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File #: 162080

September 21, 2023

VIA ELECTRONIC FILING

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

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

Dear Secretary Chiavetta:

Enclosed for filing on behalf of UGI Utilities, Inc. – Electric Division (“UGI Electric” or the “Company”) is Phase IV of UGI Electric’s voluntary Energy Efficiency and Conservation Plan (“Phase IV EE&C Plan”). UGI Electric is filing its Phase IV EE&C Plan pursuant to the Pennsylvania Public Utility Commission’s (“Commission”) December 23, 2009 Secretarial Letter at Docket No. M-2009-2142851.

UGI Electric’s Phase IV EE&C Plan follows the guidance provided by the Commission in its December 23, 2009 Secretarial Letter. The enclosed filing consists of the following documents:

1. Petition for Approval of UGI Electric’s Phase IV EE&C Plan;
2. UGI Electric Exhibit 1 – UGI Electric’s Phase IV EE&C Plan;
3. UGI Electric Exhibit 2 – *Pro forma* tariff pages for the Phase IV Energy Efficiency and Conservation Rider;
4. UGI Statement No. 1 – Direct Testimony of Theodore M. Love; and
5. UGI Statement No. 2 – Direct Testimony of Kimberly M. Bassininsky.

Rosemary Chiavetta, Secretary
September 21, 2023
Page 2

As shown on the attached Certificate of Service, UGI Electric has served copies of this filing upon the Commission's Bureau of Investigation & Enforcement, the Office of Consumer Advocate, and the Office of Small Business Advocate.

If you have any questions regarding the enclosed filing, please do not hesitate to contact me.

Respectfully submitted,



Devin Ryan

DTR/ks
Attachment

cc: Certificate of Service

CERTIFICATE OF SERVICE

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).

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Date: September 21, 2023



Devin T. Ryan

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

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

**PETITION OF UGI UTILITIES, INC. – ELECTRIC DIVISION
FOR APPROVAL OF PHASE IV OF ITS
ENERGY EFFICIENCY AND CONSERVATION PLAN**

Pursuant to 52 Pa. Code § 5.41, UGI Utilities, Inc. – Electric Division (“UGI Electric” or the “Company”) hereby files this voluntary petition (“Petition”) seeking approval of Phase IV of its Energy Efficiency and Conservation Plan for the time period beginning June 1, 2024, through May 31, 2029 (“Phase IV EE&C Plan” or “Plan”).

This voluntary Phase IV EE&C Plan includes a broad portfolio of energy efficiency and conservation programs and measures. For the reasons set forth below, UGI Electric respectfully requests that the Commission approve this voluntary Phase IV EE&C Plan as described herein and in the appended materials.

I. INTRODUCTION

1. UGI Electric is a “public utility” and an “electric distribution company” (“EDC”) as those terms are defined under the Public Utility Code, 66 Pa.C.S. §§ 102 and 2803, subject to the regulatory jurisdiction of the Commission, and provides electric distribution, transmission, and default electric supply services to customers located in its certificated service territory. UGI Electric furnishes electric distribution service to approximately 62,000 total customers located in portions of Luzerne and Wyoming counties.

2. On November 14, 2008, Act 129¹ became law in the Commonwealth and was made applicable to EDCs with 100,000 or more customers. Although Act 129 is not applicable to EDCs with fewer than 100,000 customers, the Commission recognized in the EE&C Secretarial Letter that the implementation of energy efficiency and conservation measures can assist all electric customers in mitigating retail electric rate increases and ensuring affordable and available electric service. *See Re: Voluntary Energy Efficiency and Conservation Program*, Docket No. M-2009-2142851 (Dec. 23, 2009) (“EE&C Secretarial Letter”). The EE&C Secretarial Letter therefore encouraged smaller EDCs to file voluntary EE&C plans and provided guidance regarding the content and Commission review of such voluntary plans.

3. Pursuant to the Commission’s EE&C Secretarial Letter, UGI Electric voluntarily filed an initial “Phase I” EE&C Plan on November 9, 2010, assigned to Docket No. M-2010-2210316 by the Commission.

4. Pursuant to the Commission’s Order entered on October 19, 2011, UGI Electric’s Phase I EE&C was modified, and refiled in black-line on December 19, 2011. By Order entered on March 16, 2012, this revised black-line version was approved by the Commission, subject to further modification.

5. On March 23, 2012 UGI Electric filed its revised Phase I EE&C Plan in accordance with the Commission’s March 16, 2012 Order.

6. By Secretarial Letter dated April 10, 2012, the Secretary noted that the Commission’s Bureau of Technical Utility Services found that the revised black-line Phase I EE&C Plan was in compliance with the March 16, 2012 Order.

7. UGI Electric began implementing its voluntary Phase I EE&C Plan on June 1, 2012.

¹ Act 129 of 2008, P.L. 1592, 66 Pa.C.S §§ 2806.1 and 2806.2 (“Act 129”).

8. On April 9, 2015, UGI Electric filed a Petition at Docket No. M-2010-2210316 to extend its Phase I EE&C Plan until its Phase II EE&C Plan was approved (“Phase I Extension Petition”).

9. Also on April 9, 2015, the Company filed a Petition at Docket No. M-2015-2477174 seeking Commission approval of its Phase II EE&C Plan, which set forth EE&C programs for the three-year period of June 1, 2015, through May 31, 2018.

10. On May 19, 2015, the Commission entered an Order approving UGI Electric’s Phase I Extension Petition.

11. On June 9, 2016, the Commission entered an Order approving the Phase II EE&C Plan.

12. On March 22, 2017, UGI Electric filed a Petition to extend its Phase II EE&C Plan by one year, *i.e.*, until May 31, 2019 (“Phase II Extension Petition”).

13. On May 4, 2017, the Commission entered an Order approving the Phase II Extension Petition.

14. On August 31, 2017, UGI Electric filed a Petition for approval of changes to its Phase II EE&C Plan.

15. On December 21, 2017, the Commission entered an Order approving the proposed changes to the Phase II EE&C Plan, as clarified or modified by the Company in its comments.

16. On August 21, 2018, the Company filed a Petition at Docket No. M-2018-3004144 seeking Commission approval of its Phase III EE&C Plan, which set forth EE&C Programs for the 5-year period of June 1, 2019, through May 31, 2024.

17. On March 14, 2019, the Commission entered an Order approving UGI Electric’s Phase III EE&C Plan.

18. On February 22, 2022, the Company filed a Petition for approval of changes to its Phase III EE&C Plan.

19. On June 16, 2022, the Commission entered an Order approving the proposed changes to the Phase III EE&C Plan.

II. APPLICABLE STANDARDS

20. In the EE&C Secretarial Letter, the Commission directed that petitions for approval of voluntary EE&C plans must be filed in accordance with 52 Pa. Code § 5.41 and must contain the following components:

- A detailed plan and description of the measures to be offered;
- Sufficient supporting documentation and verified statements or testimony or both;
- Proposed energy consumption or peak demand reduction objectives or both, with proposed dates the objectives are to be met;
- A budget showing total planned expenditures by program and customer class;
- Tariffs and a section 1307² cost recovery mechanism; and
- A description of the method for monitoring and verifying plan results.

EE&C Secretarial Letter at 1.

21. Voluntary EE&C plans must measure and verify energy savings in the same manner as Act 129 mandated plans. For Phase IV of Act 129, the evaluation, measurement and verification (“EM&V”) of energy savings must be performed using the Technical Reference Manual (“TRM”) established at Docket No. M-2019-3006867.³ In addition, voluntary plans, like their mandatory

² 66 Pa.C.S. § 1307.

³ *Implementation of the Alternative Energy Portfolio Standards Act of 2004: Standards for the Participation of Demand Side Management Resources – Technical Reference Manual 2021 Update*, Docket No. M-2019-3006867

counterparts, must employ the Total Resource Cost (“TRC”) Test, as defined in Act 129⁴ and applied by the Commission to determine whether a certain proposed EE&C plan is cost-effective. The Company employed the TRC Test established Docket No. M-2019-3006868 in the Commission’s *Phase IV TRC Test Order*.⁵

22. The Commission encouraged the smaller EDCs that file voluntary EE&C plans to use the Act 129 targets as guiding principles in establishing energy consumption and peak demand reduction objectives. The voluntary consumption reduction objective is to be measured against the filing EDC’s annual historical load for June 1, 2007, through May 31, 2008. Furthermore, a voluntary EE&C plan’s peak demand reduction objective should be measured against the filing EDC’s historical peak load for the same time frame. The Commission stated that it will require all smaller EDCs that voluntarily file a plan to submit an annual report to the Commission detailing the results of the EE&C plan, its cost-effectiveness, and any additional information required by the Commission.

III. UGI ELECTRIC’S PROPOSED PHASE IV EE&C PLAN

A. OVERVIEW OF UGI ELECTRIC’S PHASE IV EE&C PLAN

23. Phase IV of UGI Electric’s EE&C Plan is described more fully below and attached hereto as **UGI Electric Exhibit 1**. The Company proposes to implement Phase IV of the Plan over a five-year period, beginning June 1, 2024, and ending May 31, 2029. Phase IV includes a variety of energy efficiency and conservation practices and peak load reduction and energy

(Order entered February 4, 2021). UGI Electric will continue to use the Phase IV Act 129 TRM until the Phase V Act 129 TRM is made available and adopted.

⁴ See 66 Pa.C.S. § 1307.

⁵ See *2021 Total Resource Cost (TRC) Test*, Docket No. M-2019-3006868 (Order entered Dec. 19, 2019) (“*Phase IV TRC Test Order*”).

education initiatives that are anticipated to reduce customers' energy consumption and reduce peak load on UGI Electric's system.

24. UGI Electric's portfolio of programs is designed to provide customer benefits and to meet targeted energy consumption reduction goals established by UGI Electric to be reasonably achievable. In particular, the overall energy consumption reduction goal for the five-year period has been set at 32,250 megawatt hours ("MWh") (as measured against the Company's annual historical load for June 1, 2007, through May 31, 2008). To help ensure that the Company achieves this goal, the programs set forth in the Phase IV EE&C Plan are designed to produce electric consumption savings of 32,723 MWh, or approximately 101% of the 32,250 MWh target. In addition, UGI Electric anticipates that its Plan will produce peak load reductions, although the Company did not design the EE&C programs with the intent of achieving specific peak load reduction targets.

25. UGI Electric's Phase IV EE&C Plan addresses each of the requirements in the Commission's EE&C Secretarial Letter. The Plan is divided into the following five sections: (1) Plan Overview; (2) Program Descriptions; (3) Cost Effectiveness of Plan and Sector Summaries; (4) Implementation Strategy; and (5) Phase IV Energy Efficiency and Conservation Rider ("Phase IV EEC Rider").

26. In support of the Phase IV EE&C Plan, UGI Electric has provided the following two statements of Direct Testimony:

- (1) **UGI Electric Statement No. 1** – the Direct Testimony of Theodore M. Love, Partner at Green Energy Economics Group, Inc., which addresses: (1) background on the Company's EE&C Plans and an overview of the Phase IV EE&C Plan; (2) the development of the Phase IV EE&C Plan and changes

proposed for the Phase IV EE&C Plan; (3) the projected benefits and costs of the Phase IV EE&C Plan; and (4) the implementation, administration, and EM&V of the Phase IV EE&C Plan;

(2) **UGI Electric Statement No. 2** – the Direct Testimony of Kimberly M. Bassininsky, Principal Analyst – Rates for UGI Utilities, Inc., which addresses the Phase IV EEC Rider.

27. Included as **UGI Electric Exhibit 2** is the pro forma Phase IV EEC Rider to UGI Tariff Electric – Pa. PUC No. 6. The Company currently has a Phase III EEC Rider that recovers all applicable design, development, implementation, and ongoing administrative costs related to its Phase III EE&C Plan. The Phase IV EEC Rider is fully reconcilable and will apply to all customers who receive distribution service from the Company under Phase IV of the EE&C Plan.

28. Included as **UGI Electric Exhibit KMB-1** is the calculation of the proposed annual Phase IV EEC Rider.

B. EE&C PLAN DEVELOPMENT PROCESS

29. In approaching the development of its EE&C Plan, UGI Electric constructed an in-house team with representatives from all affected areas of the Company to solicit input with regard to Plan development. In addition, UGI Electric retained Theodore M. Love, an experienced and independent economic consultant who has worked extensively in the energy conservation plan arena, to assist in the development and preparation of UGI Electric's Phase IV EE&C Plan.

30. As with the Company's Phase I, Phase II, and Phase III EE&C Plans, the Phase IV EE&C Plan is modeled to conform to the Commission's EE&C Secretarial Letter and related provisions of Act 129. The Company used actual revenues and MWh sold for the 12-month period June 1, 2007, to May 31, 2008, which was referenced in the Commission's EE&C Secretarial Letter, to determine the approximate 2% expenditure cap.

31. The Company established an overall five-year electric consumption savings target of 32,250 MWh based upon the annual historical load for June 1, 2007, through May 31, 2008. The Company used this savings target and the 2% spending cap as a baseline for constructing a portfolio of programs that is available to all customer classes. UGI Electric also assessed the potential savings for a variety of programs and constructed the portfolio it determined was most likely to serve customer needs and achieve its energy conservation targets.

32. The savings target for the Phase IV EE&C Plan was based on the statewide consumption reduction targets from the Final Implementation Order for Act 129 Phase IV dated June 18, 2020. That order established savings targets ranging from 2.4% of reference load for West Penn Power Company to 3.5% of reference load for PECO Energy Company. Here, UGI Electric is proposing a target of 3.0%, which is in the middle of that range.

33. The UGI Electric EE&C team began with the programs offered by the Company in its Phase III EE&C Plan and then layered in successful program design from other EDCs in Pennsylvania and best practices from other jurisdictions to put together an updated portfolio of programs and measures with a high likelihood of meeting savings targets.

C. DESCRIPTION OF THE EE&C PLAN

34. UGI Electric's Plan is a comprehensive package of programs designed to allow customers to effectively and efficiently reduce their energy consumption. The Plan includes the following seven programs:

- 1) Appliance Rebate Program (Residential/Low-Income Customers);
- 2) School Energy Education Program (Residential/Low-Income Customers);
- 3) Energy Kits Program (Residential/Low-Income Customers);

- 4) Appliance Recycling Program (Residential/Low-Income Customers)⁶;
- 5) Low-Income Program (Low-Income Customers);
- 6) Community Based Organization (“CBO”) Marketing Program (Residential/Low-Income Customers);
- 7) Commercial and Industrial Incentive Program (Commercial and Industrial/Governmental Customers);

A full description of all of the programs and measures is found in Section 2 of the Phase IV EE&C Plan.

35. UGI Electric’s portfolio offers a diverse array of programs to all customer classes, including low-income customers. Specifically, the Company designed the Low-Income Program to directly install measures for low-income customers, particularly heat pump water heaters and smart thermostats. The other residential programs (*i.e.*, the Appliance Rebate Program, the School Energy Education Program, the Energy Kits Program, the Appliance Recycling Program, and the CBO Marketing Program) likely will assist low-income customers to reduce their electricity consumption as well. These programs are in addition to UGI Electric’s already robust low-income assistance programs outside the context of this Plan.

36. Section 3 of the Phase IV EE&C Plan describes the cost-effectiveness of the Plan based on the TRC Test criterion, employing the methodology included in the *Phase IV TRC Test Order*.⁷ Consistent with Act 129, the Plan allocates the cost of the measures to the customer class that will benefit from that measure. Appendix A to the Plan contains program costs and savings by year during the implementation period of the Phase IV EE&C Plan. Appendix B to the Plan

⁶ UGI Electric will continue to monitor developments in the appliance recycling market to ensure that there is a Conservation Service Provider (“CSP”) that will be available to perform this work within the proposed budget and that the program will achieve its anticipated goals.

⁷ See *Phase IV TRC Test Order*.

contains the avoided costs used for UGI Electric's benefit-to-cost analysis, based on those utilized by PPL Electric in its Act 129 Phase IV EE&C Plan.

37. The Phase IV EE&C Plan also includes procedures to measure, evaluate and verify the performance of the programs and the Plan as a whole. UGI Electric anticipates filing an annual report with the Commission on the status of Phase IV, as described in Section 4 of the EE&C Plan.

38. UGI Electric proposes to limit its annual spending on EE&C measures to 2% of its jurisdictional revenues for the twelve months ending May 31, 2008, which was approximately \$125.3 million with gross receipts tax. UGI Electric will maintain the approximately 2% spending cap on EE&C programs and measures. For Phase IV, UGI Electric proposes an annual budget of approximately \$2.1 million, which equates to a maximum of approximately \$10.5 million over the five years of the Plan. Further, the Company proposes an absolute cap on annual spending of \$2.5 million, while maintaining a five-year spending cap of approximately \$10.5 million.

39. UGI Electric proposes to continue reconciling the revenues collected under its cost recovery mechanism on an annual basis, as explained more fully in Ms. Bassininsky's Direct Testimony. Plan cost recovery will be accomplished utilizing the Phase IV EEC Rider, by which UGI Electric will calculate separately and recover the applicable EE&C Plan costs from its individual customer classes. In addition, UGI Electric proposes to conduct a final reconciliation of total revenue collected to total Plan expenditures (up to the budget caps) at the end of the five-year Plan. Any resulting over/under collections existing as of the last year of the Phase IV EE&C Plan will be recovered/refunded over the one-year period following the end of the Plan ("Final Reconciliation Year").

D. IMPLEMENTATION STRATEGY

40. UGI Electric will implement modifications to its current EE&C Plan through its own internal staff and via the Conservation Service Providers ("CSPs") with which UGI Electric

contracts. UGI Electric proposes to continue utilizing its current CSPs where possible to provide continuity to customers currently benefitting from Phase III programs; however, the Company will utilize an RFP process to find and employ new CSPs as needed.

41. In addition, UGI Electric plans to hold a stakeholder meeting to review the initial results of the Phase IV EE&C Plan and receive questions and feedback from interested stakeholders about the programs' performance. The stakeholder meeting shall be held: (1) at a time and place chosen by UGI Electric upon at least one month's notice to stakeholders; and (2) within six months after the end of Program Year 14, which concludes on May 31, 2026.

E. PUBLIC INTEREST DETERMINATION AND REQUEST FOR RELIEF

42. UGI Electric submits that its Phase IV EE&C Plan as proposed is consistent with the guidance set forth in the Commission's EE&C Secretarial Letter and that the Plan is in the public interest. The Plan includes a broad range of energy efficiency and conservation measures that are designed to meet the needs of all classes of customers. The Plan is cost-effective and is designed to achieve an energy consumption reduction target of 32,723 MWh in total over the five-year period for Phase IV. In addition, although the Company has not proposed specific peak load reduction targets, UGI Electric anticipates that its Plan will produce reductions to peak load.

43. Accordingly, UGI Electric respectfully requests that the Commission promptly approve UGI Electric's Phase IV EE&C Plan as proposed, including the Phase IV EEC Rider set forth in Section 5 of the Plan.

IV. CONCLUSION

WHEREFORE, UGI Utilities, Inc. – Electric Division, respectfully requests that the Pennsylvania Public Utility Commission approve Phase IV of UGI Electric’s voluntary EE&C Plan, as set forth in this Petition and the attachments hereto. UGI Electric requests that, to the extent possible, the Commission issue an Order approving the voluntary Phase IV EE&C Plan on or before March 14, 2024, so that the Company has sufficient time to implement the Phase III EE&C Plan before Phase III concludes on May 31, 2024. UGI Electric also requests that it be permitted to file a Phase IV EEC Rider and rate schedules consistent with the Pro Forma Tariff Supplement attached hereto as **UGI Electric Exhibit 2**, effective on one (1) day’s advance notice coincident with the effective date of the first quarterly default service rate filing following Commission approval of the Phase IV EE&C Plan. This compliance filing will include updated tariff pages for any proposed rate schedules that include the current EEC Rider if such proposed rate schedules are effective on the date of the first quarterly default service rate filing following Commission approval of the Phase IV EE&C Plan. The Company also notes that it is voluntarily filing this Plan. Therefore, to the extent that the Commission directs that modifications be made to the Company’s voluntarily-proposed Phase IV EE&C Plan or adopts final rules that would require the Company to modify the voluntary Plan proposed in this Petition, the Company will evaluate any such modifications to determine whether to proceed with voluntarily instituting the Plan as modified.

Respectfully submitted,



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Dated: September 21, 2023

Counsel for UGI Utilities, Inc. – Electric Division

UGI Electric Exhibit 1

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

UGI Utilities, Inc. – Electric Division
Energy Efficiency and Conservation Plan
Phase IV (June 1, 2024-May 31, 2029)

Docket No. M-2023-_____

TABLE OF CONTENTS

1 Plan Overview 1

2 Program Descriptions..... 8

2.1 Residential Sector Programs..... 8

2.1.1 Appliance Rebate Program 8

2.1.2 School Energy Education Program..... 14

2.1.3 Energy Kits Program..... 18

2.1.4 Appliance Recycling Program 21

2.1.5 Low-Income Program 25

2.1.6 Community Based Organization Marketing Program 28

2.2 Commercial and Industrial Sector Programs 30

2.2.1 Commercial and Industrial Incentive Program 30

3 Cost Effectiveness of Plan and Sector Summaries..... 37

4 Implementation Strategy..... 38

5 Phase IV Energy Efficiency and Conservation Rider 39

Appendix A – Program Costs and Savings by Year 1

Appendix B – Avoided Costs..... 1

Appendix C – Key Measure Assumptions 1

1 Plan Overview

UGI Utilities, Inc. – Electric Division (“UGI Electric” or the “Company”) hereby submits for approval Phase IV of its Energy Efficiency and Conservation Plan (“EE&C Plan” or “Plan”), which will continue to offer many of the same effective energy efficiency measures contained within its existing Phase III EE&C Plan, along with one new program and several enhancements to existing programs to enhance and broaden customer participation during the term of Phase IV (June 1, 2024, through May 31, 2029). The EE&C Plan includes a portfolio of energy efficiency, conservation, and consumption reduction measures, programs, and education initiatives. Unlike the major Electric Distribution Companies (“EDCs”), UGI Electric is not subject to Act 129 of 2008, P.L. 1592 (“Act 129”) because it serves fewer than 100,000 customers. *See* 66 Pa. C.S. § 2806.1(l). However, with Phase IV, UGI Electric continues to operate a voluntary EE&C Plan as suggested by the Pennsylvania Public Utility Commission (“Commission”) in its Secretarial Letter issued December 23, 2009, at Docket No. M-2009-2142851 (“Secretarial Letter”). The portfolio includes the following programs:

1. Appliance Rebate Program
2. School Energy Education Program
3. Energy Kits Program
4. Appliance Recycling Program
5. Low-Income Program
6. Community Based Organization (“CBO”) Marketing Program
7. Commercial and Industrial (“C&I”) Incentive Program

These programs offer UGI Electric’s customers a wide range of energy efficiency and conservation measures to decrease electric consumption and, in turn, customers’ electric costs.

Phase IV of UGI Electric’s EE&C Plan:

- Includes programs and individual measures designed to achieve 32,723 megawatt hours (“MWh”) of electric savings, exceeding UGI Electric’s targeted electricity consumption reduction levels of approximately 3.00%¹ energy savings, or 32,250 MWh, (as measured against the Company’s annual historical load for June 1, 2007, through May 31, 2008), by 2029.

¹ The energy consumption reduction target is based on achieving savings in the middle of the range of Act 129 Phase IV consumption reduction targets for 2021-2026. The savings targets ranged from 2.4% (West Penn Power) to 3.5% (PECO) of 2009-2010 load, as established by the Commission’s Act 129 Phase IV Order dated June 18, 2020.

- Is designed to expend no more than 2% of annual revenues for the 12-month period ended May 31, 2008, and is projected to cost approximately \$10.5 million over five years, with an average annual expenditure of \$2.1 million.
- Is cost-effective based on the Total Resource Cost (“TRC”) Test criterion and provides TRC net benefits with a present value of \$17.5 million over the five-year life of the Plan, with a benefit-cost ratio (“BCR”) of 2.24.
- Continues to offer EE&C programs and measures to all customer classes.
- Properly allocates the cost of individual measures to the customer class(es) that receive(s) the benefit of those measures.
- Uses internal UGI Electric Staff and Conservation Service Providers (“CSPs”), as necessary, to implement the programs, monitor the programs’ progress, and verify the Plan results.
- Includes procedures to measure, evaluate, and verify performance of the programs and the Plan as a whole.
- Includes a Section 1307 mechanism,² the Phase IV Energy Efficiency and Conservation Rider (“Phase IV EEC Rider”), for recovery of all applicable Phase IV EE&C Plan costs.³

The Phase IV EE&C Plan contains a variety of programs that are key components to achieving the desired energy consumption reductions. In choosing the portfolio of programs, UGI Electric considered the currently approved EE&C programs utilized by other Pennsylvania EDCs, as well as other available cost-effective EE&C measures, and selected those best suited to UGI Electric’s size and service territory.

In Phase IV, UGI Electric has modified existing programs and has added one new program that is expected to address the needs of customers in UGI Electric’s service territory. A summary of these changes is set forth in the table below and are more fully explained in the appropriate program sections:

² 66 Pa. C.S. § 1307.

³ As discussed in more detail in Section 5, UGI Electric proposes to recover Phase IV EE&C Plan costs through the Phase IV EEC Rider.

Table 1: Residential & Commercial Program Summary

Residential Program Changes			
Phase III Program	Phase IV Program	Disposition	Modification
Appliance Recycling	Appliance Recycling	Continued	Expanded eligibility to include standalone A/C and dehumidifier recycling rebates.
Appliance Rebate	Appliance Rebate	Continued	Adjusted Qualified Equipment & Rebates.
Energy-Efficient Lighting	None	Discontinued	
School Energy Education	School Energy Education	Continued	Expanded to an additional high school.
Residential Low-Income Program	Low-Income Program	Continued	
CBO Marketing Program	CBO Marketing Program	Continued	
None	Energy Kits Program	New	

Commercial/Industrial Program Changes			
Phase III Program	Phase IV Program	Disposition	Modification
Custom	Commercial and Industrial Incentive Program	Continued	Added a Prescriptive Pathway and a Direct Install for Small Business Pathway.

To the extent possible, UGI Electric has attempted to incorporate reasonable ideas, insights, program features, and implementation details from best practices of the various EDCs subject to Act 129. Additionally, and as explained more fully in Section 3, below, in accordance with Paragraph 28 of the Settlement approved in UGI Electric’s Phase III EE&C Plan proceeding at Docket No. M-2018-3004144, UGI Electric has updated its electric avoided costs to utilize those of PPL Electric Utilities Corporation (“PPL Electric”).

For Phase IV, UGI Electric proposes to adopt a 3.00% total energy consumption reduction target in constructing a portfolio of EE&C measures and programs targeting all customer classes on the UGI Electric system.⁴ For each customer segment, a set of programs was developed to provide a range of options for saving electricity, with the goal of meeting the energy reduction target while continuing successful programs from Phase III, providing new ways to engage with electric efficiency as markets shift, and maintaining a cost-effective portfolio from the TRC perspective. UGI Electric utilized the expertise of in-house staff,

⁴ The energy consumption reduction target is based on the Act 129 Phase IV Statewide Achievable savings potential for 2021-2026 of 3.00% of 2009-2010 load.

combined with the energy efficiency expertise of an external consultant, Green Energy Economics Group, Inc. (“GEEG”), which has worked in the EE&C field for many years.

The process for developing the Phase IV EE&C Plan consisted of four basic elements:

1. Maintaining continuity with the existing Plan to the extent existing programs were deemed successful.
2. Assessing alternative EE&C resource potentials.
3. Developing and balancing the portfolio, while maintaining cost-effectiveness under the TRC Test at a sector and overall Plan level.
4. Refining the Plan consistent with the objectives set forth in the Commission’s Secretarial Letter and under Act 129, generally.

Because UGI Electric is committed to a long-term investment in EE&C, the following guiding principles were part of the development of UGI Electric’s Phase IV EE&C Plan content:

1. Customer Service – The Plan was developed in a way that is easy to understand and enables customers to adopt energy efficiency measures that will save money and support the environment.
2. Proven Solutions and Sustainable Savings – The Plan focuses on proven, cost-effective energy efficiency measures as part of an extensive path to long-term and sustainable energy efficiency.
3. Flexibility – The Plan provides customers flexibility by offering a wide variety of programs in which they can participate. To support customers’ actions, the Plan provides numerous measures, customer education initiatives, energy efficiency information, financial incentives, and services. For the Company, the Plan provides flexibility by allowing UGI Electric to consider the results of the programs and determine whether any adjustments are necessary to achieve the desired energy savings on a whole and/or maintain Plan cost-effectiveness, which may include re-allocating budgets within the same rate class to programs that are performing better than others. However, the Company will not, without Commission approval:
 - a. Add new programs;
 - b. Eliminate existing programs;
 - c. Deviate significantly from the approved program parameters; or
 - d. Exceed the total approved budget for the Plan.

A summary of Phase IV programs and anticipated savings by class is set forth below.

Table 2: Projected Energy Savings by Program

Program Name	Program Market	Program Summary	Program Years Operated	Phase IV MWh Savings	% of Portfolio MWh Savings
Appliance Recycling	Residential/Low-Income	Free pickup, recycling and disposal	2024-2029	2,567	7.8%
Appliance Rebate	Residential/Low-Income	Rebates for energy efficient appliances	2024-2029	7,416	22.7%
Energy Kits	Residential/Low-Income	Online audit and low flow device kits	2024-2029	426	1.3%
School Energy Education Program	Residential/Low-Income	Energy education and kits for students	2024-2029	2,352	7.2%
Low-Income Program	Residential/Low-Income	Direct installation of heat pump water heaters (“HPWH”) and ENERGYSTAR smart thermostats	2024-2029	159	0.5%
CBO Marketing Program	Residential/Low-Income	Marketing to cross-promote EE&C programs	2024-2029	0	0%
Residential Total				12,919	39.5%
Commercial and Industrial Incentive Program	Commercial and Industrial/Governmental	Incentives for prescriptive and custom efficiency measures	2024-2029	19,804	60.5%
C&I Total				19,804	60.5%
Grand Total				32,723	100%

A summary of the total program budget is reflected below.

Table 3: Projected Budgets by Customer Class

Customer Class	Total Budget	% of Total EEC Budget
Residential	\$4,825,550	46.0%
C&I	\$3,902,108	37.3%
Portfolio-wide	\$1,745,000	16.7%
Total	\$10,472,658	100%

The chosen programs are detailed in Section 2 (Program Descriptions) of this Plan. The Plan is cost-effective under the TRC Test, as demonstrated in Section 3 of the Plan (Cost Effectiveness) and as shown in the following table.

Table 4: Cost Effectiveness Summary

Customer Class	TRC Net Present Value (“NPV”) Benefits	TRC NPV Cost	TRC Net Benefits	TRC Benefit/Cost Ratio
Residential	\$16,239,628	\$5,564,702	\$10,674,925	2.92
C&I	\$15,409,822	\$7,081,641	\$8,328,182	2.18
Portfolio-wide	\$0	\$1,486,178	-\$1,486,178	N/A
Total	\$31,649,450	\$14,132,521	\$17,516,929	2.24

As currently proposed, the new Plan will go into effect June 1, 2024, and run through May 31, 2029.

UGI Electric understands that customer engagement is critical to the success of the Plan and has developed several programs that provide tangible customer benefits. UGI Electric Staff and its CSPs will promote customer service throughout the Plan and coordinate with trade allies and other market participants through outreach, training, and education to raise customer awareness of UGI Electric’s available programs. A more complete description of UGI Electric’s implementation strategy is provided in Section 4 of this EE&C Plan.

UGI Electric will continue to employ tracking, reporting, and analyses of program data that will enable ongoing monitoring, management, analysis, and reporting. UGI Electric will focus on anticipation, prevention, and detection of problems or errors regarding Plan implementation to minimize impediments to Plan success. UGI Electric will continue working closely with its CSPs to ensure that qualified individuals are performing the required actions to carry out the Plan. In addition, UGI Electric will continue to submit an annual report to stakeholders three months after the end of each program year. Finally, UGI Electric has developed Phase IV with the intent to update and revise the Plan on an ongoing basis, as needed, to address customer participation levels and to achieve Plan success.

Cognizant of the guidelines in the Commission’s Secretarial Letter and the related requirements of Act 129, UGI Electric will continue to use 2% of 2008 revenue⁵, or \$2.5 million, as an absolute cap on annual spending.⁶ Annual spending for Phase IV is projected to be under the 2% cap, with an average expected spending of approximately \$2.1 million per year. In its *Phase IV Implementation Order*, the Commission found, consistent with its prior

⁵ UGI Electric utilized annual revenues for the twelve-month period ended May 31, 2008.

⁶ While UGI Electric did not reach the 2% budget cap in Phase II or Phase III of its EE&C Plan, UGI Electric seeks to keep this current cap in place for Phase IV, as it allows for Plan flexibility to accommodate increased customer demand.

implementation orders, that EDCs should be permitted to recover the incremental costs incurred to design, create, and obtain Commission approval of a plan in Phase IV.⁷ Thus, the total Plan cost of \$10.5 million also includes the costs that UGI Electric incurred or will incur to design, create, and obtain approval of the Phase IV EE&C Plan.

Consistent with Act 129, UGI Electric has designed its Phase IV EE&C Plan to provide that EE&C measures are paid for by the same customer class that receives the energy efficiency and conservation benefits of those measures by assigning the costs related to each measure to those classes that will receive the benefits. *See* 66 Pa. C.S. § 2806.1(a)(11). The cost recovery mechanism, the Phase IV EEC Rider, is described in more detail in Section 5 of the Plan. UGI Electric has designed the Phase IV EEC Rider to apply to all default service and choice customers.

Plan costs are likely to vary year-to-year, and UGI Electric proposes to recover those costs on an annual basis by way of a Section 1307 recovery mechanism designed to track actual yearly expenditures by customer class. Distribution of cost recovery is anticipated to be relatively even over the course of the Plan.

UGI Electric proposes to continue reconciling the revenues collected under its cost recovery mechanism on an annual basis. In addition, UGI Electric proposes to conduct a final reconciliation of total revenue collected to total Plan expenditures (up to the budget caps) at the end of this five-year Plan. Any resulting over/under collections existing as of the last year of the Phase IV EE&C Plan will be recovered/refunded over the one-year period following the end of the Plan (“Final Reconciliation Year”). If it is known that there will be a Phase V EE&C Plan at the end of the Final Reconciliation Year related to Phase IV, any remaining balance will be recovered/refunded through the Phase V EEC Rider’s E-Factor. If there will be no Phase V EE&C Plan, any balance remaining for a customer class at the end of the Final Reconciliation Year will be trued up through a one-time bill credit/debit issued to the applicable customers during the second full billing month following the end of the Final Reconciliation Year. The annual reconciliation and end-of-Plan reconciliation will be subject to Commission review and potential audit, as the Commission deems necessary.

⁷ *Energy Efficiency and Conservation Program*, Docket No. M-2020-3015228, pp. 122, 126-27 (Order Entered June 18, 2020) (“*Phase IV Implementation Order*”).

2 Program Descriptions

2.1 Residential Sector Programs

2.1.1 Appliance Rebate Program

Objectives

The objectives of the Appliance Rebate Program include:

1. Providing customers with opportunities to reduce their energy costs and increase their energy efficiency.
2. Encouraging the use of high-efficiency/ENERGY STAR-rated equipment.
3. Encouraging customers to install high-efficiency HVAC and electric appliances and to switch from less efficient electric appliances to more efficient natural gas appliances.
4. Promoting strategies that encourage and support market transformation for high-efficiency appliances and equipment.
5. Achieving approximately 6,115 installed measures through 2029, with a total reduction of approximately 7,416 MWh.

Target Market

This program will be available to all residential customers, including low-income customers and new residential construction, using a consistent implementation strategy, incentive mechanism, and administrative process.

The table below outlines eligibility parameters for the residential sector.

Customer Type	Residential/Low-Income
Building Type	All
Building Vintage	All
Building Ownership	Owner or tenant with owner approval

Program Description

The program promotes the purchase and installation of a wide range of high-efficiency equipment. The Appliance Rebate Program provides customers with financial incentives to offset the higher purchase costs of energy-efficient equipment. Targeted equipment includes heating, cooling, water heating, and other appliances. Equipment must meet ENERGY STAR requirements if such standards exist.

Implementation Strategy

To provide a seamless continuation of the program, along with a positive customer experience, UGI Electric will continue utilizing a CSP for customer intake and rebate processing.

Customers will be required to submit a program application with documentation of the equipment purchase and installation(s) for verification and rebate processing.

Key Steps in Program Participation

1. Customers may be directed to the program through UGI Electric's marketing activities, the Company's website, equipment dealers, or equipment installation contractors.
2. Customers will generally work with the equipment/appliance retailer or installation contractor to fill out program applications and ensure the required documentation is submitted to the program CSP for processing.
3. The CSP will review documentation to verify that the applicant is a UGI Electric customer and that the installed equipment meets the minimum efficiency standard.
4. Customers installing eligible high-efficiency equipment will schedule the work directly with their equipment dealer or installation contractor.
5. The CSP will process rebates in the form of checks or check cards for qualified equipment.

Marketing Strategy

This program relies on both customer education and point-of-sale dealer and installer information for promotion. UGI Electric will work with retailers to promote the program. This strategy may include, but will not be limited to:

1. Promoting the program in UGI Electric's customer bill inserts.
2. Communicating and providing access to program information on the Company's website.
3. Educating customers through various marketing campaigns which may include email, direct mail, radio, and/or social media advertising.
4. Coordinating outreach to trade allies, including, but not limited to, HVAC and appliance dealers.

Eligible Measures and Incentive Strategy

The following table provides a list of measures, minimum eligibility requirements, and incentive levels.

Table 5: Eligible Measures⁸

Measure	Eligibility Requirement	Initial Incentive	Incentive Maximum
Central Air Conditioner	SEER 16 and above	\$150	\$350
Room AC Unit	ENERGY STAR	\$25	\$50
Smart Thermostat	ENERGY STAR, electric heating	\$50	\$250
	ENERGY STAR, gas-heating, central A/C	\$25	
Ductless Mini Split Heat Pump	SEER 16 and above	\$150 per ton	\$350 per ton
	SEER 19 and above	\$200 per ton	
	SEER 21 and above	\$250 per ton	
Clothes Washer	ENERGY STAR	\$25	\$75
	ENERGY STAR Most Efficient (CEE Tier 1)		
	CEE Tier 2		
Dishwasher	ENERGY STAR	\$25	\$30
Refrigerator	ENERGY STAR	\$50	\$100
	CEE Tier 2		
	CEE Tier 3		
Dehumidifier	ENERGY STAR	\$25	\$50
Natural gas high efficiency central heat (from electric heating)	ENERGY STAR	\$1,500	\$1,500
Natural gas water heater (from electric water heating)	ENERGY STAR	N/A	\$250

⁸ Measures with N/A for current incentive are not included in program projections at this time but may be offered to customers in the future if market conditions and/or cost-effectiveness analysis allow.

Measure	Eligibility Requirement	Initial Incentive	Incentive Maximum
Natural gas clothes dryer (from electric clothes dryer)	ENERGY STAR	N/A	\$250
Heat Pump Water Heater	ENERGY STAR	\$400	\$500
Air-Source Heat Pump	SEER 15 and above	\$400	\$800
Custom Measures / New Technologies	Must have a TRC benefit-cost ratio of at least 1.0	N/A	Minimum of \$0.14 per annual kWh Saved or 50% of total project cost.

UGI Electric will periodically review its programs and may adjust measures, rebate levels, performance criteria, and/or eligibility ratings in the future as market conditions change. UGI Electric will review results from this program and determine whether any adjustments are needed to achieve the desired energy savings on a whole and/or maintain Plan cost effectiveness.

UGI Electric will require that rebate applications be submitted within 180 days of the measure’s installation date.

Evaluation, Measurement, and Verification

UGI Electric will strive to continuously improve the success of its Plan to achieve program goals. UGI Electric and the CSP will enhance quality control, evaluate, measure and verify procedures to track program activities, monitor performance and progress toward targets, and take corrective action when warranted.

Quality control (“QC”) will be integral to the delivery of all programs in UGI Electric’s Phase IV EE&C Plan. QC measures will be deployed at various stages of program implementation to ensure the highest industry standards of operational efficiency. These measures will include, but will not be limited to, the following:

- Ongoing tracking of program activities and costs through dedicated UGI Electric Staff and various CSPs.
- Applying rigorous screening and qualifying protocols in engaging CSPs.

QC processes will strive to:

- Prevent errors from beginning to end in any given program process.
- Detect and correct errors as early as possible.
- Eliminate the causes of errors as well as the errors themselves.
- Establish a correction plan based on best practices and lessons learned.

The program CSP, or UGI Electric Staff if no CSP involvement is indicated, will track the data necessary to verify program activities and outcomes. For the Appliance Rebate Program, this data will include:

- Participant information: account number, rate class, and contact information.
- Measure information: make and model number of new appliances, type and quantity of measures installed, and efficiency rating.
- A copy of a dated and paid invoice.
- New construction information: developer contact information, builder contact information, and confirmation of new account activation (most recent bill).

Where applicable, the CSP shall provide weekly and/or monthly reports to UGI Electric for measurement and verification.

Estimated Participation

Participation levels were developed based on current program participation rates and demand for new and/or modified offerings.

Table 6: Projected Participation

Measure	PY 13	PY 14	PY 15	PY 16	PY 17	Total
Air Source Heat Pump	20	20	20	20	20	100
Ductless Mini-split Heat Pump	350	380	410	440	470	2,050
Central Air Conditioner	10	10	10	10	10	50
Room Air Conditioner	100	100	100	100	100	500
Smart Thermostat	75	100	100	100	100	475
Heat Pump Water Heater	30	40	60	60	60	250
Clothes Washer	80	80	80	80	80	400
Refrigerator	150	150	150	150	150	750
Dishwasher	200	200	200	200	200	1,000
Dehumidifier	100	100	100	100	100	500
Fuel Switching: Electric Heating to Natural Gas Furnace	7	7	7	7	7	35
Fuel Switching: Electric Heating to Natural Gas Boiler	1	1	1	1	1	5
Total	1,123	1,188	1,238	1,268	1,298	6,115

Program Budget, Costs and Cost-Effectiveness

Over the five-year Phase IV EE&C Plan, the program is expected to achieve electricity consumption savings of approximately 7,416 MWh. The annual budget allocation, cumulative MWh savings through 2029, and overall program cost-effectiveness for the residential customer sector are shown in the tables below.

Table 7: Program Savings and Costs

Benefit/Cost Component	PY 13	PY 14	PY 15	PY 16	PY 17	Total
Savings (MWh)	1,274	1,381	1,503	1,587	1,671	7,416
Capacity Savings (MW)	0.552	0.598	0.645	0.689	0.732	3.216
Total Resource Cost	\$621,740	\$657,192	\$726,877	\$760,531	\$795,174	\$3,561,514
Direct Participant Cost	\$292,690	\$328,392	\$377,677	\$399,031	\$421,474	\$1,819,264
Direct Utility Costs	\$329,050	\$328,800	\$349,200	\$361,500	\$373,700	\$1,742,250
Customer Incentives	\$200,750	\$218,000	\$238,000	\$250,000	\$262,000	\$1,168,750
Administration	\$74,300	\$74,800	\$75,200	\$75,500	\$75,700	\$375,500
Marketing	\$54,000	\$36,000	\$36,000	\$36,000	\$36,000	\$198,000

Table 8: Program Cost Effectiveness

TRC Test	Value (\$1,000)
NPV Benefits	\$9,396
NPV Costs	\$3,003
Net Benefits	\$6,393
TRC Benefit/Cost Ratio	3.13

2.1.2 School Energy Education Program

Objectives

The objectives of the School Energy Education Program include:

1. Educating students on various energy types, generation and consumption, home energy use, and ways to increase energy efficiency in a home.
2. Providing customers with opportunities to reduce their energy costs and increase their energy efficiency.
3. Encouraging customers to improve the efficiency of their homes by providing an energy efficiency toolkit.
4. Obtaining participation of approximately 8,750 students, teachers, and families through PY 17, with a total energy reduction of approximately 2,352 MWh.

Target Market

This program targets residential customers with students in 4th through 12th grade. Participants must have electric service. The table below outlines eligibility parameters.

Customer Eligibility Parameters

Customer Type	Residential/Low-Income
Building Type	All
Building Vintage	All
Building Ownership	Owner or tenant with owner approval

Program Description

This program is designed to educate 4th through 12th grade students on various energy types, energy consumption and generation, home energy use, and ways to save energy in a home.

The program is typically delivered through school presentations. Teachers and schools are recruited throughout UGI Electric's service territory. In consultation with the state department of education, presentations are scheduled to avoid testing schedules, vacation periods, and other school activities.

Students and teachers at one grade level in 4th through 7th grade, and one grade level in 9th through 12th grade, attend a one-hour presentation on energy literacy and energy efficiency. Under the direction of the CSP's instructors, students learn about energy. A PowerPoint presentation guides the discussion, and hands-on learning activities are employed to build understanding among students.

The culmination of the school presentation is the distribution of free, take-home energy efficiency kits. After the completion of the school presentation, teachers ensure that each

student who has returned a signed parent permission/participation slip receives a kit. As part of a homework assignment, students then install devices with a parent and record the installation and other home energy usage and behavior information on a form. Teachers are incentivized by a performance-based mini-grant to collect Household Report Cards and return the forms to the CSP by a predetermined deadline. The CSP analyzes and summarizes installation and usage information and reports back to UGI Electric.

Implementation Outline

The implementation strategy for the program includes the following key components:

- Developing content aligned with grade-appropriate academic standards as defined by the Pennsylvania Department of Education.
- Determining school eligibility and targeting schools for participation.
- Recruiting teachers and conducting additional educational activities.
- Registering teachers online and scheduling presentations.
- Preparing curriculum and presentation materials.
- Developing energy efficiency kits.
- Assembling and shipping energy efficiency kits.
- Conducting school presentations.
- Awarding incentives.
- Gathering and analyzing program data using the Household Report Card.
- Reporting estimated energy savings.
- Program evaluation and final reporting.

Implementation Strategy

The existing CSP will continue to oversee the School Energy Education program. UGI Electric and CSP staff will manage the program and will handle acquiring the materials, mailing, recordkeeping, and reporting.

Marketing Strategy

This program relies on both getting schools involved and generating awareness at the local level. UGI Electric already offers this program for middle schools and will now be rolling out additional services to include high school students.

1. Leverage UGI Electric's CSP to establish relationships and manage program enrollment with various schools in the service territory.
2. Communicate and provide access to program information on the Company's website.

Eligible Measures and Incentive Strategy

Participants in the program will receive a free take-home energy efficiency toolkit, with a variety of low-cost measures.

UGI Electric will review the program and may adjust available measures or eligibility qualifications as warranted by changing market conditions or to manage program delivery, participation, and budgets.

Evaluation, Measurement, and Verification

UGI Electric will strive to continuously improve the success of its Plan to achieve program goals. UGI Electric and the CSP will enhance quality control, evaluate, measure and verify procedures to track program activities, monitor performance and progress toward targets, and take corrective action when warranted.

QC is integral to the delivery of all programs in UGI Electric’s EE&C Plan. QC measures will be deployed at various stages of program design and implementation to ensure the highest industry standards of operational efficiency.

The CSP will track all the data necessary to verify program activities and outcomes. For the School Energy Education Program, this data will include:

- Participant information: contact information.
- School information: site (facility) location and teacher involved.
- Expenditures and energy savings.

QC processes will strive to:

- Prevent errors from beginning to end in any given program process.
- Detect and correct errors as early as possible.
- Eliminate the causes of errors as well as the errors themselves.
- Establish a correction plan based on best practices and lessons learned.

The CSP shall provide periodic reports to UGI Electric for measurement and verification.

Estimated Participation

Participation levels were developed based on achieved participation levels to date, along with anticipated school interest.

Table 9: Projected Participation

Measure	PY 13	PY 14	PY 15	PY 16	PY 17	Total
Middle School Kits	1,000	1,000	1,000	1,000	1,000	5,000
High School Kits	750	750	750	750	750	3,750
Total	1,750	1,750	1,750	1,750	1,750	8,750

Program Budget, Costs and Cost-Effectiveness

Over the five-year Plan, the program is expected to achieve electricity consumption savings of approximately 2,352 MWh. The annual budget allocation, MWh savings, and overall program cost-effectiveness for the residential customer sector are shown in the table below.

Table 10: Program Savings and Costs

Benefit/Cost Component	PY 13	PY 14	PY 15	PY 16	PY 17	Total
Savings (MWh)	470	470	470	470	470	2,352
Capacity Savings (MW)	0.051	0.051	0.051	0.051	0.051	0.253
Total Resource Cost	\$262,660	\$262,660	\$262,660	\$262,660	\$262,660	\$1,313,300
Direct Participant Cost	\$0	\$0	\$0	\$0	\$0	\$0
Direct Utility Costs	\$262,660	\$262,660	\$262,660	\$262,660	\$262,660	\$1,313,300
Customer Incentives	\$207,660	\$207,660	\$207,660	\$207,660	\$207,660	\$1,038,300
Administration	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
Marketing	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000

Table 11: Program Cost Effectiveness

TRC Test	Value (\$1,000)
NPV Benefits	\$5,038
NPV Costs	\$1,068
Net Benefits	\$3,970
TRC Benefit/Cost Ratio	4.72

2.1.3 Energy Kits Program

Objectives

The Energy Kits Program is designed to provide residential customers with information on how to improve the efficiency of their homes along with free, targeted energy savings kits for customers who heat their water with electricity. The program also provides a way for customers to engage with UGI Electric and learn about its other programs.

Target Market

This program will be available to all UGI Electric residential customers, and kits will be available to customers who use electricity for water heating.

Customer Eligibility Parameters

Customer Type	Residential/Low-income
Building Type	All
Building Vintage	All
Building Ownership	Owner or tenant with owner approval

Program Description

The Energy Kits Program provides a way for customers to complete an online questionnaire regarding their home energy usage, which will result in a customized set of recommendations. The customer will then be eligible to receive an energy saving kit, which will be shipped to their home at no cost. Participating customers will also be referred to other UGI Electric incentive programs where appropriate. To reach customers who do not have easy access to the internet, a phone version of the audit will be made available.

Implementation Strategy

UGI Electric will work with a CSP to design and launch a website for customers to visit and learn about ways to save energy in their home. The website will also allow the customer to fill out information about their home and receive customized energy saving recommendations along with referrals to other UGI Electric programs. If the customer indicates that they utilize electricity to heat water, they will be able to fill out their information to receive a free water heating energy saving kit in the mail. The CSP will process and send the kit to the customer. UGI Electric may also distribute kits directly to customers through its outreach and marketing activities.

Marketing Strategy

The marketing strategy may include, but will not be limited to:

1. Promoting the program in UGI Electric's customer bill inserts.
2. Communicating and providing access to program information on the Company's website.

3. Educating customers through various marketing campaigns, which may include email, direct mail, radio, and/or social media advertising.

Eligible Measures and Incentive Strategy

Kits will be offered free of charge. UGI Electric plans to provide a water saving kit for customers that have electric water heaters. The kit may include, but is not limited to, low-flow showerheads, low-flow kitchen faucet aerators, and low-flow bathroom faucet aerators. There will be a limit of one kit per customer every five years.

Evaluation, Measurement, and Verification

UGI Electric will strive to continuously improve the success of its Plan to achieve program goals. UGI Electric and the CSP will enhance quality control, evaluate, measure and verify procedures to track program activities, monitor performance and progress toward targets, and take corrective action when warranted.

QC will be integral to the delivery of all programs in UGI Electric's Phase IV EE&C Plan. QC measures will be deployed at various stages of program design and implementation to ensure the highest industry standards of operational efficiency. These measures will include, but will not be limited to, the following:

- Ongoing tracking of program activities and costs through dedicated UGI Electric Staff and the program CSP.
- Applying rigorous screening and qualifying protocols in engaging new CSPs should that be necessary.

QC processes will strive to:

- Prevent errors from beginning to end in any given program process.
- Detect and correct errors as early as possible.
- Eliminate the causes of errors as well as the errors themselves.
- Establish a correction plan based on best practices and lessons learned.

The program CSP will track the data necessary to verify program activities and outcomes, including:

- Expenditures and energy savings.
- Customer information for distribution of kits to customers.

CSP shall provide weekly and/or monthly reports to UGI Electric for measurement and verification.

Estimated Participation

Program participation rates were developed based on the number of residential UGI Electric customers with electric water heat and an assumed annual acceptance rate.

Table 12: Program Participation

Measure	PY 13	PY 14	PY 15	PY 16	PY 17	Total
Water Heating Kit	250	500	500	500	500	2,250
Total	250	500	500	500	500	2,250

Program Budget, Costs, and Cost-effectiveness

Over the five-year plan, the program is expected to achieve electricity consumption savings of approximately 426 MWh. The annual budget allocation, savings, and overall cost-effectiveness for the program are shown in the table below.

Table 13: Program Savings and Costs

Benefit/Cost Component	PY 13	PY 14	PY 15	PY 16	PY 17	Total
Savings (MWh)	47	95	95	95	95	426
Capacity Savings (MW)	0.005	0.010	0.010	0.010	0.010	0.045
Total Resource Cost	\$75,535	\$77,481	\$77,901	\$78,329	\$78,766	\$388,012
Direct Participant Cost	\$285	\$981	\$1,401	\$1,829	\$2,266	\$6,762
Direct Utility Costs	\$75,250	\$76,500	\$76,500	\$76,500	\$76,500	\$381,250
Customer Incentives	\$10,000	\$20,000	\$20,000	\$20,000	\$20,000	\$90,000
Administration	\$50,250	\$36,500	\$36,500	\$36,500	\$36,500	\$196,250
Marketing	\$15,000	\$20,000	\$20,000	\$20,000	\$20,000	\$95,000

Table 14: Program Cost Effectiveness

TRC Test	Value (\$1,000)
NPV Benefits	\$658
NPV Costs	\$329
Net Benefits	\$329
TRC Benefit/Cost Ratio	2.00

2.1.4 Appliance Recycling Program

Objectives

The objectives of the Appliance Recycling Program include:

1. Encouraging customers to dispose of their existing, inefficient appliances when they purchase new or eliminate a second unit that may not be needed.
2. Reducing the use of secondary, inefficient appliances.
3. Ensuring appliances are disposed of in an environmentally responsible manner.
4. Decommissioning to ensure appliances are not resold in a secondary market.
5. Recycling approximately 2,000 refrigerators and freezers, 2,700 window air conditioning units, and 750 dehumidifiers through PY17, with a total reduction of approximately 2,565 MWh.

Target Market

This program targets residential customers with a working, residential-sized refrigerator or freezer. Refrigerators must be at least 10 cubic feet in size. Window air conditioners and dehumidifiers will now be eligible to be picked up on their own without the need to be combined with refrigerator or freezer recycling.

Customer Eligibility Parameters

Customer Type	Residential/Low-Income
Building Type	All
Building Vintage	All
Building Ownership	Owner or tenant with owner approval

Program Description

An incentive will be offered for customers who turn in eligible appliances. The program provides free pick-up and disposal of old, inefficient refrigerators, freezers, dehumidifiers and window air conditioning units. Units must be plugged in and functioning when picked up.

All units are disposed of in an environmentally responsible manner. This involves removing hazardous materials such as chlorinated fluorocarbons from the refrigerant and foam insulation, preparing refrigerant for reclamation, and recycling other materials such as metal and plastic.

Implementation Strategy

UGI Electric will continue to utilize a turn-key Appliance Recycling CSP to deliver this program. The CSP will be responsible for the following:

1. Call center services, including customer intake and scheduling.
2. Processing applications and rebates.
3. Tracking program data.
4. Providing customer and transaction information to UGI Electric.

UGI Electric EE&C Staff will provide overall strategic direction and program management for the program. Key steps in program participation may include the following:

1. CSP schedules and executes appliance collection.
2. CSP verifies customer and appliance eligibility.
3. CSP picks up and transports appliances to recycling facility.
4. CSP recycles applicable components and appropriately disposes of remaining components.
5. CSP tracks customer data and provides UGI Electric program data.
6. CSP processes rebate payments for customers.

Marketing Strategy

Marketing for this program will be conducted by UGI Electric with support from the CSP. The strategy may include, but not be limited to:

1. Promoting the program in UGI Electric customer bill inserts.
2. Communicating and providing access to program information on the Company's website.
3. Educating customers through various marketing campaigns which may include email, direct mail, radio, and/or social media advertising.
4. Including program information on ENERGY STAR's "Find a Fridge or Freezer Recycling Program" web page.

Eligible Measures and Incentive Strategy

There are two distinct incentives associated with the program:

1. Free pick-up and disposal of refrigerator, freezer, window A/C unit, or dehumidifier.
2. Appliance rebate.

For Phase IV, UGI Electric will allow standalone recycling of window A/C units and dehumidifiers. There is a limit of two rebates per customer address per program year. Appliance eligibility parameters and rebates are shown in the table below.

Table 15: Eligible Measures*

Measure	Eligibility Rating	Maximum Incentive
Refrigerator	Working unit; ≥ 10 CU FT.	\$75
Freezer	Working Unit	\$75
Window Air Conditioner	Working Unit	\$50
Dehumidifier	Working Unit	\$50

UGI Electric may offer other forms of incentives of equivalent value, such as low-flow devices, advanced power strips, or other measures at no cost to the participant. UGI Electric will review the program and may adjust available measures or eligibility qualifications as warranted by changing market conditions or to manage program delivery, participation, and budgets.

Evaluation, Measurement, and Verification

UGI Electric will strive to continuously improve the success of its Plan to achieve program goals. UGI Electric and the CSP will enhance quality control, evaluate, measure and verify procedures to track program activities, monitor performance and progress toward targets, and take corrective action when warranted.

QC will be integral to the delivery of all programs in UGI Electric’s Phase IV EE&C Plan. QC measures will be deployed at various stages of program design and implementation to ensure the highest industry standards of operational efficiency. These measures will include, but will not be limited to, the following:

- Ongoing tracking of program activities and costs through dedicated UGI Electric Staff and CSP.
- Applying rigorous screening and qualifying protocols in engaging a new CSP, should that be deemed necessary.

QC processes will strive to:

- Prevent errors from beginning to end in any given program process.
- Detect and correct errors as early as possible.
- Eliminate the causes of errors as well as the errors themselves.
- Establish a correction plan based on best practices and lessons learned.

The program CSP and UGI Electric Staff will track all the data necessary to verify program activities and outcomes. For the Appliance Recycling Program, this data will include:

- Participant information: account number, rate class, and contact information.

- Measure information: make and model number of old appliances, type, size, and quantity.
- Expenditures and energy savings.

The CSP will provide weekly and/or monthly reports to UGI Electric for measurement and verification.

Estimated Participation

Program participation levels were developed based on: (1) actual experience with this program during Phase III; and (2) consultation with the CSP on participation rates within similarly operated programs. The appliance recycling projections are shown below.

Table 16: Projected Participation

Measure	PY 13	PY 14	PY 15	PY 16	PY 17	Total
Fridge	340	340	340	340	340	1,700
Freezer	60	60	60	60	60	300
Room AC	540	540	540	540	540	2,700
Dehumidifier	150	150	150	150	150	750
Total	1,090	1,090	1,090	1,090	1,090	5,450

Program Budget, Costs, and Cost-effectiveness

Over the five-year Phase IV EE&C Plan, the program is expected to achieve electricity consumption savings of approximately 2,565 MWh. The annual budget allocation, MWh savings, and overall program cost-effectiveness are shown in the table below.

Table 17: Program Savings and Costs

Benefit/Cost Component	PY 13	PY 14	PY 15	PY 16	PY 17	Total
Savings (MWh)	513	513	513	513	513	2,565
Capacity Savings (MW)	0.217	0.217	0.217	0.217	0.217	1.085
Total Resource Cost	\$223,391	\$218,854	\$219,326	\$219,808	\$220,299	\$1,101,678
Direct Participant Cost	\$641	\$1,104	\$1,576	\$2,058	\$2,549	\$7,928
Direct Utility Costs	\$222,750	\$217,750	\$217,750	\$217,750	\$217,750	\$1,093,750
Customer Incentives	\$64,500	\$64,500	\$64,500	\$64,500	\$64,500	\$322,500
Administration	\$135,250	\$135,250	\$135,250	\$135,250	\$135,250	\$676,250
Marketing	\$23,000	\$18,000	\$18,000	\$18,000	\$18,000	\$95,000

Table 18: Program Cost Effectiveness

TRC Test	Value (\$1,000)
NPV Benefits	\$942
NPV Costs	\$935
Net Benefits	\$7
TRC Benefit/Cost Ratio	1.01

2.1.5 Low-Income Program

Objectives

The objectives of the Low-Income Program include:

1. Providing UGI Electric confirmed residential low-income customers with an array of no-cost energy-saving equipment and/or education to help reduce their energy costs, such as the direct installation of HPWHs, ENERGY STAR smart thermostats and additional and/or different measures than those offered through the Company's Low-Income Usage Reduction Program ("LIURP").
2. Achieving high customer satisfaction through impactful program offerings.
3. Achieving a total reduction in energy use of 159 MWh over the life of the Plan.

Target Market

This program is available to all UGI Electric confirmed residential low-income customers. To qualify for the program, the customer's household income must be confirmed at or below 200% of the U.S. Federal Poverty Guidelines and not be eligible for LIURP due to usage and/or limited billing history. Tenants must obtain landlord approval to participate in the program.

Customer Eligibility Parameters

Customer Type	Low-Income
Building Type	All
Building Vintage	All
Building Ownership	Owner or tenant with owner approval

Program Description

Through the Low-Income Program, UGI Electric offers a direct installation, at no cost to the participant, of an ENERGY STAR HPWH, ENERGY STAR smart thermostat, and additional and/or different measures than those offered through the Company's LIURP to eligible low-income customer residents.

Implementation Strategy

UGI Electric will manage the program internally and will work with trade allies, including but not limited to CBOs, to deliver this program.

Marketing Strategy

The marketing strategy may include, but will not be limited to:

1. Promoting the program in UGI Electric’s customer bill inserts.
2. Communicating and providing access to program information on the Company’s website.
3. Educating customers through various marketing campaigns, which may include email, direct mail and/or social media advertising.
4. Promoting the program with material and events performed through the UGI Electric CBO Marketing Program.

Eligible Measures and Incentive Strategy

All services and measures are provided to confirmed low-income customers at no cost. For eligible low-income customers, the contractor will determine whether one or more measures will be installed for the participating customer. The decision may be based on age and condition of the customer’s existing equipment. Table 19 shows UGI Electric’s list of initial energy saving measures and an estimated cost per installed measure, to be paid by UGI Electric.

Table 19: Eligible Measures

Measure Name	Measure Life (Yrs.)	Installed Measure Cost	Energy (kWh)	Demand (kW)	Fossil Fuels (MMBtus)
ENERGY STAR Smart Thermostat	11	\$400	1,199	-	3.35
ENERGY STAR Heat Pump Water Heater	10	\$3,500	2,278	1.83	-

UGI Electric will periodically review its program and may adjust or add eligible measures in the future as market conditions change. UGI Electric will review results from this program and determine whether any adjustments are needed to achieve the desired energy savings on a whole; provided, however, the Company will not, without Commission approval, deviate significantly from the approved program parameters or exceed the total approved budget for the Plan.

Evaluation, Measurement, and Verification

UGI Electric will strive to continuously improve the success of its Plan to achieve program goals. UGI Electric and trade allies will enhance quality control, evaluate, measure, and verify procedures to track program activities, monitor performance and progress toward targets, and take corrective action when warranted. Planned verification and evaluation activities for the Low-Income program include comprehensive data collection, pre and post installation photographs, and a participant survey. The Company’s annual reports will detail the implementation of the program, findings from the program, and the Company’s evaluation and verification of the program’s results.

Table 20: Estimated Participation

Measure	PY 13	PY 14	PY 15	PY 16	PY 17	Total
ENERGY STAR Smart Thermostat	10	10	10	10	10	50
ENERGY STAR Heat Pump Water Heater	10	10	10	10	10	50
Total	20	20	20	20	20	100

Program Budget, Costs and Cost-Effectiveness

Over the five-year Plan, the program is expected to achieve electricity consumption savings of approximately 159 MWh. The annual budget allocation, MWh savings, and overall program cost-effectiveness for the residential customer sector are shown in the table below.

Table 21: Program Savings and Costs

Benefit/Cost Component	PY 13	PY 14	PY 15	PY 16	PY 17	Total
Savings (MWh)	32	32	32	32	32	159
Capacity Savings (MW)	0.018	0.018	0.018	0.018	0.018	0.09
Total Resource Cost	\$49,000	\$49,000	\$49,000	\$49,000	\$49,000	\$245,000
Direct Participant Cost	\$0	\$0	\$0	\$0	\$0	\$0
Direct Utility Costs	\$49,000	\$49,000	\$49,000	\$49,000	\$49,000	\$245,000
Customer Incentives	\$39,000	\$39,000	\$39,000	\$39,000	\$39,000	\$195,000
Administration	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000
Marketing	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000

Table 22: Program Cost Effectiveness

TRC Test	Value (\$1,000)
NPV Benefits	\$205
NPV Costs	\$186
Net Benefits	\$19
TRC Benefit/Cost Ratio	1.11

2.1.6 Community Based Organization Marketing Program

Objectives

The CBO Marketing Program has several objectives, including:

1. Communicating and cross-promoting EE&C programs, such as the Appliance Recycling Program, Appliance Rebate Program, and Low-Income Program.
2. Communicating energy savings tips to UGI Electric customers.
3. Emphasizing that there are many simple low-cost products to help customers' homes become more energy efficient.

Target Market

This program will be available to all UGI Electric residential customers.

Customer Eligibility Parameters

Customer Type	Residential/Low-income
Building Type	All
Building Vintage	All
Building Ownership	N/A

Program Description

This program will be focused on marketing efforts facilitated by a CBO(s) to cross-promote EE&C programs with the intent of driving increased customer awareness and participation. The marketing strategy may include, but not be limited to, the CBO(s) developing and distributing specific UGI Electric EE&C marketing material and attending various community events and/or trade shows to further promote the availability of programs offered by UGI Electric.

Implementation Strategy

UGI Electric will utilize the services of certain LIURP CBO(s) in the Company's service territory to support and deliver the program.

Program Budget, Costs, and Cost-Effectiveness

Because this program is solely designed to act as a supplement to the remaining measures and does not provide an opportunity to discretely measure energy savings, the TRC value is assumed to be zero. The annual budget allocation is shown in the table below.

Table 23: Program Savings and Costs

Benefit/Cost Component	PY 13	PY 14	PY 15	PY 16	PY 17	Total
Savings (MWh)	0	0	0	0	0	0
Capacity Savings (MW)	0.000	0.000	0.000	0.000	0.000	0.000
Total Resource Cost	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000
Direct Participant Cost	\$0	\$0	\$0	\$0	\$0	\$0
Direct Utility Costs	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000
Customer Incentives	\$0	\$0	\$0	\$0	\$0	\$0
Administration	\$0	\$0	\$0	\$0	\$0	\$0
Marketing	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000

Table 24: Program Cost Effectiveness

TRC Test	Value (\$1,000)
NPV Benefits	\$0
NPV Costs	\$43
Net Benefits	-\$43
TRC Benefit/Cost Ratio	0.00

2.2 Commercial and Industrial Sector Programs

2.2.1 Commercial and Industrial Incentive Program

Objectives

The objectives of the Commercial and Industrial (“C&I”) Incentive Program include:

1. Encouraging the installation of high-efficiency equipment by UGI Electric’s C&I customers in new and existing facilities.
2. Encouraging equipment repairs, optimization and operational or process changes that reduce electricity consumption.
3. Increasing customer awareness of the features and benefits of energy efficient equipment.
4. Increasing the market penetration of high-efficiency equipment and leverage existing programs in the market to reach more customers.
5. Obtaining a total energy reduction of approximately 19,804 MWh.

Target Market

UGI Electric’s C&I Incentive Program targets all new and existing commercial and industrial facilities, including government and municipal customers. The program will be available for any type of new or replacement energy-efficient equipment. The program also covers retro-commissioning, repairs, optimization, and operational or process changes.

UGI Electric expects to use a multi-channel implementation strategy overseen by a single CSP to deliver the program across these market sectors. The table below outlines participant eligibility parameters for this program.

Customer Eligibility Parameters	
Customer Type	Commercial and Industrial Small Commercial and Industrial (SCI) only for Direct Install for Small Business Pathway
Building Type	Commercial and Industrial
Building Vintage	Existing and new construction
Building Ownership	Owner or tenant with owner approval

Program Description

The C&I Incentive Program provides financial incentives to customers installing a wide

variety of energy efficiency measures suited to their business needs. The program will deliver savings to customers through three pathways:

- 1) **Prescriptive Pathway** – Any non-residential customer or contractor/trade ally can submit a rebate application and receive a prescriptive rebate. This will initially cover commercial lighting measures and may be expanded to other measures including, but not limited to, HVAC and refrigeration.
- 2) **Custom Pathway** – A custom rebate is available to non-residential customers installing energy efficiency measures not covered in the Prescriptive Pathway. This is a continuation of the existing C&I Custom Program from Phase III.
- 3) **Direct Install for Small Business Pathway** – Small business customers can receive a free assessment that will be used to identify energy savings opportunities and will then be presented a rebate package designed to be higher than what they would receive through the Prescriptive Pathway.

The Non-Residential CSP will manage and coordinate the program pathways, maintain a call and rebate processing center, recruit and educate trade allies, and conduct marketing to achieve the desired participation and encourage customers to take a whole-building approach or implement multiple measures.

Implementation Strategy

The Non-Residential CSP will be directly responsible for the delivery of the program, including overseeing customer outreach and marketing, trade ally recruitment and management, application and rebate processing, and verification and inspection activities.

Prescriptive Pathway

The implementation of the Prescriptive Pathway will be similar to the residential Appliance Rebate Program and will utilize the following steps.

1. Customers may be directed to the program through UGI Electric's marketing activities, the Company's website, equipment dealers, or equipment installation contractors.
2. Customers will generally work with the equipment retailer or installation contractor to fill out program applications and ensure the required documentation is submitted to the program CSP for processing.
3. The CSP will review documentation to verify that the applicant is a UGI Electric customer and that the installed equipment meets the minimum efficiency standard.
4. Customers installing eligible high-efficiency equipment will schedule the work directly with their equipment dealer or installation contractor.
5. The CSP will process rebates in the form of checks or check cards for qualified equipment. The rebate must be submitted within 180 days of the purchase of equipment.

UGI Electric may also decide to pursue a mid-stream approach for this pathway, which would allow the prescriptive rebates to be claimed by a distributor at the time of sale, passing on the savings directly to the customer.

Custom Pathway

The Custom Pathway is a continuation of the Phase III C&I Custom Program. The project development process for the Custom Pathway Program is more fluid than other programs and may not follow a precise work path. The following workflow is an example of a typical scenario through which an equipment-based custom efficiency project may proceed:

1. Customers may be directed to the program through advertising efforts or other UGI Electric EE&C programs.
2. A trade ally (*e.g.*, energy services firms, engineering firms, providers of energy efficiency products and services, etc.) works with the customer to evaluate the facility's energy efficiency opportunities and develop potential project ideas.
3. A professional engineering firm or other qualified contractor, under contract with the customer, performs a detailed technical study of potential projects and evaluates their cost-effectiveness.
4. The program CSP will evaluate the customer's technical study report to qualify projects, which involves confirming project incremental cost, potential energy and capacity savings data, and evaluating cost-effectiveness.
5. Customers will schedule installation of eligible high-efficiency equipment upgrades, operational or process changes, or other eligible measures directly with an installation contractor of their choosing or the program CSP, if selected.
6. The CSP will verify equipment installation, operational, or process changes or other eligible work for all participants, which will be a part of the measurement and verification process.
7. The CSP will then process rebates for qualifying projects.
8. UGI Electric will require that rebate applications be submitted within 180 days of the measure's installation date.

Customer incremental costs (*i.e.*, the cost differential between standard and high-efficiency measures) will vary depending on the type of equipment and scope of the project.

Direct Install for Small Business Pathway

UGI Electric will implement a Direct Install for Small Business Pathway to address the traditionally hard-to-reach Small C&I customer segment. To participate in this pathway, customers must be on the SCI rate class and go through the following steps:

1. The customer will receive a no-cost assessment to identify energy savings opportunities.
2. The customer will then receive a report outlining the assessment findings along with recommended measures and an incentive amount that will be provided for completing the recommended work.
3. The customer will then be referred to a network of trade allies who can perform the

recommended work.

4. The customer will contract with trade allies to have the work performed.
5. Once the work has been performed, the CSP will verify that it has been done and provide the incentive.

Marketing Strategy

The program CSP and UGI Electric will work together to establish a marketing plan to promote the program through a variety of strategies. In addition, UGI Electric's sales staff may contact C&I customers to inform them about program availability. UGI Electric and the program CSP will continue to refine and expand program outreach, which may include, but not be limited to:

1. Communicating and providing access to program information on the Company's website.
2. Outreach to supply houses, engineering firms, contractors and other trade allies.
3. Utilizing limited time offers and other promotional offerings.
4. Advertising through email, direct mail, radio, and/or social media.
5. Targeting of specific customer segments based on energy usage or business profiles.
6. Coordinating education opportunities and webinars.
7. Utilizing program case studies in direct mail and/or email campaigns.

Eligible Measures and Incentive Strategy

UGI Electric will provide incentives based on the following table and maintain an overall incentive level up to \$0.10 per kWh, on average, over the lifetime of the Plan.

Pathway	Eligibility Requirement	Initial Incentive	Incentive Maximum
Prescriptive	ENERGY STAR or Design Light Consortium (DLC) where possible	\$0.07 / kWh	\$0.10 / kWh
Custom	Saves electricity	\$0.10 / kWh	\$0.18 / kWh
Direct Install	Customer Class SCI, Saves electricity	\$0.12 / kWh	\$0.18 / kWh

UGI Electric anticipates starting by offering prescriptive incentives for commercial lighting measures and may expand to non-lighting equipment depending on market conditions and customer demand.

UGI Electric will limit Custom and Direct Install rebate amounts to the lessor of \$100,000 or 50% of the customer project cost (75% for Direct Install). Custom and Direct Install projects

must save electricity and be cost-effective under the TRC Test (have a benefit-cost ratio of at least 1.0). Where possible, measure savings will be calculated using the current Act 129 TRM.⁹

UGI Electric will review the program and may adjust available measures or eligibility qualifications as warranted by changing market conditions or to manage program delivery, participation, and budgets.

Evaluation, Measurement, and Verification

UGI Electric will strive to continuously improve the success of its Plan to achieve program goals. UGI Electric and the CSP will enhance quality control, evaluate, measure and verify procedures to track program activities, monitor performance and progress toward targets, and take corrective action when warranted.

QC will be integral to the delivery of all programs in UGI Electric's Phase IV EE&C Plan. QC measures will be deployed at various stages of program design and implementation to ensure the highest industry standards of operational efficiency. These measures will include, but will not be limited to, the following:

- Ongoing tracking of program activities and costs through dedicated UGI Electric Staff and various CSPs.
- Applying rigorous screening and qualifying protocols in engaging CSPs.
- Checking a significant percentage of custom projects to verify program compliance.

QC processes will strive to:

- Prevent errors from beginning to end in any given program process.
- Detect and correct errors as early as possible.
- Eliminate the causes of errors as well as the errors themselves.
- Establish a correction plan based on best practices and lessons learned.

The program CSP and UGI Electric staff will track all the data necessary to verify program activities and outcomes. For the Custom Pathway program, this data may include:

- Participant information: account number, rate class, copy of most recent electric bill, EE&C customer segment, and contact information.
- Project information: site (facility) location, project specifications, total project cost, project application date, project approval date, and project completion date.
- Measure information: make and model number of new appliances, type and quantity of measures installed, efficiency rating, and service rendered.
- Expenditures and energy savings.

⁹ UGI Electric will continue to use the Phase IV Act 129 Technical Reference Manual ("TRM") until the Phase V Act 129 TRM is made available and adopted.

- Trade ally information, if available: contact information, dates of program involvement, and installation standards used.
- New construction information: developer contact information, builder contact information, and confirmation of new account activation.

The program CSP will also perform onsite inspections on a portion of Direct Install and Custom projects.

For Custom and Direct Install rebates, UGI Electric will continue to track and evaluate actual project savings and calculate an analysis of realized savings at the end of each program year. Such tracking and evaluation of actual project savings will be performed in a manner that allows the Company to determine estimated annual pre-project usage and estimated annual post-project usage and then calculate the difference between pre- and post-project usage and estimated annual post-project usage and then calculate the difference between pre- and post-project usage to get realized savings, with the realization rate calculated by dividing this value by the projected savings for the project. The three methods the Company may use to determine pre- and post-project usage are raw usage comparison, baseload usage comparison, and adjusted usage comparison.

Estimated Participation

Participation levels were estimated based on experience with this program over the past two years.

Table 25: Projected Participation

Project	PY 13	PY 14	PY 15	PY 16	PY 17	Total
Prescriptive Units - Small C&I	250	330	330	330	330	1,570
Prescriptive Units - Large C&I	870	1,170	1,170	1,170	1,170	5,550
Small C&I Direct Install	11	16	22	22	22	93
Custom - Small C&I	1	1	1	1	1	5
Custom - Large C&I	1	1	1	1	1	5
Total	1,133	1,518	1,524	1,524	1,524	7,223

Program Budget, Costs, and Cost-Effectiveness

Over the five-year Plan, the program is expected to achieve electricity consumption savings of approximately 19,804 MWh. Over the five-year term of the Phase IV EE&C Plan, the overall incentive spending shall be limited to \$100 per first year MWh, and the overall non-incentive spending shall be limited to \$110 per first year MWh. UGI Electric’s internal EE&C staff expenses are not assigned to the C&I Custom Incentive program and, therefore, are not included in the calculation of the annual non-incentive spending cost limit. The annual and Phase IV to-date incentive and non-incentive spending values on a per first year MWh basis will be included in the Company’s annual reports.

Table 26: Program Savings and Costs

Benefit/Cost Component	PY 13	PY 14	PY 15	PY 16	PY 17	Total
Savings (MWh)	2,786	3,725	4,431	4,431	4,431	19,804
Capacity Savings (MW)	0.445	0.599	0.705	0.705	0.705	3.159
Total Resource Cost	\$1,171,543	\$1,515,862	\$1,888,539	\$1,917,970	\$1,947,989	\$8,441,903
Direct Participant Cost	\$587,322	\$788,164	\$1,025,142	\$1,054,573	\$1,084,593	\$4,539,794
Direct Utility Costs	\$584,221	\$727,698	\$863,396	\$863,396	\$863,396	\$3,902,107
Customer Incentives	\$268,321	\$361,698	\$446,396	\$446,396	\$446,396	\$1,969,207
Administration	\$240,900	\$291,000	\$342,000	\$342,000	\$342,000	\$1,557,900
Marketing	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$375,000

Table 27: Program Cost Effectiveness

TRC Test	Value (\$1,000)
NPV Benefits	\$15,410
NPV Costs	\$7,082
Net Benefits	\$8,328
TRC Benefit/Cost Ratio	2.18

Other Information

Customers who submit qualified and approved projects to UGI Electric will receive a budget commitment for their proposal. Receipt of the rebate is contingent on project completion during the life of the Plan and the availability of program funding. Customers submitting projects to UGI Electric will be placed on a waiting list for a potential Phase V if funding runs out prior to the end of the Phase IV EE&C Plan.

Solar equipment is eligible for the Custom and Direct Install pathways to the extent that the energy generated is used to offset energy usage and the overall project passes the TRC Test.

3 Cost Effectiveness of Plan and Sector Summaries

UGI Electric designed its Phase IV EE&C Plan to offer programs that, as a whole, meet the TRC Test. The overall Phase IV EE&C Plan is cost-effective according to the TRC guidelines established by the Commission.

UGI Electric’s analysis indicates a TRC benefit-to-cost ratio of 2.24 for the overall Phase IV portfolio. The analysis reveals that for the complement of Residential Programs, the TRC Benefit/Cost Ratio is 2.92. The TRC Benefit/Cost Ratio for the Commercial and Industrial Programs is 2.18. This benefit-to-cost ratio is more than the 1.0 minimum TRC Test parameter applied to the EE&C Plans in the Act 129 proceedings. The summary of the Plan’s cost effectiveness is provided in the table below.

Table 28: Cost Effectiveness/Net Benefits Summary

Customer Class	TRC PV Benefits	TRC PV Costs	TRC PV Net Benefits	TRC Benefit-Cost Ratio
Residential	\$16,239,628	\$5,564,702	\$10,674,925	2.92
C&I	\$15,409,822	\$7,081,641	\$8,328,182	2.18
Portfolio-wide	\$0	\$1,486,178	-\$1,486,178	N/A
Total	\$31,649,450	\$14,132,521	\$17,516,929	2.24

The TRC Test methodology used herein follows the *Phase IV TRC Test Order*.¹⁰ Present value figures are provided in 2023 dollars. Participant costs shown are net of incentives. The avoided costs used for UGI Electric’s analysis are those utilized by PPL Electric in its Act 129 Phase IV EE&C Plan. These avoided costs can be found in Appendix B, which utilizes a Real Discount Rate (“RDR”) of 2.94% based on a Nominal Discount Rate (“NDR”) of 5.0% and an inflation rate of 2.0% from the *Phase IV TRC Test Order*.

¹⁰ See 2021 Total Resource Cost (TRC) Test, Docket No. M-2019-3006868 (Order entered Dec. 19, 2019) (“Phase IV TRC Test Order”).

4 Implementation Strategy

UGI Electric anticipates that it will leverage a combination of internal staff and CSPs to accomplish the goals of its Phase IV EE&C Plan. For continuity purposes, UGI Electric intends to utilize its existing CSPs for Phase IV; however, the Company will utilize a RFP process to find and employ new CSPs as needed. UGI Electric has appropriately incorporated administrative costs into its Phase IV EE&C Plan budget. The following table provides annual projections for portfolio-wide administration costs by category.

Table 29: Portfolio-wide Costs by Category and Year

Cost Component	PY 13	PY 14	PY 15	PY 16	PY 17	PY 13 - 17
Internal Labor and Other Resources	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$750,000
Tracking, Planning and Reporting	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$600,000
Miscellaneous Admin	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000
Evaluations	\$0	\$135,000	\$135,000	\$0	\$0	\$270,000
Total Cost	\$295,000	\$430,000	\$430,000	\$295,000	\$295,000	\$1,745,000

Administrative costs for UGI Electric’s Phase IV EE&C Plan constitute approximately \$1.75 million over five years, or 17% of the total Plan budget. These costs were developed based on UGI Electric’s best estimate and available information regarding the energy efficiency programs contained in its Plan, as well as \$270,000 for an evaluation of residential programs in PY14 and nonresidential programs in PY15.

Reporting

UGI Electric will continue to submit an EE&C Plan Annual Report by August 31st, no later than three months after the close of each program year. The reports will follow the same format as previous reports and include information on activity for the previous year and progress towards five-year goals, including, but not limited to:

- Spending.
- Savings.
- Participation.
- Cost-effectiveness.
- Highlights of portfolio and program activity.
- Updates to program delivery and design.

To tie savings and costs together as effectively as possible, results will be reported based on commitments made. Any measures that have been verified as installed within a program year along with any costs committed to these measures, including administration costs, will be counted for that Plan year.

5 Phase IV Energy Efficiency and Conservation Rider

For Phase IV, UGI Electric proposes an annual average budget of approximately \$2.1 million, which equates to a maximum of approximately \$10.5 million over the five years of the Plan. The budget includes the annual spending limits for the sectors, as well as the Company's annual administrative costs to implement and administer Phase IV of the Plan each year. UGI Electric proposes to limit its absolute annual spending on the EE&C portfolio to 2% of its jurisdictional revenues for the twelve months ending May 31, 2008, or approximately \$2.5 million, while maintaining a five-year spending cap of approximately \$10.5 million.

Consistent with the Commission's Secretarial Letter, UGI Electric proposes a Section 1307 mechanism to recover the budgeted costs for administration of Phase IV of the Plan. Phase IV EE&C Plan cost recovery will be accomplished utilizing the Phase IV EEC Rider, described more fully below.

Act 129 requires larger EDCs to recover the costs of their EE&C plans through a reconcilable adjustment clause under Section 1307 of the Public Utility Code. *See* 66 Pa. C.S. § 2806.1(k)(1). In its *Phase IV Implementation Order*, the Commission reemphasized this requirement stating that "the annual surcharge should be based on the projected program costs that the EDC anticipates will be incurred over the surcharge application year to attain the conservation targets." *Phase IV Implementation Order*, p. 142. This Section 1307 surcharge would be reconciled annually based on the "actual expenses incurred" compared to "actual revenues received." *Id.*

Although UGI Electric is not subject to the Act 129 requirements and orders, the Company proposes to recover the costs of its Phase IV EE&C Plan through a reconcilable Phase IV EEC Rider established under Section 1307 of the Public Utility Code, consistent with Act 129 and the Commission's *Phase IV Implementation Order*. The Phase IV EEC Rider is reflected in the distribution charges for each customer class, rather than appearing as a separate line item on customers' bills.

The costs that will be recovered by the Phase IV EEC Rider consist of all the costs of creating, designing, and implementing the Phase IV EE&C programs included in the Plan, which include, but are not limited to: (1) labor costs incurred to manage and administer the programs on an ongoing basis; (2) the cost to measure and verify program results; and (3) the cost of incentives offered to customers to participate in the programs.

UGI Electric will recover the expenditures incurred under the Phase IV EE&C Plan on a year-to-year basis. As a result, the Phase IV EEC Rider was designed to track actual yearly expenditures. Act 129 and the Commission's Secretarial Letter require that EE&C programs be supported by the same customer classes that will receive the direct energy and conservation benefits of those programs. *See* 66 Pa. C.S. § 2806.1(a)(11). Accordingly, under UGI Electric's Plan, the costs of Phase IV EE&C programs that target specific customer classes are directly assigned to those classes for purposes of developing the recovery charges. UGI Electric will, therefore, continue to separately calculate the applicable EE&C costs and

revenues for each of the major customer classes on its system, including: (1) residential; (2) small non-residential; and (3) large non-residential.

The Company will adjust the Phase IV EEC Rider for actual program expenses and revenues each year. UGI Electric also will submit a filing to reconcile previous revenues and expenses and will propose new rates effective for the subsequent year based on the projected budget and sales for that planning year, as well as to account for over and under collections incurred for the previous year. Any resulting over/under collections existing as of the last year of the Phase IV EE&C Plan will be recovered/refunded over the one-year period following the end of the Final Reconciliation Year. If it is known that there will be a Phase V EE&C Plan at the end of the Final Reconciliation Year related to Phase IV, any remaining balance will be recovered/refunded through the Phase IV EEC Rider's E-Factor. If there will be no Phase V EE&C Plan, any balance remaining for a customer class at the end of the Final Reconciliation Year will be trued up through a one-time bill credit/debit issued to the applicable customers during the second full billing month following the end of the Final Reconciliation Year.

Appendix A – Program Costs and Savings by Year

Table 30: Utility Costs (Nominal \$)

Program	PY 13	PY 14	PY 15	PY 16	PY 17	PY 13 - 17
Appliance Recycling	\$222,750	\$217,750	\$217,750	\$217,750	\$217,750	\$1,093,750
Appliance Rebates	\$329,050	\$328,800	\$349,200	\$361,500	\$373,700	\$1,742,250
Energy Kits	\$75,250	\$76,500	\$76,500	\$76,500	\$76,500	\$381,250
School Energy Program	\$262,660	\$262,660	\$262,660	\$262,660	\$262,660	\$1,313,300
Low-income Program	\$49,000	\$49,000	\$49,000	\$49,000	\$49,000	\$245,000
CBO Marketing	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000
C&I Program	\$584,221	\$727,698	\$863,396	\$863,396	\$863,396	\$3,902,107
Portfolio-wide Administration	\$295,000	\$430,000	\$430,000	\$295,000	\$295,000	\$1,745,000
Total Portfolio	\$1,827,931	\$2,102,408	\$2,258,506	\$2,135,806	\$2,148,006	\$10,472,657

Table 31: Incremental First Year Savings (kWh)

Program	PY 13	PY 14	PY 15	PY 16	PY 17	PY 13 - 17
Appliance Recycling	513,430	513,430	513,430	513,430	513,430	2,567,150
Appliance Rebates	1,274,054	1,380,677	1,503,256	1,586,936	1,670,615	7,415,538
Energy Kits	47,300	94,600	94,600	94,600	94,600	425,700
School Energy Program	470,326	470,326	470,326	470,326	470,326	2,351,630
Low-income Program	31,743	31,743	31,743	31,743	31,743	158,715
CBO Marketing	0	0	0	0	0	0
C&I Program	2,786,177	3,725,056	4,430,876	4,430,876	4,430,876	19,803,861
Total Portfolio	5,123,030	6,215,832	7,044,231	7,127,911	7,211,590	32,722,594
<i>% of 2008 Sales</i>	<i>0.48%</i>	<i>0.58%</i>	<i>0.66%</i>	<i>0.67%</i>	<i>0.67%</i>	<i>3.04%</i>

Appendix B – Avoided Costs

Table 32: Avoided Costs (2023\$)

Year	Summer Peak Energy	Summer Off-Peak Energy	Winter Peak Energy	Winter Off-Peak Energy	Summer Gener. Capacity	Dist. Capacity	NG Base	NG Space Heat	NG DHW	Water
Units:	\$/kWh	\$/kWh	\$/kWh	\$/kWh	\$/kW-yr.	\$/kW-yr.	\$/MMBtu	\$/MMBtu	\$/MMBtu	\$/gal
2022	\$0.0338	\$0.0236	\$0.0450	\$0.0362	\$58.04	\$134.45	5.33	11.36	6.84	\$ 0.0137
2023	\$0.0326	\$0.0232	\$0.0432	\$0.0347	\$45.35	\$134.45	5.51	11.50	7.01	\$ 0.0137
2024	\$0.0329	\$0.0232	\$0.0431	\$0.0349	\$45.35	\$134.45	5.69	11.64	7.18	\$ 0.0137
2025	\$0.0340	\$0.0232	\$0.0390	\$0.0364	\$45.35	\$134.45	5.87	11.79	7.35	\$ 0.0137
2026	\$0.0317	\$0.0223	\$0.0416	\$0.0337	\$45.35	\$134.45	5.95	11.83	7.42	\$ 0.0137
2027	\$0.0328	\$0.0231	\$0.0433	\$0.0349	\$45.35	\$134.45	6.09	11.94	7.55	\$ 0.0137
2028	\$0.0346	\$0.0243	\$0.0470	\$0.0374	\$45.35	\$134.45	6.10	11.92	7.56	\$ 0.0137
2029	\$0.0364	\$0.0256	\$0.0501	\$0.0396	\$45.35	\$134.45	6.86	12.70	8.32	\$ 0.0137
2030	\$0.0381	\$0.0267	\$0.0537	\$0.0420	\$45.35	\$134.45	6.87	12.66	8.32	\$ 0.0137
2031	\$0.0394	\$0.0277	\$0.0565	\$0.0440	\$45.35	\$134.45	6.88	12.64	8.32	\$ 0.0137
2032	\$0.0399	\$0.0280	\$0.0584	\$0.0450	\$45.35	\$134.45	6.88	12.59	8.31	\$ 0.0137
2033	\$0.0393	\$0.0277	\$0.0575	\$0.0442	\$45.35	\$134.45	6.89	12.56	8.31	\$ 0.0137
2034	\$0.0392	\$0.0275	\$0.0574	\$0.0440	\$45.35	\$134.45	6.88	12.51	8.29	\$ 0.0137
2035	\$0.0395	\$0.0277	\$0.0585	\$0.0446	\$45.35	\$134.45	7.01	12.62	8.42	\$ 0.0137
2036	\$0.0402	\$0.0282	\$0.0603	\$0.0456	\$45.35	\$134.45	7.04	12.61	8.43	\$ 0.0137
2037	\$0.0407	\$0.0286	\$0.0617	\$0.0465	\$45.35	\$134.45	7.14	12.68	8.53	\$ 0.0137
2038	\$0.0402	\$0.0283	\$0.0610	\$0.0458	\$45.35	\$134.45	7.22	12.73	8.59	\$ 0.0137
2039	\$0.0398	\$0.0280	\$0.0604	\$0.0453	\$45.35	\$134.45	7.26	12.74	8.63	\$ 0.0137
2040	\$0.0401	\$0.0281	\$0.0612	\$0.0457	\$45.35	\$134.45	7.32	12.76	8.68	\$ 0.0137
2041	\$0.0402	\$0.0282	\$0.0616	\$0.0458	\$45.35	\$134.45	7.41	12.83	8.76	\$ 0.0137

Electric and water avoided costs from the PPL Act 129 Phase IV Plan Filing.

Natural gas costs from UGI Utilities, Inc.’s Consolidated Energy Efficiency and Conservation Plan October 1, 2019 – September 30, 2024 (Revised July 23, 2021.)

Appendix 3.1, expressed in 2023 dollars.

Appendix C – Key Measure Assumptions

Table 33: Measure Characterizations

Program	Measure Name	Measure Life (Yr.)	Measure Cost	First Year Savings		Fossil Fuels (MMBtus)	Water (Gallons)
				Energy (kWh)	Demand (kW)		
Appliance Recycling	Fridge Recycle	5	\$75.00	841	0.14	0.00	0.00
Appliance Recycling	Freezer Recycle	4	\$75.00	1,267	0.21	0.00	0.00
Appliance Recycling	Room AC Retirement	3	\$50.00	113	0.25	0.00	0.00
Appliance Recycling	Dehumidifier Retirement	4	\$50.00	603	0.15	0.00	0.00
Appliance Rebates	Air Source Heat Pump	12	\$400.00	696	0.50	0.00	0.00
Appliance Rebates	Ductless Mini-split Heat Pump (Tier 1 - 16+ SEER)	15	\$300.00	2,592	1.36	0.00	0.00
Appliance Rebates	Ductless Mini-split Heat Pump (Tier 2 - 19+ SEER)	15	\$400.00	3,082	1.62	0.00	0.00
Appliance Rebates	Ductless Mini-split Heat Pump (Tier 3 - 21+ SEER)	15	\$500.00	2,694	1.39	0.00	0.00
Appliance Rebates	Central Air Conditioner	15	\$150.00	152	0.31	0.00	0.00
Appliance Rebates	Room Air Conditioner	9	\$25.00	11	0.07	0.00	0.00
Appliance Rebates	Smart Thermostat	11	\$50.00	140	0.00	1.64	0.00
Appliance Rebates	Heat Pump Water Heater	10	\$400.00	1,945	0.17	0.00	0.00
Appliance Rebates	Clothes Washer	11	\$25.00	101	0.01	0.21	1,658.67
Appliance Rebates	Refrigerator	12	\$50.00	111	0.02	0.00	0.00
Appliance Rebates	Dishwasher	10	\$25.00	23	0.00	0.05	490.00
Appliance Rebates	Dehumidifier	12	\$25.00	201	0.05	0.00	0.00
Appliance Rebates	Fuel Switching: Electric Heating to NG Furnace	15	\$1,500.00	16,839	0.00	-63.16	0.00
Appliance Rebates	Fuel Switching: Electric Heating to NG Boiler	15	\$1,500.00	28,562	0.00	-111.11	0.00
School Energy Program	Middle School Kit	9.4	\$86.52	232	0.02	0.75	4,141.20
School Energy Program	High School Kit	8.2	\$161.52	318	0.03	0.75	4,141.20
Energy Kits	Water Heating Kit	9.4	\$40.00	189	0.02	0.00	1,995.99
Low-income Program	Wifi Tstat (Repl. Manual) - Electric (CAC)	11	\$400.00	2,362	0.00	0.00	0.00
Low-income Program	Wifi Tstat (Repl. Manual) - Fossil Fuel (CAC)	11	\$400.00	268	0.00	6.03	0.00
Low-income Program	Heat Pump Water Heater	10	\$3,500.00	2,278	1.83	0.00	0.00
C&I Program	Prescriptive Units - Small C&I	15	\$59.99	923	0.17	0.00	0.00
C&I Program	Prescriptive Units - Large C&I	15	\$59.99	923	0.17	0.00	0.00
C&I Program	Small C&I Direct Install	15	\$14,116.40	117,637	17.62	0.00	0.00
C&I Program	Custom - Small C&I	15	\$18,066.35	180,663	22.33	0.00	0.00
C&I Program	Custom - Large C&I	15	\$27,788.21	277,882	35.44	0.00	0.00

Table 34: Measure Cost Effectiveness

TRC Test

Program	Measure Name	PV Benefits	PV Cost	PV Net	BCR
Appliance Recycling	Fridge Recycle	\$399,324	\$108,211	\$291,113	3.69
Appliance Recycling	Freezer Recycle	\$83,572	\$19,096	\$64,476	4.38
Appliance Recycling	Room AC Retirement	\$340,505	\$119,783	\$220,722	2.84
Appliance Recycling	Dehumidifier Retirement	\$118,363	\$33,128	\$85,235	3.57
Appliance Rebates	Air Source Heat Pump	\$107,415	\$79,113	\$28,302	1.36
Appliance Rebates	Ductless Mini-split Heat Pump (Tier 1 - 16+ SEER)	\$1,921,747	\$175,315	\$1,746,432	10.96
Appliance Rebates	Ductless Mini-split Heat Pump (Tier 2 - 19+ SEER)	\$3,889,997	\$462,326	\$3,427,671	8.41
Appliance Rebates	Ductless Mini-split Heat Pump (Tier 3 - 21+ SEER)	\$2,765,244	\$594,915	\$2,170,329	4.65
Appliance Rebates	Central Air Conditioner	\$33,624	\$29,195	\$4,429	1.15
Appliance Rebates	Room Air Conditioner	\$47,769	\$11,332	\$36,437	4.22
Appliance Rebates	Smart Thermostat	\$105,148	\$71,472	\$33,677	1.47
Appliance Rebates	Heat Pump Water Heater	\$216,130	\$395,834	-\$179,704	0.55
Appliance Rebates	Clothes Washer	\$105,859	\$80,390	\$25,469	1.32
Appliance Rebates	Refrigerator	\$52,085	\$54,702	-\$2,618	0.95
Appliance Rebates	Dishwasher	\$67,124	\$340,899	-\$273,775	0.20
Appliance Rebates	Dehumidifier	\$73,341	\$10,821	\$62,520	6.78
Appliance Rebates	Fuel Switching: Electric Heating to NG Furnace	\$315,005	\$487,457	-\$172,452	0.65
Appliance Rebates	Fuel Switching: Electric Heating to NG Boiler	\$76,330	\$102,670	-\$26,340	0.74
School Energy Program	Middle School Kit	\$2,834,343	\$340,527	\$2,493,815	8.32
School Energy Program	High School Kit	\$2,204,001	\$494,097	\$1,709,905	4.46
Energy Kits	Water Heating Kit	\$658,348	\$81,057	\$577,291	8.12
Low-income Program	Wifi Tstat (Repl. Manual) - Electric (CAC)	\$14,258	\$5,092	\$9,165	2.80
Low-income Program	Wifi Tstat (Repl. Manual) - Fossil Fuel (CAC)	\$25,062	\$11,882	\$13,180	2.11
Low-income Program	Heat Pump Water Heater	\$166,130	\$126,313	\$39,817	1.32
C&I Program	Prescriptive Units - Small C&I	\$1,208,238	\$117,780	\$1,090,458	10.26
C&I Program	Prescriptive Units - Large C&I	\$4,270,680	\$416,279	\$3,854,400	10.26
C&I Program	Small C&I Direct Install	\$8,284,931	\$3,887,686	\$4,397,246	2.13
C&I Program	Custom - Small C&I	\$637,347	\$340,276	\$297,072	1.87
C&I Program	Custom - Large C&I	\$1,008,627	\$689,766	\$318,861	1.46

UGI Electric Exhibit 2

UGI UTILITIES, INC. – ELECTRIC DIVISION

ELECTRIC SERVICE TARIFF

**RULES AND RATES
FOR ELECTRIC DISTRIBUTION SERVICE AND
CHOICE AGGREGATION SERVICE**

in the following service territory:

LUZERNE COUNTY

City of Nanticoke, and Boroughs of Courtdale, Dallas, Edwardsville, Forty-Fort, Harvey's Lake, Kingston, Larksville, Luzerne, New Columbus, Plymouth, Pringle, Shickshinny, Sugar Notch, Swoyersville, Warrior Run, West Wyoming and Wyoming.

First Class Townships of Hanover and Newport, and Second Class Townships, of Conyngham, Dallas, Fairmount, Franklin, Hunlock, Huntington, Jackson, Kingston, Lake, Lehman, Plymouth, Ross and Union.

WYOMING COUNTY

Townships of Monroe and Noxen

Issued:

Effective for Service Rendered on and after _____.
Issued in accordance with the
Order entered on _____ at Docket No.
_____.

Issued by:
Paul J. Szykman
Chief Regulatory Officer
1 UGI Drive
Denver, PA 17517

<https://www.ugi.com/tariffs>

NOTICE

THIS TARIFF MAKES CHANGES TO EXISTING RATES, RULES AND REGULATIONS
(PAGE 2).

LIST OF CHANGES MADE BY THIS SUPPLEMENT
(Page Numbers Refer to Official Tariff)

Rider E – Energy Efficiency and Conservation Rider, Pages 46-47.

- The Phase IV Energy Efficiency and Conservation rider has been added to include cost recovery for expenses related to the development and implementation of Phase IV of the Energy Efficiency and Conservation Plan approved by the Pennsylvania Public Utility Commission by Order entered ____ at Docket No. _____.

Issued:	Effective for Service Rendered on and after
UGI Utilities, Inc. – Electric Division	Proforma Supplement to UGI Electric Pa. P.U.C. No. 6 Page No. 46

RIDER E
ENERGY EFFICIENCY AND CONSERVATION RIDER

GENERAL. The Company shall recover costs related to the Company’s Phase IV Energy Efficiency and Conservation Plan (“Phase IV EECR”) for 2024-2029 through a Phase IV Energy Efficiency and Conservation Rider (“Phase IV EEC Rider”). The rates under the Phase IV EEC Rider shall be computed separately for each of the three customer classes listed below. The Phase IV EEC Rider Rate for each class shall be as follows: (C)

Customer Class	Rate Schedules	Phase IV EEC Rider Rate (¢/kWh)
Class 1 – Residential	R, GS-5 and the residential portion of Rate Schedules OL, SOL, MHOL, or successor rate schedules	
Class 2 – Non Residential	All Non-Residential Rate Schedules except for Rate Schedules LP and HTP	
Class 3 – Non Residential	LP and HTP	

The Phase IV EEC Rider shall apply to all customers whether they are receiving generation service from the Company or not and shall be subject to the State Tax Surcharge. (C)

CALCULATION. The Phase IV EEC Rider shall be determined as follows: (C)

- Costs to be recovered shall include Company incurred costs to implement its Commission approved Phase IV EECR during each plan year, including all costs incurred to develop and administer the Company’s Phase IV EECR from June 1, 2024 until May 31, 2029. The costs of each Phase IV EECR program shall be directly assigned to the applicable customer class based upon projected spending levels.
- The Residential Phase IV EEC Rider rate shall be calculated in accordance with the formula below and shall be rounded to the third decimal:

$$\text{Residential Phase IV EEC Rider Rate} = ((Cr / Sr) - (Er / Sr)) / (1-T) \text{ where}$$

Cr = Projected Annual Residential Phase IV EECR Costs.

Sr = Projected Annual Residential Class Sales.

Er = Net over or under collection of the Residential Phase IV EEC Rider resulting from the difference between the Phase IV EEC Rider revenues received and the Phase IV EECR costs incurred. The over or under collection shall be calculated annually and include the actual over or under collection for the reconciliation period.

T = Total Pennsylvania gross receipts tax rate as reflected in the Company’s base rates, expressed in decimal form.

(C) Indicates Change

Issued:	Effective for Service Rendered on and after
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UGI Utilities, Inc. – Electric Division	Proforma Supplement to UGI Electric Pa. P.U.C. No. 6 Page 47
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RIDER E

ENERGY EFFICIENCY AND CONSERVATION RIDER (continued)

1. The Phase IV Non-Residential EEC Rider rates shall be calculated in accordance with the formula below and shall be rounded to the third decimal: (C)

Non-Residential Phase IV EEC Rider Rate = $((C_n / S_n) - (E_n / S_n)) / (1-T)$ where

C_n = Projected Annual Non-Residential Phase IV EEC Costs.

S_n = Projected Annual Non-Residential Class Sales.

E_n = Net over or under collection of the Non-Residential Phase IV EEC Rider resulting from the difference between the Phase IV EEC Rider revenues received and the Phase IV EEC costs incurred. The over or under collection shall be calculated annually and include the actual over or under collection for the reconciliation period.

T = Total Pennsylvania gross receipts tax rate as reflected in the Company's base rates, expressed in decimal form.

Class 2 and Class 3 Non-Residential Phase IV EEC Rider rates shall be calculated and reconciled separately.

4. The Residential and Non-Residential rates under the Phase IV EEC Rider shall become effective on September 1. The Residential and Non-Residential rates under the Phase IV EEC Rider shall be updated and reconciled annually thereafter and filed with the Commission effective on thirty (30) days' notice. The Company reserves the right to make an interim filing to adjust the rates under the Phase IV EEC Rider to be effective on sixty (60) days' notice. (C)
5. Overcollections or undercollections existing at the end of the last year of the Phase III EE&C Plan (as of May 31, 2024) will be recovered/refunded over the one-year period following the end of the Phase III EE&C Plan. Any remaining balance will be recovered/refunded through the Phase IV EEC Rider's E-Factor. Overcollections or undercollections existing as of the last year of the Phase IV EE&C Plan will be recovered/refunded over the one-year period following the end of the Phase IV EE&C Plan ("Final Reconciliation Year"). If it is known that there will be a Phase V EE&C Plan at the end of the Final Reconciliation Year related to Phase IV, any remaining balance will be recovered/refunded through the Phase V EEC Rider's E-Factor. If there will be no Phase V EE&C Plan, any balance remaining for a customer class at the end of the Final Reconciliation Year will be trued up through a one-time bill credit/debit issued to the applicable customers during the second full billing month following the end of the Final Reconciliation Year. (C)

(C) Indicates Change

Issued:	Effective for Service Rendered on and after
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UGI Electric Statement No. 1

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**PETITION OF UGI UTILITIES, INC. – ELECTRIC DIVISION
FOR APPROVAL OF PHASE IV OF ITS
ENERGY EFFICIENCY AND CONSERVATION PLAN**

DOCKET NO. M-2023-_____

**TESTIMONY
OF
THEODORE M. LOVE**

UGI ELECTRIC STATEMENT NO. 1

September 21, 2023

1 **I. INTRODUCTION**

2 **Q. Please state your full name, occupation, and business address.**

3 A. My name is Theodore M. Love, and I am a Partner at Green Energy Economics
4 Group, Inc. (“GEEG”), an energy consulting firm founded in 2005. My business
5 address is 2534 Downingsville Rd., Lincoln, VT 05443.

6

7 **Q. On whose behalf are you testifying in this proceeding?**

8 A. I am testifying on behalf of UGI Utilities, Inc. – Electric Division (“UGI Electric”
9 or the “Company”).

10

11 **Q. Please briefly state your qualifications.**

12 A. I have been involved in the review and preparation of electric and natural gas energy
13 efficiency and conservation (“EE&C”) plans, as well as potential studies and cost-
14 effectiveness analyses, in nearly a dozen states, three Canadian Provinces, and
15 China, since I began working with GEEG in 2007. Most relevant to this
16 proceeding, I have been advising UGI Electric on the implementation, analysis, and
17 reporting of the current phase (“Phase III”) of its EE&C Plan. I have also been
18 advising UGI Utilities, Inc. -Gas Division (“UGI Gas”) on its natural gas EE&C
19 Plan since 2015 and Philadelphia Gas Works (“PGW”) on its natural gas energy
20 efficiency activities since 2008. My full resume is attached as UGI Electric Exhibit
21 TML-1.

22

1 **Q. Have you previously provided expert testimony before the Pennsylvania**
2 **Public Utility Commission (“Commission”)?**

3 A. Yes. In 2018, I presented testimony on behalf of UGI Electric for approval of its
4 Phase II EE&C Plan (Docket No. M-2018-3004144). I also provided testimony
5 supporting UGI Gas’s EE&C Plans in three prior base rate cases at Docket Nos. R-
6 2015-2518438, R-2016-2580030, and R-2018-3006814, respectively. I presented
7 testimony on behalf of PGW in support of the continuation of its demand-side
8 management (“DSM”) gas programs at Docket Nos. P-2014-2459362 and P-2014-
9 2459362. I also provided testimony for Peoples Natural Gas in support of the
10 approval of its EE&C Plan at Docket No. M-2017-2640306 in 2018.

11
12 **Q. What is the purpose of your direct testimony in this proceeding?**

13 A. I will provide support for and information about Phase IV of UGI Electric’s EE&C
14 Plan (“Phase IV EE&C Plan” or the “Plan”). I will explain the goals, approach,
15 and process that UGI Electric applied to the preparation of its Phase IV EE&C Plan.
16 I will provide details on the Plan’s benefits and costs and will explain UGI
17 Electric’s proposal for Plan implementation, program verification, and reporting
18 and administrative requirements.

19
20 **Q. Are you sponsoring any exhibits in the filing?**

21 A. Yes. I am sponsoring the following exhibits:
22 • UGI Electric Exhibit 1 – UGI Electric’s Phase IV EE&C Plan, which is
23 attached to the Petition for Approval of the Phase IV EE&C Plan; and

1 • UGI Electric Exhibit TML-1 – Resume of Theodore M. Love, which is
2 attached to this testimony.

3

4 **Q. Please summarize your testimony.**

5 A. I begin by describing the background for the Phase IV EE&C Plan and providing
6 an overview of the Plan. I then describe how UGI Electric’s proposed Phase IV
7 EE&C Plan was developed and discuss what changes are proposed for the Phase
8 IV EE&C Plan. Next, I will provide additional details on the Plan’s benefits and
9 costs. Finally, I describe how the Plan will be administered as well as the proposed
10 evaluation, measurement, and verification (“EM&V”) activities for the Plan.

11

12 **II. BACKGROUND AND PLAN OVERVIEW**

13 **Q. Does the Company currently operate an EE&C Plan?**

14 A. Yes. UGI Electric currently operates its voluntary Phase III EE&C Plan, which is
15 approved through May 31, 2024. Phase I of UGI Electric’s voluntary EE&C Plan
16 operated from June 1, 2012, to May 31, 2015. Phase II of UGI Electric’s voluntary
17 EE&C Plan was initially approved for operation from June 1, 2016, through May
18 31, 2018, and was extended for an additional year by a Commission Order entered
19 on May 4, 2017. The Phase III voluntary EE&C Plan was approved from June 1,
20 2019, to May 31, 2024.

21

22 **Q. Is UGI Electric required to comply with Act 129 of 2008 (“Act 129”)?**

1 A. No. I have been advised by counsel that because UGI Electric serves fewer than
2 100,000 customers (approximately 62,000 customers), the Company is not subject
3 to the requirements of Act 129.

4

5 **Q. Why did the Company choose to operate a voluntary EE&C Plan and to offer**
6 **energy efficiency and conservation programs to its customers?**

7 A. The primary reasons for offering these programs are to address customer demands
8 for these types of EE&C programs and to continue improving customer satisfaction
9 levels. Since UGI Electric's service territory is surrounded by larger electric
10 distribution companies ("EDCs") that offer energy efficiency programs and rebates
11 through Act 129, the Company continues to believe its customers should have
12 access to the same types of energy savings opportunities. Additionally, UGI
13 Electric sought to institute an EE&C Plan for its customers based on the guidance
14 contained in the Commission's December 23, 2009 Secretarial Letter issued at
15 Docket No. M-2009-2142851 ("December 23, 2009 Secretarial Letter"), which
16 asked the smaller EDCs in Pennsylvania to consider voluntarily filing EE&C Plans.

17 Moreover, UGI Electric has seen significant benefits from its existing
18 EE&C programs and believes that there are additional incremental opportunities
19 for customers to take advantage of, such as revised or new incentives to assist with
20 their implementation of energy efficiency strategies and high efficiency equipment
21 purchases. The Company believes that the proposed Phase IV EE&C Plan will
22 provide meaningful benefits to customers, assist in overall load reduction goals,

1 and be implemented in a manner that does not disadvantage the Company or its
2 customers.

3

4 **Q. Why is UGI Electric filing a Petition for Approval of its Phase IV EE&C Plan**
5 **now?**

6 A. UGI Electric's current Phase III EE&C Plan is set to end on May 31, 2024. In this
7 proceeding, UGI Electric is seeking approval of a new five-year Phase IV EE&C
8 Plan that, to the extent possible, would commence June 1, 2024, and end May 31,
9 2029. This would allow customers to continue taking advantage of energy savings
10 initiatives on an uninterrupted basis and would allow UGI Electric's customers to
11 stay competitive with other customers in Pennsylvania that have access to electric
12 efficiency programs offered under Act 129.

13

14 **Q. Please provide a summary of UGI Electric's Phase IV EE&C Plan.**

15 A. The Phase IV EE&C Plan provides a portfolio of EE&C programs that is targeted
16 at all of UGI Electric's various customer segments and is designed to reduce overall
17 electricity consumption by approximately 3.04% by 2029 compared to the
18 Company's annual historic load for June 1, 2007, to May 31, 2008. These programs
19 have been designed as a portfolio to offer UGI Electric's customers a variety of
20 cost-effective options to reduce electricity consumption, which ultimately will help
21 all customers reduce their energy costs. These programs were developed in the
22 context of providing a workable plan for UGI Electric's service territory while
23 continuing successful programs from UGI Electric's Phase III EE&C Plan. The

1 Plan is expected to save 32,723 MWh over five years and cost approximately \$10.5
2 million (approximately \$2.1 million per year). The Plan is expected to provide
3 present value net Total Resource Cost (“TRC”) benefits of \$17.5 million with an
4 overall TRC benefit-cost ratio (“BCR”) of 2.24.

5 UGI Electric’s Phase IV EE&C Plan includes some updates to its Phase III
6 EE&C Plan, which are summarized below and addressed in more detail in the
7 following section of my direct testimony. In particular, changes from the Phase III
8 EE&C Plan to the Phase IV EE&C Plan include:

- 9 1. Incorporating a proposed savings target of 3.0% of 2008 sales, or 32,250 MWh,
10 by 2029;
- 11 2. Adding an Energy Kits Program to provide energy saving guidance and energy
12 saving kits to qualifying residential customers;
- 13 3. Expanding the measures offered through the Appliance Rebate Program, and a
14 projected increase in participation;
- 15 4. Allowing stand-alone pickup for dehumidifiers and room air-conditioners in the
16 Appliance Recycling Program;
- 17 5. Expanding the School Energy Education Program to an additional high school;
18 and
- 19 6. Reworking the existing Commercial and Industrial (“C&I”) Custom Incentive
20 Program into three pathways: (1) a prescriptive pathway; (2) custom pathway;
21 and (3) direct install pathway for small business.

22

1 **Q. Are there any significant uncertainties that may affect UGI Electric’s Phase**
2 **IV EE&C Plan?**

3 A. Yes. The Company anticipates two major sources of uncertainty that may have an
4 outsized effect on the Plan over its lifetime. First, there are several new federal
5 programs and initiatives that may affect the outcome of the Plan. Specifically, the
6 Company will closely monitor the Inflation Reduction Act of 2022 (“IRA”) and the
7 effects it may have on program activity and cost-effectiveness reporting. Currently,
8 the IRA provides significant tax credits that overlap with offerings in the Plan, such
9 as heat pump water heaters. It remains to be seen how many of UGI Electric’s
10 customers will take advantage of these tax credits and how those tax credits may
11 affect the supply, distribution, and installation of efficient equipment in UGI
12 Electric’s service territory. The Company will also be monitoring the Home Energy
13 Performance-Based Whole-House Rebates (“HOMES”) and High-Efficiency
14 Electric Home Rebate Act (“HEEHRA”). In particular, UGI Electric will closely
15 watch the potential implementation of HOMES and HEEHRA in Pennsylvania for
16 how they may interact and/or overlap with the Plan’s offerings.

17 More generally, during Phase IV of UGI Electric’s EE&C Plan, there will
18 be new potential studies, new policy goals, an updated Technical Reference Manual
19 (“TRM”), a new TRC Test order, and EE&C Plan filings for Phase V of Act 129.
20 Due to UGI Electric’s size, it is not subject to Act 129; however, the Company’s
21 EE&C Plan is designed along similar lines to Act 129, and measure savings are
22 calculated using the Act 129 TRM, where possible. UGI Electric will keep a close

1 eye on Phase V of Act 129 planning activities and will consider updating its Phase
2 IV EE&C Plan to keep the Plan aligned with Act 129 electric efficiency initiatives.

3 In addition, the effectiveness of the Company’s communication efforts and
4 associated customer willingness to implement EE&C measures will impact
5 program participation. Also, the general state of the economy may adversely affect
6 the ability of customers, particularly C&I customers, to make investments in energy
7 efficiency projects. The current interest rate environment, with rates at multi-
8 decade highs, makes financing options limited for many customers, while the
9 lingering effects of COVID-19 on supply chains have created additional
10 complexities in stocking efficient equipment. Despite these headwinds, the
11 proposed Plan will provide needed financial and technical assistance to UGI
12 Electric’s customers to help them use energy as efficiently as possible and deliver
13 significant economic benefits to Pennsylvania as a whole.

14

15 **III. PLAN DEVELOPMENT AND UPDATES**

16 **Q. What are UGI Electric’s annual performance goals for energy savings and**
17 **allowed expenses over the course of the Plan, as suggested in the Commission’s**
18 **December 23, 2009 Secretarial Letter?**

19 A. UGI Electric is voluntarily attempting to reduce electric consumption by 3.00% by
20 2029 (as measured against the Company’s annual historical load for June 1, 2007,
21 to May 31, 2008). This represents a savings target of approximately 32,250 MWh,
22 and UGI Electric’s Phase IV EE&C Plan is projected to achieve savings of
23 approximately 32,723 MWh, or approximately 101% of that savings target. As

1 noted in the Commission’s December 23, 2009 Secretarial Letter, UGI Electric is
2 attempting to reach this target while spending less than 2% of its annual
3 jurisdictional revenues for the 12-month period ended May 31, 2008, or \$2.5
4 million, for each program year. The Company projects that it will cost
5 approximately \$10.5 million over five years, or approximately \$2.1 million per
6 year, for UGI Electric to achieve its savings target.

7

8 **Q. What process did UGI Electric undertake to develop its Phase IV EE&C Plan?**

9 A. UGI Electric’s EE&C team worked closely with myself and other expert
10 consultants under my direction to carefully develop the Plan, while using the
11 Commission’s orders in the Act 129 proceedings as a basic framework upon which
12 to build its Phase IV EE&C Plan. The savings target for the Phase IV EE&C Plan
13 was based on the statewide consumption reduction targets from the Final
14 Implementation Order for Act 129 Phase IV dated June 18, 2020. That order
15 established savings targets ranging from 2.4% of reference load for West Penn
16 Power Company (“West Penn”) to 3.5% of reference load for PECO Energy
17 Company (“PECO”). Here, UGI Electric is proposing a target of 3.0%, which is in
18 the middle of that range.

19 The UGI Electric EE&C team conducted an extensive review of the
20 performance of the Company’s EE&C programs to date as well as a comprehensive
21 list of EE&C measures and practices from several other sources, primarily the
22 Commission-approved EE&C programs currently utilized by the Act 129 EDCs,
23 and other available cost-effective EE&C measures. This research also included a

1 review of future federal and state regulations that could affect EE&C programs and
2 measures.

3 Data on technical specifications, energy use impacts, and measure costs
4 were compiled from various trusted sources. The Pennsylvania Act 129 TRM from
5 2019, with errata update in February 2021, served as a default source for most
6 measures. Avoided costs for electricity came from PPL Electric Utilities
7 Corporation's ("PPL Electric") approved Phase IV EE&C Plan, consistent with the
8 approach used for UGI Electric's current Phase III EE&C Plan. Together these
9 assumptions were used to compute cost-effectiveness from a TRC Test perspective.

10 The next step was to determine the potential for the existing programs in
11 the future and assess alternative programs and measures that were not yet part of
12 the Company's portfolio. The UGI Electric EE&C team began with the programs
13 offered by the Company in its Phase III EE&C Plan and then layered in successful
14 program design from other EDCs in Pennsylvania and best practices from other
15 jurisdictions to put together an updated portfolio of programs and measures with a
16 high likelihood of meeting savings targets. Working with the UGI Electric EE&C
17 team and conservation service providers ("CSPs"), my team developed
18 participation rates and program spending assumptions and determined potential
19 program, sector, and portfolio savings costs, and cost-effectiveness from the TRC
20 perspective.

21 UGI Electric balanced the portfolio by adjusting the number of participants
22 to develop a reasonable mix of programs likely to reach the Plan's savings and

1 spending objectives, while maintaining cost-effectiveness under the TRC Test at a
2 sector and plan level.

3 Although UGI Electric is not subject to the requirements of Act 129, the
4 energy-saving targets, expenditure guidelines, cost-effectiveness, and the customer
5 equity guidelines outlined by Act 129 and the Commission's related December 23,
6 2009 Secretarial Letter defined the major parameters and constraints for developing
7 the portfolio. Specifically, the Company established a savings target and used
8 actual revenues for the 12-month period June 2007 through May 2008 to determine
9 its approximate 2% of annual revenue expenditure level, which served as an upper
10 boundary for Plan development.

11

12 **Q. Does the proposed Phase IV EE&C Plan provide EE&C measures to low-**
13 **income customers on UGI Electric's system?**

14 A. Yes. UGI Electric was mindful in developing its Phase IV EE&C Plan to include
15 programs and measures that will aid its low-income customers in reducing their
16 energy consumption, even though the Company is not subject to the requirements
17 of Act 129. The Company will continue to offer the Low-Income Program that
18 provides free installation of heat pump water heaters and smart thermostats at no
19 cost to qualifying low-income customers. In addition, many of the residential
20 program offerings are available at no cost to the customer, including the new
21 Energy Kits Program, as well as the existing Appliance Recycling and School
22 Energy Education Programs.

1 **Q. What are the estimated costs and savings for the Phase IV Low-Income**
2 **Program?**

3 A. The Low-Income Program is projected to save 159 MWh of energy at a cost of
4 \$245,000 over the five years of Phase IV. The program is projected to provide net
5 benefits of \$20,000 with a TRC BCR of 1.11.

6

7 **Q. Are there any new residential programs in Phase IV?**

8 A. Yes. UGI Electric is proposing the Energy Kits Program. This program will
9 provide a key pathway for customers to learn about saving energy and the
10 opportunities available through UGI Electric's EE&C programs. Specifically, it
11 will provide a website for customers to complete an online questionnaire that will
12 result in a customized list of recommendations for saving energy, including
13 referrals to other relevant programs. Customers who indicate that they use
14 electricity for water heating through the self-assessment can then choose to receive
15 a water saving kit shipped to their home at no cost. This kit will include low-flow
16 bath and kitchen faucet aerators and a low-flow showerhead. Kits will be limited
17 to one per account every five years.

18 The Energy Kits Program is projected to cost \$381,250 over five years and
19 will serve as a gateway for customers to learn about UGI Electric's programs and
20 the many opportunities they have for saving energy. The water heating kits provide
21 customers with an easy way to save approximately 4.0 GWh of electricity and 43.4
22 million gallons of water over the lifetime of the measures, without customers
23 spending any money up front. The program is also projected to provide \$329,361

1 in present value of net benefits with a 2.00 BCR under the TRC Test. The Energy
2 Kit Program will round out the residential program offering for the portfolio,
3 provide a no-cost entryway for customers, drive engagement to other programs, and
4 boost portfolio savings and cost-effectiveness.

5
6 **Q. Are there any updates to existing residential program in Phase IV?**

7 A. Yes, there are few updates to existing programs for Phase IV, including the
8 Appliance Rebate Program, Appliance Recycling Program, and School Energy
9 Education Program. Most of these updates were made in order to help UGI Electric
10 achieve the higher Phase IV savings target.

11
12 **Q. What changes are proposed for the Appliance Rebate Program?**

13 A. First, UGI Electric is adding incentives for air source heat pumps and heat pump
14 water heaters to the Appliance Rebate Program. Higher Phase IV avoided costs
15 make it possible for these measures to be added without jeopardizing the cost-
16 effectiveness of the program or overall Plan. In addition, UGI Electric wants to
17 meet anticipated customer interest given new tax incentives and the availability of
18 rebates from other Act 129 programs for these measures. These new measures,
19 along with increasing customer demand for ductless mini-split heat pumps, lead to
20 a projected increase in spending and savings for the program. The program's
21 budget in Phase IV of \$1.74 million over five years is 40% higher than the
22 program's budget in Phase III of \$1.24 million over five years. However, Phase IV
23 savings are projected to be 7,416 annual MWh, *i.e.*, 128% higher than the last phase

1 projection of 3,258 annual MWh. Therefore, the updated Appliance Rebate
2 Program is projected to be much more cost-effective in Phase IV (with a TRC BCR
3 of 3.13) when compared to its Phase III version (with a TRC BCR of 1.11) and will
4 be essential for reaching UGI Electric's Phase IV savings goals.

5
6 **Q. Will UGI Electric offer a custom measure incentive under the Appliance**
7 **Rebate Program?**

8 A. Not initially. The Plan does provide criteria for custom measures under the
9 Appliance Rebate Program, including a requirement to have a TRC BCR of at least
10 1.0 and an incentive maximum of the lesser of \$0.14 per kWh saved or 50% of the
11 measure cost. The Company will use these criteria for offering prescriptive rebates
12 in the future for new measures that may make sense as a prescriptive offering under
13 the Appliance Rebate Program. Given the five-year term for Phase IV and the
14 administrative burden for a small EDC to file EE&C Plan changes to add new
15 measures, this approach provides crucial flexibility for UGI Electric to address any
16 future changes to the residential equipment market.

17
18 **Q. What changes are proposed for the Appliance Recycling Program?**

19 A. One way that UGI Electric is proposing to meet the higher savings goals for Phase
20 IV is to expand the Appliance Recycling Program to allow pick-ups of qualifying
21 dehumidifiers and room air-conditioning units on their own. Currently, these units
22 are only eligible for a rebate through the Appliance Recycling Program when the
23 customers are also recycling a refrigerator or freezer. The current offer has been

1 successful and expanding the criteria for retrieval will help reach additional
2 residential customers.

3

4 **Q. With those changes, what are the estimated costs and savings for the Appliance
5 Recycling Program?**

6 A. The Appliance Recycling Program is projected to save 2,565 MWh of energy at a
7 cost of \$1.1 million over the five years of Phase IV. The program is projected to
8 provide net benefits of \$7,000 with a TRC BCR of 1.01.

9

10 **Q. What changes are proposed for the School Energy Education Program?**

11 A. The School Energy Education Program has been one of the Company's most
12 successful residential programs, and as such, UGI Electric plans to expand the
13 program to one additional high school that has yet to receive services from the
14 program.

15

16 **Q. With that change, what are the estimated costs and savings for the School
17 Energy Education Program?**

18 A. The School Energy Education Program is projected to save 2,352 MWh of energy
19 at a cost of \$1.3 million over the five years of Phase IV. The program is projected
20 to provide net benefits of \$4.0 million with a TRC BCR of 4.72.

21

22 **Q. Are there any changes to C&I programs in Phase IV?**

1 A. Yes. For Phase IV, there will be three different pathways for measures in the C&I
2 Incentive Program that C&I customers can pursue. The three pathways are
3 prescriptive, custom, and direct install for small businesses. The “Prescriptive
4 Pathway” will be the simplest path for customer participation but will also offer the
5 lowest incentive of the three pathways. The Company anticipates offering
6 prescriptive incentives for lighting at the start of Phase IV; however, UGI Electric
7 may expand to include other measures, such as refrigeration or heating, ventilation,
8 and air conditioning (“HVAC”). Customers must fill out a rebate application,
9 which will require a valid UGI Electric account number and a proof of purchase
10 dated within 180 days of application. The rebate application will be submitted to a
11 program administrator who will then validate the application and provide a rebate.

12 The current Phase III C&I Custom Incentive Program has been maintained
13 as the “Custom Pathway.” This will be available for any efficiency measures not
14 covered under the Prescriptive Pathway. A custom project will be analyzed for
15 savings and cost-effectiveness, and a custom rebate offer will be provided based on
16 the saving of project and dollar per kWh incentive amount, currently projected at
17 \$0.10 per kWh. After the project’s installation, the program administrator will
18 verify that the correct equipment was installed and pay the rebate.

19 A third pathway, the “Direct Install for Small Business” pathway, is
20 available for customers who are in the Small Commercial and Industrial (“SCI”)
21 customer class. Customers who choose this pathway will receive a free energy
22 assessment that will result in a report outlining recommended measures and the
23 incentive that will be available for completing the work. The SCI customer will

1 then be referred to a network of trade allies who can perform the work. After the
2 work is performed and verified, the rebate will be paid. This pathway has the
3 highest incentive levels in the program and covers any measures that save
4 electricity.

5
6 **Q. Why is the Company proposing a “Direct Install for Small Business” pathway
7 for the C&I Incentive Program?**

8 A. Small business customers are a traditionally underserved market for energy
9 efficiency programs. Historically, the Company has seen most of the energy
10 savings in its C&I Custom Incentive Program come from the Large Commercial
11 and Industrial (“LCI”) customer class. The Direct Install for Small Business
12 pathway will only be open to SCI customers, and it will allow UGI Electric to
13 provide the higher incentives and additional technical assistance that will make sure
14 that these customers can achieve savings that will have a real impact on their
15 operating costs. By leveraging the design of the direct install pathway, the
16 Company anticipates it will be able to reach this underserved community and
17 ensure that all customer classes are served appropriately by the proposed Phase IV
18 Plan.

19
20 **Q. With these changes, what are the estimated costs and savings for the C&I
21 Incentive Program?**

22 A. The proposed C&I Incentive Program is projected to cost \$3.9 million over five
23 years, which is a 12% increase over the Phase III budget of \$3.5 million over five

1 years. The program is projected to achieve 19,804 annual MWh in savings and
2 deliver \$8.3 million in present value TRC net benefits with a TRC BCR of 2.18.

3

4 **IV. PLAN BENEFITS AND COSTS**

5 **Q. What savings are projected for UGI Electric’s Phase IV EE&C Plan?**

6 A. UGI Electric projects annual savings to total 32,723 MWh by the fifth year of the
7 Plan, which is approximately 101% of its target of 32,250 MWh. Of these savings,
8 12,919 MWh, or 40%, come from the residential sector, and 19,804 MWh, or 60%,
9 come from the C&I sector. Table 2 of the Plan provides a breakout of savings by
10 program, and the individual program sections in the Plan breakout projected
11 savings by year.

12

13 **Q. What are the projected costs to achieve these savings?**

14 A. UGI Electric anticipates costs of approximately \$10.5 million over five years to
15 achieve the projected savings. Costs for the residential sector programs are
16 projected to be \$4.8 million over five years, and costs for the C&I sector programs
17 are expected to be \$3.9 million over five years. UGI Electric also projects portfolio-
18 wide administrative costs of \$1.7 million over five years. The individual program
19 sections in the Plan provide a breakout of costs by year and category.

20

1 **Q. Does UGI Electric’s Phase IV EE&C Plan meet the criteria for spending caps**
2 **outlined in the Commission’s December 23, 2009 Secretarial Letter?**

3 A. Yes. UGI Electric is projecting annual spending of approximately \$2.1 million per
4 year, with the largest single year’s cost projected to be \$2.3 million. Therefore, the
5 Company’s projected annual spending is below the \$2.5 million per year cap
6 derived from 2% of 2008 revenue.

7
8 **Q. Does UGI Electric’s proposed Phase IV EE&C Plan provide a detailed**
9 **description of each program in the Plan and a calculation of benefits and costs?**

10 A. Yes, it does. The Plan clearly delineates each program and all of its features as well
11 as the calculation of benefits and costs for each program and measure.

12
13 **Q. Does the proposed Plan meet the Commission’s TRC Test?**

14 A. Yes. As a smaller EDC, UGI Electric is not subject to the requirements of Act 129.
15 However, the Commission’s December 23, 2009 Secretarial Letter indicated that
16 the voluntary programs offered by a smaller EDC should meet the TRC Test. The
17 Phase IV EE&C Plan is cost-effective according to the TRC Test established by the
18 Commission. UGI Electric’s analysis indicates an overall TRC BCR of 2.24 for
19 the proposed portfolio, with a TRC BCR of 2.92 for the residential sector and a
20 TRC BCR of 2.18 for the C&I sector.

21

1 **Q. Do all measures and programs provide positive net benefits from a TRC Test**
2 **perspective?**

3 A. No. The Community-Based Organization (“CBO”) Marketing Program provides
4 no claimed savings and has no TRC benefits under the Commission’s TRC Test.
5 Some measures within the Residential Appliance Rebate Program are not cost-
6 effective from a TRC Test perspective; however, the overall Program is cost
7 effective with a TRC BCR of 3.13. Moreover, consistent with prior Commission
8 orders on this issue, the portfolio overall is projected to be cost-effective on a TRC
9 Test basis, as discussed above.

10

11 **V. IMPLEMENTATION, ADMINISTRATION, AND EM&V**

12 **Q. Please summarize UGI Electric’s strategy to implement the Phase IV EE&C**
13 **Plan after Commission review and approval.**

14 A. Implementation of UGI Electric’s Phase IV EE&C Plan will rely on the
15 performance of the Company’s internal staff in collaboration with CSPs, trade
16 allies, community agencies, and other entities engaged in energy efficiency
17 activities to promote, administer, and support the effective deployment of
18 programs. Various forms of communication, including the Company website, bill
19 inserts, direct mailings, print and radio advertisements, and social media, will be
20 utilized as needed to reach customers with Plan details. UGI Electric’s internal
21 EE&C Staff will oversee planning, marketing, and implementation for the Phase
22 IV EE&C Plan and will continue utilizing program CSPs to deliver services in
23 support of the Phase IV EE&C Plan programs.

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Q. How is the Company proposing to track, evaluate, and report on the Phase IV EE&C Plan?

A. CSPs will conduct verifications of applications and participants and collect all the required data needed to calculate savings and cost-effectiveness. This information will then be transmitted to the UGI Electric reporting database, which stores participation, costs, savings, and cost-effectiveness information on all the programs in the Plan. UGI Electric’s EE&C team and consultants will continue to verify the data entered in the reporting system and evaluate progress against stated Plan goals. No later than three months after each Program Year (“PY”) concludes, the Company will compile and provide an annual report, which will include program highlights and updates, as well as progress towards Plan goals, such as savings and costs.

UGI Electric will also contract with a third-party evaluator to perform a process and impact evaluation on its programs during the Plan. The Company plans to evaluate its residential programs in PY14 and then evaluate its nonresidential program in PY15, once the program has had some time to ramp up and achieve meaningful participation.

Q. Does this conclude your direct testimony?

A. Yes, it does. I reserve the right to submit supplemental testimony during the course of the proceeding. Thank you.

UGI Electric Exhibit TML-1

Theodore Love

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Professional Experience

Green Energy Economics Group, Inc. – Cuttingsville, VT

<i>Partner</i>	2017 to Present
<i>Senior Associate and Data Scientist</i>	2013 to 2017
<i>Associate</i>	2010 to 2013
<i>Analyst</i>	2007 to 2010

For over 15 years, Theodore “Theo” Love has been providing insights into the design, analysis, and implementation of energy efficiency and distributed energy resource programs and portfolios in twelve states, three Canadian provinces, and China. He has a particular focus on EE/DER policy analysis, program design and implementation, cost-effectiveness testing, financing, and building scalable tools to analyze everything from individual projects to programs to portfolios. Some recent project experience includes:

- Providing regulatory and policy analysis assistance to the Small business Utility Advocate in California and Ontario on various energy efficiency dockets.
- Ongoing review and analysis of EfficiencyOne’s energy efficiency portfolio in Nova Scotia on behalf of the Consumer Advocate of Nova Scotia.
- Design, regulatory, and implementation support for voluntary electric and gas energy efficiency programs in Pennsylvania for UGI, PGW, and Columbia Gas.
- Working with PSE&G in New Jersey on forecasting and scaling their internally managed commercial and industrial programs.

2007 – 2010

*Consultant, **Alter & Rosen, LLP**, New York, NY*

2006 – 2007

*Client Reporting Analyst, **AllianceBernstein LP**, White Plains, NY*

Affiliations

Association of Energy Service Professionals (AESP) - Business Issues and Regulatory Models Topic Committee Co-Chair 2023 - present

AESP Gas Topic Committee Co-Chair 2019-2023

AESP National Conference Planning Committee 2021, 2022, 2023

Energy Efficiency Alliance (EEA) of Pennsylvania / New Jersey - Policy Conference Planning Committee 2022, 2023

Recent Project Experience

Green Energy Economics Group, Inc.

Economic and Policy Analysis

Small Business Utility Advocate - California

(June 2020 – Present)

- Performing data analysis of underserved small and medium business customers as part of the California Energy Efficiency Coordinating Committee (CAEECC) Underserved Working Group for Small and Medium Business (SMB).
- Prepared report and analysis of arrearages for small businesses due to COVID-19 and assisted with policy recommendations and comments on strategies to address COVID-19 related debt (Do. No. 21-01-014)
- Assisted with analysis and comments for ongoing docket on clean energy financing (Do. No. 20-08-022)
- Provided comments on program design of CleanPowerSF's Food Service Program (Do. No. R13-11-05)
- Provided comments on program design for PG&E, SCE, and SoCalGas's business plans and gas incentive retirement (Do. No. R22-02-005)

Economic and Policy Analysis

Small Business Utility Alliance – Ontario, CA

(June 2021 – Present)

- Provided analysis and evidence on Enbridge Gas of Ontario's 2023 through 2027 DSM Plan (Matter No. EB-2021-0002)

Economic and Policy Analysis

Consumer Advocate – Nova Scotia

(March 2019 – Present)

- Member of DSM Advisory Group (DSMAG) on behalf of the Consumer Advocate of Nova Scotia to provide ongoing support for design and implementation of programs.
- Provided analysis and written testimony on Efficiency One's (E1) 2023 – 2025 DSM Plan (Matter No. M10473) as it relates to historical spending, affordability, underserved communities, and avoided costs.
- Provided analysis and written testimony on Efficiency One's (E1) 2020 – 2022 DSM Plan (Matter No. M09096) as it relates to spending and savings levels, affordability, and allocation of funds.
- Provided comments on the 2019 DSM Potential Study's economic analysis and projection assumptions and approach

Program Management and Benefit Cost Analysis Expert

Public Service Enterprise Group (PSE&G) – New Jersey

(October 2021 – April 2023)

- Consulted on forecasting and management of PSE&G's internally run commercial Engineered Solutions and Direct Install programs.
- Assisted with rollout of tracking system for PSE&G DSM portfolio.

- Provided assistance with calculation of six economic tests for PSE&G's energy efficiency and conservation portfolio, including development of calculation engine and launch as a subcontractor to ANB Enterprises.

Development and Regulatory Support for DSM Portfolio

Columbia Gas of Pennsylvania - Pittsburgh, Pennsylvania (February 2022 – Present)

- Successfully developed, provided regulatory support for, and got approval of a three-year voluntary gas energy efficiency plan and provided supporting testimony under Docket No. P-2014-2459362.
- Ongoing assistance with the launch and implementation of the first three-year voluntary gas energy efficiency plan.

Development and Implementation of Energy Efficiency and Conservation Plans

UGI Utilities, Inc. – Pennsylvania (June 2015 – Present)

Assist UGI Utilities, Inc. and PNG with the development and approval of Energy Efficiency and Conservation (EE&C) Plans for their UGI Gas PNG Gas, and UGI Electric divisions, including:

- Ongoing evaluation and portfolio planning activities for both UGI Gas and UGI Electric energy efficiency portfolios.
- Developing an achievable efficiency scenarios for UGI Gas and PNG Gas.
- Designing a five-year, \$27 million energy efficiency and conservation plan for UGI Gas. Submitting direct testimony on behalf of UGI Gas, Inc. on the design and implementation of the proposed plan (Docket No. R-2015-2518438)
- Designing a five-year \$15 million energy efficiency and conservation plan for PNG Gas. Submitting direct testimony on behalf of PNG Gas, Inc. on the design and implementation of the proposed plan (Docket No. R-2016-2580030)
- Assisting with the design and implementation and reporting of the UGI Electric's voluntary EE programs. Designing and assisting with approval for a five-year \$7.2 million electric energy efficiency and conservation plan (Docket No. M-2018-3004144)

Strategic Planning and Implementation of DSM Portfolio

Philadelphia Gas Work's (PGW) - Philadelphia, Pennsylvania (August 2008 – Present)

- Assisting with ongoing program planning and implementation of both the Low-Income Usage Reduction Plan (LIURP) and the market-rate DSM portfolio.
- Provided supporting testimony and analysis for the Phase III market-rate DSM plan under Docket No. P-2014-2459362.
- Designed Phase II plan with PGW and submitted direct testimony supporting the plan on behalf of PGW (Docket No. P-2014-2459362)
- Member of lead consulting team that aided in the design and approval of PGW's five-year, \$54 million portfolio of DSM programs;
- Providing ongoing technical assistance in the development of PGW's \$35 million Phase II five year plan.
- Providing ongoing technical support in program design and implementation, including the roll-out of six programs that, combined since inception, have saved 120,000 MMBtus at a cost of approximately \$17 million;

- Developed specifications for and currently collaborating with internal PGW staff on database system to track weatherization projects, rebate applications, and other information pertaining to PGW's DSM portfolio;
- Developed multiple Excel-based tools used by contractors to perform field audits, provide QA/QC, and track ongoing progress for contractors, programs, and the portfolio as a whole;
- Provided research and analysis support for multiple rounds of expert testimony before the Pennsylvania Public Utility Commission (Docket R-2009—2149884);
- Aided in the issuance of RFPs and selection of candidates for over \$40 million in contracts;
- Major contributor to PGW's ongoing formal reporting and evaluation process, including the issuance of five implementation plans, three annual reports, and two impact evaluations.

DSM Potential Studies in New York, New Jersey, and Pennsylvania

Optimal Energy, Inc. - Vermont (December 2018 – December 2019)

- Assisted Optimal Energy, Inc. with the development of measure assumptions and characterizations for statewide, electric and gas DSM potential studies.

Natural Gas Efficiency Options and EE&C Plan for Peoples Natural Gas

Peoples Natural Gas, Inc. – Pennsylvania (September 2017 – February 2019)

- Prepared report on program, sector, and portfolio-level cost and savings for 29 natural gas administrators in 11 States, and provided recommendations for potential natural gas DSM opportunities for Peoples Natural Gas
- Assist with stakeholder review process
- Developed five year \$42 million Energy Efficiency and Conservation (EE&C) Plan, and provided testimony to support the adoption of the Plan (ongoing).

Research on Leading Energy Efficiency Portfolios

Green Energy Economics Group - Vermont (November 2007 – Present)

- Maintain research and proprietary analysis on actual and projected results from over a dozen electric and natural gas demand side management (DSM) portfolios throughout North America;

Analytic and Technical Support for DSM Tracking Systems

PECO Energy Company – Pennsylvania (September 2016 – December 2017)

Commonwealth Edison Company – Illinois (August 2017 – August 2018)

Companywide (September 2020 – present)

- Subcontractor to ANB Systems Inc. to provide domain expertise and analytic support to rollout of enhanced tracking system.
- Developed dashboards and internal reports used by PECO's EM&V team, business planning, and various program and portfolio managers.
- Guided automation of PECO's six-month and annual reporting process.
- Provided expert guidance on the development of cost effectiveness calculation modules for clients in Pennsylvania and New Jersey

- Oversaw project development of audit tool for ComEd's Carbon Free School Assessment Program.

Technical Assistance for Energy Efficiency Program Planning

Green Mountain Power - *Vermont*

(August 2012 – July 2017)

- Developed multivariable regression model and framework to estimate the cost per kW to address a reliability gap in the St. Albans region with targeted energy efficiency.
- Reviewed and analyzed program proposals for the \$20 million Community Energy & Efficiency Development Fund (CEED Fund), including the development of scoring and rebalancing mechanisms;
- Analyzed dataset of 5,000 custom business projects to establish models used for future planning exercises.
- Prepared report on uncounted benefits of renewable generation sources for Vermont.

Analysis of Energy Efficiency in British Columbia

BC Sustainable Energy Association & Sierra Club BC, *British Columbia (May 2011 – June 2014)*

- Provided comments and energy efficiency opportunities report for proceedings on FortisBC Gas and Electric's long-term DSM plans in December of 2013.
- Assisted on research for direct testimony on reasonableness of gas DSM Plan by Fortis Energy Utilities before the British Columbia Utilities Commission, BCUC Project No. 3698627;
- Technical support on assessment of FortisBC Electric's long-term DSM plan and corresponding expert testimony;
- Assistance with direct testimony and technical support on assessment of BC Hydro's long-term DSM plan, before the BCUC.

Energy Efficiency Potential in Oklahoma

Sierra Club, *Oklahoma (April 2011 – November 2011, December 2013 – January 2014)*

- Provided updated report for energy efficiency in Oklahoma and additional comments on PUC rulemaking for electric and gas utility programs.
- Preparation of report on energy efficiency potential for Oklahoma;
- Assistance with research and drafting comments on the US regional haze Federal Implementation Plan for the State of Oklahoma;
- Research and formulation of energy efficiency potential projections provided as part of expert testimony for Oklahoma Gas & Electric's rate case before the Corporation Commission of Oklahoma, Cause No. PUD 201100087.

Technical Assistance for Energy Efficiency Programs

Focus on Energy - *Wisconsin*

(June 2011 – August 2013)

- Developed and customized cost-effectiveness calculators for Wisconsin's Focus on Energy portfolio of energy efficiency programs;
- Trained staff and other consultants on usage of tools and general economic analysis of energy efficiency programs;

- Provided QA/QC on cost-effectiveness analysis of 14 programs spending over \$160 million in two years.

Chicagoland Energy Efficiency Portfolio

People's Gas - *Chicago, Illinois*

(September 2008 – January 2013)

- Providing ongoing regulatory support;
- Provided cost-benefit analysis of various program scenarios and aided in the analysis of contractor bids;
- Customized excel-based portfolio and project cost-effectiveness tools to client's specifications.

Testimony Support for Expanding Gas Energy Efficiency in Pennsylvania

Citizens for Pennsylvania's Future, *Pennsylvania*

(July 2013 – September 2013)

- Provided support on preparation of testimony regarding Peoples Gas of Pennsylvania's DSM plans, including preparation of benchmarking report and alternative scenario projections.

Energy Efficiency Potential in Texas

Sierra Club, *Texas*

(May 2012 – August 2012)

- Research and development of alternative energy efficiency potential scenarios for the ten investor owned utilities (IOUs) in Texas;
- Development of comments for the Public Utility Commission of Texas;
- Development of presentation before the Energy Efficiency Incentive Program Committee.

Austin Energy's Energy Efficiency Potential

Austin City Council Consumer Advocate, *Austin, Texas*

(April 2012)

- Research and development of alternative energy efficiency potential scenarios for Austin Energy.

Nevada Power's Energy Efficiency Potential

Sierra Club, *Nevada*

(November 2011 – June 2012)

- Research on Nevada Power's Integrated Resource Plan (IRP) and development of alternative energy efficiency potential projections.

Comments on EmPower Maryland Programs

Sierra Club, *Maryland*

(September 2011 – October 2011)

- Research for and development of comments on EmPower Maryland's energy efficiency programs, including the development of alternative energy efficiency potential projections.

Ontario Power Authority Field Audit Support Tool

Green Communities Canada - *Ontario, Canada*

(January 2011 – May 2011)

- Collected and implemented specifications for updating the tool used by Ontario Power Authority's low-income program field agents to collect data and determine project net present values;
- Added custom features including customer input forms, saving and closing routines, and database file importing.

Energy Efficiency Potential in Arkansas

Sierra Club/Audubon Society, *Arkansas* (September 2009 – March 2010)

- Research and drafting assistance for expert testimony on energy efficiency' as an alternative to the White Bluff Steam Electric Station before the Public Service Commission of Arkansas, Docket No. 09-024-U.

Training for NGOs Working on Energy Efficiency Projects in China

ISC and NRDC – *United States and China* (August 2008 – September 2010)

- Developed training materials and provided remote and in-person training sessions on the economic and financial analysis of industrial retrofit projects for structuring and negotiating financial incentive offers to customers;
 - o Worked with the Institute for Sustainable Communities (ISC) to aid its efforts to promote energy efficiency in the Guangdong and Jiangsu Provinces (February 2009 – September 2010);
 - o Worked with the National Resource Defense Council (NRDC) to aid in its efforts in China, especially in conjunction with a \$100 million revolving loan fund from the Asia Development Bank (August 2008- January 2009).

Incentive Calculations for the Project Cost-effectiveness Analysis Tool (CAT)

Efficiency Vermont – Burlington, Vermont (November 2008 – June 2010)

- Aided in the design of a new approach to calculating incentives for custom energy efficiency projects based on financing and reaching a desired rate of return;
- Modified CAT's cash-flow projection engine, an Excel VBA system, to accommodate the new approach to incentives.

Vermont's 20-year Forecast of Electricity Savings from Sustained Investment

Efficiency Vermont – Burlington, Vermont (December 2008 – October 2009)

- Provided components of final report relating to long-term trends for the environment (climate change, land-use, and water-use), population growth, and governmental regulation;
- Provided additional technical support on electric demand-side savings potential.

Connecticut's Long Term Acquisition Plan

Connecticut Office of the Consumer Council – Connecticut (August – October 2008)

- Provided research and support for expert testimony regarding long-range energy-efficiency procurement plan of the Energy Conservation Management Board, on behalf of the Connecticut Office of Consumer Counsel.

Energy Efficiency Plans of BC Hydro and Terasen Gas

BC Sustainable Energy Association and

The Sierra Club - British Columbia, Canada

(October 2008 – March 2009)

- Provided research and support for expert testimony and technical support on assessment of BC Hydro's long-term DSM plan, before the BCUC, on behalf of the BC Sustainable Energy Association and Sierra Club Canada (November 2008 – March 2009);
- Provided research and support for expert testimony on assessment of Terasen Gas conservation plans before the BCUC, on behalf of the BC Sustainable Energy Association and Sierra Club Canada (October 2008).

Testimony and Proceeding Participation

Forum	On Behalf Of	Docket/Matter	Date	Issues Addressed
California Public Utility Commission	Small Business Utility Advocates	R. 22-02-005. Application of Pacific Gas and Electric Company for Approval of 2024-2031 Energy Efficiency Business Plan and 2024-2027 Portfolio Plan (U 39 M) and associated Matters.	October-22	Issues related to 3-year Energy Efficiency Business Plan
California Public Utility Commission	Small Business Utility Advocates	R. 22-02-005. Application of Pacific Gas and Electric Company for Approval of 2024-2031 Energy Efficiency Business Plan and 2024-2027 Portfolio Plan (U 39 M) and associated Matters.	September-22	Comments on the phase out of gas incentives.
Nova Scotia Utility and Review Board	The Consumer Advocate of Nova Scotia	Matter No. M10473 An Application by EfficiencyOne for Approval of a 2023 – 2025 Demand Side Management (“DSM”) Resource Plan	May-22	Historical performance of portfolio, proposed scenarios, affordability, addressing underserved communities, program design, and avoided costs.
Pennsylvania Public Utility Commission	Columbia Gas of Pennsylvania	Docket No. R-2022-3031211. Columbia Gas of Pennsylvania, Inc. 2022 Rate Case Proceeding	March-22	Three-year energy efficiency plan proposal, including projections for costs, savings, and cost-effectiveness.
Ontario Energy Board	Small Business utility Alliance	EB-2021-0002. Enbridge Gas Inc. – Multi Year Demand Side Management Plan (2022 – 2027)	December-21	Analysis of commercial program goals and program design

Forum	On Behalf Of	Docket/Matter	Date	Issues Addressed
California Public Utility Commission	Small Business Utility Advocates	R. 21-02-014. Rulemaking to Address Energy Utility Customer Bill Debt Accumulated During the COVID-19 Pandemic.	April-21	Report on Analysis of Small Business Utility Bill Arrearages in California during COVID-19
Pennsylvania Public Utility Commission	Philadelphia Gas Works	P-2014-2459362, Petition of Philadelphia Gas Works for Approval of Demand-Side Management Plan for FY 2016-2020	October-20	Historical performance of PGW's DSM Phase II Plan and modifications to program design.
California Public Utility Commission	Small Business Utility Advocates	R. 20-08-022 to Investigate and Design Clean Energy Financing Options for Electricity and Natural Gas Customers	July-20	Comments to address options for small business customer
Nova Scotia Utility and Review Board	The Consumer Advocate of Nova Scotia	Matter No. M09096, Efficiency 1 (E1) Application for Approval of 2020 – 2022 Demand Side Management (DSM) Resource Plan	May-19	DSM Investment Levels and Affordability, Usage of Unspent Ratepayer Funding, Rate and Bill Impacts, Target Setting.
Pennsylvania Public Utility Commission	UGI Gas Utilities Inc. – Gas Division	R-2018-3006814, UGI Gas Utilities Inc. – Gas Division, Rate Case	January-19	Energy Efficiency & Conservation Plan and Total Resource Cost Implementation.
Pennsylvania Public Utility Commission	UGI Utilities, Inc. – Electric Division	M-2018-3004144, Petition of UGI Utilities, Inc. – Electric Division for Approval of Phase III of Its Energy Efficiency and Conservation Plan	August-18	Electric energy efficiency and conservation plan development, projections, implementation, and EM&V.
Pennsylvania Public Utility Commission	Peoples Natural Gas Company	M-2017-2640306, Petition of Peoples Natural Gas Company LLC for Approval of its Energy Efficiency and Conservation Plan	January-18	Energy efficiency study, energy efficiency & conservation plan, and total resource cost implementation.
Pennsylvania Public Utility Commission	UGI Penn Natural Gas, Inc	P-2016-2580030, UGI Penn Natural Gas, Inc. Rate Case	January-17	Energy efficiency & conservation plan and total resource cost implementation.
Pennsylvania Public Utility Commission	UGI Utilities, Inc.	P-2015-2518438, UGI Utilities, Inc.- Gas Division Rate Case	January-16	Energy efficiency & conservation plan and total resource cost implementation.

Forum	On Behalf Of	Docket/Matter	Date	Issues Addressed
Pennsylvania Public Utility Commission	Philadelphia Gas Works	P-2014-2459362, Philadelphia Gas Works Demand-Side Management Plan for FY 2016-2021	May-15	Analysis of Phase I DSM Plan and design of Phase II DSM Plan.

Publications

Love, Theodore. J. Nunley. “Using Smart Thermostats to Engage Residential Customers and Drive Comprehensive Retrofit Projects” In *Proceedings of the ACEEE 2020 Summer Study on Energy Efficiency in Buildings*, Washington, D.C.: American Council for an Energy Efficient Economy.

Love, Theodore. “The Future for Residential Gas Efficiency is Combined”. *Strategies*. Association of Energy Service Professionals. January 11, 2019.

Love, Theodore. “Using Open Data to Predict Energy Usage: What tax lot data can tell us about energy usage intensity in New York City”. *Behavior Energy, and Climate Change Conference 2015*. Sacramento, CA

Plunkett, John, Theodore Love, Francis Wyatt. “An Empirical Model for Predicting Electric Energy Efficiency Acquisition Costs in North America: Analysis and Application”. In *Proceedings of the ACEEE 2012 Summer Study on Energy Efficiency in Buildings*, #906, Washington, D.C.: American Council for an Energy Efficient Economy.

Gold, Elliott, Marie-Claire Munnely, Theodore Love, John Plunkett, Francis Wyatt. “Comprehensive and Cost-Effective: A Natural Gas Utility’s Approach to Deep Natural Gas Retrofits for Low Income Customers.” In *Proceedings of the ACEEE 2012 Summer Study on Energy Efficiency in Buildings*, #442, Washington, D.C.: American Council for an Energy Efficient Economy.

Education

Clark University – Worcester, MA

B.A. Magna cum Laude, *Mathematics and Computer Science*, 2006.

Study Abroad Program, Spring Semester 2005 (Kansai Gaidai University: Osaka Japan)

General Assembly: New York City, NY

Data Science Intensive Course, 2015

UGI Electric Statement No. 2

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**PETITION OF UGI UTILITIES, INC. – ELECTRIC DIVISION
FOR APPROVAL OF PHASE IV OF ITS
ENERGY EFFICIENCY AND CONSERVATION PLAN**

DOCKET NO. M-2023-_____

**TESTIMONY
OF
KIMBERLY M. BASSININSKY**

UGI ELECTRIC STATEMENT NO. 2

September 21, 2023

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

2 A. My name is Kimberly M. Bassininsky, and my business address is UGI Utilities, Inc.,
3 1 UGI Drive, Denver, Pennsylvania 17517.

4

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by UGI Utilities, Inc. as a Principal Analyst – Rates.

7

8 **Q. What is your educational background?**

9 A. I have a Bachelor of Science Degree in Business Administration (Finance) from San
10 Diego State University and a Master of Business Administration Degree from Alvernia
11 University.

12

13 **Q. Please describe your professional experience.**

14 A. Prior to being hired by UGI Utilities, Inc. (“UGI”), I worked in financial analyst and
15 finance business partner roles within the hospitality and service industries. I was hired
16 in 2015 by UGI as a Senior Analyst Operations Analysis. Over the next five years,
17 within the Financial Planning & Analysis department of UGI, I was promoted and
18 worked in various positions supporting the financial analysis, forecasting, and
19 budgeting functions for UGI with the last position being Manager Financial Planning
20 & Analysis. In 2020, I accepted a Senior Analyst position within the Rates department
21 of UGI. I have since been promoted and am currently a Principal Analyst Rates. I have
22 supported and/or been responsible for various rate filings for both UGI Utilities, Inc. –
23 Gas Division (“UGI Gas”) and UGI Utilities, Inc. – Electric Division (“UGI Electric”)

1 over the past three years. Currently, I am significantly involved and/or primarily
2 responsible for the preparation of the following tariff filings and related computations:

- 3 • Annual 1307(f) Purchased Gas Cost (“PGC”) filings on behalf of UGI Gas.
- 4 • Universal Service Program Rider, State Tax Adjustment Surcharge, Energy
5 Efficiency and Conservation (“EEC”) Rider, and Generation Supply Rate
6 filings on behalf of UGI Electric.

7 Finally, I am primarily responsible for the development and preparation of the
8 Purchased Gas Adjustment (“PGA”) and Actual Cost Adjustment (“ACA”) surcharge
9 filings for UGI Gas’s Maryland division, along with testifying in annual hearings
10 concerning these charges before an administrative law judge at the Maryland Public
11 Service Commission.

12

13 **Q. Have you previously testified before the Pennsylvania Public Utility Commission**
14 **(“Commission”)?**

15 A. Yes. I testified before the Commission in UGI Gas’s PGC 1307(f) proceedings at
16 Docket Nos. R-2021-3025652, R-2022-3032242, and R-2023-3040290. I also have
17 testified before the Maryland Public Service Commission in UGI Gas’s PGA hearings
18 for the past two years at Case Numbers 9516(d) and 9516(e).

19

20 **Q. What is the subject matter of your testimony in this proceeding?**

21 A. I will describe how UGI Electric is proposing to recover the costs for developing and
22 implementing its five-year Phase IV Energy Efficiency and Conservation Plan (“Phase

1 IV EE&C Plan” or “Plan”), which is being proposed to become effective, to the extent
2 possible, on June 1, 2024, and last through May 31, 2029.

3

4 **Q. Are you sponsoring any exhibits in this proceeding?**

5 A. Yes. I am primarily responsible for and am sponsoring: (1) UGI Electric Exhibit 2, the
6 pro forma tariff supplement for the Phase IV Energy Efficiency and Conservation Rider
7 (“Phase IV EEC Rider”), which is attached to the Petition for Approval of the Phase
8 IV EE&C Plan; (2) UGI Electric Exhibit KMB-1, which is attached to my testimony
9 and shows the calculation of the proposed annual Phase IV EEC Rider; and (3) UGI
10 Electric Exhibit KMB-2, which is attached to my testimony and is a copy of my
11 curriculum vitae. In addition, as explained in the written direct testimony of Mr. Love
12 (UGI Electric Statement No. 1), I am co-sponsoring UGI Electric’s Phase IV EE&C
13 Plan, which has been identified as UGI Electric Exhibit 1. Within UGI Electric Exhibit
14 1, I am primarily responsible for and sponsoring Section 5.

15

16 **Q. What rate mechanism is UGI Electric proposing in connection with its Phase IV**
17 **EE&C Plan?**

18 A: UGI Electric proposes to utilize a separate rate mechanism to recover the budgeted
19 costs for development and implementation of the Plan. Plan cost recovery will be
20 accomplished utilizing the Phase IV EEC Rider.

21

22 **I. Projection of EE&C Plan Costs**

23 **Q. What is UGI Electric’s projection of the annual costs for its EE&C Plan?**

1 A. The projected annual costs for the Company’s EE&C Plan are approximately \$2.1
2 million, which equates to a total budget of approximately \$10.5 million over the five-
3 year life of the Plan. This budget includes the Company’s annual spending target on
4 the Phase IV EE&C Plan programs and measures and also includes \$349,000 per year
5 (on average) to cover the Company’s annual internal administrative costs incurred to
6 implement and administer the Plan each year.

7

8 **Q. How was the Company’s spending target for the Phase IV EE&C Plan’s programs**
9 **and measures calculated?**

10 A. Act 129 provides that the total costs of any EE&C Plan cannot exceed 2% of the
11 Electric Distribution Company’s (“EDC”) total annual revenues as of December 31,
12 2006. *See* 66 Pa.C.S. § 2806.1(g). In its Phase I Implementation Order entered on
13 January 16, 2009, at Docket No. M-2008-2069887 (“*Phase I Implementation Order*”),
14 the Commission concluded that this limitation on the “total costs of any plan” should
15 be interpreted as an annual amount, rather than an amount for the full term of the Plan.
16 The Commission continued this level of cost recovery in its Phase II Implementation
17 Order entered on August 3, 2012, at Docket Nos. M-2012-2289411 and M-2008-
18 2069887 (“*Phase II Implementation Order*”), its Phase III Implementation Order
19 entered on June 19, 2015, at Docket No. M-2014-2424864 (“*Phase III Implementation*
20 *Order*”), and its Phase IV Implementation Order entered on June 18, 2020, at Docket
21 No. M-2020-3015228 (“*Phase IV Implementation Order*”). In its December 23, 2009
22 Secretarial Letter issued at Docket No. M-2009-2142851 (“*Secretarial Letter*”), the
23 Commission recognized that while the cost limits contained in Act 129 are not

1 applicable to a voluntary EE&C Plan, an EDC submitting such a plan must justify the
2 level of expenditures using the 12-month period ending May 31, 2008.

3 UGI Electric has constructed its Phase IV EE&C Plan using the base period
4 specified in the Secretarial Letter (i.e., June 1, 2007, through May 31, 2008). The
5 jurisdictional revenues for this period were approximately \$125.3 million. Based on
6 this revenue level, the Company proposes an annual budget for expenditures on the
7 Phase IV EE&C Plan programs and measures of approximately \$2.1 million, which
8 includes internal administrative costs of \$349,000 per year on average associated with
9 the design, development, and administration of the EE&C Plan. Specifically, the
10 internal costs that comprise this amount include, among other things: (1) legal costs,
11 consulting and regulatory costs associated with developing, submitting, and obtaining
12 Commission approval of this Plan; (2) internal costs incurred to manage and administer
13 the programs on an ongoing basis; and (3) internal costs to measure and verify program
14 results.

15

16 **Q. How is the budget allocated among the customer classes?**

17 A. Of the \$10.5 million total Phase IV budget, UGI Electric proposes to allocate
18 approximately \$5.9 million over the five years to the residential customer class and
19 approximately \$4.6 million over the five years to the non-residential customer class.
20 These allocations of the total budget amount include an allocation of the internal
21 administrative costs of \$349,000 per year based on projected incentive spending by rate
22 class. The projected administrative costs to be incurred over the five-year Phase IV
23 EE&C Plan are summarized in Table 29 of the EE&C Plan. Those administrative costs

1 are allocated to the residential and non-residential customers based on projected
2 incentive spending.

3

4 **Q. How does the Company propose to treat the costs to design and develop the**
5 **Company's Phase IV EE&C Plan?**

6 A. The Commission provided in its *Phase I Implementation Order* that EDCs should be
7 permitted to recover the incremental costs incurred to design, create, and obtain
8 Commission approval of a plan. This practice was continued in the Commission's
9 *Phase II Implementation Order*, *Phase III Implementation Order*, and *Phase IV*
10 *Implementation Order*. The design and development costs associated with the Phase
11 IV EE&C Plan are estimated to be \$190,000 and are included within the \$10.5 million
12 spending target. The Company proposes to defer such development costs and to
13 amortize and recover those deferred costs ratably over the 60-month life of its Phase
14 IV EE&C Plan. As a result, the Company proposes to recover \$38,000 during each
15 year of the Plan for plan design and development.

16

17 **Q. Did the Company propose a limit on annual expenditures for its Phase IV EE&C**
18 **Plan programs?**

19 A. Yes. UGI Electric has proposed an annual spending cap of \$2.5 million, which
20 represents 2% of annual revenues for the 12-month period ended May 31, 2008.

1 **II. Cost Recovery**

2 **Q. Please describe the rate mechanism UGI Electric is proposing to use to recover**
3 **the costs of its Phase IV EE&C Plan.**

4 A. Act 129 requires EDCs to recover the costs of their EE&C Plans through a reconcilable
5 adjustment clause under Section 1307 of the Public Utility Code. In its *Phase I*
6 *Implementation Order*, the Commission reiterated this requirement and also directed
7 that such cost recovery mechanisms be applicable to all electric customers and not
8 affect the EDC’s price-to-compare, provided the EDC’s plan benefits both shopping
9 and non-shopping customers. The Commission continued these requirements for cost
10 recovery and directed EDCs to implement a separate 1307 mechanism to recover Phase
11 II EE&C Plan costs in its *Phase II Implementation Order*. Further, in the *Phase III*
12 *Implementation Order*, the Commission directed that: (1) the “annual cost recovery
13 methodology” must be “based on the projected program costs that the EDC anticipates
14 will be incurred over the surcharge application year to attain the energy reduction
15 targets”; and (2) every EDC must “annually reconcile (*i.e.*, 1307(e) Statement) actual
16 expenses incurred with actual revenues received for the reconciliation period.” *Phase*
17 *III Implementation Order*, p. 149. The Commission set forth the same requirement in
18 its *Phase IV Implementation Order*. See *Phase IV Implementation Order*, p. 142.

19 Based on this Act 129 requirement and the Commission’s Orders, UGI Electric
20 proposes to recover the costs of its Phase IV EE&C Plan through the reconcilable Phase
21 IV EEC Rider that will be imposed pursuant to Section 1307 of the Public Utility Code.
22 As in Phases I, II, and III, the Company has designed its cost recovery mechanism to
23 be applicable to default service and choice customers because UGI Electric’s Phase IV

1 EE&C Plan will benefit both shopping and non-shopping customers. In this regard,
2 UGI Electric proposes that, as with Phases I, II, and III, the cost recovery mechanism
3 be included in the distribution charges for each customer class rather than appear as a
4 separate line item on customers' bills. The pro forma tariff supplement to implement
5 the Phase IV EEC Rider, which would become effective on one (1) day's notice, is
6 attached to UGI Electric's Petition for Approval of the Phase IV EE&C Plan as UGI
7 Electric Exhibit 2. The tariff language provides a description of the cost recovery
8 method, the formula for calculating the charge, and the charges specific to each rate
9 class. Attached to my testimony is Exhibit KMB-1, which shows the calculation of the
10 proposed annual Phase IV EEC Rider.

11

12 **Q. How many customer classes will be reflected in its annual cost recovery**
13 **mechanism?**

14 A. As in Phases I, II, and III, the Company proposes to calculate separately the applicable
15 Phase IV EE&C Plan costs for three (3) general customer classes on its system: (1)
16 residential; (2) non-residential customers (other than Rate Schedules LP and HTP),
17 which include small and large commercial and industrial ("C&I") customers, and (3)
18 Rate Schedule LP and HTP. The residential class includes low-income customers and
19 customers served under Rate Schedules R, GS-5 and the residential portion of Rate
20 Schedules OL, SOL, MHOL, or successor rate schedules. The non-residential class
21 includes all other Company rate schedules not listed in the preceding sentence other
22 than Rate Schedules LP and HTP.

1 **Q. What is UGI Electric’s overall approach for determining which customer class is**
2 **responsible to pay for the programs in the Phase IV EE&C Plan?**

3 A. As stated previously, my understanding is that Act 129 and the Commission require
4 that the EE&C Plan programs approved by the Commission be supported by the same
5 customer classes that will receive the direct energy and conservation benefits. As a
6 result, under the Company’s Plan, the costs of Phase IV EE&C Plan programs that
7 target specific rate classes are directly assigned to those classes for purposes of
8 developing the recovery charge.

9
10 **Q. What is the recovery period, and when will it begin and expire?**

11 A. The Company proposes that the Phase IV EEC Rider become effective, to the extent
12 possible, on June 1, 2024. If that is not possible, the Company proposes that the Phase
13 IV EEC Rider become effective on the date of the first quarterly default service rate
14 filing following Commission approval of the Plan. As in Phases I, II, and III, the
15 Company proposes that the Phase IV EEC Rider apply to all usage on and after that
16 date, through and until the last day of the respective month in Plan Year Five. As stated
17 above, UGI Electric is proposing a five-year period for this Plan. However, since Plan
18 Year Five may result in over or under collections of expenses, the rate recovery
19 mechanism must continue for a one-year period following the end of the Plan (“Final
20 Reconciliation Year”), as in Phase I, II, and III, so that the Company may fully recover
21 any under collection or refund any over collection incurred during Year Five. If it is
22 known that there will be a Phase V EE&C Plan at the end of the Final Reconciliation
23 Year related to Phase IV, any remaining balance will be recovered/refunded through

1 the Phase V EEC Rider's E-Factor. If there will be no Phase V EE&C Plan, any balance
2 remaining for a customer class at the end of the Final Reconciliation Year will be trued
3 up through a one-time bill credit/debit issued to the applicable customers during the
4 second full billing month following the end of the Final Reconciliation Year. The
5 annual reconciliation and end-of-Plan reconciliation will be subject to Commission
6 review and potential audit, as the Commission deems necessary.

7

8 **Q. Will the Company file for reconciliation each year?**

9 A. As in Phases I, II and III, the Company proposes to adjust the Phase IV EEC Rider for
10 actual program expenses and revenues each year. Each year, the Company will submit
11 a filing to become effective on 30 days' notice to reconcile the previous period's
12 revenues and expenses and adjust the Phase IV EEC Rider. In addition, as in Phases I,
13 II, and III, the Company reserves the right to make an interim filing (to become
14 effective on 60 days' notice) to adjust the Phase IV EEC Rider if it becomes evident
15 that the over or under recovery is significantly deviating from expected activity. The
16 net over or under collections will be based on the difference between the actual Phase
17 IV EEC Rider revenues received and the actual Phase IV EE&C Plan costs incurred.
18 The over or under collection calculation for each year of the Phase IV EE&C Plan will
19 include the actual over or under collections for the period where the data is known.

20

21 **Q. Does this conclude your Direct Testimony?**

22 A. Yes, although I reserve the right to submit supplemental testimony if other issues arise
23 during the course of the proceeding.

UGI Electric Exhibit KMB-1

UGI Utilities, Inc. - Electric Division
Phase IV Energy Efficiency and Conservation Plan
Development and Impact of Energy Efficiency and Conservation Rate
"Phase IV EEC Rider"

Class 1 - Residential

<u>Plan Year</u>		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Program Cost - Residential ¹		\$1,143,544	\$1,203,959	\$1,206,100	\$1,144,255	\$1,157,934
Declining Projected Residential Usage (kWh)		609,633,763	607,142,986	604,529,630	601,832,595	599,051,881
EEC Rate (¢/kWh) ²		0.199	0.211	0.212	0.202	0.205
Current Residential Rate (¢/kWh):	<u>Base Rate</u> ³					
500 kWh Monthly Use		18.336	18.535	18.547	18.548	18.538
1,000 kWh Monthly Use		17.358	17.557	17.569	17.570	17.560
1,500 kWh Monthly Use		17.035	17.234	17.246	17.247	17.237
Cumulative Rate Impact:						
500 kWh Monthly Use		1.09%	1.15%	1.16%	1.10%	1.12%
1,000 kWh Monthly Use		1.15%	1.22%	1.22%	1.16%	1.18%
1,500 kWh Monthly Use		1.17%	1.24%	1.24%	1.19%	1.20%
Average EEC charge per Monthly Residential Bill		\$1.70	\$1.79	\$1.80	\$1.70	\$1.72

Class 2 - Non-Residential (All non-residential rates plans excluding LP and HTP)

<u>Plan Year</u>		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Program Cost - Class 2 ¹		\$480,395	\$655,085	\$821,428	\$773,929	\$772,775
Declining Projected Class 2 Usage (kWh)		153,057,245	150,689,844	147,616,622	144,543,401	141,470,179
Class 2 EEC Rate (¢/kWh) ²		0.334	0.462	0.591	0.569	0.580
Current Class 2 Rate (¢/kWh):	<u>Base Rate</u> ³					
5 kW Demand 1,000 kWh Monthly Use		17.924	18.258	18.386	18.515	18.493
25 kW Demand 10,000 kWh Monthly Use		14.633	14.967	15.095	15.224	15.213
Cumulative Rate Impact:						
5 kW Demand 1,000 kWh Monthly Use		1.86%	2.58%	3.30%	3.17%	3.24%
25 kW Demand 10,000 kWh Monthly Use		2.28%	3.16%	4.04%	3.89%	3.96%
Average EEC charge per Monthly Class 2 Bill		\$4.69	\$6.40	\$8.02	\$7.56	\$7.55

Class 3 - Non-Residential (Rate Schedules LP and HTP)

<u>Plan Year</u>		<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Program Cost - Class 3 ¹		\$203,992	\$243,364	\$230,978	\$217,622	\$217,297
Declining Projected Class 3 Usage (kWh)		288,116,601	286,758,946	285,401,292	284,043,637	282,685,982
Class 3 EEC Rate (¢/kWh) ²		0.075	0.090	0.086	0.081	0.082
Current Class 3 Rate (¢/kWh):	<u>Base Rate</u> ³					
500 kW Demand 200,000 kWh Monthly Use		11.532	11.607	11.622	11.618	11.613
Cumulative Rate Impact:						
500 kW Demand 200,000 kWh Monthly Use		0.65%	0.78%	0.75%	0.70%	0.71%
Average EEC charge per Monthly Class 3 Bill		\$80.57	\$96.12	\$91.22	\$85.95	\$85.82

Footnotes:

¹ **Administrative costs, including the costs associated with the preparation and obtaining Commission approval of the EEC Plan, are allocated between EEC classes based on projected incentive spending.**

² **Includes 5.9% applicable to Gross Receipts Tax.**

³ **Total rate as of July 1, 2023.**

UGI Electric Exhibit KMB-2

KIMBERLY M. BASSININSKY

PRINCIPAL ANALYST RATES

Work Experience

2022 – Present	Principal Analyst Rates (UGI Utilities, Inc., Denver, Pa)
2020 – 2022	Senior Analyst Rates (UGI Utilities, Inc., Denver, Pa)
2019 – 2020	Manager Financial Planning & Analysis (UGI Utilities, Inc., Denver, Pa)
2018 – 2019	Principal Financial Planning & Analysis Leader (UGI Utilities, Inc., Denver, Pa)
2017 – 2018	Senior Supervisor Financial Planning & Analysis (UGI Utilities, Inc., Reading, Pa)
2016 – 2017	Senior Supervisor Operations Analysis (UGI Utilities, Inc., Reading, Pa)
2015 – 2016	Senior Analyst Operations Analysis (UGI Utilities, Inc., Reading, Pa)
2013 – 2015	Finance Business Partner – Sales & Marketing (Rentokil North America, Reading, Pa)
2005 – 2013	Senior Financial Analyst – Marketing (Garden Fresh Restaurant Corp., San Diego, Ca)
2003 – 2005	Financial Analyst II (Garden Fresh Restaurant Corp., San Diego, Ca)
1999 – 2003	Financial Analyst I (Garden Fresh Restaurant Corp., San Diego, Ca)

Education

MBA, Alvernia University, Reading, Pa.

BS, Business Administration (Finance), San Diego State University, San Diego, Ca.

Previous Testimony

UGI 2023 1307(f) Proceeding	Docket No. R-2023-3040290
UGI 2022 1307(f) Proceeding	Docket No. R-2022-3032242
UGI 2022 Commodity and Purchased Gas Proceeding	MD PSC Case No. 9516(e)
UGI 2021 1307(f) Proceeding	Docket No. R-2021-3025652
UGI 2021 Commodity and Purchased Gas Proceeding	MD PSC Case No. 9516(d)

Assisted in Preparing

UGI 2023 Electric Base Rate Case:	Docket No. R-2022-3037368
UGI 2022 Gas Base Rate Case:	Docket No. R-2021-3030218
UGI 2021 Electric Base Rate Case:	Docket No. R-2021-3023618
UGI 2020 Gas Base Rate Case:	Docket No. R-2019-3015162
UGI 2019 Gas Base Rate Case:	Docket No. R-2018-3006814
UGI 2017 Gas Base Rate Case (the former North Rate District):	Docket No. R-2016-2580030

VERIFICATION

I, Brian J. Meilinger, hereby state that I am Senior Manager-Customer Programs for UGI Utilities, Inc., that I am duly authorized to and do make this Verification on behalf of the company, that the facts set forth above are true and correct to the best of my knowledge, information, and belief, and that I expect the company to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 (relating to unsworn falsification to authorities).

Date: September 21, 2023

DocuSigned by:
Brian Meilinger
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Brian J. Meilinger