



17 North Second Street
12th Floor
Harrisburg, PA 17101-1601
717-731-1970 Main
717-731-1985 Main Fax
www.postschell.com

Garrett P. Lent

glent@postschell.com
717-612-6032 Direct
717-731-1979 Direct Fax
File #: 172358

January 18, 2019

VIA HAND DELIVERY

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor North
P.O. Box 3265
Harrisburg, PA 17105-3265

R-2016-2580030
C-2017-2585510
C-2017-2589092
C-2017-2596537

Re: Pennsylvania Public Utility Commission, Office of Consumer Advocate, Office of Small Business Advocate & Michael Ochs v. UGI Penn Natural Gas, Inc. - Docket Nos. ~~R-2016-2580030, C-2017-2585510, C-2017-2589092 & C-2017-2596537~~

Dear Secretary Chiavetta:

Enclosed for filing on behalf of UGI Utilities, Inc. – Gas Division’s North Rate District (“UGI North”) is the Annual Report for the period October 1, 2017, through September 30, 2018, Program Year 1 of UGI North’s Energy Efficiency and Conservation Plan.

Respectfully submitted,

Garrett P. Lent

GPL/jl
Enclosures

cc: Certificate of Service
Bureau of Technical Utility Services

RECEIVED
2019 JAN 18 PM 3:25
REGISTRATION BUREAU

Report to the Pennsylvania Public Utility Commission

RECEIVED

JAN 18 2019

UGI Utilities, Inc. – Gas Division PA PUBLIC UTILITY COMMISSION
UGI North Rate District SECRETARY'S BUREAU
Energy Efficiency and Conservation Plan
Program Year 1 (PY1)
October 1, 2017 - September 30, 2018

Prepared by UGI Utilities, Inc. – Gas Division
Filing Date: January 18, 2019

Table of Contents

1	EXECUTIVE SUMMARY	3
2	PORTFOLIO OVERVIEW	4
2.1	Background	4
2.2	Summary of Activity	5
2.3	Progress Toward Goals	10
3	PROGRAM RESULTS	13
3.1	Residential Prescriptive Program	13
3.2	Nonresidential Prescriptive Program	17
3.3	Residential New Construction Program	20
3.4	Nonresidential New Construction	23
3.5	Residential Retrofit Program	25
3.6	Nonresidential Retrofit Program	28
3.7	Behavior and Education	30
3.8	Combined Heat and Power	31
3.9	Updates	33

1 EXECUTIVE SUMMARY

This Annual Report covers the first year of the UGI Utilities, Inc. –Gas Division’s (UGI Gas) North Rate District’s (UGI North) Energy Efficiency and Conservation (EE&C) Plan, approved as part of UGI Penn Natural Gas, Inc.’s 2017 Rate Case (Docket No. R-2016-2580030). Program Year 1 (PY1) covers the period of October 1, 2017, through September 30, 2018. The EE&C Plan experienced a strong start in PY1:

- UGI North launched three energy efficiency (EE) programs in PY1: The Residential Prescriptive (RP) Program, the Nonresidential Prescriptive (NP) Program, and the New Construction (NC) Program. UGI North also launched its Combined Heat and Power (CHP) Program.
- Costs in PY1 for the EE&C Portfolio were \$1.03 million, which equaled 59% of projected costs. Of PY1 costs, UGI North spent \$837,730 on incentives, (142% of projections) and \$196,602 on non-incentive costs (22% of projections).
- PY1 savings for the EE programs were 21,811 MMBtus (144% of projections) while costs were \$1.03 million (59% of projections). The EE programs also resulted in electric savings of 46.7 MWh in PY1.
- There was no participation in the CHP Program in PY1. UGI North spent \$6,208 on administration for the CHP program in PY1.
- The total EE&C Portfolio provided \$914,853 in net benefits to customers with a benefit-to-cost ratio (BCR) of 1.73 as calculated under the Total Resource Cost (TRC) Test, including Demand Reduction Induced Price Effect (DRIPE) and the market price for CO₂. Under the TRC Test without DRIPE and CO₂, the Portfolio provided \$503,728 in net benefits to customers with a BCR of 1.40.
- In accordance with paragraphs 34 and 36 of the PNG rate case settlement, \$100,000 was transferred to the LIURP budget for the 2018 LIURP calendar year. Due to an accounting entry error, that transfer of \$100,000 occurred in October 2018 after the close of the 2018 fiscal year. As the EE&C program runs on a fiscal year basis, the \$100,000 transfer is not reflected in PY1, though it was available in the 2018 LIURP budget as LIURP runs on a calendar year basis. Energy savings associated with LIURP projects completed with the funds recovered through the EE&C Rider will be reported in the Company’s next annual report.

2 PORTFOLIO OVERVIEW

2.1 Background

In January 2017, UGI Penn Natural Gas, Inc. (PNG) proposed a voluntary, five-year EE&C Plan as part of its Rate Case (Docket No. R-2016-2580030). By its order entered August 31, 2017, the Commission approved the EE&C Plan (as amended by settlement in the proceeding). Pursuant to the order entered September 20, 2018 at Docket Nos. A-2018-3000381, *et al.*, on October 1, 2018, UGI Central Penn Gas, Inc. and PNG merged with UGI Utilities, Inc., with UGI Utilities, Inc. as the sole surviving entity. As of the effective date of the merger, the service territory of PNG is known as the UGI North Rate District of UGI Utilities, Inc.

UGI North respectfully submits this report documenting the results of its EE&C Plan for PY1 in compliance with the agreed-upon settlement provisions to provide an annual report. The results set forth below represent a portfolio of cost-effective EE&C programs that benefit the customer through decreased energy costs while maintaining cost-effectiveness under the TRC test.

UGI North has seven natural gas EE programs in its EE&C Portfolio and one program focused on CHP. These programs are:

- Residential Prescriptive (RP) Program
- Nonresidential Prescriptive (NP) Program
- Residential New Construction (RNC) Program
- Residential Retrofit (RR) Program
- Nonresidential Retrofit (NR) Program
- Nonresidential New Construction (NNC) Program
- Behavior and Education (BE) Program
- Combined Heat and Power (CHP) Program

These programs follow the designs and goals established in PNG's 2017 rate case. All the EE&C programs are voluntary and offer UGI North customers a wide range of energy efficiency and conservation measures to decrease natural gas consumption and, in turn, customers' annual energy costs. The following programs had activity in PY1 and are discussed in detail in this report:

- Residential Prescriptive (RP) Program
- Nonresidential Prescriptive (NP) Program
- Residential New Construction (RNC) Program
- Combined Heat and Power (CHP) Program

2.2 Summary of Activity

UGI North had a strong start to its EE&C Plan in PY1. Starting January 1, 2018, UGI North launched the RP Program, the NP Program, the NC Program, and the CHP Program. Portfolio spending of \$1.03 million was only 59% of projected PY1 spending, but first year savings of 21,811 MMBtus were 144% of first year projections. The high savings were mainly due to a strong PY1 for the NP Program. There were no CHP projects completed in PY1. The EE&C Portfolio had a present value TRC net benefits of \$914,854 million, with a BCR of 1.73 where the market price of CO₂ and DRIFE were counted. Where DRIFE and CO₂ were excluded from the calculation, the EE&C Portfolio had a present value TRC net benefit of \$503,728 million, with a BCR of 1.40. The following tables provide a high-level overview of the EE&C Portfolio's spending and savings for PY1 and the current phase.

Program	Actual	Projected	%
Portfolio Spending	\$1,034,332	\$1,849,651	56%
EE Programs	\$1,028,124	\$1,467,151	70%
LIURP Transfer	\$0	\$100,000	0%
CHP Program	\$6,208	\$282,500	2%
EE Program Natural Gas Savings			
Annual (MMBtus)	21,811	15,139	144%
Lifetime ((MMBtus)	358,347	276,754	129%
CHP Net Primary Energy Savings			
Annual (MMBtus)	0	169,855	0%
Lifetime ((MMBtus)	0	2,547,828	0%

Program	Actual	Projected	%
Portfolio Spending	\$1,034,332	\$15,432,550	7%
EE Programs	\$1,028,124	\$13,520,050	8%
LIURP Transfer	\$0	\$500,000	0%
CHP Program	\$6,208	\$1,412,500	0%
EE Program Natural Gas Savings			
Annual (MMBtus)	21,811	369,825	6%
Lifetime ((MMBtus)	358,347	4,056,268	9%
CHP Net Primary Energy Savings			
Annual (MMBtus)	0	849,276	0%
Lifetime ((MMBtus)	0	12,739,141	0%

2.2.1 Summary of Program Costs

Table 3. PORTFOLIO COSTS BY PROGRAM – PY1			
Program	Total	Incentive	Non-Incentive
Residential Prescriptive (RP)	\$677,411	\$592,200	\$85,211
Nonresidential Prescriptive (NP)	\$259,144	\$245,530	\$13,614
Residential Retrofit (RR)	\$-	\$-	\$-
Nonresidential Retrofit (NR)	\$-	\$-	\$-
Residential New Construction (RNC)	\$24,116	\$-	\$24,116
Nonresidential New Construction (NNC)	\$-	\$-	\$-
Behavior and Education (BE)	\$-	\$-	\$-
Portfoliowide Costs	\$67,453	\$-	\$67,453
LIURP Transfer	\$0	\$0	\$0
Energy Efficiency Total	\$1,028,124	\$837,730	\$190,394
CHP	\$6,208	\$-	\$6,208
Portfolio Total	\$1,034,332	\$837,730	\$196,602

Table 4. PORTFOLIO COSTS BY PROGRAM – Inception to Date			
Program	Total	Incentive	Non-Incentive
Residential Prescriptive (RP)	\$677,411	\$592,200	\$85,211
Nonresidential Prescriptive (NP)	\$259,144	\$245,530	\$13,614
Residential Retrofit (RR)	\$-	\$-	\$-
Nonresidential Retrofit (NR)	\$-	\$-	\$-
Residential New Construction (RNC)	\$24,116	\$-	\$24,116
Nonresidential New Construction (NNC)	\$-	\$-	\$-
Behavior and Education (BE)	\$-	\$-	\$-
Portfoliowide Costs	\$67,453	\$-	\$67,453
LIURP Transfer	\$0	\$0	\$0
Energy Efficiency Total	\$1,028,124	\$837,730	\$190,394
CHP	\$6,208	\$-	\$6,208
Portfolio Total	\$1,034,332	\$837,730	\$196,602

2.2.2 Summary of Program Savings

Table 5. ENERGY EFFICIENCY PROGRAM SAVINGS – PY1							
Program	Natural Gas (MMBtus)		Electric Energy (MWh)		Capacity	Water Savings (Gal)	
	Annual	Lifetime	Annual	Lifetime	MW-yr.	Annual	Lifetime
Residential Prescriptive (RP)	12,095	240,176	46.7	859.5	0.009	0	0
Nonresidential Prescriptive (NP)	9,717	118,171	0.0	0.0	0.000	6,853,550	34,267,750
Residential Retrofit (RR)	0	0	0.0	0.0	0.000	0	0
Nonresidential Retrofit (NR)	0	0	0.0	0.0	0.000	0	0
Residential New Construction (RNC)	0	0	0.0	0.0	0.000	0	0
Nonresidential New Construction (NNC)	0	0	0.0	0.0	0.000	0	0
Behavior and Education (BE)	0	0	0.0	0.0	0.000	0	0
Energy Efficiency Total	21,812	358,347	46.7	859.5	.009	6,853,550	34,267,750

Table 6. ENERGY EFFICIENCY PROGRAM SAVINGS – Inception to Date							
Program	Natural Gas (MMBtus)		Electric Energy (MWh)		Capacity	Water Savings (Million Gal)	
	Annual	Lifetime	Annual	Lifetime	MW-yr.	Annual	Lifetime
Residential Prescriptive (RP)	12,095	240,176	46.7	859.5	0.009	0	0
Nonresidential Prescriptive (NP)	9,717	118,171	0.0	0.0	0.000	6,853,550	34,267,750
Residential Retrofit (RR)	0	0	0.0	0.0	0.000	0	0
Nonresidential Retrofit (NR)	0	0	0.0	0.0	0.000	0	0
Residential New Construction (RNC)	0	0	0.0	0.0	0.000	0	0
Nonresidential New Construction (NNC)	0	0	0.0	0.0	0.000	0	0
Behavior and Education (BE)	0	0	0.0	0.0	0.000	0	0
Energy Efficiency Total	21,811	358,347	46.7	859.5	.009	6,853,550	34,267,750

Savings	PY1		Inception to Date	
	Annual	Lifetime	Annual	Lifetime
Net Primary Fuel Savings (MMBtus)	0	0	0	0

2.2.3 Summary of Program Cost-Effectiveness

Program	TRC Test - Base Case + DRIPE & CO2				TRC Test - Base Case			
	NPV Benefits	NPV Costs	NPV Net	BCR	NPV Benefits	NPV Costs	NPV Net	BCR
Residential Prescriptive (RP)	\$1,575,573	\$860,706	\$714,866	1.83	\$1,295,964	\$860,706	\$435,258	1.51
Nonresidential Prescriptive (NP)	\$598,701	\$315,503	\$283,197	1.90	\$467,184	\$315,503	\$151,680	1.48
Residential Retrofit (RR)	\$-	\$-	\$-	N/A	\$-	\$-	\$-	N/A
Nonresidential Retrofit (NR)	\$-	\$-	\$-	N/A	\$-	\$-	\$-	N/A
Residential New Construction (RNC)	\$-	\$20,523	\$(20,523)	0.00	\$-	\$20,523	\$(20,523)	0.00
Nonresidential New Construction (NNC)	\$-	\$-	\$-	N/A	\$-	\$-	\$-	N/A
Behavior and Education (BE)	\$-	\$-	\$-	N/A	\$-	\$-	\$-	N/A
Portfoliowide Costs	\$-	\$57,404	\$(57,404)	0.00	\$-	\$57,404	\$(57,404)	0.00
Energy Efficiency Total	\$2,174,274	\$1,254,136	\$920,136	1.73	\$1,763,148	\$1,254,137	\$509,011	1.41
CHP	\$-	\$5,283	\$(5,283)	0.00	\$-	\$5,283	\$(5,283)	0.00
Portfolio Total	\$2,174,274	\$1,259,419	\$914,853	1.73	\$1,763,148	\$1,259,420	\$503,728	1.40

Table 9. PORTFOLIO COST-EFFECTIVENESS BY PROGRAM – Inception to Date

Program	TRC Test - Base Case + DRIPE & CO2				TRC Test - Base Case			
	NPV Benefits	NPV Costs	NPV Net	BCR	NPV Benefits	NPV Costs	NPV Net	BCR
Residential Prescriptive (RP)	\$1,575,573	\$860,706	\$714,866	1.83	\$1,295,964	\$860,706	\$435,258	1.51
Nonresidential Prescriptive (NP)	\$598,701	\$315,503	\$283,197	1.90	\$467,184	\$315,503	\$151,680	1.48
Residential Retrofit (RR)	\$-	\$-	\$-	N/A	\$-	\$-	\$-	N/A
Nonresidential Retrofit (NR)	\$-	\$-	\$-	N/A	\$-	\$-	\$-	N/A
Residential New Construction (RNC)	\$-	\$20,523	\$(20,523)	0.00	\$-	\$20,523	\$(20,523)	0.00
Nonresidential New Construction (NNC)	\$-	\$-	\$-	N/A	\$-	\$-	\$-	N/A
Behavior and Education (BE)	\$-	\$-	\$-	N/A	\$-	\$-	\$-	N/A
Portfoliowide Costs	\$-	\$57,404	\$(57,404)	0.00	\$-	\$57,404	\$(57,404)	0.00
Energy Efficiency Total	\$2,174,274	\$1,254,136	\$920,136	1.73	\$1,763,148	\$1,254,137	\$509,011	1.41
CHP	\$-	\$5,283	\$(5,283)	0.00	\$-	\$5,283	\$(5,283)	0.00
Portfolio Total	\$2,174,274	\$1,259,419	\$914,853	1.73	\$1,763,148	\$1,259,420	\$503,728	1.40

2.3 Progress Toward Goals

UGI North made significant progress toward savings goals, achieving 144% of its PY1 annual MMBtu projections, while only spending 17% of its administrative PY1 projections. Administration costs came in below projections, partially due to the amortization of startup costs over the five-year life of the Plan. The strong start in PY1 can primarily be attributed to the success of the RP and NP Programs, where customer incentives were 114% and 387%, respectively, higher than initially projected. Overall, UGI North spent \$1,034,332 in PY1, or approximately 7% of the approved \$14,862,074 budget.

UGI North has kept the commitments it made in the settlement of its 2017 Base Rate Case. Paragraph 33 of the settlement for PNG's 2017 Rate Case requires the Company to limit the percentage of costs spent by the utility on the NP, NR, and Nonresidential New Construction Programs to 55% or less of the total cost to the utility and customer over the five-year life of the plan. The following table shows that for the phase-to-date, this value is 70%. UGI North is confident that this percentage will fall as the nonresidential programs ramp up and more customers participate.

Program	Utility Cost	Incremental Participant Cost	Total Cost	% Utility
NP	\$259,144	\$111,589	\$370,733	70%
NR	\$0	\$0	\$0	N/A
NNC	\$0	\$0	\$0	N/A
Total	\$259,144	\$111,589	\$370,733	70%

In accordance with paragraphs 34 and 36 of the PNG rate case settlement, \$100,000 was transferred to the LIURP budget for the 2018 LIURP calendar year. Due to an accounting entry error, that transfer of \$100,000 occurred in October 2018 after the close of the 2018 fiscal year. As the EE&C program runs on a fiscal year basis, the \$100,000 transfer is not reflected in PY1, though it was available in the 2018 LIURP budget as LIURP runs on a calendar year basis. Energy savings associated with LIURP projects completed with the funds recovered through the EE&C Rider will be reported in the Company's next annual report.

2.3.1 Portfolio Costs

Table 11. EE&C PORTFOLIO COSTS BY CATEGORY - PY1			
Component (Nominal \$)	Actual	Projected	%
Direct Utility Costs	\$1,034,332	\$1,829,750	56%
Customer Incentives	\$837,730	\$838,250	100%
Administration	\$120,205	\$678,000	18%
Marketing	\$73,867	\$181,000	41%
Inspections	\$2,530	\$27,500	9%
Evaluations	\$0	\$5,000	0%
LIURP Transfer	\$0	\$100,000	0%
Incremental Participant Costs	\$445,556	\$9,119,492	5%

Table 12. EE&C PORTFOLIO COSTS BY CATEGORY - PHASE I			
Component (Nominal \$)	Actual	Projected	%
Direct Utility Costs	\$1,034,332	\$15,432,550	7%
Customer Incentives	\$837,730	\$10,192,791	8%
Administration	\$120,205	\$3,223,259	4%
Marketing	\$73,867	\$906,000	8%
Inspections	\$2,530	\$390,500	1%
Evaluations	\$0	\$220,000	0%
LIURP Transfer	\$0	\$500,000	0%
Incremental Participant Costs	\$445,556	\$46,519,231	1%

2.3.2 Portfolio Savings

Table 13. EE&C PROGRAM SAVINGS - PY1			
Type	Actual	Projected	%
EE Programs			
Natural Gas (MMBtus)			
Annual	21,811	15,139	144%
Lifetime	358,347	276,754	129%
Electric Energy (MWh)			
Annual	46.7	254.6	18%
Lifetime	859.5	4950.8	17%
Capacity Savings (MW)	.009	.056	16%
Water Savings (Million Gal)			
Annual	685,355	635,645	108%
Lifetime	3,426,775	3,813,870	90%
CHP Program			
Net Primary Energy Savings			
Annual (MMBtus)	0	169,855	0%
Lifetime (MMBtus)	0	2,547,828	0%

Table 14. EE&C PROGRAM SAVINGS - PHASE I			
Type	Actual	Projected	%
EE Programs			
Natural Gas (MMBtus)			
Annual	21,811	369,825	6%
Lifetime	358,347	4,056,268	9%
Electric Energy (MWh)			
Annual	46.7	2,500.2	2%
Lifetime	859.5	48,834.6	2%
Capacity Savings (MW)	.009	.558	2%
Water Savings (Million Gal)			
Annual	685,355	15,011,211	5%
Lifetime	3,426,775	151,721,305	2%
CHP Program			
Net Primary Energy Savings			
Annual (MMBtus)	0	849,276	0%
Lifetime (MMBtus)	0	12,739,141	0%

3 PROGRAM RESULTS

3.1 Residential Prescriptive Program

(Rate Classes R/RT, N/NT)

3.1.1 Program Description

The Residential Prescriptive (RP) program is designed to overcome market barriers to energy efficient space and water heating equipment in the residential sector, through rebates and customer awareness. The objective of the program is to avoid lost opportunities, by encouraging consumers to install the most efficient gas heating technologies available when replacing older, less efficient equipment. The program also aims to strengthen UGI North's relationship with heating, ventilation and air conditioning (HVAC) contractors, suppliers, and other trade allies.

3.1.2 Program Highlights

The RP Program spent \$677,411 in PY1, of which \$592,200 were customer incentives. The program provided first year gas savings of 12,095 MMBtus, 99% of plan projections. The program provided lifetime gas savings of 240,176 MMBtus, 105% of plan projections. Under the TRC Test, including DRIPE and CO₂, the RP Program provided \$714,866 million in present value of net benefits with a BCR of 1.83. Without DRIPE or CO₂, the RP Program provided \$435,258 million in present value of net benefits with a BCR of 1.51.

UGI North utilizes the services of Energy Federation, Inc. (EFI) to process rebates, provide customer service and perform quality assurance inspections.

The RP Program got off to a slow start in the first two months of the year. Beginning in March, the RP Program saw participation increase each month throughout PY1. The customer participation increases went hand in hand with contractor participation as program buy-in continued to show growth. The program exceeded its first-year participation and savings targets. In total, 610 customers participated in the RP Program in PY1, some of them receiving more than one rebate. For example, customers installing heating equipment may have also chosen to install a Wi-Fi thermostat. Below is a chart that highlights rebates issued by equipment type.

Table 15. RP Participation	
Equipment	Rebates Issued
94+ AFUE Combi-Boiler	222
ENERGY STAR Wi-Fi Thermostat	214
ENERGY STAR Tankless Water Heater	136
ENERGY STAR Furnace	86
94+ AFUE Boiler	49
Total	707

3.1.2.1 Marketing Activity

Marketing activity began in November 2017 with an announcement on upcoming programs to local HVAC contractors in each region. Informational sessions were held in Northumberland, Williamsport, Wilkes-Barre, and Scranton and were attended by approximately 30 different HVAC Companies.

In addition to the contractor sessions, press releases were issued, and an article was published in UGI Utilities, Inc.'s December issue of First Line. First Line is a monthly UGI Utilities, Inc. publication that is provided to each member of the Pennsylvania General Assembly and the Pennsylvania Governor's office, as well as the PA Congressional delegation, so that legislators may pass the information on to their constituents.

Program marketing also included monthly bill inserts and radio advertising, which aired during drive times throughout the region's most prominent radio stations. The announcements were focused on educating customers on the various energy efficiency options available, along with energy saving tips.

Most of the marketing focus for the RP Program was digital advertising. The website, www.ugi.com/savesmart was redesigned to include all of the new gas program offerings. The website included easy to follow navigation for either paper or online rebate applications. Additional digital advertising included various social media channels and google key word searches. The Company's social media team regularly promoted the RP Program while leveraging platforms such as Facebook, Instagram, Twitter and Pinterest.

3.1.2.2 Inspection Activity

EFI, the CSP responsible for processing rebates, has also been retained to provide inspections on a subset of applications. The purpose of these inspections is to confirm that the equipment on the rebate application matches the equipment that has been installed in the customer's home. Payment of the rebate is withheld from applications flagged for inspection until such activity has been

completed. In PY1, 15 inspections were performed, with only one inspection failing for ineligible equipment, for which no rebate was issued.

3.1.2.3 Evaluation Activity

There was no evaluation activity in PY1.

3.1.3 Program Updates

There are no program updates for PY2.

3.1.4 Residential Prescriptive Program Results

Table 16. PROGRAM COSTS			
Component (Nominal \$)	PY1 - Actual	PY1 - Projected	%
Direct Utility Costs	\$677,411	\$650,000	104%
Customer Incentives	\$592,200	\$518,000	114%
Administration	\$23,582	\$56,000	42%
Marketing	\$59,099	\$59,000	100%
Inspections	\$2,530	\$17,000	15%
Evaluations	\$0	\$0	0%
Incremental Participant Costs	\$333,967	\$540,138	62%

Table 17. PROGRAM SAVINGS			
Type	PY1 - Actual	PY1 - Projected	%
Natural Gas (MMBtus)			
Annual	12,095	12,254	99%
Lifetime	240,176	228,747	105%
Electric Energy (MWh)			
Annual	46.7	252.7	19%
Lifetime	859.5	4906.8	18%
Capacity Savings (MW)	.009	.056	16%
Water Savings (Million Gal)			
Annual	0	0	0%
Lifetime	0	0	0%

Table 18. PROGRAM COST-EFFECTIVENESS (BASE CASE + DRIPE & CO₂)		
Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$1,575,573	\$1,575,573
TRC NPV Costs	\$860,706	\$860,706
TRC Net Benefits	\$714,866	\$714,866
TRC Benefit/Cost Ratio	1.83	1.83

Table 19. PROGRAM COST-EFFECTIVENESS (BASE CASE)		
Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$1,295,964	\$1,295,964
TRC NPV Costs	\$860,706	\$860,706
TRC Net Benefits	\$435,258	\$435,258
TRC Benefit/Cost Ratio	1.51	1.51

3.2 Nonresidential Prescriptive Program

(Rate Classes R/RT, N/NT)

3.2.1 Program Description

The Nonresidential Prescriptive (NP) Program is designed to overcome market barriers to energy efficient equipment in the small business and commercial sector through rebates and customer outreach. The objective of the program is to encourage business owners to install the most efficient gas heating technologies available to replace older, less efficient equipment. The program also aims to strengthen UGI North's relationship with HVAC contractors, suppliers, and other trade allies.

3.2.2 Program Highlights

The NP Program spent \$259,144 in PY1, of which \$245,530 were customer incentives. The program provided first year gas savings of 9,717 MMBtus, 351% of plan projections. The program provided lifetime gas savings of 118,171 MMBtus, 260% of plan projections. Under the TRC Test, including DRIPE and CO₂, the NP Program provided \$283,197 in present value of net benefits with a BCR of 1.90. Without factoring in DRIPE or CO₂, the NP Program provided \$151,680 in present value of net benefits with a BCR of 1.48.

UGI North utilizes the services of Energy Federation, Inc. (EFI) to process rebates, provide customer service and perform quality assurance inspections.

The program got off to a slow start, as can be expected with nonresidential programs. However, the NP Program saw dramatic participation increases with the participation of a commercial kitchen distributor in the territory. The overwhelming success of the midstream commercial kitchen program led to an update in commercial fryer incentive design and additional discussions with the supplier related to supporting future midstream rebate opportunities. Outside of the commercial kitchen equipment, one commercial water heater and one commercial boiler was installed during PY1. Below is a chart outlining rebates in PY1.

Equipment	Rebates Issued
Commercial Fryer (Small)	158
Commercial Fryer (Large)	17
Pre-Rinse Spray Valve	11
ENERGY STAR Commercial Water Heater	1
ENERGY STAR Commercial Boiler	1
Total	188

3.2.2.1 Marketing Activity

Marketing activity for the NP program was conducted in conjunction with the marketing activity for the RP program, including contractor outreach, along with bill inserts, digital and radio advertising.

In addition, the NP Program coordinated with a key commercial kitchen distributor to market the kitchen equipment rebates directly to its customer base. The direct marketing and midstream rebate offer were a success. Because of this success the NP Program will continue to focus on midstream opportunities.

3.2.2.2 Inspection Activity

EFI, the CSP responsible for processing rebates, has also been retained to provide inspections on a subset of applications. The purpose of these inspections is to confirm that the equipment on the rebate application matches the equipment that has been installed in the customer's business. Payment of the rebate is withheld from applications flagged for inspection until such activity has been completed. In PY1, 12 inspections were conducted on NP equipment. All inspections conducted passed.

3.2.2.3 Evaluation Activity

There was no evaluation activity for PY1.

3.2.3 Program Updates

Upon partnering directly with a midstream commercial kitchen distributor, incentive levels for commercial fryers were reexamined. Effective April 1, 2018, the rebate for Commercial Fryers was reduced to \$500 per fryer.

3.2.4 Nonresidential Prescriptive Program Results

Component (Nominal \$)	PY1 - Actual	PY1 - Projected	%
Direct Utility Costs	\$259,144	\$155,450	167%
Customer Incentives	\$245,530	\$63,450	387%
Administration	\$2,968	\$45,000	7%
Marketing	\$10,646	\$40,000	27%
Inspections	\$0	\$7,000	0%
Evaluations	\$0	\$0	0%
Incremental Participant Costs	\$111,589	\$78,797	142%

Table 22. PROGRAM SAVINGS

Type	PY1 - Actual	PY1 - Projected	%
Natural Gas (MMBtus)			
Annual	9,717	2,771	351%
Lifetime	118,171	45,416	260%
Electric Energy (MWh)			
Annual	0.0	0.0	0%
Lifetime	0.0	0.0	0%
Capacity Savings (MW)	0.000	0.000	0%
Water Savings (Million Gal)			
Annual	685,355	635,645	108%
Lifetime	3,426,775	3,813,870	90%

Table 23. PROGRAM COST-EFFECTIVENESS (BASE CASE + DRIPE & CO₂)

Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$598,701	\$598,701
TRC NPV Costs	\$315,503	\$315,503
TRC Net Benefits	\$283,197	\$283,197
TRC Benefit/Cost Ratio	1.90	1.90

Table 24. PROGRAM COST-EFFECTIVENESS (BASE CASE)

Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$467,184	\$467,184
TRC NPV Costs	\$315,503	\$315,503
TRC Net Benefits	\$151,680	\$151,680
TRC Benefit/Cost Ratio	1.48	1.48

3.3 Residential New Construction Program

(Rate Classes R/RT)

3.3.1 Program Description

The Residential New Construction (RNC) Program is designed to overcome market barriers to energy efficient space and water heating equipment, as well as high efficiency thermal envelopes, in the residential new construction sector. This is accomplished through rebates offered to builders and developers. The objective of the program is to avoid lost opportunities by encouraging builders and developers to install the most efficient gas heating technologies available instead of less efficient baseline equipment, as well as promote thermal envelope best practices. The program also aims to strengthen UGI North's relationship with builders, HVAC contractors, suppliers, and other trade allies. The RNC Program was launched on January 1, 2018.

For the residential new construction track, the program requires builders to work with a Home Energy Rating System (HERS) rater on their home. An incentive of \$20 per annual MMBtu saved is paid to a new home, heated with natural gas, that achieves savings of 30% over code or greater. A \$30 per annual MMBtu incentive will be paid to homes that achieve savings of 30% over code and achieve ENERGY STAR Certification. The increase in incentive is designed to move the market towards more homes being ENERGY STAR Certified and leverage the HERS rating approach taken by the electric distribution companies (EDCs) under their Act 129 new construction programs.

3.3.2 Program Highlights

UGI North utilizes the services of Performance Systems Development (PSD) for the RNC Program. In PY1, \$19,994 was spent on administration activity. A total of \$24,116 was spent on the RNC Program in PY1. However, due to a lack of new construction projects in the region and limited builder participation, no rebates were issued in PY1. Marketing activity and outreach to regional Builder Associations are being coordinated for PY2 in an attempt to increase builder awareness and participation.

3.3.2.1 *Marketing Activity*

Marketing for the RNC Program was conducted through established builders and HERS raters who have been participants in the programs mandated for large electric distribution companies (EDCs) by Act 129 of 2008, P.L. 1592 (Act 129). The marketing plan for 2018 also included outreach to various Home Builder Associations to educate this audience on the availability of this program.

3.3.2.2 *Inspection Activity*

There was no inspection activity in PY1.

3.3.2.3 Evaluation Activity

There was no evaluation activity in PY1.

3.3.3 Program Updates

There are no program updates for PY2.

3.3.4 New Construction Program Results

Component (Nominal \$)	PY1 - Actual	PY1 - Projected	%
Direct Utility Costs	\$24,116	\$61,800	39%
Customer Incentives	\$0	\$6,800	0%
Administration	\$19,994	\$27,000	74%
Marketing	\$4,122	\$27,000	15%
Inspections	\$0	\$1,000	0%
Evaluations	\$0	\$0	0%
Incremental Participant Costs	\$0	\$2,000	0%

Type	PY1 - Actual	PY1 - Projected	%
Natural Gas (MMBtus)			
Annual	0	113	0%
Lifetime	0	2,591	0%
Electric Energy (MWh)			
Annual	0.0	1.9	0%
Lifetime	0.0	43.9	0%
Capacity Savings (MW)	0.000	0.000	0%
Water Savings (Million Gal)			
Annual	0	0	0%
Lifetime	0	0	0%

Table 27. PROGRAM COST-EFFECTIVENESS (BASE CASE + DRIPE & CO₂)		
Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$0	\$0
TRC NPV Costs	\$20,523	\$20,523
TRC Net Benefits	-\$20,523	-\$20,523
TRC Benefit/Cost Ratio	0.00	-

Table 28. PROGRAM COST-EFFECTIVENESS (BASE CASE)		
Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$0	\$0
TRC NPV Costs	\$20,523	\$20,523
TRC Net Benefits	-\$20,523	-\$20,523
TRC Benefit/Cost Ratio	0.00	-

3.4 Nonresidential New Construction

(Rate Class N/NT)

3.4.1 Program Description

The Nonresidential New Construction (NNC) Program is designed to overcome market barriers to energy efficient space and water heating equipment, as well as high efficiency thermal envelopes, in the nonresidential new construction sector. This is accomplished through rebates offered to builders and developers. The objective of the program is to avoid lost opportunities by encouraging builders and developers to install the most efficient gas heating technologies available instead of less efficient baseline equipment, as well as promote thermal envelope best practices. The program also aims to strengthen UGI North's relationship with builders, HVAC contractors, suppliers, and other trade allies. The NNC Program was launched on January 1, 2019.

3.4.2 Program Highlights

The NNC Program was launched in January 2019.

3.4.2.1 *Marketing Activity*

There was no marketing activity in PY1.

3.4.2.2 *Inspection Activity*

There was no inspection activity in PY1.

3.4.2.3 *Evaluation Activity*

There was no evaluation activity in PY1.

3.4.3 Program Updates

There are no program updates for PY2.

3.4.4 Nonresidential New Construction Program Results

Component (Nominal \$)	PY1 - Actual	PY1 - Projected	%
Direct Utility Costs	\$0	\$0	0%
Customer Incentives	\$0	\$0	
Administration	\$0	\$0	0%
Marketing	\$0	\$0	0%
Inspections	\$0	\$0	
Evaluations	\$0	\$0	
Incremental Participant Costs	\$0	\$0	

Table 30. PROGRAM SAVINGS

Type	PY1 - Actual	PY1 - Projected	%
Natural Gas (MMBtus)			
Annual	0	0	
Lifetime	0	0	
Electric Energy (MWh)			
Annual	0.0	0.0	
Lifetime	0.0	0.0	
Capacity Savings (MW)	0.000	0.000	
Water Savings (Million Gal)			
Annual	0	0	
Lifetime	0	0	

Table 31. PROGRAM COST-EFFECTIVENESS (BASE CASE + DRIPE & CO₂)

Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$0	\$0
TRC NPV Costs	\$0	\$0
TRC Net Benefits	\$0	\$0
TRC Benefit/Cost Ratio	0.00	0.00

Table 32. PROGRAM COST-EFFECTIVENESS (BASE CASE)

Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$0	\$0
TRC NPV Costs	\$0	\$0
TRC Net Benefits	\$0	\$0
TRC Benefit/Cost Ratio	0.00	0.00

3.5 Residential Retrofit Program

(Rate Class R/RT)

3.5.1 Program Description

The Residential Retrofit (RR) Program is designed to overcome market barriers to energy efficiency in the existing residential sector, through rebates offered either to customers undergoing a retrofit project or to their installation contractor(s). The program encourages improvements to the thermal envelope of the structure, particularly reductions in building air leakage and increases in insulation levels, as well as installation of the most efficient gas heating technologies. The program also aims to strengthen UGI North's relationship with HVAC contractors, suppliers, and other trade allies.

3.5.2 Program Highlights

The RR Program incentivizes customers to have a full diagnostic Building Performance Institute, Inc. (BPI) level energy audit completed on their home. The customer charge for this audit, from the contractor, is \$150. In addition to the \$150 from the customer, the contractor will receive a \$150 payment from UGI North for each audit completed.

As a result of the audit findings, all cost-effective measures will be presented to the customer in the form of a report with corresponding incentive levels. After the completion of a job, the customer will have a test-out audit performed by the contractor, and a rebate will be issued for the measures that were installed.

3.5.2.1 *Marketing Activity*

There was no marketing activity in PY1.

3.5.2.2 *Inspection Activity*

There was no inspection activity in PY1.

3.5.2.3 *Evaluation Activity*

There was no evaluation activity in PY1.

3.5.3 Program Updates

The RR Program will be an extension of the existing UGI South RR Program and launched on January 1, 2019.

3.5.4 Residential Retrofit Program Results

Component (Nominal \$)	PY1 - Actual	PY1 - Projected	%
Direct Utility Costs	\$0	\$100,000	0%
Customer Incentives	\$0	\$0	
Administration	\$0	\$75,000	0%
Marketing	\$0	\$25,000	0%
Inspections	\$0	\$0	
Evaluations	\$0	\$0	
Incremental Participant Costs	\$0	\$0	

Type	PY1 - Actual	PY1 - Projected	%
Natural Gas (MMBtus)			
Annual	0	0	
Lifetime	0	0	
Electric Energy (MWh)			
Annual	0.0	0.0	
Lifetime	0.0	0.0	
Capacity Savings (MW)	0.000	0.000	
Water Savings (Million Gal)			
Annual	0	0	
Lifetime	0	0	

Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$0	\$0
TRC NPV Costs	\$0	\$0
TRC Net Benefits	-\$0	-\$0
TRC Benefit/Cost Ratio	0.00	0.00

Table 36. PROGRAM COST-EFFECTIVENESS (BASE CASE)

Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$0	\$0
TRC NPV Costs	\$0	\$0
TRC Net Benefits	-\$0	-\$0
TRC Benefit/Cost Ratio	0.00	0.00

3.6 Nonresidential Retrofit Program

(Rate Classes N/NT and R/RT as part of multi-family projects)

3.6.1 Program Description

The Nonresidential Retrofit (NR) Program will provide incentives for overcoming market barriers for natural gas efficiency retrofits in existing commercial and multi-family buildings. The NR Program was launched on January 1, 2019.

3.6.2 Program Highlights

The NR Program was launched in January 2019.

3.6.2.1 Marketing Activity

There was no marketing activity in PY1.

3.6.2.2 Inspection Activity

There was no inspection activity in PY1.

3.6.2.3 Evaluation Activity

There was no evaluation activity in PY1.

3.6.3 Program Updates

There are no program updates for PY2

3.6.4 Nonresidential Retrofit Program Results

Component (Nominal \$)	PY1 - Actual	PY1 - Projected	%
Direct Utility Costs	\$0	\$25,000	0%
Customer Incentives	\$0	\$0	
Administration	\$0	\$10,000	0%
Marketing	\$0	\$15,000	0%
Inspections	\$0	\$0	
Evaluations	\$0	\$0	
Incremental Participant Costs	\$0	\$0	

Table 38. PROGRAM SAVINGS

Type	PY1 - Actual	PY1 - Projected	%
Natural Gas (MMBtus)			
Annual	0	0	
Lifetime	0	0	
Electric Energy (MWh)			
Annual	0.0	0.0	
Lifetime	0.0	0.0	
Capacity Savings (MW)	0.000	0.000	
Water Savings (Million Gal)			
Annual	0	0	
Lifetime	0	0	

Table 39. PROGRAM COST-EFFECTIVENESS (BASE CASE + DRIPE & CO₂)

Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$0	\$0
TRC NPV Costs	\$0	\$0
TRC Net Benefits	\$0	\$0
TRC Benefit/Cost Ratio	0.00	0.00

Table 40. PROGRAM COST-EFFECTIVENESS (BASE CASE)

Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$0	\$0
TRC NPV Costs	\$0	\$0
TRC Net Benefits	\$0	\$0
TRC Benefit/Cost Ratio	0.00	0.00

3.7 Behavior and Education

(Rate Class R/RT)

3.7.1 Program Description

The objective of the Behavior and Education (BE) Program is to motivate a large group of residential customers to save energy by changing their behavior through education, outreach, and energy monitoring. The premise is that the delivery of timely, salient, and personalized information allows for informed decision-making. Small changes with noticeable results pave the way for wider program participation and increased future savings.

3.7.2 Program Highlights

UGI North had no reported activity for the BE Program in PY1.

3.7.2.1 Marketing Activity

There was no marketing activity in PY1.

3.7.2.2 Inspection Activity

There was no inspection activity in PY1.

3.7.2.3 Evaluation Activity

There was no evaluation activity in PY1.

3.7.3 Program Updates

UGI North has delayed the launch of the BE Program. Although UGI North originally planned to launch the BE Program in FY 2019, the Company has been engaging in additional research regarding the projected benefits and cost-effectiveness of the program.

3.7.4 Behavior and Education Program Results

There were no costs or savings in PY1.

3.8 Combined Heat and Power

(Rate Classes DS, LFD)

3.8.1 Program Description

The Combined Heat and Power (CHP) Program seeks to promote the installation of cost-effective and net-primary-energy-saving CHP projects thus providing meaningful CO₂ emission reductions. A CHP plant produces electricity at a commercial or industrial site, while at the same time using the waste heat from the production of the electricity to serve a thermal load. Net efficiencies come from the recovered heat that is typically wasted in grid electricity production. Added efficiencies are a result of avoided transmission and distribution losses from delivering the electricity from the generator to the customer site.

3.8.2 Program Highlights

The CHP Program spent \$6,208 on administrative costs in PY1, but no CHP projects were completed. Each CHP project is run through a cost-effectiveness test as part of the initial pre-screening. Upon completion of each project, the final project costs are evaluated to determine the final incentive.

UGI North will leverage case studies from prior successful CHP installations, along with customer outreach via Relationship Managers to educate customers on the potential benefits of CHP.

3.8.2.1 Inspection Activity

There was no inspection activity in PY1.

3.8.2.2 Evaluation Activity

There was no evaluation activity in PY1.

3.8.3 Program Updates

There are no program updates for PY2.

3.8.4 Combined Heat and Power Program Results

Component (Nominal \$)	PY1 - Actual	PY1 - Projected	%
Direct Utility Costs	\$6,208	\$282,500	2%
Customer Incentives	\$0	\$250,000	0%
Administration	\$6,208	\$10,000	62%
Marketing	\$0	\$15,000	0%
Inspections	\$0	\$2,500	0%
Evaluations	\$0	\$5,000	0%
Incremental Participant Costs	\$0	\$8,498,557	0%

Table 42. PROGRAM SAVINGS

Type	PY1 - Actual	PY1 - Projected	%
Net Primary Fuel Savings (MMBtus)			
Annual	0	169,855	0%
Lifetime	0	2,547,828	0%

Table 43. PROGRAM COST-EFFECTIVENESS (BASE CASE + DRIPE & CO₂)

Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$0	\$0
TRC NPV Costs	\$5,283	\$5,283
TRC Net Benefits	-\$5,283	-\$5,283
TRC Benefit/Cost Ratio	0.00	0.00

Table 44. PROGRAM COST-EFFECTIVENESS (BASE CASE)

Benefits/Cost Component (2015\$)	PY1	Inception to Date
TRC NPV Benefits	\$0	\$0
TRC NPV Costs	\$5,283	\$5,283
TRC Net Benefits	-\$5,283	-\$5,283
TRC Benefit/Cost Ratio	0.00	0.00

3.9 Updates

- The RR Program, originally planned to launch in FY 2019, has been delayed. The program currently is being redesigned based on customer feedback received from the UGI South RR Program. This feedback will be addressed in the Company's Gas EE&C filing planned for January 2019.
- The NR Program, launched in January 2019, in which customers will be eligible for customized rebates based on their comprehensive energy efficiency projects, will be managed in-house by the Company's Energy Efficiency Staff.
- Launch of the BE Program has been delayed. Although UGI North originally planned to launch the BE Program in FY 2019, the Company has been engaging in additional research regarding the projected benefits and cost-effectiveness of the program.

CERTIFICATE OF SERVICE
Docket No. R-2016-2580030

I hereby certify that a true and correct copy of the foregoing has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

VIA E-MAIL & FIRST CLASS MAIL

David T. Evrard, Esquire
Harrison W. Breitman, Esquire
Office of Consumer Advocate
555 Walnut Street
Forum Place, 5th Floor
Harrisburg, PA 17101-1923

Scott B. Granger, Esquire
Phillip C. Kirchner, Esquire
Bureau of Investigation & Enforcement
Commonwealth Keystone Building
PO Box 3265
400 North Street, 2nd Floor West
Harrisburg, PA 17105-3265

Steven C. Gray, Esquire
Office of Small Business Advocate
300 North Second Street, Suite 202
Harrisburg, PA 17101

Elizabeth R. Marx, Esquire
Patrick M. Cicero, Esquire
Pennsylvania Utility Law Project
118 Locust Street
Harrisburg, PA 17101
CAUSE-PA

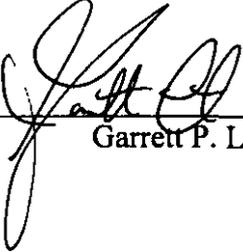
Joseph L. Vullo, Esquire
Burke Vullo Reilly Roberts
1460 Wyoming Avenue
Forty Fort, PA 18704
Commission on Economic Opportunity

Emily W. Medlyn, Esquire
U.S. Army Legal Services Agency
Regulatory Law Office (JALS-RL/IP)
9275 Gunston Road
Fort Belvoir, VA 22060-4446
U.S. Department of Defense

CPT Carlos S. Ramirez-Vazquez, Esquire
Trial Counsel Assistance Program
9275 Gunston Road, Bldg. 1450
Fort Belvoir, VA 22060
U.S. Department of Defense

Daniel Clearfield, Esquire
Karen O. Moury, Esquire
Sarah C. Stoner, Esquire
Eckert Seamans Cherin & Mellott LLC
213 Market Street, 8th Floor
Harrisburg, PA 17101
Direct Energy

Date: January 18, 2019



Garrett P. Lent

RECEIVED
2019 JAN 18 PM 3:25
PA PUBLIC DEFENDER
SECRETARY'S OFFICE