

GARY HERBERT Governor SPENCER J. COX Lieutenant Governor

# State of Utah Department of Commerce Division of Public Utilities

FRANCINE GIANI Executive Director THOMAS BRADY Deputy Director CHRIS PARKER Director, Division of Public Utilities

## MEMORANDUM

| To:   | Public Service Commission   |
|-------|---|
| From: | Division of Public Utilities<br>Chris Parker, Director<br>Energy Section<br>Artie Powell, Manager<br>Carolyn Roll, Technical Consultant |
| Date: | June 19, 2017   |

Subject: QGC Energy Efficiency Report for Year Ending December 31, 2016, Docket No. 17-057-10.

## ISSUE

On December 15, 2015, the Utah Public Service Commission (PSC or Commission) issued an order in Docket No. 15-057-16 authorizing Questar Gas Company (QGC or the Company), now known as Dominion Energy Utah, to continue to offer to customers in the GS Rate Class, Energy Efficiency Programs (EE) for 2016 with a budget of \$26.7 million.

The purpose of this report is to provide 2016 year end actual results compared to the 2016 EE budget, as approved by the Commission in Docket No. 15-057-16.<sup>1</sup> On May 30, 2017 the Commission approved the Utah Natural Gas Tariff to reflect Questar's name change to Dominion Energy Utah with an effective date of June 1, 2017. All EE expenses and activities

<sup>&</sup>lt;sup>1</sup> Commission Order, Docket No. 15-057-6, December 15, 2015.





reflected in this report occurred prior to the Commission's approval of Questar's name change, so the Division will use Questar Gas Company in this report.

### REPORT

There are seven separate ThermWise EE programs designed to help customers improve the efficiency of their natural gas consumption in the 2016 QGC EE budget plan. In the 2016 plan, there were not any major changes to the programs, but the budget did reflect a slowdown in the Weatherization program and growth in the Builder program. The Company stated it would continue to promote the Builder Rebate Credit and expected further market adoption in 2016.

The programs contain multiple prescriptive measures designed to help customers reduce their natural gas consumption. These programs are (1) the **ThermWise Appliance Rebates Program**; (2) the **ThermWise Builder Rebates Program**; (3) the **ThermWise Business Rebates Program**; (4) the **ThermWise Business Custom Rebates Program**; (5) the **ThermWise Home Energy Plan Program**; (6) the **ThermWise Weatherization Program**; and (7) **The Low Income Efficiency Program** adds an additional annual funding of \$500,000 to the \$250,000 Low Income Weatherization Assistance Program, bringing the total annual amount provided by QGC to \$750,000. The Utah Department of Workforce Services administers the funds and provides the expertise to improve energy efficiency for low income residents by using the additional \$500,000 to upgrade customers to high efficiency furnaces. In addition to these seven programs, funds were budgeted for a continuation of the **Market Transformation Initiative**. During 2015 the Company launched the **ThermWise Energy Comparison Report** as a stand-alone program. These Initiatives are designed to help educate natural gas customers on the benefits of reducing their consumption of natural gas on an ongoing basis.

#### 2016 THERMWISE EE PROGRAM SUMMARY

Table 1 on the following page compares the 2016 actual rebate expenditures with the 2016 annual budget. Table 1 shows that a total of \$23.3 million (col. E Ln. 14), or 87.2% of the \$26.7 million total annual budget was spent. The table also shows that the expenditures resulted in 827,637 Dth of deemed savings during the year compared to an estimated budgeted deemed savings of 940,293 Dth, these savings include the deemed savings from the **ThermWise Energy** 

**Comparison Report**. There were 74,976 participants during the year compared to an estimated 81,124 participants. The Total Resource Cost (TRC) ratio for all of the programs was 1.0. Col E, line 19 shows a decrease of \$.6 million in the FERC Account 184200 for the year resulting in a December 2016 ending balance of \$883,945.

|    | Table 1                         |                  |                 |              |      |            |          |             |          |       |
|----|---------------------------------|------------------|-----------------|--------------|------|------------|----------|-------------|----------|-------|
|    |                                 |                  | QUESTAR         | GAS COMPANY  |      |            |          |             |          |       |
|    |                                 | E                | NERGY EFFICIE   | NCY SUMMARY  | REP  | ORT        |          |             |          |       |
|    |                                 |                  | Decembe         | er 31, 2016  |      |            |          |             |          |       |
|    |                                 |                  | DOCKET N        | 10. 17-057-1 | D    |            |          |             |          |       |
|    |                                 |                  |                 |              |      |            |          |             |          |       |
|    |                                 |                  |                 |              |      |            |          |             |          |       |
|    |                                 |                  | -               |              | _    | _          |          |             |          | _     |
| 1  |                                 | В                | С               | D            |      | E          | F        | G           | H        | I     |
| 2  |                                 | 2016             | YTD             | 2016         |      | YTD        | YTD \$   | 2016        | Budget   | TRC   |
| 3  |                                 | Estimated        | Actual          | Budget       | Act  | ual Costs  | % of     | Dth         | Dth      | B/C   |
| 4  |                                 | -                | Participants    | (000)        |      | (000)      |          | Savings*    | Savings* | Ratio |
|    | ThermWise Appliance             | 21,281           | 24,870          | \$ 5,558.6   | \$   | 5,891.0    | 106.0%   | 219,903     | 225,000  |       |
| -  | ThermWise Builder               | 15,437           | 26,108          |              | \$   | 7,019.5    | 140.8%   | 173,367     | 145,262  |       |
|    | ThermWise Business              | 2,235            | 2,036           |              | \$   | 3,390.3    | 161.9%   | 138,398     | 89,500   | -     |
|    | ThermWise Business Custom       | 15               | 18              | \$ 498.0     | \$   | 289.8      | 58.2%    | 4,653       | 15,000   |       |
|    | ThermWise Home Energy Plan      | 3,163            | 2,233           | \$ 919.8     | \$   | 578.9      | 62.9%    | 31,530      | 39,264   |       |
|    | ThermWise Weatherization        | 37,223           | 18,499          |              | \$   | 3,886.7    | 39.1%    | 71,761      | 230,363  |       |
|    | Market Transformation           | NA               | NA              | \$ 1,424.2   | \$   | 1,261.3    | 88.6%    | NA          | NA       | NA    |
|    | Low Income Efficiency           | 1,770            | 1,212           | \$ 889.8     | \$   | 734.3      | 82.5%    | 13,225      | 21,104   | 0.8   |
|    | ThermWise Energy Report         | 230,000          | 230,000         | \$ 410.0     | \$   | 267.6      | 65.3%    | 174,800     | 174,800  | 1.4   |
| _  | Total**                         | 81,124           | 74,976          | \$26,729.4   | · ·  | 23,319.4   | 87.2%    | 827,637     | 940,293  | 1.0   |
|    | DSM Interest                    |                  |                 |              | \$   | (79.8)     |          |             |          |       |
|    | DSM Amortization                |                  |                 |              | -    | (23,824.3) |          |             |          |       |
|    | DSM General Administration      |                  |                 |              | \$   | -          |          |             |          |       |
|    | R&D Funds Transfer              |                  |                 |              | \$   | -          |          |             |          |       |
|    | YTD Change Acct 182400          | _                |                 |              | \$   | (584.7)    |          |             |          | -     |
|    | December 2015 Acct 182400 E     | Bal              |                 |              | \$   | 1,018.9    |          |             |          |       |
|    | Ending Balance Acct 182400      |                  |                 |              | \$   | 883.9      |          |             |          |       |
| 22 | *Savings reflects the net Dth o | deemed savings 1 | based on actual | participants | with | an 80% net | -to-gros | s ratio app | lied.    |       |

the purpose of calculating cost effectiveness.

## THERMWISE EE APPLIANCE PROGRAM

Table 2 on the next page summarizes the ThermWise EE Appliance Program. This program rebated 106.0% of the expected budget (col. F, Ln. 21). The High-Efficiency Gas Furnace measures (tier 3 and tier 4) were second in participation, and first in dollars rebated, with tier 3 (92% and 95% efficient) at 97.8% of budget and tier 4 (95% and 98% efficient with ECM) at 112.4% of budget. The Smart Thermostat was first in participation with 9,787 participants and second dollars rebated, this program was at 215.3% of budget. The 2016 budget for the EE Appliance Program assumed a total weighted cost of \$24.70 per saved Dth. Due to the mix of measures chosen in 2016, the actual total weighted cost for those same measures was \$26.79 per saved Dth.

| Table 2   |              |              |              |                          |             |          |          |
|---|--------------|--------------|--------------|--------------------------|-------------|----------|----------|
|   |              | QUESTAR      | GAS COMPANY  | r                        |             |          |          |
|   |              | THERMWISE AN | PPLIANCE PRO | OGRAM                    |             |          |          |
|   |              | 31-          | Dec-16       |                          |             |          |          |
|   |              | DOCKET N     | 0. 17-057-1  | 0                        |             |          |          |
|   |              |              |              |                          |             |          |          |
| A   | В            | с            | D            | E                        | F           | G        | Н        |
| 1   | 2016         | YTD          | 2016         | YTD                      | YTD \$      | Budget   | YTD      |
| 2   | Budgeted     | Actual       | Budget       | Actual Cost              | % of        | Dth      | Dth      |
| 3   | Participants | Participants | (000)        | (000)                    | Budget      | Savings* | Savings* |
| 4 Single and Multi-Family Appliance Rebates         |              |              |              |                          |             |          |          |
| 5   |              |              |              |                          |             |          |          |
| 6 High-Efficiency Gas Furnance -92 % & 95%          | 3,067        | 2,992        | \$1,063.3    | \$ 1,040.3               | 97.8%       | 61,574   | 47,167   |
| 7 High-Efficiency Gas Furnance with ECM - 95% & 98  | 4,849        | 5,399        | \$1,957.3    | \$ 2,199.4               | 112.4%      | 99,446   | 88,598   |
| 8 High Efficiency Gas Water Heater -Tier 1          | -            | 316          | \$ -         | \$ 15.8                  | NA          | -        | 432      |
| 9 High Efficiency Gas Water Heater - Tier 2         | 766          | 562          | \$ 76.6      | \$ 56.2                  | 73.4%       | 2,190    | 1,358    |
| 10 Tankless Gas Water Heater -Tier 1                | 88           | 42           | \$ 26.4      | \$ 12.6                  | 47.7%       | 737      | 291      |
| 11 Tankless Gas Water Heater -Tier 2                | 694          | 621          | \$ 242.9     | \$ 217.4                 | 89.5%       | 6,493    | 4,670    |
| 12 Condensing Gas Storage Water Heater .90 EF       | 55           | 46           | \$ 19.3      | \$ 16.1                  | 83.4%       | 461      | 326      |
| 13 Hybrid Gas Water Heater .90 EF                   | 25           | 5            | \$ 5.2       | \$ 1.8                   | 34.6%       | 114      | 37       |
| 14 Gas Boiler - Tier 1                              | 45           | 22           | \$ 18.0      | \$ 8.8                   | 48.9%       | 808      | 329      |
| 15 Gas Boiler -Tier 2                               | 81           | 51           | \$ 48.6      | \$ 30.6                  | 63.0%       | 1,996    | 1,021    |
| 16 Solar Assisted Gas Water Heating                 | 30           | 7            | \$ 22.5      | \$ 5.2                   | 23.1%       | 1,297    | 304      |
| 172.6 & 2.7 MEF Clothes Washer                      | 6,788        | 4,638        | \$ 339.4     | \$ 231.9                 | 68.3%       | 8,281    | 4,985    |
| 18 Smart Thermostat                                 | 4,545        | 9,787        | \$ 454.5     | \$ 978.7                 | 215.3%      | 38,958   | 67,085   |
| 19 Direct vent Gas Fireplace                        | 248          | 382          | \$ 49.6      | \$ 76.4                  | 154.0%      | 2645     | 3,300    |
| 20 Administrative & Overheads                       | NA           | NA           | \$1,235.0    | \$ 999.8                 | 81.0%       | NA       | NA       |
| 21 TOTAL  | 21,281       | 24,870       | \$5,558.6    | \$ 5,891.0               | 106.0%      | 225,000  | 219,903  |
| 22  |              |              |              |                          |             |          |          |
| 23 *Savings reflects the net Dth deemed savings bas | ed on actual | participants | with an 80   | <pre>% net-to-gros</pre> | s ratio apr | olied.   |          |

The Appliance Program has a TRC test ratio of 1.5 as shown in Table 1 (col. I, ln. 5).

## THERMWISE EE BUILDER PROGRAM

The ThermWise EE Builder Program is designed to offer builders (both contractors and selfbuild) who use energy efficient construction techniques specific rebates. There are three different construction tiers: (1) meet or exceed Energy Star Version 3.0 and include qualified gas space heating appliance and water heater; (2) high performance home that exceed Energy Star Version 3, meet or exceed a HERS score of 50, and include a qualified gas space heating appliance and water heater; or (3) builders may receive a rebate for a home that exceeds the current building code by at least 10%. There are also separate prescriptive rebates available to builders for energy efficient appliance installations if one of the above construction conscripts is not followed. The 2015 program included the addition of the Smart Thermostat as a prescriptive rebate.

As shown in Table 3 for 2016, the Builder Program rebated 140.8% of its budget (col. F, Ln. 19). The 95% High-Efficiency Gas Furnace measures (tier 3 and tier 4) had the greatest participation,

number wise, as well as dollars rebated, at 157.4% of budget, followed by the 2x6 Walls measure at 178.2% of budget. The Company continued the rebate credit to builders to offset up-front costs for meter and service line contributions. This rebate credit was implemented in October 2014.

| Table 3   |              |              |       |          |          |           |        |          |          |
|---|--------------|--------------|-------|----------|----------|-----------|--------|----------|----------|
|   |              | QUESTAR      | GAS   | COMPANY  |          |           |        |          |          |
|   |              | THERMWISE B  | UILD  | ER PROGR | АМ       |           |        |          |          |
|   |              | 31-          | Dec-  | 16       |          |           |        |          |          |
|   |              | DOCKET NO    | D. 17 | 7-057-10 |          |           |        |          |          |
| A   | В            | с            |       | D        |          | E         | F      |          | G        |
|   | 2016         | YTD          |       | 2016     |          | YTD       | YTD \$ | Budget   | YTD      |
|   | Estimated    | Actual       | в     | Budget   | Act      | ual Costs | % of   | Dth      | Dth      |
|   | Participants | Participants | ·     | (000)    | <u> </u> | (000)     | Budget | Savings* | Savings* |
| THERMWISE BUILDER PROGRAM                             |              |              |       |          |          |           |        |          |          |
| 1 Energy Star 3.0                                     | 1,206        | 1,064        | S     | 296.2    | s        | 266.6     | 90.0%  | 16,123   | 11,793   |
| 2 High Performance Homes                              | 107          | 25           | ŝ     | 49.9     | ŝ        | 12.5      | 25.1%  | 3,013    | 626      |
| 3 ThermWise Builder Option 1                          | 89           | 3            | S     |          | ŝ        | 12.0      | NA     | 5,015    | 41       |
| 4 HERS - 10% Better Than Code                         | 2,412        | 3,213        | ŝ     | 403.2    | ŝ        | 511.9     | 127.0% | 27,922   | 28,697   |
| 5 High-Efficiency Gas Furnance -92 % & 95%            | 5,868        | 9,363        |       | 1,996.2  | Ś        | 3,142.5   | 157.4% | 52,977   | 69,125   |
| 6 High-Efficiency Gas Furnance with ECM - 95% & 98%   | 867          | 1,271        | S     | 347.3    | s        | 509.3     | 146.6% | 9,450    | 11,244   |
| 7 High Efficiency Gas Water Heater - Tier 1           | -            | 2,787        | s     | -        | s        | 139.3     | NA     | -        | 3,812    |
| 8 High Efficiency Gas Water Heater67 EF               | 1,122        | 1,645        | s     | 112.2    | s        | 164.5     | 146.6% | 2,237    | 3,746    |
| 9 Tank Less Gas Water Heater -tier 1                  | 17           | 21           | s     | 5.1      | s        | 6.3       | 123.5% | 101      | 157      |
| 0 Tank Less Gas Water Heater -tier 2                  | 350          | 232          | Ş     | 97.0     | \$       | 81.2      | 83.7%  | 2,140    | 1,304    |
| 1 High Efficiency Condensing Gas Storage Water Heater | 10           | 71           | Ş     | 3.5      | \$       | 24.9      | 711.4% | 70       | 309      |
| 2 High-Efficiency Hybrid Gas Water Heater             | 10           | 1            | Ş     | 3.5      | Ş        | 0.3       | 8.6%   | 70       | 7        |
| 3 Gas Boiler  | 36           | 34           | Ş     | 19.0     | Ş        | 19.2      | 101.1% | 528      | 419      |
| 4 Solar Assisted Water Heater                         | 20           | 1            | Ş     | 15.0     | Ş        | 0.8       | 5.3%   | 866      | 14       |
| 5 2x6 Walls   | 3,225        | 5,792        | Ş     | 853.7    | Ş        | 1,521.2   | 178.2% | 29,180   | 41,499   |
| 6 R-5 Windows   | 63           | 463          | Ş     | 39.4     | Ş        | 16.8      | 42.6%  | 447      | 157      |
| 7 Smart Thermostat                                    | 35           | 122          | Ş     | 3.5      | Ş        | 12.2      | 348.6% | 138      | 417      |
| 8 Administrative & Overheads                          | NA           | NA           | Ş     | 742.0    | Ş        | 590.0     | 79.5%  | NA       | NA       |
| 9 TOTAL   | 15,437       | 26,108       | \$    | 4,986.7  | \$       | 7,019.5   | 140.8% | 145,262  | 173,367  |
| 0   |              |              |       |          |          |           |        |          |          |

The 2016 budget for the EE Builder Program assumed a total weighted cost of \$34.33 per saved Dth. The actual total weighted cost for the 2016 budgeted measures is \$40.49 per saved Dth due in large part to higher participation in furnace rebates with a higher cost per Dth saved. The TRC ratio for the Builder Program is 0.9.

## THERMWISE EE BUSINESS PROGRAM

In the ThermWise EE Business program, there are over 30 prescriptive measures available to commercial entities to improve their energy efficiency. Table 4 provides the detail of those measures. There were 13 measures that had \$10,000 or more of total 2016 rebate incentive costs. The total rebate expense of these 13 measures is \$2,092.1 million, which accounts for 98.5% of the rebates paid. For the year, the total program spent 161.9% of the annual budget. The 2016 budget cost per deemed Dth saved was \$23.40 compared to an actual cost of \$24.50.

|   | QUESTAR GAS CO | MPANY     |     |         |       |         |         |          |         |
|---|----------------|-----------|-----|---------|-------|---------|---------|----------|---------|
| THE   | RMWISE BUSINES | S PROGRAM |     |         |       |         |         |          |         |
|   | 31-Dec-16      |           |     |         |       |         |         |          |         |
| I   | DOCKET NO. 17- | 057-10    |     |         |       |         |         |          |         |
| A   | В              | D         |     | Е       | F     | G       | Н       |          |         |
| 1   | 2016           | YTD       |     | 2016    | У     | TD      | YTD \$  | Budget   | YTD     |
| 2   | Estimated      | Actual    | Buc | lget    | Actua | L Costs | % of    | Dth      | Dth     |
| 3   | Participants   | Participa | -   | (000)   | (0    | 00)     | Budget  | Savings* | Savings |
| 4 THERMWISE BUSINESS PROGRAM                                      |                |           |     |         |       |         |         |          |         |
|   |                |           |     |         |       |         |         |          |         |
| 5 High Efficiency Gas Water Heater Tier 1                         | 1              | 3         | \$  | 0.1     | Ş     | 0.3     | 300.0%  | 3        |         |
| 6 High Efficiency Gas Water Heater Tier 2                         | 25             | 42        | \$  | 20.0    | Ş     | 20.1    | 100.5%  | 2,864    | 1,66    |
| 7<br>High Efficiency Gas Water Heater - Commercial Tankless Tier: | 2              | 31        | \$  | 1.0     | Ş     | 15.1    | 1510.0% | 72       | 1,06    |
| B Direct Contact Water Heater                                     | 1              | 1         | \$  | 0.3     | Ş     | 0.2     | 66.7%   | 62       | 3       |
| High-Efficiency Condensing Gas Storage Water Heater               | 1              | -         | \$  | 0.3     | Ş     | -       | 0.0%    | 9        |         |
| ) Hybrid Gas Storage Water Heater                                 | 1              | 3         | \$  | 0.3     | Ş     | 1.1     | 366.7%  | 10       | 2       |
| l Combined Space Water Heater                                     | 1              | -         | \$  | 0.4     | Ş     | 1       | 0.0%    | 19       |         |
| 2 High Efficiency Residential Clothes Washer                      | 1              | -         | \$  | 0.1     | Ş     | -       | 0.0%    | 2        |         |
| Benergy Star Commercial Clothes Washer                            | 1              | 2         | \$  | 0.1     | Ş     | 0.1     | 100.0%  | 3        |         |
| 4 High Efficiency Pre-rinse Spray Valve                           | 1,000          | 9         | \$  | 32.0    | Ş     | 0.2     | 0.6%    | 10,800   | 24      |
| 5 Smart Thermostat  | 100            | 63        | \$  | 10.0    | \$    | 6.3     | 63.0%   | 1,000    | 50      |
| 6 High-Efficiency Gas Furnance -92 % & 95%                        | 303            | 229       | \$  | 105.5   | Ş     | 80.1    | 75.9%   | 5,479    | 3,33    |
| 7 High-Efficiency Gas Furnance with ECM - 95% & 98%               | 202            | 92        | \$  | 80.9    | \$    | 37.0    | 45.7%   | 3,656    | 1,33    |
| High Efficiency Boiler Hot Water                                  | 7              | 5         | \$  | 20.2    | Ş     | 21.4    | 105.9%  | 1,815    | 1,53    |
| High Efficiency Boiler Hot Water Tier 2                           | 41             | 56        | \$  | 347.8   | Ş     | 287.2   | 82.6%   | 36,103   | 19,95   |
| High Efficiency Boiler Steam                                      | 1              | -         | \$  | 4.1     | \$    | -       | 0.0%    | 372      |         |
| High Efficiency Boiler Steam Tier 2                               | 3              | 3         | \$  | 21.6    | \$    | 40.0    | 185.2%  | 1,513    | 3,80    |
| 2 Boiler Reset Control  | 2              | -         | \$  | 0.5     | Ş     | -       | 0.0%    | 148      |         |
| Boiler Tune-up  | 250            | 291       | \$  | 42.5    | \$    | 168.2   | 395.8%  | 11,998   | 43,95   |
| High Efficiency Gas Unit Heater NonCondensing                     | 1              | 8         | \$  | -       | Ş     | 1.8     | NB      | 1        | 6       |
| High Efficiency Gas Unit Heater Condensing                        | 5              | 4         | \$  | 8.1     | Ş     | 6.1     | 75.3%   | 229      | 13      |
| 6 Gas Infrared Heating System                                     | 50             | 847       | \$  | 36.2    | \$    | 600.3   | 1658.3% | 3,490    | 46,23   |
| 7 High Efficiency Combination Oven                                | 4              | 10        | \$  | 4.0     | \$    | 10.0    | 250.0%  | 161      | 32      |
| BENERGY STAR Commercial Fryer                                     | 25             | 41        | \$  | 12.5    | \$    | 20.5    | 164.0%  | 1,010    | 1,32    |
| High Efficiency Convection Oven                                   | 8              | 26        | \$  | 4.0     | Ş     | 13.0    | 325.0%  | 129      | 33      |
| High Efficiency Gas Griddle                                       | 8              | 8         | \$  | 2.4     | Ş     | 2.4     | 100.0%  | 70       | ч,      |
| ENERGY STAR Steam Cooker  | 1              | -         | \$  | 1.0     | Ş     | 1       | 0.0%    | 35       |         |
| 2 Conveyor Oven   | 8              | 2         | \$  | 8.0     | Ş     | 2.0     | 25.0%   | 707      | 14      |
| Wall Insulation - (new construction)                              | 5              | 10        | \$  | 1.6     | Ş     | 2.9     | 181.3%  | 32       | 4       |
| 4 Wall Insulation - (retrofit)                                    | 2              | 4         | \$  | 2.4     | Ş     | 1.9     | 79.2%   | 72       | 4       |
| Attic Insulation - (new construction)                             | 3              | 11        | \$  | 4.8     | Ş     | 6.3     | 131.3%  | 156      | 16      |
| 6 Attic Insulation - (retrofit)                                   | 150            | 235       | \$  | 336.0   | Ş     | 779.2   | 231.9%  | 6,510    | 12,07   |
| 7 Misc Measures   | 22             | -         | \$  | 10.8    | Ş     | -       | 0.0%    | 970      |         |
| Administrative & Overheads  |                |           | Ş   | 975.0   | \$ 1, | 266.6   | 129.9%  | NA       | NA      |
| TOTAL   | 2,235          | 2,036     | Ś   | 2,094.5 | \$3   | 390.3   | 161.9%  | 89,500   | 138,39  |

41 \*Savings reflects the net Dth deemed savings based on actual participants with an 80% net-to-gross ratio applied.

As shown in Table 1, the ThermWise EE Business Program has a TRC benefit ratio of 1.0.

#### THERMWISE EE BUSINESS CUSTOM PROGRAM

The ThermWise EE Business Custom Program is designed for customer specific applications and requires longer development time before results are achieved. In an effort to expedite some of the development time required in this program, the Company simplified some of the Tariff language for the 2016 program. The reorganized Tariff language was undertaken in an effort to clarify the overall program description.

Table 5 shows the results for the ThermWise EE Business Custom Program. The table shows that 58.2% of the total budget has been spent, 81.8% of the budgeted rebate dollars has been funded to participating customers. The projects in this program have much longer lead times and as a result Dth savings may be realized in future years. The 2016 budget for the EE Business Custom Program assumed a total weighted cost of \$4.35 per saved Dth; the actual total weighted cost for those the measures implemented was \$10.55 per saved Dth.

| Table 5                           |              |                |            |              |        |         |          |
|-----------------------------------|--------------|----------------|------------|--------------|--------|---------|----------|
|                                   | Q            | UESTAR GAS CO  | MPANY      |              |        |         |          |
|                                   | THERMWIS     | E BUSINESS CU  | STOM PROGE | RAM          |        |         |          |
|                                   |              | 31-Dec-16      |            |              |        |         |          |
|                                   | DC           | OCKET NO. 17-0 | 057-10     |              |        |         |          |
|                                   |              |                |            |              |        |         |          |
|                                   |              |                |            |              |        |         |          |
| 1                                 | 2016         | YTD            | 2016       | YTD          | YTD \$ | Budget  | YTD      |
| 2                                 | Estimated    | Actual         | Budget     | Actual Costs | % of   | Dth     | Dth      |
| 3                                 | Participants | Participants   | (000)      | (000)        | Budget | Savings | Savings* |
| 4 BUSINESS CUSTOM REBATES PROGRAM |              |                |            |              |        |         |          |
| 5                                 |              |                |            |              |        |         |          |
| 6 Business Custom Rebates Total   | 15           | 18             | \$ 60.0    | \$ 49.1      | 81.8%  | 15,000  | 4,653    |
| 7 Administrative & Overheads      |              | NA             | \$ 438.0   | \$ 240.7     | 55.0%  | NA      | NA       |
| 8                                 | 15           | 18             | \$ 498.0   | \$ 289.8     | 58.2%  | 15,000  | 4,653    |
| 9                                 |              |                |            |              |        |         |          |

As shown in Table 1, the ThermWise EE Business Custom Program has a 0.6 TRC benefit ratio due to low participation and low Dth savings.

## THERMWISE EE HOME ENERGY PLAN PROGRAM

The ThermWise EE Home Energy Plan Program is designed to give customers an opportunity to have their current energy efficiency efforts evaluated and suggestions offered on ways to improve those efforts. The home energy plans can either be an on-site audit, conducted by a qualified QGC technician or a mail in audit in which the participants answers questions and receive advice from QGC. Multi-family property owners have been receptive to the Energy Plan Program which was included in the program beginning in 2013 and the waiving of \$25 audit fee for lower-income senior homeowners continued in 2016. This program continues to have benefits in addition to those seen in the data below as it introduces customers to the potential savings they may realize by implementing additional energy efficiency measures.

|   | Table 6                                |               |                |             |               |            |           |         |
|---|--|---------------|----------------|-------------|---------------|------------|-----------|---------|
|   |  | QU            | ESTAR GAS COM  | PANY        |               |            |           |         |
|   |  | THERMWISE     | HOME ENERGY E  | LAN PROGRAM |               |            |           |         |
|   |  |               | 31-Dec-16      |             |               |            |           |         |
|   |  | DO            | CKET NO. 17-05 | 57-10       |               |            |           |         |
|   |  |               |                |             |               |            |           |         |
|   | A                                      | в             | с              | D           | E             | F          | G         | н       |
| 1 |  | 2016          | YTD            | 2016        | YTD           | YTD \$     | Budget    | YTD     |
| 2 |  | Estimated     | Actual         | Budget      | Actual Costs  | % of       | Dth       | Dth     |
| 3 |  | Participants  | Participants   | (000)       | (000)         | Budget     | Savings*  | Savings |
| 4 | RESIDENTIAL HOME ENERGY PLAN PROGRAM   |               |                |             |               |            |           |         |
| 5 |  |               |                |             |               |            |           |         |
| 6 | Audit Efficiency Measures (1)          | 3,163         | 2,233          | \$ 65.8     | 26.1          | 39.7%      | 39,264    | 31,530  |
| 7 | Administrative & Overheads             | NA            | NA             | \$ 854.0    | 552.8         | 64.7%      |           | NA      |
| 8 |  | 3,163         | 2,233          | \$ 919.8    | \$ \$ 578.9   | 62.9%      | 39,264    | 31,530  |
| 9 | (1) Participant numbers reflect total  | number of eff | iciency units  | given out,  | not number of | in home au | dits perf | ormed.  |
| - | *Savings reflects the net Dth deemed s |               | -              | -           |               |            | -         |         |

Table 6 shows the actual efficiency units given out amount to 39.7% of the budgeted amount. The Dth savings in 2016 was 31,530 compared to 2015 savings of 30,147. The TRC ratio for the Home Energy Program is 1.4.

#### THERMWISE EE WEATHERIZATION PROGRAM

Table 7 summarizes the results for the ThermWise EE Weatherization program. Insulation projects were the highest rebated measures of this program however these measures decreased substantially from 2015 levels. On a total program basis, the EE Weatherization program reached only 39.1% of budgeted expenditures. The Attic Insulation measures are the primary driver for this program, but were below budgeted levels at 24.1% of its budgeted amount. Duct Sealing and Insulation participants and rebates, which had been increasing, also decreased in 2016 with rebates paid at 45.0% of budgeted levels.

| Table 7                |                      |               |                 |              |                 |            |         |          |  |  |  |  |  |
|------------------------|----------------------|---------------|-----------------|--------------|-----------------|------------|---------|----------|--|--|--|--|--|
|                        |                      |               | QUESTAR GAS     | COMPANY      |                 |            |         |          |  |  |  |  |  |
|                        |                      | THER          | MWISE WEATHER   | ZATION PROG  | RAM             |            |         |          |  |  |  |  |  |
|                        | 31-Dec-16            |               |                 |              |                 |            |         |          |  |  |  |  |  |
|                        | DOCKET NO. 17-057-10 |               |                 |              |                 |            |         |          |  |  |  |  |  |
| A                      |                      | В             | с               | D            | E               | F          |         | G        |  |  |  |  |  |
| 1                      |                      | 2016          | YTD             | 2016         | YTD             | YTD \$     | Budget  | YTD      |  |  |  |  |  |
| 2                      |                      | Estimated     | Actual          | Budget       | Actual Costs    | % of       | Dth     | Dth      |  |  |  |  |  |
| 3                      |                      | Participants  | Participants    | (000)        | (000)           | Budget     | Savings | Savings* |  |  |  |  |  |
| 4 THERMWISE WEATHER    | RIZATION PROGRA      | м             |                 |              |                 |            |         |          |  |  |  |  |  |
| 5                      |                      |               |                 |              |                 |            |         |          |  |  |  |  |  |
| 6 Windows - Resider    | ntial                | 450           | 7,127           | \$ 17.2      | \$ 281.3        | 1635.5%    | 481     | 6,319    |  |  |  |  |  |
| 7 Wall Insulation      |                      | 873           | 574             | \$ 224.6     | \$ 158.0        | 70.3%      | 3,967   | 2,232    |  |  |  |  |  |
| 8 Attic Insulation     | Tier 1               | 18,800        | 4,900           | \$ 5,726.7   | \$ 1,365.3      | 23.8%      | 121,408 | 23,156   |  |  |  |  |  |
| 9 Attic Insulation     | Tier 2               | 7,600         | 2,026           | \$ 621.3     | \$ 164.4        | 26.5%      | 11,538  | 2,443    |  |  |  |  |  |
| 10 Floor Insulation    |                      | 300           | 170             | \$ 45.1      | \$ 31.6         | 70.1%      | 1,532   | 859      |  |  |  |  |  |
| 11 Air Sealing         |                      | 400           | 132             | \$ 210.7     | \$ 68.9         | 32.7%      | 4,597   | 1,103    |  |  |  |  |  |
| 2 Duct Sealing & In    | nsulation            | 8,800         | 3,570           | \$ 2,266.2   | \$ 1,019.7      | 45.0%      | 86,840  | 35,649   |  |  |  |  |  |
| 13 Administrative &    | Overheads            | NA            | NA              | \$ 836.0     | \$ 797.5        | 95.4%      | NA      | NA       |  |  |  |  |  |
| 14                     |                      | 37,223        | 18,499          | \$ 9,947.8   | \$ 3,886.7      | 39.1%      | 230,363 | 71,761   |  |  |  |  |  |
| 15                     |                      |               |                 |              |                 |            |         |          |  |  |  |  |  |
| 16 *Savings reflects t | he net Dth deeme     | savings based | on actual parti | cipants with | an 80% net-to-o | ross ratio | applied |          |  |  |  |  |  |

The 2016 budget for the EE Weatherization Program assumed a total weighted cost of \$43.18 per saved Dth. The actual total weighted cost for the same budgeted measures is \$54.16 per saved Dth. The program's TRC ratio was 0.8.

## THERMWISE MARKET TRANSFORMATION PROGRAM

Table 1, on page 3, shows the ThermWise EE Market Transformation Program achieved 88.6% of the expected 2016 levels. This was due primarily to lower than projected marketing expenses.

## THERMWISE ENERGY COMPARISON REPORT

Table 1, on page 3, shows the ThermWise Energy Comparison Report achieved 65.3% of the expected 2016 levels. This was due primarily to lower than projected bulk mailing rates. Current distribution of the report is to approximately 230,000 customers, the report is available to customers via opt-in and opt-out programs. The program's TRC ratio was 1.4.

## THERMWISE LOW INCOME EFFICIENCY PROGRAM

The ThermWise Low Income Efficiency Program funded its target amount of \$500,000. This \$500,000 is used to provide low-income qualified residences with energy efficient furnaces. The Low-Income Efficiency Tariff includes a paragraph allowing approved non-profit or governmental agencies to apply for rebates under the ThermWise Programs. This allows qualified agencies to utilize rebates for work they have performed to do additional weatherization measures. The Utah Department of Workforce Services and the Housing and Community Development Division (HCD) currently qualifies under this provision. This allows the qualifying HDCs to report their activity quarterly and include the saved Dths as a result of their efforts as part of the report filed by the Company on the EE program results.

| Table 8   |                      |               |      |           |     |          |        |          |          |  |  |  |  |
|---|----------------------|---------------|------|-----------|-----|----------|--------|----------|----------|--|--|--|--|
|   | Q                    | UESTAR GAS CO | MPAN | Y         |     |          |        |          |          |  |  |  |  |
|   | THERMWISE L          | OW INCOME EFF | ICIE | NCY PROGR | АМ  |          |        |          |          |  |  |  |  |
|   |                      | 31-Dec-16     |      |           |     |          |        |          |          |  |  |  |  |
|   | DOCKET NO. 17-057-10 |               |      |           |     |          |        |          |          |  |  |  |  |
|   |                      |               |      |           |     |          |        |          |          |  |  |  |  |
| A   | В                    | с             |      | D         |     | E        | F      | G        | н        |  |  |  |  |
| 1   | 2016                 | YTD           |      | 2016      | YTD |          | YTD \$ | Budget   | YTD      |  |  |  |  |
| 2   | Budgeted             | Actual        | Bud  | get       | Act | ual Cost | % of   | Dth      | Dth      |  |  |  |  |
| 3   | Participants         | Participants  | ľ    | (000)     |     | (000)    | Budget | Savings* | Savings* |  |  |  |  |
| 4 Low Income Efficiencyn Program                  |                      |               |      |           |     |          |        |          |          |  |  |  |  |
|   |                      |               |      |           |     |          |        |          |          |  |  |  |  |
| 5 High-Efficiency Gas Furnance -95%               | 190                  | 109           | \$   | 66.5      | \$  | 38.1     | 57.3%  | 3,895    | 2,235    |  |  |  |  |
| 6 High-Efficiency Gas Furnance w/ ECM - 95% & 98% | 46                   | 31            | \$   | 18.4      | \$  | 12.4     | 67.4%  | 943      | 636      |  |  |  |  |
| 7 Gas Water Heater - Tier 2                       | 38                   | 10            | \$   | 3.8       | \$  | 1.0      | 26.3%  | 150      | 40       |  |  |  |  |
| 8 Gas Water Heater Tankless - Tier 1 & 2          | 10                   |               | \$   | 3.3       |     |          | 0.0%   | 92       | -        |  |  |  |  |
| 9 Attic Insulation Tier 1                         | 260                  | 257           | \$   | 82.6      | \$  | 49.5     | 59.9%  | 1,564    | 1,049    |  |  |  |  |
| 10 Attic Insulation Tier 2                        | 180                  | 84            | \$   | 17.6      | \$  | 1.3      | 7.4%   | 326      | 25       |  |  |  |  |
| 11 Floor Insulation                               | 80                   | 67            | \$   | 17.0      | \$  | 10.0     | 58.8%  | 579      | 336      |  |  |  |  |
| 12 Wall Insulation                                | 76                   | 68            | \$   | 22.4      | Ş   | 15.7     | 70.1%  | 340      | 277      |  |  |  |  |
| 13 Duct Sealing & Insulation                      | 70                   | 7             | \$   | 30.6      | \$  | 2.5      | 8.2%   | 944      | 94       |  |  |  |  |
| 14 Air Sealing                                    | 320                  | 260           | \$   | 92.6      | \$  | 99.6     | 107.6% | 2,021    | 1,993    |  |  |  |  |
| 15 Low Income Furnace Replacement                 | 500                  | 319           | \$   | 500.0     | \$  | 500.0    | 100.0% | 10,250   | 6,540    |  |  |  |  |
| 16 Administrative & Overheads                     | NA                   | NA            | \$   | 35.0      | \$  | 4.2      | 12.0%  | NA       | NA       |  |  |  |  |
| 17 TOTAL  | 1,770                | 1,212         | \$   | 889.8     | Ś   | 734.3    | 82.5%  | 21,104   | 13,225   |  |  |  |  |

18 \*Savings reflects the net Dth deemed savings based on actual participants with an 80% net-to-gross ratio applied.

Table 8 shows the results for the ThermWise Low Income Efficiency Program. The table shows that 82.5% of the total budget has been spent. The 2016 budget for the EE Low Income Efficiency Program assumed a total weighted cost of \$42.16 per saved Dth, the actual total weighted cost for those the measures implemented was \$55.52 per saved Dth.

#### **DSM Amortization Account Balance**

As shown in Table 1, FERC account 182.400 is the account where the company accumulates the costs expended in the multiple EE programs and at least semi-annually, requests permission from the Commission to amortize those accumulated balances. In Table 1 on page 3 the balance at of the end of December 2016 was \$883,900 (Col E, Line 21). The current amortization rate for the GS class is \$0.19/ Dth (rounded) which was set in Docket No. 16-057-11, effective November 1, 2016, to amortize an estimated September, 2016 balance of \$1.1 million as well as projected current expenditures of continuing EE programs.

#### **CONCLUSION & RECOMMENDATIONS**

The Division acknowledges the success of the Energy Efficiency Programs initiated by Questar Gas Company as they benefit all rate payers by reducing usage levels. The Division notes as shown on page 3, in Column I, Line 14 of Table 1, the TRC for all Energy Efficiency programs

is 1.0. The Division requests that the Company discuss these results and trends that are forecasted for the ThermWise programs at a future 2017 Advisory Group meeting.

The Division commends QGC and the Advisory Group for their active participation and commitment to continue to develop and promote strong Energy Efficiency programs, with the intent to promote the energy saving measures to an even broader base of GS customers and urges all GS customers to participate in these programs whenever possible.

Cc: Barrie McKay, Questar Gas Company Michael Orton, Questar Gas Company Michele Beck, Office of Consumer Services Marialie Wright, DPU Customer Service