BEFORE THE PUBLIC SERVICE OF UTAH

IN THE MATTER OF THE APPLICATION OF QUESTAR GAS COMPANY FOR AUTHORITY TO CHANGE ITS DEPRECIATION RATES	))))	DPU Exhibit 1.0 DIR Docket No. 13-057-19

Artie Powell

Direct Testimony

In Support of the Stipulation

Utah Division of Public Utilities

May 28, 2014

Q: WOULD YOU STATE YOUR NAME, BUSINESS ADDRESS, AND POSITION FOR THE RECORD?

A: My name is Artie Powell; I am the energy section manager within the Division of Public Utilities; my business address is 160 East 300 South, Salt Lake City, Utah.

Q: WOULD YOU SUMMARIZE YOUR EDUCATION AND EXPERIENCE?

A: I hold a doctorate degree in economics from Texas A&M University. Prior to joining the Division, I taught courses in economics, regression analysis, and statistics both for undergraduate and graduate students. I joined the Division in 1996 and have since attended several professional courses or conferences dealing with a variety of regulatory issues including, the NARUC Annual Regulatory Studies Program (1995) and IPU Advanced Regulatory Studies Program (2005). Since joining the Division, I have testified or presented information on a variety of topics including, electric industry restructuring, incentive-based regulation, revenue decoupling, energy conservation, evaluation of alternative generation projects, and the cost of capital.

Q: ARE YOU TESTIFYING ON BEHALF OF THE DIVISION?

A: Yes.

Q: WOULD YOU PLEASE SUMMARIZE YOUR TESTIMONY AND THE DIVISION'S RECOMMENDATION?

A: Questar Gas Company (Company) filed its depreciation study on December 16, 2013.[1] As part of its application, the Company requested on a Utah basis an approximate $1.8 million increase in its depreciation expense. The Division engaged the services of William Dunkel to assist the Division in its review of the depreciation study filed with the Commission on December 16, 2013, by Questar Gas Company (Company). The Division's review raised several issues including the lives of several asset categories or accounts. The Division, along with Mr. Dunkel, presented these issues to the Company

[1] While the Company filed its study with the Commission on this date, the Company provided the study to parties in the rate case, Docket No. 13-057-05, on October 11, 2013.

in several sessions and discussions. These meetings resulted in the settlement stipulation (Stipulation) that is before the Commission.

My testimony will address these issues and explains how the settlement addresses each. If the Commission approves the stipulation, the Company's depreciation expense will decrease by approximately $1.2 million. With this settlement, the Division asserts that the resulting rates and charges are fair and reasonable. Therefore, the Division recommends that the Commission approve the stipulation as being in the public interest.

Q: WOULD YOU PLEASE EXPLAIN HOW THE SETTLEMENT RELATES TO THE COMPANY'S RECENTLY CONCLUDED GENERAL RATE CASE?

A: The Company provided its depreciation study to the Division and other parties on October 11, 2013. Direct testimony in the rate case, Docket No. 13-057-05, was due on October 30, 2013. The Division raised concern that the timing of the filing of the study and the rate case procedural schedule would not allow adequate time in the rate case to review thoroughly the study. To allow for an adequate review, parties[2] agreed that the Company would file its study in a separate docket from the rate case. After filing the depreciation study and setting a schedule for review of the study, the Commission approved a Partial Settlement[3] of most issues raised in the rate case. The Partial Settlement included an agreement on the ratemaking treatment of the then incomplete review of the depreciation study.

At paragraph 29, the Partial Settlement specifies that,

[2] The Commission held a scheduling conference to considering the scheduling of the depreciation study review in the rate case docket on October 28, 2013. Several timing issues raised at the meeting lead the Division to agree to investigate the depreciation study in a separate docket from the rate case.

[3] See, "Partial Settlement," Docket No. 13-057-05, January 6, 2014.

> The Parties agree for purposes of settlement that the Company will file, in a separate docket, the depreciation study and will seek approval of new depreciation rates to become effective as ordered by the Commission. The Parties agree that upon approval of the new depreciation rates, these rates and reserve variance will be applied to the rate base in this Partial Settlement Agreement and the rate spread consistent with the results of the Settlement Model, and the revenue requirement and rates in this docket will be adjusted accordingly.

For convenience, the Company is filing the Settlement Model, which incorporates the new depreciation rates, with the Stipulation. The Settlement Model shows the new rate spread and DNG base rates consistent with the agreement in the Partial Settlement. Attachment 3 to the Stipulation is a new depreciation study incorporating the adjustments as specified in the Stipulation.

Q: WOULD YOU EXPLAIN THE CONCERNS THE DIVISION FOUND WITH THE COMPANY'S FILED DEPRECIATION STUDY?

A: There were five asset categories or accounts were the Division's investigation raised concerns over the asset life employed in the Company's study. The accounts are,

1. Account 380 (Services);
2. Account 381.01 (Meters);
3. Account 381.21 (Transponders);
4. Account 383 (House Regulators); and
5. Account 394.4 (Tools Shop and Garage Equipment).

The Division also raised a concern with the proposed net salvage value employed by the Company for Account 380 (Services).

Q: WHAT IS THE SIGNIFICANCE OF THE ASSET LIFE CALCULATION?

A: Generally, rate base assets are depreciated over their statistical life. The shorter the life, the greater will be the depreciation expense, and vice versa, everything else being equal.

Q: WOULD YOU PLEASE EXPLAIN WHAT YOU MEAN BY STATISTICAL LIFE?

A: Using statistical techniques, an analyst chooses an Iowa curve that best fits the underlying data for each account. The Iowa curves are survivor curves developed in a study at the University of Iowa in the 1950s. Each curve represents a probability distribution function and are useful, among other things, "to make forecasts of the remaining useful life of groups of assets."[4] From these curves the analyst determines the useful life of a group of assets.

Of course different analysts can choose different curves and, thus, determine different useful lives for the same group of assets. This should not be that surprising for as Thomas Kuhn explained,

> When scientists must choose between competing theories, two men fully committed to the same list of criteria for choice may nevertheless reach different conclusions.[5]

A case in point is Account 380 before the Commission in this docket.

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[4] See "Iowa Curves," Asset Insights.net, http://assetinsights.net/Glossary/G_Iowa_Curve.html.

[5] Thomas Kuhn, "The Essential Tension: Selected Studies in Scientific Tradition and Change, (University of Chicago Press, 1977), as quoted by Elizabeth Anne Kinsella, "Knowledge Paradigms in Occupational Science: Pluralistic Perspectives," *Occupational Science*, Blackwell Publishing, 2012, p. 71.

Q: WOULD YOU EXPLAIN THE ISSUE WITH ACCOUNT 380?

A: In its initial filing, the Company proposed a 54-year life for Account 380 (Services); the Division's consultant proposed a 65-year life. The main difference in the choice of life is the data set used by each analyst.

There are actually three data sets:

1. Actual Aged Data: data from 1990 through 2012 showing how much was retired and when it was placed in service.
2. Actual Un-aged Data: data from 1961 through 1989 showing how much was retired but not when it was placed in service.
3. Statistically Aged or Simulated Data: statistically constructed data from 1961 through 2012 simulating the amount retired with in service dates.[6]

The Company's consultant used the third data set while the Division's consultant concentrated on the first.

From the Division's point of view, there are problems with both data sets. The first data set, while ideally the type of data one would seek to have in such cases, is incomplete: data for several years are missing. According to the Company's response to the Division's query, the problem arose from a change in the Company's accounting software; while the totals are correct for the period, certain years were lumped with other years resulting in missing years.

While the Company's consultant used standard methods to simulate statistically the data for set three, the process appears to assign an inordinate amount of retirements to

[6] The Company's consultant used a statistically valid method, the Stage Methodology, described in the NARUC depreciation manual to simulate the data for the third data set. See, "Public Utility Depreciation Practices," NARUC, August 1996, pp. 103-109.

some years. Again, the totals are correct but from the Division's point of view, just do not seem to be reflective of the actual retirements in the period from 1990 through 2012.

During settlement discussions, the Division made further inquiries concerning Account 380. In response to a Division request, the Company provided a history of the lives for this account. *Table 1* summarizes the estimated life from each of the Company's recent depreciation studies.

Table 1: Comparison of Depreciation Study Lives

	2004 Study	**2007 Study**	**2012 Study**	**DPU**	**Settlement**
380 Services	47-R2	49-R2.5	54-R2.5	65-R3	54
381.01 Meters	28-S2.5	28-S2.5	27-R3	31-R5	31
383 House Regulators	45-R1.5	30-R3	27-R3	32-R2	31

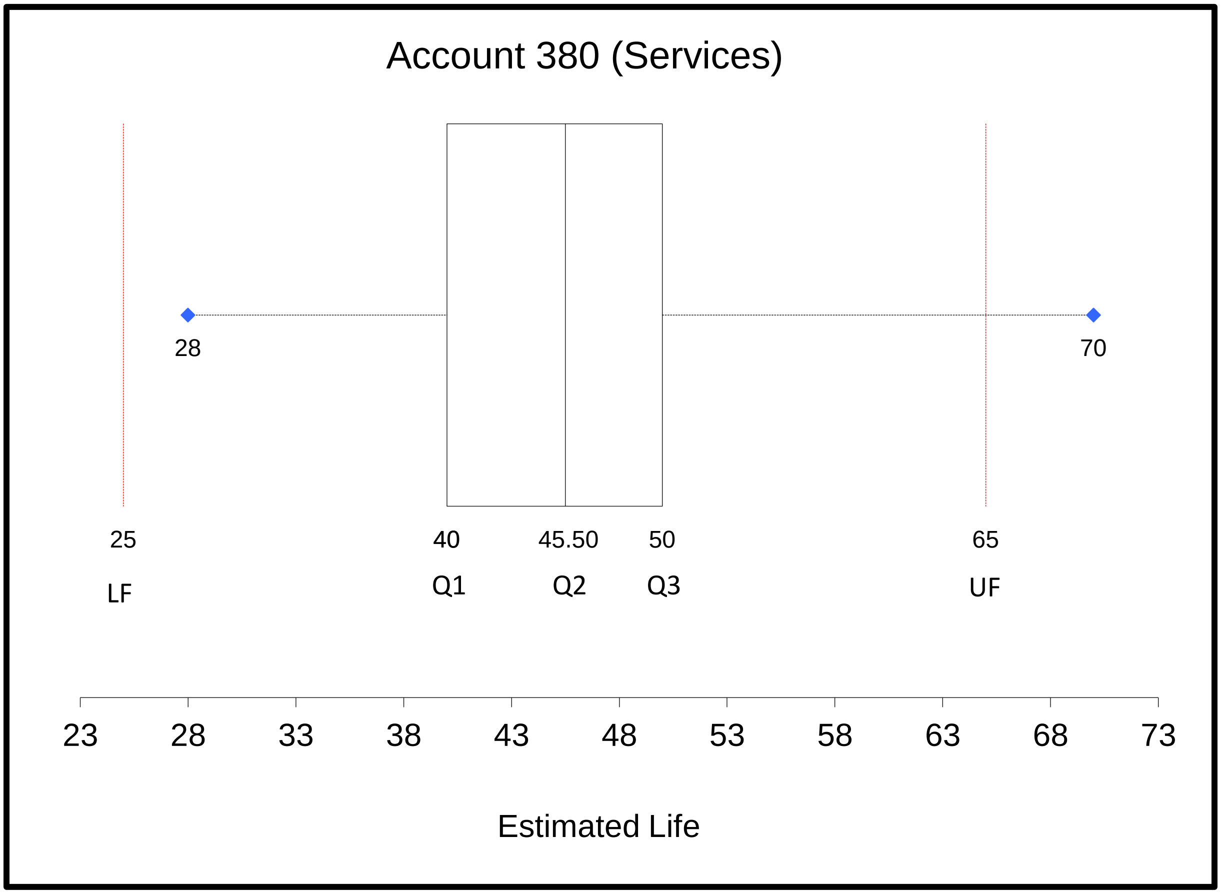
As can be seen, the life for Account 380 increased in each depreciation study.

The Company also provided the results of a survey from its consultant. This survey combines recommendations made by the Company's consultant and lives approved by Commissions. While the survey data does not constitute an independent corroboration of actual lives used in the industry, the Division found the data informative.

Q: **IN WHAT WAY DID THE DIVISION USE THIS SURVEY DATA?**

A: Using the data from the survey, I constructed a Box Plot using the lives for Account 380. (See *Figure 1*) The Box Plot is a statistical summary or depiction of the distribution of the data. There are several key components of any Box Plot. First, there are the lower and upper fences, LF and UF. Any data values outside of these fences are considered outliers—values that are unlikely to occur given the underlying characteristics of the data. Second are the first, second and third quartiles, Q1, Q2, and Q3 respectively. The quartiles divide the data into quarters, and form the box in the Box Plot. For example, by construction 50% of the data lies between Q1 and Q3, the interquartile range. Finally, the whiskers or lines that extend to the right and left of the box. The endpoints of the whiskers depict the minimum and maximum value in the data set.

Figure 1: Box Plot for the Estimated Life of Account 380



The Box Plot in *Figure 1* reveals that the Company's proposal a 54-year life, while just above the third quartile, Q3, is well within the upper fence, UF whereas the Division's proposal is equal to the upper fence.

Given these three factors—the data problems, the increasing life from study to study, and the relationship between the proposals in this case, the Division believes the Company's proposed 54-year life is reasonable.

Q: TABLE 1 ALSO SHOWS THE PROGRESSION OF THE LIVES FOR ACCOUNT 381.01 (METERS) AND ACCOUNT 383 (HOUSE REGUALTORS). WOULD YOU PLEASE COMMENT ON THESE TWO ACCOUNTS?

A: The settlement in this case places the lives for these two accounts at 31 years. In the Company's filing, it proposed 27 years for both accounts. The Division's consultant felt based on our analysis that the accounts warranted the longer lives. In *Table 1*, the Division placed the lives of these accounts at 31 and 32 years respectively.

As with Account 380, I constructed Box Plots for Both accounts. (See *Figure 2* and *Figure 3*) These plots show that the Company's proposed life is just below the first quartile but well within the lower fence; while the Division's proposed lives are above the first quartile and inside the box. For settlement purposes, the lives for these two accounts were set at 31 years. The Division believes that this is a reasonable settlement of the differences for these two accounts.

Figure 2: Box Plot for the Estimated Life of Account 381.01

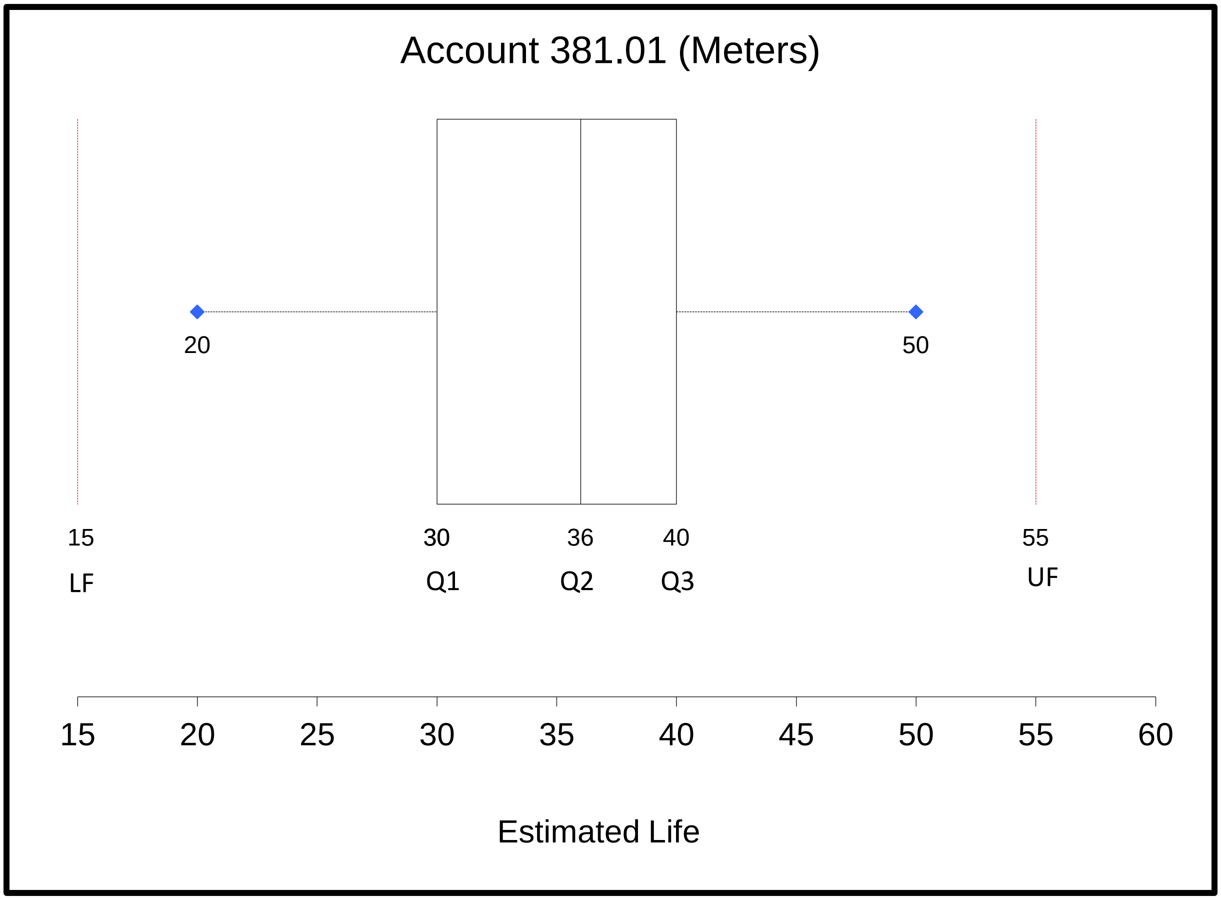
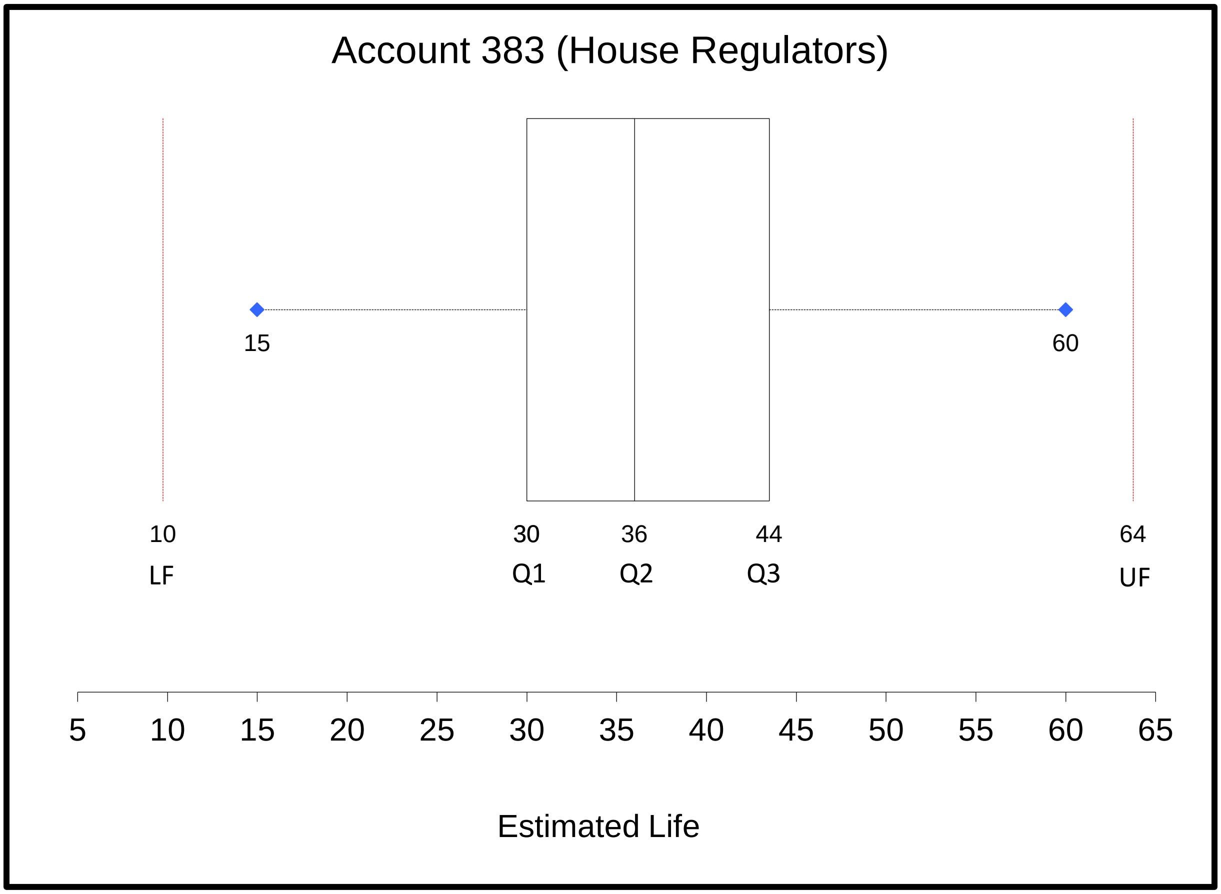


Figure 3: Box Plot for the Estimated Life of Account 383



Q: THE LIVES FOR ACCOUNTS 381.21 (TRANSPONDERS) AND 394.4 (TOOLS SHOP AND GARAGE EQUIPMENT) ARE SET AT 15 YEARS FOR SETTLEMENT PURPOSES. WOULD YOU COMMENT ON THESE TWO ACCOUNTS?

A: The Company's filed proposals were for 13 years and 10 years respectively for Account 381.21 and Account 394.4. The Division's consultant initially proposed 18 years for both accounts. For settlement purposes, the Company proposed setting these two accounts at 15 years. After consultation with the Division, the Division's consultant agreed that that the proposed settlement lives for these two accounts was reasonable. Therefore, the Division concludes that 15 years for these two accounts is reasonable.

Q: **THE STIPULATION PLACES THE NET SALVAGE FOR ACCOUNT 380 AT NEGATIVE 85%. WOULD YOU PLEASE EXPLAIN THIS VALUE?**

A: The negative 85% means that it will cost 85 cents to remove or retire the asset for every dollar spent placing the asset in service. Its filing, the Company proposed to put this value at negative 95%. During its investigation, the Division discovered that the data arguably could support a higher[7] figure, negative 104%; and an even higher figure if just considering the last half dozen years. (See pages B10-B11, of the Company's depreciation study.)

Relying on the principle of gradualism, the Division proposed for settlement purposes that the figure be set negative 85%, a figure approximately half way between the current negative 70% and the negative 104%.

Q: **DO YOU HAVE ANY FINAL COMMENTS?**

A: The Division engaged the services of William Dunkel, Inc., to assist the Division in its review of the Company's depreciation study. After thoroughly analyzing the Company's filing and requesting additional information and clarification from the Company, the Division determined that there were a limited number of issues to address at this time. The Division believes that the Settlement Stipulation addresses each of these issues in a reasonable manner. The Division represents that the Settlement will lead to just and reasonable rates and is in the public interest. Therefore, the Division recommends that the Commission adopt the Stipulation as filed.

Q: **DOES THAT COULD YOUR DIRECT TESTIMONY?**

A: Yes.

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[7] Higher in the sense that the rate impact would be higher.