



Candis A. Tunilo
Senior Counsel – Regulatory
UGI Corporation
1 UGI Drive
Denver, PA 17517
(717) 881-9648
TuniloC@ugicorp.com

August 11, 2026

VIA E-FILING

Matthew L. Homsher, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

**Re: Petition of UGI Utilities, Inc. – Electric Division for Approval of Phase IV of its
Energy Efficiency and Conservation Plan
Docket No. M-2023-3043230**

Dear Secretary Homsher:

Enclosed for filing please find the PY13 Impact and Process Evaluation of the residential energy efficiency and conversation plan (“EE&C”) programs of UGI Utilities, Inc. – Electric Division (“UGI Electric” or the “Company”) completed by the Company’s Conservation Service Provider ICF on May 30, 2026. The Evaluation is being filed pursuant to Paragraph 23 of the Settlement of the above captioned matter, which was approved by Public Utility Commission Order entered April 25, 2024. The Evaluation was completed in PY14 and reviewed residential EE&C programs as of the prior year, PY13.

The remaining requirement in Paragraph 23 of the Settlement, specifically that as part of the residential EE&C program evaluation, UGI Electric will meet with PPL Electric to discuss administrative efficiencies related to weatherization programs and resources, the Company will include an update in its Annual EE&C Report due to be filed by August 31, 2026.

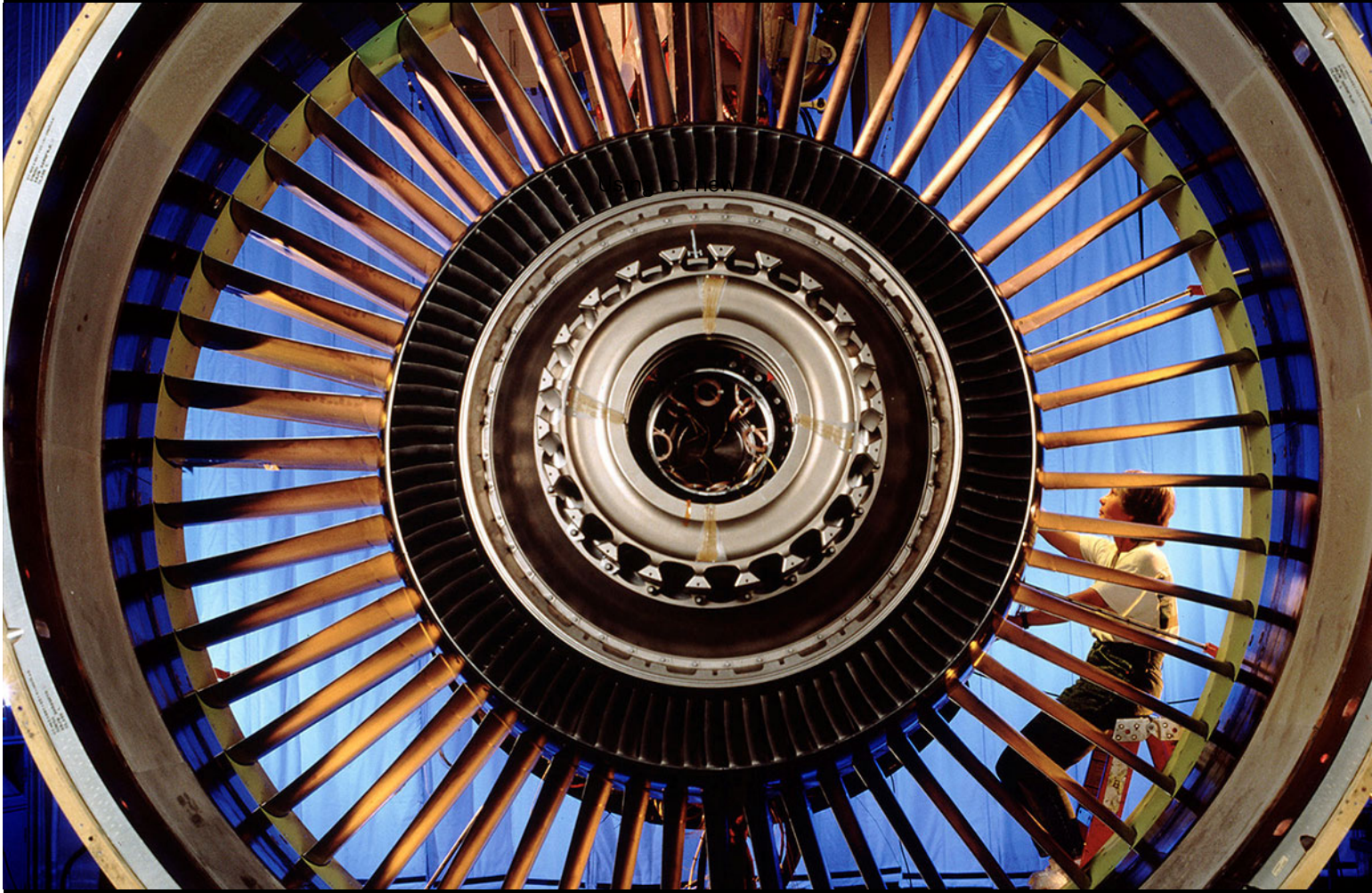
Sincerely,

A handwritten signature in blue ink that reads "Candis A. Tunilo".

Candis A. Tunilo

Enclosure

cc Certificate of service



→ UGI Electric Portfolio

PY13 Impact and Process Evaluation

May 30, 2026



Table of Contents

Executive Summary.....	1
1 Introduction.....	3
2 Evaluation Results.....	4
2.1 Portfolio Results.....	4
2.2 Appliance Rebate.....	4
2.2.1 Appliance Rebate Impact Evaluation	5
2.2.2 Appliance Rebate Process Evaluation	6
2.3 Appliance Recycling.....	9
2.3.1 Appliance Recycling Impact Evaluation	9
2.3.2 Appliance Recycling Process Evaluation	10
2.4 Residential Low-Income.....	13
2.4.1 Residential Low-Income Impact Evaluation	14
2.4.2 Residential Low-Income Process Evaluation	15
2.5 School Energy Education.....	16
2.5.1 School Energy Education Impact Evaluation.....	16
2.5.2 School Energy Education Process Evaluation	17
3 Key Findings and Recommendations	20
3.1 Impact Evaluation Results.....	20
3.2 Key Findings and Recommendations.....	20
3.2.1 Cross-Cutting: Appliance Rebate and Appliance Recycling Programs	20
3.2.2 Appliance Rebate	21
3.2.3 Appliance Recycling.....	21
3.2.4 Residential Low Income.....	22
3.2.5 School Energy Education.....	22
Appendix A. Methodology.....	24

Executive Summary

UGI Utilities (UGI), primarily a natural gas utility, has a small electric territory consisting of two counties in Northeastern Pennsylvania. UGI retained ICF (formerly Applied Energy Group) to evaluate UGI's electric portfolio every two years. This report consists of the Program Year 13 (PY13) process and impact evaluation of UGI's Residential Programs, which include the Appliance Rebate, Appliance Recycling, Residential Low-Income, and School Energy Education programs.¹

Impact Evaluation Results

Overall, the PY13 impact evaluation yielded evaluated energy savings that closely aligned with reported values. All programs had realization rates within 10% of 100%, with the exception of Appliance Recycling demand savings. The Appliance Recycling demand saving discrepancy was driven by the coincidence factor for room air conditioners being off by a factor of 10. Notably, only the School Energy Education program achieved their savings goals, slightly exceeding both kWh and kW goals.

Table 1: Evaluated Energy Savings by Program

Program Name	Savings Goal (kWh)	Reported Savings (kWh)	Evaluated Savings (kWh)	Realized Rate	Evaluated Savings as a % of Goal
Appliance Rebate	1,247,100	1,030,900	1,108,873	108%	89%
Appliance Recycling	513,400	217,300	206,705	95%	40%
Residential Low-Income	31,700	14,100	13,129	93%	41%
School Energy Education	470,300	574,500	511,034	97%	109%

Table 2: Evaluated Demand Savings by Program

Program Name	Savings Goal (kW)	Reported Savings (kW)	Evaluated Savings (kW)	Realized Rate	Evaluated Savings as % of Goal
Appliance Rebate	552	68	65	96%	12%
Appliance Recycling	217	40	72	180%	33%
Residential Low-Income	18	0	1.0	N/A	6%
School Energy Education	51	63	55	100%	108%

Process Evaluation Results

ICF found the following key findings in the evaluation of UGI's programs:

- All the programs had high levels of customer satisfaction which could potentially be used as a proof point in marketing materials to increase participation.

¹ The Residential Energy Kits Program will be evaluated in 2027 along with the Commercial and Industrial Custom Incentive Program.

- [The UGI website, emails, and bill inserts are effective marketing tools.](#) Most Appliance Rebate and Appliance Recycling participants heard about the programs through these channels.
- [The time it takes to receive the Appliance Rebate could be improved.](#) Although only a small group of participants are dissatisfied with the rebate fulfillment timeline, satisfaction degrades when it takes longer than 4 weeks for participants to receive the rebate. Investigation into potential bottlenecks may be warranted.
- [Free ridership may be a concern](#) for a couple of programs – [particularly Appliance Rebates](#) where the majority of participants said they would have purchased the same measure in the same timeframe without the rebate. More research is needed to determine how to best mitigate this concern.
- [A small number of Appliance Recycling participants](#) said their refrigerator or freezer was [not working](#), even though the appliances were required to be in working condition to be eligible for the program. This indicates a need to strengthen verification protocols.
- Interviews with Community Based Organizations (CBOs) partners indicate that the [Residential Low-Income Program delivers meaningful benefits](#) to participating households despite ongoing challenges meeting savings goals. CBOs feel it fills an important service gap for low-income customers who do not qualify for full weatherization services.
- The majority of participants noted that participation in the UGI School Energy Education Program has [changed the way they use energy in their home](#), with three quarters of respondents noting that they [will continue to use the kit products after the completion of the program](#).

1 Introduction

In 2018, UGI Utilities, Inc. (UGI) retained ICF (formerly Applied Energy Group (AEG)) as the Energy Efficiency and Conservation (EE&C) Program Evaluator to perform impact, process, and market evaluation studies for UGI's natural gas programs. In 2019, UGI added their electric territory to the scope of work, which consists of two counties in Northern Pennsylvania. ICF evaluates UGI's electric programs every two years; this report consists of the Program Year 13 (PY13) process and impact evaluation of UGI's Residential Programs, which include the Appliance Rebate, Appliance Recycling, Residential Low-Income, and School Energy Education programs.²

UGI's electric programs are voluntary and not part of Act 129 because they serve less than 100,000 customers. They do follow the same calendar—with program years running from June 1 to May 31 of the next calendar year.

Program Descriptions

For PY13, ICF conducted process and impact evaluations of the following UGI Residential Programs:

Appliance Rebate Program	Offers UGI's electric residential customers rebates for upgrading their HVAC equipment and home appliances to ENERGY STAR equipment. The purpose of the program is to reduce customers' energy costs, encourage the use of ENERGY STAR equipment, and transform the residential HVAC and appliance market to adopt more high efficiency equipment.
Appliance Recycling Program	Encourages UGI's customers to save energy by recycling their existing and inefficient refrigerators, freezers, dehumidifiers, and room air conditioners (room A/C). The program provides free pick-up and disposal of old, inefficient appliances. The units are disposed of in an environmentally responsible manner.
Residential Low-Income Program	Provides low-income customers education and direct installation of energy-savings equipment, such as ENERGY STAR heat pump water heaters (HPWHs) and smart thermostats, at no cost to the participant. Eligible customers are those with household incomes at or below 200% of the US Federal Poverty Guidelines who do not qualify for UGI's Low-Income Usage Reduction Program.
School Energy Education Program	Educates 4th through 12th grade students about energy types, generation and consumption, home energy use, and ways to increase energy efficiency in a home. The program recruits teachers and schools in UGI's service territory to participate, gives a presentation to students, facilitates learning activities, and gives students take-home energy efficiency kits.

Report Structure

The remainder of this report is structured as follows:

- Section 2 – Evaluation Results
- Section 3 – Key Findings and Recommendations
- Appendix A – Methodology

² The Residential Energy Kits Program is a new program with limited participation in PY13 and will be evaluated in 2027 along with the Commercial and Industrial Custom Incentive Program.

2 Evaluation Results

This section summarizes the process and impact evaluation results for PY13 programs, including findings from savings replication and desk review analysis.

2.1 Portfolio Results

The results of the impact evaluation are presented in Table 3 and Table 4. Overall, the PY13 impact evaluation yielded evaluated energy savings that closely aligned with reported values, with most programs achieving realization rates near or above 100 percent. Notably, the Appliance Recycling demand savings realization rate is 180 percent, a discrepancy driven by the coincidence factor for room air conditioners being off by a factor of 10.

Table 3: Evaluated Energy Savings by Program

Program Name	Reported Savings (kWh)	Evaluated Savings (kWh)	Realized Rate
Appliance Rebate	1,030,900	1,108,873	108%
Appliance Recycling	217,258	206,705	95%
Residential Low-Income	14,142	13,129	93%
School Energy Education	524,313	511,034	97%

Table 4: Evaluated Demand Savings by Program

Program Name	Reported Savings (kW)	Evaluated Savings (kW)	Realized Rate
Appliance Rebate	68	65	96%
Appliance Recycling	40	72	180%
Residential Low-Income	0	1.0	N/A
School Energy Education	55	55	100%

Results by program and measure are discussed in the subsections below.

2.2 Appliance Rebate

The Appliance Rebate Program offers UGI's electric residential customers rebates for upgrading their HVAC equipment and home appliances to ENERGY STAR equipment. The purpose of the program is to reduce customers' energy costs, encourage the use of ENERGY STAR equipment, and transform the residential HVAC and appliance market to adopt more high efficiency equipment. The Appliance Rebate Program is UGI's largest residential program in terms of distinct measure offering and total savings.

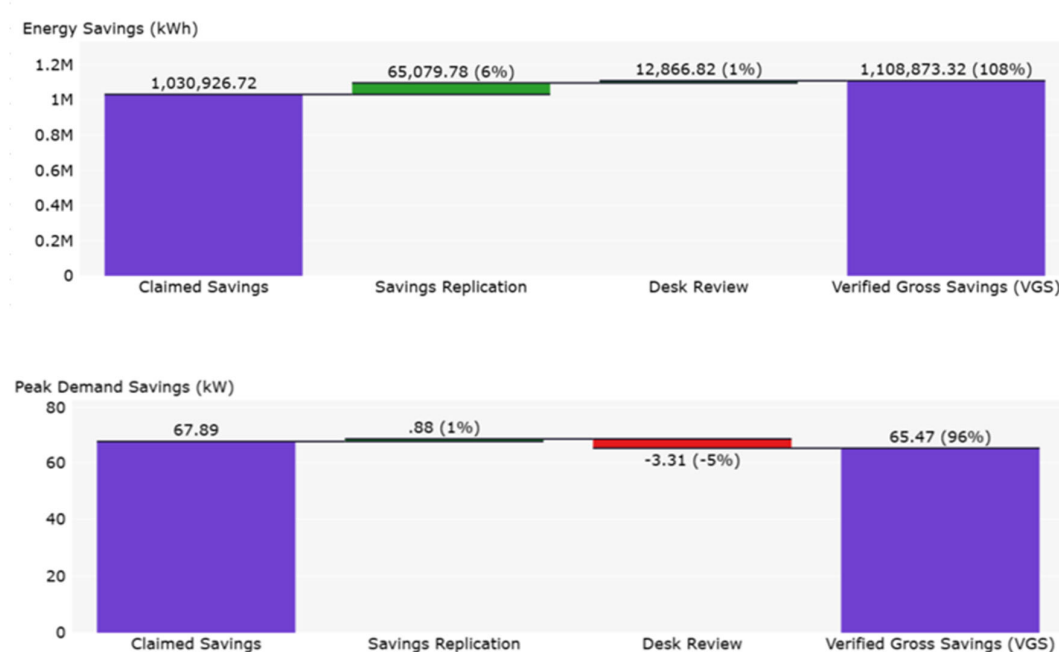
Table 5 summarizes the PY13 Appliance Rebate Program's performance against the goals in UGI's filed EE&C Plan. During PY13, the program achieved 81 percent of the electric energy savings goal and 12 percent of the demand savings goal while spending three-quarters of its budget.

Table 5: Appliance Rebate Program Electric Expenditures and Energy Savings Actual vs. Goal

Program Metric	PY13 Goal	PY13 Actual	% of Goal
Program Spending	\$328,550	\$239,709	73%
Program Savings (MWh)	1,274.1	1,030.9	81%
Program Savings (MW)	0.552	0.068	12%

2.2.1 Appliance Rebate Impact Evaluation

Exhibit 1 summarizes the impact evaluation adjustments from each activity. We discuss the drivers of each adjustment below.

Exhibit 1: PY13 Appliance Rebate Program Summary of Adjustment Activity

- **Savings Replication.** ICF's savings replication resulted in increased kWh and kW savings compared to the reported savings.
 - The Proper Sizing Factor (PSF), which represents savings from proper sizing and installation, was excluded from the air source heat pump (ASHP) kWh savings calculations.³
 - For ASHP kW savings, the EER was converted from SEER, rather than using the EER value listed in the data.
 - Reported savings for dehumidifiers used 0.437 in reported savings rather than the Pennsylvania 2019 Technical Reference Manual (TRM) value of 0.473.
 - In several cases, the refrigerator/freezer categories that were used to calculate the claimed savings did not match the categories used in the verified savings.
 - For ASHP fuel switching, the new natural gas device's capacity was being used in the claimed savings formula as the removed unit's capacity as well as the new unit's capacity instead of the default sizing by removed unit type (as noted in the TRM).

³ PSF was not included because sizing information wasn't a requirement to determine if the units were sized properly.

- **Desk Reviews.** ICF's review resulted in an increase in kWh savings.
 - SEER_EE2 and EER_EE2 were not converted to SEER_EE or EER_EE for Central Air Conditioners.
 - ICF used actual IMEF base and IMEF_ee values when calculating savings for clothes washers.
 - ICF used the ENERGY STAR rating for the kWh_ee value for dishwashers and the CEER_ee value for room air conditioners.
 - ICF used the AHRI documents to determine heating capacity for fuel switching.

The evaluated savings by measure are shown below.

Table 6: PY13 Appliance Rebate Evaluated Energy Savings by Measure

Measure	Energy (kWh)			Demand (kW)		
	Reported Savings	Evaluated Savings	Realization Rate	Reported Savings	Evaluated Savings	Realization Rate
Air Source Heat Pump	20,538	17,659	86%	3.52	-0.84	-24%
Central Air Conditioner	2,746	2,746	100%	.72	.72	100%
Ductless Mini-Split Heat Pumps	925,292	913,582	99%	57.35	58.10	101%
ENERGY STAR Clothes Washer	8,713	11,506	132%	.97	1.28	132%
ENERGY STAR Dehumidifier	8,154	8,649	106%	2.02	2.15	106%
ENERGY STAR Dishwashers	2,098	3,806	181%	.23	.42	184%
ENERGY STAR Refrigerators	11,415	10,666	93%	1.84	1.72	93%
ENERGY STAR Room Air Conditioner	173	508	294%	.38	1.12	296%
Fuel Switching: Electric to Natural Gas Furnaces (ENERGY STAR)	16,891	45,188	267%	0	0	100%
Heat Pump Water Heater	9,842	9,841	100%	.79	.79	100%
Smart Thermostat	25,064	84,719	338%	.06	0	0%

2.2.2 Appliance Rebate Process Evaluation

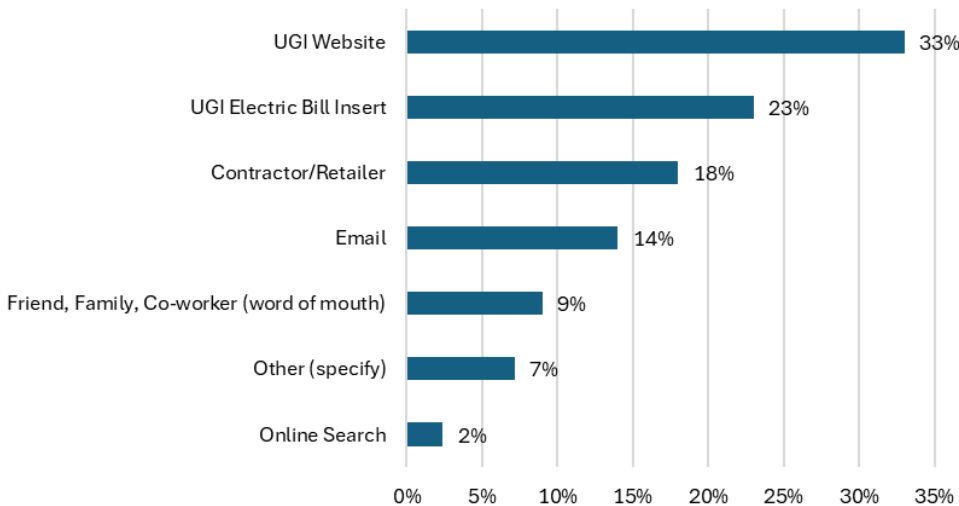
The Appliance Rebate Program promotes the purchase and installation of a wide range of ENERGY STAR equipment and provides customers with financial incentives. In PY13, the program achieved 81% of its electric savings goal and 12% of its capacity savings goal while spending 73% of the budget. This is quite different from PY12, when the program had exceeded its goals by 181%. In terms of savings achieved, the program performance in PY13 was very similar to PY12 with claimed savings of 1,169 MWhs in PY12 and 1,039 MWhs in PY13. But because the goal doubled, the percent of goal in PY13 is much lower.

Although the program has not achieved its goals, program staff indicated that they feel the goals are reasonable. Staff are looking to potentially increase the incentives and improve the outreach to increase participation. They are currently reviewing PY14 performance and considering adjustments within program planning. During the evaluation period the staff were working on strategies to increase participation and the latest forecasts show PY14 to be ahead of PY13 levels.

Marketing and Outreach

The majority of participants who responded to the survey said they heard about the program from UGI, either on the UGI website (33%) or in their bill (23%). An additional 18% heard about the program from their contractor/retailer.

Exhibit 2: How Participants Heard about the Appliance Rebate Program

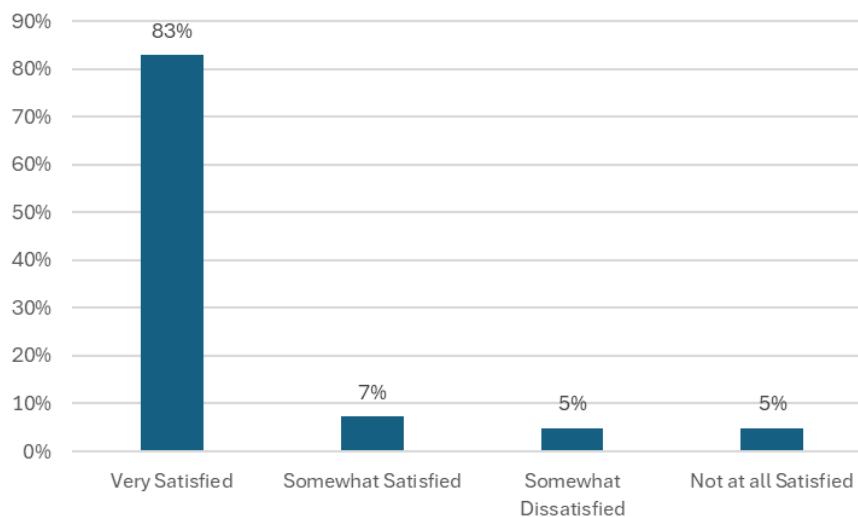


Future efforts may focus on improving program flexibility and expanding marketing approaches. New marketing strategies, such as postcards, mailers, emails, and social media, are being explored to further increase customer awareness and engagement.

Program Satisfaction

Satisfaction with the application process is high, with 83% of respondents saying they were very satisfied and an additional 7% saying they were somewhat satisfied.

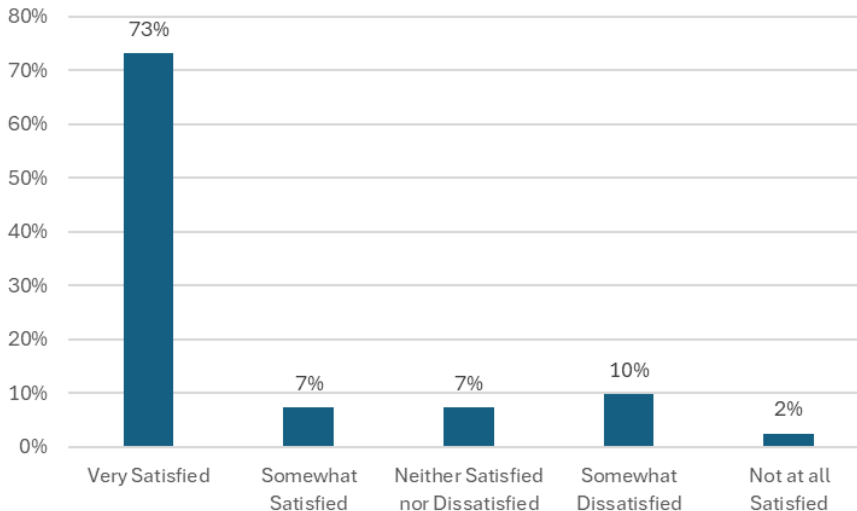
Exhibit 3: Participant Satisfaction with the Appliance Rebate Application Process



Almost all respondents said it took them less than 30 minutes to complete the application. One respondent said it took them more than hour to complete the application, and it was hard to find the specific information required without clear guidance.

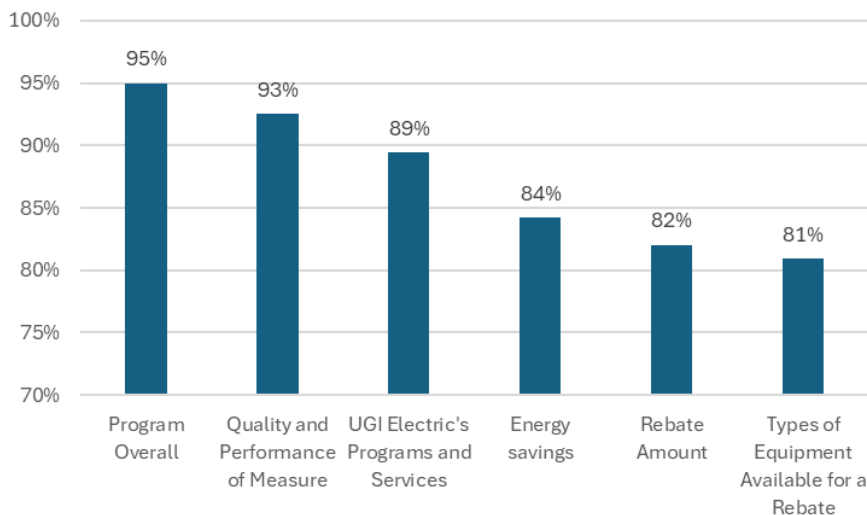
Satisfaction was slightly lower for the time it took to receive the rebate. Eighty percent were very or somewhat satisfied, and 12% were somewhat dissatisfied or not at all satisfied. Those that were dissatisfied said it took 4 to 6 weeks to receive the rebate or did not answer that question.

Exhibit 4: Participant Satisfaction with the Time it Took to Receive the Rebate



Respondents rated various components of the program high, with 95% giving a rating of very or somewhat satisfied to the program overall.

Exhibit 5: Participant Satisfaction with Appliance Rebate Program Features (Top 2 Box)



Eighty-eight percent of respondents said it was very likely that they would recommend the program to someone else. Two respondents said they had other energy-related needs that the Appliance Rebate Program did not address: one respondent said he would like a rebate for water heaters and toilets, and another said their bill was too high.

Program Effectiveness

There are some indications that the program may have an issue with free ridership. Eighty percent of respondents said they had already planned to purchase the measure when they heard about the program and 88% said they were somewhat or very likely to have purchased the same measure without the rebate.

from UGI. In the optional open-ended questions about the influence of the program on their purchasing decision, 17% of respondents clearly stated the rebate was important in their decision, while 12% said it had no influence.

2.3 Appliance Recycling

The Appliance Recycling Program encourages UGI's customers to save energy by recycling their existing and inefficient refrigerators, freezers, dehumidifiers, and room air conditioners (room A/C). The program provides free pick-up and disposal of old, inefficient appliances. The units are disposed of in an environmentally responsible manner.

Table 7 summarizes the PY13 Appliance Recycling Program's performance against the goals in UGI's filed EE&C Plan. During PY13, the program achieved 42 percent of the energy savings goal and 18 percent of the demand savings goal while spending 50 percent of its budget.

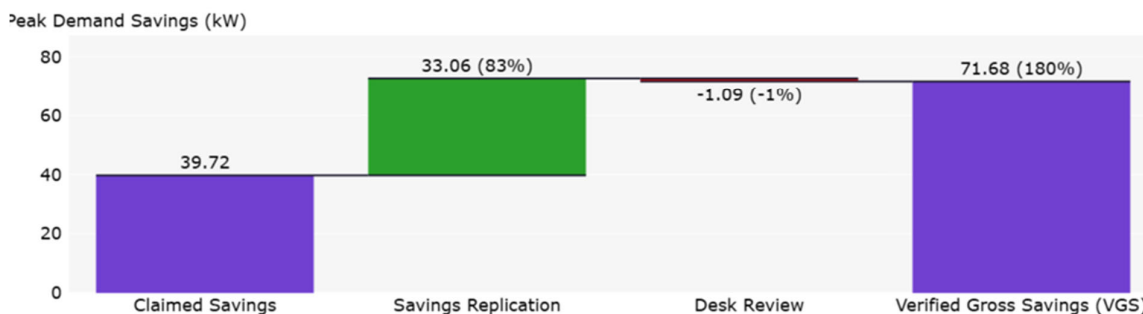
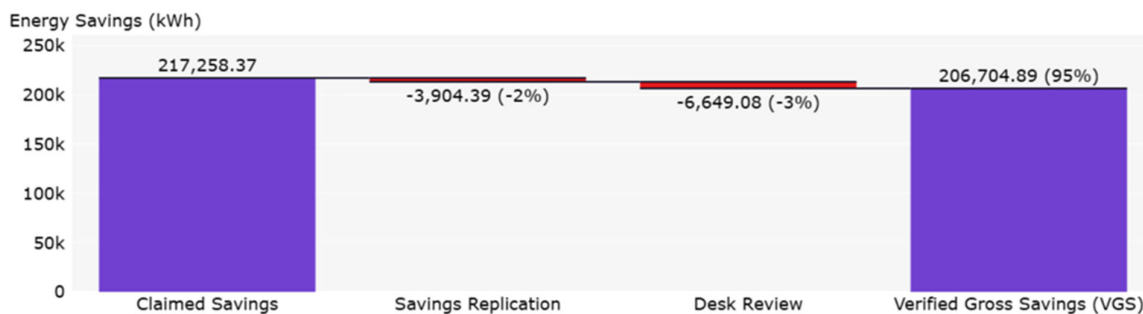
Table 7: Appliance Recycling Program Electric Expenditures and Energy Savings Actual vs. Goal

Program Metric	PY13 Goal	PY13 Actual	% of Goal
Program Spending	\$222,750	\$111,823	50%
Program Savings (MWh)	513.4	217.3	42%
Program Savings (MW)	0.217	0.040	18%

2.3.1 Appliance Recycling Impact Evaluation

~~Exhibit 6~~ summarizes the impact evaluation adjustments from each activity. We discuss the drivers of each adjustment below.

Exhibit 6: PY13 Appliance Recycling Program Summary of Adjustment Activity



- **Savings Replication.** ICF's savings replication resulted in lower kWh and higher kW savings than what was reported. The increase in kW was mostly driven by Room A/C Recycling where the reported coincidence factor was off by a factor of 10.
 - Dehumidifier reported kWh savings do not appear to reflect the deemed savings based on capacity and location.
 - ICF used the TRM value for the adjusted volume of freezers and refrigerators.

The evaluated savings by measure are shown below.

Table 8: PY13 Appliance Recycling Program Evaluated Energy Savings by Measure

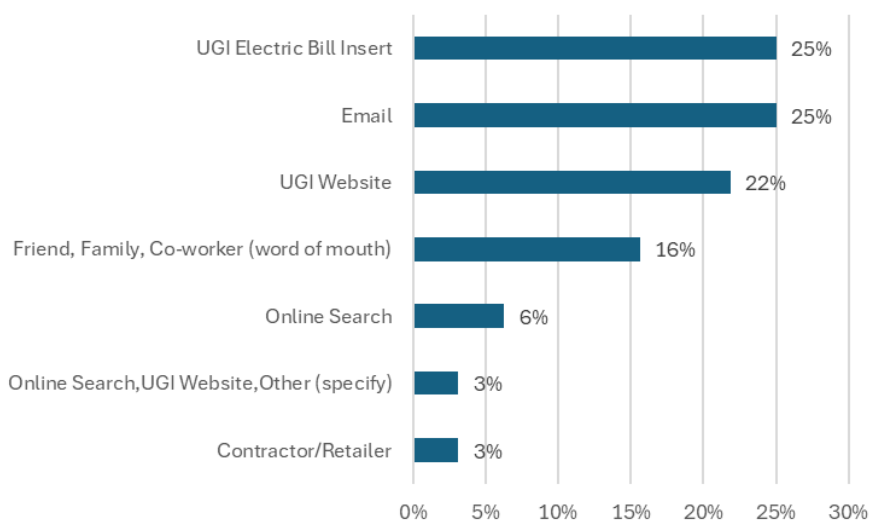
Measure	Energy (kWh)			Demand (kW)		
	Reported Savings	Evaluated Savings	Realization Rate	Reported Savings	Evaluated Savings	Realization Rate
Refrigerator Recycling	135,124	119,173	95%	21.81	19.24	95%
Freezer Recycling	22,883	27,033	97%	3.69	4.36	97%
Dehumidifier Recycling	42,376	43,597	101%	10.48	10.48	100%
Room A/C Recycling	16,875	16,901	100%	3.74	37.60	1001%

2.3.2 Appliance Recycling Process Evaluation

The Appliance Recycling Program provides free pick-up and disposal of old, inefficient refrigerators, freezers, dehumidifiers, and room A/Cs. Eligible refrigerators must be between 10 and 30 cubic feet, plugged in, and function at the time of pickup. Customers receive a \$75 incentive for recycling refrigerators and freezers and a \$50 incentive for room A/Cs and dehumidifiers.

The program is promoted through emails, social media, and special promotions. The majority of participants who responded to the survey said they heard about the program from UGI through bill inserts, emails, or the UGI website.

Exhibit 7: How Participants Heard of the Appliance Recycling Program



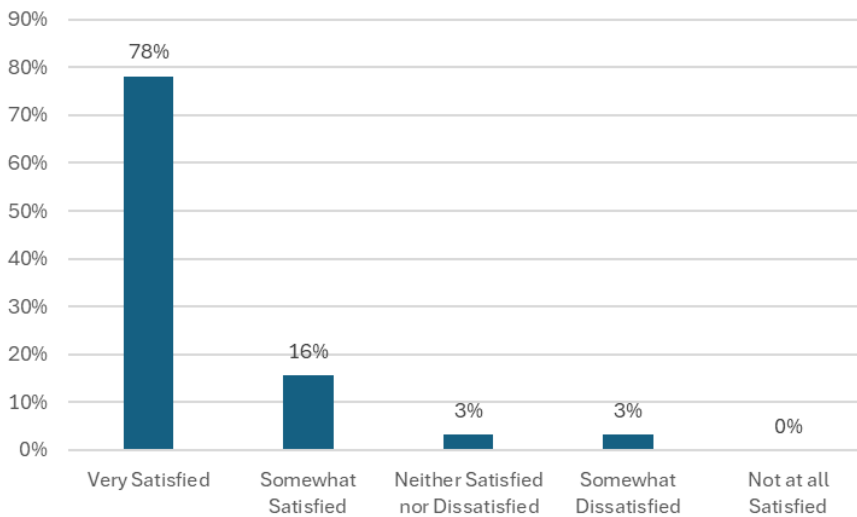
In PY13, the program did not meet its savings goals, achieving 42 percent of its electric savings goal and 18 percent of its capacity savings goal while spending 50 percent of the budget. There was a pause in

operations in PY11 – PY12 and the program has been rebuilding since it restarted in PY12. Program staff are hopeful their marketing efforts will help improve program performance. The program delivery process itself is considered consistent and reliable.

Program Satisfaction

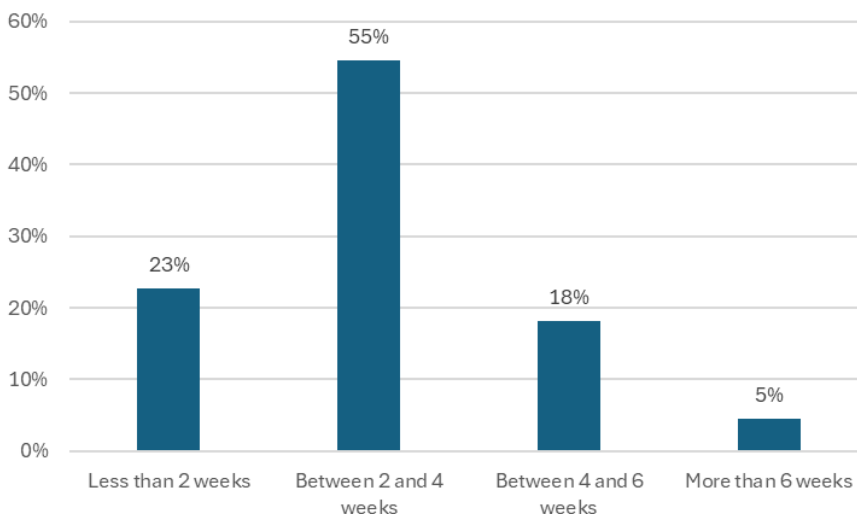
Participants are very satisfied with the application process, with all of the respondents saying they were very (88%) or somewhat (12%) satisfied. All of the respondents reported that completing the application took less than 30 minutes. Ninety-four percent of respondents also expressed high satisfaction with the time it took to receive the rebate.

Exhibit 8: Satisfaction with Time it Took to Receive the Rebate



The majority of respondents said it took 4 weeks or less to receive the rebate.

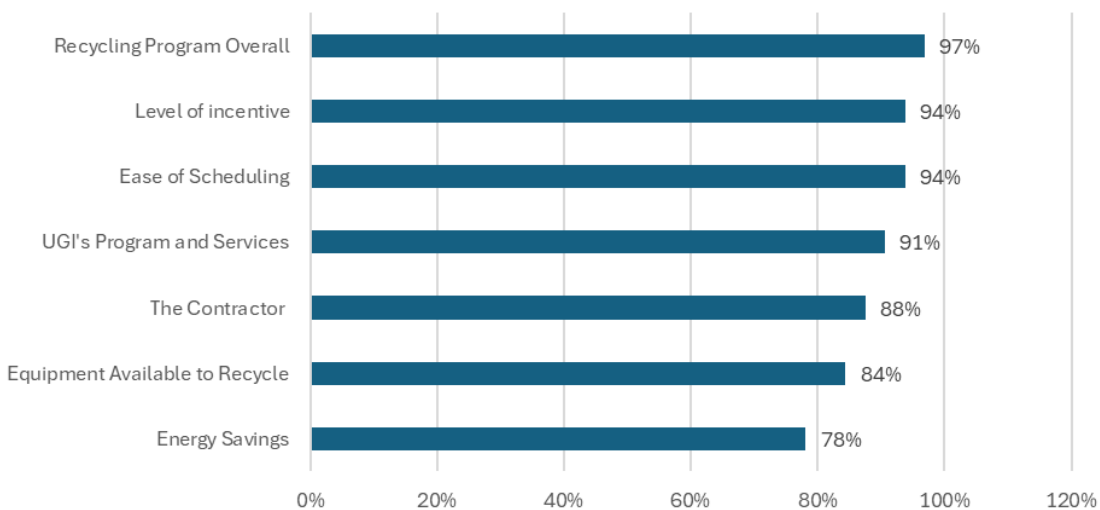
Exhibit 9: Amount of Time it Took to Receive the Appliance Recycling Rebate



According to the program staff, overall, the program has not faced major additional challenges beyond those already noted. Future improvements may focus on strengthening program performance and increasing participation to help the program better meet its savings targets.

Respondents rated various components of the program high, with 97 percent giving a rating of very or somewhat satisfied to the program overall.

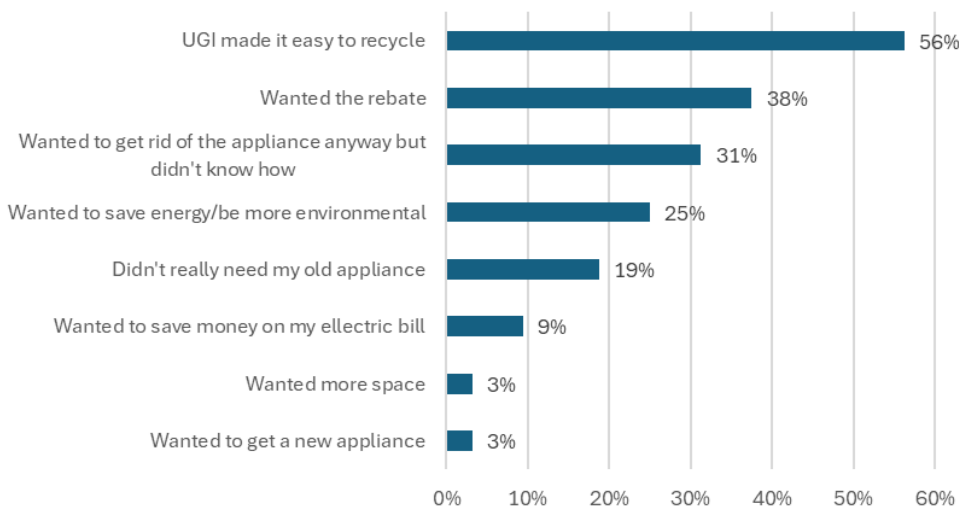
Exhibit 10: Participant Satisfaction with Appliance Recycling Program Features (Top 2 Box)



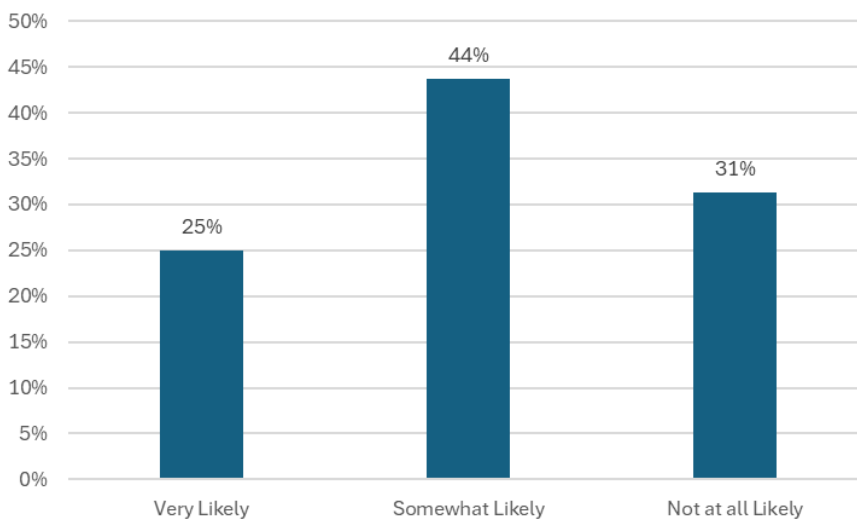
Program Effectiveness

Most participants cited programmatic features as reasons why they wanted to recycle their appliance(s), with the top answers being that UGI made it easy to recycle and they wanted the rebate. Almost a third of respondents said they wanted to get rid of the appliance anyway but didn't know how, and a quarter said they wanted to save energy/be more environmental.

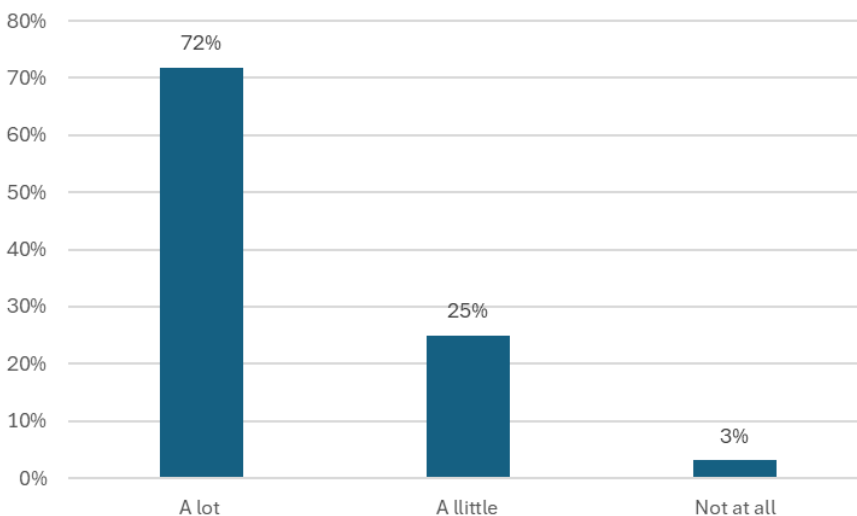
Exhibit 11: Top Reasons for Recycling Appliance



Although it was a requirement of the program that the recycled refrigerators and freezers be in working condition, two respondents said their refrigerator was not working and two respondents said their freezers were not working at the time they were recycled. All of the respondents said they were very (94%) or somewhat (6%) likely to recommend the program to someone else.

Exhibit 12: Likelihood of Recycling Appliance in Same Time Frame

There is some evidence of free ridership with a quarter of participants saying they would have recycled their appliance in the same time frame if the UGI program had not been available. But almost all respondents said the program influenced them.

Exhibit 13: How Much the Rebate Influenced the Participant to Recycle**2.4 Residential Low-Income**

The Residential Low-Income Program provides low-income customers education and direct installation of energy-savings equipment, such as ENERGY STAR heat pump water heaters (HPWHs) and smart thermostats, at no cost to the participant. Eligible customers are those with household incomes at or below 200% of the US Federal Poverty Guidelines who do not qualify for UGI's Low-Income Usage Reduction Program (LIURP). The program partners with two Community Based Organizations (CBOs) to identify eligible participants and install the measures.

Table 9 summarizes the PY13 Residential Low-Income Program's performance against the goals in UGI's filed EE&C plan. During PY13, the program achieved 55 percent of its electric energy savings goal while spending 50 percent of its budget. No smart thermostats were installed through the program in PY13.

Table 9: Residential Low-Income Program Electric Expenditures and Energy Savings Actual vs. Goal

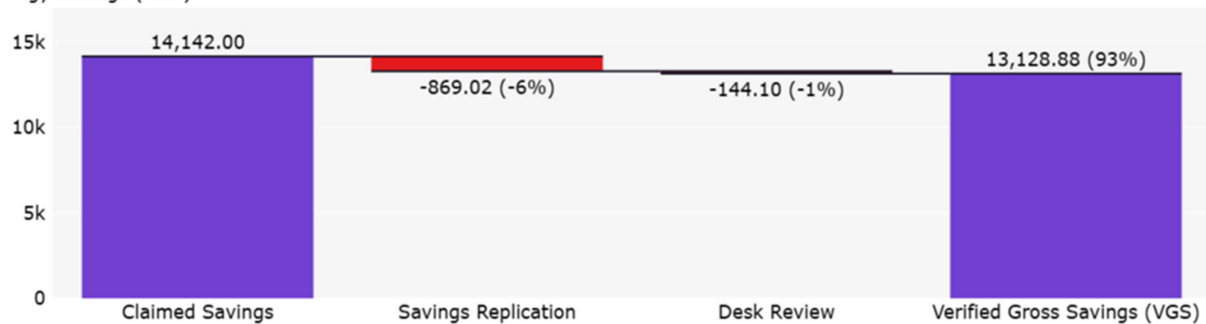
Program Metric	PY13 Goal	PY13 Actual	% of Goal
Program Spending	\$49,000	\$24,500	50%
Program Savings (MWh)	31.7	14.1	45%
Program Savings (MW)	0.018	0.000	0%

2.4.1 Residential Low-Income Impact Evaluation

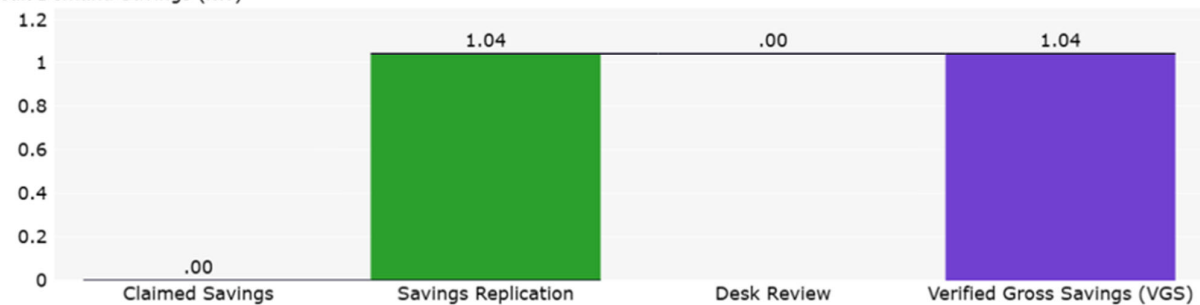
Exhibit 14 summarizes the impact evaluation adjustments from each activity. We discuss the drivers of each adjustment below.

Exhibit 14: PY13 Residential Low-Income Program Summary of Adjustment Activity

Energy Savings (kWh)



Peak Demand Savings (kW)



- **Savings Replication.** ICF's savings replication found some small errors that resulted in lower kWh savings and higher kW savings.
 - The formula parentheses were incorrectly placed, creating issues in reported savings.
 - HPWHs located in the basement need to have a cooling factor added to the kWh component of the savings calculation.

The evaluated savings by measure are shown below.

Table 10: Low-Income Program Evaluated Energy Savings by Measure

Measure	Energy (kWh)			Demand (kW)		
	Reported Savings	Evaluated Savings	Realization Rate	Reported Savings	Evaluated Savings	Realization Rate
Heat Pump Water Heater	14,142	13,129	99%	0	1.0	N/A

2.4.2 Residential Low-Income Process Evaluation

The program did not meet its savings goals in PY13, achieving 44 percent of its electric savings goal and 0 percent of its capacity savings goal while spending 50 percent of the budget. The program had noted several operational challenges during the year, including reliance on part-time workers and performance-related issues. To address these challenges, the team has begun strengthening monitoring and follow-up efforts throughout the year to better track progress and address performance concerns.

Program goals may be difficult to achieve due to program constraints and eligibility requirements. No adjustments have been made to the goals yet, though potential changes may be considered in the future. At present, the program is not on track to meet the PY14 goals. However, when eligible households participate, the program successfully installs measures that reduce energy consumption.

Interviews with CBO partners indicate that the Residential Low-Income Program delivers meaningful benefits to participating households and operates with a generally effective and collaborative implementation model, despite ongoing challenges meeting savings goals. The program provides no-cost direct installation of measures—primarily HPWHs—to income-eligible customers who do not qualify for full weatherization services, filling an important service gap.

CBOs described a structured and well-defined implementation process, beginning with ongoing screening of households for eligibility, followed by in-home visits to confirm customer interest and site suitability. For HPWHs, this includes assessing available space and customer willingness to participate. Eligible cases are submitted to UGI for review and approval, after which installations are completed by the CBO using licensed plumbers.

The relationship between UGI and its CBO partners is positive, with CBOs saying the relationship is collaborative, and effective. Roles and responsibilities are clearly defined, with CBOs responsible for outreach, screening, and installation, and UGI responsible for case review and approval. Communication is described as regular and constructive, supported by periodic check-ins and conference calls to monitor progress. A key implementation strength cited by CBOs is UGI's provision of customer lists, which helps target households most likely to be eligible and benefit from HPWH installations.

Outreach and Customer Experience

Customer outreach primarily leverages existing CBO channels, including in-home audits, phone outreach, direct mail, and weatherization program waitlists. CBOs generally indicated that the current outreach and marketing approach is working reasonably well and does not require significant changes at this time.

One ongoing challenge identified by program staff is the limited availability of CBO partners, which makes outreach and participant recruitment more difficult. Expanding partnerships and improving outreach and coordination may help increase participation and strengthen overall program performance.

Program Satisfaction

Customer satisfaction with the program is reportedly high. Participants are described as appreciative of the HPWH installations, which replace older, inefficient equipment and lead to noticeable energy savings.

Despite positive implementation characteristics and high customer satisfaction, CBOs acknowledged that the program did not meet its PY13 savings goals and remains behind PY14 targets. Interviewees identified the limited pool of eligible households as a primary driver of underperformance. Customers who qualify for other low-income programs, such as full weatherization, are not eligible for this program, which constrains participation opportunities and limits achievable savings.

In addition, certain measures—most notably smart thermostats—have seen little to no uptake. CBOs indicated that many customers, particularly elderly homeowners, are not interested in adopting this technology, further limiting savings potential.

Opportunities for Improvement

CBOs reported that no major changes have been implemented to address savings shortfalls in PY14. However, interviewees identified expanding the range of measures offered as a key opportunity to improve participation. In particular, adding mini-split heat pump systems for heating and cooling was suggested as a potential strategy to increase customer interest and generate additional energy savings.

2.5 School Energy Education

The School Energy Education Program is an energy efficiency program designed to teach 4th through 12th grade students in UGI's electric service territory about energy types, generation and consumption, home energy use, and ways to increase energy efficiency in a home. The National Energy Foundation (NEF), the implementer, recruits teachers and schools to participate, gives a presentation to students, facilitates learning activities, and gives students take-home energy efficiency kits.

NEF distributes two kits, depending on the grade level. The Take Action Kit is distributed to 4th through 8th graders, and the Energy Innovation Kit is distributed to 9th through 12th graders. The kits are similar, generally containing LEDs, low flow faucet aerators, and low flow showerheads—but the Energy Innovation Kit also contains one tier 2 smart power strip. Students also receive a survey to fill out, or a Household Report Card, where they report on household behaviors and the installation of kit items.

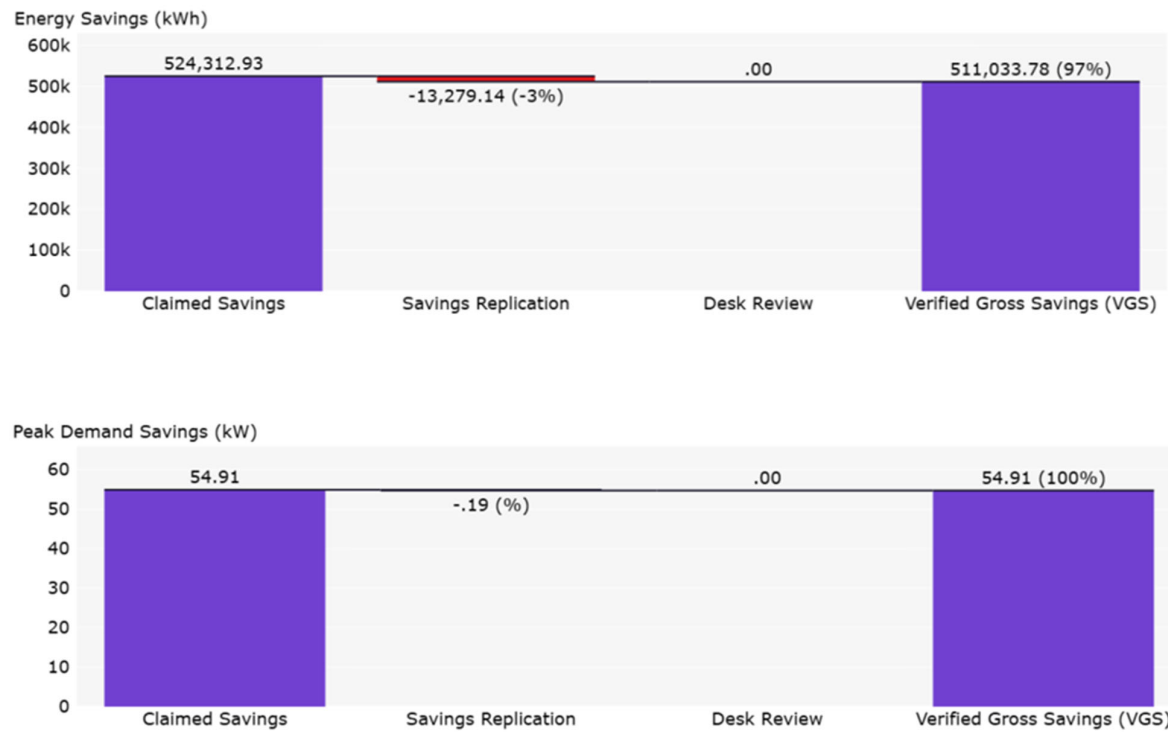
Table 11 summarizes the PY13 School Energy Education Program's performance against the goals in UGI's filed EE&C plan. During the PY13 period, the program achieved 122 percent of its electric energy savings goal and 124 percent of its demand savings goal while spending 71 percent of its budget.

Table 11: School Energy Education Program Electric Expenditures and Energy Savings Actual vs. Goal

Program Metric	PY13 Goal	PY13 Actual	% of Goal
Program Spending	\$262,660	\$186,696	71%
Program Savings (MWh)	470.3	574.5	122%
Program Savings (MW)	0.051	0.063	124%

2.5.1 School Energy Education Impact Evaluation

[Exhibit 15](#) summarizes the impact evaluation adjustments from each activity. We discuss the drivers of each adjustment below.

Exhibit 15: PY13 School Energy Education Program Summary of Adjustment Activity

- **Savings Replication.** For the savings replication, ICF calculated the savings from each kit component and multiplied those by the number of kits distributed. ICF's savings replication resulted in slightly lower overall kW and kWh savings for the program.
 - Reported savings used a Temp(in) value of 52. The value in the TRM is 55, leading to a lower realization rate.

The evaluated savings by measure are shown below.

Table 12: School Energy Education Program Evaluated Energy Savings by Measure

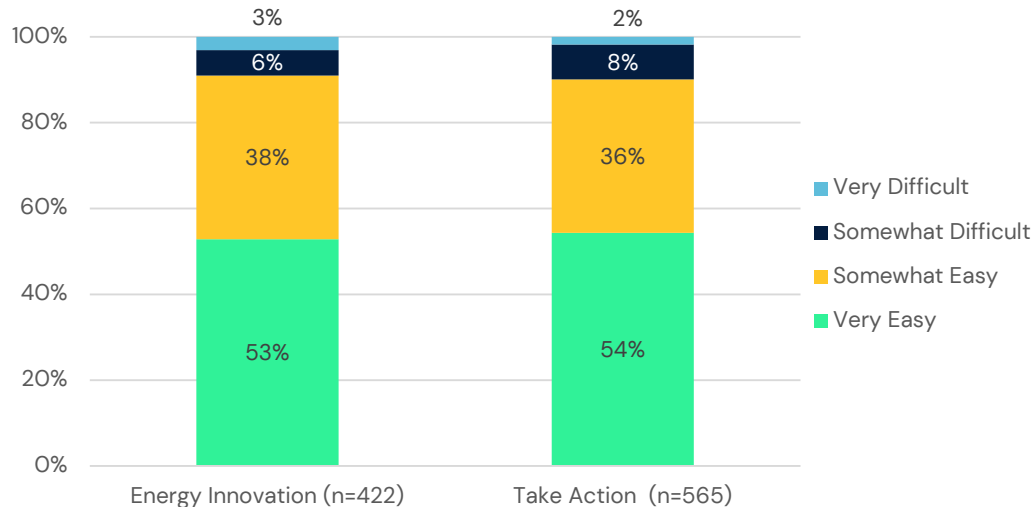
Measure	Energy (kWh)			Demand (kW)		
	Reported Savings	Evaluated Savings	Realization Rate	Reported Savings	Evaluated Savings	Realization Rate
Energy Innovation Kit	266,785	261,047	98%	28.70	28.26	98%
Take Action Kit	257,527	249,987	97%	26.21	26.46	101%

2.5.2 School Energy Education Process Evaluation

The program exceeded its savings goals in PY13, achieving 122 percent of its electric savings goal and 124 percent of its capacity savings goals while spending 73 percent of the budget. Students that participate in the program and receive an energy efficiency kit also receive a Household Report Card, a survey where they report on household behaviors and the installation of kit items. ICF reviewed the information collected on the Household Report Cards.

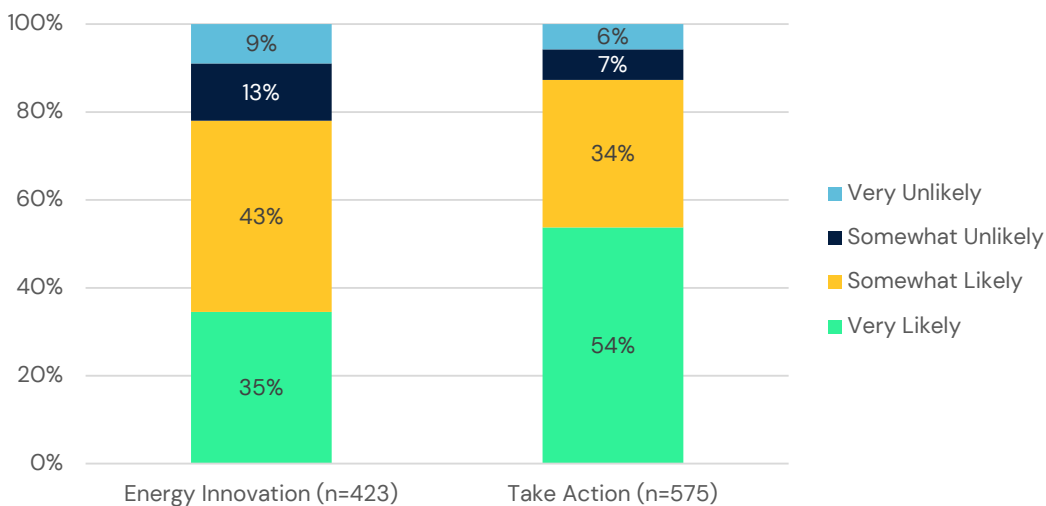
Over 50 percent of households reported that the kit and products were somewhat easy or very easy for the student and/or parent/guardian to install. Less than 10 percent reported that the kit and products were somewhat difficult or very difficult to install.

Exhibit 16: Ease of Kit and Product Installation



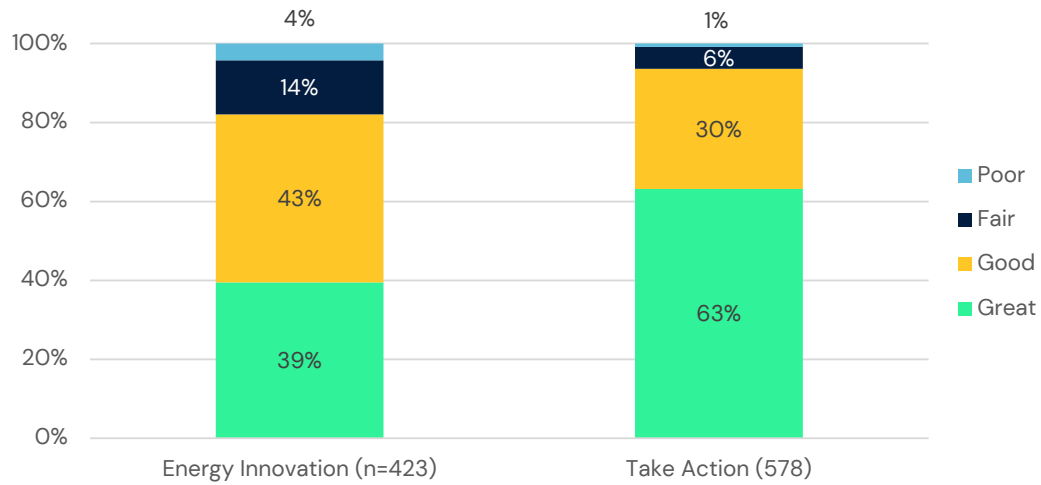
Sixty-four percent of Energy Innovation participants and 78 percent of Take Action participants noted that participation in the UGI School Energy Education Program has changed the way they use energy in their home. In line with that response, over 75 percent of respondents in both programs noted that they will continue to use the kit products after the completion of the program.

Exhibit 17: Likelihood of Using Kit Products after Completion of the Program



As shown in Exhibit 18, 94 percent of Take Action participants 82 percent of Energy Innovation participants noted that the program is good or great.

Exhibit 18: Respondent Rating of the Program



Eighty-nine percent of Energy Innovation participants and 95 percent of Take Action participants would like to see the program continued. However, only 32 percent of Energy Innovation participants and 40 percent of Take Action participants have visited the UGI website.

3 Key Findings and Recommendations

This chapter summarizes the key findings from the evaluation and provides recommendations for the future.

3.1 Impact Evaluation Results

Overall, the PY13 impact evaluation yielded evaluated energy savings that closely aligned with reported values. All programs had realization rates within 90 percent and 110 percent, with the exception of Appliance Recycling demand savings, which underestimated its demand savings. This discrepancy was due to not accounting for the coincidence factor in room A/C recycling. Notably, only the School Energy Education program achieved their savings goals, slightly exceeding both kWh and kW goals.

Table 13: Evaluated Energy Savings by Program

Program Name	Savings Goal (kWh)	Reported Savings (kWh)	Evaluated Savings (kWh)	Realized Rate	Evaluated Savings as a % of Goal
Appliance Rebate	1,247,100	1,030,900	1,108,873	108%	89%
Appliance Recycling	513,400	217,300	206,705	95%	40%
Residential Low-Income	31,700	14,100	13,129	93%	41%
School Energy Education	470,300	574,500	511,034	97%	109%

Table 14: Evaluated Demand Savings by Program

Program Name	Savings Goal (kW)	Reported Savings (kW)	Evaluated Savings (kW)	Realized Rate	Evaluated Savings as % of Goal
Appliance Rebate	552	68	65	96%	12%
Appliance Recycling	217	40	72	180%	33%
Residential Low-Income	18	0	1.0	N/A	6%
School Energy Education	51	63	55	100%	108%

3.2 Key Findings and Recommendations

ICF found the following key findings and recommends the following actions to improve UGI's programs:

3.2.1 Cross-Cutting: Appliance Rebate and Appliance Recycling Programs

- The programs [did not meet goals](#) in PY13.
- [Most participants hear about the programs from UGI](#) – either on the website, an email, or information included in their bill.

Recommendation: Rather than broad, portfolio level messaging, emphasize precision marketing which could include GIS and segmentation targeting, broadening outreach focused specifically on the Appliance Rebate or Appliance Recycling offerings using utility communications, retail materials, print, and digital advertising.

Recommendation: Use targeted messaging to highlight limited-time offers or enhanced rebates for higher-efficiency options.

- Satisfaction with the rebate process is very high with most participants finding the [application easy to complete](#).
- Satisfaction with all aspects of the programs is high and most participants would [recommend the programs to someone else](#).

Recommendation: Use satisfaction results as a proof point in marketing materials (e.g., “easy to apply,” “customer-friendly process”). Incorporate referral-based or testimonial messaging to broaden program reach.

3.2.2 Appliance Rebate

- The Appliance Rebate program achieved [realization rates near or above 100%](#).
- ICF found a variety of [savings calculations errors](#) that led to a slight underestimation of energy savings and a slight overestimation of demand savings. These included not using the Proper Sizing Factor (PSF) for Air Source Heat Pumps; not using actual equipment level data when it is available instead of a proxy; incorrect climate zones, TRM values, or equipment categories; and not correctly converting some equipment efficiency values.

Recommendation: Use actual equipment level data when it is available to improve the accuracy of the savings estimates. Conduct QA/QC on climate zones, TRM values, and equipment categories.

- Satisfaction with the time it took to receive the rebate is high but [starts to degrade when rebates take longer than 4 weeks](#).

Recommendation: Investigate reasons why, in some cases, rebates take longer than 4 weeks, and flag bottlenecks. Provide proactive status updates or notifications when delays are expected.

- [Free ridership may be a concern](#) for the program as most participants said they would have purchased the same measure in the same timeframe without the rebate.

Recommendation: Conduct additional research to determine which measures in the program are likely to have higher free ridership. Tier-based incentives, providing higher rebates for higher efficiency levels, could potentially help concentrate incentives where they have the greatest influence.

Recommendation: Consider expanding target marketing to hard-to-reach customers who are more likely to be influenced by the program.

3.2.3 Appliance Recycling

- The Appliance Recycling program [underestimated kW savings](#).

Recommendation: Use the correct coincidence factor for Room A/C recycling.

- The majority of participants are [satisfied with the time it takes to receive the rebate](#), with more than three quarters stating they received their rebate in less than 4 weeks.

Recommendation: Use timely delivery as a marketing proof point in outreach materials, emphasizing fast turnaround as a key program benefit.

- A small number of participants said their refrigerator or freezer was [not working](#), even though the appliances were required to be in working condition to be eligible for the program.

Recommendation: Strengthen verification protocols, such as: (1) requiring contractors to confirm appliance operability at pickup using a simple checklist, or (2) adding a standardized “working condition confirmed” field in tracking systems.

- A quarter of participants said they would have recycled their appliances in the same time frame in the absence of the program indicating [some potential free ridership](#). But 97% of participants said the [program influenced them at least a little](#).

Recommendation: Consider modest targeting refinements in future program cycles, such as: outreach focused on households with aging appliances and messaging that emphasizes ease and speed rather than “eventual” recycling.

3.2.4 Residential Low Income

- The Residential Low-Income programs [underestimated kW savings](#). The formula parentheses were incorrectly placed, creating issues in reported savings.

Recommendation: Double check savings algorithms to ensure they comply with the TRM.

- HPWHs located in the basement [need to have a cooling factor added to the kWh](#) component of the savings calculation.

Recommendation: If HPWHs are located in unconditioned space, apply a cooling factor to energy savings calculations.

- There were [no smart thermostats installed](#) through the program during the PY13 program year. CBOs indicated that many customers, particularly elderly homeowners, are not interested in adopting this technology, further limiting savings potential.

- In PY13, the program [did not meet its savings goals](#).

Recommendation: Expand partnerships with additional CBOs. Consider offering additional measures, such as ductless mini-split heat pumps.

- Interviews with CBO partners indicate that the Residential Low-Income [Program delivers meaningful benefits](#) to participating households despite ongoing challenges meeting savings goals. CBOs feel it fills an important service gap for low-income customers who do not qualify for full weatherization services.
- The relationship between UGI and its CBO partners is positive, with [CBOs saying the relationship is collaborative and effective](#).
- [Customer satisfaction with the program is reportedly high](#). Participants are appreciative of the HPWH installations, which replace older, inefficient equipment and lead to noticeable energy savings.
- Customers who qualify for other low-income programs, such as full weatherization, are not eligible for this program, which [constrains participation opportunities and limits achievable savings](#).

Recommendation: Explore adjustments to eligibility criteria or coordination pathways that allow households to receive services in complementary ways without duplication

3.2.5 School Energy Education

- The School Energy Education program achieved [realization rates near 100%](#) and [exceeded its savings goals in PY13](#).

Recommendation: Conduct QA/QC on TRM inputs to ensure the values align with the TRM.

- Most households reported that the kit and products were [somewhat easy or very easy for the student and/or parent/guardian to install](#).

Recommendation: Maintain the current kit design and installation approach.

- The majority of participants noted that participation in the UGI School Energy Education Program has [changed the way they use energy in their home](#).
- Three quarters of respondents noted that they will [continue to use the kit products after the completion of the program](#).

Recommendation: The program should continue to focus on reinforcing energy awareness and conservation behaviors among both students and household members, as these behavioral impacts complement the direct savings from installed measures and may lead to longer term energy savings.

- [Satisfaction with the program is high](#) and the vast majority said they would like to see it continued.
- The program has only been [marginally successful with driving participants to the UGI website](#).

Recommendation: If increasing digital engagement is an ongoing program objective, the program should test enhanced and more targeted strategies, such as clearer calls to action embedded in student materials or parent communications, tighter integration between kit instructions and online resources, and incentives or reminders tied to website visits for additional learning or tools.

Appendix A. Methodology

This appendix describes the methodology and data collection processes used for the process and impact evaluations. ICF examined UGI's data to determine the best impact and process evaluation approaches for each program.

Impact Evaluation

Impact evaluations estimate energy-related impacts, verify measure installations, identify key energy assumptions, and provide the research necessary to calculate defensible and accurate savings attributable to the program. ICF's impact evaluation consisted of performing engineering reviews. In general, the engineering review is composed of a savings replication of each program and conducting desk reviews when applicable for a sample of projects.

Engineering Review

UGI provided measure-level tracking data consisting of equipment specification inputs for each program to assist in the engineering review savings calculations. We used a two-step engineering review approach that followed the Pennsylvania 2019 Technical Reference Manual (TRM) (revised in 2021) to evaluate impacts for prescriptive measures installed in the program. The two-step process included a savings replication and desk reviews. The savings replication calculates the savings according to the TRM based on the inputs provided in the UGI tracking database. This ensures that the proper algorithms are used, and the savings are calculated correctly. For Appliance Rebate, Appliance Recycling and the Residential Low Income programs we then conducted a desk review using project documentation and other third-party sources to verify that the inputs UGI have in the tracking database are correct.

For School Energy Education we did not conduct desk review as there was no project-level documentation and savings were based on kit components and number of kits that were distributed.

Savings Replication

ICF's practice is to use data tracked in the program databases to "replicate" savings for all measures. We first verified that the appropriate deemed values or algorithms from the TRM were used in the estimates for the program. ICF then set up an automated calculation process to apply the approved savings approaches to the tracked data to replicate the savings for a census of records with prescriptive measures. This step verifies that the calculations were performed correctly based on the tracked data. Since we perform this adjustment for a census of projects with deemed savings, this first adjustment does not include any statistical sampling error.

Desk Reviews

To complete the desk reviews, ICF verified inputs to the savings algorithms in UGI's tracking database, contractor notes from the audit, rebate forms, and third-party sources such as ENERGY STAR. When appropriate, we used the same algorithm to verify savings as used during the savings replication. For the desk reviews, ICF sampled a number of measures or projects for each program to meet a minimum 85% confidence and 15% precision threshold at the program level. For each of the sampled measures and projects, UGI provided backup documentation which consisted of savings calculation workbooks, invoices, and equipment specification details.

Table 15: Impact Evaluation Activities by Program

Program Name	Tracking Database Review	Statistical Sampling	Verification of Calculations	Engineering Desk Review	Online Verification Survey
Appliance Rebate	X	X	X	X	X
Appliance Recycling	X	X	X	X	
Residential Low-Income	X		X	X	X
School Energy Education	X		X		

Sample Design

Table 16 presents the sample design. The sample was designed to achieve a minimum 15% precision at the 85% confidence interval.

Table 16: Sample Design by Program

Program Name	Participants	Engineering Reviews
Appliance Rebate	936	67
Appliance Recycling	437	23
Residential Low-Income	7	7

Process Evaluation

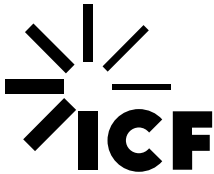
ICF designed the process evaluation to examine both internal program processes and customer response to the programs. The focus of the process evaluation activities was to understand program operations, assess the program's overall effectiveness, and identify areas for program improvement. ICF's process evaluation of UGI's electric portfolio consisted of reviewing program materials; interviewing utility program staff and surveying participating customers.

ICF data collection focused on four categories:

- **Program Staff Interviews** identified staff impressions of program implementation activities, program performance, marketing and customer awareness of the program, program data and tracking mechanisms, barriers to increased participation, overall program effectiveness, and opportunities for program improvements. For the Residential Low-Income program, we also interviewed representatives from the two Community Based Organizations that support the program.
- **Participating Customer Surveys** captured customer awareness and attitudes of energy efficiency, experiences with the program, satisfaction with the program and incentives.

Table 17: Completed Surveys by program

Program Name	Population with Valid Email Addresses	Completed Surveys	Response Rate
Appliance Rebate	576	42	7%
Appliance Recycling	187	32	17%



icf.com



twitter.com/ICF



linkedin.com/company/icf-international



facebook.com/ThisIsICF



[#thisisicf](https://instagram.com/#thisisicf)

About ICF

ICF (NASDAQ:ICFI) is a global consulting and digital services company with over 7,000 full- and part-time employees, but we are not your typical consultants. At ICF, business analysts and policy specialists work together with digital strategists, data scientists and creatives. We combine unmatched industry expertise with cutting-edge engagement capabilities to help organizations solve their most complex challenges. Since 1969, public and private sector clients have worked with ICF to navigate change and shape the future. Learn more at icf.com.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of this filing 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

Steven C. Gray, Esquire
Rebecca Lyttle, Esquire
Office of Small Business Advocate
555 Walnut Street Forum Place, 1st Floor
Harrisburg, PA 17101
sgray@pa.gov
relyttle@pa.gov

Melanie J. El Atieh, Esquire
Darryl A. Lawrence, Esquire
Office of Consumer Advocate
555 Walnut Street Forum Place, 5th Floor
Harrisburg, PA 17101-1923
melatieh@paoca.org
dlawrence@paoca.org

Dated: August 11, 2026



Candis A. Tunilo