

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Docket No. R-2015-2518438**

**UGI Utilities, Inc. – Gas Division**

**Statement No. 6-R**

**Rebuttal Testimony of  
David E. Lahoff**

**Topics Addressed:**

- Usage Per Customer**
- Annualized Revenues**
- Interruptible Revenues**
- Transportation, Excess Take, and**
- Rate N Minimum Bills**
- Revenue Allocation**
- Rate Design**
- Scaleback**
- Tariff Rules**
- EE&C Rider**
- Gas Procurement Charge**
- Storage and Capacity**

Dated: May 10, 2016

1 I. **INTRODUCTION**

2 **Q. Please state your name and business address.**

3 A. My name is David E. Lahoff. My current business address is 2525 N. 12th  
4 Street, Suite 360, Reading, Pennsylvania 19612.

5  
6 **Q. Did you previously submit direct testimony in this proceeding on behalf of  
7 UGI Utilities, Inc. – Gas Division (“UGI Gas” or the “Company”)?**

8 A. Yes. I submitted my direct testimony, UGI Gas Statement No. 6, on January 19,  
9 2016.

10  
11 **Q. What is the purpose of your rebuttal testimony?**

12 A. My testimony responds to certain portions of the following direct testimony  
13 submitted by intervenors: the Direct Testimony of Lisa A. Gumby, I&E Statement  
14 No. 2; the Direct Testimony of Joseph Kubas, I&E Statement No. 4; the Direct  
15 Testimony of Ethan H. Cline, I&E Statement No. 5; the Direct Testimony of David  
16 J. Effron, OCA Statement No. 1; the Direct Testimony of Glenn A. Watkins, OCA  
17 Statement No. 3; the Direct Testimony of Robert D. Knecht, OSBA Statement  
18 No. 1; the Direct Testimony of James L. Crist, NGS Parties Statement No. 1; and  
19 the Direct Testimony of Orlando Magnani, RESA Statement No. 1. Specifically,  
20 my testimony will address the following issues and proposals raised in the direct  
21 testimony submitted by the other parties: criticisms of the initial filing format;  
22 usage per customer; annualized revenues; interruptible revenues;  
23 Transportation, Excess Take, and Rate N Minimum Bills; revenue allocation;

1 customer charges and rate design; scaleback; certain proposed tariff rules;  
2 EE&C Rider; Gas Procurement Charge; and storage and capacity issues.

3  
4 **II. INITIAL FILING**

5 **Q. I&E criticizes certain aspects of the Company's initial filing. Please**  
6 **summarize I&E's concerns.**

7 A. On pages 2-3 of I&E Statement No. 4, Mr. Kubas is critical of the Company's  
8 filing because it did not include History Test Year ("HTY") and Future Test Year  
9 ("FTY") proof of revenues under present rates. Mr. Kubas also is critical of the  
10 Company's filing because it only provided total revenue by class, and grouped  
11 classes differently in HTY as compared to the FTY and Fully Projected Future  
12 Test Year ("FPFTY").

13  
14 **Q. Do you have a response to I&E's concerns?**

15 A. Yes. The Company's claim in this base rate proceeding is based on a FPFTY.  
16 As such, in preparing its initial filing, the Company did not see the relevance of  
17 proofs of revenue for the HTY or FTY would be appropriate and, therefore, did  
18 not produce them as part of the initial filing. It should be noted that much of the  
19 data requested by Mr. Kubas was provided by the Company in its initial filing.  
20 Indeed, the Company provided a breakdown of revenues by rate class for the  
21 HTY and FTY in UGI Gas Exhibit A, Schedules D-5 and D-5A. In addition, the  
22 Company provided detail on number of customers and usage per customer for  
23 HTY and FTY in UGI Gas Exhibits DEL-4, DEL 5, DEL-6(b) and DEL-6(c).

1 Present and proposed rate information is readily available in UGI Gas Exhibit E-  
2 Proof of Revenue.

3  
4 **Q. Has the Company been able to provide updates for the HTY and FTY that**  
5 **match the classes in the FPFTY exhibits?**

6 A. Yes. Attached to my Rebuttal Testimony as UGI Gas Exhibit DEL-15 are  
7 revisions to UGI Gas Exhibits DEL-5(b), 5(c) and 6(c) that match the classes in  
8 the HTY with the class groupings in the FTY and FPFTY.

9  
10 **III. FPFTY REVENUES**

11 **A. Usage Per Customer**

12 **Q. Both I&E and OCA propose major adjustments to the Company's proposed**  
13 **usage per customer. Please summarize these adjustments.**

14 A. Both I&E and OCA criticize use of a 21-year regression analysis. I&E also  
15 criticizes the manner in which the Company's test year usage per customer  
16 adjustments are presented in its filing, proposes to annualize residential usage  
17 per customer based on a five-year trend, and recommends that the commercial  
18 usage not be changed from the level experienced at the end of the HTY. See  
19 I&E Statement No. 4, pages 3-7; I&E Statement No. 5, pages 4-16. The OCA  
20 recommends that the Company's proposed adjustment to usage per customer be  
21 rejected based on five years of weather normalized data that suggests increasing  
22 usage trends. See OCA Statement No. 1, page 15-19. These proposals result in  
23 a major adjustment to the Company's use per customer claim as shown in the  
24 table immediately below.

Proposed FPFTY Use Per Customer

	UGI Gas	I&E	OCA
Residential Heat	69.30 Mcf	76.9 Mcf	77.0 Mcf
Residential Non-Heat	18.8 Mcf	22.15 Mcf	21.0 Mcf
Commercial Heat	503.6 Mcf	554.4 Mcf	553.1 Mcf
Commercial Non-Heat	307.9 Mcf	325.45 Mcf	339.3 Mcf

1  
2 For the reasons explained below, these adjustments are fundamentally flawed  
3 and should be rejected.

4  
5 **Q. On pages 3-4 of I&E Statement No. 4, Mr. Kubas also indicates that the**  
6 **usage per customer does not match up at the end of one test year and the**  
7 **beginning of the next test year. Do you have a response?**

8 **A.** Yes. Mr. Kubas misunderstands how the data is presented. Specifically, the  
9 exhibits referenced by Mr. Kubas do not show beginning and ending year values;  
10 rather they show unadjusted and adjusted (annualized and normalized) values  
11 for the specific year. For the FPFTY, UGI Gas Exhibits DEL-3(c), 4(c), and 5(c)  
12 show unadjusted Fiscal Year 2017 budget values (line 1) compared to FPFTY  
13 adjusted values (line 2). For the FTY, UGI Gas Exhibits DEL-3(b), 4(b) and 4(c),  
14 unadjusted Fiscal Year 2016 budget values (line 1) and adjusted FTY values  
15 (line 2) are shown. Lastly, for the HTY, UGI Gas Exhibits DEL-3(a), 4(a) and 5(a),  
16 unadjusted actual values for Fiscal Year 2015 (line 1) and adjusted HTY values  
17 are shown. In each year, adjusted values for the fiscal year are based on the  
18 results of the Company's regression model. In essence, Mr. Kubas is making an  
19 apples-to-oranges comparison and as a result, his conclusion is not valid.

1 **Q. On pages 6-7 of I&E Statement No. 4, Mr. Kubas states that the Company's**  
2 **changes in usage per customer between the FTY and FPFTY do not follow**  
3 **the process described in in your Direct Testimony. Do you agree?**

4 A. No. The regression values for normalized and annualized use per customer for  
5 the various customer groups in FTY and FPFTY can be seen on UGI Gas  
6 Exhibits DEL-6(a) and DEL-6(b) (Values shown in bold). These values  
7 correspond to the regression methodology described on page 7 of my Direct  
8 Testimony, UGI Gas Statement No. 6, and the values shown in Attachment SDR-  
9 RR-11. An example of how those regression values are factored into the  
10 adjustment for UPC is described below.

11 The FPFTY total residential heating usage per customer on UGI Gas  
12 Exhibit DEL-6(a) is 69.3 Mcf. This corresponds to the usage per customer value  
13 shown at the bottom of page 9 on Attachment SDR-RR-11(b), which shows the  
14 results of the Company's regression model. That 69.3 Mcf value is then  
15 bifurcated between Rate R and RT (see UGI Gas Exhibit DEL-6(a)), which yields  
16 67.3 Mcf for residential heating Rate R and 82.0 Mcf for residential heating Rate  
17 RT. The 67.3 Mcf value for Rate R residential heating can then be seen on UGI  
18 Gas Exhibit DEL-3(c), line 2, column 2, which is the adjusted FPFTY value for  
19 the Rate R residential heating class, prior to the impact of the EE&C, which is  
20 calculated separately and shown on UGI Gas Exhibit DEL-3(m).

21 The reason for combining the classes as the Company has done in regard  
22 to Rates R and RT, as well as Rates N, NT and DS, is that customers readily  
23 migrate between these retail sales and transportation rate schedules, and

1 maintaining a homogeneous group for statistical analysis (regression) purposes  
2 minimizes the imputed error related to customers moving in and out of those  
3 classes over time. The Company then allocates individual usage per customer  
4 by customer rate class (R vs RT, N vs NT vs DS), while keeping the total  
5 combined regression value the same. These breakouts can be seen on UGI Gas  
6 Exhibit DEL-6.

7  
8 **Q. On pages 4-5 of I&E Statement No. 5, Mr. Cline states that the Company has**  
9 **understated its projected usage, and that the 21-year period to analyze**  
10 **usage is too long. Do you have a response?**

11 A. Yes. First, to be technically correct, the period utilized by the Company  
12 encompasses 20 years and 9 months. For purposes of this rebuttal, I will  
13 reference that period as a 21-year period. With regard to this period utilized by  
14 the Company, Mr. Cline provides no independent support for his statements on  
15 page 5 that "twenty-one years ago the customer conservation initiatives were not  
16 widely in place." Mr. Cline clarifies in discovery that the conservation initiatives to  
17 which he refers are those as I stated in my direct testimony, UGI Gas Statement  
18 No. 6, page 8, lines 6-10. See UGI-I&E-IV-1(a), provided as UGI Gas Exhibit  
19 DEL-34. Thus, Mr. Cline is effectively supporting his position by saying twenty-  
20 one years ago "conservation items and measures, including, but not limited to:  
21 (1) regular appliance replacements; (2) accelerated appliance replacements; (3)  
22 high-efficiency appliance installations; (4) setback thermostat installations; (5)  
23 modifications to new and existing buildings that are designed to decrease energy

1 consumption; and (6) changes in consumer usage behavior due to “other  
2 economic influences” were not widely in place. To be clear, the Company’s  
3 position is predicated upon the fact that such measures are implemented on a  
4 continual basis over time. Thus, a review of usage trends over time (such as a  
5 21-year period) allows for proper understanding of how such measures have  
6 influenced customer usage patterns historically and how they are likely to  
7 influence customer usage patterns prospectively. Accordingly, Mr. Cline’s  
8 inference on page 5 that somehow the Company is “comparing recent  
9 consumptions trends to those of twenty-one years ago” is incorrect. The  
10 Company’s statistical analysis equally weights all periods across the 21-year  
11 period equally in order to discern how usage trends have changed, and as I will  
12 discuss later, such analysis is statistically valid. As such, if Mr. Cline’s statement  
13 on page 5 that “the impact of the decreased consumption in those years tends to  
14 be exaggerated” were true, the Company would not be able to demonstrate  
15 statistical validity for its approach and such approach would have to be  
16 abandoned in favor of an alternate. To illustrate the Company’s point, note UGI  
17 Gas Exhibits DEL-2(a) and DEL-2(b), where there clearly is a long-term steady  
18 and declining trend in use per customer, both in the residential heating and  
19 commercial heating categories. One can readily see the long-term year-to-year  
20 decline appears to be steady and not exaggerated in the earlier years of the 21-  
21 year period as Mr. Cline suggests. Lastly, while Mr. Cline criticizes the Company  
22 for using “stale data,” he provides no supporting documentation, analyses or  
23 references in support of this statement. See a copy of UGI-I&E-IV-4, provided as



1 UGI Gas Exhibit DEL-35. Accordingly, Mr. Cline's representation as to his  
2 justification of using a 5-year trend in his use per customer determination,  
3 effectively because the term in his view is "unstale", is simply unsupported; it  
4 should be accordingly rejected.

5  
6 **Q. The data shown on UGI Gas Exhibits DEL-2(a) and DEL-2(b) is through the**  
7 **period ending September 2015, correct? Have you updated these exhibits**  
8 **for more recent data?**

9 A. Yes, that is correct. UGI Gas Exhibits DEL-2(a) and DEL-2(b) do show data  
10 through September 2015. UGI Gas has now updated these exhibits through  
11 March 2016 in UGI Gas Exhibit DEL-16.

12  
13 **Q. What does this update show?**

14 A. This update shows that the 12-month weather normalized values have dropped  
15 significantly and are now just slightly higher than the statistical regression results  
16 for normalized usage.

17  
18 **Q. Can you please explain the difference between the two data lines which are**  
19 **shown on UGI Gas Exhibit DEL-16?**

20 A. Yes. It is important to note that both of these lines represent a determination of  
21 normalized use per customer; each via separate method in order to make a  
22 comparative analysis of both short and long term trends between these methods  
23 over time. The first line noted as "Multi-year Normal Trend" is the result of the

1 Company's 21-year period statistical regression analysis which develops an  
2 equation, based on historic data, which can then be utilized to forecast forward  
3 normalized use per customer values. The supporting data for the Company's  
4 regression analyses is found in the Company's filing at SDR-RR-11. The second  
5 line noted as "Normalized for 12 months end" is rolling 12-month data developed  
6 via mathematical routine (as compared to statistical analysis) whereby a factor  
7 representing heating sensitive load is determined (temperature sensitive load per  
8 degree day) and then applied to add or subtract usage from actual values in  
9 order to determine normalized figures based on normal degree day values. The  
10 supporting data for the Company's "Normalized for 12 months end" values can  
11 be found as I&E Exhibit No. 5, Schedule 1.

12  
13 **Q. Please explain what is observed on UGI Gas Exhibit DEL-16?**

14 **A.** *As is readily seen, although there are short periods of time where the 12-month  
15 normalized values drop below or fall above the regression line normalized  
16 values, UGI Gas Exhibit DEL-16 demonstrates that the both the 12-month normal  
17 values and the regression line normalized values coincide with each other over  
18 time, reflecting a demonstrated long-term trend of decline. I also would point out  
19 that the updated residential heating 12-month weather normalized value through  
20 March 2016 is 74.13 Mcf or 2.77 Mcf lower than the 76.9 Mcf value  
21 recommended by Mr. Cline.*

22

1 **Q. What is the cause for the 12-month normalized values to deviate from the**  
2 **long term regression-based normalized values?**

3 A. Normalization is not a precise science. In particular, simple normalization over a  
4 short period may be influenced by differences in temperature sensitive load per  
5 heating degree day under different weather conditions. In other words, "all  
6 degree days are not created equal."

7  
8 **Q. Is it possible to demonstrate the fact that "all degree days are not created**  
9 **equal"?**

10 A. Yes, this is readily observed. Please see SDR-RR-11. The values shown in  
11 column 6 represent the calculated temperature sensitive load per heating degree  
12 day. If one compares the value in a shoulder (non-winter) month to that of a  
13 winter month, the sensitivity differences are obvious. Consider the value for  
14 January 2015 of 4,146.2 Mcf per degree day in comparison to 1,987.9 Mcf for the  
15 month of October 2014 (shown on SDR-RR-11(b), page 3 of 3). There is over a  
16 100% increase in the usage sensitivity per heating degree day between those  
17 two periods. This variance is smoothed out, or normalized, by the inclusion of  
18 additional data points in an analysis. In particular, the Company's regression  
19 analysis not only smooths this variance out over time, but it also captures the  
20 trending changes which are underlying. Comparatively, Mr. Cline's trend  
21 attempts to address this in his 5-year trend analysis, but he, in particular, fails to  
22 recognize that his time period concludes with two of the coldest winters in the  
23 past 20 years, which, as I have demonstrated above, are certain to include

1 excessively high usage sensitivity per degree day. The error in his approach is  
2 demonstrated by the fact that he projects increasing usage per customer, which  
3 is totally at odds with: (1) the Company's longer term statistically significant  
4 regression analysis; (2) general projections of usage per customer both  
5 nationally and in Pennsylvania; and (3) the adoption of new building codes in  
6 Pennsylvania, which will clearly reduce usage per customer.

7 Specifically, the Company believes the long-term declining trend in usage  
8 demonstrated in its 21-year regression analysis will continue for the foreseeable  
9 future. The declining trend is the product of conservation efforts and energy  
10 efficiencies, which will continue for the foreseeable future as gas appliances in  
11 the UGI Gas service territory reach the end of their life-cycle each year and are  
12 replaced with higher efficiency equipment. Many of those replacements will  
13 include the addition of new, programmable thermostats which further help to  
14 reduce energy use. In addition to the cycle of equipment replacements, new,  
15 more energy efficient homes will continue to be added each year to the housing  
16 stock, which will reduce average customer usage. There is nothing to suggest  
17 that these conservations efforts will cease, that older gas appliances will not  
18 continue to be replaced with newer, more efficient equipment or that new  
19 advancements in energy efficiency are now finished, or that the housing stock  
20 will no longer be replenished with newer, more efficient homes.

21  
22 **Q. Do you have any other support that usage for the residential market will**  
23 **continue to decline in the future?**

1 A. Yes. The U.S. Energy Information Administration ("EIA") regional forecast of  
2 natural gas use, including UGI Gas's service territory, shows a projected long-  
3 term, continued decline in usage. UGI Gas Exhibit DEL-36 provides a copy of  
4 this forecast for the Middle Atlantic Region (page 1) as well as historical usage  
5 for Pennsylvania (page 2). The Department of Energy study referenced in Mr.  
6 Love's rebuttal testimony, UGI Gas Statement No. 11-R, provides further support  
7 for the continuing decline in residential and commercial usage.

8  
9 **Q. Do you agree with I&E's recommendation of annualizing residential usage**  
10 **per customer based on a five-year normalized trend?**

11 A. No. On pages 6-9 of I&E Statement No. 5, Mr. Cline recommends using an  
12 average of 5 years of consumption data to determine the residential usage per  
13 customer. Mr. Cline's proposal results in an increase of \$18,482,058 to  
14 residential present rate revenues, inclusive of an increase of \$9,894,598 in the  
15 gas cost expense to reflect the additional gas to serve the average use per  
16 customer.

17 Mr. Cline, however, offers no support for the conclusion that the recent 5-  
18 year period is more "reasonable" than the long-term trend utilized by the  
19 Company. In contrast to the long-term predictive record of the Company's 21-  
20 year regression line, with 12-month normalized usage results closely following  
21 the regression line, the methodology used by Mr. Cline reflects a more volatile  
22 dispersion of actual normalized values to the 5-year trend, as can be seen on  
23 I&E Exhibit No. 5, Schedule 1, page 1 of 2. I would also note that the *R-Square*

1 value (which is a widely recognized tool in determining the degree of linear  
2 correlation of variables in regression analysis, *i.e.*, the reliability of variables and  
3 end results)<sup>1</sup> for the Company's long-term trend line is 0.9034, or a correlation  
4 factor of approximately 90.3%, while the 5-year trend line contained in the work-  
5 papers provided by Mr. Cline is only 0.0544, or a correlation factor of  
6 approximately 5.4%. I would also point out that Mr. Cline's methodology, which  
7 uses a trend-line, is his regression of "12 month normalized" data versus "date"  
8 and does not mirror the Company's regression model which uses variables of  
9 "degree days", "lagged degree days", "trend" and "actual use". For this reason  
10 his R-squared value is an extremely low 0.05, indicating a poor fit. In addition,  
11 the P-Value, or statistical significance of the single variable in his model for  
12 Residential Heating customers is 0.0704, which exceeds the standard threshold  
13 of 0.05. The common protocol when faced with variables with a statistical  
14 significance greater than 0.05 is to delete a high P-value variable and rerun the

---

<sup>1</sup> **Residual Variance and R-square**

*R-Square*, also known as the *Coefficient of determination* is a commonly used statistic to evaluate model fit. *R-square* is 1 minus the *ratio of residual variability*. When the variability of the residual values around the regression line relative to the overall variability is small, the predictions from the regression equation are good. For example, if there is no relationship between the X and Y variables, then the *ratio of the residual variability* of the Y variable to the original variance is equal to 1.0. Then R-square would be 0. If X and Y are perfectly related then there is no residual variance and the ratio of variance would be 0.0, making R-square = 1. In most cases, the ratio and *R-square* will fall somewhere between these extremes, that is, between 0.0 and 1.0. This ratio value is immediately interpretable in the following manner. If we have an *R-square* of 0.4 then we know that the variability of the Y values around the regression line is 1-0.4 times the original variance; in other words we have explained 40% of the original variability, and are left with 60% residual variability. Ideally, we would like to explain most if not all of the original variability. The *R-square* value is an indicator of how well the model fits the data (e.g., an *R-square* close to 1.0 indicates that we have accounted for almost all of the variability with the variables specified in the model).

<http://www.statsoft.com/Textbook/Multiple-Regression>

1 regression.<sup>2</sup> However, since he is using only one variable, the only course would  
2 be to abandon the regression as invalid. This would contrast with the P values  
3 for the Company's 21-year model for residential heating customer usage which  
4 are all below the 0.05 threshold, indicating statistically significant.

5 Simply put, the Company's statistical analysis is demonstrably more  
6 reliable than Mr. Cline's through application of well-accepted statistical  
7 standards. As an additional example of the appropriateness of the 21-year  
8 regression model, I have attached UGI Gas Exhibit DEL-17 showing the relative  
9 values for the following data points: I&E Use per Customer projection,  
10 Company's Use per Customer projection, Normal Annual Degree Days,  
11 Experienced Degree Days and Actual Use per Customer. One important trend I  
12 would point out is that the graph clearly illustrates that in periods when  
13 experienced degree days equal normal degree days the actual use per customer  
14 in those periods equals the projected use per customer from the Company's  
15 model. That is, when weather is not a factor, *i.e.*, a "normal winter", the usage  
16 forecasted by the model is closely with actual use.

17  
18 **Q. On page 9 of I&E Statement No. 5, Mr. Cline recommends an increase of**  
19 **\$9,894,598 in the residential gas costs expense. Do you agree with Mr.**  
20 **Cline's recommendation?**

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<sup>2</sup> See "How Do I Interpret the P-Values in Linear Regression Analysis?" at <http://blog.minitab.com/blog/adventures-in-statistics/how-to-interpret-regression-analysis-results-p-values-and-coefficients>; see also [http://dss.princeton.edu/online\\_help/analysis/interpreting\\_regression.htm](http://dss.princeton.edu/online_help/analysis/interpreting_regression.htm).

1 A. No. Mr. Cline's recommendation to increase the residential gas costs expense is  
2 designed to reflect the additional gas to serve his increased average use per  
3 residential customer. As explained above, Mr. Cline's annualized residential  
4 usage per customer based on a five-year average should be rejected due to the  
5 low 5.4% R-Square value of the 5-year trend line utilized by Mr. Cline.  
6 Therefore, Mr. Cline's derivative adjustment to the residential gas costs expense  
7 likewise should be rejected.

8  
9 **Q. Does Mr. Cline also propose to annualize commercial usage per customer  
10 based on a five-year trend?**

11 A. No. On page 13 of I&E Statement No. 5, Mr. Cline recommends that the  
12 commercial usage per customer be based on the "actual usage per customer  
13 level experienced" at the end of the HTY, which yields a weighted average of  
14 535.4 Mcf. Mr. Cline's recommendation would result in an increase of  
15 \$38,350,875 to Rates N & NT under present rate revenues, including an increase  
16 of \$13,928,496 in the gas cost expense to reflect the additional gas to serve the  
17 average usage per customer.

18  
19 **Q. Do you agree with Mr. Cline's recommended Commercial usage per  
20 customer?**

21 A. No. Mr. Cline claims earlier in his testimony that his 5-year trend methodology is  
22 "more reasonable" than the Company's 21-year regression analysis. See I&E  
23 Statement No. 5, page 6. Notwithstanding, Mr. Cline departs from his own



1 methodology for purposes of Commercial customers stating, “[w]hile my analysis  
2 shows the Commercial usage per customer will increase to 546 Mcf, I don’t  
3 believe this will actually occur to the degree projected.” See I&E Statement No.  
4 5, page 12. Mr. Cline then proposes a completely different methodology for  
5 projecting use per customer for the Commercial customer class. Specifically, Mr.  
6 Cline proposes to use the HTY normalized results – based solely on 12 months  
7 of data from one of the coldest winters in 20 years – to support his commercial  
8 use per customer value of 535.4 Mcf. I would further note that Mr. Cline  
9 misrepresents this proposed normalized use per customer as being the “actual  
10 usage per customer level experienced” at the end of the HTY. See I&E  
11 Statement No. 5, page 13. Therefore, I submit that (a) Mr. Cline is not consistent  
12 in his methodology, and (b) for the reasons I explained above, *i.e.*, fails to reflect  
13 significant variances in heating sensitive use per degree day (“not all degree  
14 days are created equal”) by relying on a “normalized” value which is based on a  
15 12-month ending period which contains one of the coldest winters in the past 20  
16 years. Also, there is no statistically valid analysis provided in support of his  
17 position.

18  
19 **Q. Are there any errors in Mr. Cline’s application of his average use per**  
20 **Commercial customer in quantifying his sales and revenue adjustments?**

21 A. Yes, there are several and, in particular, there is one major error. Mr. Cline’s  
22 proposed usage per customer for commercial customers is 535.4 Mcf, which is  
23 comprised of values of 325.5 Mcf for commercial general customers (CG) and

1 554.4 Mcf for commercial heating customers (CH). These figures were based on  
2 data for the subset of commercial customers (not inclusive of the industrial  
3 subset as well) within three rate classes: N, NT and DS. See I&E Statement No.  
4 5, page 13; I&E Ex. No. 5, Schedule 8. Mr. Cline then applies this 535.4 Mcf to  
5 determine usage per customer for all customer in the two all customers in the  
6 rate classes, Rates N and NT. The average usage per customer for Rate DS  
7 (5,928.8 Mcf) is far higher than for Rate N in total (274.8 Mcf) or Rate NT in total  
8 (766.0 Mcf), and the industrial subset of Rate N and Rate NT is likewise far  
9 higher (1,722.4 Mcf on average), which results in a grossly overstated  
10 adjustment for Rates N and NT. In other words, Mr. Cline calculated an average  
11 use per customer for just the commercial subset of three rate classes, including  
12 the larger customer DS class and then applied that three-customer group subset  
13 average to determine the average usage per customer for two smaller customer  
14 classes, *i.e.*, N and NT. The 535.4 Mcf figure used by Mr. Cline to calculate his  
15 sales adjustment for Rates N and NT is in fact the average usage per customer  
16 for Rates N, NT and DS, including both commercial and industrial customers.  
17 Since DS and industrial customers represent is a group of customers with larger  
18 average usage, Mr. Cline has grossly overstated the average use for Rates N  
19 and NT. Specifically, Mr. Cline calculated his sales adjustment of 6,415,000 Mcf  
20 by adding sales to the sales figure found on the Company's total Rate N/NT proof  
21 of revenue, which can be found on UGI Gas Exhibit-E- Proof of Revenue, page 3  
22 of 7 until he reached his average use per customer figure of 535.5 Mcf. In total,  
23 this increased Rate N/NT sales volumes by over 45% (6,415,000 Mcf /

1 14,141,073 Mcf). See UGI Gas Exhibit E, Proof of Revenue page 3 of 7. A  
2 simple reasonableness check of Mr. Cline's recommended commercial heating  
3 (Rates DS and NT included) value of 554.4 Mcf against the Company's  
4 commercial heating (Rates DS and NT included) value of 503.6, a 10.0%  
5 increase  $((554.4 - 503.6) / 503.6)$ , and recommended commercial general (Rates  
6 DS and NT included) value of 325.45 Mcf against the Company's commercial  
7 general (Rates DS and NT included) value of 307.9, a 5.7% increase  $((325.45 -$   
8  $307.9) / 307.9)$  against the overall 45% increase in sales reveals his  
9 recommendations did not flow through his adjustment calculations correctly. See  
10 UGI Gas Exhibit DEL-6(a) for the Company's "Commercial Non-Heating" and  
11 "Commercial Heating" values.

12  
13 **Q. How should Mr. Cline have calculated his adjustment amount?**

14 **A.** The appropriate method to adjust use per customer based on Mr. Cline's total  
15 usage values for Commercial Non-Heating (325.45 Mcf) and Commercial  
16 Heating (554.4 Mcf) would be to compare those values to the Company's values  
17 of 307.9 Mcf and 503.6 Mcf, respectively, as could be found on UGI Gas Exhibit  
18 DEL-6(a). This calculation leads to a sales adjustment of 1,832,399 Mcf and not  
19 the 6,415,000 Mcf calculated by Mr. Cline. The calculation of the 1,832,399  
20 adjustment is shown on UGI Gas Exhibit DEL-18.

21

1 **Q. Have you calculated how this adjustment would then need to be allocated**  
2 **between the rate classes in order to determine revenue adjustment**  
3 **amounts compared to those Mr. Cline developed?**

4 A. Yes. Since these use per customer numbers are inclusive of all commercial  
5 customers served under Rates N, NT and DS, an allocation across these rate  
6 classes is appropriate to correctly derive revenue impacts. This allocation was  
7 done by using the class sales as a percentage to the total group sales, and is  
8 also shown on UGI Gas Exhibit DEL-18. The revenue amount related to these  
9 adjustments can be found on UGI Gas Exhibits DEL-19 and DEL-20.

10  
11 **Q. How do these corrected revenue adjustments found on UGI Gas Exhibits**  
12 **DEL-19 and DEL-20 compare with those which Mr. Cline developed?**

13 A. Excluding gas costs, the Rate N/NT adjustment is \$5,268,798 and the Rate DS  
14 adjustment is \$1,007,701 for a combined total adjustment amount of \$6,276,499.  
15 Comparatively, Mr. Cline's adjustment amount, excluding gas costs, is  
16 \$24,422,379. Thus, Mr. Cline's adjustment, excluding gas cost, is overstated by  
17 \$18,145,880. Including gas costs, Mr. Cline's revenue adjustment is  
18 correspondingly overstated by \$31,023,208.

19  
20 **Q. Are there any other adjustments to Mr. Cline's recommendation which you**  
21 **believe are appropriate?**

22 A. Yes. Mr. Cline's recommended use per customer value was based on 12  
23 months ending September, 2015, the latest data presented in the Company's

1 original filing. However, including more recent data and updating these numbers  
2 through March 2016 further reduces the sales 1,832,399 Mcf adjustment amount  
3 by 961,382 Mcf to 871,017 Mcf. See UGI Gas Exhibit DEL-21 for the calculation  
4 of this adjustment. As with the initial adjustment amount of 1,832,399, the  
5 updated 871,017 Mcf must then be allocated between Rates N/NT and Rates  
6 DS. This allocation is also shown on UGI Gas Exhibit DEL-21. The dollar  
7 amount of those adjustments can be found on UGI Gas Exhibits DEL-22 and  
8 DEL-23; for Rate N/NT the adjustment is \$2,523,337 and for Rate DS adjustment  
9 is \$467,528 for a total adjustment of \$2,990,865, excluding gas costs.

10  
11 **Q. In total do these adjustments then reflect a fully corrected, updated,**  
12 **annualized and normalized value which would be appropriate for use in the**  
13 **FPFTY?**

14 **A.** No. One last adjustment would be to annualize the 12 months ending March,  
15 2016, to the end of the FPFTY. There are two options for making this  
16 adjustment: (a) continue the trend reduction from normalized 12 months ending  
17 September 2015 to 12 months ending March 2016; or (b) trend the reduction  
18 based on the slope of the Company's 21-year regression. See UGI Gas Exhibit  
19 DEL-24 for the development of these two options. As seen in the exhibit, option  
20 (a), continuing the recent trend in normalized 12 month ending values over the  
21 last 6 months results in a very large decline in commercial heating use per  
22 customer to 443.76 Mcf, which is actually below the Company's 21-year  
23 regression. The use of option (b), the annual decline underlying the 21-year

1 regression line, results in a use per customer level of 520.98 Mcf; this is a more  
2 reasonable result. Using option (b) reduces the sales adjustment of 871,017 Mcf  
3 by another 189,307 Mcf to 681,710 Mcf, as shown on UGI Gas Exhibit DEL- 25.  
4 Again, an allocation of that reduction in sales would need to be made between  
5 Rates N/NT and Rate DS. This allocation is also shown on UGI Gas Exhibit DEL-  
6 25. The dollar amount of those adjustments can be found on UGI Gas Exhibits  
7 DEL-26 and DEL-27. The Rate N/NT adjustment is \$1,988,589 and the Rate DS  
8 adjustment is \$357,592 for a total adjustment of \$2,346,181, excluding gas costs.  
9 For a summary of these adjustments, please see UGI Gas Exhibit DEL-28,  
10 which, in total, demonstrates that Mr. Cline's suggested adjustment of  
11 \$24,422,379 should be reduced to a value of \$2,346,181, excluding gas costs,  
12 once all corrections and updates are made and an end of FPFTY annualized and  
13 normalized value is developed.

14  
15 **Q. Do you agree that the \$2.2 million is an appropriate adjustment?**

16 **A.** No. As I noted earlier, Mr. Cline uses differing methodologies in support of his  
17 adjustment for the commercial classes as compared to the residential classes in  
18 order to arrive at some arbitrary result. Thus, the arbitrary nature of his approach  
19 should even discount the use of the \$2,346,181 adjustment and my original use  
20 per customer forecasts should be adopted by the Commission.  
21  
22

1 **Q. On pages 15-16 of I&E Statement No. 5, Mr. Cline recommends an increase**  
2 **of \$13,928,496 in the Commercial gas costs expense. Do you agree with**  
3 **Mr. Cline's recommendation?**

4 A. In addition to the errors and updates explained above concerning the calculation  
5 of N volumes, Mr. Cline uses an incorrect percentage to calculate the volumes  
6 associated with PGC customers. This mistake exaggerates the level of  
7 purchased gas volumes affected by his usage adjustment. He uses the  
8 Company Proof of Revenue PGC volumes of 6,732,150 divided by partial  
9 volumes of 13,227,555 to get 50.89%. The correct approach would have been to  
10 divide 6,732,150 by total Rate N/NT volumes of 14,141,073 to get 47.61%. This  
11 error results in an overstatement of PGC volumes. For all of the above reasons,  
12 Mr. Cline's derivative adjustment to the Commercial gas costs expense should  
13 be rejected.

14  
15 **Q. Please summarize the OCA's reason for recommending that the Company's**  
16 **adjustments for annualized use per customer be rejected in their entirety.**

17 A. On pages 15-16 of OCA Statement No. 1, Mr. Effron contends that UGI Gas's  
18 usage model should be rejected because it is contradicted by "reality". In  
19 support, Mr. Effron states that all of the overall historic decrease took place prior  
20 to 2011, the actual weather normalized 12-months ended September 2015 was  
21 higher than projected by UGI Gas, and that using five years of weather  
22 normalized data suggests increasing usage trends. Mr. Effron therefore  
23 recommends that the Company's adjustments for annualized use per customer

1 be rejected in their entirety. Mr. Efron's recommendation results in an increase  
2 in pro forma FPFTY revenues by \$34,878,000. Mr. Efron also proposes an  
3 increase to the pro forma FPFTY cost of gas by \$18,855,000, and an increase to  
4 the pro forma FPFTY margin of \$16,023,000.

5  
6 **Q. Do you agree with Mr. Efron's recommendations?**

7 A. No. First, Mr. Efron's five-year analysis suffers from all of the same problems  
8 described above for Mr. Cline's analysis and should be rejected for the same  
9 reasons. Although Mr. Efron contends that all of the overall historical decrease  
10 occurred prior to 2011, when asked what studies he conducted to support the  
11 conclusion that residential and small commercial customers stopped undertaking  
12 conservation actions, Mr. Efron stated that he did not conduct such a study. See  
13 response to UGI Gas to OCA Set II-3, provided as UGI Gas Exhibit DEL-37. He  
14 also rejects the UGI Gas regression model because it did not predict "what  
15 actually happened in that year". In reality, Mr. Efron is comparing the results of  
16 two normalization methods and not "what actually happened". When asked if it  
17 was OCA's belief that the application of statistical regression to a data set will  
18 always result in the regression evaluation yielding projections that will be exactly  
19 verified by actual occurrence, he indicated that he had not relied on nor had he  
20 conducted a study of at what point expected errors from projections may be  
21 deemed reasonable, and when expected errors should be deemed "abnormal or  
22 unusual". See response to UGI Gas to OCA Set II-6, provided as UGI Gas  
23 Exhibit DEL-38. In addition, although he attempts to refute the results of the



1 long-term regression model, he indicated that he has not researched alternative  
2 normalization methods that could otherwise have been applied to the regression  
3 data presented in SDR-RR-11 to determine use per customer. See response to  
4 UGI Gas to OCA Set II-5, provided as UGI Gas Exhibit DEL-39.

5 Finally, Mr. Efron points to the fact that the weather normalized residential  
6 heating use per customer increased approximately 2.4% from the twelve-month  
7 trend ending September 2010 to the twelve month trend ending September 2015.  
8 I would note that, after updating the 12-month normalized data through March  
9 2016, the residential heating use per customer is now showing a decline of 2.1 %  
10 from twelve months ending September 2010 to twelve months ending March  
11 2016. This refutes Mr. Efron's conclusion that average usage per customer has  
12 increased over the past five years, which is the principal basis for his rejection of  
13 the Company's analysis. It also fully demonstrates that relying on short-term  
14 data can provide inaccurate and seriously misleading results.

15 As explained earlier, UGI Gas Exhibit DEL-16 containing updated UGI  
16 Gas Exhibits DEL-2(a) and DEL-2(b) clearly demonstrates a long-term declining  
17 trend and that the 12-month actual normalized values are tightly clustered around  
18 the regression normalize value line throughout the period. Although there are  
19 shorter periods of time where the 12-month normal strays above or below the  
20 regression line, the values over time tend to return to and reflect the long-term  
21 trend. As I noted earlier in my testimony, the R-Square value for the Company's  
22 long-term regression trend line is 0.9034, or a correlation factor of approximately  
23 90.3%, a tight fit that is statistically significant and supports the reliability of the

1 conclusions of the analysis. Additionally, as I noted earlier in my testimony, the  
2 Company believes that the long-term declining trend will continue due to the  
3 conservations efforts and energy efficiencies described above, which will  
4 continue for the foreseeable future.

5  
6 **Q. Does the OCA provide any additional reasons in an effort to support its  
7 recommendation that the Company's usage per customer be rejected?**

8 A. Yes. On pages 9-11 of OCA Statement No. 3, Mr. Watkins states that UGI Gas's  
9 downward revenue adjustments based on customer usage do not reflect "reality"  
10 and are contrary to sworn testimony in most recent 1307(f) filing.

11  
12 **Q. Is there an inconsistency with UGI Gas's use per customer assumptions in  
13 this case and the referenced PGC testimony?**

14 A. No. The referenced PGC testimony is referencing the combined Peak Day  
15 requirements of UGI Gas's core market customers, not annual use per customer.  
16 Use per customer may decline, while the peak day requirements of UGI Gas's  
17 PGC portfolio increase because of, as referenced in Mr. Hart's PGC testimony,  
18 increases in the total number of customers, increases in the number of  
19 customers using gas for heating purposes, and customers switching from  
20 interruptible to firm service. None of the peak day data is relevant to a  
21 determination of the appropriate annual use per customer.

22

1 **Q. Finally, in developing their proposed use per customer values, did any of**  
2 **the other parties include the impact of the proposed EE&C program on**  
3 **forecasted customer usage?**

4 A. No. While the Company included an additional adjustment for the impact of the  
5 EE&C program in its proof of revenue, the adjustments proposed by the other  
6 intervenors did not. In the event the Commission approves the EE&C program,  
7 the use per customer levels approved by the Commission should include the  
8 adjustment for the EE&C program as calculated on UGI Gas Exhibit DEL-3(m).

9  
10 **B. Annualized Revenues**

11 **Q. Does OCA propose to eliminate the Company's annualization of revenues**  
12 **to reflect the number of customers as of the end of the FPFTY?**

13 A. Yes. On pages 13-14 of OCA Statement No. 1, Mr. Effron proposes to eliminate  
14 the Company's annualized revenue adjustment that reflects the number of  
15 customers at end of FPFTY. Mr. Effron states that the Company's proposal is  
16 inconsistent with his recommendation that an average pro-forma rate base be  
17 used for the FPFTY. Mr. Effron's proposed adjustment reduces pro forma  
18 FPFTY revenues under present rates by \$760,000, reduces pro forma FPFTY  
19 gas costs expense by \$430,000, and reduces pro forma FPFTY margin by  
20 \$330,000.

21  
22 **Q. Do you agree with Mr. Effron's recommendation?**

23 A. No. As explained in the Rebuttal Testimony of Ms. Kelly, UGI Statement No. 2-  
24 R, Mr. Effron's proposed use of an average rate base for the FPFTY should be

1 rejected. Moreover, Mr. Effron seriously understates the pro forma FPFTY  
2 margin associated with customer additions during the FPFTY. The Company's  
3 budget shows 4,340 Rate RH and 830 rate CH customers added during the  
4 FPFTY, producing about \$3 million and \$2.4 million in non-gas revenue. One-  
5 half of those amounts would be \$1,471,260 and \$1,141,392, respectively, which  
6 is \$2,282,652 above Mr. Effron's figure of \$330,000 of non-gas revenue.  
7 Accordingly, Mr. Effron's proposal to eliminate the Company's annualization of  
8 revenues to reflect the number of customers as of the end of the FPFTY should  
9 likewise be rejected.

10  
11 **Q. On page 14 of OCA Statement No. 1, Mr. Effron recommends eliminating**  
12 **the Company's proposed adjustment for Transportation Changes. Do you**  
13 **have a response?**

14 **A.** Yes. His recommendation is without merit. According to Mr. Effron, the  
15 Company's adjustment for Transportation Changes is inconsistent with UGI  
16 Gas's projections of customers and volumes. This is not correct. The  
17 Transportation Change adjustment proposed by the Company is related to  
18 changes in the number of transportation customers that, due to timing reasons,  
19 are not reflected in the budget for Fiscal Year 2017. That is, the adjustment  
20 reflects new information that was not known at the time the 2017 budget was  
21 established. These changes reflect customers who are now known to be either  
22 terminating or initiating service in the FPFTY, but were not reflected in 2017

1 budget. Please see UGI Gas Exhibit DEL-29 for additional detail on these  
2 customers, which supports the Company's adjustments.

3  
4 **Q. Do you have other concerns with Mr. Efron's recommendations to reject  
5 the Company adjustments for transportation customers?**

6 A. Yes. Mr. Efron also alludes to inconsistencies between the Company's  
7 *adjustment and the information found in the Company's 1307(f) filing.* However,  
8 it is important to note that he is referring to a page included in Book 1 of the 2015  
9 PGC filing that contains data from Appendix A, page 1 of Form-IRP-Annual Gas  
10 Requirements that would have been based on a budget that was developed in  
11 August 2014, or a full year earlier than the information included in the base rate  
12 case (filed January 2016) based on a budget that was developed in August,  
13 2015. His reliance on that information is misplaced as the Company's  
14 adjustment is based on updated and therefore more reliable information. Stated  
15 another way, the Company's IRP plans do not reflect ratemaking adjustments  
16 which may be appropriate for base rate case proceedings.

17  
18 **C. Interruptible Revenues**

19 **Q. I&E and OCA both propose substantial adjustments to the Company's  
20 proposed ratemaking treatment of revenues from interruptible customers.  
21 Can you summarize these adjustments?**

22 A. Yes. Both I&E and OCA propose to apply traditional cost of service principles to  
23 *determine the proper ratemaking treatment of revenues from interruptible*  
24 *customers.* I&E recommends that the Company's claim for interruptible revenues

1 be increased from \$4,900,000 to \$20,379,000 under present rates for the FPFTY  
2 based on interruptible revenue experienced in the HTY. See I&E Statement No.  
3 5, page 19. The OCA recommends that the Company's claim for interruptible  
4 revenues be increased from \$4,900,000 to \$20,621,000 under present rates for  
5 the FPFTY based on historical experience and the OCA's contention that there is  
6 no real possibility that interruptible customers will switch to alternative fuels. See  
7 OCA Statement No. 1, pages 19-20; OCA Statement No. 3, pages 7-8. In short,  
8 both I&E and OCA propose to reflect all revenue from interruptible customers in  
9 establishing the Company's revenue requirement, performing cost allocation  
10 studies, and setting rates. As explained below, these adjustments, in my opinion,  
11 should be rejected for a variety of reasons.

12  
13 **Q. Do you agree with I&E's and OCA's use of historical levels of interruptible**  
14 **revenues?**

15 A. No. As explained in detail in the Rebuttal Testimony of Mr. Szykman, UGI Gas  
16 Statement No. 1-R, I&E's and OCA's reliance on historic interruptible revenues is  
17 not persuasive and should be rejected. Relying on the historical levels of  
18 interruptible revenues does not reflect either the at-risk nature of the interruptible  
19 revenues or the \$4.9 million amount that should be allocated to the interruptible  
20 class based on the average of the two cost of service studies performed by Mr.  
21 Herbert. OCA's and I&E's proposed treatment of interruptible revenues would  
22 also trigger the need for more frequent rate relief because of changes in the  
23 market price of alternative fuels beyond the control of UGI Gas; would

1 presumably, consistent with the recommendations of OSBA witness Knecht,  
2 justify a high minimum price below which UGI Gas could not discount on cost-of-  
3 serve principles, thereby causing many more customers who could have  
4 provided revenue contributions to shared system costs to turn to alternate, less  
5 efficient and less environmentally beneficial fuel sources; and would remove the  
6 current strong incentive for UGI Gas to maximize revenue contributions from  
7 customers with competitive fuel options. Significantly, UGI Gas's maximization of  
8 such revenue streams have enabled it to significantly avoid the need for rate  
9 relief to the long-term benefit of all of its customers, including those customer  
10 groups the OCA and I&E are trying to assist through their proposed adjustments.  
11

12 **D. Transportation, Excess Take, and Rate N Minimum Bills**

13 **Q. Please describe the OCA's recommendation regarding the revenues from**  
14 **Pooling Fees, System Access Fees, and Information Service Fees.**

15 **A.** *On page 20 of OCA Statement No. 1, Mr. Efron recommends including revenue*  
16 *from Pooling Fees, System Access Fees, and Information Service Fees in the*  
17 *pro forma FPFTY operating revenues because they are included in present rates.*  
18 *Similarly, on page 9 of OCA Statement No. 3, Mr. Watkins recommends that*  
19 *revenues at present rates be increased due to pooling, system access, and*  
20 *information services fees currently being collected by UGI Gas.*  
21

1 Q. Do you agree with the OCA's recommendation that the revenues from  
2 Pooling Fees, System Access Fees, and Information Service Fees should  
3 be included in the pro forma FPFTY operating revenues?

4 A. No. Mr. Effron and Mr. Watkins argue that, since the Company is currently  
5 receiving revenue from these charges in its operating revenues, they should not  
6 be adjusted out of current rates. However, the Company's proposal with regard  
7 to these fees is to eliminate them. So, on a pro forma basis, current rates would  
8 no longer contain these charges in the FPFTY. Further, no party opposed the  
9 elimination of these charges. Therefore, if these charges are not adjusted out for  
10 the purposes of calculating the proposed revenue change, it would result in a  
11 revenue requirement shortfall when rates become effective since those charges  
12 will be eliminated when the rates become effective. The chart below represents  
13 a simple example of the need for this adjustment. In this example, the revenue  
14 requirement under proposed rates is \$100 and the revenue under present rates  
15 is also \$100 but includes \$5 for miscellaneous revenue. As seen in Scenario 1,  
16 below, if an adjustment is not made for the elimination of these current  
17 miscellaneous charges, there is a revenue shortfall of \$5.00 when the new rates  
18 are effective.



1

<b>Scenario 1 - No adjustment to Present Rates for Elimination of current \$5.00 miscellaneous charges</b>				
Present Revenues at current rates (no adjustment for \$5.00 in misc. revenue)	Revenue Requirement under Proposed Rates	Proposed Revenue Change	Actual revenue generated when new rates take effect and misc. revenues are zero	Revenue Shortfall
\$100.00	\$100.00	\$	\$95.00	\$(5.00)

<b>Scenario 2- Adjustment to Present Rates for Elimination of current \$5.00 miscellaneous charges</b>				
Present Revenues at current rates (excluding \$5.00 in misc. revenue)	Revenue Requirement under Proposed Rates	Proposed Revenue Change	Actual revenue generated when new rates take effect and misc. revenues are zero	Revenue Shortfall
\$95.00	\$100.00	\$5.00	\$100.00	\$ 0

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The goal of ratemaking and use of a "test year" is to adjust actual or budgeted data to remove abnormal and non-recurring items and reflect conditions expected to be in place during the period new rates will be in effect on a pro forma basis. It is clear that these charges will be not in effect at the time new rates go into effect. Indeed, the OCA does not oppose elimination of these charges. It is perfectly appropriate and necessary to adjust present rate revenues to remove revenue from rates which will no longer be in effect in order provide a "normalized" starting point for determining the Company's revenue requirement.

1 **Q. Please describe the OCA's recommendation regarding the revenues from**  
2 **Excess Take and Rate N Minimum Bills.**

3 A. On pages 20-21 of OCA Statement No. 1, Mr. Effron recommends that the  
4 revenue from Excess Take and Rate N Minimum Bills be included in the pro  
5 forma FPFTY operating revenues because they are currently included in present  
6 rates.

7  
8 **Q. Do you agree with the OCA's recommendation that the revenues from**  
9 **Excess Take and Rate N Minimum Bills be included in the pro form FPFTY**  
10 **operating revenues?**

11 A. No. The OCA's recommendation regarding the revenues from Excess Take and  
12 Rate N Minimum Bill should be rejected for the same reasons that the revenues  
13 from Pooling Fees, System Access Fees, and Information Service Fees should  
14 not be included in the pro forma FPFTY operating revenues. That is, UGI Gas is  
15 proposing to eliminate Rate N minimum bill charges from the tariff in the FPFTY  
16 and is forecasting Excess Take charges to be zero in the FPFTY, and if revenues  
17 from Excess Taken and Rate N Minimum Bill were not adjusted out of present  
18 rates, there would be a shortfall of revenue when the new rates take effect. That  
19 is, the revenues from these charges would no longer exist when the rates  
20 established in this proceeding become effective.

21

1 **IV. REVENUE ALLOCATION**

2 **Q. Does the OSBA agree with the Company's Cost of Service Study design**  
3 **day demands for the FPFTY?**

4 A. No. On page 19 of OSBA Statement No. 1, Mr. Knecht states that the  
5 Company's use of the design day forecast from its 2015 PGC is not reasonable  
6 for use in a COSS design day for the FPFTY. Mr. Knecht therefore develops an  
7 alternative approach for the FPFTY design day. See OSBA Statement No. 1,  
8 pages 20-21.

9  
10 **Q. Do you agree with Mr. Knecht's approach to the FPFTY design day?**

11 A. The Company agrees with Mr. Knecht's concern that the peak day allocation  
12 should be adjusted to account for the migration between rate classes and is  
13 submitting a revised design day allocation and updated Cost of Service Study as  
14 part of its rebuttal testimony. In addition to reflecting the migration impacts on  
15 peak day values, the Company has also updated its calculation related to Rate  
16 DS peak day, as it found an error in that calculation upon further review which  
17 was understating Rate DS peak day. See also the rebuttal testimony of Ms.  
18 Borelli, UGI Statement No. 13-R. This update is also reflected in the updated  
19 Cost of Service Study presented by Mr. Herbert in UGI Gas Statement No. 4-R.

20  
21 **Q. Does this change to the Cost of Service Study require any change to the revenue**  
22 **allocation proposed by the Company?**

23 A. No, it does not. As shown in the table below, the changes to the Cost of Service Study  
24 produced only modest changes to the relative class rates of return. Under the Company's

1 proposed revenue allocation all rate classes move substantially towards the system rate of  
 2 return under both the original and the revised Cost of Service Study. In my opinion, the  
 3 Company's proposed revenue allocation is reasonable under either version of the study.  
 4

Rate Class	Relative ROR at Present			Relative ROR at Proposed		
	As Filed	Per Rebuttal	Variance	As Filed	Per Rebuttal	Variance
R/RT	0.16	0.12	(0.04)	0.61	0.57	(0.04)
N/NT GL	1.30	1.37	0.07	1.09	1.21	0.12
DS	3.28	3.32	0.04	2.14	2.28	0.14
LFD	6.40	5.31	(1.09)	3.70	2.81	(0.89)

5  
 6 **Q. Did I&E have a specific revenue allocation proposal?**

7 A. No. However, as further addressed in the Rebuttal Testimony of Mr. Herbert,  
 8 UGI Gas Statement No. 4-R, I&E did recommend use of the Cost of Service  
 9 Study provided as UGI Gas Exhibit D, Schedule C, which allocates mains to the  
 10 interruptible class on the basis of average daily volumes excluding excess  
 11 capacity.  
 12

13 **Q. Does the OCA agree with the Company's proposed revenue allocation?**

14 A. On page 37 of OCA Statement No. 3, Mr. Watkins states that he generally  
 15 agrees with the revenue allocation proposed by the Company. However, Mr.  
 16 Watkins states that the Company's proposed \$43.3 million increase for Rate R  
 17 results in an effective increase of 165% of the system average percentage  
 18 increase, which Mr. Watkins states is higher than the Company's proposal to limit

1 the increase to the residential class to 150%. Mr. Watkin's also makes  
 2 corrections for the inclusion of interruptible revenues and ancillary transportation  
 3 fee revenue at current rates. The results of Mr. Watkin's proposed revenue  
 4 allocation are provided on pages 37-38 of OCA Statement No. 3 and  
 5 summarized below:

Class	UGI Proposed Allocation		OCA Proposed Allocation	
	Increase \$	Increase %	Increase \$	Increase %
Rate R	\$43,332,429	39.9%	\$37,775,982	29.2%
Rate N	\$12,495,779	22.7%	\$8,486,075	15.4%
Rate DS	\$981,480	9.3%	\$666,538	5.3%
Rate LFD	\$1,754,237	7.0%	\$1,191,329	4.8%
Rate XD Firm	\$0	0%	\$0	0%
Interruptible	\$0	0%	\$0	0%
Total	\$58,563,925	26.6%	\$42,119,925	19.5%

6  
 7 The total figures do not match as a result of Mr. Watkins proposed increase to  
 8 present rate and proposed pro forma interruptible revenues, which reduces the  
 9 overall revenue requirement deficiency.

10  
 11 **Q. Do you agree with Mr. Watkins that the increase allocated to the residential**  
 12 **class under the Company's proposal is 165%?**

13 **A.** No. As shown on his Schedule GAW-8, Mr. Watkins calculates the 39.9%  
 14 proposed increase (without gas costs) as being 165% of the system average by  
 15 lowering the overall system average from 26.6% to 24.1%, which he  
 16 accomplishes by assuming the Company continues to obtain \$2,348,000 in  
 17 revenues from certain ancillary transportation fees in FPFTY. However, as  
 18 explained earlier, those fees are proposed to be eliminated and as a result, the  
 19 full 26.6% total increase, or \$58,563,925 will be required in order to generate the

1 proposed revenue requirement. As a result, the 39.9% proposed increase is  
2 150% of the 26.6% total proposed increase.

3  
4 **Q. Do you agree with the OCA's proposed revenue allocation?**

5 A No. I disagree with the OCA's revenue allocation because it makes adjustments  
6 to inflate current non-gas revenues, primarily those revenues that are assumed  
7 to be generated by transportation fees, even though they will cease to exist in the  
8 FPFTY, and includes at-risk interruptible revenues in excess of those developed  
9 from the Company's Cost of Service Studies.

10  
11 **Q. Does the OSBA agree with the Company's proposed revenue allocation?**

12 A. No. On page 31 of OSBA Statement No. 1, Mr. Knecht agrees with the  
13 Company that the increase for Rate R should be limited to 1.5 times system  
14 average. He also notes that Rate XD customers are subject to negotiated rates  
15 that produce revenues in excess of costs and, therefore, proposes no increase or  
16 decrease to Rate XD. However, Mr. Knecht recommends adjustments to  
17 eliminate cross subsidies among Rates N, DS, and LFD. For the interruptible  
18 class, Mr. Knecht states on page 30 that, other than one very large customer,  
19 UGI Gas has not provided sufficient evidence that the current negotiated rates  
20 are necessary to retain these customers and recommends 1.5 times the system  
21 average for the interruptible class. The results of Mr. Knecht's proposed revenue  
22 allocation are provided on pages 30-32 of OSBA Statement No. 1, and are  
23 summarized below:

1

Class	UGI Proposed Allocation		OSBA Proposed Allocation	
	Increase \$	Increase %	Increase \$	Increase %
Rate R	\$43,332,429	39.9%	\$44,180,000	40.1%
Rate N	\$12,495,779	22.7%	\$7,270,000	13.2%
Rate DS	\$981,480	9.3%	\$1,430,000	13.5%
Rate LFD	\$1,754,237	7.0%	\$3,790,000	15.1%
Rate XD Firm	\$0	0%	\$0	0%
Interruptible	\$0	0%	\$1,900,000	38.7%
Total	\$58,563,925	26.6%	\$58,560,000	27.1%

2

3 **Q. Do you agree with the OSBA's proposed revenue allocation?**

4 A. No. As discussed in the Rebuttal Testimony of Mr. Stoyko, UGI Gas Statement  
5 No. 7-R, Mr. Knecht has simply failed to investigate any specific interruptible  
6 customer transactions, and has no basis for assuming his proposed allocation of  
7 revenues will have no deleterious effects.

8

9 **V. RATE DESIGN**

10 **A. Residential Rate R Customer Group (Rates R and RT)**

11 **Q. Please summarize the Company's proposed rate design for the Rate R  
12 customer group.**

13 A. The Company is proposing a Rate R customer group customer charge of \$17.50  
14 per month, as compared to the current charge of \$8.55 per month, to better  
15 reflect the customer component of customer service. The Company also is  
16 proposing to replace the current declining block structure with a single block  
17 volumetric charge of \$3.0123 per Mcf.

18

1 **Q. Please describe the concerns raised by the intervenors regarding an**  
2 **increased residential monthly customer charge from \$8.55 to \$17.50.**

3 A. I&E, OCA, and CAUSE-PA all opposed the Company's proposal to increase the  
4 residential monthly charge from \$8.55 to \$17.50. I&E recommends that the  
5 Company's customer cost analysis be rejected. Based on its own customer cost  
6 analyses, I&E recommends a Rate R customer charge of \$11.40. See I&E  
7 Statement No. 5, pages 26-30. Both I&E and the OCA argue that the Company's  
8 proposed Rate R customer charge ignores the ratemaking concept of gradualism  
9 and should be limited to no more than \$11.25 per month. See I&E Statement  
10 No. 5, page 29; OCA Statement No. 3, pages 42-43. The OCA and CAUSE-PA  
11 argue that the Company's proposal hurts low-volume and low-income customers  
12 as well as energy conservation. See OCA Statement No. 4, pages 24-26;  
13 CAUSE-PA Statement No. 1, pages 16-18. CAUSE-PA recommends that any  
14 increase for Rate R should be applied only to a volumetric charge. See CAUSE-  
15 PA Statement No. 1, page 18.

16  
17 **Q. How do you respond to the concerns regarding the increased customer**  
18 **charge?**

19 A. In his Rebuttal Testimony, UGI Gas Statement No. 4-R, Mr. Herbert provides  
20 extensive support for the Company's proposal from a cost of service perspective,  
21 and addresses the arguments raised by the opposing parties regarding  
22 conservation and the impact of customer charges on low-income customers.



1           Regarding the argument that an increase in the customer charge will  
2 negatively impact conservation, the Company fully supports appropriate  
3 incentives to encourage customers to conserve energy, but does not believe that  
4 it is appropriate to design rates solely based on conservation. Rates driven  
5 solely by conservation efforts would go against the fundamental cost causation  
6 principles and put investment in utility infrastructure at risk. That being said, it is  
7 important to remember that approximately 72% of a typical residential bill will still  
8 be based on energy consumption through the proposed volumetric charges.  
9 Thus, a typical residential customer will continue to have a significant incentive to  
10 reduce his/her energy consumption and realize cost savings. Moreover, UGI  
11 Gas has proposed a comprehensive energy efficiency program in this  
12 proceeding, which ironically is opposed by some of the same parties arguing that  
13 high customer charges negatively impact conservation.

14           With respect to low-income customers, UGI Gas has several universal  
15 service programs to help low income customers who may be impacted by an  
16 increased customer charge as further explained in the Rebuttal Testimony of Ms.  
17 Rossi, UGI Gas Statement No. 12-R.

18  
19 **Q. Do you have a response to the intervenors' concerns that the Company's**  
20 **proposed Rate R customer charge is inconsistent with the principal of**  
21 **gradualism?**

22 **A.** The Company has addressed gradualism concerns by using the following  
23 parameters when establishing the revenue allocation among rate classes: (1)

1 rate classes that are above the system average rate of return at present rates will  
2 receive an increase less than the system average distribution increase; and (2)  
3 the rate increase for rate classes that are below the system average rate of  
4 return at present rates will not exceed 150% of the system average increase. In  
5 addition, UGI Gas's customers have not had a base rate increase in 21 years  
6 and when looking at the proposed increase over that extended period, one could  
7 make the case that one increase in 21 years is pretty gradual. Especially when  
8 you consider that UGI Gas's current customer charge is the lowest in  
9 Pennsylvania among major NGDCs and the overall charges proposed by the  
10 Company, including its purchased gas cost rate, are on a par with those of 21  
11 years ago.

12  
13 **Q. Do you have any comments regarding the \$11.40 and \$11.25 Rate R**  
14 **customer charges proposed by I&E and OCA, respectively?**

15 **A.** Yes, I disagree with the Rate R customer charges recommended by both I&E  
16 and OCA. The Rate R customer charges recommended by I&E and OCA would  
17 equate to the lowest residential customer charge in State of Pennsylvania among  
18 major NGDCs. The Company's proposed customer charge for Rate R is only 4%  
19 above the most recently approved customer charge established for Columbia  
20 Gas of Pennsylvania, and is less than I&E's calculation of direct costs per bill of  
21 \$17.63.

22

1 **Q. Do the intervenors raise any other concerns regarding the Company's**  
2 **proposed rate design for the Rate R customer group?**

3 A. Yes. While the OCA supports the Company's proposal to eliminate the declining  
4 block usage rate for the Rate R customer group, see OCA Statement No. 3, page  
5 41, I&E recommends that the declining block usage rate be retained and  
6 increased. Specifically, I&E recommends that the Rate R "Under 5 Mcf"  
7 declining block be increased by 30% from \$3.3082 to \$4.2963 per Mcf and the  
8 "Over 5 Mcf" declining block be increased by 42% from \$2.6634 to \$3.9463. See  
9 I&E Statement No. 5, page 34.

10  
11 **Q. Do you have a response to I&E's declining block recommendation for Rate**  
12 **R?**

13 A. Yes. While the Company does not believe there is anything inherently wrong  
14 with a rate that incorporates a declining block structure, it believes the originally  
15 proposed single block structure helps simplify customer bills as well as  
16 incentivizes conservation, compared to a rate with a lower tail block at higher  
17 levels of usage. In addition, UGI Gas's single block rate of \$3.3082 would be  
18 lower than the I&E proposed first block (of the first 5Mcf) of \$4.2963 so non-  
19 heating customers, whose usage primarily falls within the first block, would see  
20 their distribution charges increase by approximately 43% over the UGI Gas  
21 proposed charge. See the chart below for a simplified example of the different  
22 usage charges that result when comparing UGI and I&E volumetric rates,  
23 assuming a low usage customer whose total usage flows through the first block.

1 Single Block versus Declining Block Usage Charge Comparison – Rate R.  
2

	UGI	I&E	% variance
Annual Usage (Mcf)	20	20	
Rate	\$3.0123	\$4.2963	
Total	\$60.246	\$85.926	43%

3  
4  
5 **B. Small Commercial Rate N Customer Group (Rates N and NT)**

6 **Q. Please summarize the Company's proposed rate design for the Rate N**  
7 **customer group.**

8 A. The Company is proposing a Rate N customer group customer charge of \$32.00  
9 per month, as compared to the current charge of \$8.55 per month, to better  
10 reflect the customer component of customer service. The Company also is  
11 proposing to replace the current declining block structure with a single block  
12 volumetric charge of \$3.6932 per Mcf.

13  
14 **Q. Please describe the concerns raised by the intervenors regarding an**  
15 **increased small commercial monthly customer charge from \$8.55 to \$32.00.**

16 A. I&E and OSBA opposed the Company's proposal to increase the small  
17 commercial monthly charge from \$8.55 to \$32.00. Both I&E and OSBA  
18 recommended that the Company's customer cost analysis be rejected. Relying  
19 on their customer cost analyses, I&E recommends a Rate N customer charge of  
20 \$14.00, and the OSBA recommends a Rate N customer charge of \$20.00 per  
21 month. See I&E Statement No. 5, pages 26-30; OSBA Statement No. 1, page

1 34. Both I&E and OSBA argue that the Company's proposed Rate N customer  
2 charge violates the ratemaking concept of gradualism. See I&E Statement No. 5,  
3 page 29; OSBA Statement No. 1, page 34.  
4

5 **Q. How do you respond to the concerns regarding the increased customer**  
6 **charge?**

7 A. In his Rebuttal Testimony, UGI Gas Statement No. 4-R, Mr. Herbert provides  
8 extensive support for the Company's proposal from a cost of service perspective  
9 and addresses I&E's and OSBA's customer cost analyses. Further, as explained  
10 above, the Company believes it has addressed gradualism concerns by using the  
11 following parameters when establishing the revenue allocation among rate  
12 classes: (1) rate classes that are above the system average rate of return at  
13 present rates will receive an increase less than the system average distribution  
14 increase; and (2) the rate increase for rate classes that are below the system  
15 average rate of return at present rates will not exceed 150% of the system  
16 average increase. I&E and OSBA improperly apply the principle of gradualism to  
17 individual components of rates, rather than to rates as a whole. Customers do  
18 not pay individual rate components, they pay a total bill.

19 The Company's proposed customer charge for Rate N of \$32 is less than  
20 I&E's calculation of direct costs per bill of \$47.17. Also, the \$32 customer charge  
21 is slightly less than the average of the two small commercial rates for the most  
22 recently approved commercial customer charges for Columbia Gas of  
23 Pennsylvania, which are \$21.25 for commercial customers with annual volumes

1 of less than 6,640 thm and \$48 for those with annual volumes greater than 6,640  
2 thm but less than 64,400 thm. Therefore, the Company's proposed Rate N  
3 customer charge is booth supported on a cost basis and is in line with other  
4 customer charges approved by the Commission.  
5

6 **Q. Do other parties raise any other concerns regarding the Company's**  
7 **proposed rate design for the Rate N customer group?**

8 A. Yes. I&E recommends that the declining block usage rate be retained and  
9 increased. Specifically, I&E proposes two declining block usage rates for the  
10 Rate N customer group: \$4.3720 per Mcf for the first 500 Mcf of usage; and \$3.4  
11 per Mcf for all usage over 500 Mcf. See I&E Statement No. 5, page 34. The  
12 OSBA recommends a single \$3.6707 per Mcf commodity charge for Rate N. See  
13 OSBA Statement No. 1, page 34.  
14

15 **Q. Do you have a response to I&E's and OSBA's proposed changes to the**  
16 **volumetric charge for Rate N customer group?**

17 A. I believe the benefits of rate simplification outweigh the expressed concerns  
18 about gradualism, which is not the only concern when designing rates.  
19

20 **C. Rate DS**

21 **Q. Please summarize the Company's proposed rate design for the Rate DS**  
22 **customer group.**

23 A. The Company is proposing to maintain the current Rate DS monthly customer  
24 charge of \$290.00 per month. The Company also is proposing to replace the

1 current declining block structure with a single block volumetric charge of \$2.9121  
2 per Mcf.

3  
4 **Q. Do other parties have any concerns with the Company's proposed rate  
5 design for the Rate DS customer group?**

6 A. Yes. Although I&E agrees with the Company's proposal, see I&E Statement No.  
7 5, page 35, the OSBA has concerns that the Company's proposal for Rate DS  
8 may result in more current Rate DS customers opting for Rate N/NT. See OSBA  
9 Statement No. 1, page 35. The OSBA suggests that UGI Gas could reduce the  
10 customer charge for Rate DS or could consider differentiated customer charges  
11 for Rate DS. See OSBA Statement No. 1, page 36.

12  
13 **Q. Do you have a response to the OSBA's proposal?**

14 A. Mr. Knecht offers a general concern that a number of smaller, current DS  
15 customers may opt for rate N or NT due to the larger customer charge.  
16 However, he does not provide a specific proposal and, as a result, it is difficult to  
17 respond directly to his general concerns and suggestions. I would agree that the  
18 larger customer charge may cause some smaller DS customers to move to N/NT  
19 and note that the Company has endeavored to track and forecast customer  
20 migration based on the most economical rate and has attempted to reflect those  
21 changes in its Proof of Revenue. The Company's migration analysis has not  
22 been questioned. The Company would reserve the right to update its migration

1 analysis in order to appropriate reflect the impacts of any final revenue allocation  
2 and rate design.

3  
4 **D. Rate LFD**

5 **Q. Please summarize the Company's proposed rate design for the Rate LFD**  
6 **customer group.**

7 A. The Company is proposing to maintain the current Rate LFD monthly customer  
8 charge of \$700 per month. The Company also is proposing to replace the  
9 current declining block structure with a single block volumetric charge of \$1.2133  
10 per Mcf. The Company also is proposing a demand charge of \$5.45/Mcfd to  
11 assist with system planning.

12  
13 **Q. Do other parties have any concerns with the Company's proposed rate**  
14 **design for the Rate LFD customer group?**

15 A. On pages 35-36 of I&E Statement No. 5, Mr. Cline recommends that the four  
16 existing declining block usage rates be reduced from four blocks to two blocks.

17  
18 **Q. Do you have a response to Mr. Cline's proposal?**

19 A. The Company would agree to accept a LFD Rate design that incorporates a two  
20 block, declining structure.

21  
22 **E. Rate XD**

23 **Q. Please summarize the Company's proposed rate design for the Rate XD**  
24 **customer group.**



1 A. For Rate XD, the rates for this class are based on current contracts as negotiated  
2 between the Customer and the Company given competitive considerations, the  
3 Company is not proposing any change to present rates.

4  
5 **Q. Do other parties have any concerns with the Company's proposed rate  
6 design for the Rate XD customer group?**

7 A. On pages 39-40 of OCA Statement No. 3, Mr. Watkins recommends that the XD  
8 tariff provisions be revised to include appropriate pricing parameters to ensure  
9 negotiated rates are fair and reasonable.

10  
11 **Q. Do you have a response to Mr. Watkins' recommendation?**

12 A. Yes. The Company believes that since XD customers also have Rate LFD as an  
13 alternative, this provides assurance that negotiated rates are fair and reasonable.

14  
15 **F. Other Proposed Rate Design Changes**

16 **Q. Are any additional rate design concerns identified by other parties?**

17 A. Yes. On page 33 of I&E Statement No. 5, Mr. Cline expresses his view that the  
18 Company's proposal of consolidating declining block usage rates into single  
19 volumetric rates excessively increases Rate N and Rate LFD in violation of the  
20 concept of gradualism. Mr. Cline therefore recommends that the Company  
21 consider consolidating the Rate N and Rate LFD declining blocks into a single  
22 block over several base rate cases. However, Mr. Cline provides no evidence of  
23 a violation of gradualism on a total bill basis. Simply because an individual

1 charge component has significantly increased does not necessarily imply a  
2 violation of gradualism if the increase on the total bill is reasonable.

3  
4 **Q. Do you have a response to Mr. Cline's proposal?**

5 A. Yes. First as explained above, the Company believes it has addressed  
6 gradualism concerns by using the following parameters when establishing the  
7 revenue allocation among rate classes: (1) rate classes that are above the  
8 system average rate of return at present rates will receive an increase less than  
9 the system average distribution increase; and (2) the rate increase for rate  
10 classes that are below the system average rate of return at present rates will not  
11 exceed 150% of the system average increase.

12 In I&E Exhibit No. 5, Schedule 15, page 2 of 2, shows I&E's proposed two  
13 declining rate blocks of \$1.662 and \$0.7860. Unfortunately, the exhibit also  
14 indicates that there are multiple versions of rate blocks within the rate schedule  
15 that these rates are applied to, depending on where the customer is migrating  
16 from, resulting in pricing inconsistencies by customer for Rate Class LFD. For  
17 example, Schedule 15, page 2 of 2, shows that for customers migrating from rate  
18 DS to LFD, the exhibit applies a rate of \$1.6620 to the first 500 Mcf and \$0.7860  
19 to the remainder, while for customers who are already on rate LFD (not migrating  
20 from a different rate) have \$1.6620 applied to the first 5,000 Mcf and the second  
21 block rate of \$0.7860 does not apply until the customer exceeds 5,000 Mcf. It is  
22 unclear how the Company would be able to support and administer these  
23 different charges for different LFD customers.

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**VI. SCALEBACK**

**Q. Do any of the parties suggest how the proposed class revenue allocation should be scaled back in the event the Commission does not approve the full rate increase requested by the Company?**

A. Yes. I&E, OCA, and OSBA all offer scaleback recommendations, each of which are different. On pages 36-37 of I&E Statement No. 5, Mr. Cline proposes a specific scaleback based on I&E's recommended revenue decrease of \$18,640,241. Mr. Cline's scaleback proposal for each rate class is summarized on page 37 of his testimony and shown in I&E Exhibit 5, Schedule 17, page 1, columns F through I. Mr. Cline's proposal results in a decrease of approximately 5% for R&RT, N&NT, DS, and LFD rate classes as shown on I&E Exhibit No. 5, Schedule 10, columns F-G.

On page 39, of OCA Statement No. 3, Mr. Watkins recommends that any scaleback be applied proportionally to all classes that will get an increase. On page 35 of OSBA Statement No. 1, Mr. Knecht recommends that any scaleback should be passed on to the Rate N/NT customer group and assigned to both the customer and commodity charges.

**Q. Do you have a response to Mr. Cline's specific scaleback proposal?**

A. Yes. In the development of the scale-back proof of revenue, Mr. Cline incorporates usage adjustments made to the various rate classes that I noted and disagreed with earlier in my testimony, including his increase to the commercial heating class based on an inflated use per customer value that

1 included the higher usage values from a different rate class – Rate DS. In  
2 addition, there is an unexplained proposed rate of \$4.2206 per Mcf on I&E  
3 Exhibit No. 5, Schedule 9, column E, applied to the incremental volumes based  
4 on the analysis mentioned above for the commercial heating rate class. This  
5 unexplained rate of \$4.2206 is contrary to the proposed single block rate under  
6 the scaleback scenario of \$2.7528. In response to an interrogatory concerning  
7 the unexplained \$4.2206, Mr. Cline explained that it was an error and submitted  
8 a revised schedule that incorporated a two block structure for N/NT. In addition,  
9 his scaleback proof of revenue presumably includes the same incorrect blocking  
10 for LFD that was reflected in I&E Exhibit No. 5, Schedule 15, page 2 of 2. As a  
11 result of these concerns, I would reject the proposed scaleback calculations.

12  
13 **Q. Does the Company have a position on the scaleback that should be applied**  
14 **in the event the Commission approves a rate increase less than the**  
15 **increase requested by the Company?**

16 **A.** Yes. To the extent the Commission approves a rate increase less than the  
17 Company's proposed rate increase, the scaleback should be proportional based  
18 on the Company's revenue allocation.

19

1 **VII. TARIFF RULES**

2 **Q. Before addressing the tariff rule issues raised by the other parties, is the**  
3 **Company making any corrections to Proposed Tariff No. 6, as filed on**  
4 **January 19, 2016, due to errors or omissions?**

5 A. Yes. The Company is proposing the following changes. On page 5 the  
6 Company would like to reinstate the Township of Brecknock in Lancaster County  
7 to its Description of Territory – Western Region. This township was inadvertently  
8 deleted from an earlier supplement. On page 16, in proposed Section 3.29(b)  
9 the phrase “with the agreement of the Customer” should be moved to the  
10 beginning of the section rather than the middle for clarity. On page 75 the docket  
11 number referenced in the Customer Charge section is incorrect. The correct  
12 Docket Number is R-00974012. On page 90, the word “Rate” is missing from the  
13 third paragraph. On pages 83 and 86 the section titled Charge for Unauthorized  
14 Overrun should include the following “the rate of Fifty Dollars (\$50.00) per Mcf, or  
15 the charge calculated in compliance with Section 20.4 Maximum Daily Excess  
16 Balancing Charge, whichever is greater, plus the charge specified in the monthly  
17 rate table.”

18 The Company proposes to make these changes to UGI Gas Exhibit F –  
19 *Proposed Tariff as part of its compliance filing.*

20

1 **Q. On page 50 of OCA Statement No. 3, Mr. Watkins recommends that the**  
2 **Company's proposal to increase the returned check fee be rejected for lack**  
3 **of support. Do you have a response?**

4 **A.** Yes. UGI Gas has undertaken a review of currently approved return check fees  
5 for other utilities in the State, which indicated a range of returned check fees  
6 between \$20 and \$35. The Company's proposed \$35 returned check fee is in  
7 line with those approved for other utilities in the State. In addition, a \$35 fee  
8 would align UGI Gas's returned check fee with those approved for both CPG and  
9 PNG. Finally, the returned check fee is designed to serve as a deterrent and  
10 should not be judged on a cost basis.

11  
12 **Q. On pages 50-51 of OCA Statement No. 3, Mr. Watkins recommends a**  
13 **modification to the Company's proposed residential minimum bill tariff**  
14 **provisions. Please summarize Mr. Watkins's recommendation.**

15 **A.** Mr. Watkins is concerned that customers that elect to discontinue service for less  
16 than 12 months will be subject to two charges: (1) the accrual of monthly  
17 customer charges; and (2) a reconnect charge of \$73.00. Mr. Watkins therefore  
18 recommends that these customers be subject to only one of these charges, but  
19 not both.

20

1 **Q. Do you have a response to Mr. Watkins's proposed modification to the**  
2 **Company's residential minimum bill tariff provisions?**

3 A. One of the basic assumptions the Company makes when setting rates and  
4 determining extension profitability is the concept of annual usage and billings. To  
5 the extent customers use their service on a seasonal bases it can negatively  
6 impact those calculations. As a result, the Company uses the minimum bill  
7 provisions to secure that annual distribution revenue and protect other rate  
8 payers from subsidizing seasonal usage. The Reconnect Fee is a charge to  
9 recover the actual cost of performing the reconnection work. As such it is  
10 independent of the minimum bill charge for recovering the anticipated distribution  
11 revenue. For these reasons, the Company rejects the recommendation to not  
12 charge one of these two fees, which address entirely separate issues.

13  
14 **Q. On page 51 of OCA Statement No. 3, Mr. Watkins recommends that the**  
15 **language in the Company's current Rule 5.6 regarding deposits and**  
16 **refunds be left unchanged. Do you have a response?**

17 A. Yes. The changes proposed by UGI Gas simply make its tariff consistent with the  
18 tariff of UGI CPG and UGI PNG. The concept of providing refunds for  
19 *subsequent connections is almost impossible to administer for mass market*  
20 *accounts and does not comport with modern realities of how distribution work is*  
21 *performed. Almost all customers want an upfront guaranteed price before*  
22 *committing to a line extension contribution, and do not want to carry the risk of*  
23 *subsequent true-ups of cost that might result, for example, due to unexpected*

1 ground conditions or permitting or repaving costs. Thus, UGI Gas generally uses  
2 average costs in pricing line extensions, and may use a variety of outside  
3 contractors and internal resources in performing any particular line extension,  
4 and may not be able to easily trace and calculate the costs of a particular line  
5 extension without considerable manual effort and coordination with outside  
6 contractors. Moreover, just as UGI Gas does not generally attempt to reconcile  
7 the actual costs of each extension, it also does not have the systems in place to  
8 try to trace subsequent additions to each individual extension as it has developed  
9 for its Get Gas line extension pilot program. Thus, the Company believes that it  
10 is appropriate to align its tariff language with current business realities, while  
11 leaving open the possibility of negotiating potential refund opportunities in  
12 individual service extension agreements where unique circumstances and  
13 expected revenues might make the manual calculation of individual customer  
14 costs and the tracing of subsequent connections economically feasible.

15  
16 **Q. On page 7 of NGS Parties Statement No. 1, Mr. Crist asserts that UGI Gas's**  
17 **\$10 switching fee for customers who make more than one switch in**  
18 **suppliers in a twelve-month period is discriminatory because it only**  
19 **applies to switches to a NGS and not to switches to default service. Do**  
20 **you believe this criticism of the fee is valid?**

21 A. No. The switching fee was established at Docket A-00994786 as a means for  
22 the Company to recover the administrative costs associated with providing  
23 suppliers with a mechanism for processing switches, including populating system



1 rate tables, manually intervening in the enrollment transaction when problems  
2 arise, notifying suppliers in the event two suppliers enroll the same customer and  
3 answering customer inquiries related to the switch. While Mr. Crist claims the  
4 switching fee is discriminatory because it does not apply to switches to default  
5 service, there are fundamental differences between default service and supplier  
6 switches that make the application of the switching fee to both problematic. The  
7 NGDC is operating solely in its statutory role of provider of last resort, and when  
8 customers switch back to default service most or all of the administrative costs  
9 the switching fee was designed to address are simply not present.

10  
11 **Q. On pages 19-20 of NGS Parties Statement No. 1, Mr. Crist expresses**  
12 **concern about UGI Gas' financial security requirements. Are his concerns**  
13 **valid?**

14 **A.** UGI Gas has proposed no change to its level of financial security which was  
15 established by Commission Order at Docket P-00032054 after a complaint  
16 lodged by Shipley. Financial security requirements are the result of the public  
17 policy decision made by the Pennsylvania General Assembly in 66 Pa.C.S. §  
18 2207(k) which states:

19 *In the event the natural gas supplier discontinues service or defaults*  
20 *before its contract with the customer expires, the retail gas customer shall*  
21 *be served by the supplier of last resort at the commission-approved*  
22 *supplier of last resort rate commencing with the next bill cycle. However,*  
23 *the retail gas customer shall continue to be charged the rate the customer*  
24 *negotiated with the discontinuing or defaulting natural gas supplier for the*  
25 *remainder of the billing cycle. Any difference between the costs incurred*  
26 *by the supplier of last resort and the amount payable by the retail gas*  
27 *customer shall be recovered from the natural gas supplier or from the*  
28 *bond or other security provided by the natural gas supplier without*

1 recourse to any retail gas customer not otherwise contractually committed  
2 for the difference.  
3

4 While suppliers may be dissatisfied with this decision of the General Assembly,  
5 their remedy is to seek a statutory change, and not to push the risk from  
6 themselves, as the statute directs, onto NGDCs. The commodity price risk the  
7 General Assembly created is hard to quantify because it depends on both the  
8 pricing of Choice suppliers and the prices of gas at the time of default, both of  
9 which can vary substantially over time and under peak day conditions which  
10 could certainly vary substantially between the western and eastern parts of the  
11 state. In the eastern part of the state, UGI Gas believes the current security level  
12 is fully justified by the price spike that can occur under design cold conditions.  
13 While Mr. Crist argues that security levels should be decreased because of the  
14 performance history of Choice suppliers on UGI Gas's system and throughout  
15 the state, I believe these arguments need to be made to the banks or other  
16 financial institutions that provide letters of credit or other instruments of security,  
17 and price their products based on their assessment of risk. Presumably, Mr.  
18 Crist's clients have seen a decrease in their financial security costs from third  
19 party providers because of their history of performance. To use an analogy, a  
20 good driving record may lead to lower auto insurance premiums, but should not  
21 form a basis for lowering required insurance amounts since the risk of accident,  
22 and the attendant costs, still remain. Mr. Crist also claims UGI Gas's security  
23 requirement is excessive compared to two other NGDCs in the State, but does  
24 not provide evidence of actual costs, and the actions of other NGDCs, and the

1           compromises they might have made in establishing their current standards are  
2           unknown.

3  
4   **Q.    On pages 4-5 of RESA Statement No. 1, Mr. Magnani expresses concern**  
5   **about UGI Gas' use of separate pools defined by meter read dates, claiming**  
6   **that this results in an increased number of smaller pools that are more**  
7   **difficult to balance, and argues that UGI Gas should adopt UGI CPG**  
8   **approach of requiring all transportation customers to install Automatic**  
9   **Meter Reading ("AMR") devices so that large groups of transportation**  
10   **customers can be grouped in a single poll and balanced at the end of a**  
11   **month. What is your reaction to this recommendation?**

12   **A.    I disagree with Mr. Magnani's recommendation at this time. UGI Gas inherited**  
13    an infrastructure when it acquired UGI CPG that permits end of month balancing  
14    since all transportation customers have been required for some time to have  
15    AMR devices installed, which permit accurate meter reads to be provided for  
16    large groups of customers on a single day. UGI Gas, however, does not have  
17    this infrastructure and thus need differing pooling rules. UGI Gas has required  
18    and will continue to require its larger customers, who can more easily bear the  
19    associated costs, to install AMR devices, but has not proposed in this  
20    proceeding, or incorporated into its revenue requirement, the significant costs  
21    that would be associated with universal AMR adoption for all transportation  
22    customers, and is not sure its smaller transportation customer would want to pay  
23    the costs of a universal AMR installation simply to ease the administrative costs

1 of their marketers in manage additional pools. I would note the inclusion of at  
2 least some larger customers with AMR devices within these pools based on their  
3 meter reading cycle gives marketers access to real time intra-month metering  
4 information that should help them in gauging individual pool balancing  
5 requirements. Moreover, UGI Gas has had a robust transportation program on  
6 its system for decades that encompasses almost all of its larger customers, while  
7 using pools based on meter read dates, so I do not believe the efforts required to  
8 manage a larger number of pools are that burdensome. Lastly, as UGI Gas is  
9 eliminating its Information Service fees, the economics of a supplier or customer  
10 paying for an AMR device and then subsequently receiving daily usage  
11 information have been greatly enhanced.

12 To the extent that affected customers would agree to bear the cost of  
13 installing AMR equipment either as a contribution or as a special rate, the  
14 Company would consider moving to a program like what is permitted on the CPG  
15 system.

16  
17 **VIII. EE&C RIDER**

18 **Q. Do any of the intervenors proposed modifications to the Company's**  
19 **proposed EE&C Rider?**

20 **A.** Yes. On page 49 of OCA Statement No. 3, Mr. Watkins recommends a  
21 modification to the Company's proposed EE&C Rider to provide a minimum of  
22 30-days' notice for any updates or changes. Mr. Watkins argues that the  
23 Company's proposed one days' notice is unacceptable in that it provides no  
24 opportunity for stakeholders to review or comment on the filing.

1

2 **Q. Do you agree with Mr. Watkins's recommendation?**

3 A. No. The EE&C filing is subject to review by other parties after the fact in that it is  
4 reconcilable and subject to PUC audit. As such, the 30-day notice proposed by  
5 Mr. Watkins is unnecessary. However, the Company would agree to modify the  
6 notice provision to allow for a ten day notice, which the Company believes is  
7 consistent with the notice used for other utilities' EE&C plans.

8

9 **Q. On page 12 of I&E Statement No. 2, Ms. Gumby states that introducing a**  
10 **stand-alone EE&C plan for UGI Gas violates its own goal of harmonizing**  
11 **the three natural gas companies. Do you agree?**

12 A. No, I do not. The Company's goal is to standardize, where applicable during  
13 base rate proceedings, the tariffs provisions across the three UGI companies.  
14 However, it would be unreasonable to prohibit any new proposed tariff provisions  
15 at one UGI company in a rate proceeding simply because the tariff provision had  
16 not been proposed in the other UGI companies. Indeed, in the event that the  
17 Commission approves the Company's EE&C, EE&C plans for both CPG and  
18 PNG are likely to be proposed in the future in order to keep the companies  
19 harmonized.

20

21

1 Q. On page 46 of OSBA Statement No. 1, Mr. Knecht recommends that the  
2 Company both track costs and develop separate EE&C charges for the  
3 small non-residential customers (Rates N/NT) and the large non-residential  
4 customers (Rates DS and LFD). Do you have a response?

5 A. Yes. The Company agrees with the proposal and is offering a change to the  
6 EE&C to accomplish that. Additional detail and a revised breakout of the EE&C  
7 cost and Riders is provided in UGI Gas Exhibit DEL-30.

8  
9 IX. GPC

10 Q. Please summarize the NGS Parties' and RESA's recommendations  
11 regarding the Company's Gas Procurement Charge ("GPC").

12 A. Both the NGS Parties and RESA argue UGI Gas's GPC should include all  
13 working capital costs, labor charges, IT costs (UNITE), and other related costs.  
14 See NGS Parties Statement No. 1, pages 11-16; RESA Statement No. 1, pages  
15 8-9. RESA recommends a GPC rate of \$0.1701/Mcf.

16  
17 Q. Do you agree with these recommendations?

18 A. No. There are a significant number of flaws in Mr. Crist's development of costs to  
19 be included in the Gas Procurement Charge ("GPC") which are explained below.

20 Method of assigning costs to the GPC

21 In his testimony, Mr. Crist characterizes my approach as identifying "those  
22 costs that were incremental to the existing UGI Gas operation, and viewed only  
23 those costs as the appropriate costs for allocation into the GPC". That statement  
24 is incorrect. The development of the costs included into the GPC were those

1 total costs associated with the procurement function, not, as Mr. Crist identified,  
2 as incremental. The GPC is meant to include those specific procurement costs  
3 that are associated with non-shopping customers since these costs would  
4 presumably go away as customers migrated to alternate suppliers. To include  
5 other non-procurement costs simply because the NGSs may also have those  
6 costs would leave the utility at risk of not being able to recover those costs in the  
7 event customers move to alternate suppliers. Taken to its logical conclusion, if  
8 all customers are shopping, there would be no volumes to which a GPC could be  
9 applied, and if the GPC included costs that remain, independent of shopping  
10 levels, the Company would be unable to recover those costs.

11 Mr. Crist's method would place the Company at serious added risk of  
12 under-recovering its basic, non-procurement related cost of service in the event  
13 customers switched to NGS over time. As opposed to specifying actual costs  
14 associated with procurement, Mr. Crist used an over-the-top ratio of total gas  
15 supply expenses to total operating expenses to develop a multiplier and then  
16 applies that multiplier to general expense categories, regardless if they are  
17 procurement related or not. I would also note that, the level of gas costs are  
18 primarily driven by the underlying commodity cost, which can vary significantly,  
19 since even if all core market customers were to move to Choice suppliers, UGI  
20 Gas would still be required to procure long-term pipeline, storage and peaking  
21 assets which would follow such core market customers as they move between  
22 Choice suppliers. Using such a volatile cost component in the calculation of  
23 costs to be included in the GPC would result in widely varying GPC cost levels

1 caused by something completely independent of operational gas procurement  
2 costs.

3 Working Capital for Gas in Storage:

4 Mr. Crist maintains that working capital associated with gas in storage  
5 should be included in the GPC to avoid collecting working capital from both  
6 suppliers and Choice customers who currently pay for working capital in base  
7 rates. He supports that conclusion by explaining that the costs charged to  
8 suppliers for gas taken from storage includes a component for working capital.  
9 Unfortunately for Mr. Crist, that is an incorrect assumption. Working capital costs  
10 are not passed along to the suppliers. As explained in the direct testimony of  
11 Shaun Hart, UGI Statement No.1, filed under Docket No. R-2012-2314235  
12 pursuant to the Pennsylvania Public Utility Commission's Revised Final  
13 Rulemaking Order at Docket No. L-2008-2069114:

14  
15 *Since UGI NGDCs do not release storage capacity to Choice suppliers,*  
16 *but instead manage the storage capacity on behalf of Choice suppliers,*  
17 *and as a result, the UGI NGDCs bear all of the working capital costs for*  
18 *gas that is stored on the UGI NGDCs system, and Choice suppliers do not*  
19 *bear separate costs for this working capital . . .*

20  
21 *Instead the UGI NGDCs give Choice suppliers the option to receive*  
22 *bundled city gate sales service at summer index prices for a portion of*  
23 *their gas supplies. This gives Choice suppliers the seasonal benefit*  
24 *associated with storage of acquiring winter supplies ay summer process,*  
25 *while preserving the UGI NGDCs' ability to retain storage and peaking*  
26 *asset to ensure reliability and comply with FERC rules. Under this*  
27 *approach, Choice suppliers receive the benefits of storage but do not*  
28 *actually own gas in storage on the UGI NGDCs' system or have the*  
29 *working capital costs related to storage inventory on the Company's*  
30 *system. Since Choice suppliers on the UGI NGDCs ' systems do not incur*  
31 *working capital costs related to gas in storage inventory, but are able to*  
32 *receive the benefits of the storage comparable to that received by PGC*



1 customers, it is appropriate for the UGI NGDCs to leave these costs in  
2 base rates. Stated another way, if working capital costs were removed  
3 from base rates and placed on PGC customers alone, shopping  
4 customers would receive the benefits of the UGI NGDCs' storage system  
5 but would not pay working capital costs for this storage inventory, resulting  
6 in a subsidy of Choice customers by PGC customers. Therefore, it is  
7 appropriate for the UGI NGDCs to keep working capital costs for storage  
8 inventory in base rates.  
9

10 IT Expenses:

11 Mr. Crist believes a portion of the costs of the UNITE project, which is the  
12 project to replace UGI's two aging CISs, should be included in the GPC because  
13 NGSs also maintain their CIS and it is unfair to burden shopping customers with  
14 the cost of two CIS systems. He then goes on to calculate the portion of CIS  
15 costs that should be included by multiplying the total annual expense of UNITE  
16 by the ratio of gas costs to total operating expenses. Apparently, Mr. Crist is  
17 unaware of the fact that the UNITE project does not include the replacement of  
18 UGI's Gas Management system, GASTAR. That system is not being replaced  
19 and as a result, there are no system costs related to the procurement function in  
20 the UNITE project. In addition, even if there were procurement costs associated  
21 with UNITE, the appropriate method for calculating those costs would be to  
22 identify that portion of the system that is actually used for procurement related  
23 activities and not, as Mr. Crist has done, just take a rough over the top ratio of  
24 total gas costs to total expenses to develop a multiplier. In addition, the level of  
25 gas costs are primarily drive by the underlying commodity cost, which can vary  
26 significantly. Using such a volatile cost component in the calculation of costs to  
27 be included in the GPC would result in widely varying GPC cost levels caused by  
28 something completely independent of operational procurement costs.

1                                    Labor Costs:

2                                    In the beginning of his testimony, Mr. Crist acknowledges that there are  
3 three UGI NGDCs – UGI Gas, UGI PNG and UGI CPG. He then continues to  
4 make an inaccurate statement that "the total labor and benefits costs are  
5 \$324,561 which shockingly is a decrease from the amount Mr. Lahoff claimed in  
6 the 2010 filing of \$393,801." The total labor and benefits costs that Mr. Crist was  
7 referring to was for all three UGI NGDCs labor and benefits costs combined, not  
8 the labor and benefits cost for UGI Gas only which at the time, was \$166,692.  
9 Comparing the level of UGI Gas specific labor costs in this proceeding with the  
10 2012 proceeding that Mr. Crist alludes to in his testimony yields a 95% increase  
11  $((\$324,561 - \$166,692) / \$166,692)$ , not the decrease claimed by Mr. Crist.

12                                    While referencing data response OSBA-I-12 for the 2012 GPC proceeding  
13 at page 15 of his testimony, Mr. Crist incorrectly identifies the number of  
14 employees who work in the gas procurement area by suggesting that there are  
15 36 employees in that area. Looking at the attachment, it clearly states the  
16 number of full-time equivalent employees from Accounting, Rates and Gas  
17 Supply engaged in procurement was 5 employees total for all three UGI NGDCs  
18 not, the 36 full-time employees that work in UGI Gas's Accounting, Rates, and  
19 Gas Supply departments. In referencing the full-time equivalent employees to  
20 the GPC for this proceeding in data response OCA-IV-27, Mr. Crist again,  
21 incorrectly identifies the number of employees. The attachment shows that there  
22 is a total of 5.08 full-time equivalent employees who work in the gas procurement  
23 area for all three UGI NGDCs. Multiplying that number by the associated

1 Modified Wisconsin Formula (MWF) for UGI Gas (53.77), the correct full-time  
2 equivalent employees is 2.73 as shown in OCA-IV-27. The labor costs to be  
3 included in the GPC were calculated based on this detailed analysis regarding  
4 the number of FTE's devoted to procurement activities and the applicable salary  
5 and benefits. Mr. Crist then proposes to double it without any specific support,  
6 other than to compare it to a small sample (two) of other Pennsylvania NGDCs.  
7

8 **Q. On pages 25-26 of OSBA Statement No. 1, Mr. Knecht expresses concern**  
9 **about the allocation of gas supply working capital. Please explain.**

10 A. Mr. Knecht notes the costs associated with gas storage inventory and cash  
11 working capital are allocated by PGC volumes, and that this implies that these  
12 costs are related only to providing gas sales service and not Choice customer  
13 service. However, as I previously explained in response to Mr. Crist's concerns,  
14 gas storage inventory is used to service both PGC customers and Choice  
15 customers through bundled city gate sales to Choice suppliers. Technically, the  
16 allocation of these costs should have been based on an allocation factor that  
17 includes both PGC and Choice volumes. Further, the Company has developed a  
18 new factor for that purpose and applied it to the allocation of gas storage  
19 inventory to R/RT and N/NT, which is provided in UGI Gas Exhibit DEL-31.  
20 However, for the reasons explained elsewhere in my testimony, the Company  
21 rejects the propose inclusion of gas storage inventory in the Gas Procurement  
22 Charge ("GPC").  
23

1 **Q. Does Mr. Knecht recommend that gas supply related working capital costs**  
2 **be included in GPC?**

3 A. Yes. With regard to cash working capital associated with purchased gas costs,  
4 the Company believes the use of PGC sales as an allocator is appropriate in as  
5 much as the majority of cash working capital is associated with gas purchases for  
6 PGC customers. Further, the Company agrees with Mr. Knecht's proposal to  
7 include \$843,869 in cash working capital costs-purchased gas related in the  
8 development of the GPC. The addition of these costs adds approximately 3.1  
9 cents to the GPC and increases the GPC from \$0.0146 per Mcf to \$0.0459 per  
10 Mcf as seen in UGI Gas Exhibit DEL-32, which updates the original UGI Gas  
11 Exhibit DEL-11.

12  
13 **X. STORAGE AND CAPACITY**

14 **Q. On pages 17-18 of NGS Parties Statement No. 1, Mr. Crist recommends that**  
15 **Choice suppliers be allocated physical or virtual storage to allow greater**  
16 **flexibility. Do you have a response?**

17 A. Yes. Mr. Crist's recommendation has no merit. UGI Gas does not release  
18 physical storage to NGSs for several reasons: (1) Under FERC rules assigned  
19 capacity can be recalled but there is no mechanism under FERC or bankruptcy  
20 laws to ensure inventory will be there in the event storage capacity is recalled; (2)  
21 Section 7(c) storage cannot be assigned at all; (3) In the Eastern part of the  
22 state there is no guarantee that substitute supplies will be available if storage is  
23 recalled without inventory on the coldest days.

1           In light of these limitations, UGI Gas developed a winter bundled service  
2 that it provides to NGSs. This service was developed in PGC proceedings with  
3 Mr. Crist's involvement. UGI Gas uses storage to support supply sales to NGSs  
4 during the winter. The service provides flexibility similar to storage as the NGSs  
5 can adjust the nominated volume that is coming from storage to fulfill their daily  
6 delivery requirements on a daily basis. The bundled service cost is based on the  
7 previous summer's pricing. UGI Gas views the summer pricing and daily  
8 nomination flexibility as providing the NGSs with the benefits of storage.  
9

10 **Q. On page 18 of NGS Parties Statement No. 1, Mr. Crist suggests that Choice**  
11 **suppliers do not receive full value for transportation capacity that is**  
12 **released by UGI. Do you agree?**

13 **A.** *No, this assertion is incorrect. UGI Gas releases capacity on Transco to the*  
14 *Choice suppliers. The capacity releases includes a primary receipt point of Leidy*  
15 *and a primary delivery point of UGI Gas's city gate. These entitlements*  
16 *represent of a prorated share of UGI Gas's entire contract. Mr. Crist asserts that*  
17 *the NGSs should receive delivery entitlements beyond UGI Gas's city gate to the*  
18 *Station 210 pooling point. This is not possible because UGI Gas does not hold*  
19 *capacity with primary firm entitlements that extend beyond its city gate.*  
20  
21

1 **Q. In response to an interrogatory regarding the Merchant Function Charge**  
2 **("MFC"), the Company indicated that it discovered an error in the original**  
3 **calculation of the rate N/NT MFC, which would also affect the uncollectible**  
4 **component of the Purchase of Receivables ("POR") discount. Has the**  
5 **Company revised the calculation to correct the error?**

6 A. Yes. The revised uncollectibles component of the POR discount is provided in  
7 UGI Gas Exhibit DEL-33, which updates the original UGI Gas Exhibit DEL12. In  
8 its original calculation, the Company calculated a MFC for Rate N customers of  
9 0.41%. However, it was later determined that there was an error in the  
10 calculation that required a correction by the Company. As a result of that  
11 correction, the rate was equal to 0.36% which is the current rate MFC so, as a  
12 result, the proposed rate N MFC remains unchanged from the current rate N  
13 MFC of 0.36%.

14  
15 **Q. How does this change impact the POR discount?**

16 A. Currently the Rate N POR discount is 0.50%. This discount is comprised of an  
17 uncollectible component that equals the rate MFC or 0.36% and an  
18 administrative component of 0.14%. As a result of the correction to the proposed  
19 rate N MFC as noted above, the proposed POR Rate N discount now remains  
20 unchanged.

21  
22 **Q. Does this conclude your rebuttal testimony?**

23 A. Yes, it does.

**UGI Gas Exhibit DEL-15**

UPDATED TO BE CONSISTENT WITH FTY & FPFTY

Detail for Usage per Customer by Class as shown on UGI Exhibit DEL-5(c)

Residential Non-Heating	(1)	(2)	(3)
	UPC	Fully Adj Cust	Sales
Total	18.7	28,031	524,180
Rate R	17.8	24,383	434,804
Rate RT	24.5	3,648	89,376

Residential Heating	(1)	(2)	(3)
	UPC	Fully Adj Cust	Sales
Total	72.3	305,598	22,094,735
Rate R	70.7	262,059	18,524,537
Rate RT	82.0	43,539	3,570,198

Rate RT Total	77.6	47,187	3,659,574
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Commercial Non-Heating	(1)	(2)	(3)
	UPC	Fully Adj Cust	Sales
Total	303.2	3,364	1,019,965
Rate N	166.5	2,354	391,922
Rate NT	549.6	998	548,501
Rate DS	6628.5	12	79,542

Original Combined Rate NÈ	280.6	3,352	940,423
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Commercial Heating	(1)	(2)	(3)
	UPC	Fully Adj Cust	Sales
Total	513.9	33,006	16,961,783
Rate N	284.4	23,457	6,671,646
Rate NT	732.2	8,963	6,562,709
Rate DS	6360.8	586	3,727,429

Original Combined Rate NÈ	408.2	32,420	13,234,355
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Industrial Non-Heating	(1)	(2)	(3)
	UPC	Fully Adj Cust	Sales
Total	1709.4	134	229,060
Rate N	490.7	70	34,348
Rate NT	1369.4	42	57,515
Rate DS	6236.2	22	137,196

Original Combined Rate NÈ	820.2	112	91,863
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Industrial Heating	(1)	(2)	(3)
	UPC	Fully Adj Cust	Sales
Total	1862.3	936	1,743,113
Rate N	379.3	467	177,147
Rate NT	2115.3	369	780,546
Rate DS	7854.2	100	785,420

Original Combined Rate NÈ	1145.6	836	957,693
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Rate NT Total	766.4	10,372	7,949,270
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Rate DS Total	6568.9	720	4,729,587
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Adjustment for Customer Changes

Line #	Description	[1] Residential-Non Htg	[2] Residential-Htg	[3] RT	[4] Commercial-Non Htg	[5] Commercial-Htg	[6] Industrial-Non Htg	[7] Industrial-Htg	[8] NT	[9] DS	[10] Transport-Other	[11] Grand Total
1	Total Historic Year Revenues	\$ 7,221	\$ 223,234	\$ 16,407	\$ 4,905	\$ 87,541	\$ 342	\$ 6,269	\$ 30,386	\$ 19,927	\$ 52,115	\$ 448,327
2	PGC Revenues	(2,976)	(129,055)	(578)	(2,800)	(52,477)	(208)	(3,958)	(467)	(3,790)	(3,040)	(199,287)
3	Revenues net of PGC - Margin	\$ 4,245	\$ 94,179	\$ 15,830	\$ 2,105	\$ 35,065	\$ 135	\$ 2,313	\$ 29,919	\$ 16,137	\$ 49,074	\$ 249,041
4	Average Effective Customers in Historic Year	25,184	262,929	45,506	2,384	23,417	71	504	10,095	702	606	371,400
5	Average Annual Margin Per Customer (L3 / L4)	\$ 0.169	\$ 0.358	\$ 0.348	\$ 0.883	\$ 1.497	\$ 1.896	\$ 4.589	\$ 2.968	\$ 22.987	\$ 80.665	\$ 0.671
6	Number of Customers at End of Year	24,383	262,059	47,167	2,354	23,457	70	467	10,372	720	606	371,675
7	Change in Customers during Historic Year (L6 - L4)	(801)	(870)	1,881	(30)	40	(1)	(37)	277	18	(2)	275
8	Annualization of Margin (L5 * L7)	\$ (135)	\$ (312)	\$ 585	\$ (26)	\$ 60	\$ (2)	\$ (170)	\$ 822	\$ 414	\$ (240)	\$ 996
9	Average Annual Revenue Per Customer (L1 / L4)	\$ 0.287	\$ 0.849	\$ 0.361	\$ 2.058	\$ 3.736	\$ 4.818	\$ 12.438	\$ 3.008	\$ 28.386	\$ 85.663	\$ 1.207
10	Annualization of Total Revenue (L7 * L9)	\$ (230)	\$ (739)	\$ 606	\$ (62)	\$ 150	\$ (5)	\$ (460)	\$ 833	\$ 511	\$ (240)	\$ 365
11	Annualization of PGC Revenues (L10 - L8)	\$ (95)	\$ (427)	\$ 21	\$ (35)	\$ 90	\$ (3)	\$ (290)	\$ 11	\$ 97	\$ -	\$ (631)
12	Total Actual (Unadjusted)-MCF	20.40	83.50	94.20	207.40	379.80	502.90	1,306.20	818.70	7,172.00		
13	Annualization Adjustment for Sales-MMCF (L12 * L7)	(16)	(73)	158	(6)	15	(1)	(48)	227	129	(5)	380

Notes:  
 Column [1] and [4] includes GL  
 Column [4] includes CIAC

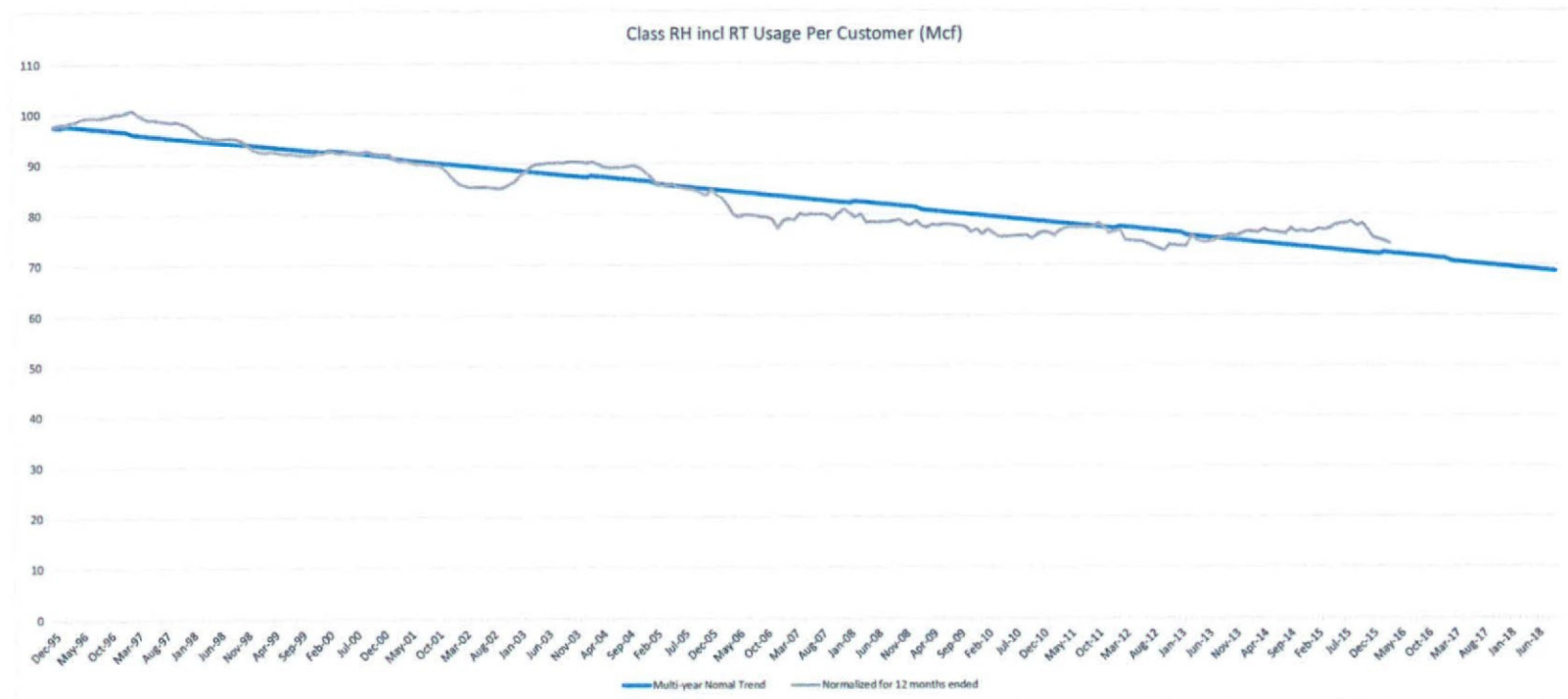
UGI Utilities, Inc.  
 Historic Period- 12 Months Ended September 30, 2015  
 (\$ in Thousands)

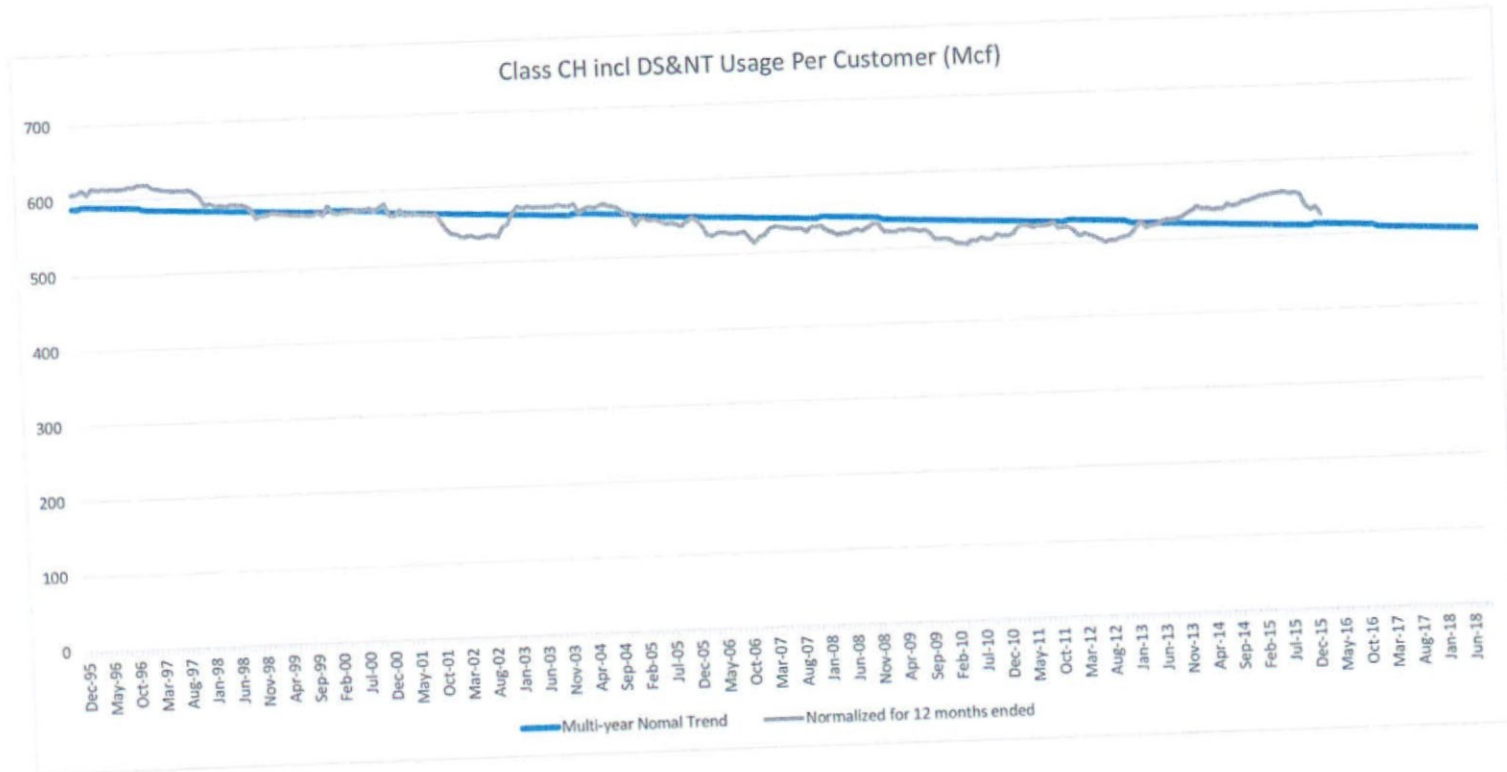
Adjustment for Annualized Use/Customer

Line #	Description	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]
		Residential-Non Htg	Residential-Htg	RT	Commercial-Non Htg	Commercial-Htg	Industrial-Non Htg	Industrial-Htg	NT	DS	Large Transp-Other	Total
1	Total FY 15 Actual UPC-MCF	20.40	83.30	94.20	207.40	379.80	502.90	1,306.20	818.70	7,172.00		
2	Fully Adjusted FY 15 UPC-MCF	17.80	70.70	77.60	166.50	284.40	490.70	379.30	788.40	6,568.90		
3	Change in UPC -MCF	(2.60)	(12.60)	(16.60)	(40.90)	(95.40)	(12.20)	(826.90)	(52.30)	(603.10)		
4	End of Year Customers-Total FY 15	24,383	262,639	47,187	2,354	23,457	70	487	10,372	720	886	371,875
5	Annualization Adjustment for Sales-MCMCF (L3*L4)	(83)	(3,354)	(783)	(96)	(2,238)	(1)	(433)	(542)	(434)	581	(7,385)
6	Total Revenue Adjustment (L8 + L10)	\$ (517)	\$ (26,300)	\$ (2,339)	\$ (855)	\$ (19,320)	\$ (8)	\$ (3,737)	\$ (2,050)	\$ (999)	\$ 985	\$ (55,140)
7	Total Unit Revenue Adjustment (L6/L5)	8.1829	7.8405	2.9858	8.8815	8.6336	8.8815	8.6336	3.7789	2.30	1.78	
8	Margin Adjustment (L5 *L9)	\$ (210)	\$ (10,015)	\$ (2,339)	\$ (368)	\$ (8,498)	\$ (3)	\$ (1,638)	\$ (2,050)	\$ (999)	\$ 885	\$ (25,111)
9	Unit Margin Rate	3.3082	2.9658	2.9858	4.0268	3.7789	4.0268	3.7789	3.7789	2.30	1.78	
10	PGC Revenue (L5*L11)	\$ (308)	\$ (16,284)	\$ -	\$ (487)	\$ (10,864)	\$ (4)	\$ (2,101)	\$ -	\$ -	\$ -	\$ (30,023)
11	PGC Unit Rate	4.8547	4.8547		4.8547	4.8547	4.8547	4.8547				

Notes:  
 Column (1) & (4) includes GL  
 Column (4) includes CIAC

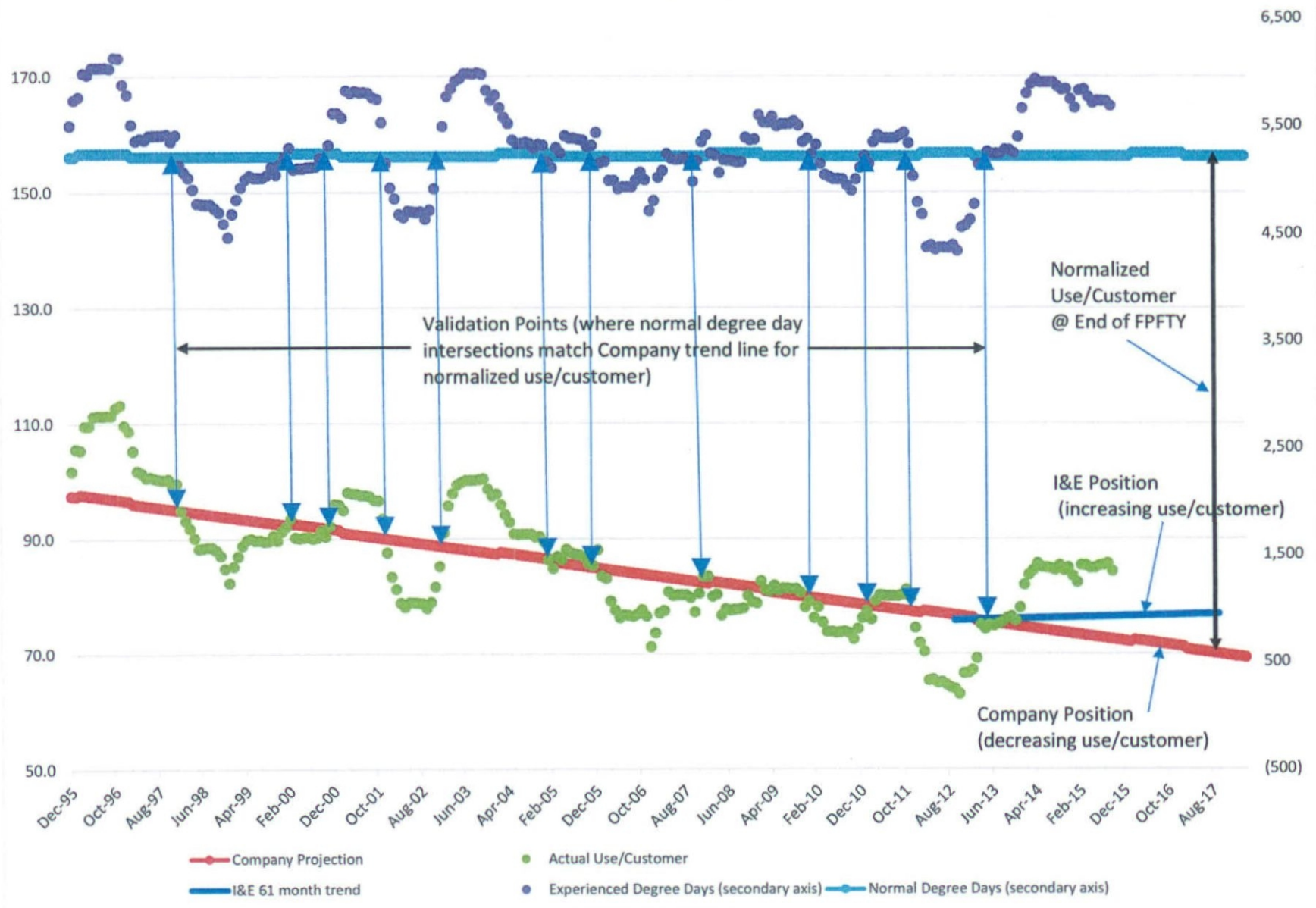
**UGI Gas Exhibit DEL-16**





**UGI Gas Exhibit DEL-17**

### Residential Heating Use/Customer



**UGI Gas Exhibit DEL-18**





**UGI Gas Exhibit DEL-19**

**UGI Utilities, Inc. - Gas Division**  
**Non-Residential Service - Rate Schedules N & NT**  
**Calculation of the Effect of Proposed Rates**  
**12-Months Ending September 30, 2017**

Line No	Description	Number of Bills (A)	Pro Forma Consumption Mcf (B)	Current Rate (C)	Current Revenue (D)
<b>Non-Residential Service &amp; Non-Residential Transportation Service</b>					
<b>Customer Charges</b>					
1	Rate N	335,532	27,961	\$ 8.55	\$ 2,868,799
2	Rate NT	121,368	10,114	\$ 8.55	\$ 1,037,696
3	Rate DS - NT	<u>3,828</u>	319	\$ 290.00	\$ 1,110,120
		460,728			\$ 5,016,615
<b>Distribution Charges</b>					
4	Increase in Usage per Customer N/NT Only N/NT - N/NT	2/	1,394,268	\$ 3.7789	\$ 5,268,798
5	First 25		4,835,282	\$ 4.0288	\$ 19,470,712
6	Next 475		7,135,274	\$ 3.5309	\$ 25,193,938
7	All over 500 Winter		1,189,948	\$ 2.4374	\$ 2,900,379
8	All over 500 Summer		<u>67,052</u>	\$ 2.2902	\$ 153,562
9	Subtotal		14,621,822	\$ 3.7312	\$ 52,987,388
10	DS - NT				
	First 500		488,011	\$ 2.3000	\$ 1,122,426
11	All over 500 Winter		335,222	\$ 2.0700	\$ 693,910
12	All over 500 Summer		<u>90,285</u>	\$ 1.9500	\$ 176,055
13	Subtotal		913,518		\$ 1,992,391
14	DS - NT				
	First 25		325,715		
15	Next 475		500,993		
16	All over 500 Winter		82,180		
17	All over 500 Summer		<u>4,631</u>		
18	Subtotal		913,518		
19	<b>Average Usage</b>	<b>404.6</b>			
20	State Tax Adjustment Surcharge (STAS) - Rider A			0.00%	\$ -
21	Purchased Gas Costs (PGC) - Rider B - Usage Correction	50.88%	709,598	\$ 4.26620	\$ 3,027,288
22	Company Claim	1/	<u>6,732,150</u>	\$ 4.26620	\$ 28,720,699
23	<b>TOTAL Purchased Gas Costs (PGC) - Rider B</b>	1/	7,441,748		\$ 31,747,987
24	Merchant Function Charge (MFC) - Rider D		7,441,748	0.360%	\$ 114,293
25	Gas Procurement Charge (GPC) - Rider E		7,441,748	\$ 0.04000	\$ 297,670
26	Energy Efficiency & Conservation Rider (EEC) - Rider G		15,535,341	\$ -	\$ -
27	<b>Total Rate N/NT</b>		<u>15,535,341</u>	\$ 0.0436	\$ 92,156,344

Summary of Error	Sales	Non-Gas Revenue	Total Revenue	
Original Ethan Cline Adj.	6,415,000	\$ 24,241,644	\$ 122,171,851	per I&E Exhibit No. 5, Schedule 9 per above corrected values
Corrected Ethan Cline Adj.	1,394,268	\$ 5,268,798	\$ 92,156,344	
Overstated/(Understated) At	5,020,732	\$ 18,972,846	\$ 30,015,507	

**Notes:**

1/ The PGC rate is based on rates effective December 1, 2015.

2/ The 3.7789 rate is the Commercial Heating Margin Rate shown on UGI Gas Exhibit 3(c), column 5, line 9

**UGI Gas Exhibit DEL-20**

**UGI Utilities, Inc. - Gas Division  
Delivery Service - Rate Schedule DS  
Calculation of the Effect of Proposed Rates  
12-Months Ending September 30, 2017**

Description	Number of Bills (1)	Pro Forma Consumption Mcf (2)	Current Rate (3)	Current Revenue (4)
<b>Delivery Service</b>				
Customer Charge				
1 N/NT - DS	2,844		\$ 8.55	\$ 24,316
2 DS - DS	4,260		\$ 290.00	\$ 1,235,400
	<u>7,104</u>			<u>\$ 1,259,716</u>
Distribution Charges				
3 <b>Increase in Usage per Customer DS Only</b>	<b>4/</b>	<b>438,131</b>	<b>\$ 2.30</b>	<b>\$ 1,007,701</b>
N/NT - DS				
4 First 25		560,088	\$ 4.0268	\$ 2,255,364
5 Next 475		861,491	\$ 3.5309	\$ 3,041,839
6 All ovt 500 Winter		141,314	\$ 2.4374	\$ 344,438
7 All ovt 500 Summer		<u>7,963</u>	<u>\$ 2.2902</u>	<u>\$ 18,236</u>
Subtotal		<u>1,570,856</u>		<u>\$ 5,659,878</u>
DS - DS				
8 First 500		896,339	\$ 2.3000	\$ 2,061,579
9 All ovt 500 Winter		607,274	\$ 2.0700	\$ 1,257,057
10 All ovt 500 Summer		<u>164,903</u>	<u>\$ 1.9500</u>	<u>\$ 321,560</u>
Subtotal		<u>1,668,515</u>		<u>\$ 3,640,196</u>
11 State Tax Adjustment Surcharge (STAS) - Rider A			0.00%	\$ -
12 Purchased Gas Costs (PGC) (N - DS) - Rider B	1/	766,722	\$ 4.2662	\$ 3,270,989
13 Merchant Function Charge (MFC) (N - DS) - Rider D	2/	766,722	0.360%	\$ 11,776
14 Gas Procurement Charge (GPC) (N - DS) - Rider E	3/	766,722	\$ 0.0400	\$ 30,669
15 Energy Efficiency & Conservation Rider (EEC) - Rider G		3,239,371	\$ -	\$ -
16 System Access Fee (DS - DS)		0	\$ 1.2500	\$ -
<b>Total Rate DS</b>		<u><b>3,677,502</b></u>		<u><b>\$ 14,880,925</b></u>

Summary of Error	Sales	Non-Gas Revenue	Total Revenue	
Original Ethan Cline Adj. to DS	0	\$ -	\$ -	
Corrected Ethan Cline Adj. to include DS	438,131	\$ 1,007,701	\$ 1,007,701	per above corrected values
Overstated/(Understated) Adj.	(438,131)	\$ (1,007,701)	\$ (1,007,701)	

**Notes:**

- 1/ There will be no Purchased Gas Costs in the future year under Rate DS for N customers transitioning to Rate DS.
- 2/ There will be no Merchant Function Charge in the future year under Rate DS for N customers transitioning to Rate DS.
- 3/ There will be no Gas Procurement Charge in the future year under Rate DS for N customers transitioning to Rate DS.
- 4/ The 2.30 rate is the Commercial Heating Margin Rate shown on UGI Gas Exhibit-3(c), column 9, line 9

**UGI Gas Exhibit DEL-21**

Detail for Usage per Customer by Class as shown on UGI Exhibit DEL-3(c)

Residential Non-Heating	(1) UPC	(2) Fully Adj Cust	(3) Sales
Total	18.8	24,143	453,888
Rate R	17.8	20,447	363,336
Rate RT	24.5	3,696	90,552

Residential Heating	(1) UPC	(2) Fully Adj Cust	(3) Sales
Total	69.3	323,977	22,451,606
Rate R	67.3	279,985	18,844,262
Rate RT	82.0	43,992	3,607,344

Rate RT Total	77.5	47,688	3,697,896
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	(1)	(2)	(3)	(4)	(5)=(4)*[2]	(6)=(5)-[3]	(7)	(8)=(7)*[6]	
Commercial Non-Heating	UPC	Fully Adj Cust	Sales	Commercial Non-Heating	Ethan Cline UPC updated w Mar 16 Normals	Adj Sales using Ethan Cline UPC updated w Mar 16 Normals	Total Variance Original Sales vs Ethan Cline Sales	Percentage of Total Sales Adjustment	Allocation of Total Sales Adjustment
Total	307.9	3,172	976,659	Total	327.35	1,038,354	61,695		61,695
Rate N	153.7	2,167	333,127	Rate N				34.1%	21,044
Rate NT	549.6	990	544,104	Rate NT				55.7%	34,371
Rate DS	6628.5	15	99,428	Rate DS				10.2%	6,281
Commercial Heating	(1) UPC	(2) Fully Adj Cust	(3) Sales	Commercial Heating					
Total	503.6	34,975	17,613,410	Total	526.74	18,422,732	809,322		809,322
Rate N	268.3	25,410	6,816,241	Rate N				38.7%	313,201
Rate NT	732.2	8,891	6,509,990	Rate NT				37.0%	299,129
Rate DS	6360.8	674	4,287,179	Rate DS				24.3%	196,992
Total N/NT Adj									567,744
Total DS Adj									203,273
Total Adj									871,017

Industrial Non-Heating	(1) UPC	(2) Fully Adj Cust	(3) Sales
Total	1584.3	125	198,038
Rate N	476.8	54	25,747
Rate NT	1369.4	44	60,254
Rate DS	4149.5	27	112,037

Industrial Heating	(1) UPC	(2) Fully Adj Cust	(3) Sales
Total	1797.9	923	1,659,462
Rate N	1182.2	459	542,630
Rate NT	2115.3	362	765,739
Rate DS	3442.1	102	351,093

Rate NT Total	766.0	10,287	7,880,086
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Rate DS Total	5928.8	818	4,849,737
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**UGI Gas Exhibit DEL-22**



**UGI Utilities, Inc. - Gas Division  
 Non-Residential Service - Rate Schedules N & NT  
 Calculation of the Effect of Proposed Rates  
 12-Months Ending September 30, 2017**

Line No.	Description	Number of Bills (A)	Pro Forma Consumption Mcf (B)	Current Rate (C)	Current Revenue (D)
<b>Non-Residential Service &amp; Non-Residential Transportation Service</b>					
<b>Customer Charges</b>					
1	Rate N	335,532	27,961	\$ 8.55	\$ 2,868,799
2	Rate NT	121,368	10,114	\$ 8.55	\$ 1,037,696
3	Rate DS - NT	<u>3,828</u>	<u>319</u>	\$ 290.00	\$ 1,110,120
		460,728			\$ 5,016,615
<b>Distribution Charges</b>					
4	<b>Increase in Usage per Customer N/NT Only</b>	2/	<b>667,744</b>	<b>\$ 3.7789</b>	<b>\$ 2,523,337</b>
<b>N/NT - N/NT</b>					
5	First 25		4,835,282	\$ 4.0268	\$ 19,470,712
6	Next 475		7,135,274	\$ 3.5309	\$ 25,193,938
7	All over 500 Winter		1,189,948	\$ 2.4374	\$ 2,900,379
8	All over 500 Summer		<u>67,052</u>	\$ 2.2902	\$ 153,562
9	Subtotal		13,895,299	\$ 3.7312	\$ 50,241,927
<b>DS - NT</b>					
10	First 500		488,011	\$ 2.3000	\$ 1,122,426
11	All over 500 Winter		335,222	\$ 2.0700	\$ 693,910
12	All over 500 Summer		<u>90,285</u>	\$ 1.9500	\$ 176,055
13	Subtotal		913,518		\$ 1,992,391
<b>DS - NT</b>					
14	First 25		325,715		
15	Next 475		500,993		
16	All over 500 Winter		82,180		
17	All over 500 Summer		<u>4,631</u>		
18	Subtotal		913,518		
19	<b>Average Usage</b>	<b>395.7</b>			
20	State Tax Adjustment Surcharge (STAS) - Rider A			0.00%	\$ -
<b>Purchased Gas Costs (PGC) - Rider B - Usage Correction</b>					
21	Percent on PGC <b>50.89%</b>		<b>336,841</b>	\$ 4.26620	\$ 1,448,831
22	Company Claim 1/		<u>6,732,150</u>	\$ 4.26620	\$ 28,720,699
23	<b>TOTAL Purchased Gas Costs (PGC) - Rider B</b>	1/	<u>7,071,991</u>		\$ 30,170,530
24	Merchant Function Charge (MFC) - Rider D		7,071,991	0.360%	\$ 108,614
25	Gas Procurement Charge (GPC) - Rider E		7,071,991	\$ 0.04000	\$ 282,880
26	Energy Efficiency & Conservation Rider (EEC) - Rider G		<u>14,808,817</u>	\$ -	\$ -
27	<b>Total Rate N/NT</b>		<u>14,808,817</u>	<b>\$0.0436</b>	<b>\$ 87,812,957</b>

Summary of Error	Sales	Non-Gas Revenue	Total Revenue	
Original Ethan Cline Adj.	6,415,000	\$ 24,241,644	\$ 122,171,851	per I&E Exhibit No. 5, Schedule 9 per above corrected values
Corrected Ethan Cline Adj.	667,744	\$ 2,523,337	\$ 87,812,957	
Overstated/(Understated) Adj.	5,747,256	\$ 21,718,307	\$ 34,358,894	

**Notes:**

1/ The PGC rate is based on rates effective December 1, 2015.

2/ The 3.7789 rate is the Commercial Heating Margin Rate shown on UGI Gas Exhibit-3(c), column 5, line 9

**UGI Gas Exhibit DEL-23**

UGI G

**UGI Utilities, Inc. - Gas Division  
Delivery Service - Rate Schedule DS  
Calculation of the Effect of Proposed Rates  
12-Months Ending September 30, 2017**

Description	Number of Bills (1)	Pro Forma Consumption Mcf (2)	Current Rate (3)	Current Revenue (4)
<b>Delivery Service</b>				
<b>Customer Charge</b>				
1 N/NT - DS	2,844		\$ 8.55	\$ 24,316
2 DS - DS	4,260		\$ 290.00	\$ 1,235,400
	<u>7,104</u>			<u>\$ 1,259,716</u>
<b>Distribution Charges</b>				
<b>3 Increase in Usage per Customer DS Only</b>		<b>203,273</b>	<b>\$ 2.30</b>	<b>\$ 467,528</b>
<b>N/NT - DS</b>				
4 First 25		560,088	\$ 4.0268	\$ 2,255,364
5 Next 475		861,491	\$ 3.5309	\$ 3,041,839
6 All ovt 500 Winter		141,314	\$ 2.4374	\$ 344,438
7 All ovt 500 Summer		<u>7,963</u>	<u>\$ 2.2902</u>	<u>\$ 18,236</u>
Subtotal		<u>1,570,856</u>		<u>\$ 5,659,878</u>
<b>DS - DS</b>				
8 First 500		898,339	\$ 2.3000	\$ 2,061,579
9 All ovt 500 Winter		607,274	\$ 2.0700	\$ 1,257,057
10 All ovt 500 Summer		<u>164,903</u>	<u>\$ 1.9500</u>	<u>\$ 321,560</u>
Subtotal		<u>1,668,515</u>		<u>\$ 3,640,196</u>
11 State Tax Adjustment Surcharge (STAS) - Rider A			0.00%	\$ -
12 Purchased Gas Costs (PGC) (N - DS) - Rider B 1/		766,722	\$ 4.2662	\$ 3,270,989
13 Merchant Function Charge (MFC) (N - DS) - Rider D 2/		766,722	0.360%	\$ 11,776
14 Gas Procurement Charge (GPC) (N - DS) - Rider E 3/		766,722	\$ 0.0400	\$ 30,669
15 Energy Efficiency & Conservation Rider (EEC) - Rider G		3,239,371	\$ -	\$ -
16 System Access Fee (DS - DS)		0	\$ 1.2500	\$ -
<b>Total Rate DS</b>		<u><b>3,442,645</b></u>		<u><b>\$ 14,340,752</b></u>

Summary of Error	Sales	Non-Gas Revenue	Total Revenue	
Original Ethan Cline Adj. to DS	0	\$ -	\$ -	
Corrected Ethan Cline Adj. to include DS	203,273	\$ 467,528	\$ 467,528	per above corrected values
Overstated/(Understated) Adj.	(203,273)	\$ (467,528)	\$ (467,528)	

Notes:  
 1/ There will be no Purchased Gas Costs in the future year under Rate DS for N customers transitioning to Rate DS.  
 2/ There will be no Merchant Function Charge in the future year under Rate DS for N customers transitioning to Rate DS.  
 3/ There will be no Gas Procurement Charge in the future year under Rate DS for N customers transitioning to Rate DS.  
 4/ The 2.30 rate is the Commercial Heating Margin Rate shown on UGI Gas Exhibit-3(c), column 9, line 9

**UGI Gas Exhibit DEL-24**

Projected UPC Using Normal Data

Option A	[1]	[2]	[3]=[2]-[1]	[4]=[3]/6*18	[5]=[4]+[2]
	Sept 15 Norm	Mar 16 Norm	Variance	Usage Adj Proj @ 9/17	Projected UPC @ 9/17
Com Gen	325.45	327.35	1.9	5.7	333.05
Com Htg	554.4	526.74	-27.66	-82.98	443.76

Projected UPC Using Regression Data

Option B	[6]	[7]	[8]=[7]-[6]	[9]=[8]/268	[10]=[9]*18	[11]=[10]+[2]
	12 Mo regression Value @ Dec 1995	12 Mo regression Value 2 FPFTY	Dec 1995 value vs FPFTY value	UPC Projected Change/Mo	Usage Adj Proj @ 9/17	Projected UPC @ 9/17
Com Gen	250.98	307.94	56.97	0.21	3.83	331.18
Com Htg	589.31	503.57	-85.74	-0.32	-5.76	520.98

**UGI Gas Exhibit DEL-25**

Detail for Usage per Customer by Class as shown on UGI Exhibit DEL-3(c)

Residential Non-Heating

	(1) UPC	(2) Fully Adj Cust	(3) Sales
Total	18.8	24,143	453,888
Rate R	17.8	20,447	363,336
Rate RT	24.5	3,696	90,552

Residential Heating

	(1) UPC	(2) Fully Adj Cust	(3) Sales
Total	69.3	323,977	22,451,606
Rate R	67.3	279,985	18,844,262
Rate RT	82.0	43,992	3,607,344

Rate RT Total 77.5 47,688 3,697,896

	(1) UPC	(2) Fully Adj Cust	(3) Sales	(4) Commercial Non-Heating Ethan Cline UPC updated w Proj thru 9/17	(5)=[4]*(2) Adj Sales using Ethan Cline UPC updated w Proj thru 9/17	(6)=[5]-[3] Total Variance Original Sales vs Ethan Cline Sales	(7) Percentage of Total Sales Adjustment	(8)=[7]*(6) Allocation of Total Sales Adjustment
<b>Commercial Non-Heating</b>								
Total	307.9	3,172	976,659	331.18	1,050,503	73,844		73,844
Rate N	153.7	2,167	333,127				34.1%	25,187
Rate NT	549.6	990	544,104				55.7%	41,139
Rate DS	6628.5	15	99,428				10.2%	7,518
<b>Commercial Heating</b>								
Total	503.6	34,975	17,613,410	520.98	18,221,276	607,866		607,866
Rate N	268.3	25,410	6,816,241				38.7%	235,239
Rate NT	732.2	8,891	6,509,990				37.0%	224,670
Rate DS	6360.8	674	4,287,179				24.3%	147,957
								526,235
								155,475
								681,710
								681,710

Industrial Non-Heating

	(1) UPC	(2) Fully Adj Cust	(3) Sales
Total	1584.3	125	198,038
Rate N	476.8	54	25,747
Rate NT	1369.4	44	60,254
Rate DS	4149.5	27	112,037

Industrial Heating

	(1) UPC	(2) Fully Adj Cust	(3) Sales
Total	1797.9	923	1,659,462
Rate N	1182.2	459	542,630
Rate NT	2115.3	362	765,739
Rate DS	3442.1	102	351,093

Rate NT Total 766.0 10,287 7,880,086

Rate DS Total 5928.8 818 4,849,737

**UGI Gas Exhibit DEL-26**



**UGI Utilities, Inc. - Gas Division  
 Non-Residential Service - Rate Schedules N & NT  
 Calculation of the Effect of Proposed Rates  
 12-Months Ending September 30, 2017**

Line No	Description	Number of Bills (A)	Pro Forma Consumption Mcf (B)	Current Rate (C)	Current Revenue (D)
<b>Non-Residential Service &amp; Non-Residential Transportation Service</b>					
<b>Customer Charges</b>					
1	Rate N	335,532	27,961	\$ 8.55	\$ 2,888,799
2	Rate NT	121,368	10,114	\$ 8.55	\$ 1,037,696
3	Rate OS - NT	3,828	319	\$ 290.00	\$ 1,110,120
		460,728			\$ 5,016,615
<b>Distribution Charges</b>					
4	Increase in Usage per Customer N/NT Only N/NT - N/NT	2/	526,235	\$ 3.7789	\$ 1,988,589
5	First 25		4,835,282	\$ 4.0268	\$ 19,470,712
6	Next 475		7,135,274	\$ 3.5309	\$ 25,193,938
7	All ove 500 Winter		1,189,948	\$ 2.4374	\$ 2,900,379
8	All ove 500 Summer		67,052	\$ 2.2902	\$ 153,562
9	Subtotal		13,753,790	\$ 3.7312	\$ 49,707,180
<b>DS - NT</b>					
10	First 500		488,011	\$ 2.3000	\$ 1,122,426
11	All ove 500 Winter		335,222	\$ 2.0700	\$ 693,910
12	All ove 500 Summer		90,285	\$ 1.9500	\$ 176,055
13	Subtotal		913,518		\$ 1,992,391
<b>DS - NT</b>					
14	First 25		325,715		
15	Next 475		500,893		
16	All ove 500 Winter		82,180		
17	All ove 500 Summer		4,631		
18	Subtotal		913,518		
19	<b>Average Usage</b>	<b>382.0</b>			
20	State Tax Adjustment Surcharge (STAS) - Rider A			0.00%	\$ -
21	Purchased Gas Costs (PGC) - Rider B - Usage Corrector	Percent on PGC 50.89%	287,822	\$ 4.26620	\$ 1,142,582
22	Company Claim	1/	6,732,150	\$ 4.26620	\$ 28,720,699
23	<b>TOTAL Purchased Gas Costs (PGC) - Rider B</b>	1/	6,999,972		\$ 29,863,281
24	Merchant Function Charge (MFC) - Rider D		6,999,972	0.360%	\$ 107,508
25	Gas Procurement Charge (GPC) - Rider E		6,999,972	\$ 0.04000	\$ 279,999
26	Energy Efficiency & Conservation Rider (EEC) - Rider G		14,667,308	\$ -	\$ -
27	<b>Total Rate N/NT</b>		14,667,308	\$0.0436	\$ 86,966,973

Summary of Error	Sales	Non-Gas Revenue	Total Revenue	
Original Ethan Cline Adj.	6,415,000	\$ 24,241,644	\$ 122,171,851	per I&E Exhibit No. 5, Schedule 9
Corrected Ethan Cline Adj.	526,235	\$ 1,988,589	\$ 86,966,973	per above corrected values
Overstated/(Understated) Adj.	5,888,765	\$ 22,253,055	\$ 35,204,878	

**Notes:**

- 1/ The PGC rate is based on rates effective December 1, 2015.
- 2/ The 3.7789 rate is the Commercial Heating Margin Rate shown on UGI Gas Exhibit-3(c), column 5, line 9

**UGI Gas Exhibit DEL-27**

**UGI Utilities, Inc. - Gas Division  
 Delivery Service - Rate Schedule DS  
 Calculation of the Effect of Proposed Rates  
 12-Months Ending September 30, 2017**

Description	Number of Bills (1)	Pro Forma Consumption Mcf (2)	Current Rate (3)	Current Revenue (4)	
<b>Delivery Service</b>					
<b>Customer Charge</b>					
1 N/NT - DS	2,844		\$ 8.55	\$ 24,316	
2 DS - DS	4,260		\$ 290.00	\$ 1,235,400	
	<u>7,104</u>			<u>\$ 1,259,716</u>	
<b>Distribution Charges</b>					
<b>3 Increase in Usage per Customer DS Only</b>		<b>155,475</b>	<b>\$ 2.30</b>	<b>\$ 357,592</b>	
<b>N/NT - DS</b>					
4 First 25		560,088	\$ 4.0268	\$ 2,255,364	
5 Next 475		861,491	\$ 3.5309	\$ 3,041,839	
6 All over 500 Winter		141,314	\$ 2.4374	\$ 344,438	
7 All over 500 Summer		7,963	\$ 2.2902	\$ 18,236	
	Subtotal	<u>1,570,856</u>		<u>\$ 5,659,876</u>	
<b>DS - DS</b>					
8 First 500		696,339	\$ 2.3000	\$ 2,061,579	
9 All over 500 Winter		607,274	\$ 2.0700	\$ 1,257,057	
10 All over 500 Summer		164,903	\$ 1.9500	\$ 321,560	
	Subtotal	<u>1,668,515</u>		<u>\$ 3,640,196</u>	
11 State Tax Adjustment Surcharge (STAS) - Rider A				0.00%	\$ -
12 Purchased Gas Costs (PGC) (N - DS) - Rider B		1/ 766,722	\$ 4.2662	\$ 3,270,989	
13 Merchant Function Charge (MFC) (N - DS) - Rider D		2/ 766,722	0.360%	\$ 11,776	
14 Gas Procurement Charge (GPC) (N - DS) - Rider E		3/ 766,722	\$ 0.0400	\$ 30,669	
15 Energy Efficiency & Conservation Rider (EEC) - Rider G				\$ -	\$ -
16 System Access Fee (DS - DS)				\$ 1.2500	\$ -
<b>Total Rate DS</b>		<u><b>3,394,846</b></u>		<u><b>\$ 14,230,815</b></u>	

Summary of Error	Sales	Non-Gas Revenue	Total Revenue	
Original Ethan Cline Adj. to DS	0	\$ -	\$ -	
Corrected Ethan Cline Adj. to Includ	155,475	\$ 357,592	\$ 357,592	per above corrected values
Overstated/(Understated) Adj.	(155,475)	\$ (357,592)	\$ (357,592)	

**Notes:**

- 1/ There will be no Purchased Gas Costs in the future year under Rate DS for N customers transitioning to Rate DS.
- 2/ There will be no Merchant Function Charge in the future year under Rate DS for N customers transitioning to Rate DS.
- 3/ There will be no Gas Procurement Charge in the future year under Rate DS for N customers transitioning to Rate DS.
- 4/ The 2.30 rate is the Commercial Heating Margin Rate shown on UGI Gas Exhibit-3(c), column 9, line 9

**UGI Gas Exhibit DEL-28**

[1] [2] [4] [6]

		I&E Normalized	I&E Normalized
		Values versus	Values Projected @
		Company	Company
I&E Testimony	Regression Values	Regression Values	Regression Values

Volumes Adj	6,415,000	1,832,399	871,017	681,710
Current Rate Revenue	\$ 122,171,851	\$ 93,164,045	\$ 88,280,485	\$ 87,324,565
Current Rate Margins Adj	\$ 24,241,644	\$ 6,276,499	\$ 2,990,865	\$ 2,346,181

**UGI Gas Exhibit DEL-29**

Detail to UGI Gas Exhibit DEL-3(b)(1)

Rate Class	Customer	Fully Projected Future Test Year			Fully Projected Future Test Year		
		Annualized Volume	Original Volume	Variance	Annualized Margin	Original Margin	Variance
LFD	CUSTOMER 1	0	32,700	(32,700)	\$0	\$25,326	(\$25,326)
LFD	CUSTOMER 2	0	27,600	(27,600)	\$0	\$21,981	(\$21,981)
LFD	CUSTOMER 3	0	39,000	(39,000)	\$0	\$0	\$0
LFD	CUSTOMER 4	0	15,000	(15,000)	\$0	\$13,715	(\$13,715)
LFD	CUSTOMER 5	0	50,000	(50,000)	\$0	\$36,675	(\$36,675)
LFD	CUSTOMER 6	0	45,000	(45,000)	\$0	\$33,395	(\$33,395)
LFD	CUSTOMER 7	0	38,375	(38,375)	\$0	\$29,049	(\$29,049)
LFD	CUSTOMER 8	0	140,074	(140,074)	\$0	\$95,764	(\$95,764)
LFD	CUSTOMER 9	10,000	0	10,000	\$10,000	\$10,435	(\$435)
	<b>Total LFD</b>	<b>10,000</b>	<b>387,749</b>	<b>(377,749)</b>	<b>\$10,000</b>	<b>\$266,339</b>	<b>(\$256,339)</b>
XD-F	CUSTOMER 10	0	28,154	(28,154)	\$0	\$31,931	(\$31,931)
XD-F	CUSTOMER 11	0	600,000	(600,000)	\$0	\$1,092,000	(\$1,092,000)
XD-F	CUSTOMER 12	150,000	0	150,000	\$169,500	\$0	\$169,500
	<b>Total XD-F</b>	<b>150,000</b>	<b>628,154</b>	<b>(478,154)</b>	<b>\$169,500</b>	<b>\$1,123,931</b>	<b>(\$954,431)</b>
DSO/IS	CUSTOMER 13	0	1,244	(1,244)	\$0	\$4,913	(\$4,913)
DSO/IS	CUSTOMER 14	0	1,271	(1,271)	\$0	\$5,401	(\$5,401)
	<b>Total DSO IS/AL</b>	<b>0</b>	<b>2,514</b>	<b>(2,514)</b>	<b>\$0</b>	<b>\$10,313</b>	<b>(\$10,313)</b>
	<b>Grand Total</b>	<b>160,000</b>	<b>1,018,418</b>	<b>(858,418)</b>	<b>\$179,500</b>	<b>\$1,400,584</b>	<b>(\$1,221,084)</b>

**UGI Gas Exhibit DEL-30**



**UGI Utilities, Inc. - Gas Division**  
**Energy Efficiency & Conservation (EEC) Rider Calculation (REVISED)**

<u>Program Category</u>		<u>R/RT</u>	<u>N/NT</u>	<u>DS</u>	<u>LFD</u>	<u>Total</u>
Customer Incentives	\$	471,396	\$ 60,856	\$ 150,000	\$ 100,000	\$ 782,252
Administration	\$	1,108,417	\$ 289,349	\$ 30,000	\$ 20,000	\$ 1,447,765
Marketing	\$	172,955	\$ 144,851	\$ 39,000	\$ 26,000	\$ 382,806
Inspections	\$	16,422	\$ 6,762	\$ 1,500	\$ 1,000	\$ 25,683
Evaluation	\$	-	\$ -	\$ 12,000	\$ 8,000	\$ 20,000

<b>Total Expenses</b>	<b>\$</b>	<b>1,769,189</b>	<b>\$ 501,817</b>	<b>\$ 232,500</b>	<b>\$ 155,000</b>	<b>\$ 2,658,506</b>
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Billing Determinants (Mcf)      22,744,148    15,550,057    4,849,741    11,545,232

Proposed EEC Rider      \$      0.0778    \$    0.0323    \$    0.0479    \$    0.0134

**UGI Gas Exhibit DEL-31**

UGI UTILITIES, INC. - GAS DIVISION

FACTORS FOR ALLOCATING COST OF SERVICE TO SERVICE CLASSIFICATIONS

FACTOR 1. ALLOCATION OF COSTS WHICH VARY DIRECTLY WITH PGC SALES.

Factors are based on the pro forma average daily PGC sales volumes for each service classification.

<u>Service Classification</u> (1)	<u>Pro Forma Average Daily PGC Volumes (Mcf)</u> (2)	<u>PGC and Choice Volumes (Mcf)</u>	<u>Allocation Factor 1</u> (3)	<u>Allocation Factor 1A</u>
<u>Volumetric Costs</u>				
Rate R	52,240	62,313	0.7238	0.5784
Rate N	19,934	45,421	0.2762	0.4216
Rate DS			-	
Rate LFD			-	
Rate XD	-		-	
Interruptible	-		-	
<b>Total</b>	<u>72,174</u>	<u>107,734</u>	<u>1.0000</u>	<u>1.0000</u>
				107,734

**UGI Gas Exhibit DEL-32**

UGI Utilities, Inc.  
Development of the Gas Procurement Charge

<u>Line</u>	<u>Labor and Benefits</u>	<u>UGIU Total</u>
(1)	Gas Supply	\$ 162,743
(2)	Accounting Support	\$ 46,684
(3)	Internal Legal Support	\$ 26,552
(4)	Regulatory Support	\$ 52,520
(5)	Management Support	\$ 36,062
(6)	Total Labor and Benefits Costs	(6) = (1)+(2)+(3)+(4)+(5) \$ 324,561
	<u>Non-Labor Costs</u>	
(7)	Outside Services- Legal Support	\$ 60,000
(8)	IT O&M Expenses	\$ 8,766
(9)	Working Capital	\$ 843,869
(10)	Costs to be recovered by GPC	(10) = (6)+(7)+(8)+(9) <u>\$ 1,237,196</u>
(11)	Sales Volumes For rates R and N (Mcf)	26,930,349
(12)	GPC rate	(12) = (10)/(11) <u>\$ 0.0459</u>

**UGI Gas Exhibit DEL-33**

**UGI Gas Utilities, Inc. - Gas Division  
Merchant Function Charge (MFC) Calculation**

		<u>Rate R/RT</u>		<u>Rate N/NT</u>
Total Uncollectible Revenue Requirement	\$ 5,561,000			
Allocator 1/		91.86%		6.28%
Uncollectible Revenue Requirement	\$ 5,108,335		\$ 349,231	
Total Proposed Revenue	\$ 233,347,467		\$ 96,316,755	
<u>MFC % 2/</u>		<u>2.19%</u>		<u>0.36%</u>

1/ The allocator is based on a 5-year average of uncollectible expenses.

2/ The MFC will be applied to bills of customers in Rate Schedules R & N only.

**UGI Gas Exhibit DEL-34**



**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**v.**

**UGI UTILITIES, INC. – GAS DIVISION**

**Docket No. R-2015-2518438**

**Responses of the Bureau of Investigation and Enforcement  
to UGI Utilities, Inc. – Gas Division Set IV**

**Witness: Ethan Cline**

**UGI-I&E-IV-1** Please reference I&E Statement No. 5, page 5, lines 4-6.

- (a) Please identify the “customer conservation initiatives” referenced in this statement.
- (b) Please identify when such “customer conservation initiatives” referenced did subsequently become “widely in place.”
- (c) Please quantify the level of “consumption in general” referenced in this statement.
- (d) Please identify the period being referred to as “more recently.” Provide any and all supporting documentation, analyses or references in support of your responses and include spreadsheets in executable electronic format.

**Response:** (a) The “customer conservative initiatives” referenced in I&E Statement No. 5, page 5, lines 4-6 are in reference to the customer conservative initiatives described in UGI Gas Statement No. 6, page 8, lines 6-10.

(b) I did not conduct an analysis to determine exactly when or if the customer conservation initiatives became widely in place for UGI Gas customers beyond the fact that UGI Gas is proposing to put in place an Energy Efficiency and Conservation plan in the current proceeding and, therefore, it could not have been in place twenty-one years ago. However, based on the decline in usage in the residential heating customer class from February 1997 through October 2012, it could be postulated that non-Company specific customer conservation initiatives did subsequently have an effect, though that effect appears to have ended after October 2012 when usage began to increase.

(c) The statement “consumption in general” refers to the consumption levels of the majority of UGI Gas’s rate classes

## PENNSYLVANIA PUBLIC UTILITY COMMISSION

v.

UGI UTILITIES, INC. – GAS DIVISION

Docket No. R-2015-2518438

Responses of the Bureau of Investigation and Enforcement  
to UGI Utilities, Inc. – Gas Division Set IV

Witness: Ethan Cline

and, therefore, a majority of its customers. The following table shows, for each rate class, the usage amount at September 2015, the end of the historic test year, the date and amount for when the highest consumption occurred, the date and amount of usage for when the usage was last roughly equal or higher to the usage at the end of the historic test year.

Rate Class	Usage at September 2015	Highest Usage Mcf - Date	Equal to Historic Usage Mcf- Date
RH	77.53	100.71 – 2/97	77.38 – 10/09
RG	20.26	20.26 – 9/15	-
CH	554.4	617.99 – 1/97	541.92 – 2/05
CG	325.45	325.45 – 9/15	-
IH	2243.85	2785.78 – 2/96	2236.85 – 2/04
IG	2166.3	3282.7 – 4/96	2163.32 – 8/06

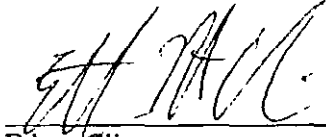
Please note that the above data was obtained from I&E Exhibit No. 5, Schedule 1, the Company's response to I&E-RS-27-D and that only the RG and CG classes do not have usage above the level at the end of the historic test year.

(d) "More recently" refers to the five year analysis period I recommended in my direct testimony.

VERIFICATION

I, Ethan Cline, hereby state that the facts set forth in the foregoing document are true and correct to the best of my knowledge, information and belief, and that I expect to be able to prove the same at any hearing. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. §4904 (relating to unsworn falsification to authorities).

5/21/2016  
Date

  
Ethan Cline

**UGI Gas Exhibit DEL-35**

**PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**v.**

**UGI UTILITIES, INC. – GAS DIVISION**

**Docket No. R-2015-2518438**

**Responses of the Bureau of Investigation and Enforcement  
to UGI Utilities, Inc. – Gas Division Set IV**

**Witness: Ethan Cline**

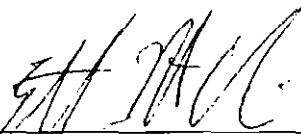
**UGI-I&E-IV-4** Please reference I&E Statement No. 5, page 5, line 21. Please specifically identify the “stale data” referenced by Mr. Cline. Also, please identify the criteria used to determine “stale data.” Provide any and all supporting documentation, analyses or references in support of your responses and include spreadsheets in executable electronic format.

**Response:** The “stale data” refers to data beyond the five years I recommended in my direct testimony. As I stated on page 5 of Statement No. 5, lines 9-10, “[t]his does not accurately reflect current usage patterns.”

VERIFICATION

I, Ethan Cline, hereby state that the facts set forth in the foregoing document are true and correct to the best of my knowledge, information and belief, and that I expect to be able to prove the same at any hearing. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. §4904 (relating to unsworn falsification to authorities).

5/17/2016  
Date

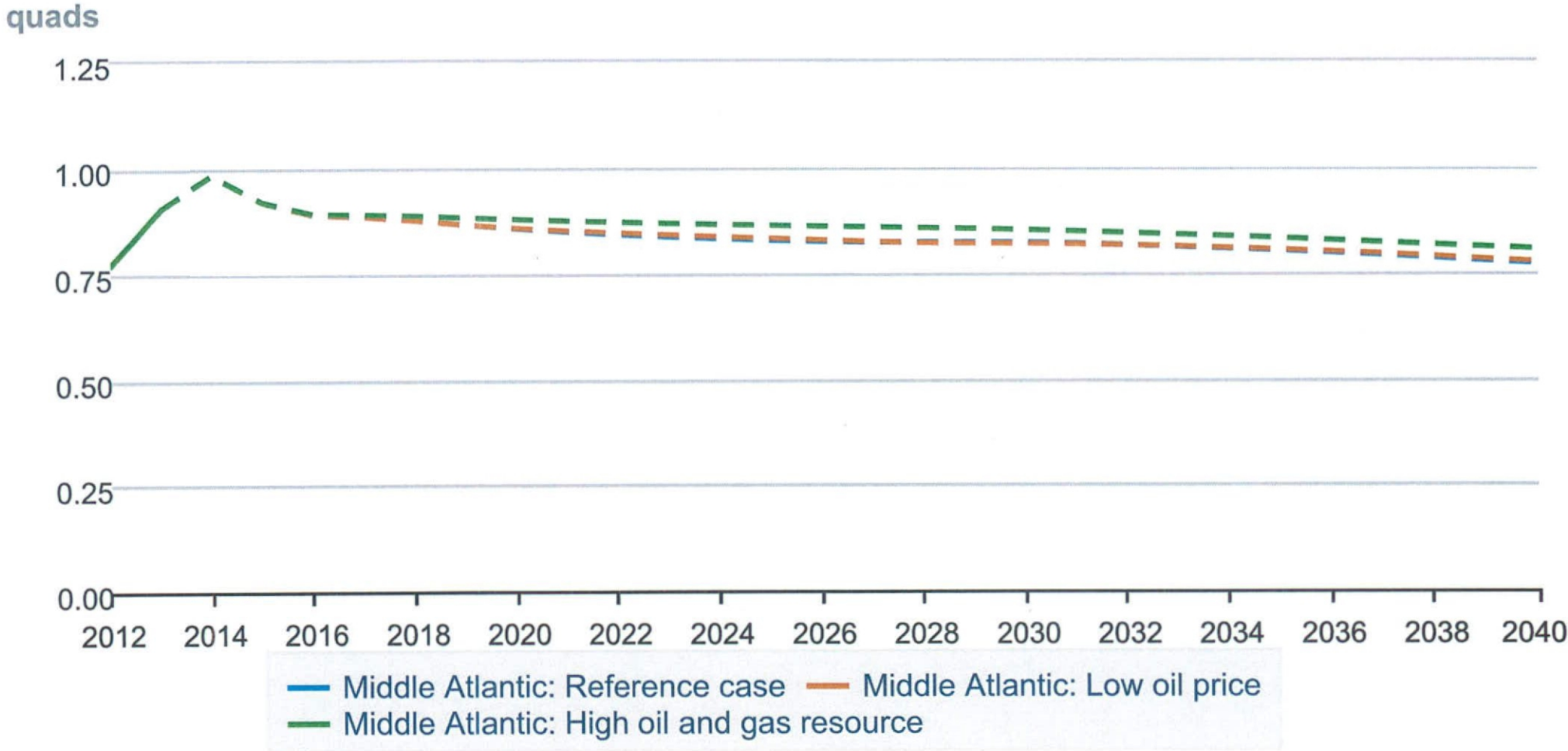
  
Ethan Cline

**UGI Gas Exhibit DEL-36**

# Energy Use: Residential: Natural Gas

Region: Middle Atlantic

UGI Gas Exhibit DEL-36



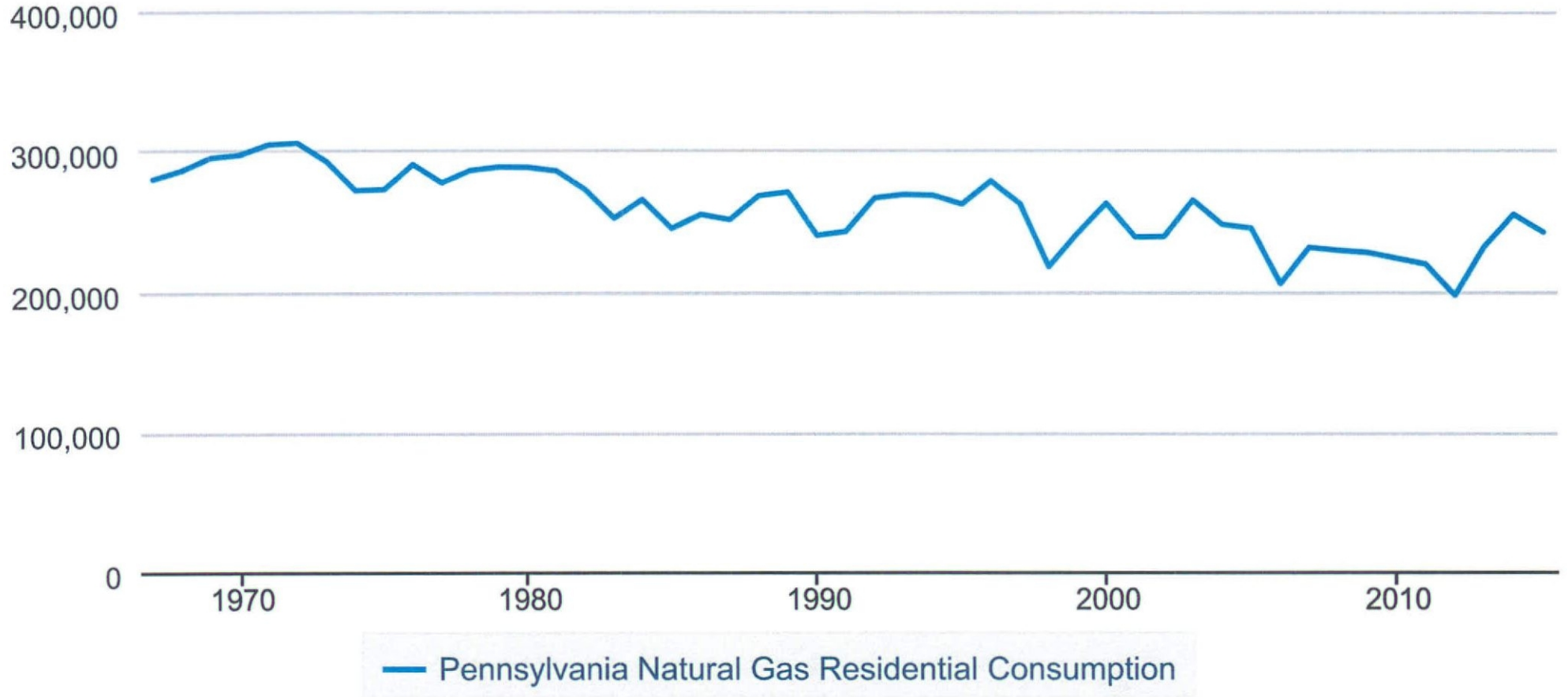
Source: U.S. Energy Information Administration



# Pennsylvania Natural Gas Residential Consumption

UGI Gas Exhibit DEL-36

Million Cubic Feet



**UGI Gas Exhibit DEL-37**

**Pennsylvania Public Utility Commission**

**v.**

**UGI Utilities Inc. – Gas Division**

**Docket No. R-2015-2518438**

**Responses of the Office of Consumer Advocate  
UGI Gas to OCA Set II**

UGI Gas to OCA-II-3

Regarding residential and small commercial market segments, nationally, state-wide and locally to the UGI Gas service territory, please identify the point in time where such natural gas customers have stopped undertaking conservation actions, including but not limited to: the installation of energy efficient natural gas appliances, the replacement of lower efficiency natural gas heating equipment with higher efficiency natural gas heating equipment, adding insulation to reduce heat loss, replacing doors and windows to reduce heat loss and installing setback thermostats.

Response:

UGI Gas to OCA-II-3 is not directed at any particular witness. To the extent that this interrogatory is directed to Mr. Effron, Mr. Effron has not conducted a study to determine if or when residential and small commercial market segments, nationally, state-wide and locally to the UGI Gas service territory have stopped undertaking conservation actions.

Witness: David J. Effron

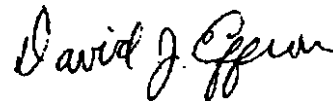
BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2015-2518438
	:	
UGI Utilities, Inc. – Gas Division	:	

VERIFICATION

I, David J. Effron, hereby state that I am the witness responsible for responding to the Interrogatories of UGI-G, Set II to the Office of Consumer Advocate, numbers OCA-II-1 through OCA-II-8, and that the facts above set forth are true and correct to the best of my knowledge, information and belief in the listed interrogatory responses. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Signature:



\_\_\_\_\_  
David J. Effron

Consultant Address: Berkshire Consulting Services  
12 Pond Path  
Northampton, NH 03862

DATED: April 25, 2016

**Pennsylvania Public Utility Commission**

**v.**

**UGI Utilities Inc. – Gas Division**

**Docket No. R-2015-2518438**

**Responses of the Office of Consumer Advocate**

**UGI Gas to OCA Set II**

*UGI Gas to OCA-II-3*

Regarding residential and small commercial market segments, nationally, state-wide and locally to the UGI Gas service territory, please identify the point in time where such natural gas customers have stopped undertaking conservation actions, including but not limited to: the installation of energy efficient natural gas appliances, the replacement of lower efficiency natural gas heating equipment with higher efficiency natural gas heating equipment, adding insulation to reduce heat loss, replacing doors and windows to reduce heat loss and installing setback thermostats.

Response:

UGI Gas to OCA-II-3 is not directed at any particular witness. To the extent that this interrogatory is directed to Mr. Effron, Mr. Effron has not conducted a study to determine if or when residential and small commercial market segments, nationally, state-wide and locally to the UGI Gas service territory have stopped undertaking conservation actions.

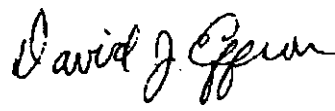
Witness:       David J. Effron

BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2015-2518438
	:	
UGI Utilities, Inc. – Gas Division	:	

VERIFICATION

I, David J. Effron, hereby state that I am the witness responsible for responding to the Interrogatories of UGI-G, Set II to the Office of Consumer Advocate, numbers OCA-II-1 through OCA-II-8, and that the facts above set forth are true and correct to the best of my knowledge, information and belief in the listed interrogatory responses. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Signature:   
 \_\_\_\_\_  
 David J. Effron

Consultant Address: Berkshire Consulting Services  
12 Pond Path  
Northampton, NH 03862

DATED: April 25, 2016

**UGI Gas Exhibit DEL-38**

**Pennsylvania Public Utility Commission**

v.

**UGI Utilities Inc. – Gas Division**

**Docket No. R-2015-2518438**

**Responses of the Office of Consumer Advocate  
UGI Gas to OCA Set II**

**UGI Gas to OCA-II-6**

Please reference OCA Statement No. 1, page 17, line 22. Please verify that it is OCA's belief that the application of statistical regression to a dataset will always result in the regression equation yielding projections that will later be exactly verified by actual occurrences. If it cannot be verified, please state what expected errors from projections may be deemed reasonable, and when expected errors should be deemed "abnormal or unusual." Provide any and all statistical citations in support of OCA's position.

**Response:**

It is not OCA's belief that the application of statistical regression to a dataset will always result in the regression equation yielding projections that will later be exactly verified by actual occurrences. Mr. Effron has not conducted a study of at what exact point expected errors from projections may be deemed reasonable, and when expected errors should be deemed "abnormal or unusual."

**Witness:** David J. Effron

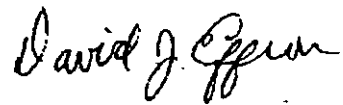


BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2015-2518438
	:	
UGI Utilities, Inc. – Gas Division	:	

VERIFICATION

I, David J. Effron, hereby state that I am the witness responsible for responding to the Interrogatories of UGI-G, Set II to the Office of Consumer Advocate, numbers OCA-II-1 through OCA-II-8, and that the facts above set forth are true and correct to the best of my knowledge, information and belief in the listed interrogatory responses. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Signature:   
 \_\_\_\_\_  
 David J. Effron

Consultant Address: Berkshire Consulting Services  
12 Pond Path  
Northampton, NH 03862

DATED: April 25, 2016

**UGI Gas Exhibit DEL-39**

**Pennsylvania Public Utility Commission**

**v.**

**UGI Utilities Inc. – Gas Division**

**Docket No. R-2015-2518438**

**Responses of the Office of Consumer Advocate**

**UGI Gas to OCA Set II**

UGI Gas to OCA-II-5

Please reference OCA Statement No. 1, page 17, lines 20-21. Please provide a detailed description of the most accurate weather normalization methodology of which OCA is aware that could otherwise be applied to the data presented in SDR-RR-11 in order to determine use per customer. Provide the results in live Excel format.

Response:

Mr. Effron has not researched alternative weather normalization methodologies that could otherwise be applied to the data presented in SDR-RR-11 in order to determine use per customer.

Witness: David J. Effron

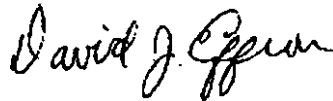
BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION

Pennsylvania Public Utility Commission	:	
	:	
v.	:	Docket No. R-2015-2518438
	:	
UGI Utilities, Inc. – Gas Division	:	

VERIFICATION

I, David J. Effron, hereby state that I am the witness responsible for responding to the Interrogatories of UGI-G, Set II to the Office of Consumer Advocate, numbers OCA-II-1 through OCA-II-8, and that the facts above set forth are true and correct to the best of my knowledge, information and belief in the listed interrogatory responses. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Signature:



\_\_\_\_\_  
David J. Effron

Consultant Address: Berkshire Consulting Services  
12 Pond Path  
Northampton, NH 03862

DATED: April 25, 2016