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. 09-057-16

DIRECT TESTIMONY OF STEVEN R. BATESON

FOR QUESTAR GAS COMPANY

December 3, 2009

QGC Exhibit 4.0

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Steven R. Bateson. My business address is 180 East First South Street, Salt Lake City, Utah.

Q. By whom are you employed and what is your position?

A. I am employed by Questar Gas Company (Questar Gas or Company) as Supervisor, Regulatory Affairs. I am responsible for cost allocation, rate design, gas cost adjustments and forecasting.

Q. What are your qualifications to testify in this proceeding?

A. I have listed my qualifications in QGC Exhibit 4.1.

Q. Attached to your testimony are QGC Exhibits 4.1 through 4.11. Were these prepared by you or under your direction?

A. Yes.

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

A. I will present the Company's class cost-of-service (COS) study and rate design proposals. I will discuss how the Company's proposed COS study and rate design achieves the goals of cost allocation and rate design. I will present the Conservation Enabling Tariff (CET) allowed revenue per General Service customer resulting from the COS study. I will present an updated facility extension study. Finally, I will discuss the efforts of the Low-Income Task Force.

II. CLASS COST-OF-SERVICE STUDY

A. Class Cost-of-Service Study

Q. In the Utah Public Service Commission's December 22, 2008, Phase II Order in Docket No. 07-057-13 (COS Order), the Company was directed to include all classes in its next class COS study. Has the Company complied with that requirement in its filing?

A. Yes. A COS study has been performed for the General Service (GS), Firm Sales (FS), Interruptible Sales (IS), Transportation Service (TS), Firm Transportation (FT-1) and Natural Gas Vehicle (NGV) rate classes. It should be noted that two customers, the one Municipal Transportation (MT) customer and the one transportation special contract (FT2-C) customer are included in the TS class for the COS study. These two customers are both transportation customers.

Q. Mr. Cook recommends revised qualification criteria for the FT-1 rate class. Have you included the impact of that proposal in your class COS study?

A. Yes. The COS study includes in the FT-1 class only those customers that would continue to qualify for the FT-1 class. The FT-1 customers that would no longer qualify for this rate have been moved to the TS rate class. In every case where an allocation factor is affected by this change, two versions of that allocation factor have been developed. The COS model[1] has the built-in option to select either the current FT-1 criteria or the proposed FT-1 criteria. The resulting COS model output will reflect that selection.

Q. Mr. Cook recommends a refinement in the use of temperature and elevation when measuring volumes. Have you reflected the effect of those refinements in your COS study?

A. The COS study also uses throughput volumes reflective of the adoption of the modified temperature and elevation practices. In every case where an allocation factor is affected by this change, two versions of that allocation factor have been developed. The COS model has the built-in option to select either the current method of adjusting measured quantities for temperature and elevation or the proposed method. The resulting COS model output will reflect that selection.

Q. Which COS study is the Company proposing?

A. The Company is proposing the COS study that includes the modified FT-1 qualifications, coupled with the adoption of the temperature and elevation refinements.

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[1] The COS model is provided electronically herewith and is identified as 09-057-16 Model.xls.

Q. The COS Order also addressed the Company's proposal in Docket No. 07-057-13 to split the GS rate class between residential and commercial customers. Has the Company performed the COS study in a manner that will allow any party the opportunity of examining alternative approaches to split the GS rate class?

A. Yes. The Company has provided a base GS COS study and three additional GS COS studies, each with an alternative way of splitting the GS class. The base GS class COS study includes all customers currently qualified to be served on this rate schedule. The first alternative GS COS study splits the class along the lines of residential and commercial customers, based on the tax-code definition currently recorded for each GS customer. The second alternative study splits the GS class on the basis of seven usage silos. Individual customers are included in a usage silo depending on the peak-month use for that customer in the prior year. The seven specific usage silos used for this analysis are based on peak month usage of 0-10 Dth, 10-25 Dth, 25-50 Dth, 50-100 Dth, 100-200 Dth, 200-400 Dth and over 400 Dth The third alternative study splits the GS class based on the Basic Service Fee (BSF) type meter used to serve each individual customer. Users of the COS model can choose any of these studies by adjusting a single switch. I will present the COS study results showing the effect of splitting the GS class into the subcategories described above in the discussion of cost curves.

Q. What does the Company recommend with regard to a split of the GS rate class?

A. The Company recommends that the GS rate class continue to apply to both residential and commercial customers up to a daily requirement of 1,250 Dth. The Company believes the negative implications of rate-class proliferation far outweigh the questionable benefits of more rate classes with homogeneous customers. These negative implications include sharp rate jumps between classes, complex customer administration and customer confusion. Homogeneous rate classes are not necessary to implement good cost tracking to individual customers. Instead the Company will recommend a further refinement in the rate design of the current GS schedule.

Q. But didn't the Company recommend a split of the GS class in the last rate case?

A. Yes. The Company recommended a split based on the tax classification of customers between residential and commercial customers. The split was justified because it was apparent that large commercial customers were paying more than their cost-of-service. There was also a push to have flat rates for the residential customers subject to the GS rate. As I will discuss later, virtually 100% of the residential GS customers already have flat rates. Based on the arguments presented in the last case, the Commission's decision and further consideration of the issue, the Company does not believe there are significant advantages to a split of the GS class at this time. All of the factors that might motivate the Company to recommend a split of the GS class are better addressed through rate design within a single class.

B. Allocation Factors

Q. Please describe the allocation factors used in the COS study?

A. The Company uses 35 allocation factors in the COS study. QGC Exhibit 4.2 provides a brief description of each allocation factor. I will describe in greater detail the Distribution Plant Factor, the Distribution Throughput Factor and the Peak-Day Factor.

C. Distribution Plant Factor Study

Q. Will you please describe the Distribution Plant Factor Study?

A. The Distribution Plant Factor Study is an analysis of distribution plant installed to provide service to customers in each rate class. The types of distribution plant analyzed are meters, regulators, service lines and small diameter (6 inches and smaller in diameter) intermediate high pressure (IHP) main lines. The Distribution Plant Factor Study uses a non-proportional stratified random sample of active meters to measure the average investment for each plant category. In response to recommendations from the Cost-of-Service and Rate Design Task Force established in Docket No. 02-057-02, larger capacity meters are sampled at much higher rates than smaller capacity meters. Studies of this nature have been a central aspect of the Company's COS studies since the mid-1960s.

Q. Please describe the changes to the Distribution Plant Factor Study since the Company's last general rate case.

A. The numbers of installed meters by class have been updated to reflect the current distribution of meters of all capacities. Current cost levels for each type of facility in the analysis have also been updated. Finally, the book values as of June 30, 2009 for each plant category were used to keep the various aspects of the analysis in balance.

Q. Please describe how the Distribution Plant Factor is developed.

A. The Distribution Plant Factor begins with a non-proportional stratified random sample of installed meters to determine the average amount of plant installed for each meter type. The sample used in the Company's last general rate case was updated to reflect the currently installed meters at each sample location. QGC Exhibit 4.3, page 1, shows the current meters by rate class.

Q. How was the amount of plant required to serve customers estimated?

A. Each meter selected in the sample was evaluated using information from the Company's Customer Care and Billing (CC&B) system, engineering files, and the Graphical Information System (GIS). Based on current cost estimates, the costs to reproduce the meter set, service line and the portion of main line attributable to the sampled meter were determined.

Q. How did you determine the amount of main line attributable to the sampled meters?

A. The study examines the main line directly connected to the service line serving a sampled meter. The study examines the main line within 1,000 feet of a service-tap point. Usually this translates into 500 feet in each direction. The length of each size of main line within the 1,000 feet is recorded, along with the number of service-line taps within the 1,000 feet. QGC Exhibit 4.3, page 2, shows the map from the GIS for an individual sampled meter. The map for this sampled meter, designated with a star, includes the measurements for main (1,000 feet of two-inch main line, with 20 service taps), and service line (97 feet of half-inch service line). The main line attributable to this meter (1,000 feet/20 taps, or 50 feet) is then priced at current cost.[2] The cost associated with

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[2] The only exception is that if main with a diameter greater than six inches is found in the sample, the excess cost above the cost of six-inch main line is excluded. These excess costs are allocated using the Distribution Throughput Factor that is discussed below.

the identified main line divided by the service-line taps is included in the Distribution Plant Factor Study.

Q. Why was 1,000 feet selected for the main line measurements?

A. One thousand feet was selected as the measured length in order to capture the character of the area surrounding a customer premises, including street crossings. Experience has shown that longer measurement lengths have a tendency to include dissimilar neighborhoods while shorter lengths tend to capture too few or no intersection crossings. Also, the effort required to perform this analysis increases substantially as the measurement length increases. One thousand feet produces reliable information regarding the size of mains installed in the vicinity of a customer, as well as the local density of customers attached to the same main. Additionally, the use of 1,000 feet is consistent with the methodology employed since the early 1980s.

Q. How is the service-line cost determined?

A. The length and size of service line for each sampled meter is recorded. For the sampled meter shown on QGC Exhibit 4.3, page 2, the service line associated with this meter was 97 feet of half-inch pipe. The length of service line is then multiplied by current cost for the identified pipe size.

Q. How are the meter and regulator costs determined?

A. For each active meter installed in the system, a comparable model is identified. The current cost for the comparable model, along with standard ancillary facilities, was determined. These current cost amounts are then assigned to the sampled meters.

Q. How were the current cost levels established?

A. The cost estimates were provided by distribution engineering. The costs for IHP main and service lines are based on the actual pricing in effect for 2008, weighted by the footage installed in 2008. The costs for high-pressure service lines are based on recent actual projects adjusted to 2008 price levels. The current costs for meter sets are based on current engineering estimates for standard meter sets of like size. QGC Exhibit 4.3, page 3, lists the cost data for main, service line and meter sets used to price the facilities identified through the sample measurements.

Q. How is the sample used to establish the small-diameter IHP main investment by rate class?

A. QGC Exhibit 4.3, page 4, shows the calculation of plant investment for small-diameter mains for each rate class. Column B, lines 1-46, shows the average investment in mains by nominal meter rating at current cost. These average values are multiplied by the number of active meters in each rate class. The product of these calculations is shown in columns C through H, lines 1-46. The total for each rate class is shown on line 47. The sum of the values on line 47 is shown in column I. The total in column I, line 47, represents the total main-line investment at current cost attributable to the customers receiving service under the rate classes included in the COS study. The next step is to proportion this total to match the book investment for small-diameter mains (column J, line 48). The percentage reduction required to proportion the unadjusted total investment (column I, line 48) to equal the book investment is then applied to each line of column I to arrive at the adjusted class totals shown on line 48.

Q. How is the sample used to establish the service-line and meter/regulator investment by rate class?

A. QGC Exhibit 4.3, page 5, shows the calculation of plant investment for service lines for each rate class. QGC Exhibit 4.3, page 6, shows the calculation of plant investment for meters/regulators for each rate class. The service-line and meter/regulator investment by rate class is calculated the same way as described above for small diameter IHP mains.

Q. Why are the plant-investment values, calculated at current cost, proportioned down to match book cost?

A. This step is part of this study to ensure that no component of plant is given too much weight when the three components of the Distribution Plant Factor Study are combined.

Q. What costs are allocated using the Distribution Plant Factor?

A. The costs allocated using this factor include: 1) the rate-base related costs, including return, taxes and depreciation; 2) operation and maintenance expenses related to distribution activities; and 3) a portion of administrative and general expense.

Q. What is the result of the Distribution Plant Factor Study?

A. The results are shown in QGC Exhibit 4.3, page 7, columns B-G, rows 5-7. The Distribution Plant Factor Study shows that 98.22% of distribution facilities are installed to serve GS customers, 0.59% are installed to serve FS customers, 0.16% are installed to serve IS customers, 0.81% are installed to serve TS customers, 0.21% are installed to serve FT-1 customers and 0.01% are installed to serve NGV customers.

D. Distribution Throughput Factor Study

Q. Please describe the Distribution Throughput Factor Study.

A. The Distribution Throughput Factor Study develops an allocation factor based on the commodity volumes delivered through the IHP distribution system. The factor is developed by identifying customers that are not connected to the IHP system and then subtracting the Dths delivered to those customers from the commodity-throughput numbers.

Q. What costs are allocated using the Distribution Throughput Factor?

A. The costs associated with large-diameter IHP main lines (greater than 6 inches in diameter) are allocated using the Distribution Throughput Factor. These facilities are generally sized for more than just local delivery requirements and, therefore, are excluded from the Distribution Plant Factor Study. The Distribution Throughput Factor is based on throughput quantities that reflect the underlying purpose of these facilities. Large-diameter main lines installed within the IHP system are typically designed to move gas from the high-pressure feeder-line system to the smaller distribution lines. These facilities benefit all customers connected to the IHP system. Customers that are not connected to the IHP system receive no benefit from these facilities and are allocated none of these costs. The booked cost of the large-diameter main lines is used to determine the portion of the distribution cost associated with these facilities.

Q. What are the results of the Distribution Throughput Factor Study?

A. The factor developed from the study is shown on QGC Exhibit 4.4 on line 7, columns B through H. The study shows on line 7 that some rate classes, such as the Transportation Service rate class, have very few customers connected to the IHP distribution system, while in the case of the GS class, nearly all of the customers are served from the IHP system. As a result, transportation customers are allocated a relatively small portion of costs associated with large-diameter mains.

E. Peak-Day Factor Study

Q. What is the Peak-Day Factor Study?

A. The Peak-Day Factor Study attributes responsibility for the design peak day between the rate classes. This factor is used to allocate costs related to the coincident peak demand of customers.

Q. In the COS Order, at page 31, the Commission concluded "we require the Company to use a measure of actual demand for the peak-day allocation factor in its cost-of-service study in the next DNG case" and "we are persuaded by the Division that interruptible customers contribute to peak demand and therefore these customers should receive some allocation of peak demand in the Company's next cost-of-service study." Have you modified your peak-day allocation factor to comply with the Commission's request?

A. Yes. Although the Company disagrees that interruptible customers contribute to the design peak-day demand, we have complied with the Commission's order. We note that while interruptible customers are not on the system during peak-day conditions, they nevertheless are able to stay on the system longer each winter as a result of the system being designed and built to reliably serve the peak needs of the firm customers. With the requirement that interruptible loads be included in the peak-day study, there is a risk that an excessive level of cost will be allocated to interruptible customers.

Q. Do you have a recommendation that complies with the Commission's requirement that interruptible customers should receive some allocation of peak demand?

A. Yes, I have modified the Peak-Day Factor Study to allocate to interruptible customers the costs associated with the portion of the design peak day that exceeds the average peak requirements of the firm customers.

Q. Why is the design peak day higher than the average peak requirement?

A. The design peak day includes a margin above average requirements in recognition of the phenomenon that the potential design peak day is higher than the average firm peak requirements. This is necessary to reflect the fact that firm sales customers often exhibit higher requirements than the average expectation from demand models. This phenomenon has been observed each winter. Roughly half of near peak days exceed model predictions while the other half fall short of predictions. This is to be expected with an average. The average shortfall on near peak days is 4.61%. This percentage is the portion of the design peak day that is assigned to interruptible customers.

Q. You mentioned that there are other considerations in the Company's COS study that reflect the benefit interruptible customers receive. What are those other considerations?

A. The Company's COS study recognizes that the plant and expenses that are related to design peak also provide the benefit of commodity delivery. The allocation of these plant and expense accounts is performed by utilizing a blended allocation factor that weights the Peak-Day Factor at 60% and the Throughput Factor at 40%.

Q. What design peak day is used in developing the Peak-Day Factor?

A. I have used the 2010 peak day from the 2009 IRP as the basis for this study. The Utah design peak day, updating for transportation contracts, for 2010 is projected to be 1,399,929 Dth.

Q. How is the Peak-Day Factor calculated?

A. The first step is to determine the portion of the design peak day that can be assigned directly to specific rate classes. These are the IS, TS, FT-1 and NGV rate classes. The contract demand attributable to customers served under the FT-1 and TS rate classes is directly assigned. The total firm-contract demand for these two classes is 191,092 Dth.

The NGV class is assigned 1,636 Dth of peak demand based on the average use per work day. The IS and TS rate classes are then assigned, as explained above, a pro-rata share to the 4.61% of the peak-day demand to comply with the Commission's directive. The balance of the design peak day attributable to the GS and FS classes is 1,151,549 Dth. These calculations are shown on QGC Exhibit 4.4, page 1, lines 1 through 4.

Q. How is the remaining quantity of design peak day apportioned between the GS and FS rate classes?

A. An analysis of the population for these classes was performed using data from the CC&B system to establish the proportionate responsibility for the remaining design peak day. This study involved estimating the contribution to peak for customers grouped by weather zones within the three remaining rate classes. The total estimated design peak day was calculated using individual customer data and was then summed by rate class. The remaining design peak day is allocated between these two classes based on their share of the calculated peak.

Q. Does this approach differ from the methodology historically used by the Company in its COS study?

A. Other than including all rate classes in the COS study and the inclusion of an interruptible aspect to the allocation study, this approach is very similar to the method used in Docket No. 07-057-13.

Q. What is the result of the Peak-Day Factor Study?

A. The results are shown on page 1, line 4 of QGC Exhibit 4.5. The GS class is responsible for 79.4% of the design peak, the FS class is responsible for 2.8% and transportation classes are responsible for 17.3%.

Q. Are the results of the Peak Day Factor Study consistent with your expectations?

A. Yes. I have also shown on QGC Exhibit 4.5, page 1, line 6, the resulting load factor for each of the firm-sales classes. This shows that the GS class has an average load factor of 23.7% and the FS customers have an average load factor of 47.6%. These load factors are consistent with the requirements of the FS rate class (40% minimum load factor requirement) and historical experience for the GS class.

F. Cost of Service Results

Q. In Mr. Mendenhall's revenue requirement calculation he ran the model (09-057-16 Model.xls) using both allowed revenues and volumetric revenues for the GS class. What revenues for the GS class have been used in the COS model?

A. I have used volumetric revenue for the GS class in the COS model. For clarification, the total revenue requirement is not affected by the use of allowed or volumetric GS revenues. However, reported deficiency, as explained in Mr. Mendenhall's testimony on page 26, does vary. Therefore, when using volumetric revenues for the GS class the COS Study will be showing a $14.7 million deficiency (QGC Exhibit 4.6, page 1, column B, line 52).

Q. Please describe the results of the COS study.

A. QGC Exhibit 4.6 shows the results of the COS study. Lines 1-48 are a summary of the revenues, expenses and rate base allocated to the different rate classes using the factors explained above. Lines 49 and 50 show the Rate of Return and Return On Equity by class before the deficiency. Line 52 shows how the deficiency needs to be assigned to each class in order to have each class's return equal. Line 53 is the COS adjustments that I will discuss below. Line 54 represents the total revenue requirement (COS with deficiency). Line 56 shows the revenue that needs to be collected from each class after giving each class a credited share of the general related revenues. QGC Exhibit 4.6, page 2, line 1, shows the same values for each rate class. Line 2 shows the volumetric revenue by class using current rates. The difference, line 3, matches the deficiency calculated by Mr. Mendenhall for volumetric revenues of $14,720,915 (revenue deficiency by class). The percent change by class is shown on line 4.

Q. How do you reconcile the impact of the shift of customers due to the adoption of the new FT-1 criteria?

A. I have added three lines to page 2 of QGC Exhibit 4.6. Line 5, columns F and G, show the volumetric revenues for the TS and FT-1 classes with the customers that will no longer qualify for the FT-1 rate shifted to the TS class. Line 6 shows the change from the COS results, line 1, and the revenues on line 5. Line 7, columns F and G, show the percentage change for these two classes.

Q. You mention COS adjustments above. Is the Company proposing that any of the classes contribute less than their full COS?

A. Yes. The FT-1 rate class has historically been designed to recover revenue that exceeds the variable cost to serve, but falls short of fully allocated cost. With the adoption of Mr. Cook's recommended criteria for FT-1 qualification, only those customers truly capable of bypass will be left on this schedule. The Company believes that in the interest of avoiding bypass this rate should be designed to cover less than the fully embedded cost-of-service. The other class that has been designed to collect less than a full COS is the NGV rate class. The NGV market, as discussed by Mr. McKay, is still developing. The Company recommends that past Commission practice of designing this rate to recover less than full cost should continue. The Company notes that the Utah Legislature passed in the last session a statute expressly allowing this practice for NGVs. The amount of the subsidy is very small in relation to the potential long-term benefits described by Mr. McKay.

Q. How was the proposed FT-1 COS adjustment derived?

A. The rate blocks were given the same percentage change as the TS class. The difference between the revenue generated by these rates and the COS results is used to calculate the proposed COS adjustment. This adjustment is shown on QGC Exhibit 4.6, page 1, column G, line 53. This results in an FT-1 rate that is fair and does not represent an undue level of discrimination.

Q. How was the proposed NGV COS adjustment derived?

A. The proposed adjustment to this class can be found on QGC Exhibit 4.6, page 1, column H, line 53. This adjustment will move the NGV class 50% of the way to full COS. This represents an increase in the DNG component of the rate of 24.1%. The increase to the DNG portion of the NGV rates is $0.144 per gasoline gallon equivalent.

III. RATE DESIGN

Q. Please summarize your testimony of how the Company's rate design proposals are developed.

A. I will discuss the functionalization of costs. I will discuss the development and use of cost curves. I will describe the Company's proposals for basic service fees, transportation administration charge and the demand charge applicable to transportation customers requiring firm service. I will demonstrate that declining block rate designs coupled with graduated basic service fees are effective rate design components for matching the cost to serve individual customers. I will describe how the Company's proposal strikes a reasonable balance between the three primary objectives of rate design.

A. Functionalization of Costs

Q. Will you please explain the methodology used to design the proposed rates?

A. The first step in the rate design process is to categorize the components of the COS (O&M expenses, depreciation, taxes, and return on rate base) into functional categories. The three categories used are:

1. **Customer Costs:** Those costs that are driven by the number of customers served. While these costs are primarily customer-related, they frequently increase with the size of the load being served.

2. **Demand Costs:** Those costs that are driven by the design peak day requirements of firm customers.

3. **Throughput Costs:** Those costs not specifically assigned to the customer or demand categories.

B. Development of Cost Curves by Rate Schedule

Q. How are cost curves developed?

A. The next step in the process is to develop an equation that captures the behavior of the three categories of costs over the pertinent usage range for each rate class. The first functional category is Customer Costs. Customer Costs vary by customer, with costs increasing at a decreasing rate as usage levels increase. These are the costs that justify the use of basic service fees and declining blocks to accurately track cost recovery to individual customers. The form of equation that best describes the behavior of these costs is a power function ($A * X^B$, where X is annual usage, A and ^{B} are constants derived from a regression analysis). The second functional category is Demand Costs. These costs are related to the peak responsibility of each class. Demand Costs are recovered over winter usage from firm sales customers and in the form of a demand charge from firm transportation customers. These costs are included in the cost curves on an equal cents per Dth basis. The third functional category is Throughput Costs. These costs are reflected in the cost curve on an equal cents per Dth basis. The cost curve for each rate class can then be graphed to illustrate the behavior of the cost curve for that rate class over the range of usage expected for that class. Rates are then designed, including fixed charges, and volumetric rates (including declining block rate structures), to effect revenue recovery that follows the cost per Dth as closely as possible. QGC Exhibit 4.7, pages 1-7 show the cost curves for the GS, FS, IS, and TS rate classes and the revenue per Dth collected from the proposed rates.

Q. You have included four versions of the GS cost curve. Can you describe what each version is intended to demonstrate?

A. Yes. QGC Exhibit 4.7, page 1, is a simple graph showing the GS cost curve and the GS proposed rate, with summer and winter rates combined. This graph demonstrates that for customers using less than about 9 Dth per month, the proposed rate design under recovers costs from these customers. Conversely, for customers using more than 9 Dth per month the proposed rate design over recovers costs from these customers. For a customer that has about half of their bills below 9 Dth per month and the other half above 9 Dth, this rate design will recover an amount of annual revenue about equal to the annual cost to serve.

Q. Could the proposed rate design be modified to more accurately recover costs from individual customers?

A. Yes. If the BSF for Category 1 meters was set at a higher amount, the rate would be much closer to the cost curve, especially over the range where the bulk of GS customer bills fall.

Q. Please continue.

A. QGC Exhibit 4.7, page 2, shows the same information as page 1, with additional information on the cost to serve GS customers split into the seven usage silos described earlier.

Q. How did you calculate the cost to serve the customers in each silo?

A. The first step was to determine for every GS customer which silo that customer would be assigned. Historical data for the 12 months ending June 30, 2009 was used. Each customer was tagged as: 1) residential or commercial; 2) served by a BSF Category 1, 2, 3 or 4 meter; and 3) peak month of use in one of the seven usage silos. The statistics required to calculate every major allocation factor were then accumulated for each of the 13 silos (residential vs. commercial, BSF 1, 2, 3 and 4, usage silos 1-7). The COS model includes allocation factors calculated by silo.

Q. How are the COS results for the seven usage silos shown on QGC Exhibit 4.7, page 2 depicted?

A. Each silo is represented by a horizontal line showing the average DNG cost per Dth for all of the customers in each silo. The horizontal line begins and ends at the usage level inclusive of 60% of the monthly Dth bill quantities for that silo. The dot represents the average monthly Dth for the silo.

Q. What do these results reveal regarding the behavior of the costs for the GS class?

A. The costs exhibit a marked decline as usage levels increase. Customers in the lowest usage silo (0-10 Dth peak month) has costs in excess of $6.00 per Dth. The next higher usage silo (10-25 Dth peak month) have an average cost of just over $3.00 per Dth. Unit costs continue to decline as the silo usage ranges increase. These cost studies are based on real customers with realistic allocation factors. The pattern of the cost decline validates the GS class cost curve.

Q. Are the BSF silos (page 3 of 7) and the residential/commercial silos (page 4 of 7) created in a similar manner?

A. Yes.

Q. Do you believe new rate classes could be created using any of these silos?

A. While it is possible, it is not advisable. If the usage silos were used, the rate jump between silos would be too large and many customers would be shifting between silos each year. Also, individual customers that are close to any of the qualification break points would face perverse incentives. This type of class structure would also be administratively complex. I would strongly urge the Commission to avoid these problems by rejecting the possibility of any type of disaggregation of the GS class.

C. Basic Service Fee

Q. Are you proposing any changes to the Basic Service Fees?

A. No. While the cost curve analysis shows that rates are below cost for smaller GS customers, in keeping with past Commission preference, the Company is not proposing any changes to the Basic Service Fees in this case.

D. Determination of the Number of Blocks and the Size of Blocks by Rate Schedule

Q. What is the purpose of using block rate structures?

A. The primary goal of block rates is to calculate rates that follow the cost curves as closely as possible, without creating overly complicated rate structures. In the past, the Company has made an effort to standardize the block breaks throughout the rate schedules. In addition, the Company has simplified the GS rate design to reflect only two rate blocks. However, a close examination of the cost to serve the broad range of customers in this rate class shows that two blocks are not sufficient.

Q. Is the Company proposing a different block structure for the GS rate class?

A. Yes. The block structure used for the GS class for many years has been designed with two blocks. The first block consisted of the first 45 Dth used in any month. Approximately 98.5% of GS customer bills never leave the first rate block resulting in those customers essentially having a flat rate structure. For residential bills, 99.6% fall in the first rate block. The second rate block was designed primarily for the larger commercial customers in the GS rate class and currently includes all usage in a month that exceeds 45 Dth. For the larger commercial users in the GS rate class, the Company is now proposing a third rate block. This will affect approximately 6,300 large commercial customers and will significantly help to smooth the transition between the GS and FS schedules.

Q. What is the proposed block structure for the GS rate class?

A. The first 45 Dth will continue to be the first rate block. The second rate block will be for monthly usage between 45 Dth and 200 Dth. The third rate block will be for all usage over 200 Dth per month. Each year some customers are required to move from the GS to the FS rate schedules, and vice-versa, because of the 40% load factor requirement on the FS schedule. The availability of the third block in the GS schedule allows for better cost tracking which directly results in a more gradual transition between these two rate schedules.

E. Transportation Administrative Charge

Q. Are you proposing any changes to the calculation or level of the Transportation Administrative Charge?

A. No. The Company is proposing that the Transportation Administration Charge remain unchanged from the level currently in the Tariff.

F. Transportation Firm Demand Charge

Q. How is the firm contract demand for transportation service established?

A. The total firm-contract limit for each customer served under the TS rate class is summed. This amount is the maximum Dth requirement allowed on the system during periods of interruption. Each customer taking service under the TS schedule is required to specify a daily firm-contract requirement. Prior to agreeing to supply this level of firm service, the Company must first confirm that sufficient capacity is available to serve the customer's request. Approximately 56.6% of TS customers contract for no firm service, 8.8% of TS customers have all of their daily requirements covered by a firm contract and the remaining 34.6% have firm contracts that cover only a portion of their daily requirement.

Q. Are you proposing any changes to the demand charge for firm transportation customers?

A. Yes. With the assignment of some peak responsibility to the interruptible portion of the TS class, total demand costs allocated to the TS class have increased. However, not all of these costs should be included in the demand charge. The transportation firm demand charge is calculated by dividing the portion of the demand cost attributable to firm customers by the firm contract demand. The resulting demand charge is $24.35 per Dth per year.

G. Design Rates and Fees to Collect the Required Revenue by Rate Schedule

Q. Have you calculated proposed rates that correspond to the revenue requirement calculated by Mr. Mendenhall and the COS study you presented earlier in this testimony?

A. Yes, a summary of the proposed rates is shown in QGC Exhibit 4.8. The rate design (green tabs) of "09-057-16 Model.xls" used to calculate these rates has been provided to all parties in this case as part of the filing.

H. Balancing Appropriate Cost Recovery with Incentives for Efficient Use of the Product

Q. The Commission expressly directed the parties to address the issue of "how best to achieve the objectives of appropriate cost recovery and incentives to efficiency and conservation considering we have redesigned the regulatory apparatus by approving the CET pilot as a means to encourage the Company to undertake DSM on behalf of its customers," COS Order at 59. Has the Company considered the goal of encouraging energy efficiency in the design of the GS rates being proposed?

A. Yes. The issue, as framed by the Commission, is a good example of the tension encountered when alternative approaches to rate design are considered. Dr. Bonbright in his seminal work, Principles of Public Utility Rates, addressed this issue in a couple of ways. First, he recognized that the eight criteria of a desirable rate structure tend to be ambiguous, overlap, and do not necessarily have a set order of priority. He repeatedly advised that a rate design should seek balance between these desirable attributes. Second, he listed three primary objectives, noting that the eight attributes are incorporated therein. The three primary objectives are: 1) the revenue requirement or financial need objective is met; 2) the fair-cost-apportionment objective; and 3) the optimum-use or fair-rationing objective.

Q. Why do you believe the Company's proposed GS rate design achieves the objectives identified by the Commission?

A. This is accomplished because it reflects a reasonable balance of the three primary rate design objectives as identified by Dr. Bonbright. First, the Conservation Enabling Tariff (CET) assures the Company that the first objective is met. Under the CET, the Company is only allowed to recover the Commission-authorized revenue per customer. Next, the Company's diligence in developing a fair and well-balanced COS study and the translation of the COS study into administratively feasible rates achieves the second objective. In the GS rate class, the BSFs and the declining block rates are designed to collect from individual customers the costs caused by those customers as accurately as possible. Finally, the price signal required to encourage customers to use natural gas wisely and efficiently is built into the Company's rate design. The total cost of every Dth of gas consumed by our customers carries with it the cost of finding, producing, gathering, transporting, distributing and measuring the quantity of gas delivered. Even the last Dth consumed in the lowest possible rate block contains each and every one of these cost elements. As a result, even the last Dth consumed in the lowest rate block is fairly priced. GS customers retain an incentive to use our product wisely even if their usage levels allow them to reach the least expensive rate block. Energy conservation is best encouraged by creating incentives for the customer to adopt energy-efficient practices. The Commission has fully supported the Company's efforts to promote the adoption of energy efficiency. As a result, the Company's customers have implemented many energy-efficiency measures. I believe this will continue with the Company's rate design as proposed.

Q. Would flat DNG rates improve the price signal GS customers perceive?

A. No. Flat rates would actually have the unintended consequence of reducing the price signal for over 98% of the GS customers. As I noted earlier, 98.5% of GS bills terminate in the first rate block. With flat rates the first rate block would be $.173/Dth lower. This unintended consequence would send a weaker price signal to the very customers that can have the greatest impact on improving energy efficiency. The real issue is cost tracking. Flat rates invariably under-recover costs from smaller customers at the expense of a few very large customers. The use of energy efficiency to rationalize a transfer of wealth is both inappropriate and counterproductive.

Q. Why is it important to balance the three objectives?

A. The objectives of rate design are by their very nature conflicting. A fundamental tenet of rate design is to strike a reasonable balance between the conflicting objectives. The Company's proposed GS rate design coupled with the Company's ThermWise energy-efficiency programs and the CET strike a fair and equitable balance between the competing objectives.

Q. Have you calculated the annual bill for a typical GS customer based on the Company's proposed revenue requirement, COS study and rate design?

A. Yes. QGC Exhibit 4.9 shows the monthly bill amounts for the typical customer using current rates and the proposed rates. I have adjusted, in column E, the typical customer usage from 80 Dth to 82 Dth to account for the proposed temperature and elevation refinements proposed by Mr. Cook. This results in the typical GS customer's annual bill increasing by $11.85 or 1.8 percent.

IV. CET ALLOWED REVENUE PER CUSTOMER

Q. Have you calculated revised allowed monthly revenue per customer amounts for use in the CET tariff?

A. Yes. Attached as QGC Exhibit 4.10 is a worksheet showing the revenue requirement allocated to the GS class along with a calculation of the average revenue per GS customer and a monthly allocation of the average based on the past three years of revenue.

V. FACILITY EXTENSION POLICY

Q. In the COS Order, the Company was directed to prepare and file in its next general rate case an updated Contribution in Aid of Construction (CIAC) study through calendar year 2008 similar to what the Company provided in the Company's 2002 general rate case, Docket No. 02-057-02, QGC Exhibit 5.2, along with the Company's recommendations on proposed modifications to construction allowances. Has the Company prepared this analysis?

A. Yes. Attached as QGC Exhibit 4.11, page 1, is the requested analysis updated through December 31, 2008. This analysis shows that the level of investment in main and service lines has increased since the 2002 study. The average investment in main extensions per new GS customer is $1,168 (column C, line 1) and the average investment for service lines and meter per new GS customer is $606 ($216 + $390) (column C, lines and 3).

Q. Is the Company proposing modifications to construction allowances?

A. No. The Company is not proposing to increase the allowances for main or service line extensions at this time. QGC Exhibit 4.11, page 2, includes a graph of the distribution of main extension costs for residential customers in 2008. QGC Exhibit 4.11, page 3, shows a graph of the distribution of service line costs for residential customers for 2008. As can be seen from these two graphs the Company's facility extension policy requires nearly all residential customers to pay a contribution for main and service lines. This is a fairly recent phenomenon.

Q. If you are not proposing a change to the allowance levels, why are you showing data that supports an increase to the facility allowances?

A. The Company may request an increase in the facility allowances in a future case. Historically customers were allowed much greater footage than the current policy grants. This is due mainly to cost inflation that has occurred over the last 30 years. The questions surrounding what represents fair treatment between new and existing customers is much broader that just looking at what the book investment per customer happens to be at any particular point in time. A customer connected to the system in the early 1970s and before seldom paid a contribution, yet the mains serving virtually every one of those customers have been replaced with plastic pipe since the original installation at no direct cost to those customers. Considerations such as these should also be part of the dialogue. The Company will continue to study this issue and make a recommendation in a future case.

VI. LOW INCOME TASK FORCE

Q. In the Company's last general rate case, the COS Order directed the Company to work with interested parties to convene a task force to study certain issues related to low income customers. What were the results of the Low Income Task Force?

A. The Low Income Task Force has met nine times formally, with subgroups holding numerous additional work sessions. The Low Income Task Force filed its report with the Commission on December 1, 2009.

Q. Does this conclude your testimony?

A. Yes.

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

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

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Steven R. Bateson

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

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Notary Public