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BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of Questar Gas Company to File a General Rate Case	**Docket No. 07-057-13**

PREFILED DIRECT TESTIMONY OF KEVIN C. HIGGINS

[COST OF SERVICE]

The UAE Intervention Group hereby submits the Prefiled Direct Testimony of Kevin C. Higgins on cost of service, rate spread, and rate design.

DATED this 18th day of August, 2008.

/s/ _____
Gary A. Dodge,
Attorneys for UAE

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was served by email this 18th day of August, 2008, to the following

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BEFORE

THE PUBLIC SERVICE COMMISSION OF UTAH

Direct Testimony of Kevin C. Higgins

on behalf of

UAE

Docket No. 07-057-13

[Cost of Service, Rate Spread, Rate Design]

August 18, 2008

DIRECT TESTIMONY OF KEVIN C. HIGGINS

Introduction

Q. Please state your name and business address.

A. Kevin C. Higgins, 215 South State Street, Suite 200, Salt Lake City, Utah, 84111.

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

A. I am a Principal in the firm of Energy Strategies, LLC. Energy Strategies is a private consulting firm specializing in economic and policy analysis applicable to energy production, transportation, and consumption.

Q. Are you the same Kevin C. Higgins who previously filed testimony in the test period, rate of return, and revenue requirement phases of this proceeding on behalf of the Utah Association of Energy Users Intervention Group (UAE)?

A. Yes, I am. A detailed description of my qualifications is contained in Attachment A, attached to my direct testimony on test year, UAE TP 1.

Overview and conclusions

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

A. My testimony addresses: (1) class cost-of-service; (2) rate spread; and (3) certain tariff changes proposed by Questar Gas Company (QGC).

Q. What are your conclusions and recommendations?

A. I offer the following conclusions and recommendations:

(1) With respect to QGC's cost-of-service analysis:

(a) I recommend modifying the weightings used for QGC's Allocation Factor 230. This allocation factor is used for allocating the costs of compressor stations, high-pressure feeder mains, system regulation, and system measurement. The weighting proposed by QGC for Allocation Factor 230 is 60% peak-day and 40% throughput. I recommend instead that the throughput weighting for Allocation Factor 230 should be set equal to QGC's system load factor, consistent with the typical application of the Peak and Average method. This produces a weighting for Allocation Factor 230 equal to 75% peak / 25% throughput.

(b) QGC proposes to allocate the revenue credit from Schedule FT-1 on the basis of class DNG revenues. I disagree with this approach. The allocation of the FT-1 revenue credit to classes should bear a reasonable nexus to the cost support provided by the respective classes for the facilities used to provide service to FT-1 customers. The DNG revenue allocator proposed by the Company does not provide such a reasonable nexus, as it includes a large proportion of costs associated with small-diameter mains and service lines, facilities that are largely unrelated to providing service to FT-1 customers. I recommend instead that FT-1 revenue credits should be allocated on the basis of Allocation Factor 230, which allocates the cost of facilities generally required for service to FT-1 customers.

(2) With respect to rate spread, I recommend that rates be moved in the direction of cost of service, but that the maximum increase levied on any rate schedule should be capped at 200% of the system average increase. Further, I recommend that the GSC revenue requirement remain unchanged from test year revenues, and that the revenue decrease that would otherwise apply to this class (if rates were set equal to cost of service) be used to mitigate the rate increase for residential customers, as well as contribute to the 200% rate increase cap. I support QGC's proposal that the customer classes excluded from the cost of service study (FT-1, MT, NGV) should receive the system average rate increase, subject to providing pro-rata funding of the 200% rate increase cap.

(3) I recommend that the Commission reject QGC's proposal to prevent a customer from receiving both sales and transportation service through one meter set.

(4) I recommend that the Commission reject QGC's proposals to alter certain pricing provisions of its imbalance charges for transportation service. Specifically:

(a) I recommend that the Commission reject QGC's proposal to grant the Company the option to cash out imbalances by selecting prices from multiple months; and

(b) I recommend that the Commission reject QGC's proposal to apply Southern California Gas Company index prices for cashing out imbalances at, or downstream of, Indianola. Instead, either the Questar Pipeline index price or Northwest Pipeline (Rocky Mountains) index price should be used for this purpose.

Class Cost of Service

Q. What is the purpose of conducting class cost-of-service analysis?

A. Class cost-of-service analysis is conducted to assist in the determination of appropriate rates for each customer class. The analysis involves the assignment of revenues, expenses, and rate base to each customer class. Through this process, each class is allocated its share of responsibility for the utility's costs, and the revenue change needed for each customer class to produce an equalized rate of return is identified.

Q. What class cost-of-service information is presented by QGC?

A. The Company's class cost-of-service results are presented in the direct testimony of QGC witnesses Gary L. Robinson and Steven R. Bateson filed December 17, 2007 and in updated direct testimony filed March 31, 2008. The Company also made its cost-of-service model available to the parties in the case. In addition, on July 25, 2008, QGC filed a second updated cost-of-service model.

Q. Do you have any comments on the second updated cost-of-service model filed by QGC on July 25, 2008?

A. Yes. The second updated model modifies the method by which cost responsibility for income taxes is apportioned to each customer class. This modification is entirely

appropriate and corrects an error in the previous filings. In its cost-of-service analyses filed on December 17, 2007 and March 31, 2008, QGC had allocated income tax responsibility (at current revenues) to customer classes in proportion to the rate base allocated to each class. While this approach may appear intuitive, it produces incorrect class revenue changes when deriving the class revenues needed to yield equalized rates of return. The correct approach is to calculate income tax responsibility for each class based on the net income produced by each class at current rates. This is the standard approach used across the United States. Utilizing this approach, when the revenue deficiencies (and sufficiencies) for each class needed to achieve equalized rates of return are identified, the final apportionment of income tax responsibility is proportionate to the share of rate base allocated to each class, which is an appropriate cost-of-service outcome. This correct approach is incorporated in the second updated model.

Q. Do you have any additional comments on the cost-of-service analysis presented by the Company?

A. Yes. While I concur with many aspects of the Company's analysis, I disagree with certain components of it. Specifically, I disagree with: (1) the weightings used for Allocation Factor 230, which is used to allocate compressor station and feeder system costs; and (2) the basis for allocating to customer classes the revenue credits attributable to Schedule FT-1.

Q. Please proceed. What is Allocation Factor 230?

A. Allocation Factor 230 is described on page 1 of QGC Exhibit 7.2. This factor is used for allocating the costs of compressor stations, high-pressure feeder mains, system regulation, and system measurement. It is designed to be a weighted blend of peak-day and throughput factors, presumably because these facilities are viewed as providing both peak-day and throughput-related services. The weighting proposed by QGC for Allocation Factor 230 is 60% peak-day and 40% throughput.

Q. What is your disagreement regarding the weightings used for Allocation Factor 230?

A. Allocating costs for particular facilities on both a peak basis and a throughput basis is an application of a methodology generally referred to as the "Peak and Average" method.[1] In using the Peak and Average method, the weighting assigned to the throughput component should be no greater than the system load factor.[2] This is because the throughput component is intended to allocate costs that are associated with base-load-type usage, and system load factor is a generally-accepted standard for measuring the portion of facilities associated with provision of base load service.

The 40% weighting assigned by QGC to throughput in the composition of Allocation Factor 230 exceeds QGC's load factor and thus overstates the reasonable assignment of cost responsibility to throughput. According to a QGC data response, the

[1] The term "average" in "Peak and Average" refers to "average demand", which is equal to throughput divided by the 8,760 hours in the year.
[2] See, for example, the discussion of the Peak and Average method in the NARUC Electric Utility Cost Allocation Manual, p. 57. The Manual specifies that the weighting assigned to energy (throughput) is equal to average demand

weightings used by QGC for Allocation Factor 230 have varied over time from 50/50 to 75% peak / 25% throughput.[3] The 40% weighting proposed by QGC is not tied to any system utilization metric, but is purely judgmental.

Q. What alternative do you recommend to the Commission?

A. I recommend that the throughput weighting for Allocation Factor 230 be set equal to QGC's system load factor, which is approximately 25 percent, calculated with respect to the design peak. This produces a weighting for Allocation Factor 230 equal to 75% peak / 25% throughput. This weighting is more consistent with the application of the Peak and Average method. The calculation of QGC's load factor is shown in UAE Exhibit COS 1.1.

Q. What is your disagreement regarding the allocation to classes of the revenue credits attributable Schedule FT-1?

A. Schedule FT-1 is the firm transportation rate offered to customers who may be able to bypass the QGC system economically. This customer class is not allocated a share of QGC's distribution non-gas ("DNG") costs; instead the revenues recovered from the customers on this rate schedule are treated as a credit against the cost of service allocated to the other rate schedules. This means it is necessary to establish a reasonable basis for allocating the revenues from Schedule FT-1 to the other customer classes.

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divided by the sum of system peak demand plus average demand. As average demand divided by peak demand equals load factor, the weighting assigned to throughput in the Manual must always be less than system load factor.

[3] QGC Response to CCS 25.07.

QGC allocates the revenue credit from Schedule FT-1 on the basis of class DNG revenues. That is, under the Company's proposed approach, the credit against a class's cost of service is proportionate to the DNG revenues recovered from that class. This approach is a marked change from QGC's allocation of revenue credits in its previous rate filing, Docket No. 02-057-02, in which revenue credits were allocated on the basis of throughput.

The allocation of the FT-1 revenue credit to classes should bear a reasonable nexus to the cost support provided by the respective classes for the facilities used to provide service to FT-1 customers. The total DNG revenue allocator proposed by the Company does not provide such a reasonable nexus, as it includes a large proportion of costs associated with small-diameter mains and service lines, facilities that are largely unrelated to providing service to FT-1 customers. This inflates the revenue credit for classes that incur substantial DNG costs for facilities that are largely unrelated to providing FT-1 service.

Q. What alternative do you recommend to the Commission?

A. I recommend that FT-1 revenue credits should be allocated on the basis of Allocation Factor 230; as discussed above, this allocation factor is used for allocating costs of compressor stations, high-pressure feeder mains, system regulation stations, and system measuring equipment – facilities required for service to FT-1 customers. The most reasonable basis for allocating the revenue credits from Schedule FT-1 is to apply the same allocation factor that is used in allocating the costs that support the provision of

FT-1 service, i.e., the revenue credit benefit should be allocated in the same manner as costs of the facilities that produce the benefit.

Q. What is the result of incorporating your two recommended adjustments to QGC's cost-of-service model?

A. These results are presented in UAE Exhibit COS 1.2, and are summarized in Table KCH-1, below. UAE Exhibit COS 1.2 also presents the cost-of-service results using QGC's proposed approach at the Commission-ordered revenue increase of $11,966,500.

Table KCH-1
UAE Cost-of-Service Study Results

Class	Current Revenues incl. Credits*	Cost of Service	Required Increase	Percent Change
GSR	$181,325,116	$195,346,545	$14,021,429	7.73%
GSC	$42,089,161	$38,561,150	-$3,528,012	-8.38%
FS	$4,058,321	$4,295,530	$237,210	5.85%
IS	$526,307	$693,053	$166,746	31.68%
TS	$5,165,035	$6,234,160	$1,069,125	20.70%
Total	$233,163,940	$245,130,438	$11,966,498	5.13%

* Includes DNG revenue credits of $4,846,743.

Q. Do you have any comments on QGC's proposal to separate the GS-1 class into two new customer classes: General Service Residential ("GSR") and General Service Commercial ("GSC")?

A. Yes. I support this separation. There is a great variety in the energy usage requirements of commercial customers relative to residential customers, which is nearly

always recognized in ratemaking by establishing separate rate schedules for these groups. Moreover, residential usage is generally a type of end-use consumption, e.g., comfort, water heating, etc., whereas commercial usage is generally an input into the production of another good or service. These differences typically have implications for rate design. The fundamental differences between residential and commercial usage warrant serving these customers under separate rate schedules.

Rate Spread

Q. What objectives should be kept in mind when determining rate spread?

A. Rate spread should recognize that rates must be just and reasonable. To this end, revenue responsibility for any class should be informed by the cost to serve the class, as well as considerations of fairness, rate stability, and economic impacts. In aligning rates with costs, we should be mindful of class rate impacts, and apply the principle of gradualism when appropriate.

Q. What has QGC proposed with respect to rate spread?

A. QGC is proposing that those customer classes excluded from the cost of service study receive the system average rate increase. All other customer classes would be required to recover the class revenue requirements identified in the Company's cost-of-service study, with the exception of the GSR and GSC classes. In the latter case, the Company determined in its initial filing that setting GSR rates equal to cost would have resulted in an increase to residential customers that was double the system average

increase. To mitigate this impact, QGC has proposed a gradualism adjustment under which GSR would move one-quarter of the way toward cost of service. The cost of this mitigation proposal would be absorbed by the GSC class.[4]

QGC's proposed rate spread at the Commission-ordered revenue increase of $11,966,500 is presented in Table KCH-2, below. This spread was derived from the QGC model filed in this proceeding.

Table KCH-2
QGC Proposed Rate Spread

Class	Current Revenue	Proposed Revenue	Proposed Increase	Percent Change
GSR	$178,295,795	$185,642,535	$7,346,739	4.12%
GSC	$40,849,482	$41,894,331	$1,044,849	2.56%
FS	$3,866,561	$4,372,420	$505,859	13.08%
IS	$510,598	$783,755	$273,157	53.50%
TS	$4,794,760	$7,495,800	$2,701,039	56.33%
FT-1	$1,481,696	$1,557,740	$76,044	5.13%
FT-1L	$2,976,000	$2,976,000	$0	0.00%
FT-2C	$22,534	$22,534	$0	0.00%
MT	$15,175	$15,954	$779	5.13%
NGV	$351,338	$369,369	$18,031	5.13%
Total	$233,163,940	$245,130,438	$11,966,498	5.13%

Q. What is your assessment of the Company's rate spread proposal?

A. I support applying the principle of gradualism to mitigate the rate impact on residential customers, but the Company's application of this principle is highly selective. Indeed, in its updated filing of March 31, 2008, in which QGC proposed an overall revenue increase of 9.50%, the Company proposed mitigation for what would otherwise

[4] Direct testimony of Gary L. Robinson, pp. 5-6.

have been a 12.25% rate increase on residential customers, while simultaneously proposing over a 90% rate increase for TS customers – with no mitigation. If the principle of gradualism is applicable for a 12% increase, presumably it should also apply at rate increases over 90%.

Q. Do you have an alternative rate spread proposal?

A. Yes. I recommend that rates be moved in the direction of cost of service, but that the maximum increase levied on any rate schedule should be capped at 200% of the system average increase. This is consistent with the approach approved by the Commission in Docket No. 02-057-02. Further, I recommend that the GSC revenue requirement remain unchanged from test year revenues, and that the revenue decrease that would otherwise apply to this class (if rates were set equal to cost of service) be used to mitigate the rate increase for residential customers, as well as contribute to the 200% rate increase cap. I support QGC's proposal that the customer classes excluded from the cost of service study (FT-1, MT, NGV) should receive the system average rate increase, subject to providing pro-rata funding of the 200% rate increase cap.

Q. What are the results of your proposed rate spread at the Commission-ordered rate increase of $11,966,500?

A. These results are presented in UAE Exhibit COS 1.3, and summarized in Table KCH-3, below.

Table KCH-3
UAE Proposed Rate Spread

Class	Current Revenue	Proposed Revenue	Proposed Increase	Percent Change
GSR	$178,295,795	$189,180,316	$10,884,520	6.10%
GSC	$40,849,482	$40,849,482	$0	0.00%
FS	$3,866,561	$4,263,442	$396,881	10.26%
IS	$510,598	$563,008	$52,410	10.26%
TS	$4,794,760	$5,286,916	$492,156	10.26%
FT-1	$1,481,696	$1,594,349	$112,663	7.60%
FT-1L	$2,976,000	$2,976,000	$0	0.00%
FT-2C	$22,534	$22,534	$0	0.00%
MT	$15,175	$16,329	$1,154	7.60%
NGV	$351,338	$378,052	$26,714	7.60%
Total	$233,163,940	$245,130,438	$11,966,498	5.13%

Q. How should your recommended change in the revenue requirement for Schedule TS (relative to QGC's proposal) be reflected in the Schedule TS rate design?

A. In my opinion, the rate design proposed by QGC for Schedule TS is generally reasonable. Therefore, I recommend that the reduction in revenue requirement be implemented through a pro-rata reduction in the firm demand charges and volumetric charges that would otherwise obtain under QGC's proposed revenue requirement for this rate schedule.

Tariff Terms and Conditions

Q. Do you have objections to any proposed changes in the terms and conditions of QGC's tariff?

A. Yes. I have objections to: (1) QGC's proposal to prevent a customer from receiving both sales and transportation service through one meter set; and (2) QGC's proposal to alter the pricing provisions of its imbalance charges for transportation service.

Q. Please explain QGC's proposal to prevent a customer from receiving both sales and transportation service through one meter set.

A. This proposal is presented in the direct testimony of Gary L. Robinson.[5] Currently, QGC's tariff permits a customer to purchase both sales and transportation service through one meter set. According to QGC's filing, at least one customer is doing so at this time. QGC is proposing to eliminate this option by modifying Section 8.01 of its tariff to expressly prohibit customers from receiving both sales and transportation service through one meter set. This change is being proposed in concert with the Company's proposed elimination of Schedule F-4, which the customer referenced above is apparently utilizing for its firm sales service.

Q. What is your assessment of this proposal?

A. While it may be uncommon for a customer to purchase both sales and transportation service, QGC offers no principled reason why a customer should be precluded from doing so. Section 8.01 of QGC's tariff explains the terms under which the purchases of multiple services may occur, and the sequence in which they are applied to the customer's bill. This sequence includes both sales and transportation service.

[5] Direct testimony of Gary L. Robinson, pp. 10-11.

Prohibiting a customer from taking both sales and transportation service is arbitrary and unduly restricts the options available to customers. I recommend that QGC's proposal to eliminate Schedule F-4 and to modify Section 8.01 of the tariff be rejected by the Commission.

Q. Please explain the changes QGC is proposing with regard to the treatment of imbalance charges for transportation service that cause you concern.

A. Section 5.11 of QGC's tariff provides that after the closing of the month, transportation customers have fifteen days to bring any monthly imbalances to within a +/- 5% tolerance window through nomination or balance trading. The current tariff provides that any remaining positive imbalance may be purchased by QGC at the lesser of the market index price or QGC's commodity cost, minus $1.00 per Dth. Any negative imbalance may be sold to the customer at the greater of the market index price or QGC's commodity cost, plus $1.00 per Dth.

QGC's proposal to alter these terms is presented in the direct testimony of Brent A. Bakker.[6] QGC is proposing to change these terms to allow the Company to purchase imbalances at the prices prevailing either in the month the imbalance occurred, or in the month following the imbalance, at the Company's discretion. Similarly, QGC is proposing that negative imbalances may be sold to customers either at the prices prevailing in the month the imbalance occurred, or in either of the two months following the imbalance, again at the Company's discretion.

Q. Please explain your objections to this proposal.

A. QGC's tariff already prescribes specific economic penalties for customers who retain an imbalance outside the tolerance band fifteen days after the close of the month: it is the more adverse of two pricing benchmarks plus or minus $1.00 per Dth, depending on whether the imbalance is negative or positive. QGC is attempting to introduce a "shopping list" of pricing options that will allow the Company to exact an even stiffer penalty by selecting more adverse prices from subsequent months – at the Company's sole discretion.

While I agree with the Company that it is important that transportation customers be encouraged to stay within the imbalance tolerance window, the tariff terms must also be just and reasonable. The current tariff terms already provide a sufficient incentive for minimizing imbalances through the existing pricing penalties, and QGC has not provided any evidence that additional penalties are needed, nor has QGC provided any evidence that granting it the pricing discretion it is seeking will improve the status quo in a just and reasonable manner. Adopting this provision will create an invitation for QGC to apply its discretion selectively, without a countervailing public benefit to justify departure from the current tariff's prescriptive terms.

Q. What is your recommendation to the Commission on this matter?

[6] Direct testimony of Brent A. Bakker, pp. 5-6.

A. I recommend that the Commission reject QGC's proposed changes to Section 5.11 (re-numbered 5.10) that would provide the Company with the option to cash out imbalances by selecting prices from multiple months.

Q. Do you have other concerns with changes QGC is proposing with regard to the treatment of imbalance charges for transportation service?

A. Yes. In addition to the aforementioned issue, QGC is proposing to apply the Southern California Gas Company index for cashing out imbalances for customers whose gas is delivered into the distribution system at, or downstream of, Indianola. This means that, as a practical matter, QGC would purchase positive imbalances from affected customers at the Company's own commodity costs less a dollar, and sell negative imbalances at the much higher Southern California Gas Company index plus a dollar.

Q. What are your objections to this proposal?

A. Prices for delivery into southern California are substantially higher than prices on the Questar Pipeline and Northwest Pipeline (Rocky Mountains) systems, which are the other indexes that QGC proposes to use for pricing imbalances on its system. The history of these prices since 2003 is shown in UAE Exhibit COS 1.4. Adoption of the Company's proposal to apply the Southern California Gas Company index for cashing out imbalances at or downstream of Indianola would result in an unreasonable penalty for QGC customers in the southern part of Utah.

Again, while I agree that it is important for transportation customers to be encouraged to stay within the imbalance tolerance window, the penalty being proposed

by QGC is excessive. Transportation customers in southern Utah typically purchase their gas supplies in Rocky Mountain markets. Selling imbalance gas to them at southern California prices (while purchasing negative imbalances at Rocky Mountain prices) is unduly punitive.

Q. What is your recommendation to the Commission on this matter?

A. I recommend that the Commission reject QGC's proposal to apply Southern California Gas Company index prices for cashing out imbalances at or downstream of Indianola. Instead, either the Questar Pipeline index price or Northwest Pipeline (Rocky Mountains) index price should be used for this purpose.

Q. Does this conclude your direct testimony with respect to cost of service?

A. Yes, it does.