BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

IN THE MATTER OF THE APPLICATION OF QUESTAR GAS COMPANY TO INCREASE NON-GAS RATES AND CHARGES AND MAKE TARIFF MODIFICIATIONS	Docket No. 09-057-16

DIRECT TESTIMONY OF

DAVID M. CURTIS

FOR

QUESTAR GAS COMPANY

December 3, 2009

QGC Exhibit 2.0

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I. INTRODUCTION

Q. Please state your name and position.

A. David M. Curtis. I am employed by Questar Gas Company as Vice President and Controller.

Q. Please state your qualifications and experience testifying before regulatory commissions.

A. My qualifications and experience are provided in QGC Exhibit 2.1.

Q. What is the purpose of your testimony?

A. I will provide testimony supporting the Company's requested rate of return (cost of capital) in this general rate case. The components of a rate of return include: (1) investors' required return on equity, (2) cost of long-term debt, and (3) capital structure. A rate of return is calculated based on these components.

My testimony will discuss the models and factors used in supporting the Company's requested rate of return including: regulatory framework and financial implications; proxy group; discounted cash flow model; risk premium models; impact of allowed returns on bond ratings; comparison of risks between Questar Gas and the proxy group; performance of Questar Gas compared to peer companies; cost of long-term debt; capital structure; and the rate of return recommendation.

II. RETURN ON EQUITY

A. Regulatory Framework and Financial Implications

Q. Please describe the guiding principles to be used in establishing the authorized return on equity for a regulated utility.

A. The United States Supreme Court definitively established the guiding principles to be used by regulatory commissions in setting the appropriate authorized return on equity in two cases: *Bluefield Waterworks & Improvement Company v. Public Service*

Commission of West Virginia, 262 U.S. 679 (1923) and *Federal Power Commission v. Hope Natural Gas Co.*, 320 U.S. 591 (1944).

In *Bluefield* the Court said:

> A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and the same general part of the country on investments in other business undertakings which are attended by corresponding risks and uncertainties; but it has no constitutional right to profits such as are realized or anticipated in highly profitable enterprises or speculative ventures. The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise money necessary for the proper discharge of its public duties. A rate of return may be reasonable at one time and become too high or too low by changes affecting opportunities for investment, the money market and business conditions generally. *(Bluefield* at 692-93)

In *Hope* the Court said:

> From the investor or company point of view it is important that there be enough revenue not only for operating expenses but also for the capital costs of the business. These include service on the debt and dividends on the stock. By that standard the return to the equity owner should be commensurate with returns on investment in other enterprises having corresponding risks. That return, moreover, should be sufficient to assure confidence in the financial integrity of the enterprise, so as to maintain its credit and attract capital. (*Hope* at 603)

In these cases, the Court unequivocally has determined that returns to investors should be: (1) adequate to assure confidence in the financial soundness of the utility, (2) adequate to support its credit and enable it to raise capital, (3) reasonable in light of current financial market conditions, and (4) commensurate with returns on investments having corresponding risks.

The United States Supreme Court did not specify a means of arriving at a fair rate of return, but determined that the end result must be "just and reasonable."

Q. How do these guiding principles impact your approach to recommending an authorized return on equity?

A. I have utilized several different models to estimate a "just and reasonable" authorized return on equity. These models are used in Utah and in many jurisdictions throughout the United States. I compared the results of each of these models with other models and investor expectations as measured by recent allowed returns for natural gas utilities throughout the United States. To the extent that these results are inconsistent, I have weighted the results in arriving at my recommendation. It is not mandated that any particular model be used, rather, it is important that the end result is "just and reasonable."

Q. What would be the impact on Questar Gas if the authorized return on equity is not "just and reasonable"?

A. Questar Gas needs access to debt and equity capital to provide safe and reliable natural gas distribution service to customers. Questar Gas needs access to capital to replace aging pipeline infrastructure as discussed by Mr. McKay. This is a significant investment program for Questar Gas that will require substantial capital over a number of years. In addition, over the past decade or more, the number of customers served has grown at an average rate of more than 3% per year. Although the customer growth rate has decreased over the past two years because of the economic recession, Questar Gas expects the rate of customer growth to resume in the next several years. If the return on equity authorized by the Commission is not "just and reasonable," bond ratings could be lowered resulting in higher long-term debt costs. I will address this issue later in my testimony. Questar Gas also needs to raise new equity capital. Unless the return on equity is deemed adequate, equity investors will not be likely to invest additional capital in the Company.

B. Overview of the Economy and Capital Markets

Q. What is the current condition of the United States economy?

A. The United States is still in the most significant recession since the Great Depression of the 1930s. We have experienced four consecutive quarters of negative growth in real gross domestic product (GDP) beginning with the third quarter of 2008. While the third

quarter of 2009 did show some rebound in GDP, economists are not yet declaring an end to the recession. The national unemployment rate is over 10%. Major industries are incurring significant losses and more bankruptcies of long-time institutions are still possible.

Q. What is the federal government doing to pull the country out of this recession?

A. The federal government has responded to the recession in two ways. The first response is to spread federal stimulus funds to the states to encourage states to create jobs. These federal stimulus funds are being used for infrastructure projects such as highway and bridge replacements. The federal government has also invested significant funds in shoring up the banking and financial systems to avoid collapse and encourage lending. The second response is a very expansive monetary policy. The federal funds target rate is 0.25%, which results in low borrowing costs.

Q. What is the potential impact of the federal government's response to the recession?

A. While a significant reaction to the recession is necessary, these reactions can have long-term impacts. Stimulus funds increase the federal deficit. Eventually this deficit must be reduced either by increased taxes or inflation. An expansive monetary policy carries significant risk of inflation. To avoid this risk of inflation, the federal government must be prepared to change policies as soon as economic conditions begin to improve.

Q. How has the capital market reacted to the recession?

A. The capital market started to collapse beginning in the second quarter of 2008 with a number of major financial institutions in serious financial trouble including Lehman, Bear Sterns, AIG, Merrill Lynch, Wachovia, and Citicorp. These companies went bankrupt, were sold or were bailed out by the federal government. The US large capitalization stock market as measured by the S&P 500 declined 37% in 2008, the second worst result in 83 years. By the end of 2008 the credit markets had basically shut down. Commercial paper was not available on many days. No long-term debt financing was being completed. I should note that it was in this environment that Questar Gas reduced its 2009 capital budget because financing was not available.

By the middle of 2009 the capital markets had begun to improve. The stock markets have recovered significantly from their lows but are still far short of the pre-collapse highs. The credit markets have reopened for investment grade credit. The expansive monetary policy has resulted in interest rates that are unusually low given the state of the economy. Commercial paper is generally available for companies with strong credit ratings. However, bank lending policies are still very tight. Questar Corporation has experienced banks pulling back on credit lines.

Q. How does this impact Questar Gas's ability to access capital markets?

A. As long as Questar Gas has strong credit ratings, it should be able to raise debt capital. However, I would not expect today's low interest rates to continue. Over time I would expect interest rates to rise, especially if inflation returns as the economy recovers.

C. Proxy Group

Q. Why have you used a group of proxy companies to help estimate the cost of equity for Questar Gas?

A. As a wholly-owned subsidiary of Questar Corporation, Questar Gas's common stock is not publicly traded so market data does not exist for Questar Gas. Therefore, it is not possible to measure investor expectations of returns for Questar Gas directly. Since the return on equity is a market-based concept, it is necessary to use a group of companies with similar risks that are publicly traded as a proxy for investor expectations for Questar Gas. It would not be appropriate to use the return expected by the market for Questar Corporation since Questar Gas constitutes only a small portion of Questar Corporation's business. The risks and investor expectations for Questar Corporation, as a whole, are different from the risks and investor expectations for the natural gas distribution business.

In addition, even if Questar Gas's common stock were publicly traded, it would be necessary to use a proxy group to assure that the return on equity authorized for Questar Gas is commensurate with returns on investments of similar risks and to avoid any anomalies in the return expected by investors in Questar Gas. Therefore, the use of a

group of publicly traded proxy companies is a common practice in Utah and in jurisdictions throughout the United States in circumstances like these.

Q. How did you determine which companies to use in your list of proxy companies?

A. I started with Value Line's list of 18 publicly traded natural gas utility stocks. I immediately eliminated three of the companies because they distribute propane or fuel oil as their primary business and, therefore, their risk profile would not be consistent with a rate-regulated natural gas distribution company. The remaining 15 companies are shown on QGC Exhibit 2.2. I used the following criteria for inclusion in the proxy group: (1) at least half of total operating income for the company must come from natural gas distribution operations; (2) the company must have an investment grade bond rating by Moody's (Baa3 or better) or Standard and Poor's (BBB- or better); and (3) the company must be followed by at least two investment analysts in order to obtain growth estimates from more than a single source. I utilized these criteria to ensure that the proxy companies matched, as closely as possible, the risk profile of Questar Gas. Five of the companies were eliminated for failing one or more of these criteria.

The remaining ten companies all have risk profiles similar to Questar Gas. Each has at least one-half of its operating income from natural gas distribution operations, has an investment grade bond rating, and is actively followed by investment analysts. These companies are also similar in size to Questar Gas. I believe that this group of companies has similar risks to Questar Gas and constitutes a valid proxy group to measure investor return expectations.

D. Discounted Cash Flow Model

Q. Describe the discounted cash flow model for measuring investor expectations.

A. The discounted cash flow model starts with the assumption that a company's stock price is the present value of future expected cash flows to stockholders discounted at the required return on equity. This model is represented by the following formula:

$$P_0 = \frac{D_1}{(1+k)} + \frac{D_2}{(1+k)^2} + \frac{D_3}{(1+k)^3} + \ldots + \frac{D_\infty}{(1+k)^\infty}$$

Where P_0 represents the current stock price, $D_1 \ldots D_\infty$ represent the expected stream of future dividends, and k is the discount rate or required return on equity. If you assume that the dividend growth rate is constant, then this equation can be rearranged and simplified to give the following equation:

$$k = \frac{D_0(1+g)}{P_0} + g$$

This formula is the "Constant Growth DCF" model in which the first term is the expected dividend yield and the second term is the expected long-term growth rate for dividends.

Q. What are the deficiencies in this model?

A. There may be a temptation to rely too heavily on this model to calculate investors' expected return on investment because it is straightforward and easy to calculate and understand. However, this formula is based on significant assumptions that are not always accurate over time. For example, this model assumes that dividends grow at a constant rate in perpetuity, that the dividend payout ratio remains constant, that investors require a constant return in perpetuity and that the growth assumption is knowable.

The range of results for one of my DCF analyses, shown on QGC Exhibit 2.3, page 1, illustrates the weakness in the model. I do not believe that investors require a return of 13.3% for South Jersey Industries, yet only require a return of 8.5% for Laclede Group. We selected proxy companies with relatively similar risks, yet the model suggests that the expected returns of one company are 64% higher than the other company. I deal with this range of results by averaging the expected returns for the ten proxy companies. By using an average there is no need to exclude unusually high or low results.

Because of the weaknesses in this model, it should not be used alone. The model should be used in context with the results of other models and capital market conditions.

Q. How did you calculate the expected dividend yield?

A. The dividend yield is calculated based on current stock prices and dividend payments. Data on QGC Exhibit 2.3 pages 1 through 4 show the current dividend yields. For each of the proxy group companies I obtained the current annual dividend per share. I then

divided the dividend per share by the current stock price. For this model I used an average price over the last 50 trading days to even out short-term fluctuations in the stock market. This results in a current dividend yield. Since the model uses a dividend yield at the end of the first year, I multiplied this dividend yield by one plus the growth rate. The average adjusted dividend yield for these ten proxy companies is about 4.5%.

Q. How did you calculate the growth rate?

A. The growth-rate assumption has the largest impact on this model, yet it is the assumption that has the least certainty. I used two different growth rates in this model to estimate investor expectations.

The first growth rate as shown on QGC Exhibit 2.3 page 1 is the analyst 5-year earnings growth assumption as tracked by Thompson Financial and reported on Yahoo Finance. Each of the proxy group companies is followed by three to nine investment analysts. These analysts make individual assumptions about the growth of the company. The growth rate used in this iteration of the model is the average growth rate for each individual company. The results of this model show an average required return on equity of 10.0%. These assumptions are prepared by a small group of analysts and may or may not reflect the actual assumption of growth rates in the market.

The second growth rate as shown on QGC Exhibit 2.3 page 2 is the long-term growth estimate as compiled by Zachs Investors Service. The average expected return on equity using these growth rates is 10.5%.

Q. What is your overall result from the discounted cash flow model?

A. I averaged these growth rates discussed above to get a final result because the two different growth rates were inconsistent between companies (i.e. no one company had consistently high or low growth rate assumptions). The results are shown on QGC Exhibit 2.3, page 3. The average growth discounted cash flow model had an average expected return on equity of 10.20%, a minimum of 8.25%, and a maximum of 14.04%.

E. Risk Premium Models

Q. Describe the capital markets line.

A. QGC Exhibit 2.4 shows the capital markets line as derived from the Morningstar Ibbotson SBBI 2009 Valuation Yearbook. The vertical axis shows the average return to investors for various asset classes for the years 1926 through 2008. The horizontal axis shows the annual standard deviation of returns for these asset classes. This graph illustrates the financial assumption that investors require higher rates of return for asset classes that have more risk. The level of risk can be measured by the variability of returns. For example, this graph shows that returns on US Government treasury bills have returns averaging about 4% for this long time period. The variability of returns for treasury bills as measured by the standard deviation has also been low at about 3%. In contrast, small company stocks had an average return of over 16% for this same long time period. However the standard deviation of returns for small company stocks was 33%.

This capital markets line makes intuitive sense because of the different risks associated with each asset class. Smaller companies are riskier than larger companies because of smaller market share of the various goods and services and fewer economies of scale. Common equity is riskier than long-term debt because of residual risk of loss and debt investors have a priority claim on the assets of the company. Long-term debt is riskier than short-term debt because of interest rate risk and longer exposure to credit risk. Corporate debt securities are riskier than US government debt securities because of credit risk.

Q. How can this theory be used in estimating the cost of equity capital?

A. Various models have been developed that estimate the cost of equity capital based on the risk premium for equity over debt. Investors insist on being paid for risk. The higher the level of risk, the higher the required return. The relationships between required returns tend to be relatively stable over time.

I have used three different risk premium models to estimate the required return on equity. These models are (1) the Capital Asset Pricing Model, (2) a regression analysis of allowed returns on equity for natural gas distribution companies and the 30-year treasury bond yield, and (3) a regression analysis of allowed returns on equity for natural gas distribution companies and yields on Baa corporate bonds.

Q. Describe the Capital Asset Pricing Model.

A. The Capital Asset Pricing Model estimates the cost of equity for a given company using the risk-free rate of return and a risk premium to compensate the investor for additional risks associated with the company. This is calculated as follows:

$$k = rf + \beta(r_m - rf)$$

where:

k = the required return on equity

β = Beta of an individual security

rf = the risk free rate of return

r_m = the required return on a market as a whole.

In this formula, the term $(r_m - rf)$ represents the risk premium of the United States large capitalization stock market over the risk free rate of return. The risk free rate of return is the yield on U.S. government 30-year bonds.

Beta is a measure of the risk of an individual security relative to the market as a whole. Beta is defined as:

$$\beta = \frac{\text{Covariance } (r_e, r_m)}{\text{Variance } (r_m)}$$

The variance of the market return is a measure of the uncertainty of the market. The covariance between the return of a specific security and the market as a whole is a

measure of the extent to which the return on a security will respond to a change in the market.

Q. Is the Capital Asset Pricing Model a reasonable approach to help establish a utility's return on equity?

A. Sometimes the Capital Asset Pricing Model can be used to establish a return on equity. The Capital Asset Pricing Model has been a measure considered by the Utah Commission as well as commissions in many other jurisdictions throughout the United States. The Capital Asset Pricing Model is used by investors and analysts. It is commonly used in other applications such as asset valuations for levying property taxes. The underlying principles of risk premium and risk-free rate of return are sound.

However, as with the Discounted Cash Flow Model, the Capital Asset Pricing Model is not an exact tool. The assumption that the risk of an individual security can be measured by the Beta of that security relative to the market as a whole is theoretical at best. Many items can influence the Beta not directly related to risk such as how active the security is traded in the market and size of the company.

The Capital Asset Pricing Model has also been significantly influenced by recent changes in the capital markets. Each of the components of the Capital Asset Pricing Model has declined since the crisis in the capital markets began in mid-2008. The yield on the long-term treasury bond is near an all time low because of relaxed monetary policy used to stimulate the economy. The market risk premium for long-term actual returns of large capitalization stocks over long-term treasury bonds decreased from 7.1% for the period from 1926 – 2007 to 6.5% for the period from 1926 – 2008. The dramatic declines in the stock market during 2008 had a significant influence on the market risk premium even though 2008 was only one year out of 83. Paradoxically, years like 2008 will cause investors in equity investments to demand higher returns over fixed income investments because the risk of investing in equity investments has proven to be much higher after the capital market performance in 2008. Also the natural gas distribution utilities' stock

prices did not decline as significantly as the overall market, so the Betas for the proxy companies declined.

Q. Discuss the components of the Capital Asset Pricing Model.

A. My calculation of the required return on equity using the basic Capital Asset Pricing Model is shown on QGC Exhibit 2.5 page 1.

The adjusted Beta used in the model was calculated by Value Line using historical market data. Value Line adjusts the raw Beta by averaging the historical result with 1.0 to reflect the tendency of the Beta to regress to the market mean of 1.0 over time. Value Line weights the raw Beta by 0.67 and the market (or 1.0) by 0.33. Failure to adjust the raw Beta will underestimate the cost of capital for relatively low raw Beta companies such as regulated utilities.

I used the yield on the 30-year Treasury Bond as the risk free rate of return. To even out short-term fluctuations in the market, I averaged this yield over the past three months.

The market risk premium was taken from Ibbotson Associates data using returns from 1926 through 2008. The arithmetic average of the difference between total return on large company stocks and income from long-term government bonds is 6.50%.

Q. What are the results from the basic Capital Asset Pricing Model?

A. The basic Capital Asset Pricing Model for the proxy group showed a required return on equity ranging from a minimum of 8.1% to a maximum of 9.0% with a mean of 8.5% as shown on Exhibit 2.5 page 1.

For the reasons discussed above, the basic Capital Asset Pricing Model provides results significantly out of line with the other models. These differences are explained by unprecedented capital market conditions. Therefore, the basic Capital Asset Pricing Model should not be given any weight at this time.

Q. Is there a form of the Capital Asset Pricing Model that can be used at the present time to help establish a utility's return on equity?

A. Small company stocks have a very different risk and return expectation from large company stocks as shown on the Capital Markets Line in QGC Exhibit 2.4. The basic Capital Asset Pricing Model uses a Market Risk Premium for the stock market as a whole. Since the stock market returns are capitalization weighted, this Market Risk Premium is more reflective of larger company stocks than smaller company stocks.

The Morningstar Ibbotson SBBI 2009 Valuation Yearbook calculates additional risk premia for each of the stock market deciles based on size of capitalization. The calculation is based on actual returns for 1926 – 2008, the same as the calculation for the overall Market Risk Premium.

QGC Exhibit 2.5 page 2 shows the Capital Asset Pricing Model with an additional adjustment for the size of market capitalization. The average result from this model shows an average required return of 10.2%. This return is consistent with other models and helps support investors' expectations of a required return.

Q. How else have you used the risk premium model?

A. I prepared two additional versions of the risk premium model. For the first one I prepared a regression analysis with the yield on US government 30-year treasury bonds as the independent variable and the authorized return on all natural gas utilities as the dependent variable. I used quarterly data from 1990 through the second quarter of 2009. I averaged the monthly closing yield on the 30-year treasury bond for each quarter. I averaged the authorized return on equity ordered by public service commissions for natural gas companies for each quarter.

The results of my analysis are shown on QGC Exhibit 2.6 pages 1 to 2.

Q. What are the results of your regression analysis using 30-year treasury bond yields?

A. The regression analysis shows a reasonable relationship between the yield on the 30-year treasury bond and authorized returns on equity for natural gas companies as ordered by various public utility commissions. The R squared value from this analysis was 0.64, which shows a significant relationship between the allowed return and the 30-year

treasury bond yield. The *t* statistics for both the intercept and the slope of the equation show statistically significant relationships.

I obtained a required return on equity of 10.4% using the formula from the regression analysis and the average yield on the 30-year treasury bond for the last quarter. The lower end of a 95% confidence level gave a return of 9.5% and the upper end of a 95% confidence level gave a return of 11.1%. These results are in the range of other models used to estimate required returns on equity.

Q. What was the second additional version of the risk premium model?

A. I prepared a regression analysis with the yield on Corporate Baa-rated bonds as the independent variable and the authorized return on natural gas utilities as the dependent variable. I used quarterly data from 1990 through the second quarter of 2009. I averaged the monthly closing yield on the Corporate Baa bonds for each quarter. I averaged the authorized returns on equity ordered by public service commissions for all natural gas companies for each quarter.

The results of my analysis are shown on QGC Exhibit 2.6 pages 3 to 4.

Q. What are the results of your regression analysis using Corporate Baa bond yields?

A. The regression analysis shows a reasonable relationship between the yield on the Corporate Baa bonds and authorized returns on equity for natural gas companies as ordered by various public utility commissions. The R squared value from this analysis was 0.55, which shows a significant relationship between the allowed return and the Corporate Baa bond yield. The *t* statistics for both the intercept and the slope of the equation show statistically significant relationships.

I obtained a required return on equity of 10.4% using the formula from the regression analysis and the average yield on the Corporate Baa bonds for the last quarter. The lower end of a 95% confidence level gave a return of 9.1% and the upper end of a 95% confidence level gave a return of 11.8%. These results are in the range of other models used to estimate required returns on equity.

F. Impact of Allowed Returns on Bond Ratings

Q. What are Questar Gas's current long-term debt ratings?

A. Questar Gas's senior unsecured long-term debt is currently rated A3 by Moody's and BBB+ by Standard and Poor's.

Q. What impact does an allowed return on equity have on bond ratings?

A. The bond rating agencies use a variety of quantitative and qualitative measures to establish ratings on securities. Moody's publishes its methodologies while Standard and Poor's keeps its methodologies proprietary.

In a report published in August 2009, Moody's lays out the following measures in establishing bond ratings for regulated electric and gas utilities: (1) regulatory framework; (2) ability to recover costs and earn returns; (3) diversification; and (4) financial strength, liquidity and key financial metrics. The first three measures are qualitative in nature but are significantly influenced by actions of regulators. The fourth measure is based on a cash-flow from operations interest coverage test, two cash-flows from operations to debt tests, and a capital structure test. All of these tests are impacted by the allowed rate of return.

Moody's uses a different rating methodology for Questar Gas because Questar Gas is part of a diversified natural gas company. In a report published in March 2007, Moody's described the following measures for establishing bond ratings for diversified natural gas transmission and distribution companies: (1) scale; (2) quality of diversification; (3) management strategy and financial policy; and (4) financial strength. The fourth measure is weighted at 60%. Moody's has established the following criteria to maintain an investment grade rating (Baa or above): (a) EBIT/Interest Expense – 3X or above; (b) Debt/Book Capitalization – 60% or less; (c) Retained Cash Flow/Debt – 10% or greater; and (d) Return on Equity – 10% or greater.

Q. How do Questar Gas's financial results map to these criteria?

A. Questar Gas's 2008 financial results map to Moody's criteria as follows:

Bond-Rating Criteria	Result	Indicated Rating
EBIT/Interest Expense	3.5	Baa
Debt/Book Capitalization	54.7%	Baa
Retained Cash Flow/Debt	5.5%	B
Return on Equity	10.5%	Baa

This table shows that there may be downward pressure on Questar Gas's current Moody's bond rating of A3 since all criteria track below the A-rating. The low level of cash flow to debt puts particular pressure on the rating.

I believe Questar Gas would see additional downward pressure on its bond ratings if it earned a financial return on equity below 10%.

Q. How does the allowed return on equity relate to the financial return on equity?

A. The allowed return on equity and the actual financial return on equity are different calculations but tend to track very closely. They may differ because of various factors including costs not allowed in rates, regulatory lag and differences between actual costs incurred and projected costs used in setting rates.

Q. How does Moody's view return on equity?

A. Moody's issued a credit opinion on Questar Corporation, including Questar Gas, on March 13, 2008. Moody's states, "Gas' [Questar Gas] stable outlook incorporates some potential weakening in free cash flow and debt metrics as it implements a multi-year feeder line replacement program. Gas faces near-term regulatory risk with a rate case that it recently filed with new rates expected in the fall of this year. An unfavorable outcome with allowed returns below industry norms could pressure the ratings."

Moody's also issued a credit opinion on December 18, 2008, for New Jersey Natural Gas Company (one of our proxy companies). Moody's has assigned an Aa3 rating for New Jersey Natural Gas senior secured medium term notes. This implies an A1 rating for unsecured debt. Moody's states in this credit opinion, ". . . any weakening of the aforementioned credit metrics such that the company were not able to achieve an ROE [return on equity] of at least 11%, interest coverage above 4x, or RCF [retained cash flow]/Debt above 8%, could increase pressure for a downgrade . . . ."

Q. How would Questar Gas be impacted by a downgrade in bond ratings?

A. The obvious impact on Questar Gas of a bond ratings downgrade would be on the cost of debt. Questar Gas's capital expenditures are expected to exceed cash flow for the foreseeable future. Questar Gas will need to raise investment capital to fund these capital expenditures. The interest rate spread due to lower bond ratings can be significant. During the recent capital markets crisis the credit spread between investment grade credit and noninvestment grade credit reached record highs. At times during this capital markets crisis, funds have not been available for noninvestment grade credit at any price. A decline in bond ratings now could have a significant impact on the future cost of capital and limit access to debt capital makets.

A decrease in bond ratings could have additional indirect impacts on Questar Gas that may exceed the direct impact on interest costs. Questar Gas relies on relationships with suppliers of goods and services to operate its business. The credit strength of Questar Gas is a key part of these relationships. Questar Gas would not be able to rely on supplier credit to run its business if its bonds were downgraded below investment grade.

For example, Questar Gas's natural gas purchases exceed $100 million during an average winter month. Without an investment grade bond rating, Questar Gas's suppliers would not extend the necessary credit to Questar Gas to make these essential purchases. Instead, Questar Gas would be required to prepay for this gas supply, significantly increasing the working capital requirement. Some of these suppliers may have internal

policies that would even prevent them from selling to Questar Gas under the same pricing terms received today.

Questar Gas has an insurance program that includes a self-insured retention. Without an investment grade bond rating, other parties that Questar Gas conducts business with would be unwilling to accept the self-insured retention, which would increase Questar Gas's costs of doing business.

In summary, the loss of an investment grade bond rating would significantly increase cost of business for Questar Gas and would increase cost of service to customers.

G. Allowed Returns in Other Jurisdictions

Q. What allowed returns on equity have other jurisdictions been ordering for natural gas distribution companies?

A. QGC Exhibit 2.7 pages 1 and 2 is a list of rate cases completed for natural gas distribution companies from January 2006 through October 2009 as compiled by SNL. A total of 99 cases during this time period had a return on equity identified in the rate-case order. The authorized returns ranged from 9.10% to 11.35% with a mean of 10.29%.

Q. Why is it important for the Utah Commission to acknowledge the returns authorized by other jurisdictions?

A. As was stated earlier, Questar Gas needs to raise debt and equity capital in order to continue to provide safe and reliable natural gas service. Questar Gas accesses the same capital markets as other natural gas utilities. These markets are aware of the authorized returns granted utilities. If Questar Gas's authorized returns are lower than comparable companies, the market will consider Questar Gas to have higher operating risks and will likely raise the cost of capital. This will have a direct impact on the cost of providing service to customers.

H. Comparison of Risks Between Questar Gas and Proxy Group

Q. How do the business risks of Questar Gas compare with the business risks of the proxy group?

A. As was stated earlier, I selected a proxy group of publicly traded natural gas companies based on earning the majority of operating income from natural gas distribution operations, holding investment grade bond ratings and attracting the following of investment analysts.

Natural gas distribution companies are also faced with risks of variation or declines in revenues due to weather and changes in usage per customer. Many jurisdictions throughout the United States have implemented various rate mechanisms to mitigate the impact of changes in weather and declining usage per customer.

QGC Exhibit 2.8 is a summary of the proxy companies, their natural gas distribution operating subsidiaries, the jurisdictions in which these companies provide service, their allowed returns on equity from the most recent cases and a summary of various regulatory mechanisms.

Several items are of interest in this exhibit:

- All of the companies in the proxy group have a form of revenue stabilization mechanism in at least some of their jurisdictions. The revenue stabilization mechanisms are intended to offset the loss of revenues due to declining gas usage per customer. These revenue stabilization mechanisms have several forms including a large monthly fixed charge, revenue decoupling, rate stabilization, and straight-fixed variable rate design.
- Weather normalization mechanisms are common and are used in five of the ten companies.
- Eight out of ten companies have a demand-side management program. In all jurisdictions but one, the demand side management program is paired with a direct

revenue stabilization program such as revenue decoupling or straight-fixed variable rate design. It is essential that companies with demand-side management programs have revenue stabilization programs because demand-side management programs are designed to reduce gas usage and volumetric revenues.

- Six out of ten companies have a facilities tracker to adjust rates for the costs of infrastructure replacement similar to the mechanism Questar Gas is requesting in this rate case.

- All of the companies in all jurisdictions use a gas balancing account.

Q. How does this impact the decision on the allowed return on equity?

A. It shows that the use of these rate mechanisms should not reduce the allowed return on equity because the proxy group companies and their respective expected returns on equity already reflect the inclusion of these mechanisms. I have used a proxy group to determine investors' expectations for the return on equity. Investors in the proxy companies are aware of the various rate mechanisms in place in each of these proxy companies. Historical operating results have been impacted by these mechanisms and future growth rate forecasts incorporate these mechanisms. The change in risk associated with these mechanisms has already been priced into the market value of these stocks.

Questar Gas shares the same regulatory mechanisms as the proxy group. Questar Gas is no less risky than the proxy group because it has a decoupling mechanism. Questar Gas would be in line with most of the proxy companies if the Commission allows Questar Gas to have a tracking mechanism for feeder line replacement. Therefore, no adjustment to an allowed return calculated from a proxy group is necessary or appropriate because of regulatory mechanisms.

I. Business Performance of Questar Gas Compared to Peer Companies

Q. How does the business performance of Questar Gas compare to its peer companies in the natural gas distribution business?

A. QGC Exhibit 2.9 contains a list of natural gas distribution companies that investors would consider peers to Questar Gas. This list includes all of the proxy companies and five additional diversified natural gas companies that have natural gas distribution operations. I have not included combination gas and electric companies because the information on separate gas distribution operations is generally not available and the economies of scope are different. This group of 15 peer companies, along with Questar Gas, comprises the universe of natural gas distribution companies that is available for capital market investors to make a direct investment in the natural gas distribution industry.

I have compared financial and operating data for these peer companies to Questar Gas using 2008 data. There are several interesting items of note from this exhibit:

- Questar Gas's actual financial return on equity is lower than the mean of the peer companies.
- Questar Gas's operating and maintenance expense per customer is significantly lower that the mean of the peer companies.
- Questar Gas's net property, plant and equipment cost per customer is significantly lower than the mean of the peer companies.
- Questar Gas's EBITDA (earnings before interest, taxes, depreciation and amortization) per customer is significantly lower than the mean of the peer companies.
- Questar Gas's gross margin (revenues less gas costs) per decatherm delivered is significantly lower than the mean of the peer companies.

Q. What conclusions can you draw from this analysis?

A. Questar Gas is among the most efficient companies in this peer group as demonstrated by the low operating and maintenance expense per customer and the low net property, plant and equipment per customer. As a result of efficient operations, the cost of service requirements are low as demonstrated by the low EBITDA per customer and the low gross margin per decatherm. Questar Gas overall rates remain the lowest in the lower 48 states as shown on Mr. McKay's QCG Exhibit 1.4.

However, Questar Gas has not been rewarded with an allowed return on equity that affords it the opportunity to earn at the same level as the mean of the peer companies. Questar Gas' current allowed return in Utah of 10.0% is clearly at the low end of the allowed return of the proxy companies as shown on QGC Exhibit 2.8.

Q. How should this analysis impact the decision on the allowed return on equity?

A. Questar Gas asks the Commission to acknowledge its standing as one of the most efficient natural gas distribution companies among its peers by approving an allowed rate of return on equity that is commensurate with its performance as a highly efficient company. The allowed rate of return should be comparable to its peer companies.

J. Recommendation

Q. Summarize your analysis of allowed return on equity.

A. The following table summarizes the results of my models and analysis of allowed return on equity.

	Minimum or Lower 95%	Mean	Maximum or Upper 95%
Discounted cash flow model			
Yahoo growth	8.51%	10.00%	13.28%
Zachs growth	7.99%	10.54%	14.80%
Combined growth	8.25%	10.20%	14.04%
Capital asset pricing model with small cap adjustment	9.67%	10.15%	10.65%
Regression analysis with 30-year treasury yield	9.58%	10.35%	11.12%
Regression analysis with Corp Baa yield	9.06%	10.42%	11.78%
Recent authorized returns	9.10%	10.29%	11.35%

Q. What is your recommendation for an authorized return on equity?

A. Based on my analysis, I recommend that the Utah Commission authorize an allowed return of 10.6%. Questar Gas needs access to capital markets in order to fund customer growth and replace aging infrastructure. This level of return would allow Questar Gas to

obtain the necessary financing and would be consistent with the returns currently authorized by other commissions. The level of return is slightly higher than the average returns reflected in the models in acknowledgement of Questar Gas's outstanding performance relative to its peers.

III. COST OF LONG-TERM DEBT

Q. What is Questar Gas's cost of long-term debt?

A. QGC Exhibit 2.10 shows Questar Gas's cost of long-term debt at 6.25% after assuming a three-year term loan effective as of October 2010. Questar Gas's overall cost of long-term debt is a weighted average of all issues currently outstanding, including amortization of debt issuance costs and loss on reacquired debt.

Q. How did you determine the cost of the three-year term loan issued in 2010?

A. Questar Gas received a quote from one of Questar Corporation's lenders on October 13, 2009. Based on Questar Gas's current bond ratings, the lender quoted term loan pricing of Libor plus 250 basis points and a 30 basis point fee. Based on the Libor three-month rate on October 20, 2009, of 28 basis points, the cost of this facility would be approximately 3.08%. This rate would be variable and would change every 90 days based on Libor.

IV. CAPITAL STRUCTURE

Q. What is Questar Gas's expected capital structure?

A. QGC Exhibit 2.10 also shows the Questar Gas's expected capital structure as of December 31, 2010. This is based on actual results through December 31, 2008 plus expected changes in equity and debt for 2009 and 2010. Questar Gas plans to receive an equity contribution of $50 million in 2010 from its parent company, Questar Corporation.

The capital structure is estimated as follows:

	% of Capital
Long-term debt	47.14%
Common shareholder's equity	52.86%

Q. Is this capital structure reasonable?

A. QGC Exhibit 2.11 shows the capital structure of the proxy companies. Note that these capital structures are based on numbers reported in SEC filings and may differ slightly from the percentages used to establish rates. The mean common equity percentage of capitalization was 56.0%. I believe that the Questar Gas capital structure is reasonable and in line with the capital structure of the proxy group.

V. RATE OF RETURN RECOMMENDATION

Q. What is your overall recommendation for rate of return?

A. The following table summarizes my recommendation:

	Percent of Capital	Cost of Capital	Weighted Cost of Capital
Long-term debt	47.14%	6.25%	2.95%
Common shareholder's equity	52.86%	10.60%	5.60%
Rate of return			8.55%

Q. Does this conclude your testimony?

A. Yes.

State of Utah)
) ss.
County of Salt Lake)

I, David M. Curtis, being first duly sworn on oath, state that the answers in the foregoing written testimony are true and correct to the best of my knowledge, information and belief. Except as stated in the testimony, the exhibits attached to the testimony were prepared by me or under my direction and supervision, and they are true and correct to the best of my knowledge, information and belief. Any exhibits not prepared by me or under my direction and supervision are true and correct copies of the documents they purport to be.

_____
David M. Curtis

SUBSCRIBED AND SWORN TO this 3rd day of December 2009.

_____
Notary Public