BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

IN THE MATTER OF THE APPLICATION OF QUESTAR GAS COMPANY TO INCREASE DISTRIBUTION RATES AND CHARGES AND MAKE TARIFF MODIFICATIONS.	§	**Docket No. 13-057-05**
	§	**Direct Rate of Return Testimony of Daniel J. Lawton For the Utah Office of Consumer Services**

October 30, 2013

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Exhibits and Attachments

DIRECT TESTIMONY OF
DANIEL J. LAWTON

SECTION I: INTRODUCTION/BACKGROUND/SUMMARY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Daniel J. Lawton. My business address is 12600 Hill Country Boulevard, Suite R-275, Austin, Texas 78738.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. I have been working in the utility consulting business as an economist since 1983. Consulting engagements have included electric utility load and revenue forecasting, cost of capital analyses, financial analyses, revenue requirements/cost of service reviews, and rate design analyses in litigated rate proceedings before federal, state and local regulatory authorities, and in court proceedings. I have worked with numerous municipal utilities developing electric rate cost of service studies for reviewing and setting rates. In addition, I have a law practice based in Austin, Texas. My main areas of legal practice include administrative law representing municipalities in electric and gas rate proceedings and other litigation and contract matters. I have included a brief description of my relevant educational background and professional work experience in Exhibit OCS 2.1.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN RATE PROCEEDINGS?

A. Yes. A list of cases where I have previously filed testimony is included in Exhibit OCS 2.1.

Q. ON WHOSE BEHALF ARE YOU FILING TESTIMONY IN THIS PROCEEDING?

A. I have been retained to review the Questar Gas Company ("Company" or "Questar") cost of capital request, and related financial issues, on behalf of the Utah Office of Consumer Services ("OCS").

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

A. The purpose of my testimony in this proceeding is to address the Company's requested overall cost of capital for regulated gas operations. I will address the Company's requested overall rate of return to be earned on rate base investment, capital structure, and cost rates for equity capital, and long-term debt, which is presented in the direct testimony of Questar cost of capital witness, Mr. David M. Curtis. In addition, I address the cost of capital impact of the Questar proposed expansion of the existing Infrastructure Replacement Tracker ("Tracker") to include the replacement of intermediate high pressure pipes initiative on customers, Company financial integrity and cash flow issues related to return of and on invested capital.

Q. WHAT MATERIALS DID YOU REVIEW AND RELY ON FOR THIS TESTIMONY?

A. I have reviewed prior orders of the Public Service Commission of Utah ("Commission") the Company's current direct testimony, Company responses to interrogatories, Value Line Investment Survey ("Value Line"), financial reports of the Company, along with other utility companies of comparable risk and other financial information available in the public domain. When relying on various sources, I have referenced such sources in my testimony and/or attached Exhibits and included copies or summaries in my schedules and/or work papers.

Q. PLEASE SUMMARIZE YOUR FINDINGS AND CONCLUSIONS IN THIS CASE.

A. My analysis of the Company's required cost of capital results in a

recommendation as follows for Questar in this case:

Table 1[1]

DESCRIPTION	RATIO	COST	WEIGHTED COST
LONG-TERM DEBT	47.93%	5.23%	2.51%
COMMON EQUITY	52.07%	9.30%	4.84%
TOTAL CAPITAL	100.00%		7.35%

As discussed below, in my opinion, these recommended return levels are consistent with current market capital costs and consistent with just and reasonable rates for consumers. My analyses of the Company's requested 10.35% equity return indicates that the Company's request is overstated and is not consistent with just and reasonable rates for consumers given current market capital costs.

Based on my analyses (which are fully explained in the following pages), I make the following conclusions and recommendations:

(i) A return of 9.3% on shareholder equity is consistent with current market capital cost requirements and is more than adequate for the Company to maintain its financial integrity and creditworthiness;

(ii) The Company's cash flows and liquidity at a rate of return on rate base investment of 7.35% are more than adequate to meet cash operating and construction requirements;

(iii) The Company's overall cost of capital, employing the Company's proposed capital structure and cost rates for debt and my recommended equity return of 9.3% for gas operations, to be earned on rate base investment should be set at 7.35% for setting just and reasonable rates for customers in this proceeding;

(iv) The Company's proposed 10.35% return for equity shareholders is an overstatement of the required return on equity to hold and attract equity capital;

(v) The Company's proposed 7.89% overall return on investment is overstated and should not be adopted as representative of the Company's cost of capital requirements; and

(vi) Lastly, if the Company's proposed expansion of the Tracker surcharge proposal is adopted, I recommend that the Company's equity return be reduced an additional 5 basis points to reflect the impact of the risk shifting from shareholders to customers.

SECTION II: OVERVIEW OF COMPANY'S REQUEST

Q. PLEASE DESCRIBE THE REQUESTED RATE INCREASE.

A. The Company is requesting an annual increase in revenue requirements of $18.96 million.[2] The Company's case is based on a test period (projected) for the 12 months ending December 31, 2014 and includes an equity return or shareholder profit level of 10.35%.[3] The requested increase does not include additional revenue requirements proposed to be recovered through a surcharge/tracker mechanism for Questar's proposed Tracker expansion.

SECTION III: SUMMARY OF ISSUES ADDRESSED

Q. WHAT ARE THE ISSUES BEING ADDRESSED WITH REGARD TO EQUITY, RETURN, AND CAPITAL STRUCTURE?

A. The overall issue is what level of profits that Questar should be authorized to earn on rate base investment. The Company has requested an after tax profit level on shareholder equity of 10.35% or about $54.3 million based on a requested rate base of $1.088 billion for gas operations.[4] Reducing the requested return level by the approximate 100 basis points will reduce requested revenue requirements by about $5.25 million annually before tax impacts.

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[1] Capital structure ratios and debt cost rate per Company request See QGC Exhibit 2.0 Direct Testimony David Curtis at 19.
[2] Questar Rate Filing QGC Exhibit 4.6 line 52, column B.
[3] Id at Line 58, column B.
[4] Id. At line 48, column B.

The Company's requested shareholder profit and return on investment is overstated in light of current market capital costs. The Company's failure to recognize these lower capital costs overstates the need for a rate increase in this case.

SECTION IV: REGULATORY ISSUES AND COST OF CAPITAL

Q. PLEASE EXPLAIN THE COST OF CAPITAL CONCEPT AS IT RELATES TO THE REGULATORY PROCESS.

A. The overall rate of return to be earned on rate base investment is an essential element in the regulatory and rate setting process and is typically a major part of overall revenue requirements. For example, in this case the Company's requested overall return is 7.89%. As is discussed above, a 100 basis point change in rate of return on equity can have a large impact on overall revenue requirements, in this case about $5.25 million per year before tax and revenue related gross-up factors are considered.

Q. WHAT IS THE BREAKDOWN OF RETURN ON CAPITAL AND PROFIT BEING REQUESTED IN THIS CASE?

A. The overall return on rate base investment being requested in this case is shown in the following table.

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Table 2[5]

GAS OPERATIONS COMPANY REQUEST					
LINE NO.	DESCRIPTION	RATIO	COST RATE	WEIGHTED COST	WEIGHTED W/ FIT
1	Long-Term Debt	47.93%	5.23%	2.50%	2.50%
2	Common Equity	52.07%	10.35%	5.39%	8.29%
3	Total Capital	100.00%		7.89%	10.79%

GAS OPERATIONS COMPANY REQUEST (CONTINUED)				
LINE NO.	DESCRIPTION	CLAIMED RATE BASE	RETURN REQUIREMENT	RETURN & FIT REQUIREMENT
1	Long-Term Debt	$1,008,377,277	$25,209,432	$25,209,432
2	Common Equity	$1,008,377,277	$54,351,535	$83,594,476
3	Total Capital		$79,560,967	$108,803,908

As can be seen from the Table 2 above, the Company is requesting that rates be set to allow the Company to earn a 7.91% overall return on a claimed test year investment level of $1.008 billion, which translates into about $79.5 million of total return dollars. The total return dollars can be broken down to $25.209 million of interest return to cover claimed debt costs and a Company request of $54,351,535 of profit for shareholders.

It is important to note that the shareholder profit being requested is an after tax request. In other words, customers also must pay through rates a return on equity investment and income (state/federal/revenue related) taxes such that the $54.3 million profit request is available after all taxes are paid. Federal income taxes alone, at a 35% rate, adds about $29.242 million to gas customer rates.[6]

Q. PLEASE EXPLAIN HOW THE VARIOUS COMPONENTS OF COST OF CAPITAL ARE DETERMINED.

A. The overall rate of return in the regulatory process is best explained in two parts.

[5] Capital structure and cost rates per QGC 2.0 David Curtis Direct Testimony at 19: 501, Rate Base per QGC Exhibit 4.6, line 48, column B.

[6] Tax Factor equal 1/(1-tax rate), which is (1/(1-.35)) equals 1.53846154. This tax factor of 1.53846154 times the requested shareholder profit level requested equals taxes and profits.

First, return to senior securities, such as debt and preferred stock, both of which are included in the capital structure, are contractually set at issuance. The reasonableness of the cost of this contractual obligation between the utility and its investors is examined by regulatory agencies as part of the utility's overall revenue requirement.

The second part of a company's overall return requirement is the appropriate cost rate to assign the equity portion of capital costs. The return to equity should be established at a level that will permit the firm an opportunity to earn a fair rate of return. By fair rate of return, I mean a return to equity holders, which is sufficient to hold and attract capital, sufficient to maintain financial integrity, and a return to equity comparable to other investments of similar risks.

Two U.S. Supreme Court decisions are often cited as the legal standards for rate of return determination. The first is *Bluefield Water Works and Improvement Company v. Public Service Commission of West Virginia*, 262. U.S. 679 (1923). The *Bluefield* case established the following general standards for a rate of return: The return should be sufficient for maintaining financial integrity and capital attraction and a public utility is entitled to a return equal to that of investments of comparable risks.

The second U.S. Supreme Court decision is the *Federal Power Commission v. Hope Natural Gas Company*, 320 U.S. 591 (1942). In the *Hope* decision, the Court affirmed its earlier *Bluefield* standards and found that methods for determining return are not the test of reasonableness rather the result and impact of the result are controlling.

The cost of capital is defined as the annual percentage that a utility must receive to maintain its financial integrity, to pay a return to security owners and to ensure the continued attraction of capital at a reasonable cost and in an amount adequate to meet future needs. Mathematically, the cost of capital is the composite of the cost of several classes of capital used by the utility such as debt, preferred stock, and common stock, weighted on the basis of an appropriate capital structure.

The ratemaking process requires the regulator to determine the utility's cost of capital for debt, preferred stock and equity costs. These calculations of cost rates, when combined with the proportions of each type of capital in the capital structure, result in a percentage figure that is then multiplied by the value of assets (investment) used and useful in the production of the utility service to ultimately arrive at a rate charged to customers. Rates should not be excessive (exceed actual costs) or burdensome to the customer and at the same time should be just and reasonable to the utility.

Q. PLEASE EXPLAIN THE COST OF EQUITY CONCEPT.

A. The cost of equity, or return on equity capital, is the return expected by investors over some prospective time period. The cost of equity one seeks to estimate in this proceeding is the return investors expect prospectively when the rates from this case will be in effect.

The cost of common equity is not set by contract and there are no hard and fast mathematical formulae with which to measure investor expectations with regard to equity requirements and perceptions of risk. As a result, any valid cost of equity recommendation must reflect investors' expectations of the risks facing a utility.

Q. WHAT PRINCIPAL METHODOLOGY DO YOU EMPLOY IN YOUR COST OF EQUITY CAPITAL ANALYSES?

A. I employ the Discounted Cash Flow ("DCF") methodology for estimating the cost of equity, keeping in mind the generally accepted premise that any utility's cost of equity capital is the risk free return plus the premium required by investors for accepting the risk of investing in an equity instrument. It is my opinion that the best analytical technique for measuring a utility's cost of common equity is the DCF methodology. Other return on equity modeling techniques such as the Capital Asset Pricing Model ("CAPM") or risk premium are often used to check the reasonableness of the DCF results. I have employed all these modeling methods to arrive at my recommendations in this case.

Q. PLEASE DESCRIBE THE RISKS YOU REFER TO ABOVE.

A. As I stated earlier in this testimony, equity investors require compensation above and beyond the risk free return because of the increased risk factors investors face in the equity markets. Thus, investors require the risk free return plus some risk premium above the risk free return. The basic risks faced by investors that make up the equity risk premium include business risks, financial risks, regulatory risks, and liquidity risks.

SECTION V: CURRENT CAPITAL MARKET CONDITIONS

Q. DO CURRENT ECONOMIC CONDITIONS WARRANT HIGHER RETURNS FOR UTILITY COMPANIES?

A. In my opinion, no. While the financial markets and the economy in general have experienced periods of uncertainty and turmoil since September 2008, government intervention has had an impact on financial markets. Moreover, recent September 2013 Federal Reserve monetary policy announcements have signaled continuation of accommodative monetary policy and continued low interest rates. The end result is that cost of capital today is not higher as a result of the economic turmoil that impacted the global markets in the autumn of 2008. The cost of capital continues at low levels as evidenced by an historical annual review of bond yields and authorized equity returns set by regulatory authorities around the country.

Q. ARE ECONOMIC CONDITIONS EXPECTED TO CONTINUE TO IMPROVE IN 2013?

A. Yes, but slowly. Forecasts are for continued, but slowed economic improvement. Economic conditions in the first half of 2013 when compared to the end of 2008 are much improved. The Federal Reserve has recently, following the September Federal Reserve meetings lowered economic growth estimates to reflect the slower growth in Gross Domestic Product ("GDP"). This represents the third time the Federal Reserve has lowered the forecast projections this year.

I have included in my Exhibit OCS 2.2 recent economic projections of the Federal Reserve from the September 2013 meetings of the Federal Reserve Board. These projections of GDP and unemployment have declined from the earlier June 2013 projected levels.

Thus, while growth continues in the U.S. economy the growth in economic activity is slower than earlier projected and the Federal Reserve has once again revised its projections to lower levels.

Q. DOES THE FEDERAL RESERVE CONTINUE TO TARGET A LOW FEDERAL FUNDS RATE AS PART OF ITS MONETARY POLICY?

A. Yes. Since December 2008, the federal funds targeted rate, by the Federal Open Market Committee ("FOMC") of the Federal Reserve, has been between 0 and .25 percent – essentially zero. Thus, for the past few years the Federal Reserve policy has been to maintain low short-term interest rates as part of the monetary policy.

Q. HAS THE FEDERAL RESERVE CHANGED ITS PUBLIC REPORTING POLICY OF THESE CLOSELY WATCHED INTEREST RATES?

A. Yes. At the December 2011 meeting of the Federal Reserve it was decided to start communicating to the public, four times per year, how long the Federal Reserve will maintain short-term interest rates at current levels.[7] In other words, projections of target federal reserves combined with the Summary of Economic Projections (which are released four times per year and include projections of economic growth, unemployment, and inflation) would help the public and markets better understand monetary policy. Another goal of this new projected information was to assure the public and the markets that interest rates will not increase before a specific time.

The first forecast of interest rates under this new policy was published following the January 24-25, 2012 meeting of the FOMC. Following the January 2012 FOMC meetings the Federal Reserve stated: "…the Committee decided today to

[7] www.federalreserve.gov, see minutes of Federal Open Market Committee, December 13, 2011 at 9-10.

keep the target range for the federal funds rate at 0 to ¼ percent and currently anticipates that economic conditions – including low rates of resource utilization and a subdued outlook for inflation over the medium run – are likely to warrant exceptionally low levels for the federal funds rate at least through late 2014."

Thus, the Federal Reserve has made a commitment extending these 0% to .25% federal funds rates from the mid-2013 period at least through late 2014. Certainly, the Federal Reserve's assurance that these key interest rates will remain at or near zero for an additional 18 months beyond the previous mid-2013 projection points to continued sluggish economic conditions and lower near term expectations.

Q. DO THE FEDERAL RESERVE POLICY ACTIONS PROVIDE YOU ANY INSIGHT AS TO THE DIRECTION AND LEVEL OF LONGER-TERM INTEREST RATES?

A. Current monetary policy objectives of the Federal Reserve are designed to stimulate economic growth and employment. The Federal Reserve decision not to taper the current quantitative easing program and maintain the accommodative monetary policy is yet another signal of continued low interest rates. The Federal Reserve has stated that short-term rates will remain at or near zero at least until late 2014 in an effort to provide further economic stimulus and employment growth.

The market evidence provided in Exhibit OCS 2.3 shows long term interest yields generally declining. Although, since May 2013 there has been an up tick in yields from earlier lower levels which has continued through September 2013. Thus, the Federal Reserve stated policy of continued lower interest rates is reflected in market results. The Federal Reserve actions continue efforts to maintain lower interest rates in an effort to promote economic growth and lowering unemployment levels. The evidence of declining and lower rates in the market place all indicate it is reasonable to expect continued low yields for the foreseeable near term future.

Q. WHAT DOES THE FEDERAL RESERVE'S MOST RECENT ECONOMIC ASSESSMENT INDICATE?

A. I discussed earlier the revised and lowered economic estimates of the Federal Reserve Open Market Committee that reflect lower or slower growth. Basically, economic growth is slower than expected. Unemployment at high levels continues. The Federal Reserve response is to maintain the federal funds rate at or near zero through late-2014.

Economic projections from the Federal Reserve meeting in September 2013 indicate a long-term range (beyond 2015) GDP growth in the 2.2% to 2.5% range, unemployment in the 5.2% to 5.8% range and inflation at 2.0%. The shorter range up to 2015 indicates a GDP growth range at 3.0% to 3.5%, unemployment at 5.9% to 6.2% and inflation at 1.7% to 2.0%.

Generally, the recent Federal Reserve actions reflect a view of slightly weaker economic conditions than was previously projected following the June 2013 forecast. The current policy of extending low interest rates through the end of 2014 or longer and continuation of accommodative monetary policy through quantitative easing is viewed as an attempt to further increase economic growth to address higher levels of unemployment.

Q. WHAT CONCLUSIONS DO YOU DRAW FROM CURRENT ECONOMIC CONDITIONS IN PROVIDING GUIDANCE IN SETTING EQUITY CAPITAL COSTS IN THIS PROCEEDING?

A. As a general matter capital costs remain low in comparison to historical levels. While the yields of the bottom tier of investment grade corporate bond rates triple-B increased substantially during the liquidity crisis such increases do not appear to be a trend, but rather the direct impact of an atypical event in the capital markets. Current triple-B bond rates during the first week of October are at the 5.4% level. The economic slowdown and continued but modest growth in recovery will cause general investor expectations of growth to continue to be moderate. The bottom line is that the general economic data does not support increasing capital costs.

Q. HAVE REGULATORY AUTHORITIES AROUND THE COUNTRY RECOGNIZED THE DECLINING COST OF EQUITY AND DEBT CAPITAL IN SETTING RATES?

A. Absolutely. Many regulatory authorities have established equity returns at or below 10%. Regulatory authority cost of equity decisions for calendar year 2012 averaged about 10% for electric utilities and 9.94% for gas utilities.[8]

SECTION VI: QUESTAR AND THE UTAH REGULATORY PROCESS

Q. DOES THE REGULATORY PROCESS IN UTAH AFFORD QUESTAR RISK-REDUCING OPPORTUNITIES?

A. Yes. Utah provides a supportive regulatory framework. The Company is able to employ a forecasted test year in setting rates that minimizes the impact of regulatory lag. By employing a forecasted test period future expected cost changes are included in the rate calculus without the need of future filings to recover cost changes. This future test year allows for improved cost recovery for the utility.

Also, Questar has the advantage of a decoupling mechanism through the Conservation Enabling Tariff that applies to the GS customer rate tariff. This decoupling tariff ensures that the Company collects the authorized revenue per customer no matter the weather, economic, conservation or other influences on consumer demand. Cash flow recovery is predictable and not influenced by consumption.

A third mechanism is the Tracker, which currently authorizes recovery of about $55 million per year associated with high-pressure feeder lines. This recovery mechanism allows Questar to recover investment on an ongoing basis without the need of filing a rate proceeding. Such a mechanism improves cash flow and reduces regulatory lag or earnings erosion.

[8] Regulatory Research Associates, Regulatory Focus, Major Rate Case Decisions - Calendar 2012, (January 17,2013) at 1.

Such rate mechanisms reduce the Company's risks through enhancing cash flow and improving the timing of cost expenditure recovery. Questar has lower risk due to these mechanisms. I would note that many gas companies and some electric utilities have similar mechanisms, thus Questar's risks relative to the proxy gas companies are similar in terms of regulatory mechanisms that enhance cash flow and reduce regulatory lag.

Q. PLEASE EXPLAIN REGULATORY LAG AND HOW IT IMPACTS RATE SETTING AND REGULATORY RISK.

A. Regulatory lag is the period of time it takes to adjust tariffs in a rate case proceeding. Generally, it is the time between the utility rate request or the realization of a needed rate adjustment and the ultimate authorization of a rate change. For example, a utility requesting a rate increase of $1 million based on an historical test year may claim earnings erosion due to the regulatory lag during the pendency of the rate process until the authorized increase is implemented. Also, a utility that receives a rate adjustment may assert regulatory lag if it finds its unit costs are higher than the cost levels upon which the rate adjustment was based.

The counter argument to these claims of regulatory lag and risks is that the utility controls the timing of its rate requests. Also, regulatory lag is built into the regulatory process to encourage the utility to control and monitor costs as a means of managing costs and bolstering profits. Regulatory lag can work both ways – sometimes there is earnings erosion while other times there can be excess earnings.

Other contributions to regulatory lag are increasing costs, inflation, increasing capital investments and lower growth and sales. I have discussed three mechanisms in Utah that address regulatory lag issues: (i) forecasted test year, (ii) decoupling, and (iii) Infrastructure Replacement Tracker. For example, the test year (in this case the 12 months ended December 31, 2014) affords Questar the opportunity to capture future expected changes in this rate proceeding. Second, revenue decoupling assures revenue recovery and prevents earnings

erosions resulting from economic and typical weather influences on utility sales. Third, the aforementioned Tracker limits the Company's gas operation risk to certain plant additions. The regulatory process in Utah provides the Company ample opportunity to earn its authorized return by reducing regulatory lag in the rate process.

Q. HAVE RATING AGENCIES WEIGHED IN WITH REGARD TO THE RISKS AND EXPECTATIONS OF THE COMPANY?

A. Yes. A Standard & Poor's ("S&P") January 23, 2013 credit research report for Questar Gas which evaluates Questar Gas based on the consolidated credit profile of the parent company, Questar Corp. specifically stated the following regarding the regulated gas company Questar:

> Supportive regulation, a growing service area with a mostly residential customer base, low operating risks, and lack of competition characterize the utility's excellent business risk profile.
>
> … QGC's constructive relationship with the Utah Public Service Commission, which covers more than 95% of its customer base, has resulted in supportive rate design that provides stable cash flows largely insulated from fluctuations in gas prices, weather, and usage. QGC also has a decoupling mechanism and an infrastructure tracker …[9]

The benefits and attributes of regulatory mechanisms such as decoupling, infrastructure adjustments, and use of a forecasted test year are viewed as important attributes by credit rating agencies in evaluating risk and creditworthiness.

Standard & Poor's views Questar's financial risk profile as intermediate and business risk profile as excellent.[10] Such risk evaluation and assessment is consistent with the Company bond rating of "A" by Standard & Poor's.

[9] Standard & Poor's Research, Questar Gas Company (January 23, 2013) at 2.
[10] Id.

Q. **ARE OTHER RATING AGENCY REPORTS FOR QUESTAR CONSISTENT WITH THE RECENT STANDARD & POOR'S EVALUATION YOU DESCRIBED ABOVE?**

A. Yes. Moody's also rates the Questar Gas senior debt at A3 which Moody's states: "… reflects the regulatory environment and rate mechanisms, particularly in its predominant Utah jurisdiction, that have been supportive of the company's credit quality. … Additionally, Questar Gas is well capitalized has exhibited strong financial metrics."[11] Moody's also views the regulatory environment for Questar Gas as constructive.[12]

Thus, both Moody's and Standard & Poor's view the regulatory mechanisms in Utah as credit supportive to the Company.

Q. DOES THE COMPANY FACE ANY UNUSUAL BUSINESS OR FINANCIAL RISK?

A. No. If anything risks have declined with cost recovery through the credit supportive mechanisms implemented in Utah.

SECTION VII: COMPARABLE GROUP ANALYSIS

Q. PLEASE EXPLAIN AND DESCRIBE THE STARTING POINT OF YOUR COST OF CAPITAL ANALYSIS FOR THIS CASE.

A. Each of the components of the cost of capital analysis is addressed in detail in the following pages. But the first step for any cost of equity capital analysis is the selection of a comparable group of companies for which market data is available to conduct a market based cost of capital analysis. My analysis starts with 18 gas distribution and integrated natural gas companies from AUS Utility Reports. I then reduced this group to reflect only gas distribution companies. The resulting eight companies are presented in my Exhibit OCS 2.4. All of these companies are dividend-paying utilities with investment grade bond ratings. I have excluded the Laclede Group from the comparable group because Laclede is

[11] Moody's Investor Services Credit Opinion Questar Corporation (November 29, 2012) at 2.
[12] Id.

currently involved with purchasing gas systems in Missouri and selling off gas systems assets in New England. I remove Laclede to avoid any distortions to current market data associated with the sale and purchase transactions. Thus, my comparable group of gas utilities consists of eight companies. These eight companies are the same companies employed by Mr. Curtis in his proxy group analysis on behalf of Questar.

I have included a listing in Exhibit OCS 2.4 of the gas utilities in the comparable group along with basic data for beta, historical and forecasted equity ratios and bond ratings.

Q. **DO YOU HAVE OTHER SPECIFIC REASONS EXPLAINING WHY YOU EXAMINED COMPARABLE GAS COMPANIES?**

A. There are several reasons why the estimate of a cost of capital requires an analysis of a group of comparable risk companies rather than the single firm subject of the analysis:

(1) A comparable risk group analysis is consistent with the requirements of a fair and reasonable return addressed in the *Hope* and *Bluefield* cases. The return on investment should be commensurate with returns earned by firms with comparable risk. Thus, there is a need to examine firms of comparable risk to identify the fair and reasonable comparable returns being earned. In addition, the equity returns of comparable firms are viewed as opportunity costs of forgone investments in the market that like other investment opportunities, will directly impact the cost of equity of the Company.

(2) The reliability of the cost of equity estimate is enhanced when the calculation is based on equity capital estimates from a variety of risk equivalent companies. A group of comparable companies can be employed as a check on a single company analysis. Further, the comparable group analysis, whether employed as a check or the primary analysis, mitigates any distortions resulting from measurement errors in dividend yield and expected growth measures and estimates. For

example, the average growth rate estimate based on forecasts of several comparable firms is less likely to deviate from investor expectations of growth than an estimate for a single firm. Moreover, the general assumptions underlying the DCF model are more likely to be met for a group of companies than for a single firm.

(3) An analysis of a comparable group also avoids circularity problems. In the analysis of investor-owned utilities, the stock price (that is, the cost of equity capital) is a direct function of an investor's growth rate expectations, which is also a function of an investor's perception of the regulatory environment. The cost of equity depends in part on the anticipated regulatory environment and actions.

(4) Extending the sample size of comparable companies beyond a single regulatory influence will mitigate the regulatory circularity problem. Specific conditions concerning a subject utility often require that a comparable company analysis be employed. One of the most common conditions is the lack of market data necessary to perform a DCF analysis. In times of utility consolidation and merger, many utilities are owned and controlled by a single parent holding company.

SECTION VIII: COST OF CAPITAL MODELS

Q. PLEASE EXPLAIN THE CONSTANT GROWTH DCF METHODOLOGY YOU HAVE EMPLOYED IN YOUR ANALYSIS.

A. The foundation of the DCF model is in the theory of security valuation. The price that an investor is willing to pay for a share of common stock today is determined by what income stream the investor expects to receive from the investment. The return the investor expects to receive over the investment time horizon is composed of: (i) dividend payments and (ii) the appreciated sale value of the investment. A proper analysis adds dividends to the gain on the final sale value, and discounts these expected future earnings to a present value.

To determine or estimate investor requirements using the DCF model, one computes a cost of capital requirement, or discount rate from the current market

data and the expected dividend stream. The DCF model stated as a formula is as follows:

$$K = D/P + G$$

where:

K = required return on equity,

D = dividend rate,

P = stock price,

D/P = dividend yield, and

G = growth in dividends.

Q. PLEASE EXPLAIN HOW YOU CALCULATED THE DIVIDEND YIELD FOR THE COMPARABLE COMPANIES.

A. The dividend yield is the ratio of the dividend rate to the stock price. When calculating the dividend yield one must be cautious and not rely on spot stock prices. One must be equally cautious not to rely on long periods of time as the data becomes unrepresentative of market conditions. The objective is to use a period of time such that the resulting dividend yield is representative of the prospective period when rates will be in effect.

While there is no fixed period for selecting the denominator of the dividend yield (i.e., stock price), the key guideline is that the yield not be distorted due to fluctuations in stock market prices. On the other hand, dividends, the numerator of the yield calculation, are relatively stable, as opposed to the stock prices, which are subject to daily and cyclical market fluctuations. The selection of a representative time period will dampen the effect of stock market changes.

The price and dividend data used for each of the proxy companies in the comparable group is contained in my Exhibit OCS 2.5.

I have examined weekly closing stock prices for the period July 2013 through the first week of October 2013 for 12 week, 8 week, 6 week along with 52 week high and low averages, and spot intervals to calculate a representative price for the dividend yield calculation. For this analysis, I have employed the recent six-week average price in calculating the dividend yield.

To calculate dividends, one could employ the current annualized dividend increased for one-half of the expected growth rate. Because utility companies tend to increase quarterly dividends at different times throughout the year, the assumption is that dividend increases will be evenly distributed over the calendar quarters for the comparable group companies. Given the above, it is appropriate to calculate the expected dividend yield by applying one-half of the long-term estimates of growth to the current dividend yield. An alternative calculation is to employ current estimates of next year's expected dividend (in this case the 2014 dividend estimate) and no growth adjustment is necessary. For this proceeding I have calculated the yield employing the 2014 dividend estimates from Value Line and the recent six-week average price and the resulting dividend yields are shown in my Exhibit OCS 2.5 at column (Y).

Q. HOW DOES THE DIVIDEND YIELD FROM YOUR COMPARABLE GROUP ANALYSIS COMPARE TO THE DIVIDEND YIELD PRESENTED BY MR. CURTIS' CONSTANT GROWTH DCF ANALYSIS?

A. Mr. Curtis' comparable group dividend yield is a group average of 3.74% to 3.81%.[13] My comparable group dividend yield is about 3.78% to 3.86% shown on Exhibit OCS 2.5 column Y average and median estimates. Given that we both use the same comparable group the small differences in dividend yield results are mostly related to the timing of our analyses.

Q. EXPLAIN HOW YOU HAVE CALCULATED THE EXPECTED GROWTH RATE IN YOUR CONSTANT GROWTH DCF ANALYSIS FOR THE COMPANIES IN THE COMPARABLE GROUP.

A. Like the dividend yield, there exists no single or simple method to calculate growth rates. The calculation of investor growth expectations is the most difficult part of the DCF analysis. To estimate investor expectations of growth, I have examined historical growth and forecasted growth rates, and other financial data for each of the companies in the comparable group.

[13] See QGC Exhibit 2.0 Direct Testimony David M. Curtis at 6:154.

Implementation of the DCF model requires the exercise of considerable judgment with regard to estimating investor expectations of growth and it is a difficult task, but such difficulties are not insurmountable. Many economic factors affect capital markets in general and individual stocks specifically. Such economic variables entail the current state of the economy, the trade deficit, federal budget uncertainty, fiscal policy, inflation, and Federal Reserve Board policies on interest rates.

Investors generally have good information on the economic and financial variables outlined above. All of this information is available quickly, especially in recent decades with easy access to the worldwide web. This information influences return expectations and the maximum price an investor will pay for various securities.

Like the information available on the general economy, investors also have access to a wealth of information about particular types of securities, industries and specific company investments. This information is also factored into investor expectations and therefore the stock price individuals are willing to pay.

Common stock earnings growth rate forecasts and historical growth rate data may be found in the Value Line publication. These Value Line earnings estimates are five-year projections in annual earnings. Again, Value Line is widely available to the public, and is a good source of earnings projections. Other earnings estimates are forecasted by Zacks as well as First Call projections, which are widely available on the internet at Zacks.com and Yahoo Finance respectively. Those earnings projections along with other stock specific financial data provide a range of estimates of earnings and are readily available at no cost.

Another growth estimate is referred to as the sustainable growth or retention ratio growth estimate. To project future growth in earnings under the sustainable growth method, one multiplies the fraction of a firm’s earnings expected to be retained (not paid out as dividends) by the expected return on book equity. As a formula:

Growth = ("b" x "r")

Where:

"b" =1- (dividends per share/earnings per share)

"r" =earnings per share / net book value share

All the data necessary to calculate the elements of the sustainable growth method are available on a forecasted basis in Value Line.

I have extended this sustainable growth formula to include the impact of external equity financing. The growth formula including external financing is:

$$g = br + sv$$

The terms "b" and "r" have been described above, "s" is the expected growth in shares to finance investment, and "v" is the profitability of those expected investments.

Q. PLEASE EXPLAIN YOUR GROWTH RATE ANALYSIS.

A. I have included in my Exhibit OCS 2.6 a two-page schedule showing the growth rates I have reviewed in my analysis. The first set of growth rates examined is the five-year and ten-year historical growth rates in earnings per share, dividends per share, and book value per share as reported by Value Line. The second set of growth rates is the Value Line forecasted growth rates in dividends, book value and earnings per share for each company in the comparable group. The third set of growth rates examined is the Zacks forecasted growth rates in earnings. The fourth growth estimate considered, the First Call growth estimate is readily available to investors at Yahoo Finance.

In addition, I have examined the growth rates based on the forecasted internal growth, the so-called sustainable growth estimate discussed above.

The growth rates described above provide a range of estimates for each of the comparable companies. The resulting range of average and median forecasted growth rates for the gas utility comparable group is from 3.0% to 5.8%. (See Exhibit OCS 2.6 page 1 of 2, columns H through O). Relying on the average

forecasted earnings per share estimates and internal growth rate estimates, the growth rate average range can be narrowed to 4.85% to 5.82% as shown in Exhibit OCS 2.6, page 1, columns M and N.

Q. DID YOU RELY ON THE HISTORICAL GROWTH RATES?

A. No. Historical growth rates are a starting place for the analysis, but investors consider additional information when formulating expectations. Moreover, whether the trends of the past ten or five years continue to hold may be a suspect assumption. Instead, I rely on all forecasted growth rates as a better predictor of investor expectations. I should note that despite a number of missing and excluded negative historical growth observations, this historical average range is 4.58% to 5.14% (Exhibit OCS 2.6 page 1, column G) for the group and is consistent with the forecast range discussed above, albeit at the lower end of the range.

Q. HOW DO THE GROWTH RATE ESTIMATES FOR YOUR COMPARABLE GROUP COMPARE TO THOSE PROJECTED BY QUESTAR WITNESS MR. CURTIS?

A. Mr. Curtis reviewed five forecasted growth rates for his constant growth DCF analysis.[14] Mr. Curtis abandoned his forecasted growth estimates in favor of historical growth for estimating his DCF capital costs.[15] The historical five and ten-year growth estimates utilized by Mr. Curtis ranged from 5.01% to 9.4% as shown in his QGC Exhibit 2.3 at page 2 of 2 columns H and I.

As stated above the comparable group growth estimates (mean and median values) range from 4.85% to about 5.82% as shown in my Exhibit OCS 2.6 page 1, columns M and N.

The bottom line is that my recommended growth rates top out at about 5.8% while Mr. Curtis' growth estimates extend to 9.4% based on an unfounded belief that forecasted growth estimates are biased downward.[16]

[14] QGC Exhibit 2.0 Direct Testimony David Curtis at 6:158-166.
[15] Id. at 7:170-187.
[16] Direct Testimony David Curtis at 7: 176-187.

Q. PLEASE SUMMARIZE YOUR CONSTANT GROWTH DCF ANALYSIS.

A. The comparable group mean and median results fall in a range of 8.94% to 9.61% with about a 9.25% midpoint. These analyses can be found in my Exhibit OCS 2.7, columns E and G. As I note on my Exhibit OCS 2.7, all results below 7.5% have been excluded from the calculations. There are no regulatory authorities considering or authorizing equity returns below 7.5% and investment alternative returns would likely keep investors from seeking returns below 7.5% for utility companies under current market conditions. Thus, I treated all results below 7.5% as unreasonable and excluded them from the analysis.

Q. HOW DO YOUR CONSTANT GROWTH DCF RESULTS AND RECOMMENDATIONS COMPARE WITH QUESTAR WITNESS MR. CURTIS' CONSTANT GROWTH DCF RECOMMENDATIONS?

A. At page 8:205-206 of Mr. Curtis' direct testimony, he concludes the following regarding his constant DCF analysis; "I believe these two models support a required return on equity of 10.35%."

I should note that Mr. Curtis' actual results (prior to his consideration of the relative merits of the alternative growth rates) show a range of DCF results of 7.96% to 9.50% with a midpoint of 8.75%.[17]

As discussed earlier, my comparable group results range from 8.94% to 9.61% with a midpoint of 9.25%.

Q. HAVE YOU CALCULATED ADDITIONAL DCF ANALYSES FOR THE COMPARABLE GROUP COMPANIES?

A. Yes. I have calculated a two stage non-constant growth DCF analysis for the companies in the comparable groups.

Q. PLEASE DESCRIBE YOUR TWO-STAGE NON-CONSTANT GROWTH DCF.

[17] See Direct Testimony David Curtis at Exhibit QGC 2.3, page 1 of 2.

A. This analysis calculates equity cost using a non-constant growth two stage DCF Model. The constant growth DCF model is often adjusted to reflect multiple growth assumptions because the constant growth rate assumption is often not consistent with investor expectations. As an example, it is often the case where short-term growth estimates are not consistent with long-term sustainable growth projections. In those instances, where more than one growth rate estimate is appropriate, a multi-stage non-constant growth model can be employed to derive a cost of capital estimate. In other words, the constant growth model is adjusted to incorporate multiple growth rate periods, assuring a constant growth (long-term) rate is estimated for a longer period.

For the comparable group, the first growth stage (years 1-4) of the model, the Value Line growth in dividends is employed and an annual dividend is calculated. The second stage (years 5 and beyond) employs an earnings growth estimate based on the individual company in the comparable group forecast earnings per share ("EPS") average estimate. The forecasted EPS estimate is the average of the analyst earnings per share growth estimates and represents the higher end of my growth rate range.

In the two-stage model the dividend cash flows are discounted equal to the price paid for the stock. The calculated discount rate is the cost of equity capital estimate.

Q. WHAT ARE THE RESULTS OF THE TWO STAGE NON-CONSTANT GROWTH DCF ANALYSIS?

A. The results of the two-stage non-constant growth DCF analysis are shown in Exhibit OCS 2.8, column L. The gas company comparable group mean and median results indicate a cost of equity range of 8.99% to 9.41% with a 9.2% midpoint.

SECTION IX: RISK PREMIUM/ECAPM COST OF EQUITY ESTIMATE

Q. PLEASE DESCRIBE THE RISK PREMIUM ANALYSIS.

A. Debt instruments such as bonds (long-term debt) are less risky than common equity when both classes of capital are issued by the same entity. Bondholders have a prior contractual claim to the earnings of the corporation and returns on bonds are less variable and more predictable than stocks. The bottom line is that debt is less risky than equity. There are numerous return studies of capital market investments, all of which show lower returns with lower risks and higher returns with higher risk investments. These financial truisms provide a sound theoretical basis and foundation for the risk premium method for estimating equity costs. The risk premium approach is useful in that the analysis is based on current market interest rates, that is, the current observable cost of debt capital. But, the risk premium approach is not without its problems and drawbacks. In practice, there is considerable debate as to the time period to analyze in the determination of the bond/equity return risk spread. Historical debt/equity risk spreads measured over many decades may not be relevant to current capital market requirements. Others argue that a long-term analysis is necessary, since the goal is to measure investors' long-term expectations.

Another version of the risk premium method is the capital asset pricing model ("CAPM"). Generally, the CAPM begins with a theoretically risk-free interest rate such as a 30-year Treasury bond yield. The risk premium, or equity spread above and beyond the risk free rate is adjusted by the stock beta.[18] The risk free return measure is combined with the equity risk premium adjusted for the measure of beta to arrive at a CAPM result.

Like the risk premium discussed above, the CAPM is subject to measurement uncertainties. First, the problem of how to measure the equity risk premium and the time period for which the premium is analyzed are subject to considerable debate. This problem and associated criticisms is generic to all variants of the risk premium model. Second, measures of beta are sometimes unstable from period to period and may not reflect the equity risk spread measure.

For all of the above reasons, risk premium methods should be viewed with

[18] Beta is a measure of the volatility of the specific stock movement relative to that of a market measure such as the S&P 500. A beta below 1.0 means that a specific stock is less volatile than the market

caution. The risk premium analysis and CAPM described below consists of analyses that estimate Questar's cost of capital and are employed along with the DCF results described earlier to estimate Questar's cost of equity.

Q. **DESCRIBE YOUR RISK PREMIUM ANALYSIS.**

A. I performed two analyses. The first compared the authorized gas utility return on equity relative to 30-year U.S. Treasury bond yields and the second analysis calculated the risk premium from the average triple-B corporate bond yield for the period 1980 - 2012. This analysis is set forth in my Exhibit OCS 2.9. For each risk premium analysis the resulting risk premium is combined with the 30 years U.S. Treasury Bond or corporate triple-B recent 3-month average yield to determine the risk premium estimate of equity costs.

The resulting risk premium range of results for gas utilities is 9.85% to 9.88%.

CAPITAL ASSET PRICING MODEL ANALYSIS

Q. PLEASE EXPLAIN HOW YOU CALCULATED THE EQUITY RETURN ESTIMATE EMPLOYING THE CAPM.

A. I employed the basic CAPM formula denoted as follows:

ROE = $R_f + \beta(R_m - R_f)$

Where:

R_f = risk free rate;

β =beta;

R_m = market return; and

$R_m - R_f$ = market risk premium or MRP

This is the typical model structure employed by most financial analysts in estimating equity returns.

Q. WHAT RISK FREE (R_f) VALUE DID YOU EMPLOY IN YOUR CAPM ESTIMATE?

measure, while a beta above 1.0 indicates a specific stock is more volatile than the market measure.

A. I employed the most recent three-month average of the 30 Year U.S. Treasury Bond rates. This three-month average is:

July 2013	3.61%
August 2013	3.76%
September 2013	3.79%
3 Month Average	3.72%

Q. WHAT VALUE DID YOU EMPLOY FOR BETA IN YOUR CAPM ANALYSIS?

A. I employed a Value Line beta estimate for each company in the comparable group as shown in my Exhibit OCS 2.10, column A.

Q. WHAT VALUE HAVE YOU EMPLOYED FOR THE MARKET RISK PREMIUM ("MRP")?

A. To calculate the MRP, I first looked at the historical risk premiums for the period 1926-2012. These historical equity and bond returns are calculated and reported through the Ibbotson yearbook published by Morningstar. The following summarizes the historical MRP for the 1926-2012 period:

Investment[19]	Arithmetic Mean Return
Large Company Stocks	11.8%
Long Term Government Bonds	6.1%
Historical MRP	5.7%

Thus, the historical MRP is 5.7% above the risk free rate U.S. Treasury Bonds.

I also estimated a more current MRP by measuring the difference between the long term equity returns on large company stocks of 11.8% and the current October 2013 U.S. Treasury yields of 3.7%. This alternative produces a MRP of 8.1% (11.8% - 3.7%).

[19] Market Results for Stocks, Bonds, Bills, and Inflation, 1926-2012, Morningstar 2013 Classic Yearbook.

Taking both the historical MRP and more current MRP values into consideration by averaging the two, results in an MRP of 6.9% ((5.7 + 8.1)/2). Such an MRP is consistent with the ranges of MRP's of 5% - 8% found in a number of studies in the financial literature.[20]

Q. IN YOUR ANALYSES, HAVE YOU INCLUDED A CALCULATION OF THE EMPIRICAL CAPM OR ECAPM RETURN ESTIMATE FOR THIS CASE?

A. Yes. Like the CAPM analysis discussed above, the ECAPM estimate of equity return relies on basic financial theory in order to correct for biased beta estimates, an adjustment is made so as not to understate the cost of equity. The basic formula for the ECAPM for beta conversion is as follows:

$$K = R_f + 0.25(R_m - R_f) + 0.75\beta(R_m - R_f)$$

Q. WHAT ARE THE RESULTS OF YOUR CAPM AND ECAPM ANALYSES FOR THE GAS COMPANY COMPARABLE GROUP?

A. The results of these CAPM and ECAPM analyses can be found in my Exhibit OCS 2.10 at column E for the gas comparable group. The range of ECAPM results is 9.03% to 9.07% with a midpoint of 9.05% that I round up to 9.1%.

Q. HOW DO YOUR CAPM AND ECAPM RESULTS COMPARE TO THOSE PRESENTED BY QUESTAR WITNESS MR. CURTIS FOR THE COMPARABLE GROUP COMPANIES?

A. Mr. Curtis concludes that the forward-looking ECAPM estimates for the gas group suggest an ROE on the order of 9.5% to 10.5%.[21] My ECAPM results in a midpoint of 9.1%.[22] The approximate 140 basis point difference between my analysis and that of Mr. Curtis is primarily related to Mr. Curtis' reliance on forecasted U.S. Treasury rates and his use of a size premium adjustment. I discuss the issue of size premium adjustment in detail in Section XII of this

[20] Morin, Roger; New Regulatory Finance, Public Utility Reports, Inc. (2006). See Chapter 5.
[21] Direct Testimony of David Curtis at 12:308.
[22] See Exhibit OCS 2.10, column E.

testimony.

Q. PLEASE SUMMARIZE YOUR COST OF EQUITY CAPITAL RESULTS FOR QUESTAR GAS.

A. Table 5 below is a summary of the equity cost estimates for the comparable group of companies employing the DCF, 2-Stage DCF, Risk Premium, and ECAPM models.

Table 5

Cost of Equity Estimates Gas Utility[23]

MODEL	COMPARABLE GROUP	
	RANGE	MIDPOINT
DCF	8.9% - 9.6%	9.25%
2 Stage DCF	9.0% - 9.4%	9.2%
ECAPM	9.0% - 9.1%	9.1%
Risk Premium	9.85%-9.88%	9.9%

The comparable group produces constant growth DCF results of 9.25%. This result is supported by the 9.2% estimate from the two-stage DCF model. The ECAPM and risk premium estimates produce equity returns of 9.1% and 9.9% respectively. I stated earlier, these risk premium models must be viewed with caution. Taken together or averaged, these risk premium models would produce a 9.5% the upper end of the constant growth DCF and two-stage DCF range of results. All of the above supports a 9.3% equity return for Questar gas.

[23] See Exhibit OCS 2.7, 2.8, 2.9 and 2.10.

SECTION X: CAPITAL STRUCTURE

Q. WHAT CAPITAL STRUCTURE IS THE COMPANY PROPOSING IN THIS PROCEEDING?

A. Based on the direct testimony of Company witness David Curtis, and reflecting capital cost estimates through the December 31, 2014 test year end the Company is proposing the following capital structure, cost rates and overall cost of capital to be earned on rate base investment:

TABLE 6
QUESTAR
OVERALL REQUESTED COST OF CAPITAL[24]

Line No	Description	Percent	Cost Rate	Weighted Cost
1	Long-Term Debt	47.93%	5.23%	2.50%
3	Common Equity	52.07%	10.35%	5.39%
4	Total	100.00%	---	7.89%

Thus, the Company requests an overall cost of capital to be earned on Questar's rate base investment of 7.89% in this case.

Q. WHAT IS THE SIGNIFICANCE OF CAPITAL STRUCTURE?

A. The overall cost of capital is the sum of the weighted average cost rates of various sources of capital. The quantity or portion of each type of capital, combined with the cost rate of capital determines the overall rate of return that the Company should be allowed to earn in this proceeding. The most significant relationship in any capital structure is the debt to equity ratio.

Q. DOES THERE EXIST SOME SET RELATIONSHIP OR IDEAL MIX OF DEBT AND EQUITY CAPITAL?

[24] QGC Exhibit 2.0 Direct Testimony David Curtis at 19:501

A. There exists no set debt/equity relationship for all firms or all industries in terms of leveraging. However, the ideal capital structure is one that minimizes the overall cost of capital to the firm, while still maintaining financial integrity so as to maintain the ability to attract capital at reasonable costs to meet future needs. Because the cost of debt is generally lower than the cost of equity, and also because the cost of debt represents a tax deductible expense, any increase in the quantity of debt capital tends to decrease the overall cost of capital relative to equity financing. One must keep in mind that increases in the quantity of debt financing can cause the financial risk of the Company to increase. In other words, there is a cost for the savings associated with increased debt leveraging. That cost is increased financial risk to the firm.

In summary, it is not possible to determine with precision the exact proportion of debt and equity that minimizes the overall cost of capital without imposing undue financial risk upon the Company. There does exist some range of capital structure that generally, meets the goal of minimizing the overall cost of capital while maintaining the firm's financial integrity.

Q. WHAT CRITERIA SHOULD REGULATORS EMPLOY IN DETERMINING THE APPROPRIATE CAPITAL STRUCTURE TO BE USED FOR RATEMAKING?

A. In my opinion, rate regulation should focus on two criteria to determine the appropriate capital structure. Those factors as outlined below should be economy and safety.

The advantage of debt in the capital structure is that debt costs less than equity. Moreover, interest charges are deductible for income tax purposes and act to reduce taxes. Thus, the more debt in the capital structure the lower the cost of capital will be. The question of economy is addressed by examining whether increases in the debt ratio act to increase the cost rates of both debt and equity so as to over balance the benefits of the larger proportion of debt.

In addition, there is always the overriding question of safety. In other words, financial risk is increased if the proportion of debt is increased by such a

magnitude that interest obligations cannot be covered during periods of depressed earnings.

Q. HAVE YOU MADE ANY CHANGES TO THE COMPANY'S PROPOSED CAPITAL STRUCTURE AND COST RATES?

A. Other than reducing the cost of equity to 9.3%, I am not at this time proposing any other capital structure or cost rate changes. However, to the extent the Company makes changes in updates additional issues may be raised that may need to be addressed.

Q. WHAT CAPITAL STRUCTURE AND COST RATES ARE YOU RECOMMENDING THAT THE COMMISSION ADOPT IN THIS CASE?

A. Based on the analyses and results discussed above, I am recommending the following capital structure, cost rates and overall cost of capital for this case:

TABLE 7
QUESTAR GAS OPERATIONS
OCS RECOMMENDED COST OF CAPITAL

Description	Ratio	Cost	Weighted Cost
Long-term Debt	47.93%	5.23%	2.51%
Common Equity	52.07%	9.30%	4.84%
Total	100.00%	---	7.35%

As can be seen from the above table when the long-term debt cost rates and common equity cost rates reflect current market conditions, the Company's overall cost of capital is 7.35%. I have included the capital structure in my Exhibit OCS 2.11 as part of the financial metrics analysis.

SECTION XI: FINANCIAL INTEGRITY

Q. HAVE YOU REVIEWED CREDIT RESEARCH REPORTS FOR THE

COMPANY REGARDING CREDIT QUALITY AND CORPORATE FINANCIAL METRICS?

A. Yes. The Company's credit quality is not threatened or under pressure of downgrade. I have discussed these issues earlier with regard to a recent Moody's and the S&P Credit Reports.

Q. WILL YOUR RECOMMENDED RETURN PROVIDE THE COMPANY SUFFICIENT CASH FLOW AND FINANCIAL METRICS TO MAINTAIN ITS FINANCIAL INTEGRITY?

A. Yes. Based on the capital structure above, my recommended overall cost of capital (which is based on a 9.3% equity return) provides sufficient financial metrics for the Company.

Q. WHAT FINANCIAL RATIOS OR FINANCIAL METRICS SHOULD THE COMMISSION CONSIDER WHEN EVALUATING COST OF EQUITY?

A. In my opinion, the Commission should consider the financial metrics that bond rating agencies consider in evaluating credit risk to a company. Three key financial metrics involve cash flow coverage of interest, cash flow as a percentage of debt, and debt leverage ratio.

Q. HOW ARE THESE FINANCIAL RATIOS CONSIDERED AND CALCULATED?

A. Ratings agencies such as Moody's and Standard & Poor's develop rating guidelines that make explicit general ratings outcomes that are typical or expected given various financial and business risk combinations. A rating matrix or guideline is just that, a guideline, not a rule written in stone that guarantees a particular rating for a particular achieved financial metric level.

Funds from a company's operations, in other words cash flow, are very critical to any rating/risk consideration. Interest and principal obligations of a company cannot be paid out of earnings if earnings are not cash. Thus, analyses of cash

flow reveal debt-servicing ability.

Debt and capital structure considerations are indicative of leverage and flexibility to address financial changes. The liquidity crisis that hit all markets and industries is an example of the importance of financial flexibility. Stable and continuous cash flows provide financial flexibility.

Each of these financial ratios is calculated in my Exhibit OCS 2.11 employing my recommendations in this proceeding. The results of my analyses indicate strong financial metrics, supporting the Company's current single "A" bond rating.

SECTION XII: RESPONSIVE TESTIMONY TO DAVID M. CURTIS

Q. DO YOU HAVE ANY COMMENTS REGARDING THE DIRECT TESTIMONY AND RECOMMENDATIONS OF COMPANY WITNESS DAVID M. CURTIS?

A. Yes, I have a number of comments. First, as to Mr. Curtis' recommended return on equity of 10.35% for Questar, such a return level is overstated and not supported by market data or his own modeling results. I discussed earlier in this testimony current market data and how such current market data supports an equity return in the 9.3% range. Further, Mr. Curtis' own DCF results (when forecasted growth estimates are employed) support an equity return of about 8.7%. Mr. Curtis' CAPM estimates support an equity return of 9.8% after correcting for his unsupported size premium adjustment discussed below. Mr. Curtis' DCF and corrected CAPM results in a range of 8.7% to 9.8% with a midpoint of 9.35%, well below his claimed 10.35% cost of equity.

The bottom line is that Mr. Curtis' equity return models support the equity return I am recommending in this case. There is no support for the requested 10.35% equity return proposed by Questar in this proceeding.

Q. AT PAGE 3, LINES 81-83, MR. CURTIS ASSERTS BOND RATINGS COULD BE LOWERED RESULTING IN HIGHER DEBT COSTS. DOES MR. CURTIS PROVIDE ANY SUPPORT FOR THIS CLAIM

REGARDING THE QUESTAR BOND RATING?

A. No. When asked for specific support on this issue Mr. Curtis stated:"[t]here is no specific report indicating that Questar Gas bond rating could be lowered."[25] Thus, other than Mr. Curtis' claim of what could happen, there is no third party support for such a claim.

On this issue of return on equity and bond rating Moody's Investor Services states:

> One of the most referenced, but potentially misleading, indicators used to judge whether a particular utility is recovering its costs and earning an adequate return is its regulatory allowed return on equity. Although a high allowed return on equity can be associated with a higher earned return, this measure cannot be looked at in isolation but must be viewed in relation to a utility's cost recovery provisions that impart actual earned rate of return, like automatic adjustment clauses, the length of rate cases, and the degree of regulatory lag that may occur. Some regulators believe that mechanisms like automatic adjustment clauses materially reduce the business and operating risk of a utility, providing justification for a relatively low allowed rate of return. We believe this is one of several reasons why both allowed and requested ROE's have trended downward over the last two decades.[26]

Moody's goes on to state:

> Moody's views automatic adjustment clauses… as supportive of utility credit quality and important in reducing a utility's cash flow volatility, liquidity requirements, and credit risk.[27]

Lastly, Moody's states:

> The ability to recover prudently incurred costs in a timely manner is perhaps the single most important credit consideration for regulated electric and gas utilities…[28]

Thus, when considering risk and bond rating, unlike Mr. Curtis' singular focus on high equity returns, rating agencies such as Moody's look at the ability to

[25] See Questar Response to OCS 1.04.
[26] Moody's Investor Services, Cost Recovery Provisions Key to Investor Owned Utility Ratings and Credit Quality (June 18, 2010) at 1.
[27] Id. at 1.

recover revenues and costs.

Q. DOES QUESTAR HAVE RATEMAKING COST RECOVERY MECHANISMS WHICH ENHANCE REVENUE RECOVERY AND REDUCE RISKS?

A. Yes, these rate or revenue recovery mechanisms such as revenue decoupling, future test year, and pipeline integrity surcharge recovery were all discussed earlier. Unfortunately, Mr. Curtis focuses on return, but fails to consider these risk reducing revenue recovery enhancements in his analysis.

Q. PLEASE COMMENT ON MR. CURTIS' DCF ANALYSES.

A. The first problem is that Mr. Curtis increases the dividend yield by the full amount of the growth rate employed in his analysis. The correct way to adjust the dividend yield is to employ one-half the growth rate. I discussed the issue earlier in the DCF section of my testimony.

A second problem is Mr. Curtis' reliance on historical growth rates and his unsupported claim of "systematic bias from investment analysts in understating earnings growth projections."[29] Mr. Curtis claims that because investment analysts' estimates are generally lower than historical growth actuals and lower than growth estimates disclosed by some companies, he concludes there is a systematic bias in analyst forecasts.[30]

Analysts develop and provide these forecasts to the investing public. There is a demand for these estimates in the market place because investors use and rely on these estimates. Such forecasts are lower than historical results because that is what investment analysts estimate, there is no evidence supporting the "systematic bias claims" of Mr. Curtis.

An important consideration of employing historical growth rates is whether these growth rates reflect changes in variables that may not be repeated in the future, making such growth estimates not sustainable. Alternatively, one must consider

[28] Id. at 3.
[29] Direct Testimony David Curtis at 7:170-171.
[30] Id.

whether there exist relevant factors in the future that are not reflected in the historical growth rates. Either way reliance on the historical growth rates can be misleading. The key consideration is that the future may not be like the past. For example, in employing a five-year historical growth rate today one captures most of the impact of the 2008 recession and resulting economic turmoil. For that matter, the ten year growth (historical) rate captures the recession as well, but not to the extent of the five year growth rates. In either case, there are no forecasts of such a recession occurring in the near term future. Thus, the recent past may not be a good proxy of the future.

Historical growth rates are a helpful starting place to evaluate investor expectation of growth. But there are hazards with total reliance on historical growth rates. For example, extrapolation based on history alone without considering trends, variable changes, and impact of historical events may result in misleading estimates.

In my opinion, Mr. Curtis' DCF results based on historical growth and nothing more have resulted in an overstatement of equity costs. His results are clearly an outlier relative to other modeling results, returns currently being granted around the country by regulators, and basic market costs. For all the above reasons, Mr. Curtis' DCF results employing historical growth measures should be given little, if any, weight.

Q. MR. CURTIS SUGGESTS A COMPANY SIZE PREMIUM ADJUSTMENT SHOULD BE EMPLOYED IN THE CALCULATION OF THE CAPITAL ASSET PRICING MODEL EQUITY ESTIMATES, DO YOU AGREE?

A. No, I do not agree. I have found no studies in the financial literature that suggest there should be a size premium factor or consideration for utility operations. The one study specifically addressing utility stocks and size premium concludes: "… although the size phenomenon has been strongly documented for industrials, the findings suggest that there is no need to adjust the firm size [in] utility rate

regulation[]."[31] The end result is that Mr. Curtis' CAPM estimates are overstated by about 150 basis points because of the size premium adjustment. Thus, his CAPM estimates should average about 8.3% and range up to 8.8%.

SECTION XIII: PROPOSED INFRASTRUCTURE TRACKER

Q. DOES QUESTAR PROPOSE TO EXPAND THE APPLICATION OF THE INFRASTRUCTURE TRACKER?

A. Yes. The Company is proposing to expand the application of the current Tracker approved by the Commission in the last case as a pilot program. The continuation of the program is subject to review by the Commission in this case.[32] Under the pilot program the Company is limited to replacing $55 million (adjusted for inflation) of high-pressure pipeline infrastructure annually.[33]

In this case the Company requests continuing the Tracker program.[34] The Company asserts that the expected annual level of spending when the original $55 million spending authority is adjusted for inflation is $66.7 million annually.[35] Instead of continuing the original high-pressure pipe replacement program Questar proposes to expand the program to include $10 million of annual expenditures for intermediate high-pressure pipe.

Q. QUESTAR PROPOSES TO INCLUDE $65 MILLION ANNUALLY IN THE TRACKER INCLUDING $10 MILLION FOR INTERMEDIATE HIGH-PRESSURE PIPE. WHAT IS YOUR RESPONSE?

A. The Company is financially sound and quite capable of financing annual investment requirements along with needed infrastructure replacement without the need for the Tracker mechanism. If the Questar proposal to expand the Tracker mechanism to include other investments were to become a trend then as the inflation adjustment

[31] Wong, Annie. "Utility Stocks and Size Effect: An Empirical Analysis". Journal of the Midwest Finance Association (1993) at 98.
[32] Direct Testimony Barrie McKay at 7:181-183.
[33] Id. At 8:192-195.
[34] Id. At 9:220-227.
[35] Id.

expands authorized spending levels at some point all investment would be financed with this mechanism at the expense of customers.

Q. DOES THE COMPANY HAVE SIGNIFICANT FINANCING REQUIREMENTS FOR THE 2014-2015 NEAR TERM PERIOD?

A. No. Based on my review of expected capital investment and planned financing it would appear that the majority of the capital needs are generated from internal funds (depreciation) and other cash flows.[36]

Q. PLEASE EXPLAIN HOW THE TRACKER MECHANISM BENEFITS THE COMPANY AT THE EXPENSE OF CONSUMERS.

A. The simple answer is that while the investment will eventually be made by the Company and included in customer rates through the ratemaking process, the Tracker allows the Company to collect the investment carrying cost sooner enhancing Company financials. The timing difference I refer to is analogous to the timing difference between collection under historical versus future test year rate making. In this case, the Company has both future test year ratemaking and the additional benefit of added investment recovery between future test years.

I have provided an example of the Tracker impact on consumers in my Exhibit OCS 2.12. In this example, I assume $10 million of annual Tracker investment equal to the Company's proposed expansion level of the Tracker. I also assume an 11.89% carrying charge rate that includes the Company's return, and depreciation rate. The next assumption is that there are three years between rate cases thus on average the early tracker payment by consumers is 18 months. Lastly, I have assumed a consumer discount rate of 5 percent.

Applying these assumptions to the Company's proposed $10,000,000 annual Tracker expansion proposal results in consumers paying about $270,844 more over this period due to early payments and time value of money considerations.

[36] See Company Response to OCS questions 1.01 and 1.02.

This $270,844 is equivalent to about 5 basis points of equity return under the Company's proposal in this case. These calculations are shown in OCS 2.12.

Based on the above, I recommend that if the Commission accepts the Company's proposal and Tracker expansion, I recommend that the authorized equity return be reduced by 5 basis points in an effort to reduce the impact of early payment on consumers.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.