BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of Questar Gas Company to Increase Distribution Non-Gas Rates and Charges and Make Tariff Modifications	))))))))))	**DOCKET NO. 07-057-13** **Exhibit No. DPU 2.0 SR** **Surrebuttal Testimony and Exhibits** **Charles E. Peterson**

FOR THE DIVISION OF PUBLIC UTILITIES
DEPARTMENT OF COMMERCE
STATE OF UTAH

Surrebuttal Testimony of

Charles E. Peterson

May 12, 2008

Q. Please state your name and occupation?

A. My name is Charles E. Peterson. I am employed by the Utah Division of Public Utilities ("Division" or "DPU") as a Technical Consultant.

Q. Have you submitted Direct Testimony in this proceeding?

A. Yes. I submitted Direct Testimony on March 31, 2008 and Erratum Testimony on May 1, 2008.

Q. What is the purpose of your testimony?

A. My purpose is to respond to comments made by Robert B. Hevert in his Rebuttal Testimony and identified as QGC Exhibit 3.0R along with the attached exhibits; to John J. Reed in his Rebuttal Testimony designated as QGC Exhibit 4.0R; and finally to Alan K Allred in his Rebuttal Testimony identified as QGC Exhibit 2.0R.

I. GENERAL COMMENTS

Q. Do you have general comments regarding the Rebuttal Testimony of Messrs. Hevert, Reed, and Allred?

A. Yes. Mr. Hevert's Rebuttal Testimony recounts my testimony and analyses and shows how my analyses can be "corrected" to support his original Direct Testimony. In several places he inaccurately characterizes my testimony and omits mentioning important elements of my discussion in my Direct Testimony. These characterizations and omissions will be discussed in more detail later. Mr. Hevert focuses on fluctuations in interest rates during the first part of April 2008 along with summaries of authorized rates of return in an attempt to show that I (and Dr. Woolridge) have estimated cost of equity rates that are either too low or unreasonable.

Q. Do you find any of Mr. Hevert's criticisms persuasive?

A. No. Mr. Hevert's Rebuttal Testimony amounts to a reassertion of his original position as being correct and dismisses arguments that do not support his view. He does not present any new data that is substantially different from what he had in his Direct Testimony. His criticisms of my application of the different models do not invalidate my applications.

Q. How does your own Direct Testimony differ from that of Mr. Hevert's Rebuttal Testimony?

A: In my Direct Testimony I discussed and presented to the Commission a wide range of options. I included some of the methodologies used by Mr. Hevert, especially with respect to the Capital Asset Pricing Model (CAPM) and plainly stated that there are advocates for the particular applications of those models that Mr. Hevert uses. I also explained that there are differing views among both academics and practitioners regarding the application of those models. I highlighted some of the problems and controversies particularly with the CAPM. Rather than being merely descriptive, I gave my guidance to the Commission regarding what I believe to be the better more "middle of the road" positions to take and used this guidance to arrive at my recommended range and point estimate. However, I did not avoid presenting data on applications that were either higher than, or lower than, my recommended range and point estimate.

Q. In your testimony here do you intend to respond in detail to all of Mr. Hevert's comments?

A. No. I plan to respond to a few of the more important issues raised by Mr. Hevert. Omission of a specific comment on the various issues raised by Mr. Hevert should not be construed as agreement with his position on those issues.

Q. Do you have any general comments on Mr. Reed's Rebuttal Testimony at this time?

A. Yes. Mr. Reed sees no conflict between his Direct Testimony and that from an investor's viewpoint Questar Gas is merely average, or perhaps sub-average. This proves to him that management is doing a good job and therefore the Company's stockholder should be rewarded with a premium return on equity. Mr. Reed does not acknowledge that the measurements I applied are also a reading on management's ability. To this end there is no evidence of superior management and consequently no evidence that the market would reward Questar Gas' owner with a premium return.

Q. Do you have any comments on Mr. Allred's Rebuttal Testimony?

A. Yes. Mr. Allred appears most concerned about Questar Gas' ability to attract capital should the allowed rate of return be reduced to within the ranges that the Committee of Consumer Services or I are advocating.

Q. Is it likely that Questar Gas will no longer be able to attract capital?

A. No. Although as I indicated in my Direct Testimony, there may be a possibility of a ratings downgrade on the Company's debt which might in the future raise its cost of debt. With respect to a possible ratings downgrade, I have seen no evidence that the rating would drop below investment grade. Thus, even in this worst case scenario, the Company would continue to attract debt capital at a reasonable rate, which likely would be minimally higher than at present.

Q. Has any of the Rebuttal Testimony offered by the Company's witnesses altered your conclusions?

A. No. As detailed below, the Company's witnesses are not persuasive in their critique of my testimony. My recommended point estimate for cost of equity remains 9.25 percent.

II. COMMENTS ON MR. HEVERT'S REBUTTAL TESTIMONY

Q. How have you organized this section?

A. I have organized this section by the following topics: Comparable Companies; DCF Models; Capital Asset Pricing Models; Risk Premium Models; and Other Issues and Conclusions.

A. Comparable Companies

Q. Mr. Hevert in his Rebuttal Testimony provides analyses of slightly different groupings of comparable, or proxy, companies. What is your response to this analysis?

A. Mr. Hevert shows by this analysis that adding or subtracting a company from the list of comparables has little affect on the overall results. This is not surprising and generally supports the basic notion that there is comparability among the companies used as proxies by Mr. Hevert, Dr. Woolridge, and me. Consequently it is also not at all surprising that when Mr. Hevert applies his methodologies to these slightly different groupings of comparable companies, he obtains results similar to his original Direct Testimony.

Q. In your view is the selection of the comparable company group a significant issue in this case?

A. No. I continue to support my comparable company list, but I would not argue strongly against the Commission adopting Mr. Hevert's "revised proxy group," because of the comparability among the companies used by Mr. Hevert, Dr. Woolridge, and me.

B. DCF Models

Q. Although Mr. Hevert admits that there is little practical effect on the results, he criticizes your use of a different growth rate to arrive at "D" in your single-stage DCF models. Do you have a response to this criticism?

A. Mr. Hevert is correct that the mathematical formalism that arrives at the single- stage formula for the DCF model uses a single constant growth "g." Once that formula is derived (i.e. k = D/P +g), the practical application of the formula must be dealt with. The "D" in the formula is usually understood to be the "current dividend," or the "dividend over the next 12 months." Different practitioners estimate "D" in different ways. For example, Mr. Hevert himself uses one-half of his "g" to estimate "D." Roger Morin discusses other methods of estimating "D" including attempting to estimate each dividend for the next four quarters.[1] I have chosen to use Value Line's forecast dividend growth rate to estimate "D" as a good estimate of the expected dividend over the next year. Because Mr. Hevert's "g" (or one-half "g') overestimates the expected near-term dividends, then his DCF models are likely to overestimate the current cost of equity.

Q. Do you agree with Mr. Hevert's criticism of your DCF analysis using historical growth rates?

A. No. First, I think it is useful for the Commission to see the historical results and their effects on cost of equity. Second, the fact that analysts presumably use historical data

[1] Morin, Roger A. "New Regulatory Finance," Public Utility Reports, Inc. Vienna, VA., 2006. See Chapter 11 for a discussion of quarterly dividends in the DCF model.

as part of their inputs into their forecasts, does not logically suggest that historical data must not be used as part of the input in a rate case matter. Third, the historical results in this case closely match other estimates of cost of equity. Fourth, the strengths and weaknesses of historical growth rates are discussed by Dr. Morin in his latest book, indicating that historical growth is not a wholly unreasonable factor to consider.[2] In sum, I reject Mr. Hevert's criticism of my consideration and presentation of DCF results using historical growth rates. However, I do not put much weight on this DCF model.

Q. Mr. Hevert complains that your "adjusted" DCF models were biased downward. Do you agree with his criticism?

A. No. I would argue that, if anything, they were biased upward. In arriving at his conclusion, Mr. Hevert appears to confuse commission authorized rates of returns with "the market."[3] While I agree that market participants may follow commission decisions as one of their inputs, commission decisions are not a market. The market observations are the actually observed stock prices. The dividends and earnings, included forecasted dividends and earnings are widely recognized factors that investors consider. In this regard my DCF models are based upon market observations. In "throwing out" outliers, I have truncated the lower end of my range of symmetry (i.e. plus or minus two standard deviations), which will bias the result upward from a purely symmetrical adjustment. It is simply wrong for Mr. Hevert to

[2] Ibid. beginning on p. 283.
[3] See Mr. Hevert's Rebuttal Testimony, lines 638-645.

assert that the low-end results "have never been observed in the market"[4] since that is exactly what they are—market observations.

Q. Mr. Hevert disagrees with your use of forecast dividend growth rates. Is it correct to ignore dividend growth forecasts?

A. No. In the first place the DCF model is based upon dividend payments. Thus dividend forecasts are theoretically the most correct growth rate that should be used. I agree with Mr. Hevert that earnings growth rates will likely drive growth in dividends in the long-term. However, to the extent that near-term dividend growth is expected to be higher, or lower, than earnings growth, then the departure of the growth in dividends from the growth in earnings will affect the stock price either up or down under this model. As I mentioned in my Direct Testimony, the Commission's 2002 decision in Questar Gas' general rate case to weight earnings growth 75 percent and dividend growth 25 percent is a reasonable compromise of earnings vs. dividend growth rate issue.

Q. How do you respond to Mr. Hevert's concerns that you used lower growth rates initially in your two-stage DCF models and a higher growth rate for the terminal growth?

A. As discussed above the near-term dividends (and consequently dividend growth rates) will have a more significant effect on the stock price than dividends received later in time. In one model I used Value Line's dividend forecast rates for the near-term and

[4] Ibid. line 644.

then weighted earnings and dividend growth rates for the terminal value to reflect the effect of near-term dividends coupled with the assumption that in the long run earnings growth will tend to dominate. Similarly, in the second model I used an average of dividend and earnings growth forecasts for the near term dividends and earnings-only forecasts for the terminal value. My purpose was to present to the Commission the effects on the cost of equity estimates by using a range of growth estimates in the two stage model. Of course I could have strictly used earnings growth rate forecasts for every case, but then that would be the same as the single stage model with earnings-only growth (which I also present for the Commission's consideration).

The other comments by Mr. Hevert largely relate back to the growth rates I used in the single-stage DCF models. In any case, Mr. Hevert's criticisms are without merit.

Q. Do you have a response to Mr. Hevert's comments in his Rebuttal Testimony regarding forecast rates of growth for the economy, as represented by the Gross Domestic Product?

A. Yes. Mr. Hevert's most significant point seems to be that the Handy Whitman Index of Utility Construction Costs for the 1912 to July 2007 historical period shows an inflation rate of about 4.4 percent, and then when added to a real growth estimate gives a growth result of 7.0 percent. Mr. Hevert concludes that a growth rate of 5.0

percent is "far too low."[5] The obvious question posed by Hevert's analysis is the relevance of the historical Handy Whitman index going forward either as an indicator of inflation or economic growth or its necessary relevance for growth in net income and dividends. Given the high energy prices and the significant and growing economic competition from places like China and India, it is easy to imagine that future economic growth in the United States will not reflect the past.

C. Capital Asset Pricing Models (CAPM)

Q. Mr. Hevert disagrees with your use of unadjusted betas in one of your CAPM estimates. What are your comments on this issue?

A. As I pointed out in my Direct Testimony, there is some question that utility company betas do or should be expected to converge to the market mean of 1.0. I presented some evidence that the actual long-term average may be closer to 0.5, although the evidence at this point is not conclusive and I have not used these indications to adjust betas downward toward 0.5. On the other hand, if the long-term tendency of utility betas is to fluctuate around an average beta that is less than 1.0,[6] then the adjusted betas by Value Line and Bloomberg will tend to overstate the risk of a utility company. As an alternative I have presented one CAPM result using the average of unadjusted betas for the Commission's consideration.

[5] Mr. Hevert's Rebuttal Testimony at line 760.
[6] A long-term average beta less than 1.0 would suggest that over the long term investors perceive utility companies' common stock to be less risky than the typical common stock. Such a result would seem perfectly reasonable to me.

Q. Mr. Hevert presents further data and argument in support of the use of the Morningstar (formerly Ibbotson) data from 1926 to the present to estimate the market risk premium for the CAPM. Do you have any comments on Mr. Hevert's analysis?

A. Yes. In my Direct Testimony, I discussed at length what I have referred to as the "Ibbotson Method" with respect to developing CAPM. I indicated that that approach is used and advocated by a number of practitioners of which Mr. Hevert is one. I explained why I reject that time period as including data that are no longer relevant. If the length of the historical period used is the controlling factor, then studies pushing the analysis of the market risk premia back to various points in the nineteenth century would be even better than the Ibbotson period. But the usual complaints about nineteenth century data are basically that "things were different" then than they are now. I agree with Mr. Hevert that when analyzing historical data, one can use a time period that is "too short" to give reasonably stable information. In my testimony I have tried to present a reasonable compromise with respect to the historical data. Mr. Hevert and I will have to agree to disagree on this point. However, despite my serious reservations concerning the Ibbotson CAPM method, I have included it as part of my analysis for the Commission's consideration.

I make one additional observation on the Ibbotson historical period. The high risk premia results are largely driven by high returns on common stock combined with very low bond returns during roughly the 1950 to 1973 time period. DPU Figures

2.1SR and 2.2SR graph the relevant data using 10-year and 20-year moving averages, respectively. As can be clearly seen, there is a significant "bulge" in the risk premiums over the 1950 to 1973 time period. Before and after that time period, the risk premia, while variable, appear to fluctuate around a mean. Using 10-year moving averages that mean is 4.06 percent; the 20-year moving average data has a mean of 4.34 percent. If the earlier and more recent period is more reflective of the anticipated relative returns in stocks and bonds, then a market risk premium in the 4.0 to 4.5 percent range is appropriate.

D. Risk Premium Models

Q. Do have any observations regarding Mr. Hevert's rebuttal comments to your risk premium model?

A. Mr. Hevert believes that my risk premium analysis is "somewhat circular."[7] I disagree with that characterization. Briefly, my analysis relates Value Line's forecast return to Value Line's financial strength rating to estimate a risk factor. Given a particular financial strength rating, an expected return can be estimated. Since the comparable companies I used had an average financial strength rating of B++ (above average), by this measure these companies should have a cost of capital less than the market mean. I have quantified this below average required return on equity in my analysis. Mr. Hevert would disagree with my estimate of the expected market return since, in arriving at the expected market return, I reject the use of the 82 year

[7] Mr. Hevert's rebuttal testimony at line 989.

Ibbotson historical period as discussed in the CAPM section above. This is the primary difference in my risk premium results from the results Mr. Hevert obtains.

In any case as Mr. Hevert observes, other than as a general test for reasonableness, I put little weight on this model. To the extent I have used this model, I stand by its results.

Q. You commented in your Direct Testimony on Mr. Hevert's risk premium analysis. Do you have anything to say about his comments in his Rebuttal Testimony regarding his risk premium model?

A. Yes, a couple of comments. Mr. Hevert remarks that my trend analysis is only based on time and implies that it has no explanatory power. Contrariwise, I believe the trend analysis indicates commission reaction to lowering interest rates and lowering cost of capital expectations generally. Mr. Hevert complains that I make no attempt to relate the clearly declining authorized rates of return with market fundamentals, but then Mr. Hevert makes no effort to explain the clear and obvious trend either.

E. Authorized Rates of Return

Q. Do you have any further comments, beyond what you said in your Direct Testimony and alluded to above, regarding Mr. Hevert's adherence to historical authorized rates of return by various commissions as a major indicator on what Questar Gas' cost of equity should be?

A. Yes. Mr. Hevert's Chart 1 on page 8 of his Rebuttal Testimony indicates that while my point estimate and reasonable range are in the lower part of the range of data compiled by Mr. Hevert, the point estimate and, at least the upper half of my reasonable range are within the range of authorized returns according to this data. The Commission, therefore, will not be breaking new ground if it were to authorize a return on equity for Questar Gas in the range I have suggested. Of note in a recent New Mexico case (Docket No. 06-00210-UT) that Commission awarded 9.53 percent to its local gas utility.

F. Other Issues and Conclusions Regarding Mr. Hevert's Testimony

Q. Mr. Hevert suggests that you made no adjustments to reflect the possibility that Questar Gas may face a ratings downgrade. How do you respond?

A. As I indicated in my Direct Testimony, if a possible ratings downgrade is a serious concern to the Commission, then the Commission could award a slightly higher authorized rate of return that is in the upper half of my range. In that way the Commission could protect against the possible ratings downgrade and still keep the authorized return within a range supported by the market and the estimates from the cost of equity models.

Q. Mr. Hevert raises the issue that the premium spread between the Company's embedded debt and your recommended 9.25 percent cost of equity is unreasonably low. How do you respond to that?

A. Simply to say that stock market investors do not demand the premiums over debt that Mr. Hevert suggests that they should. Contrary to Mr. Hevert's assertions, my cost of equity does reflect the current market conditions; therefore Mr. Hevert's concerns in this regard are not valid.

Q. Mr. Hevert asserts that you have not complied with the criteria of the Hope and Bluefield cases. Is his assertion correct?

A. No. My cost of equity is based upon established theoretical models and the reasonable application of market data. As indicated above, if the Company does face a downgrade in its debt rating, there is no evidence that the rating will not remain investment grade. The Company will still have access to capital at a reasonable cost—likely to be minimally higher than at present--both to it and to ratepayers.

Q. Do you have any final comments regarding Mr. Hevert's Rebuttal Testimony?

A. Yes. Mr. Hevert and I have a fundamental disagreement on the size of the market risk premium, i.e. the premium return common stock investors expect over and above the return they would receive on a bond issue. Based upon long-term historical averages, Mr. Hevert believes that this premium is about two percentage points higher than I believe it is. This difference drives both of our analyses, particularly for CAPM. Mr. Hevert bolsters his DCF model by ignoring low growth estimates and accepting high growth estimates as reasonable. He validates his results by comparing them with authorized rates of return data that he has compiled.

As discussed above, I reject that high market risk premium which Mr. Hevert uses. I reject the high growth rates as being unlikely going forward, even if there may be some historical justification for them. To ignore near-term dividend growth rates in favor of earnings-only growth rates also, in this case, skews the DCF results to the high end. Authorized rates of return are not market observations no matter how much Mr. Hevert would like them to be; consequently market observations should be the controlling factor.

III. COMMENTS ON MR. REED'S REBUTTAL TESTIMONY

Q. You indicated earlier that your financial ratios are also indices of management performance. Could you expand on that?

A. Yes. While Company management may be constrained on its return on equity to approximately its allowed rate of return, superior management would be expected to show consistently above average results on it financial measures. My corrected Exhibit 2.15 in my Direct Testimony sets my analysis of selected financial measures. I rate Questar Gas "average," "above average," or "below average" for each measure. In my comments here, "above average" means simply above the average of comparable companies, not necessarily the rating I used in my Direct Testimony (where "above average" required it to be at least one standard deviation above the mean). In Questar Gas' case, measures of management efficiency such as Days Revenue Receivable are much below the mean of the comparable companies, almost a standard deviation below. With respect to controlling its debt and interest expense, the Company management is below average as measure by the Times Interest Earned ratio. Operating income as a percent of revenue is below average despite the advantage the Company has in the purchase of relatively cheap Wexpro gas. The revenues to net fixed asset ratios are below average, suggesting that the Company's management may be inefficiently deploying fixed assets relative to the comparable companies. In sum, there is no evidence of superior management in the financial ratios I've examined in which does not support Mr. Reed's testimony.

Q. Do you have an opinion regarding Mr. Reed's claims that "operational performance" or the savings that ratepayers allegedly have enjoyed as a result of that performance overcomes the average or below average financial ratios?

A. Yes. I am not persuaded that they do. In any case, the request for incentive regulation needs to be addressed in another docket where parties can fully examine these issues.

Q. In your Direct Testimony, you made the point that Questar Gas needed to establish before the Commission the approval of and the mechanism for incentive regulation, and not try to "back door" this type of regulation as part of the rate of return of testimony in a rate case. Does Mr. Reed rebut your position?

A. No. Mr. Reed's comments are restricted to his interpretation and effect of the financial ratios I presented in my Direct Testimony.

Q. Does the fact that you did not provide a detailed critique of Mr. Reed's analyses in your Direct Testimony mean that you agree with his analyses and conclusions?

A. No. For this case I am not taking a position on the validity or lack thereof on Mr. Reed's measurements. It is my position that if Questar Gas wants to implement incentive regulation and use Mr. Reed's measures, it should petition the Commission to do that in a separate docket so that the Division and other interested parties can more thoroughly study the issues involved.

IV. COMMENTS ON MR. ALLRED'S REBUTTAL TESTIMONY

Q. You earlier indicated that Mr. Allred in his Rebuttal Testimony is most concerned about the Company's ability to attract capital. Have you complied with Hope and Bluefield criteria in this regard?

A. Yes. As I discussed above, the equity rates I'm advocating are derived from market data, which means they should be satisfactory to equity investors. Even should the Company experience a debt rating downgrade, it still should be able to obtain debt capital as an investment grade borrower, as suggested in my analysis in my Direct Testimony. The Company's recently complete debt issuance should mitigate any practical concern of a downgrade in that it should not have to issue more debt for some time.

Q. Mr. Allred refers to authorized rates of return as being much higher than the cost of equity amounts you are advocating. Is Mr. Allred correct that utility equity investors will simply move their money to other utilities because they are offering a higher return?

A. No. Mr. Allred confuses the authorized return from a regulatory commission with the returns that common equity investors are getting and expecting in the marketplace. As demonstrated by my Direct Testimony, investors in gas utility common stock are likely expecting to receive sub-ten percent returns on their investment.

V. SUMMARY AND CONCLUSION

Q. Please summarize your surrebuttal testimony.

A. Mr. Hevert leveled a number of criticisms in his Rebuttal Testimony, many of which I had already dealt with in my Direct Testimony, although perhaps some clarification was needed. Generally, I disagree with Mr. Hevert's relatively high growth rates used in his DCF models. I disagree with Mr. Hevert's market risk premium in his CAPM model. The market risk premium is my principal disagreement with Mr. Hevert with respect to his CAPM calculations. Finally, I disagree with Mr. Hevert's heavy reliance on authorized rates of return as some sort of "market" indicator.

Q. What conclusions have you reached?

I maintain my point estimate of 9.25 percent as my recommendation for Questar Gas' cost of equity as being just and reasonable and supported by substantial market and theoretical evidence. I also keep the caveat that if a possible debt rating downgrade, which I believe would only be minimally higher than at present, is a serious concern to the Commission, then a higher cost of equity in the upper half of my range would still be reasonable.

Q. Does this conclude your Surrebuttal Testimony?

A. Yes.