illinois Gas's cost of short-term debt is 5.17%. Illinois Gas issues short-term debt via lines of credit with several banks.[8] The interest rates on its various lines of credit are set by adding negotiated premiums, specific to each line of credit, to the current prime rate.[9] Therefore, to estimate Illinois Gas's cost of short-term debt, I first added the appropriate premium to the 5.00% October 1, 2008 prime rate to derive the interest rate for each line of credit, as of October 1, 2008. My

[6] Standard & Poor's, "Standard & Poor's Ratings Definitions," December 10, 2002, p. 5.
[7] Standard & Poor's Compustat database.
[8] Schedule D-2.
[9] Company responses to Staff data requests MGM 3.01 and MGM 3.02.

cost of short-term debt estimate equals the weighted average of those interest rates, based on the relative amount of borrowings under each line of credit.[10] The calculation of the cost of short-term debt is presented on Schedule 3.2.

Cost of Long-term Debt

Q17. What is the Company's embedded cost of long-term debt?

A17. Illinois Gas's embedded cost of long-term debt equals 5.39%, as shown on Schedule 3.3. That cost reflects the adjustments to the Company's proposed long-term debt balance discussed previously.

Cost of Common Equity

Q18. What is your estimate of the Company's cost of common equity?

A18. My analysis indicates that the cost of common equity for Illinois Gas's gas distribution operations equals 10.94%.

Q19. How did you measure the investor required rate of return on common equity for Illinois Gas?

A19. I measured the investor required rate of return on common equity for Illinois Gas with discounted cash flow ("DCF") and risk premium models. Since Illinois Gas does not have market-traded common stock,[11] DCF and risk premium models

[10] Specifically, the weighted average interest rate was calculated as the sum of the interest rates after each is multiplied by its relative weight. The relative weight was calculated as the percentage of the mean of the average monthly balances for each line of credit divided by the mean of the average monthly balance for all lines of credit during the 12 month period used to measure the balance of short-term debt (i.e., October 2007 through September 2008).

[11] Company response to Staff data request MGM 1.07.

cannot be applied directly to Illinois Gas; for this reason, and to minimize measurement error, I applied both models to a sample of natural gas utility companies ("Gas Sample").

Sample Selection

Q20. How did you select companies for your Gas Sample?

A20. Since this proceeding will set rates for the Company's gas distribution operations, the sample should reflect the risks associated with the provision of those services. Therefore, I selected a gas sample based on the following criteria. First, I began with a list of all domestic publicly-traded companies assigned an industry number of 4924 (i.e., natural gas distribution companies) within *S&P Utility Compustat* and categorized as a natural gas utility by The Value Line Investment Survey ("Value Line"). Second, I removed any company that had no Zacks Investment Research ("Zacks") long-term growth rates. Third, I eliminated any company that does not have a stable dividend payment history. Finally, I eliminated any company involved in any significant merger activity. The seven remaining companies, as presented on Schedule 3.5, compose the Gas Sample.

Q21. Please discuss the criteria by which you selected the Gas Sample.

A21. Because it includes only natural gas distributors, the operating risk of the Gas Sample should be similar to that of Illinois Gas's natural gas distribution utility business. In addition, limiting the sample to companies with no significant merger activity ensures that the price data for each company is not distorted by the inclusion of a merger premium. The remaining criteria ensure that I have the data necessary to complete my analysis.

DCF Analysis

Q22. Please describe DCF analysis.

A22. For a utility to attract common equity capital, it must provide a rate of return on common equity sufficient to meet investor requirements. DCF analysis establishes a rate of return directly from investor requirements. A comprehensive analysis of a utility's operating and financial risks becomes unnecessary to implement a DCF analysis since the market price of a utility's stock already embodies the market consensus of those risks.

According to DCF theory, a security price equals the present value of the cash flow investors expect it to generate. Specifically, the market value of common stock equals the cumulative value of the expected stream of future dividends after each is discounted by the investor required rate of return.

Q23. Please describe the DCF model with which you measured the investor required rate of return on common equity.

A23. As it applies to common stocks, DCF analysis is generally employed to determine appropriate stock prices given a specified discount rate. Since a DCF model incorporates time-sensitive valuation factors, it must correctly reflect the timing of the dividend payments that stock prices embody. As such, incorporating stock prices that the financial market sets on the basis of quarterly dividend payments into a model that ignores the time value of quarterly cash flows constitutes a misapplication of DCF analysis. The companies in my Gas Sample pay dividends quarterly; therefore, I applied a multi-stage, non-constant

growth quarterly DCF model to measure the annual required rate of return on common equity.

Q24. Why did you apply a non-constant growth DCF model in this proceeding?

A24. A single-stage, constant growth DCF model employs a single growth rate estimate, which is assumed to be sustainable ad infinitum. Thus, the cost of common equity calculation derived from a constant growth estimate is correct if the near-term growth rate forecast for each company in the sample is expected to equal its average long-term dividend growth. However, the level of growth indicated by the 3-5 year growth rate average for my Gas Sample is not sustainable over the long-term. Therefore, I implemented a multi-stage, non-constant growth DCF model.

Q25. Why did you conclude that 3-5 year growth rates for the companies in your sample appear to be unsustainable over the long-term?

A25. The average Zacks growth rate for my Gas Sample was 6.50%. As I discuss later, the current expectation for growth for the economy, as measured by GDP, is only 4.26%. In theory, no company could sustain into infinity a growth rate any greater than that of the overall economy, or it would eventually grow to become the entire economy. Moreover, since utilities in particular are generally below-average growth companies, the sustainability of an above average growth rate is particularly dubious. At 6.50%, the average growth rate for the companies in my Gas Sample is approximately 50% greater than that expected for the overall economy. Thus, given the large difference between the average growth rate estimate for my sample and the expected overall growth of the economy, the sustainability of the Zacks growth rates for my sample is highly unlikely. Thus, I

used a non-constant growth DCF model that employs distinct growth rate estimates for each of three discrete time periods.

Q26. Please describe how you modeled your non-constant growth DCF analysis.

A26. I modeled three stages of dividend growth. The first, a near-term growth stage, is assumed to last five years. The second stage is a transitional growth period lasting from the beginning of the sixth year through the end of the tenth year. Finally, the third, or "steady-state," growth stage begins at the end of the tenth year and is assumed to last into perpetuity. An expected stream of dividends is estimated by applying these stages of growth to the current dividend. The discount rate that equates the present value of this expected stream of cash flows to the company's current stock price equals the market-required return on common equity. Schedule 3.4 mathematically presents the relationship between the cash flow stream, stock price, and market required rate of return on common equity.

Q27. How did you estimate the growth rate parameter?

A27. Determining the market-required rate of return with the DCF methodology requires a growth rate that reflects the expectations of investors. Although the current market price reflects aggregate investor expectations, market-consensus expected growth rates cannot be measured directly. Therefore, I measured the first stage growth with growth rates forecasted by securities analysts that are disseminated to investors. Specifically, for the first stage, I used Zacks growth rate estimates as of October 1, 2008. Zacks summarizes and publishes the earnings growth expectations of financial analysts employed by the research

departments of investment brokerage firms. Zacks provides 3-5 year forward-looking, expectational estimates of earnings growth.

To estimate the long-term growth expectations for the third, steady-state stage, I utilized the implied 20-year forward U.S. Treasury rate in ten years, which reflects current expectations of the long-term overall economic growth during the steady-state growth stage of my non-constant DCF model.[12] An implied 20-year forward U.S. Treasury rate in ten years of 4.49% was derived from the 3.81% 10- and 4.26% 30-year U.S. Treasury rates as of October 1, 2008 using the following formula:

$$ {}_{20}f_{10} = [(1+{}_{30}r_0)^{30} / (1+{}_{10}r_0)^{10}]^{1/20} - 1 $$

Where ${}_{20}f_{10}$ = the implied 20-year forward U.S. Treasury rate in ten years;
${}_{30}r_0$ = the current 30-year U.S. Treasury rate; and
${}_{10}r_0$ = the current 10-year U.S. Treasury rate

The growth rate employed in the intervening, five-year transitional stage equals the average of the Zacks growth rate and the steady-state stage growth rate. Schedule 3.5 presents the growth rate estimates for the companies in the Gas Sample.

[12] Excepting a small premium for interest rate risk, the implied 20-year forward U.S. Treasury rate in ten years represents the risk-free rate of return during the 20-year period beginning in 10 years and ending 30 years from today, as implied by current 10- and 30-year U.S. Treasury rates. As I explain later, the overall economic growth rate and the risk-free rate of return should be similar since both are a function of production opportunities and consumption preferences.

Q28. Is an estimate of the long-term overall economic growth rate a reasonable estimate for the steady-state stage growth for your non-constant DCF analysis?

A28. Ideally, the steady stage growth rate would be estimated with very long term forecasts of growth for individual companies. Unfortunately, company-specific long-term growth rate forecasts are not available. Further, for the reasons presented above, it is clear that investors cannot reasonably expect utilities to sustain growth over the very long term equal to analysts' current 3-5 growth rate estimates. Thus, while the overall economic growth rate may be biased upward for generally low-growth companies such as utilities, it is much closer to the growth rate that investors could reasonably expect utilities to sustain over the long term, based on expectations for the overall economy.

Q29. How did you measure the stock price?

A29. A current stock price reflects all information that is available and relevant to the market; thus, it represents the market's assessment of the common stock's current value. I measured each company's current stock price with its closing market price from October 1, 2008. Those stock prices appear on Schedule 3.6.

Since current stock prices reflect the market's current expectation of the cash flows the securities will produce and the rate at which those cash flows are discounted, an observed change in the market price does not necessarily indicate a change in the required rate of return on common equity. Rather, a price change may reflect investors' re-evaluation of the expected dividend growth rate. In addition, stock prices change with the approach of dividend payment dates. Consequently, when estimating the required return on common equity

with the DCF model, one should measure the expected dividend yield and the corresponding expected growth rate concurrently. Using a historical stock price along with current growth expectations or combining an updated stock price with past growth expectations will likely produce an inaccurate estimate of the market-required rate of return on common equity.

Q30. Please explain the significance of the column titled "Next Dividend Payment Date" shown on Schedule 3.6.

A30. Estimating the present value of each dividend requires measuring the length of time between its dividend payment date and the stock observation date. For the first dividend payment, that length of time is measured from the "Next Dividend Payment Date." Subsequent dividend payments occur in quarterly intervals.

Q31. How did you estimate the expected future quarterly dividends?

A31. Most utilities declare and pay the same dividend per share for four consecutive quarters before adjusting the rate. Consequently, I assumed the current dividend rate will remain in effect for a minimum of four quarters and then adjust during the same quarter it changed during the preceding year; if the utility did not change its dividend during the last year, I assumed the rate would change during the next quarter. The average expected growth rate was applied to the current declared dividend rate to estimate the expected dividend rate. This technique was applied to produce dividend projections for the next 11 years hence, substituting the appropriate growth rate estimate for each of the three stages of my non-constant growth DCF analysis. Schedule 3.6 presents the last four declared quarterly dividends. Schedule 3.7 presents the expected quarterly dividends for the coming year.

Q32. Based on your DCF analysis, what is the estimated required rate of return on common equity for the Gas Sample?

A32. My DCF analysis estimated that the required rate of return on common equity for the Gas Sample averages 9.23%, as shown on Schedule 3.8. That result was derived from the growth rates presented on Schedule 3.5, the stock prices and dividend payment dates presented on Schedule 3.6, and the expected quarterly dividends presented on Schedule 3.7.

Risk Premium Analysis

Q33. Please describe the risk premium model.

A33. The risk premium model is based on the theory that the market-required rate of return for a given security equals the risk-free rate of return[13] plus a risk premium associated with that security. A risk premium represents the additional return investors expect in exchange for assuming the perceived risk in a given investment. Mathematically, a risk premium equals the difference between the expected rate of return on a risk factor and the risk-free rate. If the risk of a security is measured relative to a portfolio, then multiplying that relative measure of risk and the portfolio's risk premium produces a security-specific risk premium for that risk factor.

The risk premium methodology is consistent with the theory that investors are risk-averse. That is, investors require higher returns to accept greater exposure to risk. Thus, if investors had an opportunity to purchase one of two securities

[13] The risk-free rate of return is the theoretical rate of return on an investment with zero risk. This represents the absolute minimum return an investor demands as compensation for deferring consumption.

with equal expected returns, they would purchase the security with less risk. Similarly, if investors had an opportunity to purchase one of two securities with equal risk, they would purchase the security with the higher expected return. In equilibrium, two securities with equal quantities of risk have equal required rates of return.

The Capital Asset Pricing Model ("CAPM") is a one-factor risk premium model that mathematically depicts the relationship between risk and return as:

$$R_j = R_f + \beta_j \times (R_m - R_f)$$

where R_j ≡ the required rate of return for security j;

R_f ≡ the risk-free rate;

R_m ≡ the expected rate of return for the market portfolio; and

β_j ≡ the measure of market risk for security j.

In the CAPM, the risk factor is market risk, which is defined as risk that cannot be eliminated through portfolio diversification. To implement the CAPM, one must estimate the risk-free rate of return, the expected rate of return on the market portfolio, and a security or portfolio-specific measure of market risk.

Q34. How did you estimate the risk-free rate of return?

A34. I examined the suitability of the yields on four-week U.S. Treasury bills and thirty-year U.S. Treasury bonds as estimates of the risk-free rate of return.

Q35. Why did you examine the yields on U.S. Treasury bills and bonds as measures of the risk-free rate?

A35. The proxy for the nominal risk-free rate should contain no risk premium and reflect similar inflation and real risk-free rate expectations to the security being analyzed through the risk premium methodology.[14] The yields of fixed income securities include premiums for default and interest rate risk. Default risk pertains to the possibility of default on principal or interest payments. The federal government's fiscal and monetary authority makes securities of the United States Treasury virtually free of default risk. Interest rate risk pertains to the effect of unexpected interest rate fluctuations on the value of securities.

Since common equity theoretically has an infinite life, its market-required rate of return reflects the inflation and real risk-free rates anticipated to prevail over the long run. U.S. Treasury bonds, the longest term treasury securities, are issued with terms to maturity of thirty years; U.S. Treasury notes are issued with terms to maturity ranging from two to ten years; U.S. Treasury bills are issued with terms to maturity ranging from four weeks to six months. Therefore, U.S. Treasury bonds are more likely to incorporate within their yields the inflation and real risk-free rate expectations that drive, in part, the prices of common stocks than either U.S. Treasury notes or Treasury bills.

However, due to relatively long terms to maturity, U.S. Treasury bond yields also contain an interest rate risk premium that diminishes their usefulness as measures of the risk-free rate. U.S. Treasury bill yields contain a smaller

[14] The real risk-free rate and inflation expectations compose the non-risk related portion of a security's rate of return.

premium for interest rate risk. Thus, in terms of interest rate risk, U.S. Treasury bill yields more accurately measure the risk-free rate.

Q36. Given the similarity in the inflation and real risk-free rate expectations that are reflected in the yields on U.S. Treasury bonds and the prices of common stocks, does it necessarily follow that the inflation and real risk-free rate expectations that are reflected in the yields on U.S. Treasury bills and the prices of common stocks are dissimilar?

A36. No. To the contrary, short and long-term inflation and real risk-free rate expectations, including those that are reflected in the yields on U.S. Treasury bills, U.S. Treasury bonds, and the prices of common stocks, should equal over time. Any other assumption implausibly implies that the real risk-free rate and inflation are expected to systematically and continuously rise or fall.

Although expectations for short and long-term real risk-free rates and inflation should equal over time, in finite time periods, short and long-term expectations may differ. Short-term interest rates tend to be more volatile than long-term interest rates.[15] Consequently, over time U.S. Treasury bill yields are less biased (i.e., more accurate) but less reliable (i.e., more volatile) estimators of the long-term risk-free rate than U.S. Treasury bond yields. In comparison, U.S. Treasury bond yields are more biased (i.e., less accurate) but more reliable (i.e., less volatile) estimators of the long-term risk-free rate. Therefore, an estimator of the long-term nominal risk-free rate should not be chosen mechanistically. Rather, the similarity in current short and long-term nominal risk-free rates should be evaluated. If those risk-free rates are similar, then U.S. Treasury bill yields

[15] Fabozzi, The Handbook of Fixed Income Securities, Fifth Edition, Irwin, p. 827.

should be used to measure the long-term nominal risk-free rate. If not, some other proxy or combination of proxies should be used.

Q37. What are the current yields on four-week U.S. Treasury bills and thirty-year U.S. Treasury bonds?

A37. Four-week U.S. Treasury bills are currently yielding 0.66%. Thirty-year U.S. Treasury bonds are currently yielding 4.26%. Both estimates are derived from quotes for October 1, 2008.[16] Schedule 3.9 presents the published quotes and effective yields.

Q38. Of the U.S. Treasury bill and bond yields, which is currently a better proxy for the long-term risk-free rate?

A38. In terms of the gross domestic product ("GDP") price index, the Energy Information Administration ("EIA") forecasts the inflation rate will average 2.0% annually during the 2006-2030 period.[17] Similarly, Global Insight forecasts the GDP price index will average 1.8% annually during the 2008-2038 period.[18] In terms of the consumer price index ("CPI"), the *Survey of Professional Forecasters* ("*Survey*") forecasts the inflation rate will average 2.5% during the next ten years.[19] EIA forecasts of real GDP growth imply the real risk-free rate will average 2.4% during the 2006-2030 period.[20] Global Insight forecasts of real

[16] The Federal Reserve Board, *Federal Reserve Statistical Release: Selected Interest Rates, H.15 Daily Update*, www.federalreserve.gov/releases/h15/update/, October 2, 2008.
[17] Energy Information Administration, *Annual Energy Outlook 2008*, Table A19, Macroeconomic Indicators, June 2008.
[18] Global Insight, *The U.S. Economy: The 30-Year Focus, First Quarter 2008*, Table 1: Summary of the U.S. Economy.
[19] Federal Reserve Bank of Philadelphia, *Survey of Professional Forecasters*, www.philadelphiafed.org/files/spf/survq308.html, August 12, 2008. The *Survey* aggregates the forecasts of approximately thirty forecasters.
[20] Energy Information Administration, *Annual Energy Outlook 2008*, Table A19, Macroeconomic Indicators, June 2008.

GDP growth imply the real risk-free rate will average 2.5% during the 2008-2038 period.[21] The *Survey* forecasts real GDP growth will average 2.7% during the next ten years.[22] Those forecasts imply a long-term, nominal risk-free rate between 4.4% and 5.3%.[23] Therefore, EIA, Global Insight, and *Survey* forecasts of inflation and real GDP growth expectations suggest that, currently, the U.S. Treasury bond yield more closely approximates the long-term risk-free rate. It should be noted, however, the U.S. Treasury bond yield is an upwardly biased estimator of the long-term risk-free rate due to the inclusion of an interest rate risk premium associated with its relatively long term to maturity.

Q39. Please explain why the real risk-free rate and the GDP growth rate should be similar.

A39. Risk-free securities provide a rate of return sufficient to compensate investors for the time value of money, which is a function of production opportunities, time preferences for consumption, and inflation.[24] The real risk-free rate excludes the premium for inflation. The real GDP growth rate measures output of goods and services without reflecting inflation expectations and, as such, also reflects both production and consumers' consumption preferences. Therefore, both the real GDP growth rate and the real risk-free rate of return should be similar since both

[21] Global Insight, *The U.S. Economy: The 30-Year Focus, First Quarter 2008*, Table 1: Summary of the U.S. Economy.

[22] Federal Reserve Bank of Philadelphia, *Survey of Professional Forecasters*, www.philadelphiafed.org/files/spf/survq108.html, February 12, 2008.

[23] Nominal interest rates are calculated as follows:

$$r = (1 + R) \times (1 + i) - 1.$$

where r ≡ nominal interest rate;
R ≡ real interest rate; and
i ≡ inflation rate.

[24] Brigham and Houston, Fundamentals of Financial Management, 8th edition.

are functions of production opportunities and consumption preferences without the effects of either a risk premium or an inflation premium.

Q40. How was the expected rate of return on the market portfolio estimated?

A40. The expected rate of return on the market was estimated by conducting a DCF analysis on the firms composing the S&P 500 Index ("S&P 500") as of September 30, 2008. That analysis used dividend information reported in the October 2008 edition of S&P's *Security Owner's Stock Guide* and September 30, 2008 closing stock market prices reported by Zacks. October 1, 2008 growth rate estimates were also obtained from Zacks. Firms not paying a dividend as of September 30, 2008, or for which Zacks growth rates were not available were eliminated from the analysis. The resulting company-specific estimates of the expected rate of return on common equity were then weighted using market value data from Zacks on September 30, 2008. The estimated weighted average expected rate of return for the remaining 370 firms, composing 84.54% of the market capitalization of the S&P 500, equals 14.13%.

Q41. How did you measure market risk on a security-specific basis?

A41. Beta measures risk in a portfolio context. When multiplied by the market risk premium, a security's beta produces a market risk premium specific to that security. I used Value Line's betas and a regression analysis to estimate the beta of the Gas Sample.

Value Line estimates beta for a security with the following model using an ordinary least-squares technique:[25]

$$R_{j,t} = a_j + \beta_j \times R_{m,t} + e_{j,t}$$

where $R_{j,t}$ ≡ the return on security j in period t;

$R_{m,t}$ ≡ the return on the market portfolio in period t;

a_j ≡ the intercept term for security j;

β_j ≡ beta, the measure of market risk for security j; and

$e_{j,t}$ ≡ the residual term in period t for security j.

A beta can be calculated for firms with market-traded common stock. Value Line calculates its betas in two steps. First, the returns of each company are regressed against the returns of the New York Stock Exchange Composite Index ("NYSE Index") to estimate a raw beta. The Value Line regression employs 259 weekly observations of stock return data. Then, an adjusted beta is estimated through the following equation:

$$\beta_{adjusted} = 0.35 + 0.67 \times \beta_{raw}.$$

The regression analysis applies an ordinary least-squares technique to the following model to estimate beta for a security or portfolio of securities:

$$R_{j,t} - R_{f,t} = \alpha + \beta (R_{m,t} - R_{f,t}) + \varepsilon_t$$

[25] Statman, Meir, "Betas Compared: Merrill Lynch vs. Value Line", *The Journal of Portfolio Management*, Winter 1981.

where $R_{j,t}$ ≡ the return on security *j* in period *t*;

$R_{f,t}$ ≡ the risk-free rate of return in period *t*;

$R_{m,t}$ ≡ the return on the market portfolio in period *t*;

α ≡ the intercept term for security *j*;

β ≡ beta, the measure of market risk for security *j*; and

ε_t ≡ the residual term in period *t* for security *j*.

The regression analysis beta estimate for the Gas Sample was calculated in three steps. First, the U.S. Treasury bill return was subtracted from the average percentage change in the sample's stock prices and the percentage change in the NYSE Index to estimate the portfolio's return in excess of the risk-free rate. Second, the excess returns of the Gas Sample were regressed against the excess returns of the NYSE Index to estimate a raw beta. The regression analysis employs sixty monthly observations of stock and U.S. Treasury bill return data. Third, an adjusted beta is estimated through the following equation:

$$\beta_{adjusted} = 0.33743 + 0.66257 \times \beta_{raw}.$$

Q42. Why do you use an adjusted beta estimate?

A42. Some empirical tests of the CAPM suggest that the linear relationship between risk, as measured by raw beta, and return is flatter than the CAPM predicts. That is, securities with raw betas less than one tend to realize higher returns that the CAPM predicts. Conversely, securities with raw betas greater than one tend to realize lower returns than the CAPM predicts. Adjusting the raw beta estimate towards the market mean of 1.0 results in a linear relationship between the beta estimate and realized return that more closely conforms to the CAPM

prediction.[26] Securities with betas less than one are adjusted upwards thereby increasing the predicted required rate of return towards observed realized rates of return. Conversely, securities with betas greater than one are adjusted downwards thereby decreasing the predicted rate of return towards observed realized rates of return.

Q43. What is the beta estimate for the Gas Sample?

A43. The average Value Line beta for the Gas Sample is 0.82.[27]

Table 1

Company	Value Line Estimate
AGL Resources, Inc.	0.85
Atmos Energy Corp.	0.80
Laclede Group, Inc.	0.80
Nicor, Inc.	0.90
Northwest Natural Gas Co.	0.75
Piedmont Natural Gas Co., Inc.	0.80
WGL Holdings, Inc.	0.85
Average	0.82

The regression beta estimate for the Gas Sample is 0.59. I used the average of those two estimates, or 0.71.

[26] Litzenberger, Ramaswamy and Sosin, "On the CAPM Approach to the Estimation of a Public Utility's Cost of Equity Capital," *Journal of Finance,* May 1980.
[27] The Value Line Investment Survey, "Summary and Index," September 26, 2008, pp. 2-22.

Q44. What required rate of return on common equity does the risk premium model estimate for the Gas Sample?

A44. The risk premium model estimates a required rate of return on common equity of 11.27% for the Gas Sample. The computation of that estimate appears on Schedule 3.9.

Cost of Equity Recommendation

Q45. Based on your entire analysis, what is your estimate of Illinois Gas's cost of common equity?

A45. A thorough analysis of the required rate of return on common equity requires both the application of financial models and the analyst's informed judgment. An estimate of the required rate of return on common equity based solely on judgment is inappropriate. Nevertheless, because techniques to measure the required rate of return on common equity necessarily employ proxies for investor expectations, judgment remains necessary to evaluate the results of such analyses. Along with DCF and risk premium cost of equity analyses, I have considered the observable 5.94% rate of return the market currently requires on less risky A-rated long-term utility debt.[28] Based on my analysis, in my judgment the investor-required rate of return on common equity for Illinois Gas's gas distribution operations equals 10.94%.

[28] The Value Line Investment Survey, "Selection & Opinion," September 26, 2008.

Q46. Please summarize how you formed your estimate of the investor-required rate of return on common equity for Illinois Gas.

A46. First, I estimated the investor-required rate of return on common equity for the Gas Sample from the results of the DCF and risk premium analyses for that sample. The models from which the individual company estimates were derived are correctly specified and, thus, contain no source of bias. Moreover, except for the use of U.S. Treasury bond yields as a proxy for the long-term risk-free rate and overall economic growth, I am unaware of bias in my proxy for investor expectations. In addition, measurement error has been minimized through the use of a sample, since estimates for a sample as a whole are subject to less measurement error than individual company estimates. The average investor-required rate of return common equity for my Gas Sample, 10.25%, is based on the average of the DCF-derived results (9.23%) and the risk premium-derived results (11.27%).

Next, I compared the relative risk of the Gas Sample to that of Illinois Gas. The Gas Sample serves as a proxy for Illinois Gas and should, therefore, reflect the risks of Illinois Gas. If the proxy does not accurately reflect the risk level of the target company, an adjustment should be made.

Q47. How did you analyze the relative risks of the Gas Sample and Illinois Gas?

A47. According to financial theory, the market-required rate of return on common equity is a function of both operating and financial risk. Thus, to analyze the relative risks of the Gas Sample and Illinois Gas, I performed a principal components analysis using twelve financial and operating ratios: 1) common equity to capitalization; (2) funds from operations to capitalization; (3) funds from

operations to long-term debt; (4) fixed assets to revenues; (5) free cash flow to capitalization; (6) funds from operations interest coverage; (7) net cash flow to capital expenditures; (8) net plant to capital expenditures; (9) operating profit margin; (10) operating revenue stability; (11) earnings before interest and taxes stability; and (12) earnings stability. For the first nine ratios, data from the period 2005-2007 were averaged to normalize the ratios. The last three ratios were measured over the period 2003-2007 with the coefficient of determination of a least-squares regression of the natural logarithm of the respective quarterly data against time.[29] Using those ratios, I compared Illinois Gas and the Gas Sample to the utility industry.

Among the market-traded companies on S&P's *Utility Compustat* tape utilities, 92 had sufficient data to calculate the financial and operating ratios. I conducted the principal components analysis of the financial and operating ratios for those 92 companies and Illinois Gas. Principal components constitute linear combinations of optimally-weighted variables, which are uncorrelated with one another.[30, 31] For each utility in the data base, the principal components analysis calculates a value for each component, known as a principal component score, which has a mean of zero and a standard deviation of one.[32] From the principal components

[29] Dummy variables were added to the regression model to incorporate seasonality.
[30] A principal component can be described mathematically as follows:

$$c_i = b_{i1} \times x_1 + b_{i2} \times x_2 + ... + b_{in} \times x_n$$

where c_i ≡ the utility's score on principal component i;
b_{in} ≡ the weight for ratio x_n to create component c_i; and
x_n ≡ the utility's value on ratio n.

[31] The variables are optimally weighted when the resulting principal components explain the maximum amount of variance in the data base.
[32] The standard deviation is a statistical measure that explains how tightly the observations are clustered around the mean in a set of data.

analysis, I retained four components ("factors") for risk analysis. Each utility's factor score represents the number of standard deviations (σ) that utility falls from the industry average in terms of that specific factor. The standard deviation is a statistic that explains how tightly the observations are clustered around the mean in a set of data. Under a normal distribution, approximately 68% of all observations will fall within one standard deviation of the average; approximately 95% will fall within two standard deviations. Schedule 3.10 presents the four principal component scores for each company in the Gas Sample and for Illinois Gas.

Q48. How does Illinois Gas compare to your Gas Sample in terms of risk?

A48. Factor 1 measures financial risk, with a higher score indicating less risk. Illinois Gas's score on factor 1 is -0.321σ from the industry average, while my Gas Sample's factor 1 score is 0.180σ. Thus, Illinois Gas is slightly riskier than my Gas Sample in terms of financial risk. Factor 2 measures construction risk. Illinois Gas's score on factor 2 is 5.076σ, which is substantially higher than my Gas Sample's 0.472σ, which indicates that Illinois Gas's level of construction risk is significantly lower than that of my Gas Sample. Factor 3 measures revenue and earnings stability, indicators of sales and cost variability. Illinois Gas's factor 3 score of -0.269σ is lower than my Gas Sample's score of 0.845σ, which indicates that Illinois Gas has less stable revenues and earnings and, consequently, higher sales risk than my Gas Sample. Factor 4 measures capital intensity. Capital intensity can insulate a company from competition and, thus, reduce risk. However, capital intensity can also indicate higher operating leverage (i.e., fixed costs), which can increase risk through lower earnings stability. Illinois Gas's factor 4 score of -0.860σ is slightly lower than my Gas

Sample's factor score of -0.680σ, which indicates that Illinois Gas has less operating leverage, but is exposed to slightly more competitive risk. Since Illinois Gas's earnings stability is inferior to that of my Gas Sample, Illinois Gas's operating leverage has not led to less relative operating risk. Thus, I conclude that Illinois Gas's capital intensity raises its operating risk slightly relative to my Gas Sample. Overall, my analysis indicates that Illinois Gas has slightly higher financial and competitive risk and less stable earnings than my Gas Sample, but significantly less construction risk. Thus, the principal components analysis indicates that the overall risk of Illinois Gas is equal to or slightly greater than that of my Gas Sample.

Q49. Did you perform any other analyses of the relative risks of the Gas Sample and Illinois Gas?

A49. Yes. Moody's publishes benchmarks for the financial ratios it analyses to determine its credit ratings for gas distribution companies.[33] Specifically, Moody's uses four financial ratios to calculate a Financial Strength and Flexibility Factor, which is incorporated into its ratings analysis: 1) earnings before interest and taxes to interest ratio, 2) retained cash flow to debt ratio, 3) debt to book value of capitalization ratio, and 4) free cash flow to funds from operations ratio. I calculated those ratios for Illinois Gas and the companies in my Gas Sample. Table 2 below presents Moody's benchmarks for Aaa, Aa, A, and Baa ratings; the Gas Sample's average score; and Illinois Gas's score for each ratio.

[33] Moody's Investors Service, "Moody's Rating Methodology: North American Regulated Gas Distribution Industry," October 2006.

Table 2

Ratio	Aaa	Aa	A	Baa	Illinois Gas	Gas Sample
EBIT / Interest	>7x	5-7x	3-5x	2-3x	2.32x	3.83x
RCF / Debt	>26%	21-26%	15-21%	10-15%	15.06%	14.86%
Debt / Book Capitalization	<30%	30-40%	40-50%	50-65%	59.98%	56.61%
FCF / FFO	>10%	10-(15)%	(15)-(30)%	(30)-(45)%	35.09%	(41.01%)

Illinois Gas's EBIT / Interest ratio indicates a higher degree of risk than that of the Gas Sample. The RCF / Debt ratio indicates very similar risk for Illinois Gas relative to the Gas Sample. The Debt / Book Value ratio indicates slightly higher risk for Illinois Gas relative to the Gas Sample. Illinois Gas's FCF / FFO ratio indicates much lower risk than that of the Gas Sample. Overall, those four ratios indicate that the overall risk of Illinois Gas is quite similar to that of my Gas Sample. These results are generally consistent with the findings of my principal components analysis. Thus, in my judgment, the risk of my Gas Sample reasonably reflects that of Illinois Gas and no risk adjustment is necessary.

Q50. Did you make any other adjustments to your cost of equity estimate?

A50. Yes. I adjusted the cost of common equity estimate for the Gas Sample for liquidity costs, which arise from the probability and financial consequences of an investor's inability to sell an asset at the desired time, at a predictable price. The Gas Sample comprises market-traded companies whose security prices do not reflect substantial liquidity costs. However, the security prices of small standalone companies such as Illinois Gas typically reflect significant liquidity costs, which are largely due to the lack of a market for their securities.

Q51. How did you estimate the liquidity premium for Illinois Gas's common equity?

A51. A direct assessment of the liquidity premium in the cost of Illinois Gas's common equity cannot be performed since the cost of common equity for small gas distribution utilities is not directly observable. Thus, a liquidity premium must be measured indirectly. It is reasonable to assume that the liquidity premium equals the additional cost that a relatively small company such as Illinois Gas must pay for capital above and beyond what an otherwise similarly rated company would pay. In Illinois Gas's last rate case, Docket No. 04-0475, Staff estimated this additional cost by subtracting the 4.67% cost of 5-year BBB+/BBB utility rated debt from the 5.36% interest rate Illinois Gas is paying during the first five years of the debt it issued on June 1, 2004. This approach produced a liquidity premium of 69 basis points (5.36% – 4.67% = 0.69%). My analysis incorporates that same liquidity premium estimate. Thus, in my judgment, a fair rate of return on common equity for Illinois Gas equals the 10.25% cost of common equity for my Gas Sample plus a 69 basis point liquidity premium, for an ultimate cost of equity of 10.94%.

Overall Cost of Capital Recommendation

Q52. What are the overall costs of capital for the Companies?

A52. As shown on Schedule 3.1, Illinois Gas's overall cost of capital equals 7.81%. That estimate incorporates the midpoint cost of common equity of 10.94%.

Q53. Does this conclude your prepared direct testimony?

A53. Yes, it does.

Illinois Gas Company

Weighted Average Cost of Capital

Company Proposal
March 31, 2008

	Amount	Percent of Total Capital	Cost	Weighted Cost
Short-term Debt	$1,050,000	14.85%	6.74%	1.00%
Long-term Debt	$2,607,569	36.87%	5.36%	1.98%
Common Equity	$3,415,043	48.29%	11.00%	5.31%
Total Capital	$7,072,612	100.00%		
Weighted Average Cost of Capital				**8.29%**

Source: Illinois Gas Company's Schedule D-1.

Staff Proposal
March 31, 2008

	Amount	Percent of Total Capital	Cost	Weighted Cost
Short-term Debt	$1,660,417	21.63%	5.17%	1.12%
Long-term Debt	$2,601,632	33.89%	5.39%	1.83%
Common Equity	$3,415,043	44.48%	10.94%	4.87%
Total Capital	$7,677,092	100.00%		
Weighted Average Cost of Capital				**7.81%**

Illinois Gas Company

Balance of Short-term Debt
March 31. 2008

End of Month Balance

Date (A)	First Financial Bank (B)	Old National (C)	Integra Bank (D)	First National Bank (E)	Fairfield National Bank (F)	Peoples State Bank (G)	Total Short-term Debt Outstanding (I)	Total Monthly Average (J)
Sep-07	700,000	250,000	400,000	200,000	200,000	-	1,750,000	
Oct-07	700,000	250,000	400,000	300,000	200,000	-	1,850,000	$ 1,800,000
Nov-07	700,000	250,000	200,000	300,000	200,000	-	1,650,000	$ 1,750,000
Dec-07	500,000	250,000	-	300,000	450,000	200,000	1,700,000	$ 1,675,000
Jan-08	700,000	250,000	300,000	300,000	450,000	200,000	2,200,000	$ 1,950,000
Feb-08	200,000	250,000	300,000	300,000	450,000	200,000	1,700,000	$ 1,950,000
Mar-08	50,000	100,000	300,000	300,000	100,000	200,000	1,050,000	$ 1,375,000
Apr-08	-	-	300,000	300,000	100,000	200,000	900,000	$ 975,000
May-08	-	-	300,000	300,000	100,000	200,000	900,000	$ 900,000
Jun-08	-	400,000	300,000	300,000	100,000	200,000	1,300,000	$ 1,100,000
Jul-08	700,000	400,000	600,000	-	-	200,000	1,900,000	$ 1,600,000
Aug-08	700,000	600,000	600,000	400,000	-	200,000	2,500,000	$ 2,200,000
Sep-08	700,000	600,000	600,000	400,000	500,000	-	2,800,000	$ 2,650,000
Average								**$ 1,660,417**
Weight	24.8%	15.9%	20.6%	17.1%	12.5%	9.0%		100.0%
Int. Rate	5.00%	5.25%	5.00%	5.50%	5.00%	5.50%		
Wtd. Cost	1.24%	0.84%	1.03%	0.94%	0.63%	0.50%		**5.17%**

Notes: Column (I) = Column (B) + Column (C) + Column (D) + Column (E) + Column (F) + Column (G)
Column (J) = Average of the ending balance for that month and the ending balance of the prior month presented in Column (I)

Sources: Company responses to Staff Data Requests MGM 1.02, 2.01, and 3.02.

Illinois Gas Company

Embedded Cost of Long-term Debt
March 31, 2008

	Debt Issue Type, Coupon Rate (A)	Date Issued (B)	Maturity Date (C)	Original Principal Amount (D)	Face Amount Outstanding (F)	Unamortized Debt Discount or (Premium) (H)	Unamortized Debt Expense (I)	Carrying Value (J)	Coupon Interest Expense (K)	Amortization of Debt Discount or (Premium) (L)	Amortization of Debt Expense (M)	Total Expense (N)
1	Mortgage Bonds											
2	5.36% 15-year note	06/01/04	05/31/19	3,200,000	2,607,569	-	5,937	2,601,632	139,766	-	531	140,297
3												5.39%

Sources: Schedule D-3 and Company response to Staff data requst MGM 1.09.

ILLINOIS GAS

The Non-Constant Growth Discounted Cash Flow Model

The formula for measuring the cost of common equity, *k*, when growth, *g*, does not become constant until period φ, is as follows:

$$k = \left[\frac{D_{1,1}(1+k)^{\varphi-0.25} + D_{1,2}(1+k)^{\varphi-0.50} + D_{1,3}(1+k)^{\varphi-0.75} + \ldots + D_{\varphi,4} + P_{\varphi,4}}{P} \right]^{\left(\frac{1}{x+\varphi-0.25} \right)} - 1$$

where: P $\equiv$ the current market value;

$D_{\varphi,q}$ $\equiv$ the expected dividend at the end of quarter *q* in year φ, where *q* = 1 to 4 and φ = the number of periods until the steady-state growth period;

k $\equiv$ the cost of common equity;

x $\equiv$ the elapsed time between the stock observation and first dividend payment dates, in years; and

$P_{\varphi,4}$, the market value at the beginning of the steady-state growth stage, is calculated from the following equation:

$$P_{\varphi,4} = \frac{\sum_{q=1}^{4} D_{\varphi,q}(1+g_l)(1+k)^{1-[x+0.25(q-1)]}}{k-g_l}$$

where: $D_{\varphi,q}$ $\equiv$ the dividend paid in quarter q during the last year of the transitional growth stage; and

g_l $\equiv$ the steady-state growth rate.

ILLINOIS GAS

Growth Rate Estimates

Gas Sample

Company	Growth Rates Stage 1[1]	Stage 2[2]	Stage 3[3]
AGL Resources, Inc.	4.75	4.62	4.49
Atmos Energy Corp.	5.43	4.96	4.49
Laclede Group, Inc.	10.00	7.25	4.49
Nicor, Inc.	5.75	5.12	4.49
Northwest Natural Gas Co.	6.50	5.50	4.49
Piedmont Natural Gas Co., Inc.	5.60	5.05	4.49
WGL Holdings, Inc.	7.50	6.00	4.49
Average	6.50%	5.50%	4.49%

1 Zacks 3-5 year earnings per share growth rate estimate. (Zacks Investment Research, Inc.)
2 Equals the average of Stage 1 and Stage 3 growth rates.
3 The implied 20-year forward U.S. Treasury rate in ten years ($_{20}f_{10}$), based on the 10- and 30-year U.S. Treasury rates as of October 1, 2008. (The Federal Reserve Board, Federal Reserve Statistical Release: H.15, Selected Interest Rates, Daily Update, www.federalreserve.gov/releases/H15/update/, October 2, 2008.)

ILLINOIS GAS

Quarterly Dividends and Stock Prices
as of October 1, 2008

Gas Sample

Company	Last Four Quarterly Dividends $D_{0,1}$	$D_{0,2}$	$D_{0,3}$	$D_{0,4}$	Next Dividend Payment Date	Stock Price
AGL Resources, Inc.	$0.410	$0.420	$0.420	$0.420	12/1/2008	$31.82
Atmos Energy Corp.	0.325	0.325	0.325	0.325	12/10/2008	27.37
Laclede Group, Inc.	0.375	0.375	0.375	0.375	1/2/2009	50.77
Nicor, Inc.	0.465	0.465	0.465	0.465	2/2/2009	46.00
Northwest Natural Gas Co.	0.375	0.375	0.375	0.375	11/14/2008	52.16
Piedmont Natural Gas Co., Inc.	0.250	0.260	0.260	0.260	1/15/2009	32.69
WGL Holdings, Inc.	0.343	0.343	0.355	0.355	11/1/2008	32.45

Sources: *The Wall Street Journal*, http://online.wsj.com, October 2, 2008; www.aglresources.com; www.atmosenergy.com; www.thelacledegroup.com; www.nicor.com; www.nwnatural.com; www.piedmontng.com; www.wglholdings.com.

ILLINOIS GAS

Expected Quarterly Dividends

Gas Sample

Company	$D_{1,1}$	$D_{1,2}$	$D_{1,3}$	$D_{1,4}$
AGL Resources, Inc.	$0.420	$0.440	$0.440	$0.440
Atmos Energy Corp.	0.343	0.343	0.343	0.343
Laclede Group, Inc.	0.413	0.413	0.413	0.413
Nicor, Inc.	0.492	0.492	0.492	0.492
Northwest Natural Gas Co.	0.395	0.395	0.395	0.395
Piedmont Natural Gas Co., Inc.	0.260	0.275	0.275	0.275
WGL Holdings, Inc.	0.355	0.355	0.382	0.382

Sources: Staff Schedules 3.5 and 3.6.

ILLINOIS GAS

DCF Cost of Common Equity Estimates

Gas Sample

Company	Estimate
AGL Resources, Inc.	10.29
Atmos Energy Corp.	9.96
Laclede Group, Inc.	8.96
Nicor, Inc.	9.17
Northwest Natural Gas Co.	8.04
Piedmont Natural Gas Co., Inc.	8.11
WGL Holdings, Inc.	10.11
Average	9.23%

ILLINOIS GAS

Risk Premium Analysis

Interest Rates as of October 1, 2008

U.S. Treasury Bills[1]		U.S. Treasury Bonds[2]	
Discount Rate	Effective Yield	Bond Equivalent Yield	Effective Yield
0.65%	0.66%	4.22%	4.26%

Risk Premium Cost of Equity Estimate

Proxy Group	Risk-Free Rate		Beta		Risk Premium		Cost of Common Equity
Gas Sample	4.26%	+	0.71	×	(14.13% – 4.26%)	=	11.27%

[1] U.S. Treasury bill yields are quoted on a 360-day discount basis. The effective yield is determined as follows:

$$Effective\ yield = \left(1 + \frac{discount\ rate \times \left(\frac{days\ to\ maturity}{360} \right)}{1 - discount\ rate \times \left(\frac{days\ to\ maturity}{360} \right)} \right)^{\left(\frac{365}{days\ to\ maturity} \right)} - 1$$

where *days to maturity* equals twenty-eight days.

[2] The bond equivalent yield on U.S. Treasury bonds represents a nominal rather than an effective yield. The effective yield is calculated as follows:

$$Effective\ yield = [1 + (bond\ equivalent\ yield \div 2)]^2 - 1.$$

ILLINOIS GAS

Principal Components Scores and Distance

Gas Sample

Company	Factor 1	Factor 2	Factor 3	Factor 4
AGL Resources, Inc.	0.060	1.185	0.793	0.317
Atmos Energy Corp.	-0.401	0.139	0.328	-0.954
Laclede Group, Inc.	-0.360	0.327	1.069	-1.362
Nicor, Inc.	1.735	0.602	0.066	-0.964
Northwest Natural Gas Co.	-0.458	0.422	1.504	-0.304
Piedmont Natural Gas Co., Inc.	0.146	0.086	1.168	-0.689
WGL Holdings, Inc.	0.535	0.541	0.984	-0.804
Average	0.180	0.472	0.845	-0.680

Illinois Gas

Company	Factor 1	Factor 2	Factor 3	Factor 4
Illinois Gas	-0.321	5.076	-0.269	-0.860