655 E. Millsap Road
Fayetteville, AR 72703

May 1, 2026

Ms. Karen Shook
Secretary of the Commission
Arkansas Public Service Commission
1000 Center Street
Little Rock, AR 7223

Re: ASPC Docket No. 07-078-TF
IN THE MATTER OF THE APPLICATION FOR APPROVAL OF ARKANSAS WESTERN GAS COMPANY'S INITIAL ENERGY EFFICIENCY PROGRAM PLAN

Dear Ms. Shook:

Enclosed for filing in the above-referenced docket is Black Hills Energy Arkansas, Inc.'s Energy Efficiency Program Portfolio Annual Report for the program year 2025. The report is comprised of both a narrative report and an electronic spreadsheet.

Please contact me at Jeff.Dangeau@blackhillscorp.com or at (479) 601-8174 if you have any questions.

Respectfully,

Jeff Dangeau
Associate General Counsel
Black Hills Energy Arkansas, Inc.

Comprehensive Energy Efficiency Plan

Annual Report

May 1, 2026

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1.0 EXECUTIVE SUMMARY

1.1 Historical Summary of the Comprehensive Energy Efficiency Plan

This annual report is provided to the Arkansas Public Service Commission ("APSC" or the "Commission") as a review of Black Hills Energy Arkansas, Inc.'s (f/k/a SourceGas Arkansas, Inc., f/k/a Arkansas Western Gas Company), ("BHEA" or the "Company") Comprehensive Energy Efficiency Plan ("CEEP") for Program Year ("PY") 2025 and plan results pursuant to Section 9 of the "Rules for Conservation and Energy Efficiency Programs ("C&EE Rules"). These rules require that each operating utility within the jurisdiction of the Commission file an Annual Report by May 1st of each year. The report should address "the performance of each conservation and energy efficiency program operated by the utility."[1]

In August of 2023, Black Hills Energy Arkansas filed its 2024-2026 Energy Efficiency Plan ("EE Plan") in response to Commission Order No. 25 in Docket No. 13-002-U. The Arkansas Public Service Commission ("APSC") approved the 2024-2026 programs, which builds upon BHEA's Quick Start Energy Efficiency programs that were implemented from late 2007 through early 2011 and the Comprehensive Programs that have been implemented in Arkansas since mid-2011. The EE Plan was filed in compliance with Order No. 43 of Docket No. 13-002-U, which required investor-owned natural gas utilities in Arkansas to capture energy savings equivalent to 0.5% of their 2022 energy sales reduced by those customers choosing to self-direct their energy efficiency efforts.

This report covers activities for the BHEA CEEP that commenced on January 1, 2025 through December 31, 2025. The BHEA CEEP consists of three separate programs with individual pathways for each.

- **Residential Solutions Program ("RSP") Section 2.1-2.3**
  - **Equipment Rebate Pathway:** The Equipment Rebate Pathway offers residential customers rebates for purchasing energy efficient furnaces, tankless water heaters, and smart thermostats. The Equipment Rebates Pathway is designed to help provide customers with assistance in identifying potential measures that are eligible for rebates in qualifying residential homes.
  - **Home Energy Solutions Pathway ("HES Pathway"):** The HES Pathway offers residential customers no cost assessments and energy efficient improvements. The Consistent Weatherization Approach ("CWA") is delivered through this program. The HES Pathway is designed to help customers achieve savings by consulting with a qualified contractor who will analyze their energy use, identify, and install core energy efficiency improvements at no cost to the customer.

[1] Section 9, Page 11 of the APSC Rules for Conservation and Energy Efficiency

- **Commercial & Industrial Solutions Program ("CISP"): Section 2.4**
    - **Custom:** CISP offers technical assistance to support Commercial and Industrial customers in identifying and implementing energy savings opportunities. In its custom program offering, the CISP offers on-site technical assistance, trade ally incentives for steam system surveys, and incentives based on verified performance of custom measures that are outside of the scope of the Arkansas Technical Reference Manual ("TRM").
    - **Prescriptive:** CISP offers prescriptive incentives for measures that have deemed savings established in the TRM, including commercial furnaces, water heaters, boilers, boiler controls, food service equipment, boiler burners, and steam traps.
    - **Direct Install:** The direct install component provides installation of high-saving, low-cost measures at no cost to the participant. Direct Install measures include low flow showerheads, faucet aerators, pre-rinse spray valves, and weather stripping for exterior doors.
    - **Strategic Energy Management (SEM):** Strategic Energy Management (SEM) is a long-term approach to energy efficiency that includes setting goals, tracking progress, and reporting results through behavioral changes.
- **Income Qualified Program ("IQP"): Section 2.5**
    - **IQP** offers qualifying residential customers no cost assessments and energy-efficient improvements along with health and safety measures. The low income carveout for the CWA is delivered through this program.

Overall, this Annual Report demonstrates the following successes, and challenges across the portfolio:

- **Portfolio**
    - The Energy Savings of 1,488,803 net therms represent 115% of the Net Therms savings goal.
- **Residential Solutions Program**
    - The program met 96.7% of its filed net savings goal. The overall realization rate was 101.3%.
- **Commercial & Industrial Solutions Program**
    - As seen in recent program years, custom projects account for a large majority of savings in 2025.

- Savings increased by 29.5% compared to PY2024, and the program met 135.1% of its net savings goal.
- Participation increased in the Prescriptive Pathway from 30,066 to 55,254.
- SEM constituted 6% of CISP Custom Pathway savings in PY2025, down from 23% in PY2024.
- Water savings decreased from 5,062,063 gallons to 507,787 gallons. This is a volatile value year-over-year as it is heavily driven by the relative prevalence of custom projects that save water.

- **Income Qualified Program**

  - The program was highly cost effective and met 99.0% of its net savings goal.
  - Program offerings for the IQP are an enhanced service level compared to the HES Pathway.
  - The program provided very detailed Health & Safety tracking.

1.2 Program Year 2025 Results

1.2.1 Major Accomplishments

For the fourteenth consecutive year, the Company achieved greater than 100% of its net savings goal, realizing 1,488,803 net therms for PY 2025. The Company's 2025 filed savings goal was 1,291,789 net therms and was designed to provide savings great enough to meet or exceed the APSC-established net target for the Company of 1,170,758. This net goal was derived by calculating 0.50% of BHEA's 2022 retail sales (234,151,599 therms), as adjusted for the 2022 sales of Self-Direct customers (32,839,040 therms). In the end, BHEA's total evaluated net energy savings for 2025 was 127% of the Company's net Commission-established goal. In addition, BHEA's portfolio was cost-effective, with a Total Resource Cost Benefit Ratio ("TRC") of 2.22.

2025 Portfolio Summary

Net Energy Savings		Costs			Cost-Effectiveness			Goal Achievement		
Demand Therms	Energy Therms	Actual Expenditures	LCFC	Performance Incentives	TRC Net Benefits (NPV)	TRC Ratio	PAC Ratio	Commission Established Target % of Baseline	Actual Savings Achieved % of Baseline	% of Target Achieved (%)
n/a	1,488,803	$ 4,099,326	$ 417,796	$ 342,218	$ 5,404,669	2.23	2.01	0.50%	0.64%	127%

Figure 1 – 2025 EE Portfolio Summary

1.2.2 Goals and Objectives for EE Portfolio:

BHEA's primary goals and objectives are to provide energy savings opportunities to its customers of all rate classes and market segments. BHEA strives to meet and exceed its energy savings goal established by the APSC.

The Company has worked to achieve the following objectives in PY 2025:

Commercial & Industrial Solution Program:

- Continue evaluating, and, when possible, adding new measures for customers
- Continue to offer Direct Installation ("DI") of measures as a gateway to further participation in BHEA's CISP
- Continue to strive to facilitate inter-fuel coordination of projects with Southwest Electric Power Company ("SWEPCO"), Entergy Arkansas, LLC. ("Entergy"), Oklahoma Gas and Electric Company ("OG&E"), and Liberty Utilities Empire District ("Empire") ("participating electric utilities")
- Continue to incorporate SEM into its measure mix
- Continue to provide energy audit services to small and large customers

Residential Programs:

- Facilitate meetings to keep trade allies updated on changes to residential programs
- Continue to incorporate the United States Department of Energy's Home Performance with ENERY STAR Program ("HPwES") into BHEA's HES Pathway
- Continue the successful inter-fuel promotion of HES Pathway and programs offered by SWEPCO and Entergy

The Company also worked to present all marketing materials on the website www.EnergyReady-Arkansas.com. Examples are provided in Appendix B.

BHEA's portfolio of programs continues to seek adherence to the energy efficiency objectives listed in Section 2 of the Commission's C&EE Rules by:

- Reducing end-use natural gas consumption in a cost-effective manner to save money for consumers and conserve non-renewable resources.
- Protecting the environment by encouraging installation of energy efficiency measures that help reduce carbon dioxide emissions and air pollutants.
- Increasing residential and commercial customer awareness of available energy efficiency opportunities, including equipment upgrades and behavioral changes.
- Generating customer awareness of energy efficiency programs through Black Hills Energy's Arkansas website at www.Energyready-Arkansas.com.
- Identifying cost-effective natural gas savings measures.
- Improving relationships with customers, trade allies, and stakeholders by providing value-added energy efficiency services, training and education, hardware, verification, and support; and
- Supporting a more robust local and statewide economy by using local labor (when possible) and helping Arkansas residents reduce their monthly energy expenses.

1.2.3 Progress Achieved vs. Target and Objectives:

The APSC savings target for a gas utility in 2025 was the realization of a 0.50% reduction from the utility's 2022 baseline throughput (266,990,639 therms), excluding volumes used by Self Direct customers (32,839,040 therms). This represented a savings target for BHEA of 1,170,758 net therms. The Company achieved 127% of this target and therefore qualifies for an incentive of $342,218 according to APSC Docket 13-002-U, Order No. 7.

1.2.4 High Level Recap of Portfolio Savings, Participation Levels, and Prior Year Comparisons

The chart below details the trends of BHEA's budgets, expenses, and energy savings beginning with PY 2016 and continuing through PY 2025.

Company Statistics

Program Year	Revenue and Expenditures					Energy				
		Budget		Actual			Plan		Evaluated	
	Total Revenue (a) ($000's)	Portfolio Budget (b) ($000's)	% of Revenue (%=b/a)	Portfolio Spending (c) ($000's)	% of Revenue (%=c/a)	Total Annual Energy Sales (d) (Therms)	Net Annual Savings (e) (Therms)	% of Energy Sales (%=e/d)	Net Annual Savings (f) (Therms)	% of Energy Sales (%=f/d)
2022	$ 310,466	$ 4,524	1.5%	$ 4,510	1.5%	317,361,270	1,330,541	0.42%	1,510,377	0.48%
2023	$ 267,938	$ 4,399	1.6%	$ 4,449	1.7%	295,781,710	1,510,377	0.51%	1,543,029	0.52%
2024	$ 247,790	$ 4,241	1.7%	$ 3,962	1.6%	290,824,100	1,291,789	0.44%	1,350,413	0.46%
2025	$ 285,289	$ 4,278	1.5%	$ 4,099	1.4%	316,040,330	1,291,789	0.41%	1,488,803	0.47%

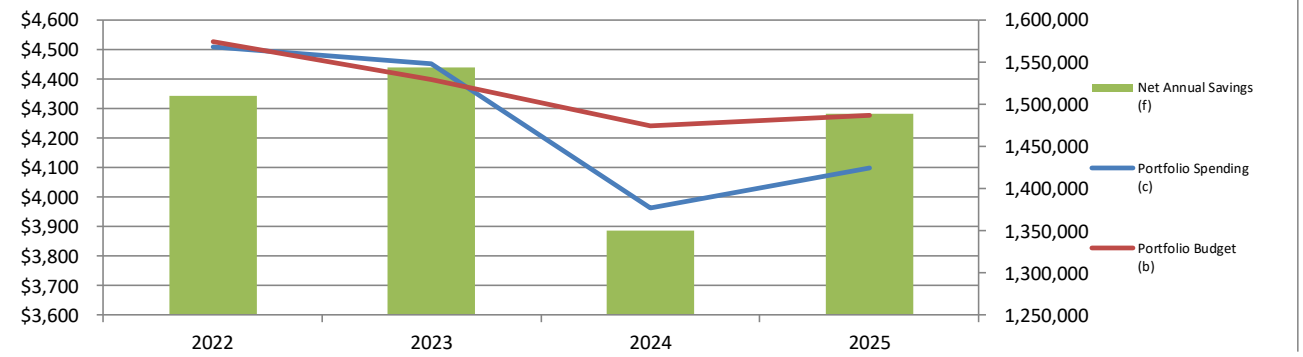

Figure 2 – Company Statistics for Program Years 2022 - 2025

BHEA spent 96% of its budget in 2025, as Figure 3 shows below. Most of the dollars the Company spent went to Customer Incentives and Marketing and Delivery.

EE Portfolio Expenditures by Program

Program Name	Target Sector	Program Type	2025 Budget ($)	2025 Actual ($)	% of Budget
Income Qualified Program	Residential	Market Specific/Hard to Reach	219,910	197,752	90%
Residential Solution Program	Residential	Other	2,559,814	2,196,983	86%
Commercial & Industrial Solutions Program	Commercial & Industrial	Custom	1,470,078	1,696,750	115%
Energy Efficiency Arkansas	All Classes	Behavior/Education	-	-	-
Regulatory	-	-	27,917	7,842	28%
		Total	**4,277,719**	**4,099,326**	**96%**

Figure 3 – BHEA's 2025 EE Portfolio Costs by Program

EE Portfolio Expenditure Summary by Cost Type

Cost Type	2025 Total Expenditures			
	% of Total	Budget ($)	Actual ($)	% of Total
Planning / Design	2%	69,664	-	0%
Marketing & Delivery	40%	1,708,070	1,816,531	44%
Incentives / Direct Install Costs	50%	2,147,382	1,956,683	48%
EM&V	5%	202,733	183,165	4%
Administration	3%	121,953	135,106	3%
Regulatory	1%	27,917	7,842	0%
	100%	**4,277,719**	**4,099,326**	100%

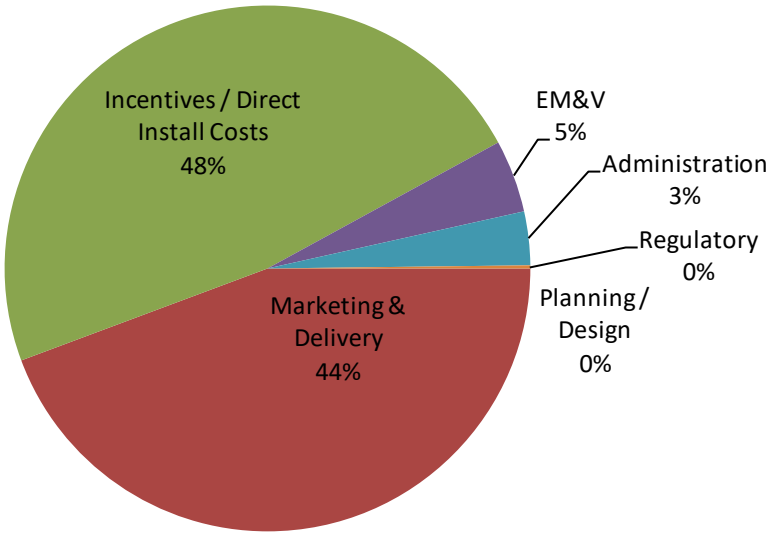

Figure 4 – BHEA's 2025 EE Portfolio Summary by Cost Type

1.2.5 Highlights of Well-Performing Programs:

BHEA was encouraged by the performance of its CEEP as a whole. All three programs exceeded their filed gross goals.

Commercial & Industrial Solutions Program

BHEA had 66 C&I customers participate by installing Energy Conservation Measures ("ECM") in 2025 through the custom, direct install, and prescriptive rebates in the CISP. This represented total net savings of 837,897 therms or 135% of the net savings goal.

Equipment Rebate Pathway

The BHEA Equipment Rebate Pathway provided rebates for 341 high efficiency furnaces and 161 tankless water heaters during 2025. In addition, 186 Smart Thermostats were rebated. BHEA experienced net savings from this pathway of 50,714 therms.

Home Energy Savings Pathway

BHEA engaged five contractors that in conjunction with the implementor performed 1,293 assessments across its service territory and 3,752 measures were paid to contractors for work done in 1,374 customers' homes. A total net savings of 549,000 therms was achieved for HESP.

1.2.6 What's Working and What's Not

BHEA's Equipment Rebate Pathway results were lower this year than in the previous year in part due to an uncertain economy. Incentive funds for tankless water heaters remained available through December of 2025. Furnace and smart thermostat rebates were available through the end of 2025 as well. The HES Pathway customer experience with this program has been very positive and the participant surveys found high satisfaction levels.

1.2.7 Planned Changes to Programs or Budgets

No Changes are planned, however, BHEA may choose to use the budget flexibility approved by the Commission.

1.2.8 Arkansas Energy Efficiency Potential Study

In 2025, the Parties Working Collaboratively ("PWC") completed and filed the results of the Arkansas Market Potential Study for 2023-2024 that was prepared by by GDS Associates. The study was intended to facilitate future Arkansas Public Service Commission energy efficiency savings targets efforts and will be used to establish new targets for the 2028-2030 program cycle.

1.2.9 Training

In 2025, BHEA and its implementation staff provided training to customers, trade allies, and employees of the Company, as well as continued training for the program administrator. Details of training achievements for 2025 are reported in the training sections of the Standardized Annual Report Packet ("SARP") Workbook.

- Members of the implementation staff participated in training opportunities by attending training provided by the Association of Energy Services Professionals ("AESP") and the Arkansas Chapter of The Association of Energy Engineers ("AAEE").
- The implementation staff continued to offer BPI training to trade allies to meet program standards. These training courses are offered as needed throughout the year to allow new trade ally staff to receive the training required for BPI certifications.

- The BHEA program administrator attended trainings to increase knowledge in marketing energy efficiency, how to incorporate new technology, and in evaluation methods. These conferences and webinars included ones held by AESP, AAEE, and the Home Performance Institute.

1.2.10 Conclusion

BHEA's success in 2025 reflects its desire to continually monitor program(s) performance and make improvements as necessary. The company worked with its implementer to provide the necessary trainings to its contractors and provide them with the information needed to be successful in delivering results to BHEA's customers.

BHEA's total evaluated net energy savings for 2025 was 127% of the Company's net Commission established goal of 1,170,758. BHEA's portfolio was cost-effective with a TRC of 2.22, and all programs had a TRC benefit-cost ration of 1.0 or greater in 2025.

BHEA's portfolio performance qualified the Company to receive an EE incentive for the 2025 program year.

2.0 Portfolio Programs

2.1 Residential Solution Program - Equipment Rebate Pathway ("ERP")

2.1.1 Program Description

BHEA's Equipment Rebate Pathway promotes high efficiency natural gas comfort heating equipment, tankless water heating equipment and Energy Star® qualified Smart Thermostats in new and existing homes. This program is available to all residential customers. Customers must use natural gas as their primary heating fuel to receive a furnace or thermostat rebate or must use natural gas as their primary water heating source to receive a water heater rebate. New customers who have made a commitment to take natural gas service from BHEA as the primary heating or water heating fuel are also eligible rebates.

BHEA provides a financial incentive in the form of prescriptive rebates to customers who purchase and install qualifying comfort heating and water heating measures. After purchasing and installing new equipment, customers may fill out rebate forms with detailed information about the purchase and installation and mail them in. Customers may expect their rebate checks in four to eight weeks. Trade allies are given a $50 rebate (except for Smart Thermostats) for each installation to help them recover the costs incurred when helping customers fill out the rebate forms and encouraging them to do so.

2.1.2 Pathway Highlights

- Furnace rebates were available to customers through December 31, 2025.
- Water heater rebates were available to customers through December 31, 2025.
- BHEA will continue to have face-to-face meetings with builders to increase new construction participation.
- A total of 688 rebates were paid through ERP in 2025.
    - 341 Residential furnaces were rebated
    - 161 Residential water heaters were rebated
    - 186 Residential Smart thermostats were rebated
    - Net therm savings of 50,714 therms were achieved

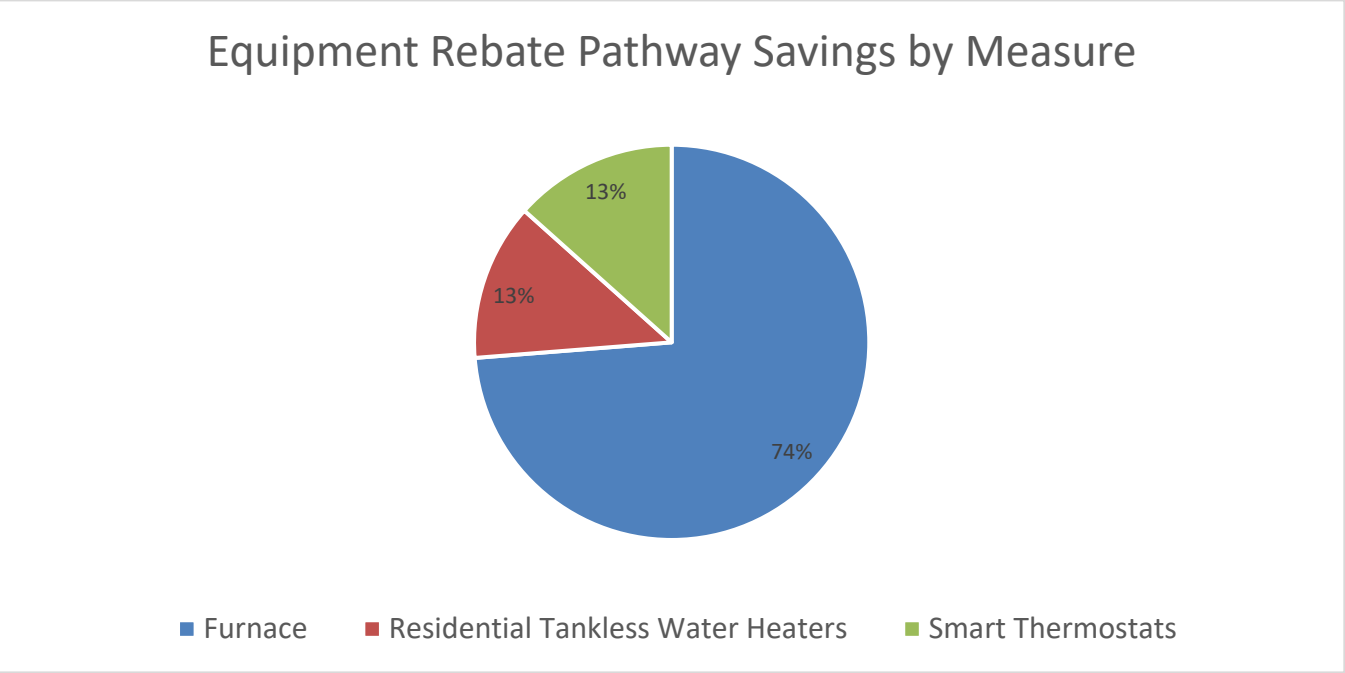

Figure 5 – 2025 Equipment Rebate Pathway Measure Mix

2.1.3 Description of Participants

- Each piece of equipment being rebated is defined as a participant.

2.1.4 Challenges & Opportunities

- The number of participating contractors who had not previously participated in the program has increased through efforts to directly contact trade allies and provide them with information about BHEA program offerings.

2.1.5 Planned or Proposed Changes to Program & Budget

- No Changes are planned, however, BHEA may choose to use the budget flexibility approved by the Commission.

2.1.6 BHEA's Response to Evaluators' Recommendations

- In PY2025, one program level recommendation was provided to BHE as part of the EM&V of their portfolio. Part one of this recommendation was completed, and part 2 was rejected.
    - Part 1 - Program savings estimations need to be updated to address equipment inputs appropriately for water heaters. Program staff may consider updating water heater calculations to account for the correct setpoint temperature for both residential and commercial projects.
    - Part 2 - Additionally, calculation updates are needed to appropriately size baseline water heater to determine the appropriate DHW load.

2.2 Residential Solution Program - Home Energy Savings Pathway ("HES")

2.2.1 Program Description

BHEA's HES Pathway began to offer comprehensive residential energy efficiency audits on a limited basis in November of 2013. This program was added to the Company's portfolio to offer qualifying BHEA residential customers an EE program that will provide them with lasting energy savings benefits and increased home comfort. Building on the solid base established in prior years, this program was again successful in 2025.

The HES Pathway is designed to fulfill the requirements established by the APSC in Docket 13-002-U, Order Nos. 22 and 23. These orders instructed the Investor-Owned Utilities ("IOUs") – BHEA, SWEPCO, Entergy, Summit Arkansas, AOG, OG&E, and Empire – to design and implement a Consistent Weatherization Approach beginning in 2016. The goal of the Commission was to provide consistent weatherization programs to all residential customers in the state of Arkansas served by the IOUs.

Through this program, BHEA residential customers are connected with trained service providers (trade allies) that perform a comprehensive home energy assessment and install EE weatherization measures designed to save energy, improve indoor comfort, air quality, and safety in existing residences. The assessment and multiple building envelope measures are provided to customers at no charge. BHEA trade allies are currently providing duct sealing, air infiltration measures, ceiling insulation, combustion safety checks, and with customer approval, installation of energy efficient aerators and showerheads. After customers' homes are weatherized, trade allies leave behind a branded folder containing information about other programs offered by BHEA and SWEPCO, when appropriate, along with a dual branded version of the U.S. Housing and Urban Development's Safe and Healthy Home booklet. The packet is given to the customer at the completion of each job along with a report on what was accomplished by the weatherization.

The Company continued its association with the Home Performance with Energy Star® Program in 2025. HES is a program backed by the Department of Energy and Environmental Protection Agency that promotes a "whole-house" approach to each home being assessed that begins with a comprehensive home energy assessment.

2.2.2 Pathway Highlights

- In PY 2025 the HES Pathway achieved a net savings of 599,714 therms.
- The conversion rate for customers receiving an assessment that then results in weatherization being performed is 123%.
- Trade allies working within this program must meet minimum certification requirements (Building Performance Institute ("BPI") or Residential Energy Service Network ("RESNET") as well as undergo BHEA specific program training.
- In conjunction with SWEPCO, BPI training opportunities for trade allies were provided.

- Trade allies are also required to complete online training provided by BHEA's implementor.
- To reduce customer inconvenience, quality assurance and quality control visits were coordinated with other utilities whenever possible. During 2025, many of the quality control visits were conducted virtually with the contractor onsite.
- BHEA's contractors provide weatherization services for the rebates.
- The Company continues to use an allotment system to increase trade ally consistency and performance along with prolonging program availability.
- In homes where the electric provider is not an IOU, BHEA pays the full cost of the audit as well as the installation of energy saving measures.
- 2025 results were as follows:
- The HES Pathway had 1,374 participants in PY2025.
- 1,293 energy assessments were performed.
    - 81% of heating systems had duct sealing done
    - 71% of homes had air infiltration measures completed
    - 21% of homes received insulation
    - 2% had showerheads installed
    - 1% had aerators installed

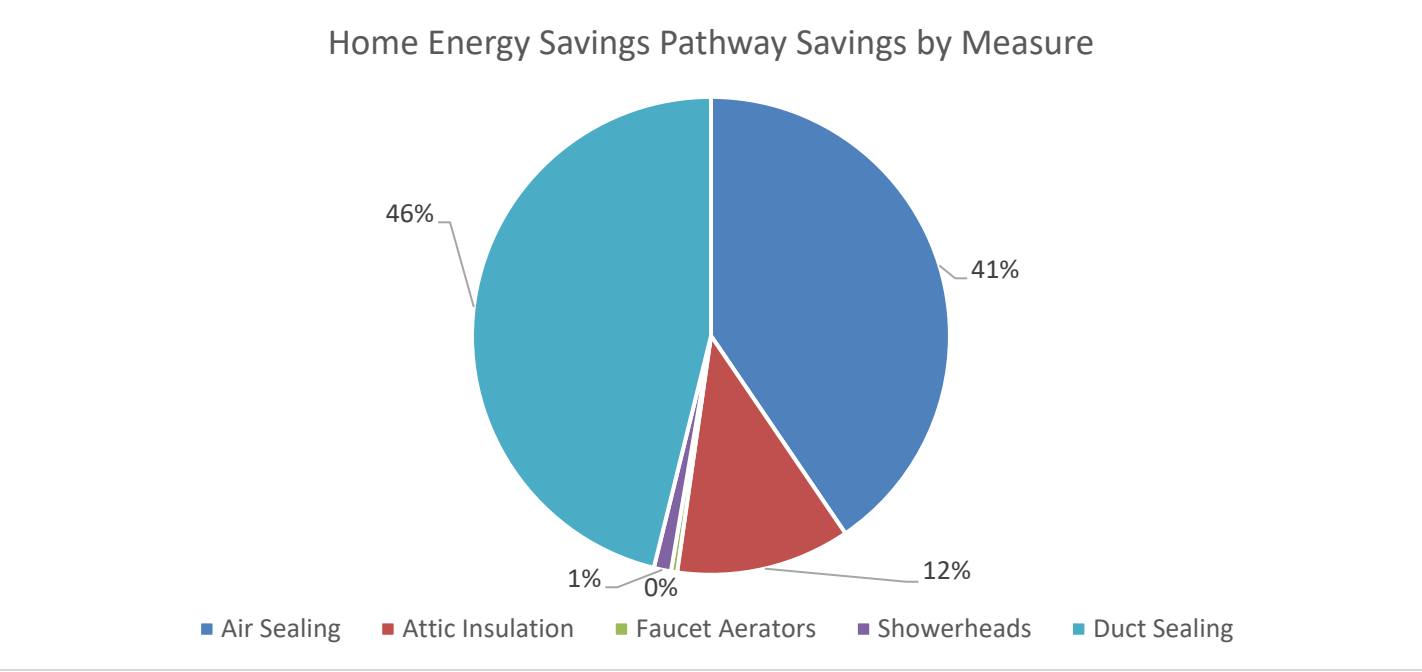

Figure 6 – 2025 HES Pathway Measure Mix 2.2.3

2.2.3 Description of Participants

- A Participant of BHEA's HES Pathway represents an incentivized measure, including assessments.

2.2.4 Challenges & Opportunities

- BHEA's primary challenge is to strike a balance between customers wanting to participate and the funds available to provide services, particularly on assessments performed on BHEA only homes.
- Since this is and the IQP programs are the only BHEA programs that requires trade allies to be registered and trained to participate, recruiting and training trade allies is critical.

2.2.5 Planned or Proposed Changes to Program & Budget

- No Changes are planned; however, BHEA may choose to use the budget flexibility approved by the Commission.

2.3 Residential Solution Program Conclusion

2.3.1 Program Highlights

- The TRC ratio for the Residential Solution Program in 2025 was 2.39
- The weatherization services offered by the HES pathway continue to be popular with BHEA customers.

2.3.2 Residential Solution Budget, Savings, and Participants

Residential Solution Program

	Expenditures			Energy Savings (Therms)			Demand Savings (Therms)			Participants		
Program	**Budget**	**Actual**	**%**	**Plan**	**Evaluated**	**%**	**Plan**	**Evaluated**	**%**	**Plan**	**Actual**	**%**
Program Year 2023	$ 2,699,719	$ 2,688,538	100%	755,139	726,434	96%	n/a	n/a	-	4,834	4,834	100%
Program Year 2024	$ 2,517,958	$ 2,504,890	99%	620,027	599,714	97%	n/a	n/a	-	2,225	2,225	100%
Program Year 2025	**$ 2,559,814**	**$ 2,196,983**	**86%**	**620,027**	**599,714**	**97%**	**n/a**	**n/a**	**-**	**2,225**	**2,225**	**100%**

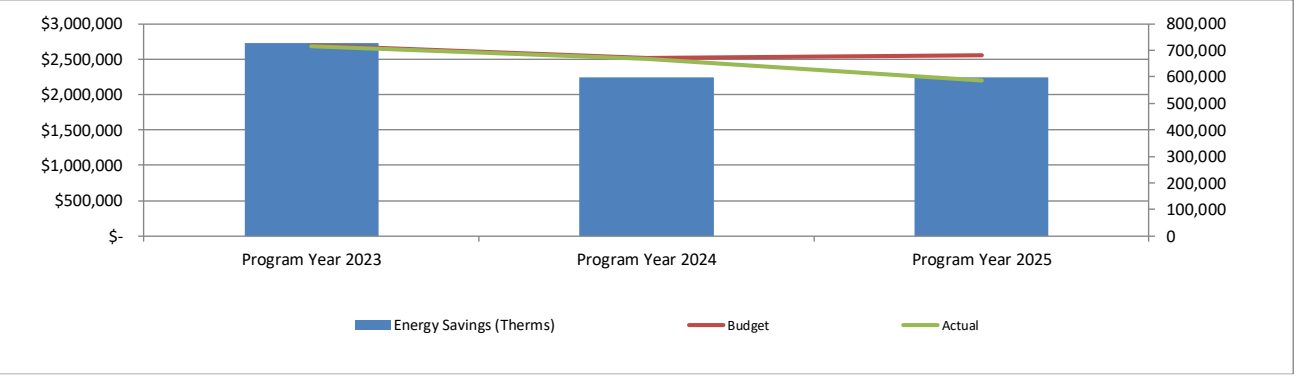

Figure 7 – 2023-2025 Residential Solution Program Trends

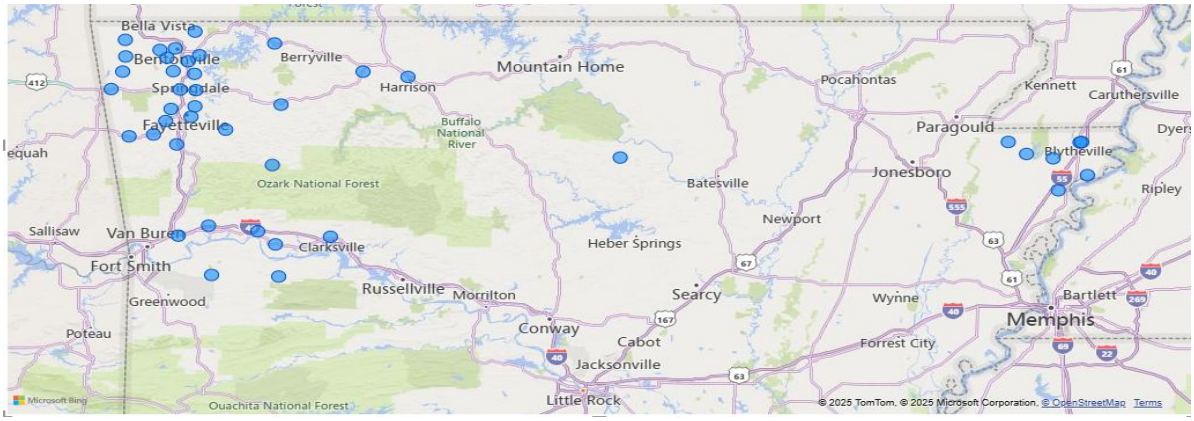

Figure 8 – 2025 Residential Solution Program Participants by Zip Code

2.4 Commercial & Industrial Solutions Program ("CISP")

2.4.1 Program Description

This program is available to all BHEA C&I customers, both existing facilities and new construction where natural gas is the primary heating/water heating/process fuel, or where the potential customer has made a commitment to take natural gas from BHEA as its primary heating/water heating/process fuel. BHEA provides financial incentives to encourage installation of energy efficient measures.

The CISP promotes cost effective natural gas energy savings through energy efficiency. It is a threefold program that gives C&I customers the opportunity to save on their natural gas usage. The program provides for the direct installation of water aerators, low flow showerheads, pre-rinse spray valves, and weather stripping at no cost to customers. Prescriptive rebates for comfort heating boiler equipment, boiler component installations and replacements, boiler burner replacements, commercial space heating furnaces, commercial tankless water heaters, steam traps, boiler burners, as well as qualifying Energy Star commercial cooking equipment are available. Custom incentives for specific measures are also available.

The calculation of savings for CISP may be determined through use of the TRM or through custom Measurement and Verification. This process employs point of use metering of natural gas, both prior to and after measure installation.

The custom part of CISP is highly dependent on frequent customer contact by BHEA's implementers, trade allies, and BHEA account managers. Budget cycles can be long and getting EE projects approved is difficult. Facility audits are done by the Company's implementers and are presented to the customer. Follow up is necessary to keep the customer thinking about the potential for natural gas savings and reductions in process,

maintenance, and facility costs. Continued contact with potential customers is facilitated through phone calls, invitations to energy efficiency learning opportunities, and additional site visits.

2.4.2 Program Highlights

- BHEA's CISP was available to all C&I customers in 2025, except those electing to self-direct their energy savings. In total, the program achieved 837,897 net therms.
- Savings were distributed as follows:
  - Custom
    - 8 customers
    - Savings of 627,207 net therms
  - Commercial Boiler
    - 6 customers and 9 boilers
    - Savings of 18,228 net therms
  - Commercial Furnaces
    - 16 customers and 29 furnaces
    - Savings of 4,642 net therms
  - Commercial Cooking Equipment
    - 12 customers and 26 pieces of equipment
    - Savings of 17,923 net therms
  - Commercial Tankless Water Heaters
    - 13 customers and 66 water heaters
    - Savings of 14,460 net therms
  - SEM
    - 1 participant
    - 39,184 therms
  - Direct Install
    - 76 Participants
    - 578 feet of weather stripping (exterior walk thru doors, windows, etc.)
    - 2,326 feet of overhead door weather stripping
    - Savings of 116,253 net therms
- The TRC for CISP was 2.02 for 2025.

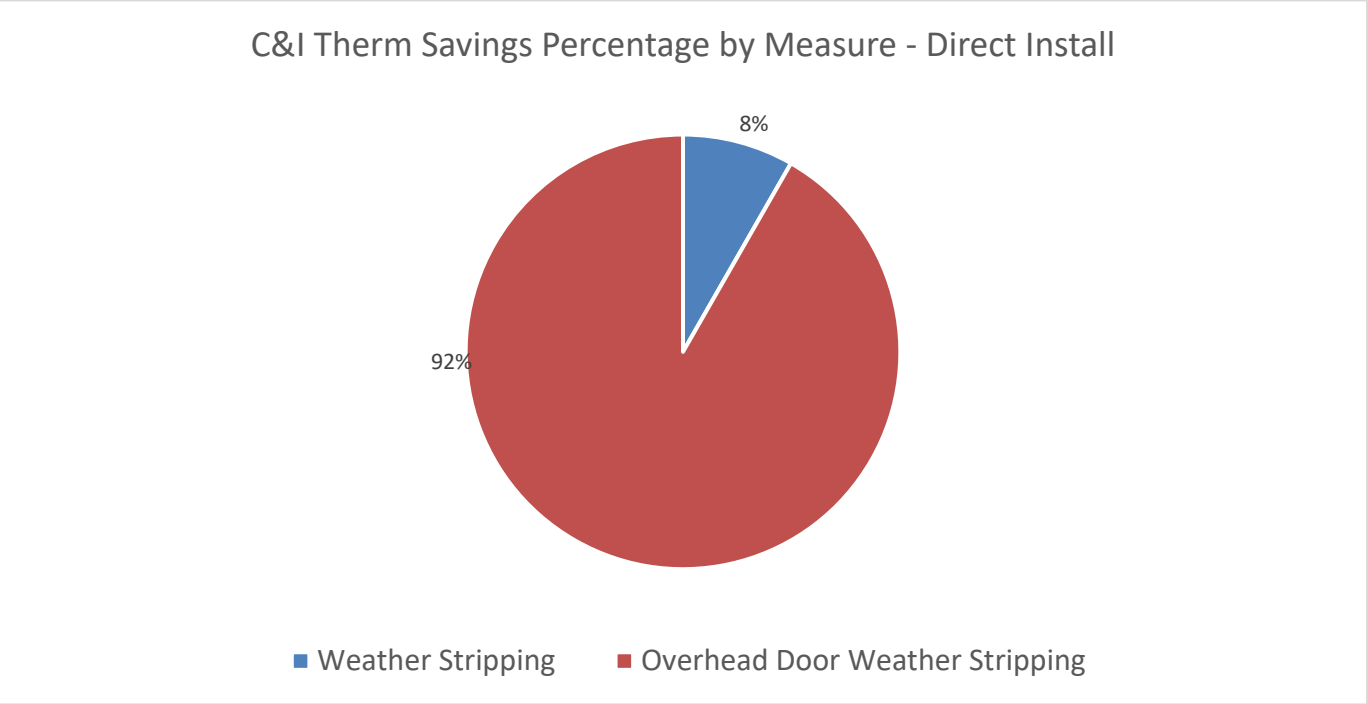

Figure 9 – 2025 Commercial & Industrial Direct Install Measure Mix

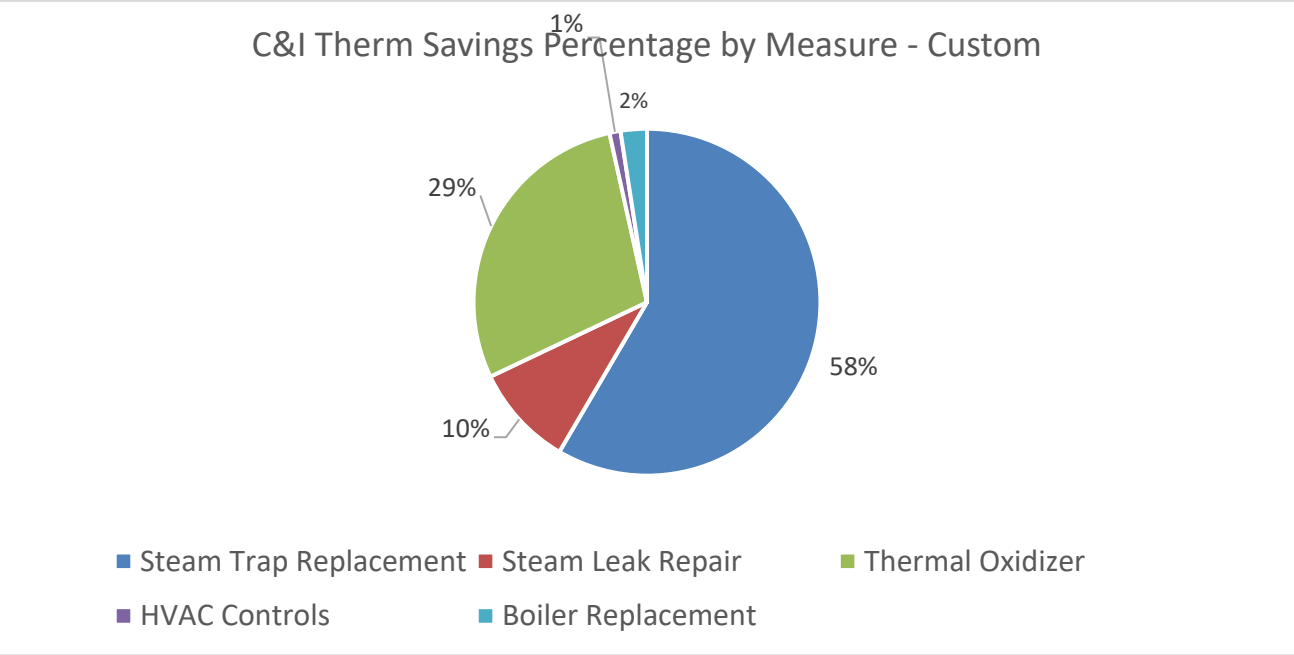

Figure 10 – 2025 Commercial & Industrial Custom Measure Mix

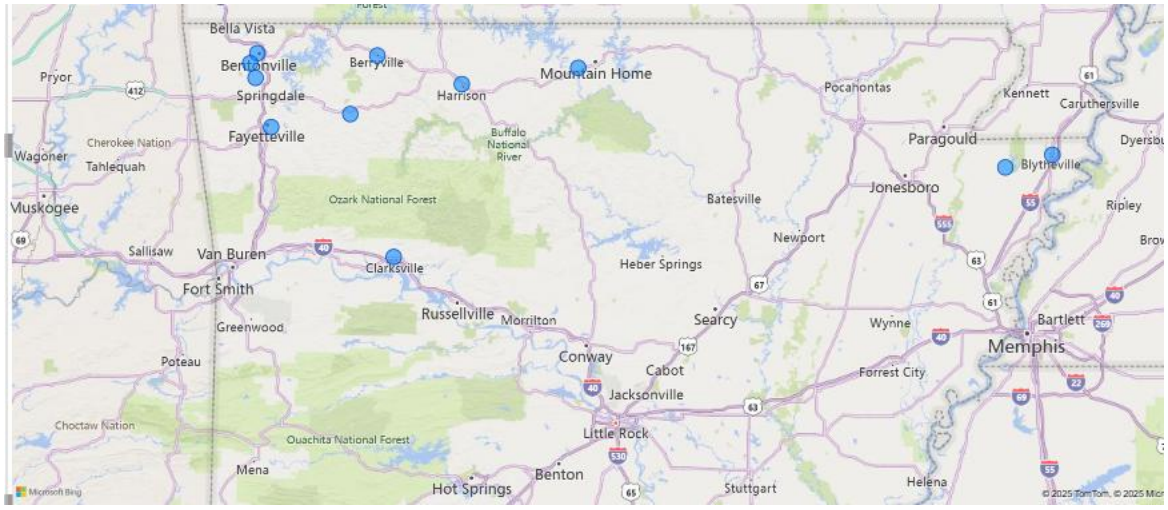

Figure 11 – 2025 Commercial & Industrial Participants by Zip Code

2.4.3 Program Budget, Savings, and Participants

Commercial & Industrial Solutions Program

	Expenditures			Energy Savings (Therms)			Demand Savings (Therms)			Participants		
Program	**Budget**	**Actual**	**%**	**Plan**	**Evaluated**	**%**	**Plan**	**Evaluated**	**%**	**Plan**	**Actual**	**%**
Program Year 2023	$ 1,552,279	$ 1,674,089	108%	723,540	792,445	110%	n/a	n/a	-	1,569	1,569	100%
Program Year 2024	$ 1,425,198	$ 1,425,148	100%	620,044	837,897	135%	n/a	n/a	-	232	232	100%
Program Year 2025	**$ 1,470,078**	**$ 1,696,750**	**115%**	**620,044**	**837,897**	**135%**	**n/a**	**n/a**	**-**	**232**	**232**	**100%**

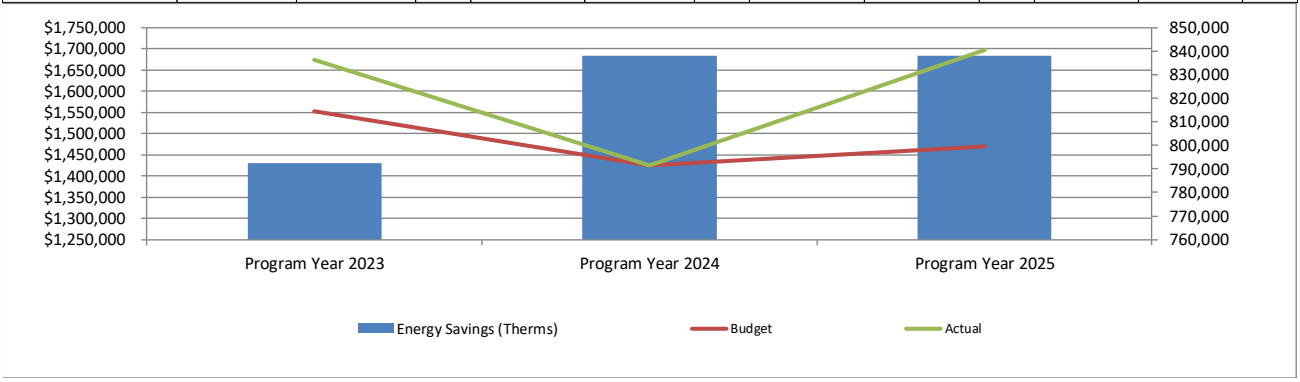

Figure 12 – 2023-2025 Commercial & Industrial Solutions Program Trends

2.4.4 Description of Participants

- A Participant of BHEA's CISP is defined as any measure installed.

2.4.5 Challenges & Opportunities

- Historically, BHEA's primary challenge in this program is assisting CLEAResult in finding opportunities for custom projects. A large capital investment by customers can

be required to participate in this program. However, the current pipeline is healthy, and there is no shortage of custom projects.

- BHEA employs a Commercial and Industrial Account Manager to promote the Company's EE Portfolio at customer meetings and outside events. The account manager works with CLEAResult to provide contacts for follow-up.

2.4.6 Planned or Proposed Changes to Program & Budget

- BHEA will continue to update and revise the program to incorporate new technology and equipment.

2.5 Income Qualified Program ("IQP")

2.5.1 Program Description

The IQP was designed to comply with Act 1102. IQP is an extension of the CWA, and it is targeted to customers who meet the income eligibility requirements of the Low-Income Home Energy Assistance Program (LIHEAP).

The program provides energy assessments, along with direct installation of low-cost measures and pre-qualification for building envelope improvements.

- Direct install measures include:
  - Faucet aerators
  - Low flow showerheads
- Weatherization measures include:
  - Air infiltration
  - Duct sealing
  - Ceiling insulation

Additionally, the program offers a maximum of $500 per participating residence to meet the health code standards required to weatherize the residence. Health and safety (H&S) funding may be used to provide carbon monoxide detectors, smoke detectors, or other required measures.

2.5.2 Program Highlights

- The program successfully completed comprehensive H&S retrofits with thorough documentation, meeting all Act 1102 requirements.
- The program met savings goals and was highly cost-effective, achieving a savings of 51,718 net therms and meeting 99.0% of its net savings goal.
- The IQP spent $187 per participant on H&S retrofits, and thoroughly documented the equipment installed.
- 133 homes were weatherized in 2025, which were joint projects done in conjunction with SWEPCO.

- The focus on joint projects allowed the recipients to have up to $1,000.00 of Health & Safety equipment installed per home since the costs were split between the utilities. This was a great service to these customers as many of these homes needed extensive repairs before the weatherization measures could be installed.

2.5.3 Program Budget, Savings, and Participants

Income Qualified Program

	Expenditures			Energy Savings (Therms)			Demand Savings (Therms)			Participants		
Program	Budget	Actual	%	Plan	Evaluated	%	Plan	Evaluated	%	Plan	Actual	%
Program Year 2023	$ 87,959	$ 86,236	98%	31,698	24,150	76%	n/a	n/a	-	123	123	100%
Program Year 2024	$ 216,111	$ 211,895	98%	51,718	51,192	99%	n/a	n/a	-	68	68	100%
Program Year 2025	**$ 219,910**	**$ 197,752**	**90%**	**51,718**	**51,192**	**99%**	**n/a**	**n/a**	**-**	**68**	**68**	**100%**

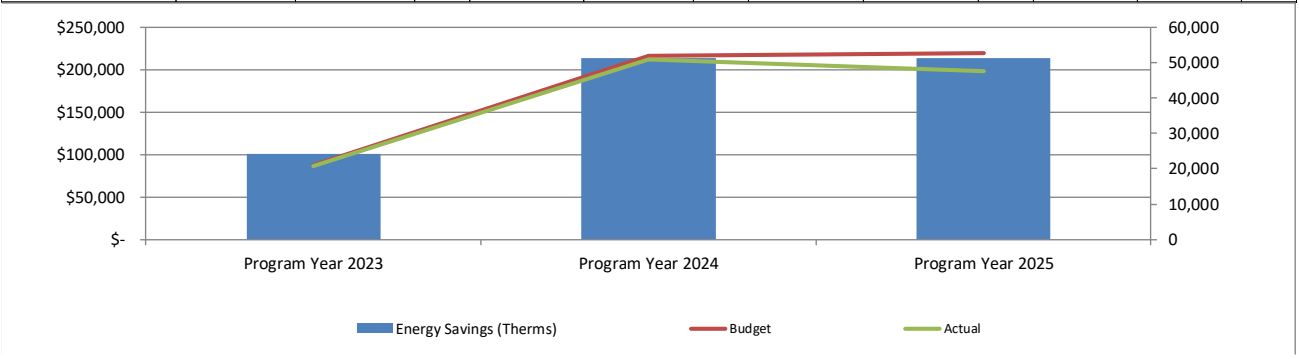

Figure 13 – 2023-2025 Income Qualified Program Trends

2.5.4 Description of Participants

- A Participant of BHEA's IQP represents an incentivized measure, including assessments.

2.5.5 Challenges & Opportunities

- The current limit on Health & Safety measures is $500 per project. While this meets the needs with joint projects, it can fall short on BHEA only projects. Consideration will be given to increasing this limit to $1,000 if needed.

2.5.6 Planned or Proposed Changes to Program & Budget

- Currently there are no planned changes, however, BHEA will use the budget flexibility granted by the Commission if appropriate.

3.0 Supplemental Requirements

3.1 Staffing

- Current staff for BHEA's EE programs is the Black Hills Energy Efficiency Manager and supports the program as part of her full time role.
- The Company has a Commercial and Industrial Account Manager who continues to leverage any contact with customers as an opportunity to promote EE programs.

- BHEA's implementer, CLEAResult, employs the equivalent of 6 full-time employees to work on BHEA's programs.

3.2 Stakeholder Activities

BHEA's EE team, including its program implementation and evaluation team members, were again very active with the PWC. The PWC held several meetings throughout the year, the majority of these discussions focused on making changes and updates to the TRM and the next program cycle.

Program evaluators provided timely updates throughout the year regarding the status of evaluation activities and worked proactively with the IEM to develop new studies based on feedback from the PWC.

3.3 Information Provided to Consumers to Promote EE

BHEA's marketing plan relies on traditional marketing channels to promote the programs. Additionally, BHEA uses customer touch points such as service calls, customer newsletters, and speaking engagements at seminars, conferences, and community events to spread the word about its programs. Over the past year, marketing for BHEA's energy efficiency programs has included:

- Continued internet presence through the www.energyready-arkansas.com website which features:
  - A website that is mobile and tablet compatible;
  - A list of energy savings tips;
  - Information on all BHEA's EE programs and instructions on how to participate in each program, with contact information for further questions;
  - Printable rebate forms;
  - Links to other useful resources, such as a free online energy audit tool and energy efficiency organizations;
  - Samples of marketing materials;
  - A direct email link for more information or questions regarding any BHEA EE program.
- Program materials are distributed at multiple events during the year, where BHEA customers are able to learn more about the programs.

Comprehensive Energy Efficiency Plan

Program Year 2025

Annual Report

Appendix A – Evaluation, Measurement and Verification Report For The 2025 Arkansas Energy Efficiency Portfolio

EVALUATION, MEASUREMENT AND VERIFICATION REPORT FOR THE 2025 ARKANSAS ENERGY EFFICIENCY PORTFOLIO

SUBMITTED TO: BLACK HILLS ENERGY ARKANSAS

SUBMITTED ON: APRIL 30, 2026

SUBMITTED BY: QUALUS, LLC

Qualus, LLC
100 Colonial Center Parkway, Suite 100
Lake Mary, FL 32746

Black Hills Energy

Acknowledgements

We would like to thank the staff at Black Hills Energy Arkansas for their time and effort in contributing to the EM&V of the PY2025 programs. This evaluation was conducted with regular coordination with staff at BHE, who provided quick feedback and turnaround to the requests of the evaluation team as well as open and forthright insights into the operations of their programs.

Further, we would like to acknowledge our gratitude towards BHE customers, implementation contractor staff, and trade allies. As with the staff at BHE, their active participation allowed the evaluation team to collect all needed data for this effort.

In final, we would like to thank staff at the Independent Evaluation Monitor for their involvement in providing thorough answers and clarification to the evaluation team when higher-level questions arose over the course of the PY2025 EM&V effort.

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Qualus

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1 Executive Summary

In October of 2023, Black Hills Energy Arkansas (BHE) filed its 2024–2026 Energy Efficiency Plan (EE Plan) in response to Commission Order No. 25 in Docket No. 13-002-U. The Arkansas Public Service Commission (APSC) approved the 2024–2026 programs, which builds upon BHE's Quick Start Energy Efficiency programs that were implemented from late 2007 through early 2011 and the Comprehensive programs that have been implemented in Arkansas since mid-2011. The EE Plan was filed in compliance with Order No. 43 of Docket No. 13-002-U, which required investor-owned natural gas utilities in Arkansas to capture energy savings equivalent to 0.5% of their 2022 energy sales reduced by those customers choosing to self-direct their energy efficiency efforts.

This report presents the Evaluation, Measurement, & Verification (EM&V) results for BHE's energy efficiency programs implemented in Program Year (PY) 2025. In accordance with APSC Conservation & Energy Efficiency (C&EE) Rules, BHE selected an independent, third-party EM&V contractor. The selected EM&V contractor is Qualus[1]. The Qualus staff, collectively referred to as the Evaluators, evaluated the BHE portfolio.

The PY2025 BHE evaluation included impact and process analyses that are specified in the APSC rules and follow the Arkansas TRM Version 10.0 (TRM V10.0) protocols and savings algorithms. In addition, Qualus developed the program evaluation activities based upon discussions with BHE staff and its implementation contractors, reviews of program tracking and program documentation, a review of prior years' EM&V efforts and BHE annual reports, and input from the Independent Evaluation Monitor (IEM).

BHE's Plan includes a portfolio of energy efficiency programs designed to facilitate energy savings in every customer class. BHE services approximately 169,000 customers in Arkansas. BHE's service area is primarily comprised of communities in Northwest Arkansas, including Fayetteville, Springdale, and Rogers, as well as North-central (Mountain Home) and Northeast (Blytheville, Manila, Osceola) communities.

1.1 Summary of BHE Energy Efficiency Programs

In PY2025, BHE offered a portfolio of three energy efficiency programs, which provided a comprehensive range of customer options for natural gas efficiency. BHE designed its programs to achieve the following objectives:

[1] In July of 2025 ADM Associates, the incumbent evaluators, were purchased by Qualus. Staff from legacy ADM continue to provide the same services to clients as the Demand Analytics and Solutions group within Qualus.

- Program plan net therm savings target of 1,291,790, exceeding the APSC target;
- Significant energy-savings opportunities for all customers and market segments;
- Broad ratepayer benefits; and
- Comprehensiveness in seven areas (comprehensiveness factors) defined by the APSC.[2]

The Evaluators calculated the results for PY2025 for one commercial and industrial (C&I) and two residential programs. Those programs and pathways are described below:

- **Commercial & Industrial Solutions Program (CISP):**
    - **Custom:** CISP offers technical assistance to support C&I customers in identifying and implementing energy-saving opportunities. In its custom program offering, the CISP offers on-site technical assistance, trade ally incentives for steam system surveys, and incentives based on verified performance of custom measures that are outside of the scope of the TRM V10.0.
    - **Prescriptive:** CISP offers prescriptive incentives for measures that have deemed savings established in the TRM, including commercial furnaces, water heaters, boilers, boiler controls, and food service equipment.
    - **Direct Install:** The direct install component provides installation of high-saving, low-cost measures at no cost for the participant. Direct install measures include low flow showerheads, faucet aerators, pre-rinse spray valves, and weather stripping for exterior doors.
- **Residential Solutions Program (RSP)**
    - **Equipment Rebates Pathway (ERP):** ERP offers residential customers rebates for purchasing energy efficient furnaces, tankless water heaters, and smart thermostats. The Equipment Rebates Pathway is designed to help provide customers assistance in identifying potential measures that are eligible for rebate and installation in qualifying residential homes.
    - **Home Energy Savings Pathway (HESP):** HESP offers residential customers no cost assessments and energy efficient improvements. The Consistent Weatherization Approach (CWA) is delivered through this program. Home Energy Savings Pathway is designed to help customers achieve savings by consulting with a qualified contractor who will analyze their energy use, identify, and install core energy efficiency improvements at no cost to the customer.

[2] As defined by the APSC in the C&EE Rules of Order No. 17 in Docket 08-144-U.

- **Income Qualified Program (IQP):** The IQP complies with CWA guidelines just as HESP does. In addition to measures found in HESP, homes may qualify for additional health and safety measures which may not generate direct energy savings but will improve overall health and safety of the residence.

Through its energy efficiency portfolio, BHE seeks to provide customers with easy program entry points, flexible options for saving energy and ongoing support for those who want to pursue deeper energy savings. Table 1-1 shows a list of the BHE programs, Pathways, and sectors served.

Table 1-1: BHE PY2025 Energy Efficiency Portfolio Overview

Program	Pathway	Sector
Residential Solutions	Equipment Rebates	Residential
	Home Energy Savings	Residential
CISP	Custom	Commercial, Industrial
	Prescriptive	Commercial, Industrial
	Direct Install	Commercial, Industrial
Income Qualified Program	N/A	Residential

Table 1-2: BHE PY2025 Energy Efficiency Portfolio Sectors Served

Program	Single Family	Multifamily	Small Business	Large C&I	Municipal	Agricultural
Residential Solutions	✓	✓				
CISP			✓	✓	✓	✓
Income Qualified Program	✓	✓				

1.2 Evaluation Objectives

The goals of the PY2025 EM&V effort are as follows:

- Verify program tracking data and correctly apply the AR TRM v10.0 to calculate savings following AR TRM v10.0 Volume 1 Protocol A and estimate gross and net energy impacts at the pathway, program, and portfolio levels.
- Adjust program-reported gross savings using the results of evaluation research, relying primarily on tracking system and engineering desk reviews, on-site verification, and application of accepted protocols such as IMPMVP for custom measures and achieve a minimum precision of ±10% of the gross realized savings estimate with 90% confidence at the program level.
- In consultation with the IEM, estimate Net-to-Gross (NTG) ratios, which was performed following AR TRM v10.0 Volume 1 Protocol H and provide complete documentation and transparency of all evaluated savings estimates.

- Provide ongoing technical reviews and guidance to implementers and administrators throughout the evaluation cycle and review tracking system data to assess data captured for new measure offerings following AR TRM v10.0 Volume 1 Protocol A.
- Support the calculation of portfolio non-energy benefits (NEB) in accordance with AR TRM v10.0 Volume 1 Protocol L.
- Complete process evaluation activities.
- Update the assessment of success in achieving the goals and objectives established in the Commissions Comprehensiveness Checklist.
- As applicable, conduct EM&V research to support updates for the next version of the AR TRM.

1.3 Impact Findings

Table 1-3 and 1-4 present the gross and net impact by program.

Table 1-3: Gross Impact Summary

Program	Annual Energy Savings (Therms)		Lifetime Energy Savings (Therms)		Gross Realization Rate
	Ex Ante	Ex Post	Ex Ante	Ex Post	
Residential Solutions	616,466	624,600	12,977,604	13,148,839	101.3%
Commercial & Industrial Solutions	846,484	842,528	8,786,829	8,745,764	99.5%
Income Qualified Program	51,191	51,192	1,115,628	1,115,644	100.0%
Total	**1,514,140**	**1,518,319**	**22,880,061**	**23,010,247**	**100.3%**

Table 1-4: Net Impact Summary

Program	Annual Energy Savings (Therms)		Lifetime Energy Savings (Therms)		NTGR	Net Realization Rate
	Ex Ante	Ex Post	Ex Ante	Ex Post		
Residential Solutions	592,601	599,714	12,477,681	12,627,449	96.0%	101.2%
Commercial & Industrial Solutions	831,854	837,897	8,602,678	8,665,169	99.5%	100.7%
Low Income Pilot	51,191	51,192	1,115,628	1,115,644	100.0%	100.0%
Total	**1,475,647**	**1,488,803**	**22,195,987**	**22,408,261**	**98.1%**	**100.9%**

Figure 1-1 and Figure 1-2 summarize the share of savings by measure category for residential and non-residential segments, respectively.

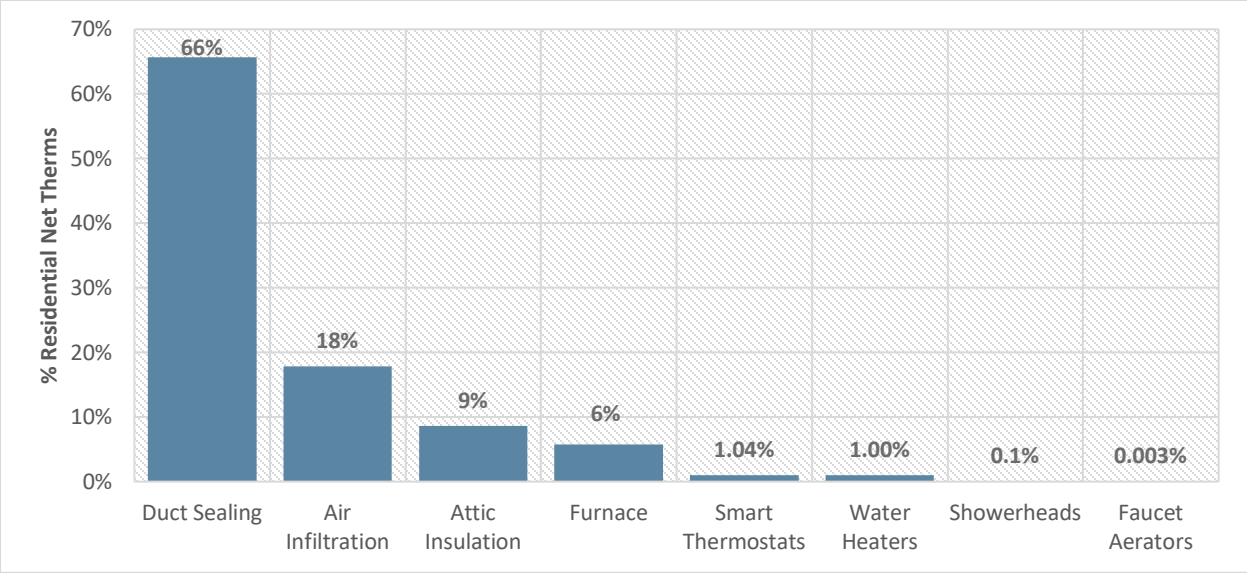


Figure 1-1: Savings Share by Measure – Residential

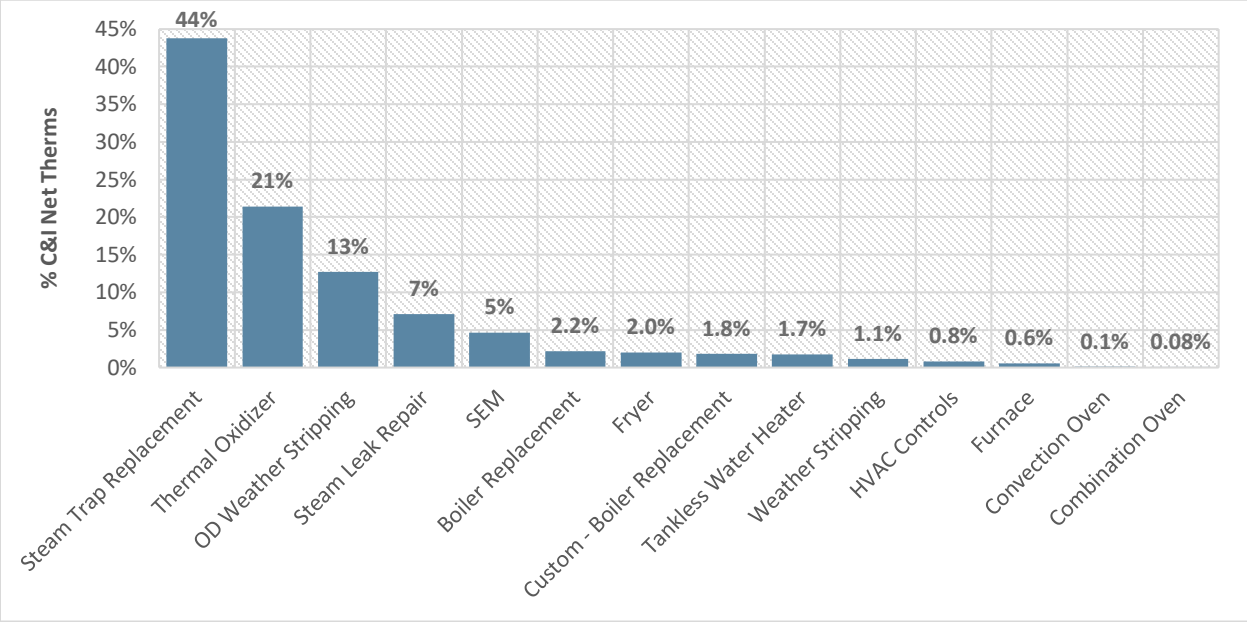


Figure 1-2: Savings Share by Measure – C&I

From this, the Evaluators have identified the following High Impact Measure (HIMs):

- Residential
  - Duct sealing
  - Air sealing
  - Ceiling insulation
  - Furnace replacement
- Non-residential

- Steam Trap Replacement
- Thermal Oxidizer
- Overhead Door Weather Stripping
- Steam Leak Repair
- SEM

Further, the Evaluators put the net savings into the context of BHE's filed PY2025 goal. BHE's filed goal exceeds the requirements established by the APSC. Table 1-5 summarizes the performance against filed goals of programs evaluated in this report.

Table 1-5: BHE PY2025 EE Portfolio Performance against Goals

Program	PY2025 Ex Post Net Therms	PY2025 Net Therms Goal	% Goal Reached
RSP	599,714	620,027	96.7%
CISP	837,897	620,044	135.1%
IQP	51,192	51,718	99.0%
Total	**1,488,803**	**1,291,790**	**115.3%**

The BHE portfolio overall met 115.3% of the filed savings goal. Percent of goal attained, and budget spent by program is summarized in Figure 1-3. This was achieved while spending 95.1% of the program budget, compared to 91.2% in PY2024.

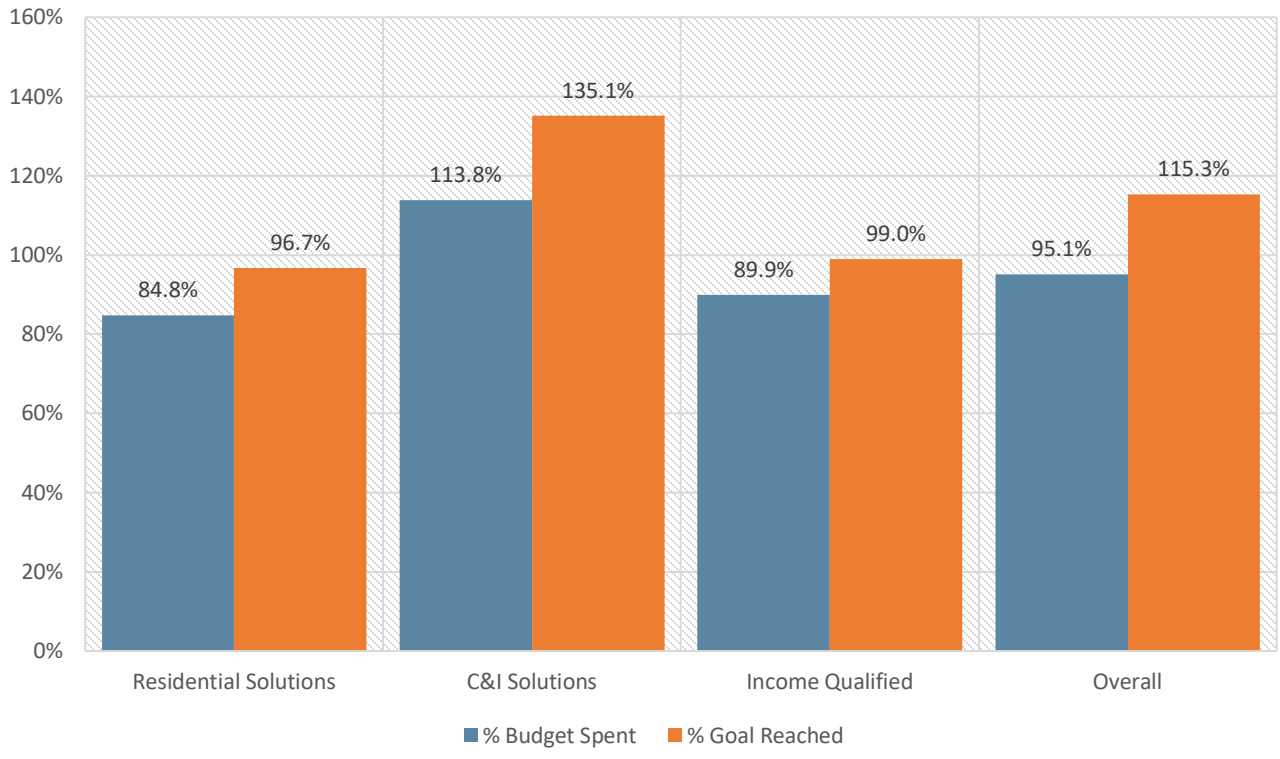


Figure 1-3: Summary of Goal Attainment & Budget Expenditure by Program

The non-energy benefits (NEBs) attained by the BHE portfolio in PY2025 are detailed below.

Table 1-6: BHE PY2025 Ex Post Electric Savings

Program	Measure	Net Annual kWh	Net Peak kW	Lifetime Net kWh
RSP	Smart Thermostats	107,989	0.00	1,187,878
	Air Infiltration	158,462	107.96	3,169,246
	Ceiling Insulation	143,148	117.99	4,294,450
	Duct Sealing	902,580	572.67	18,051,608
IQP	Duct Sealing	11,119	6.88	222,390
	Air Infiltration	2,739	1.94	54,771
	Ceiling Insulation	2,477	2.07	74,307
CISP	Weather Stripping	4,938	4.23	54,314
Total		**1,333,453**	**813.74**	**27,108,965**

Table 1-7: BHE PY2025 Ex Post Water Savings (Gallons)

Program	Measure	Net Annual Water	Net Lifetime Water
RSP	Faucet Aerators	4,058	40,583
	Showerheads	79,941	799,413
CISP	Steam Leak Repair	507,787	5,077,866
IQP	Faucet Aerators	344	3,440
	Showerheads	2,904	29,044
	Total	**595,035**	**5,950,346**

Table 1-8: BHE PY2025 Avoided/Deferred Replacement Cost

Program	Measure	Net ARC/DRC per Unit	Total ARC/DRC
RSP	Res Furnace Early Retirement	$544.84	$89,353
	Res Tankless WH	$249.37	$40,149
CISP	C&I Tankless WH	$125.83	$8,305
Total			**$221,649**

1.4 Program Findings

1.4.1 Residential Solutions

The program nearly met savings goals and was highly cost-effective.	The program met 96.7% of its net savings goal while spending 84.8% allocated.

Realization rates were high across most measured categories.	The overall realization rate was 101.3%. Realization was high for all measure groups.

1.4.2 C&I Solutions

The program met savings goals and was highly cost-effective.	The program met 135.1% of its net savings goal. The program had a 2.02 TRC and is cost-effective.
	Participation increased in the Prescriptive Pathway for this Year. Savings by year from this pathway for the last three years were: • PY2023: 26,444 • PY2024: 30,066 • PY2025: 55,254
NEBs have remained significant.	Water savings decreased significantly compared to PY2024. Savings by year from this pathway for the program cycle were: • PY2023: 1,190,120 • PY2024: 5,062,063 • PY2025: 507,787 This is a volatile value year-over-year as it is heavily driven by the relative prevalence of custom projects that save water.

1.4.3 Income Qualified

The program nearly met savings goals and was highly cost-effective.	The program met 99.0% of its net savings goal while spending 89.9% allocated.

1.5 Report Organization

This report is organized with one chapter providing the full impact and process summary of a specified program. The report is organized as follows:

- Chapter 2 provides general methodologies;
- Chapter 3 provides a summary of portfolio-level issues;
- Chapter 4 provides results for the Residential Solutions Program;
- Chapter 5 provides results for the C&I Solutions Program;

- Chapter 6 provides results for the Income Qualified Program;
- Appendix A provides the site-level custom reports for the CISP;
- Appendix B provides Deferred Replacement Cost Calculations;
- Appendix C presents Program Surveys;
- Appendix D presents Survey-based Net-to-Gross Results;
- Appendix E provides Residential Site Visit Findings; and
- Appendix F summarizes cost-benefit inputs.

2 General Methodology

This section details general impact evaluation methodologies by program-type as well as data collection methods applied. This section will present full descriptions of:

- Gross Savings Estimation;
- Sampling Methodologies;
- Free-Ridership Determination;
- Process Evaluation Methodologies; and
- Data Collection Procedures.

2.1 Glossary of Terminology

As a first step to detailing the evaluation methodologies, the Evaluators provide a glossary of terms to follow[3]:

- *Ex Ante* – Forecasted savings used for program and portfolio planning purposes (from the Latin for "beforehand")
- *Ex Post* – Savings estimates reported by the Evaluators after the energy impact evaluation has been completed (From the Latin for "From something done afterward")
- *Deemed Savings* – An estimate of an energy savings or demand savings outcome (gross savings) for a single unit of an installed energy efficiency measure. This estimate (a) has been developed from data sources and analytical methods that are widely accepted for the measure and purpose and (b) is applicable to the situation being evaluated (e.g., assuming 17.36 Therms savings for a low-flow showerhead)
- *Gross Savings* – The change in energy consumption and/or demand that results directly from program-related actions taken by participants in an efficiency program, regardless of why they participated
- *Gross Realization Rate* – Ratio of Ex Post Savings / Ex Ante Savings (e.g., if Qualus verifies 15 Therms per showerhead, Gross Realization Rate = 15/17.36 = 86%)
- *Free-Rider* – A program participant who *would have* implemented the program measure or practice in the absence of the program. Free riders can be total, partial, or deferred

[3] Arkansas TRM V10.0, Volume 1, Pg. 87-91

- *Spillover* – Reductions in energy consumption and/or demand caused by the presence of the energy efficiency program that exceed the program-related gross savings of the participants. There can be participant and/or non-participant spillover rates depending on the rate at which participants (and non-participants) adopt energy efficiency measures or take other types of efficiency actions on their own (i.e., without an incentive being offered).
- *Net Savings* – The total change in load that is attributable to an energy efficiency program. This change in load may include, implicitly or explicitly, the effects of free drivers, free riders, energy efficiency standards, changes in the level of energy service, and other causes of changes in energy consumption or demand (e.g., if Free-Ridership for low-flow showerheads = 50%, net savings = 15 Therms x 50% = 7.5 Therms).
- *Net-to-Gross-Ratio (NTGR)* = (1 – Free-Ridership % + Spillover %), also defined as Net Savings / Gross Savings
- *Ex Ante Net Savings* = Ex Ante Gross Savings x Ex Ante Free-Ridership Rate
- *Ex Post Net Savings* = Ex Post Gross Savings x Ex Post Free-Ridership Rate
- *Net Realization Rate* = Ex Post Net Savings / Ex Ante Net Savings
- *Effective Useful Life (EUL)* – An estimate of the median number of years that the efficiency measures installed under a program are still in place and operable
- *Gross Lifetime Therms* = Ex Post Gross Savings x EUL

2.2 Overview of Methodology

The proposed methodology for the evaluation of the PY2025 BHE portfolio is intended to provide:

- Net impact results at the 90% confidence and +/-10% precision at the program-level; and
- Program feedback and recommendations via process evaluation

In doing so, this evaluation will provide verified net savings results, provide recommendations for program improvement, and ensure cost-effective use of ratepayer funds.

2.3 Sampling

Sampling is necessary to evaluate savings for the BHE EE portfolio insomuch as verification of a census of program participants is typically cost-prohibitive. As per evaluation requirements set forth by the IEM, samples are drawn in order to ensure 90% confidence at the +/- 10% precision level. Programs are evaluated on one of three bases:

- Census of all participants
- Simple Random Sample
- Stratified Random Sample

2.3.1 Census of Participants

A census of participant data was used for programs where such review is feasible. Programs that received analysis of a census of participants include:

- Commercial & Industrial Solutions – Custom Component

2.3.2 Simple Random Sampling

For programs with relatively homogenous measures (largely in the residential portfolio), Qualus conducted a simple random sample of participants. The sample size for verification surveys is calculated to meet 90% confidence and ±10% precision (90/10). The sample size to meet 90/10 requirements is calculated based on the coefficient of variation (CV) of savings for program participants. CV is defined as:

$$CV(x) = \frac{Standard\ Deviation\ (x)}{Mean(x)}$$

Where x is the average Therms savings per participant. Without data to use as a basis for a higher value, it is typical to apply a CV of 0.5 in residential program evaluations. The resulting sample size is estimated at:

$$n_0 = \left(\frac{1.645 * CV}{RP}\right)^2$$

Where,

1.645 = Z score for 90% confidence interval in a normal distribution

CV = Coefficient of Variation

RP = Required Precision, 10% in this evaluation

With 10% required precision (RP), this calls for a sample of 68 for programs with a sufficiently large population. However, in some instances, programs did not have sufficient participation to make a sample of this size cost-effective. In instances of low participation, Qualus then applied a finite population correction factor, defined as:

$$n = \frac{n_0}{1 + {}^{n_0}/_{N}}$$

Where

n_0 = Sample Required for Large Population

N = Size of Population
n = Corrected Sample

For example, if a program were to have only 100 participants, the finite population correction would result in a final required sample size of 41. The Evaluators applied finite population correction factors in instances of low participation in determining samples required for surveying or onsite verification.

Programs subject to Simple Random Sampling included pathways of the Residential Solutions Program.

2.3.3 Stratified Random Sampling

For the BHE Commercial & Industrial Solutions program, Simple Random Sampling is not an effective sampling methodology as the CV values observed in business programs are typically very high because the distributions of savings are generally positively skewed. Often, a relatively small number of projects account for a high percentage of the estimated savings for the program.

To address this situation, we use a sample design for selecting projects for the M&V sample that takes such skewness into account. With this approach, we select a number of sites with large savings for the sample with certainty and take a random sample of the remaining sites. To further improve the precision, non-certainty sites are selected for the sample through systematic random sampling. That is, a random sample of sites remaining after the certainty sites have been selected is selected by ordering them according to the magnitude of their savings and using systematic random sampling. Sampling systematically from a list that is ordered according to the magnitude of savings ensures that any sample selected will have some units with high savings, some with moderate savings, and some with low savings. Samples cannot result in concentrations of sites with atypically high savings or atypically low savings. Programs that were evaluated using stratified random sampling include:

- Commercial & Industrial Solutions – Direct Install (DI).

2.4 Free-Ridership

In determining ex post net savings for the BHE EE portfolio, the Evaluators provide estimates of free ridership for individual programs. Free riders are program participants that would have implemented the same energy efficiency measures at nearly the same time absent the program. As per TRM V10.0 guidelines, free riders are defined as:

> "…program participants who received an incentive but would have installed the same efficiency measure on their own had the program not been offered. This includes partial free-riders, defined as customers who, at some point, would have installed the measure anyway, but the program persuaded them to install it *sooner* or customers who would have installed the measure anyway,

> but the program persuaded them to install more efficient equipment and/or more equipment. For the purposes of EM&V activities, participants who would have installed the equipment within one year will be considered full free-riders; whereas participants who would have installed the equipment later than one year will not be considered to be free-riders (thus no partial free-riders will be allowed)."[4]

Given this definition, participants are defined as free riders through a binary scoring mechanism, in being either 0% or 100% free riders. Models of free ridership utilized in these EM&V efforts were aimed at providing a probability of free ridership; this probability value was then rounded to a whole-number free ridership value.

2.4.1 Residential Free-Ridership

The Evaluators determine free ridership by measure type and installation type for BHE programs. Free-ridership study groups are delineated by technology, delivery mechanisms and target market. The taxonomy of residential free-ridership designations is summarized in Figure 2-1. Blocks marked in light blue indicate a final free-ridership category.

[4] Arkansas TRM V10.0, Pg. 49.

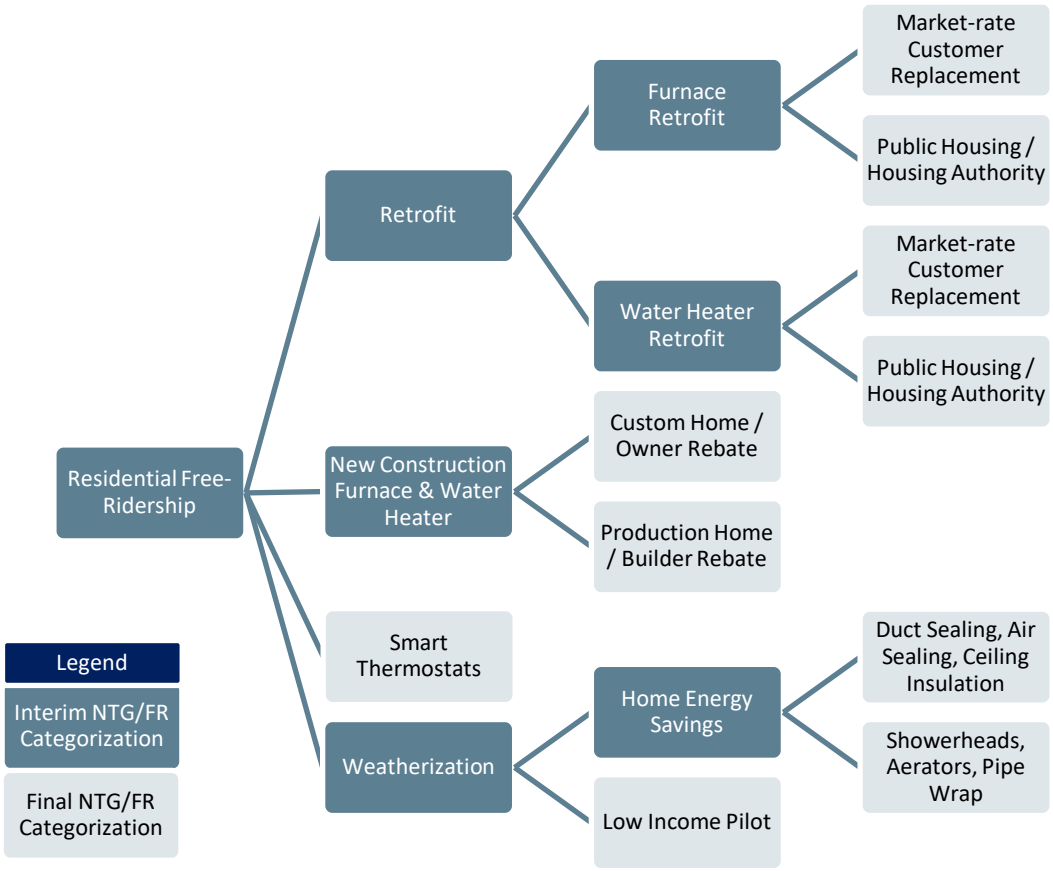


Figure 2-1: Residential Free-ridership Designations

Certain measures were selected to have NTG evaluated by different market segments, as these segments can demonstrate markedly different decision-making processes and cost sensitivities. For example, installation of a high efficiency furnace or tankless water heater is a simpler process in new construction than in retrofit, and the decision is often made by a home builder rather than a homeowner. In instances such as this, the Evaluators segmented participation into key subgroups to better-differentiate the impact of BHE program interventions on various customer segments' decision-making.

The general methodology for evaluating free ridership among residential participants involved examination of four factors:

(1) Demonstrated financial ability to purchase high-efficiency equipment absent the rebate

(2) Importance of the rebate in the decision-making process

(3) Prior planning to purchase high-efficiency equipment

(4) Demonstrated behavior in purchasing similar equipment absent a rebate

In this methodology, Part (1) is essentially a gateway value, in that if a participant does not have the financial ability to purchase energy efficient equipment absent a rebate, the other components of free ridership become moot. As such, if they could not have afforded the high-efficiency equipment absent the rebate, free ridership is scored at 0%. If they did have the financial capability, the Evaluators then examine the other three components. The respondent is determined to be a free rider based upon a preponderance of evidence of these three factors; that is, if the respondent's answers indicate free ridership in two or more of these three components, they are considered free riders. Specific questions and modifications to this general methodology are presented in the appropriate program chapters.

For residential programs, free ridership is calculated as the average score determined for the sample of participants surveyed. For programs that are contractor-driven, the free rider score of a survey respondent incorporates the relative importance of advice from their contractor, provided that the contractor is a program trade ally that received training from the appropriate program. This value is then applied to the program-level savings to discount savings attributable to free ridership.

2.4.2 Prescriptive Non-Residential Free-Ridership

The general methodology for evaluating free ridership among prescriptive program participants involved examination of four factors:

(1) Demonstrated financial ability to purchase high-efficiency equipment in the absence of the rebate

(2) Importance of the rebate in the decision-making process

(3) Prior planning to purchase high-efficiency equipment

(4) Importance of the contractor in influencing the decision-making process[5]

In this methodology, Part (1) is essentially a gateway value, in that if a participant does not have the financial ability to purchase energy efficient equipment absent a rebate, the other components of free ridership become moot. As such, if they could not have afforded the high-efficiency equipment absent the rebate, free ridership is scored at 0%. If they did have the financial capability, the Evaluators then examine the other three components. The respondent is determined to be a free rider based upon a preponderance of evidence of these three factors; that is, if the respondent's answers indicate free ridership in two or more of these three

[5] Contractor recommendations were considered to be program-inducement in instances where findings from vendor interviews showed that the program changed the mix of products sold by the vendor and that the vendor responsible for the customers' installation was a program trade ally.

components, they are considered free riders. Specific questions and modifications to this general methodology are presented in the appropriate program chapters.

For non-residential programs, free ridership is calculated as the average score determined for the sample of participants surveyed. This value is then applied to the program-level savings to discount savings attributable to free ridership.

2.4.3 Custom Free-Ridership

For custom projects from the CISP, free ridership is assessed on a case-study basis, through which the Evaluators conduct an in-depth interview that includes a battery of questions addressing:

- The timing of learning of the program relative to the timing of the planning of the retrofit;
- The impact the program incentive has on measure payback relative to the stated payback requirements by the respondent;
- Whether the respondent learned of the energy efficiency measure from a program-funded audit; and
- Whether any influence the program had in modifying the project affected savings by greater than 50%.

2.5 Impact Evaluation Activities by Program

The Evaluators used established, industry-standard approaches to estimate energy savings at the measure, program, and portfolio levels. We followed all applicable measure- and program-level guidelines and protocols from the AR TRM V10.0.

To evaluate program impacts, the Evaluators adjusted program-reported gross savings using the results of our research, relying primarily on engineering desk reviews, TRM deemed savings calculation, and onsite verification and metering for applicable programs. To calculate deemed savings, we verified the appropriateness of savings algorithms and values in program tracking data as compared to guidelines in the TRM V10.0. Where sampling was used (for surveys and site visits), we designed a sampling plan to achieve a minimum precision of ±10% of the gross realized savings estimate with 90% confidence at the program-level.

Impact evaluation activities by program are summarized in Table 2-1.

Table 2-1: PY2025 Impact Evaluation Activities by Program

Program	Residential Solutions	CISP	Income Qualified Program
Database & Document Review	✓	✓	✓
Engineering Desk Review		✓	
TRM Deemed Savings Review	✓	✓	✓
On-site Verification / Metering	✓		
Simulation Modeling		✓	
Billing Analysis		✓	

2.5.1 Net-to-Gross Approach by Program

For the PY2025 evaluation, the evaluation team conducted data collection and analysis to support NTG calculations. Table 2-2: shows the NTG approach the Evaluators followed for each program based on our assessment of specific program needs and the availability of accurate, existing information. These data collection and analysis activities are in compliance with one of the five accepted approaches listed in the TRM V10.0, Protocol F.

Table 2-2: PY2025 NTG Approaches by Program

Program	Assigned PY2022 Value	Assigned PY2023 Value	Literature Review	PY2025 Value from survey
Residential Solutions				
▪ Residential furnace retrofit		✓		
▪ Residential DHW retrofit		✓		
▪ Residential smart thermostats		✓		
▪ Housing authority furnace & DHW	✓			
▪ New construction – builders	✓			
▪ New construction – homeowner / custom		✓		
▪ Commercial furnace & DHW		✓		
▪ Home Energy Savings		✓		
CISP				
▪ Direct install				✓
▪ Custom		✓		
▪ Prescriptive boilers				✓
▪ Prescriptive food service				✓
Income Qualified Program			✓	

2.6 Process Evaluation

The Evaluators' general approach to process evaluation begins with a review of the tests for timing and appropriateness of process evaluation as defined in Protocol C of the TRM V10.0. In this review, the Evaluators determine what aspects of the program warrant a process evaluation.

The PY2025 process overviews began with interviews of program staff. These interviews, along with guidance from IEM protocols, inform the establishment of goals for the process evaluation, provide background history of programs, and give an introduction to portfolio-level

issues. From these interviews, the Evaluators then develop a list of data collection activities. The data collection procedures for process evaluations included:

- *Participant Surveying*. The Evaluator administered surveys to participants in the natural gas utility prescriptive and direct install programs in November 2025 and January and February or 2026. Survey data were collected through web and phone surveys.
    - Web survey: Respondents with available emails were sent an invitation to the survey. Non-respondents were sent up to two reminder emails.
    - Phone survey: Some program participants did not have email addresses available in the program tracking data and were contacted by telephone. In addition, the Evaluator attempted to administer the survey by telephone to participants who received prescriptive incentives and did not respond to the email invitation.
- *In-Depth Interviews*. The Evaluators conducted in-depth interviews with high-level program actors, including BHE program staff, and third-party implementation staff. These interviews are semi-structured, in having general topics to be covered, without fully prescribed question and answer frameworks.

3 Portfolio-Level Summary

This chapter provides a summary of the portfolio-level findings and any cross-cutting evaluation activities that occurred over the course of the PY2024 EM&V effort. Specifically, this chapter includes:

- A summary of program and portfolio performance in PY2025;
- A summary of EM&V activities and expenditures in PY2025; and
- High-level findings that cut across programs.

3.1 Summary of EM&V Effort

Table 3-1 summarizes the data collection efforts for the PY2025 EM&V effort. "Interviews" should be distinguished from "Surveys" in that "Interviews" reflect semi-structured, in-depth discussions with high-level program actors (such as utility staff and third-party implementation staff) whereas surveys are fully structured and typically conducted with program participants.

Table 3-1: Summary of Data Collection Efforts

Program	# Site Visits	# Surveys	# Staff Interviews	# Trade Ally Interviews
Residential Solutions	32	0	2	0
CISP	0	15	2	0
Income Qualified Program	16	0	2	0
Total	48	15	2*	0

*Staff were interviewed for all programs.

3.2 Comprehensiveness Checklist

This section outlines how the BHEA portfolio performed against the seven factors approved by the APSC with Order No. 17 in Docket No. 08-144-U on December 10, 2010.

The Evaluator reviewed the BHEA programs and portfolio to assess whether it followed the APSC Comprehensiveness Goals. In assessing these metrics, the Evaluator scored them on various subcomponents.

The scoring methodology is as follows:

●: Meets all requirements and is in full compliance with this performance indicator

◐: Meets some requirements and is in partial compliance with this performance indicator

○: Is not in compliance with this performance indicator.

NA: Performance indicator is not applicable to this program.

3.2.1 Factor 1: Education, Training, Marketing, and Outreach

3.2.1.1 Assessment of Education

The Evaluator reviewed education, training, and marketing/outreach activities across Residential Solutions, Commercial & Industrial Solutions, and Income Qualified programs.

Education and outreach activities are jointly coordinated by the utility and the implementer. CLEAResult develops customer-facing materials—including social media content, flyers, case studies, and updates to program webpages—and Black Hills reviews and approves these materials before release.

Customer education and outreach activities are integrated into program delivery and occur across all Black Hills Energy programs. For Residential Solutions and the Income Qualified program, trade allies provide program folders and DOE informational materials during in-home assessments, and customers who participate in equipment rebates receive follow-up communications describing additional program pathways. The Income Qualified program also receives targeted outreach through the utility's customer assistance team, which works directly with LIHEAP-eligible customers as part of their broader support services. For the Commercial and Industrial Solutions program, customer education occurs primarily through account managers, business development staff, and public relations personnel who share program materials during site visits, meetings with contractors and developers, and community or chamber events.

Training requirements differ across programs. The Residential Solutions and Income Qualified offerings require Building Performance Institute (BPI) certification for crew leads. CLEAResult provides classroom and field-based BPI training and conducts annual program trainings to review procedures and quality-control findings. The C&I Solutions program does not require formal certification, but the implementer staff work directly with contractors and facility personnel to review program documentation requirements and project processes.

Marketing activities are coordinated between the implementer and the utility and focus on attracting customers to participate in the programs. CLEAResult develops marketing materials—including social media graphics, flyers, case studies, and program webpage content—which are reviewed and approved by Black Hills staff and the communications team. Staff described the approval process as quick, allowing new materials to be deployed efficiently. Social media campaigns for residential offerings are newly developed and in the process of being launched, and email outreach is used to promote participation. The Income Qualified program also benefits from additional visibility through LIHEAP-related activities conducted by Black Hills' customer assistance team. For the Commercial and Industrial program, marketing relies primarily on in-person engagement by account managers and participation in community events.

The scoring for customer education is in Table 3-2.

Table 3-2: Assessment of Customer Education by Program

Program	*Provides Educational Materials*	*Outreach Through Multiple Channels*	*Education Targeted to Specific Market Barriers*	*Coordination of Education by Multiple Entities*
Residential Solutions	●	●	●	●
CISP	●	●	●	●
Income Qualified Program	●	●	●	●

● Educational materials broadly provided
◐ Program budgeting includes educational materials, but materials not broadly provided
○ Educational materials not offered

3.2.1.2 Assessment of Training

The Evaluator assessed whether programs are contractor-driven, provide training, and require certification.

- Residential Solutions: Contractor-driven for Home Energy Savings, requiring BPI certification for crew leads. Training includes virtual classroom sessions, local field training, and annual protocol reviews. Equipment Rebates contractors are licensed professionals; no certification required, but annual updates and informal outreach are provided.
- Commercial & Industrial Solutions: Engages contractors for prescriptive and custom projects. No formal certification required, but training on program processes (documentation, protocols, data system) is provided through onboarding and ongoing engagement.
- Income Qualified: Mirrors Home Energy Savings pathway with BPI certification and the same training structure.

Table 3-3: Assessment of Contractor Training by Program

Program	*Contractor Training Offered*	*Training Requirements Adhere to Best Practices*	*Trade Allies Participate in Training*
Residential Solutions	●	●	●
CISP	●	●	●
Income Qualified Program	●	●	●

● Category fulfilled in most instances (deviations are an exception)
◐ Category fulfilled in some instances (deviations occur regularly)
○Category not offered not offered/not fulfilled at all

3.2.1.3 Marketing & Outreach

The Evaluator reviewed marketing strategies to assess whether they address participant barriers, leverage trade allies, and promote comprehensive energy efficiency.

- Residential Solutions: Marketing for Residential Solutions uses multiple channels, including new social media content under development, email outreach, and program information provided on

the utility's website. Trade allies also promote the program through their own customer interactions and social media advertising, using materials developed by CLEAResult. Staff noted that residential programs benefit indirectly from marketing conducted by SWEPCO in overlapping territories, although no formal joint campaigns were described.

- Commercial & Industrial Solutions: Marketing for the Commercial and Industrial Solutions program is centered on in-person outreach. Account managers, business development staff, and public relations staff promote program offerings during site visits, contractor meetings, and community events. The transcripts did not describe digital marketing specific to C&I offerings. Coordination with SWEPCO occurs primarily within the Strategic Energy Management offering, where both utilities engage shared customers, but no general joint marketing campaigns for prescriptive or custom projects were identified.
- Income Qualified: Outreach for the Income Qualified program is conducted through Black Hills' customer assistance team, which works directly with LIHEAP-eligible households during the assistance application process. This outreach is supplemented by trade ally engagement and the use of CLEAResult-developed program materials. No additional marketing channels unique to the Income Qualified program were described in the transcripts.

Table 3-4: Assessment of Marketing & Outreach by Program

Program	Marketing Approach	Assessment
Residential Solutions	Multi-channel: social media, email campaigns, website, trade ally outreach	Appropriate: Addresses cost and awareness barriers; leverages trade allies
Commercial and Industrial Solutions	Digital and in-person: social media, email, account manager outreach, outreach by program staff and engagement with community and business groups	Appropriate: Combines digital reach with relationship-based engagement
Income Qualified	Targeted outreach via customer assistance team and trade allies	Appropriate: Focused on reaching LIHEAP-eligible customers through direct engagement

3.2.2 Factor 2: Budgetary, Management, and Program Delivery Resources

Whether the program and/or portfolio have adequate budgetary, management, and program delivery resources to plan, design, implement, oversee, and evaluate energy efficiency programs.

To evaluate budget and resource sufficiency, the Evaluator assessed performance indicators associated with the adequacy of budget allocations, the cost per therm saved and whether program staff and contractor support was sufficient to support program goals.

Program staffing for Residential Solutions, Commercial & Industrial Solutions, and Income Qualified programs is structured to ensure effective management and timely delivery of resources. Each program is implemented by CLEAResult under the oversight of Black Hills Energy Arkansas (BHEA).

The implementer manages day-to-day operations, including marketing, contractor engagement, and quality control, while BHEA provides oversight, approves marketing materials, and ensures alignment with corporate standards.

Program staff from both organizations maintain close coordination throughout the program cycle. This includes joint efforts on marketing campaigns, contractor training, and quality assurance activities. For example, BHEA and CLEAResult collaborate on outreach strategies, review marketing content, and jointly conduct annual training sessions for trade allies.

Staffing resources support timely processing of rebate applications, contractor payments, and quality control inspections. The implementer provides technical support for contractors through training and documentation guidance, while utility staff assist with customer engagement for targeted programs such as Income Qualified.

The Evaluator found that BHEA has achieved Factor 2 objectives.

Table 3-5: Assessment of Budgetary, Management, and Program Delivery Resources by Program

Program	*Budget is Sufficient to Support Program Goals*	*Cost per-Therm Aligns with Program Plan*	*Program Has Sufficient Staffing*	*Program Has Sufficient Trade Ally Support*
Residential Solutions	●	●	●	●
CISP	●	●	●	●
Income Qualified Program	●	●	●	●

● Quantitative: meets of expectation/requirement
Qualitative: Category fulfilled in most instances (deviations are an exception)

◐ Quantitative: value no lower than 90% of expectation/requirement
Qualitative: Category fulfilled in some instances (deviations occur regularly)

○ Quantitative: value is lower than 90% of expectation/requirement
Qualitative: Category not offered not offered/not fulfilled at all

Aggregated across all programs, actual cost per therm is significantly lower than planned. As demonstrated in Figure 3-1, in PY2025 the BHE portfolio had an acquisition cost of $2.71 per net therm, lower than the program plan value of $3.29. At the individual program level, the CISP outperformed relative to its planned acquisition cost, with acquisition costs at 84% of the program plan value.

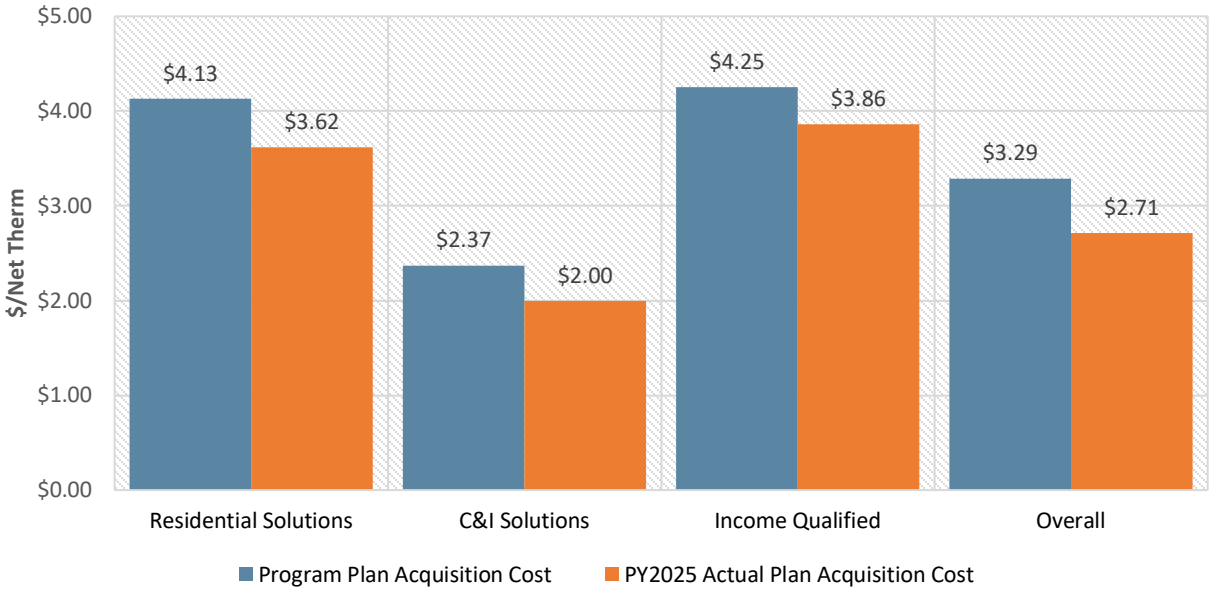


Figure 3-1: Comparison of Program Plan vs. Actual Acquisition Costs

Overall, the BHE portfolio had acquisition costs that were 18% lower than PY2025 plan values.

3.2.3 Factor 3: Addressing Major End-Uses

Residential Solutions delivers a comprehensive approach through two pathways. The Equipment Rebates pathway targets end-uses such as space heating and water heating by offering incentives for high-efficiency furnaces, tankless water heaters, and smart thermostats. The Home Energy Savings pathway, BHEA's implementation of the CWA, focuses on building envelope improvements and HVAC performance through air sealing, duct sealing, and ceiling insulation, along with direct-install measures like faucet aerators and low-flow showerheads. Together, these measures enable customers to combine equipment upgrades with whole-home improvements for deeper energy savings.

Commercial & Industrial Solutions addresses natural gas efficiency through prescriptive, custom, and direct-install pathways. Prescriptive rebates cover common end-uses, including boilers, furnaces, water heaters, and commercial cooking equipment such as combi ovens and fryers. For facilities with complex systems, the Custom pathway provides site-specific solutions for process heating, steam systems, and other specialized applications. Direct-install offerings, such as faucet aerators and pre-rinse spray valves, further reduce water heating loads at no cost to participants.

The Income Qualified program mirrors the Home Energy Savings approach, delivering weatherization measures like air sealing, duct sealing, and insulation, along with direct-install items at no cost to participants.

The following bullets summarize how energy use is distributed across major end uses in the commercial and residential sectors.

- Commercial sector: Energy use is primarily driven by industrial process loads (71.5%), with secondary contributions from the building envelope (13.7%) and water heating (6.5%); all other end uses are relatively minor, each below 5%.
- Residential sector: Energy use is concentrated in HVAC (72.0%) and envelope-related loads (26.7%), with water heating representing a small share (1.2%) and appliances effectively negligible (0.0%).

The Evaluators identified the end-uses served by each of the BHE programs. Most BHE programs are designed around a specific technology or end-use. Table 3-6 summarizes the end-uses addressed by each program.

Table 3-6: End-Uses Addressed by Program

Program	*HVAC*	*Hot Water*	*Appliances*	*Food Service*	*Building Envelope*	*Industrial Process*	*Behavioral*
Residential Solutions	●	●	○	NA	●	NA	○
CISP	●	●	●	●	●	●	●
Income Qualified	●	●	○	NA	●	NA	○

● Measure targeted ◐ Measure offered ○ Measure not offered

Presently, the BHE portfolio covers most end-uses. The Evaluators found that sectors where the program offerings were not providing sufficient outreach and market transformation included:

- **Behavioral savings.** BHE cancelled their Home Energy Reports program to allow for the development of the Home Energy Savings weatherization program. This has had the tradeoff of filling residential building envelope but leaving a gap in behavioral savings. Given the program budget allotment, the Evaluators concluded that BHE was correct in prioritizing weatherization over behavioral savings.
- **Residential appliances.** The TRM V10.0 includes deemed savings for residential appliances, including dishwashers and clothes washers. These are not presently offered in any BHE programs. However, given the low unit energy savings of these measures, any offering for this end-use would need to be an upstream, multi-utility effort to be cost-effective.

Table 3-7 summarizes the percent of projects that are single- versus multiple-measure installations by program.

Table 3-7: Installation of Multiple Measures

Program	% Single-Measure	% Multi-Measure
Residential Solutions	41%	59%
CISP	33%	67%
Income Qualified	43%	57%

3.2.4 Factor 4: Comprehensively Addressing Customer Needs

To assess Factor 4, the Evaluator reviewed the extent to which BHEA programs provide technical assistance, offer incentives for comprehensive projects or measure bundles, and include tiered incentives for higher efficiency levels.

Across the portfolio, customers can choose the level of participation that fits their needs and budget. Programs do not require installation of multiple measures, but they encourage deeper savings through bundled offerings and cross-promotion. The findings are:

- Technical Assistance: The Home Energy Savings pathway and Income Qualified Program provide on-site energy assessments and recommendations for efficiency improvements. These assessments are delivered by BPI-certified trade allies and include blower door testing, diagnostic checks, and tailored upgrade recommendations. C&I Solutions offers technical support for prescriptive and custom projects through program staff and contractors, including guidance on documentation and installation protocols.
- Comprehensive Measures: Residential Solutions combines equipment rebates with whole-home weatherization measures such as air sealing, duct sealing, and insulation. Income Qualified mirrors this approach, adding health and safety measures for eligible customers. C&I Solutions supports comprehensive projects through its Custom pathway, which incentivizes large-scale process improvements and system optimization.
- Tiered Incentives: Residential Solutions offers prescriptive incentives for high-efficiency equipment, including furnaces (≥95% AFUE), tankless water heaters (UEF ≥0.90), and smart thermostats. Incentives are provided for meeting these premium efficiency thresholds, but the program does not include multiple tiers. C&I Solutions provides incentives based on verified therm savings for custom projects, meaning higher savings result in higher payouts by design.
- Bundled Incentives and Contractor Engagement: Residential Solutions and Income Qualified programs bundle direct-install measures with weatherization upgrades at no cost to customers. Contractor incentives are provided for completing paperwork under the Equipment Rebates pathway and for achieving performance targets in Home Energy Savings. C&I Solutions does allow a customer to use “bonus” incentives from one measure and apply them to another measure if they are completed at the same time.
- Cross-Promotion and Follow-Up: Residential Solutions uses follow-up communications to promote additional pathways, such as informing equipment rebate participants about weatherization options. Marketing materials across programs aim to raise awareness of complementary offerings.

Table 3-8 summarizes the comprehensiveness of offerings for each program.

Table 3-8: Assessment of Project Comprehensiveness by Program

Program	*Technical Assistance and/or Audits*	*Information Provided for Comprehensive Efficiency*	*Bundled Incentives for Multiple Measures*	*Tiered Incentives for Premium Efficiency*	*Trade Ally Incentives for Premium Efficiency*
Residential Solutions	●	●	●	○	●
CISP	●	●	●	●	○
Income Qualified	●	●	●	○	●

● Broadly provided ◐ Available ○ Not offered

3.2.5 Factor 5: Targeting Market Sectors & Leveraging Opportunities

The Evaluators reviewed whether the BHE portfolio offered a comprehensive range of energy efficiency opportunities to all major customer sectors. Table 3-9 summarizes the market sectors and what programs target or allow each sector.

Table 3-9: Assessment of Targeted Customer Sectors by Program

Program	Residential	Multifamily	Mobile Home	Small Commercial	Large Commercial	Industrial	Agricultural	Public Sector
Residential Solutions	●	●	●	○	○	○	○	○
CISP	○	○	○	●	●	●	◐	●
Income Qualified	●	●	●	○	○	○	○	○

● Program targets this sector
◐ Sector is eligible for this program
○ Sector is ineligible for this program

The Evaluator reviewed whether the BHEA portfolio offers a comprehensive range of energy efficiency opportunities to major customer sectors. Residential Solutions, Commercial & Industrial Solutions, and Income Qualified programs collectively provide coverage for residential, multifamily, mobile homes, and commercial customers, with targeted pathways for specific needs.

- Residential Solutions primarily serves single-family homes but also applies to multifamily and mobile homes, subject to eligibility and landlord approval. The program offers equipment rebates for high-efficiency furnaces, tankless water heaters, and smart thermostats, as well as whole-home weatherization measures through the Home Energy Savings pathway.
- Commercial & Industrial Solutions targets small and large commercial facilities and industrial customers through prescriptive and custom pathways. Prescriptive rebates cover common equipment such as boilers, furnaces, water heaters, and food service appliances, while custom

projects address complex systems like steam processes and waste heat recovery. Direct-install measures provide low-cost savings opportunities for businesses.

- Income Qualified mirrors the Home Energy Savings approach for low-income households, including multifamily and mobile homes. It provides no-cost weatherization measures and health and safety upgrades for LIHEAP-eligible customers.

While the portfolio addresses most major sectors, agricultural facilities are not specifically targeted, and public sector participation occurs primarily through C&I Solutions rather than dedicated offerings.

BHEA leverages partnerships to expand program reach and reduce costs. Joint marketing efforts with a neighboring electric utility enhance outreach for residential and C&I programs, creating opportunities for customers to participate in both electric and gas efficiency offerings. The implementer, CLEAResult, delivers consistent program design and training across multiple pathways, supporting alignment and cost efficiency. Trade allies and industry partners also play a role in promoting programs through their networks and events.

3.2.6 Factor 6: Cost-Effectiveness of Energy Efficiency

Whether the programs and/or portfolio enable the delivery of all achievable, cost-effective energy efficiency within a reasonable period and maximize net benefits to customers and the utility system.

To evaluate Factor 6, the Evaluator assessed three key performance indicators: 1) whether programs achieved their Plan goals, 2) NTG values and 3) program cost-effectiveness.

A summary of Factor 6 findings is provided in Table 3-10.

Table 3-10: Assessment of Cost-Effectiveness

Program	*NTGR*	*NTGR Within Industry Norms*	*Met Net Savings Goal*	*Program TRC*
Residential Solutions	96.0%	Yes	No	2.39
CISP	99.5%	Yes	Yes	2.02
Income Qualified	100.0%	Yes	No	2.02

All programs and the portfolio overall had a TRC benefit-cost ratio of 1.0 or greater in PY2025. Portfolio overall met Net Savings Goal.

3.2.7 Factor 7: Adequacy of EM&V Procedures

The Evaluators conducted a review of EM&V procedures by program as implemented by several parties:

- Quality assurance and quality control (QA/QC) and EM&V procedures by BHE program staff;
- QA/QC and EM&V procedures by third-party implementation staff (where applicable)

- QA/QC and EM&V procedures by the Evaluators.

The EM&V of the BHE programs incorporated industry's best practices and was conducted in an iterative process that incorporated feedback from BHE and implementation contractors as well as the IEM.

Further, the Evaluators found that BHE has QA/QC procedures that align with industry best-practices, including randomized post-inspection to their programs and targeting of new trade allies for early feedback.

Finally, the Evaluators reviewed the quality of program tracking data in order to assess whether the data allowed for complete evaluation. Further, the Evaluators reviewed the extent to which individual savings calculations were performed using facility-specific inputs into the TRM V10.0 algorithms versus the use of simplifying assumptions[6]. The results of the review are summarized in Table 3-11.

Table 3-11: Assessment of Data & QA/QC Procedures by Program

Program	*Tracking Contains Necessary Fields*	*Savings Calculations Performed and Reported*	*Savings Calculations Based on Facility Data*	*QA/QC Inspections by Program Staff*
Residential Solutions	●	●	●	●
CISP	●	●	●	●
Income Qualified	●	●	●	●

● Process fully developed ◐ Process partially developed ○ No process in place

Findings of this review included:

- QA/QC inspections are in place for all programs.
- CLEAResult conducts inspections of an adequate percent of projects annually and align with industry best practices.

3.3 Cost-Effectiveness Results

Table 3-12 summarizes the cost-effectiveness results by program. Tests performed include:

- **Total Resource Cost (TRC):** Evaluating benefits and costs simultaneously from the perspective of BHE and program participants.
- **Utility Cost Test (UCT):** Evaluating benefits and costs from the perspective of BHE.

[6] Examples of this could include assuming average facility square footage for commercial water heating and using that as an input to the savings calculation, as opposed to collecting facility-specific square footage.

- **Ratepayer Impact Measure (RIM):** Evaluating benefits and costs from the perspective of all BHE customers (including participants and non-participants).
- **Participant Cost Test (PCT):** Evaluation benefits and costs from the perspective of program participants.

Table 3-12: Cost-Effectiveness Summary

Program	TRC	UCT	PCT	RIM	TRC Net Benefits
Residential Solutions	2.39	1.96	4.94	0.44	$3,500,142
CISP	2.02	2.12	8.76	0.48	$1,709,256
Income Qualified	2.02	1.92	6.15	0.43	$202,113
EEA	0.00	0.00	0.00	0.00	$0
Regulatory	0.00	0.00	0.00	0.00	($27,244)
Total	**2.22**	**2.01**	**6.00**	**0.45**	**$5,384,267**

3.3.1 NEBs Summary

NEBs claimed by-program are as follows:

- **RSP:** avoided replacement costs, deferred replacement costs, kWh, kW, and water;
- **CISP:** avoided replacement costs, kWh, kW, and water; and
- **IQP:** kWh and kW.

Table 3-13: Residential NEBs

Measure	Water	kWh / kW	Avoided Replacement Cost	Deferred Replacement Cost	AR TRM V10.0 Section
Furnace (early retirement only)				✓	2.1.3
Duct sealing		✓			2.1.11
Smart thermostats		✓			2.1.12
Ceiling insulation		✓			2.2.2
Air infiltration		✓			2.2.9
Tankless water heater			✓		2.3.1
Faucet aerators	✓				2.3.4
Low-flow showerheads	✓				2.3.5

Table 3-14: Commercial & Industrial NEBs

Measure	Water	kWh / kW	Avoided Replacement Cost	Deferred Replacement Cost	AR TRM V10.0 Section
Weather stripping		✓			3.2.10
Tankless water heater			✓		3.3.1
Aerator	✓				3.3.2
Steam leak repair	✓				N/A - Custom
Condensate Return	✓				N/A - Custom

NEBs were a significant contributor to program benefits in PY2025, accounting for 17% of total TRC benefits across the portfolio. Figure 3-2 summarizes the percent of total TRC benefits derived from NEBs.

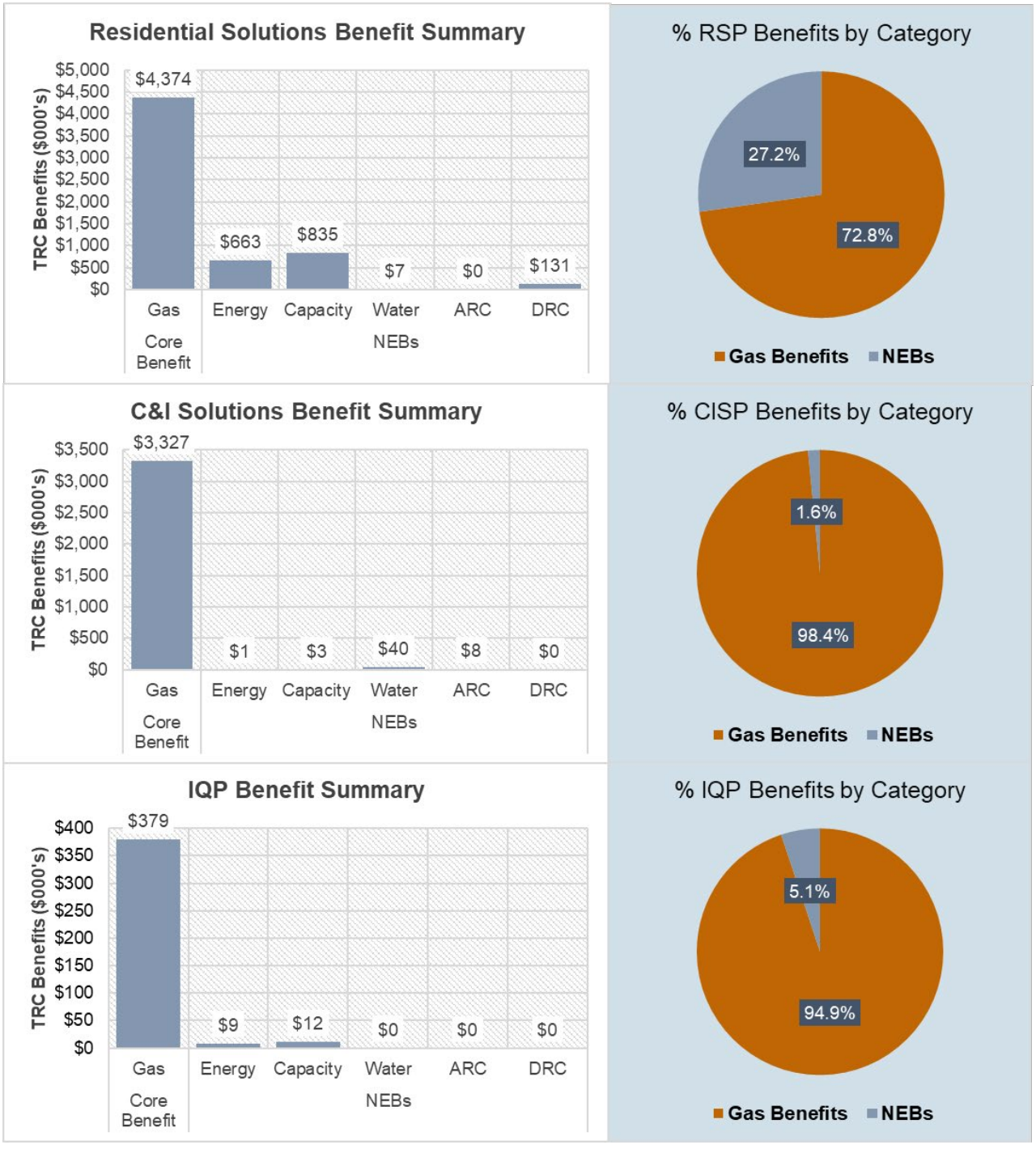


Figure 3-2: Benefit Summary by Program

4 Residential Solutions

The Residential Solutions Program is comprised of two separate pathways: the Equipment Rebate Pathway (ERP) and the Home Energy Savings Pathway (HESP).

The Equipment Rebate Pathway provides incentives to residential customers for high-efficiency space heating, water heating equipment and smart thermostats. Further, a $50 trade ally incentive is provided for all qualifying furnace and water heating equipment.

Eligible measures for this pathway include:

- $400 for furnaces with 95% or higher AFUE;
- $300 for tankless water heaters with an EF of 0.90 or greater; and
- $50 for a smart thermostat.

The Home Energy Savings Pathway is a weatherization program designed to train contractors and home energy consultants to analyze the energy use for single and multifamily homes and identify specific energy efficiency improvements which may be undertaken by the customer.

The Home Energy Savings Pathway provides energy assessments, direct installation of low-cost measures and weatherization improvements for qualifying homes.

The HESP provides the following measures:

- Faucet aerators;
- Low flow showerheads;
- Air sealing;
- Duct sealing; and
- Ceiling insulation.

The program is implemented by CLEAResult.

4.1 Program Overview

The history of program performance and expenditures is presented in Table 4-1.

Table 4-1: Residential Solutions Performance against Goals

Program	# Participants		Budget			Net Therms		
Year	Actual	Goal	Spent	Allocated	%	Achieved	Goal	%
2020	4,909	4,834	$2,183,409	$2,421,798	90.2%	647,495	681,204	95.0%
2021	6,867	4,834	$2,256,751	$2,421,798	93.2%	791,836	681,204	116.2%
2022	4,982	4,834	$2,688,648	$2,470,073	108.8%	784,542	681,204	115.2%
2023	5,280	4,834	$2,493,479	$2,470,073	100.9%	726,434	681,204	106.9%.
2024	2,324	2,225	$2,263,128	$2,517,958	89.9%	651,784	620,027	105.1%
2025	1,721	2,225	$2,169,616	$2,559,814	84.8%	599,714	620,027	96.7%

4.2 Participation Summary

Figure 4-1 summarizes verified net therms savings by measure for PY2025 compared to PY2023-PY2024.

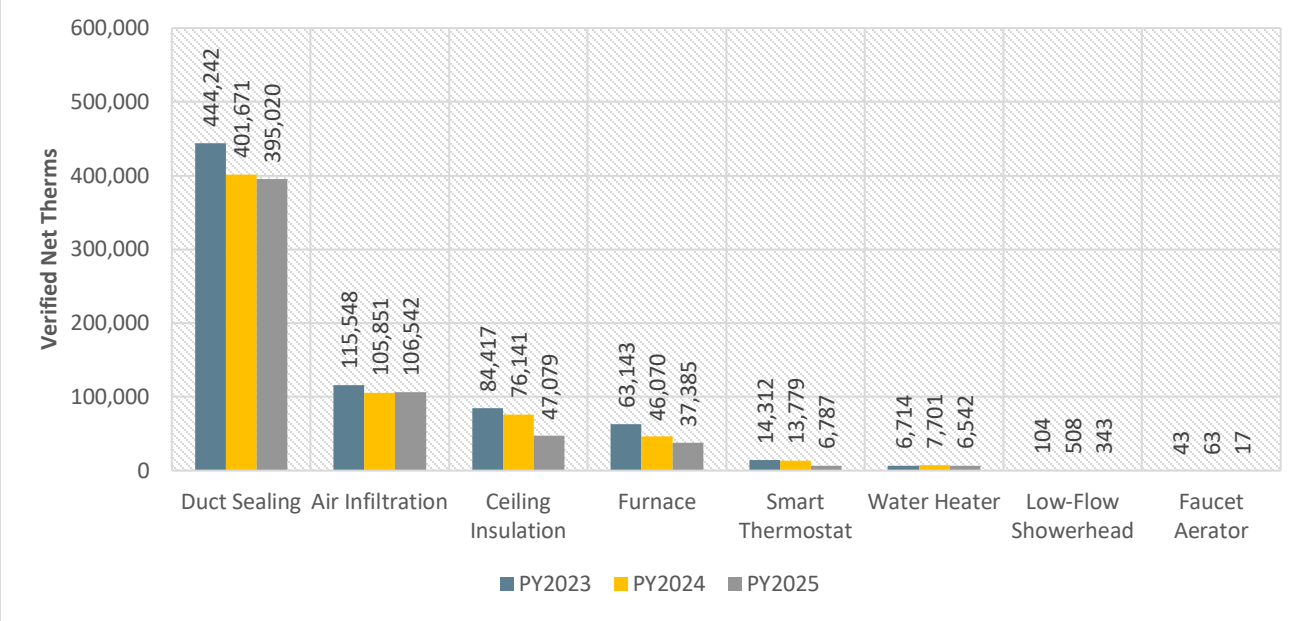


Figure 4-1: Program Savings Share by Measure

4.3 Residential Solutions Program Impact Evaluation

This section provides a brief overview of the data collection activities, gross and net impact calculation methodologies, and process evaluation activities that the Evaluators employed in the evaluation of RSP. The evaluation activities conducted are summarized in Table 4-2.

Table 4-2: RSP PY2025 Impact Evaluation Activities

Gross Impact Evaluation	Net-to-Gross
▪ Database review ▪ TRM deemed savings calculation review	▪ Citing prior NTG studies for non-sampled measure groups

4.3.1 Gross Impact Evaluation

The evaluation of gross therm savings from projects incentivized through the RSP can be broken down into the following steps:

- First, the program tracking database was reviewed to determine the scope of the program and to ensure there were no duplicate project entries.
- Next, a detailed desk review was conducted for a census of projects in the tracking system. The desk review process entails recalculation of therms and non-energy benefits for each measure and for each participant.
- For HESP the Evaluators scheduled on-site inspections with program participants subsequent to completion of documentation reviews. The visits were used to collect data for savings calculations, to verify measure installation, and to determine measure operating parameters.
- After determining the verified savings impacts for each sampled project, the verified savings were combined with the reported savings from the projects not included in the sample to determine a program level savings.

4.3.2 Summary of Non-Energy Benefits

Table 4-3 summarizes the non-energy benefits by measure that were credited to the Residential Solutions Program.

Table 4-3: RSP Non-Energy Benefits

Measure	Electric Savings	Water Savings	Propane Savings	Avoided Replacement Cost	Deferred Replacement Cost
Equipment Rebates Pathway					
▪ Furnace Early Retirement					✓
▪ Tankless Water Heater				✓	
▪ Smart Thermostat	✓				
Home Energy Savings Pathway					
▪ Duct Sealing	✓				
▪ Ceiling Insulation	✓				
▪ Air Infiltration	✓				
▪ Low Flow Showerhead	✓	✓			
▪ Faucet Aerator	✓	✓			

4.4 Residential Solutions Process Evaluation

Table 4-4 and Table 4-5 summarize the Evaluators' review of the Residential Solutions Program in comparison to TRM V10.0 Protocol C for timing and conditions of conducting a process evaluation. The Residential Solutions Program is a combination of two preexisting programs. When assessing the Residential Solutions Program per Protocol C, the evaluators did so via a combined examination of past program performance for the Equipment Rebates Program and Home Energy Savings Program.

Table 4-4: Determining Appropriate Timing to Conduct a Process Evaluation

Component	Determination
New and Innovative Components	No. The program is unchanged from PY2024.
No Previous Process Evaluation	No. A limited process evaluation was conducted in PY2022 and PY2023.
New Vendor or Contractor	No. The restructured program continues to be implemented by CLEAResult.

Table 4-5: Determining Appropriate Conditions to Conduct a Process Evaluation

Component	Determination
Are program impacts lower or slower than expected?	No. The program met 105.1% of goal in PY2024.
Are the educational or informational goals not meeting program goals?	No. The educational and informational goals are meeting program goals.
Are the participation rates lower or slower than expected?	No. The program met participation goals in PY2024.
Are the program's operational or management structure slow to get up and running or not meeting program administrative needs?	No. The PY2023 process evaluation found that the operational and management structure for the Equipment Rebates Pathway and Home Energy Savings Pathway to be up to speed and efficient in administering the program.
Is the program's cost-effectiveness less than expected?	No. The program was cost-effective.
Do participants report problems with the programs or low rates of satisfaction?	No. Participant surveys found high satisfaction levels.
Is the program producing the intended market effects?	Yes. Interviews with participants and trade allies have shown market transformation is occurring.

Based on these findings, a partial process evaluation was conducted in PY2025.

4.4.1 Residential Solutions - Response to Program Recommendations

In PY2024, the Evaluators provided one program recommendations for the residential solutions program.

Table 4-6: Residential Solutions Response to PY2024 Recommendations

PY	Prog.	Recommendation	Response
24	**Residential Solutions**	Program savings estimations need to be updated to address equipment inputs appropriately for water heaters. - Program staff may consider updating water heater calculations to account for the correct setpoint temperature for both residential and commercial projects. Additionally, calculation updates are needed to appropriately size baseline water heaters to determine the appropriate DHW load.	Completed Part 1 Reviewed and Rejected Part 2

4.4.2 Equipment Rebates Pathway

PY2025 participation in the Equipment Rebates Pathway is as follows:

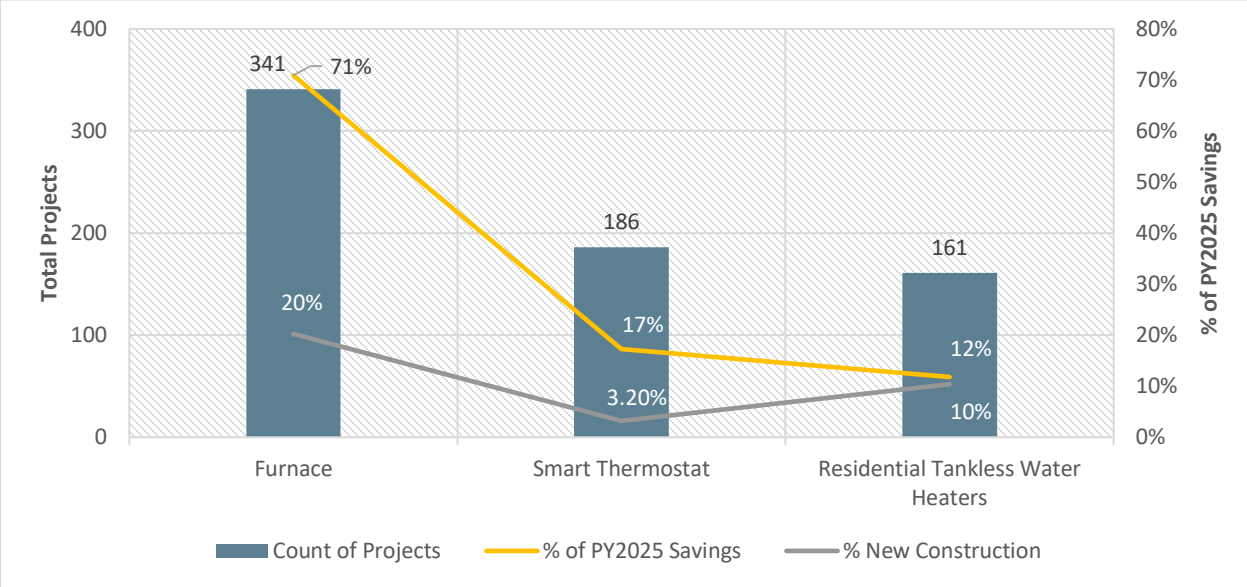


Figure 4-2: ERP Participation Summary

4.4.2.1 Equipment Rebates Pathway Process Evaluation Results

This section includes the process evaluation findings for the Equipment Rebates Pathway.

4.4.2.1.1 Equipment Rebates Pathway - Data Collection Activities

Table 4-7 summarizes the data collection for this process evaluation effort. This includes the titles, role, and sample sizes for data collection.

Table 4-7: RSP Equipment Rebates Pathway Data Collection Summary

Target	Component	Activity	n	Precision Met	Role
BHE Program Staff	Energy Efficiency Coordinator	Interview	1	NA	Energy efficiency coordinator involved in regulatory and sustainability
CLEAResult Staff	Program Manager	Interview	1	NA	Program manager for BHE's residential portfolio.

4.4.2.1.2 Equipment Rebates Pathway- Staff Interview Findings

The residential equipment rebate pathway did not undergo any major changes in PY2025. The pathway continues to provide rebates for furnaces, water heaters and smart thermostats. Trade allies who install furnaces and water heaters receive a rebate on top of the rebate that customers receive for these installations. Although there is no official trade-ally network, customers must use a registered professional for non-thermostat installations. When customers reach out asking for a contractor's recommendation, staff provide a list of contractors who have participated in the past.

Staff indicated that adoption of the new construction bundle – which began in PY2023 and offers an extra incentive for builders who purchase furnaces, water heaters and smart thermostat -- has been low, with only one company choosing to take advantage of the opportunity. Staff explained that some builders continue to purchase efficient furnaces but are less interested in the water heater-related rebates.

Black Hills Energy and CLEAResult share marketing responsibilities for the equipment rebate programs, with CLEAResult taking on the lion's share of the marketing for the commercial program. All marketing materials are BHE branded to add legitimacy to the materials and program.

4.4.2.1.3 Equipment Rebates Pathway - Program Theory & Design

The Equipment Rebates Pathway is designed to provide straightforward prescriptive incentives for high efficiency furnaces, water heaters, and smart thermostats. The program is designed to engage both the retrofit and new construction markets. Contractors may participate as long as they have the appropriate licensing.

4.4.2.1.4 Equipment Rebates Pathway - Program Administration

The Equipment Rebates Pathway is overseen by the Manager of Energy Efficiency at BHE. This manager's responsibilities primarily include interfacing with CLEAResult, who directly implements the program. Other activities by this manager included providing updated customer lists to CLEAResult to better facilitate their implementation, participation in outreach events, and at times assisting CLEAResult in customer interactions. Three program coordinators also assist with the program; these staff split their time across the different portfolio programs focusing on specific tasks for each program and pathway including 1) trade ally connections, 2) data administration, and 3) quality control.
For CLEAResult, the roles and responsibilities of program staff are as follows:

- **Program Manager.** The Program Manager oversees day-to-day activities, supervises program staff, and handles complaints from customers or contractors.
- **Program Specialist.** This staff member coordinates tracking data, develops samples for quality assurance inspection, and supports reporting and invoicing requirements.

4.4.2.1.5 Equipment Rebates Pathway - Program Implementation & Delivery

This pathway does not use a formal trade ally network. Instead, participation is open to licensed HVAC and plumbing contractors who install qualifying high-efficiency furnaces and tankless water heaters. Smart thermostats may be installed by homeowners or contractors. Contractors receive annual updates on program requirements, including revised rebate forms and eligibility criteria. No field training is required since contractors are licensed professionals.

Staff also conduct informal outreach visits to contractors each year to share program information and gather feedback. During these visits, staff provide appreciation gifts and use the opportunity to discuss program performance and any changes for the upcoming year.

To encourage participation, contractors receive a $50 incentive for completing rebate paperwork. Applications are submitted by mail. Program staff review applications for completeness and verify equipment eligibility using approved efficiency standards and model numbers. Customer eligibility is confirmed against utility account data provided by the utility. Approved applications are processed weekly, and payments are issued promptly. Informal feedback from contractors is gathered during annual outreach visits, which also serve as an opportunity to maintain relationships and share program updates.

4.4.2.1.6 Equipment Rebates Pathway – Measures

The were no changes to the measures offered through the residential equipment rebate pathway in 2025. In 2023 there was an introduction of a new construction bundle. The main purpose of this bundle was to increase interest in tankless water heater rebates. In 2025 there was an increase in new construction projects for smart thermostats and tankless water heaters, percent of new construction projects and percent of savings for tankless water heaters and smart thermostats compared to 2024.

4.4.2.1.7 Equipment Rebates Pathway - Marketing

CLEAResult is the implementer of the Equipment Rebates Pathway and Black Hills Energy and CLEAResult share marketing responsibilities for the equipment rebate programs. The program is directly marketed by participating HVAC and plumbing contractors, who use program incentives as part of their business' customer outreach. Other marketing efforts include encouragement of program referrals among participants and promotion of the program on the BHE website. All marketing materials are BHE branded.

4.4.2.1.8 Equipment Rebates Pathway - Protocol A Database Review

Table 4-8: RSOL ERP Solutions Protocol A Summary

Category	Field	Status	Description of Issue(s)
Participating Customer Information	Unique customer identifier, such as account number	-	Not provided
	Customer contact information – name, mailing address, telephone number	-	Phone and email missing for 9% of records.
	Date/s of major customer milestones such as rebate application date, approval date, rebate processing date, etc.	✓	
Measure-Specific Information	Measure Group (Equipment Type)	✓	
	Equipment Fuel/Energy Source	✓	
	Equipment Quantity	✓	
	Efficiency Level	✓	
	Estimated Savings	✓	
	Estimated incremental measure cost	✓	
	Equipment Useful Life	✓	
	Measure Name – Text Description	✓	
	Measure Name – Numerical Code	N/A	
	Serial Number	N/A	
	Reported age of equipment replaced	N/A	
	Reported measure type of equipment replaced	✓	
	Other inputs necessary for the use and compliance with the TRM	✓	
Vendor-Specific Information	Name and Contact Information for Contractor	✓	
	Contractor Type	✓	
	Date of Installation	✓	
	Cost of the installed equipment	✓	
	Efficiency level of the installed equipment	✓	
Program Tracking Information	Date of the initial program contact/rebate information	✓	
	Date of rebate/incentive paid	✓	
	Incentive amount paid to-date	✓	
	Incentive amounts remaining	✓	
	Application Status (i.e., number of applications approved, pending, or denied)	✓	
	Reason and reason code for application denial	✓	
Program Costs	Overall program budgets	✓	
	Program expenditures to-date	✓	
	Incentive Costs	✓	
	Administrative Costs	✓	
	Marketing/Outreach Costs	✓	
	Evaluation Costs	✓	
Marketing and Outreach Activities	Advertising and marketing spending levels	-	Not itemized from total marketing costs in data provided to the Evaluators.
	Media schedules	N/A	
	Summary of number of community events/outreach activities	✓	
	Other media activities – estimated impressions via mailings, television/radio; print ads.	✓	

4.4.3 Home Energy Savings Pathway

4.4.3.1 Home Energy Savings Pathway Participation Summary

HESP had 1,374 participants in PY2025. This includes:

- 1,293 customers that received one assessment;
- 79 customers received either duct sealing, air sealing, or ceiling insulation but no assessment in PY2025.
- 2 customers received health and safety measures but no assessment, duct sealing, air sealing, or ceiling insulation in PY2025.

4.4.3.1.1 Home Energy Savings Pathway Impact of Home Assessments

The Evaluators reviewed the measure installations energy savings for participants in the HES Pathway. The Evaluators' key findings from this review were:

- 94.1% of participating homes received an assessment.
- Similar to prior program years, assessment homes had significantly higher savings than homes that were install-only.

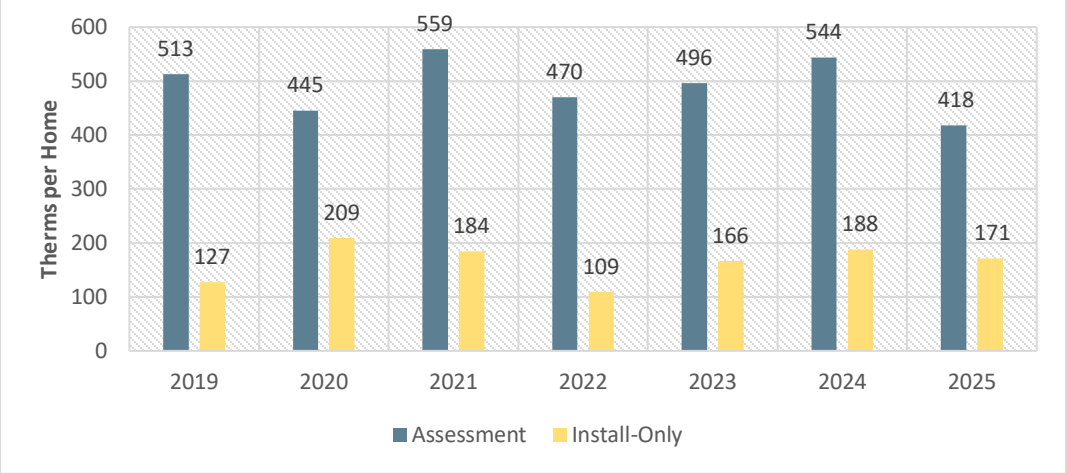


Figure 4-3: HESP- Per-Home Therms Savings: Assessment vs. Install-Only

As shown in Figure 4-4, the measure mixes largely remained the same between 2022 and 2025.

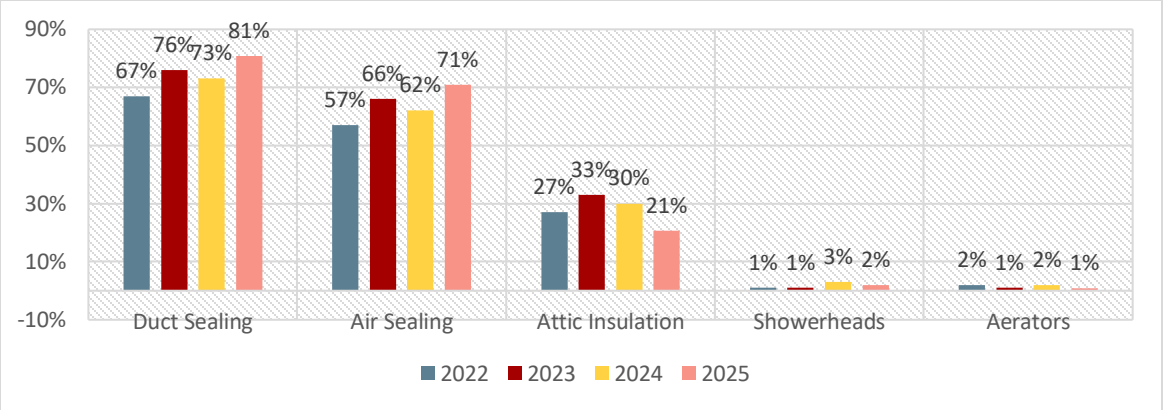


Figure 4-4: HESP - % Houses with Each Measure

4.4.3.1.2 Home Energy Savings Pathway Contractor Participation

In PY2025, HESP had five registered trade allies. All registered allies were active in the program in PY2025. As shown in Figure 4-5, most trade allies installed duct sealing and air sealing improvements at a large majority of their projects. In PY2025, one trade ally completed 45% of total projects. Other trade allies completed between 0.3% and 39% of total projects.

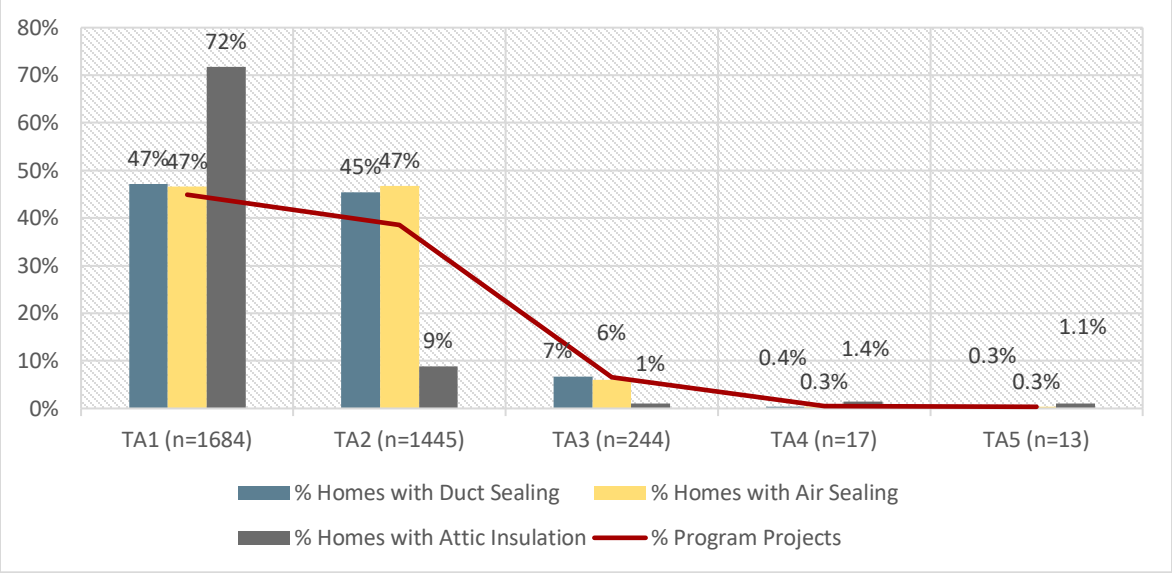


Figure 4-5: HESP Trade Ally Participation Summary

4.4.3.2 Home Energy Savings Pathway Process Evaluation Results

This section includes the process evaluation findings for HESP.

4.4.3.2.1 Home Energy Savings Pathway - Protocol A Database Review

Table 4-9: Home Energy Savings Pathway Protocol A Summary

Category	Field	Status	Description of Issue(s)
Participating Customer Information	Unique customer identifier, such as account number	-	Not provided
	Customer contact information – name, mailing address, telephone number	-	Missing email and phone for 5% of records
	Date/s of major customer milestones such as rebate application date, approval date, rebate processing date, etc.	✓	
Measure-Specific Information	Measure Group (Equipment Type)	✓	
	Equipment Fuel/Energy Source	✓	
	Equipment Quantity	✓	
	Efficiency Level	✓	
	Estimated Savings	✓	
	Estimated incremental measure cost	✓	
	Equipment Useful Life	✓	
	Measure Name – Text Description	✓	
	Measure Name – Numerical Code	✓	
	Serial Number	✓	
	Reported age of equipment replaced	✓	
	Reported measure type of equipment replaced	✓	
	Other inputs necessary for the use and compliance with the TRM	✓	
Vendor-Specific Information	Name and Contact Information for Contractor	✓	
	Contractor Type	✓	
	Date of Installation	✓	
	Cost of the installed equipment	✓	
	Efficiency level of the installed equipment	✓	
Program Tracking Information	Date of the initial program contact/rebate information	✓	
	Date of rebate/incentive paid	✓	
	Incentive amount paid to-date	✓	
	Incentive amounts remaining	✓	
	Application Status (i.e., number of applications approved, pending, or denied)	✓	
	Reason and reason code for application denial	✓	
Program Costs	Overall program budgets	✓	
	Program expenditures to-date	✓	
	Incentive Costs	✓	
	Administrative Costs	✓	
	Marketing/Outreach Costs	✓	
	Evaluation Costs	✓	
Marketing and Outreach Activities	Advertising and marketing spending levels	-	Not itemized from total marketing costs in data provided to the Evaluators.
	Media schedules	N/A	
	Summary of number of community events/outreach activities	✓	
	Other media activities – estimated impressions via mailings, television/radio; print ads.	✓	

4.4.3.2.2 Home Energy Savings Pathway Customer, Premise, Cost, and Vendor Information

Each of these factors was assessed individually based on the guidelines stated in TRM V10.0. Overall, the Evaluators conclude the following regarding tracking data completeness:

- Participating customer information was complete for all participants. This included Job IDs, telephone numbers, addresses, full names, and utility account numbers for BHE and participating electric utility.
- All participant records included the name of the installation contractor who performed the implementation as well as the invoice date and weatherization date.
- Tracking data included the measure and project costs for each home.
- Tracking data included the weather zone for each home.
- As with the prior program year, premise characteristics such as home heating type, cooling type, and ceiling square footage were present for all participants where appropriate and needed.

4.4.3.2.3 Home Energy Savings Pathway Measure Specific Information

The content of tracking data was found to include sufficient information for all measures in PY2025. There were no large issues with measure specific information in the PY2025 program tracking data.

4.4.3.2.4 Home Energy Savings Pathway - Data Collection Activities

The process evaluation of Home Energy Savings Pathway included the following activities:

- *Program Actor In-Depth Interviews*. The Evaluators conducted in-depth interviews with a series of program actors. These interviews covered a range of topics, including marketing efforts, feedback on program delivery, an assessment of barriers to program implementation and success, and recommendations for program improvement. Program Actors interviewed include:
    - *BHE Program Staff*. The Evaluators interviewed staff at BHE involved in the administration of the Home Energy Savings Pathway.
    - *Third Party Implementation Staff Interviews.* The Evaluators interviewed staff at CLEAResult involved in the administration of the Home Energy Savings Pathway.
- *Field Data Collection.* The Evaluators conducted field data collection to verify impacts from duct sealing, air sealing, and ceiling insulation measures.

Table 4-10 summarizes the data collection for this process evaluation effort. This includes the titles, role, and sample sizes for data collection.

Table 4-10: RSP Home Energy Savings Pathway Data Collection Summary

Target	Component	Activity	n	Precision Met	Role
BHE Program Staff	Energy Efficiency Coordinator	Interview	1	NA	Energy efficiency coordinator involved in regulatory and sustainability.
CLEAResult Staff	Program Manager	Interview	1	NA	Program manager for BHE's residential portfolio.
Program Participants	RSP: HESP	Field Data Collection	32	±9.6%	Field data collection was performed to verify duct sealing, air sealing, and ceiling insulation projects.

4.4.3.2.5 Home Energy Savings Pathway - Program Theory & Design

HESP is designed to follow Department of Energy's Home Performance with ENERGY STAR® (HPwES) Program guidelines. HESP offers a comprehensive, whole-home approach to improving energy efficiency in existing homes. HESP also is consistent with the approved APSC-mandated Consistent Weatherization Approach. The program maintains a closed contractor network, emphasizing training and quality control for a small group of providers who are allocated a share of total weatherization projects to complete for the program year.

4.4.3.2.6 Home Energy Savings Pathway - Program Administration

HESP is overseen by the Manager of Energy Efficiency at BHE. This manager's responsibilities primarily include interfacing with CLEAResult, who directly implements the program. Other activities by this manager include providing updated customer lists to CLEAResult to better facilitate their implementation, participation in outreach events, and at times assisting CLEAResult in customer interactions.

For CLEAResult, the roles and responsibilities of program staff are as follows:

- **Program Manager.** The Program Manager oversees day-to-day activities, supervises program staff, and handles complaints from customers or contractors.
- **Program Specialist.** This staff member coordinates tracking data, develops samples for quality assurance inspection, and supports reporting and invoicing requirements.
- **Field Specialist.** This staff member oversees pre assessments.
- **QA Verification Specialist.** The QA Verification Specialist conducts post inspections and communicates inspection results to contractors.

4.4.3.2.7 Home Energy Savings Pathway - Program Implementation & Delivery

For HESP, homes must be at least 10 years old or have gas costs that are at $.05 per square foot based on the customers' highest bill in the past 12 months. Eligible homes must have been occupied for the previous 12 months and have not received weatherization services in the past five years.

Figure 4-6: HESP Home Efficiency Graphic (source: https://energy-readyarkansas.com/home-energy-savings-evaluation.html)

The key delivery aspects specific to this outreach channel include the following elements:

- **Customer verification**: Potential customers interested in the program will be confirmed as a qualified BHE customer by program staff.
- **A comprehensive assessment of the customer's home:** Once the customer is prequalified, the contractor will schedule a comprehensive audit of the home and develop a recommended action plan of weatherization upgrades for the homeowner.
- **Direct installation of immediate energy savings measures:** While performing the comprehensive audit, the contractor will also install energy efficient measures throughout the home, including low-flow aerators and showerheads, at no cost to the customer.
- **Installation of a set of weatherization measures:** The contractor and customer will decide on what upgrades will be undertaken for the home. Based on review of the plan, the customer and contractor will develop an installation plan, and upgrades will be installed by the contractor.

4.4.3.2.8 Home Energy Savings Pathway - Marketing

CLEAResult is the implementer for HESP and oversees marketing efforts. The program is directly marketed by the four registered trade allies. Other marketing efforts include encouragement of program referrals among participants and promotion of the program on the BHE website.

4.4.3.2.9 Home Energy Savings Pathway - Measures

The program did not offer any new measures in PY2025.

4.4.3.2.10 Home Energy Savings Pathway - Trade Ally Network

This pathway is delivered primarily through certified trade allies who perform in-home energy assessments and install weatherization measures such as air sealing, duct sealing, and attic insulation. Trade allies also install direct install measures, such as faucet aerators and showerheads, when customers agree to these upgrades.

A notable feature of this pathway is the pre-assessment process that was introduced to reduce the number of contractors "assessment-only" visits where homes technically qualified but offered little savings potential. When leads are received through the program website, the implementer applies screening criteria, such as home age, foundation type (slab vs. crawl space), and number of stories, to

determine whether the home should be forwarded directly to a trade ally or scheduled for a pre-assessment. Pre-assessments are conducted by implementer staff and include a full audit following BPI standards, blower door testing, and zone pressure diagnostics (but not duct blaster testing). Customers receive a report summarizing findings, and if savings opportunities exist, the lead is forwarded to a trade ally for follow-up work. Program staff estimated that approximately 30% of the preassessments result in lead that is forwarded to a trade ally.

Pre-assessments also serve as a safety check; staff noted instances where gas leaks were identified during testing, prompting immediate utility intervention. Trade allies generally support this process because it reduces unproductive site visits and helps maintain crew efficiency.

Trade allies are responsible for completing assessments, installing measures, and submitting project documentation through a contractor portal linked to the program's data management system. This portal captures invoices, pre- and post-installation test results, and audit reports. Payments are processed weekly after implementer review. Quality control is conducted through multiple methods, including live inspections, post-installation checks, and virtual assessments using an app.

Trade allies must complete program-specific training and hold Building Performance Institute (BPI) certification for crew leads. The implementer offers classroom training virtually and field training locally, along with two annual sessions to review protocols, address quality issues, and reinforce best practices. These sessions also serve as opportunities to communicate updates and maintain engagement.

4.4.3.2.11 Home Energy Savings Pathway Consistent Weatherization Approach (CWA) Metrics

This section presents the required metrics for BHE's CWA program (HESP).

Table 4-11: CWA Required Process Evaluation Metrics

Metric	Value
Program Name	Residential Solutions Program - HESP
CWA Implementation	The CWA is implemented using a third-party contractor (CLEAResult) with a network of pre-approved trade allies that market the program. The program coordinates with SWEPCO and Entergy
Total Audits Completed	1,293
Total Submitted Measures	3,752 at 1,374 homes
Conversion Rate	123%
Measures installed per-project	1.75 (excluding Assessment)
Cost per participant	No customer co-pay. BHE paid $801.13/home
Percent of contractors promoting program	100%

Table 4-12: HESP Alignment with CWA Requirements

Requirement	Alignment with Requirement	Percent of Participants Receiving
Includes Applicable DI Measures	Yes	2.33%
Aerators	Yes	0.73%
Showerheads	Yes	2.04%
Efficient lighting	Yes	N/A
Prequalifies homes based on year of construction or energy costs	Yes, the customer must have had a bill in the last twelve months that exceeded five cents per square foot, or the home's age is 10 years or greater.	Not in tracking data
TRC is used to assess program cost-effectiveness	Yes	N/A
Measures screened using SIR or comparable metric	Program uses TRC	N/A
Includes Core No Cost Measures	Yes	99.85%
Audit (walk through)	Yes	94.10%
Attic insulation	Yes	20.52%
Duct sealing	Yes	69.80%
Air infiltration reduction	Yes	70.82%
Safety testing and/or measures	Yes	0.15%
Offers other utility measures	Yes	N/A
Contractors are certified BPI Building Analyst or RESNET HERS Rater	Yes, for duct sealing, air infiltration, and assessments. Insulation requires Arkansas Home Improvement Specialty License.	N/A

On average, HESP participants received measures that resulted in 403 therm savings and incentives that averaged $801.13 (Table 4-13).

Table 4-13: Summary of Home Participation

Average Ex ante Therm Savings	Average Incentive Amount	Average Number of Measures Implemented
403.3	$801.13	2.73

4.4.4 Free-Ridership and Spillover Findings

The survey battery to address residential program free-ridership was as follows:

- Were you planning to complete the same [MEASURE] project in 2024 before learning about the program?
    - **IF PLANNING = "YES":** Would your budget for the planned project have accommodated the project's full cost if you had not completed the project through the program?
    - If the incentive was not available from the program, would you have completed the same project or would you have done something different?

- **IF RESPONSE = "SOMETHING DIFFERENT":** Would it have been the same level of energy efficiency, higher energy efficiency, or lower energy efficiency?

- Would you have completed the same project or one that made your home even more energy efficient within one year if the program was not available?

A respondent is a free rider if they indicate all the following:

1. They had plans to complete the same measure in 2024;
2. Had a budget that could accommodate the full project cost without the program;
3. Would have done the same project or a more efficient version of the project in the absence of the program; and
4. Would have completed the same or more efficient version of the project within a year.

Figure 4-7 details the scoring mechanism for residential free ridership in the Residential Solutions Program.

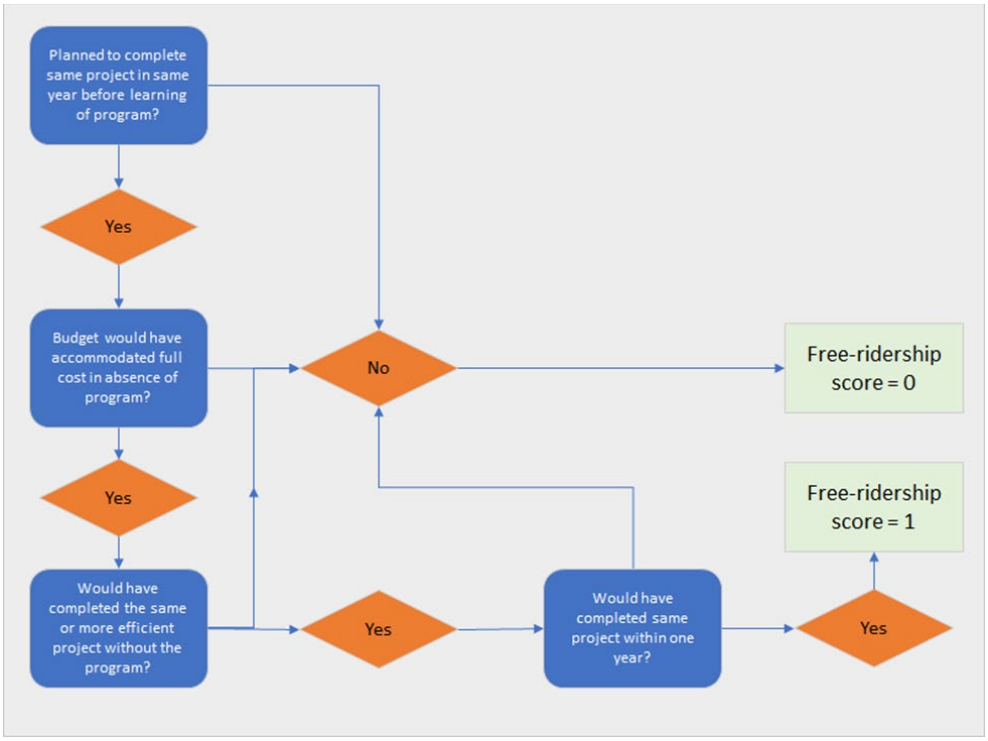


Figure 4-7: RSP FR Diagram

Table 4-14 summarizes the estimated free-ridership, spillover, and net-to-gross ratios for the estimates developed through self-report.

Table 4-14: RSP Summary of Free-ridership, Spillover, and NTGRs

Pathway & Measure	Free Ridership	Spillover	NTG Ratio
Equipment Rebates Pathway			
▪ Furnace - Retrofit	21.6%	0.0%	78.4%
▪ Furnace – NC - Builder	9.0%	0.0%	91.0%
▪ Furnace – NC - Owner	21.6%	0.0%	78.4%
▪ Furnace – Housing Authority	0.0%	0.0%	100.0%
▪ Smart Thermostat	35.0%	0.0%	65.0%
▪ Water Heater - Retrofit	28.3%	0.0%	71.7%
▪ Water Heater – Housing Authority	0.0%	0.0%	100.0%
▪ Water Heater - NC – Builder	9.0%	0.0%	91.0%
▪ Water Heater – NC - Owner	28.3%	0.0%	71.7%
Home Energy Savings Pathway			
▪ Duct sealing, air sealing, ceiling insulation	1.7%	0.0%	98.3%
▪ Aerators, showerheads, pipe wrap, tank wrap	1.7%	0.0%	98.3%

4.4.4.1 Home Energy Savings Pathway – Gross Savings Analysis

The Evaluators conducted field verification at 32 homes in HESP. Measures included in this sample were as follows:

- Air Infiltration: 30 homes
- Ceiling Insulation: 12 homes
- Duct Sealing: 32 homes, 39 HVAC systems

The Evaluators conducted duct blaster and blower door tests at all homes that received duct sealing and air sealing (respectively). There were 1 air infiltration projects omitted from ISR calculations due to significant discrepancies in evaluator and trade ally test results, due to conditions in the home being altered after the trade ally conducted testing. Additionally, 2 duct sealing test results were omitted due to alterations to HVAC duct systems after the trade ally conducted testing.

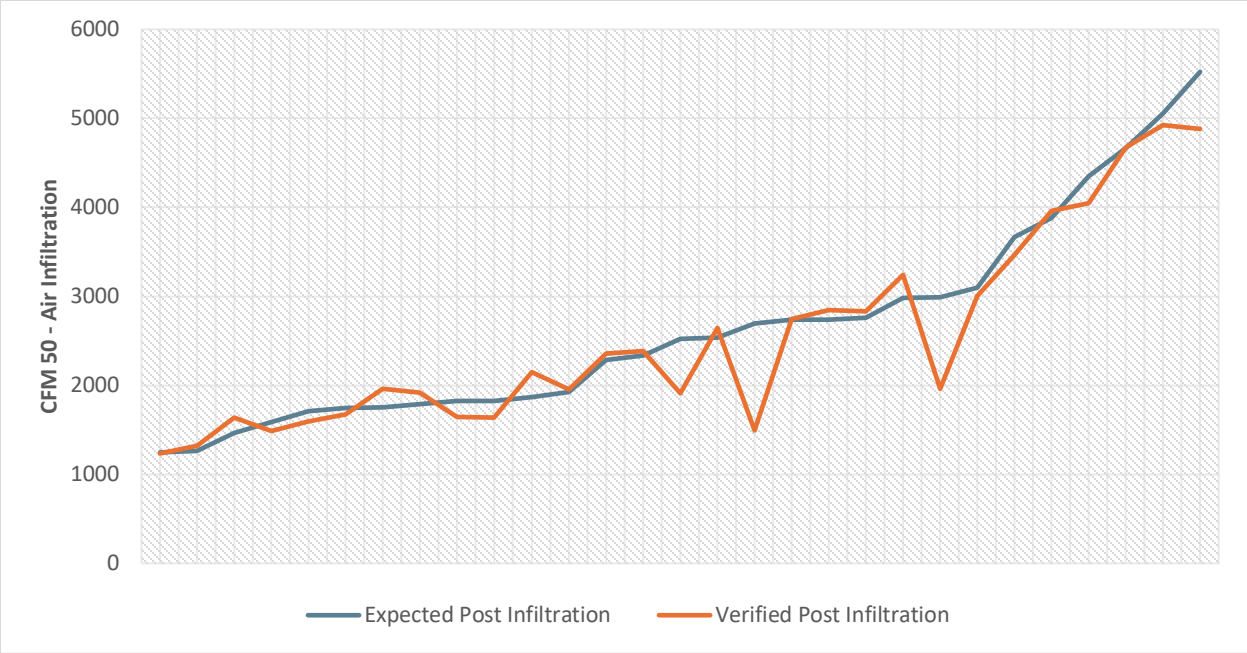


Figure 4-8: Air Infiltration Field Data Collection Results (n=29)

The Evaluators found lower efficient infiltration data during field visits than shown in Ex Ante estimates. This resulted in an overall in-service rate (ISR) of 105.9%.

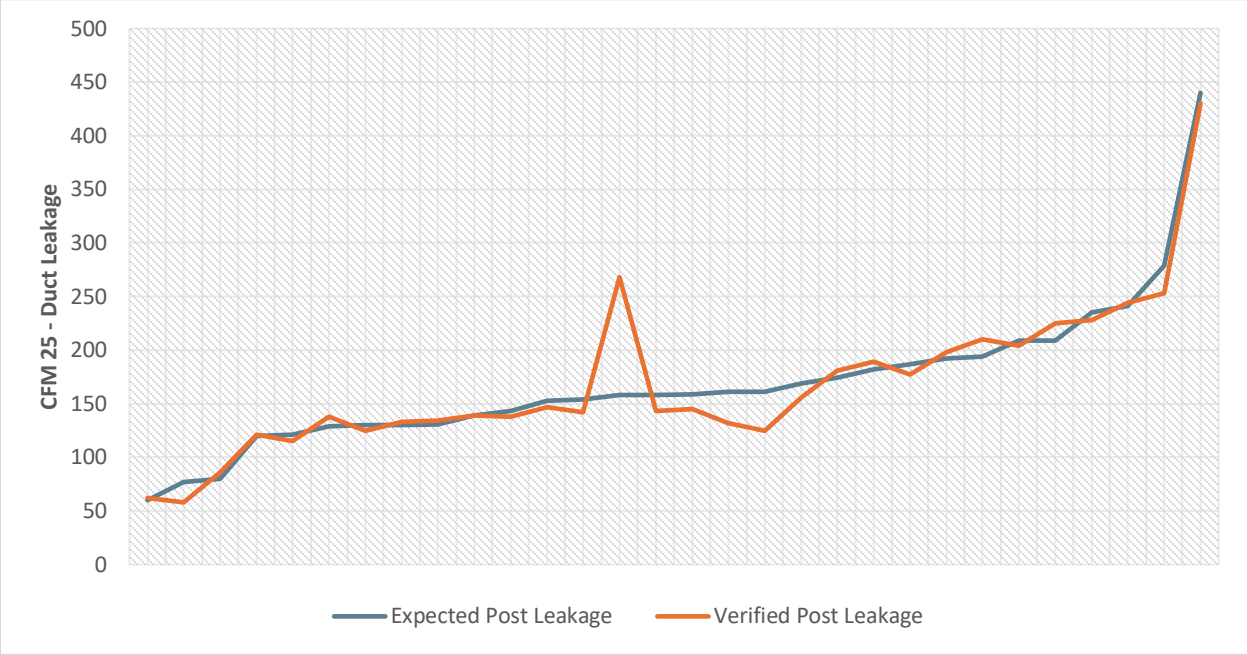


Figure 4-9: Duct Sealing Field Data Collection Results (n=30)

The Evaluators found lower efficient leakage data during field visits than shown in Ex Ante estimates. This resulted in an overall in-service rate (ISR) of 100.4%.

Attic insulation projects inspected showed one deviation from project tracking (where insulation wasn't installed) and had a 97.0% ISR.

4.4.4.2 Energy Savings Calculations - Furnaces

Gross savings for furnaces applied TRM V10.0 protocols. The Evaluators verified heat load estimates based on home age and square footage, all of which was provided in BHE program tracking data.

One key parameter addressed in the PY2020 gross impact analysis was verification of early retirement. Early retirement is estimated based off survey findings with BHE participants. Surveys were not completed in PY2024 so values from the PY2020 survey were applied to PY2024 projects. The survey findings addressed:

- Extent to which furnaces that are in working condition have been replaced; and
- Age of the preexisting furnace in instances of qualifying early retirement.

As per the TRM V10.0, and the procedures for calculating the impact of early replacement for residential furnaces, early retirement AFUE is calculated by a degradation factor of a 78 AFUE unit. This is calculated as: [7]

$$AFUE_{base\_early} = (Base\ AFUE) \times (1 - M)^{age}$$

Where:

$Base\ AFUE$ = efficiency of the existing equipment when new, 78% AFUE.
M[8] = maintenance factor, 0.01.
age = the age of the existing equipment, in years.

Following this, lifetime savings are determined based on the Remaining Useful Life (RUL) of the old equipment. The RUL table is presented in Table 4-15. [9]

[7] Arkansas TRM V10.0 Volume 2, Pg. 48
[8] Maintenance factor of 0.01 is the average maintenance factor for gas furnaces taken from the October 2010 National Renewable Energy publication "Building America House Simulation Protocols", Table 30.
[9] AR TRM V10.0, Volume 2, Pg. 50

Table 4-15: Residential Furnace RUL

Unit Age	RUL	Unit Age	RUL
5	14.7	**19**	3.6
6	13.7	**20**	3.2
7	12.7	**21**	2.9
8	11.8	**22**	2.6
9	10.9	**23**	2.4
10	10.0	**24**	2.1
11	9.1	**25+**	0.0
12	8.3		
13	7.5		
14	6.8		
15	6.2		
16	5.5		
17	4.5		
18	4.0		

To assess whether a unit qualified for early retirement, the Evaluators examined the following survey questions:

7. Was the replaced [BASELINE]….(READ LIST)?

1. Fully functional and not in need of repair?
2. Functional, but needed minor repairs?
3. Functional, but needed major repairs?
4. Not functional?

98. DON'T KNOW
99. REFUSED

8. How old was the [BASELINE] at the time you replaced it?

1. ___ # Years

98. DON'T KNOW
99. REFUSED

9. How long do you think your [BASELINE] would have lasted if you had not replaced it?

1. ___ # Years

98. DON'T KNOW

Figure 4-10 summarizes the scoring for early retirement based on these three questions.

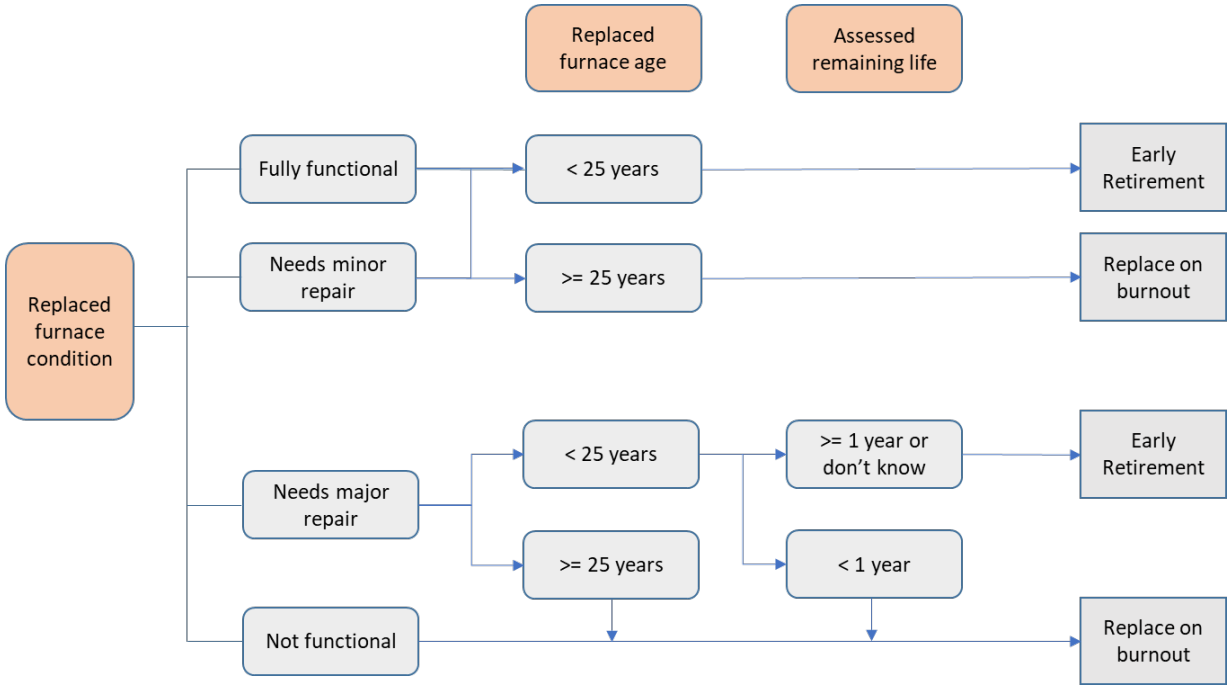


Figure 4-10: Residential Furnace Early Retirement Flowchart

In total, the Evaluators found that 78.26% of BHE furnace retrofits were early retirement.

The average age of functioning and failed units was as follows:

- 14.12 for functioning units
- 20.33 for failed units

Based on the degradation equation from TRM V10.0[10], this leads to an Early Retirement AFUE of:

$$AFUE_{base_{early}} = (.78) \times (1 - .01)^{14.12} = .6768$$

Further, based on the values in Table 4-15, the RUL of the early replacement units is seven years. For years 8-20 of the unit EUL, the normal replacement baseline applies. The savings for each residential retrofit unit were calculated using both the normal and early replacement baselines, and final savings reflect a weighted average of these two values based on participant survey data findings. These values were then applied on a weighted basis to the residential retrofit units using weights of 78.26% early replacement and 21.74% normal replacement. The resulting weighted average baseline is .7036.

[10] TRM V10.0Vol. 2 Pg. 48

4.4.4.3 Energy Savings Calculations – Water Heaters

Savings from tankless water heaters were calculated using protocols from Arkansas TRM V10.0 Vol. 2 Section 2.3.1.

Gross realization for water heaters was 120.7%. The Evaluators attribute this to the following:

- **Aligning DHW load to match baseline sizing.** Though the direct formula is not visible in the spreadsheet tracking data provided to the Evaluators (as calculations are performed in a back-end system with an Excel export then sent for review), the Evaluators suspect that the DHW load is aligning with 40-gallon systems. The Evaluators were able closely recreate ex ante calculations (to within 3.0% of ex ante estimates) when the baseline was established to align with a high-draw pattern (50-gallon equivalent) tankless system while aligning the DHW load to a medium draw pattern (40-gallon equivalent) system.

4.4.4.4 Energy Savings Calculations – Smart Thermostats

Gross savings were calculated for smart thermostats using protocols AR TRM V10.0 Vol 2 2.1.12. BHE tracked the baseline thermostat on their program application. The Evaluators applied the appropriate baseline for each line item. Savings calculations and application of square footage were significantly improved compared to prior program years, and the Evaluators found 96.9% realization for this measure.

4.4.5 Ex Post Savings

Table 4-16 presents the gross savings results of the evaluation of the PY2025 Residential Solutions Program. Total gross savings summarizes the savings calculations performed by TRM V10.0 protocols.

Table 4-16: RSP Ex Post Gross Therms Savings

Pathway	Measure Category	Ex Ante Therms Savings	Ex Post Therms Savings	Gross Realization Rate	EUL	Lifetime Therms Savings
ERP	Furnace: Retrofit	31,690	35,665	112.54%	22.77	811,925
	Furnace: NC Builder	6,164	5,463	88.62%	36.00	196,658
	Furnace: NC Owner	6,175	5,579	90.35%	36.00	200,848
	Furnace: Housing Authority	111	87	78.60%	23.05	2,002
	Tankless Water Heater: Retrofit	3,217	3,873	120.40%	20.00	77,468
	Tankless Water Heater: NC Builder	784	947	120.79%	20.00	18,932
	Tankless Water Heater: NC Owner	3,348	4,049	120.92%	20.00	80,974
	Smart Thermostat	10,779	10,442	96.87%	11.00	114,863
HESP	Home Energy Savings	554,197	558,495	100.78%	20.85	11,645,168
	Total Gross Savings	**616,466**	**624,600**	**101.32%**	**21.05**	**13,148,839**

The resulting net savings are presented in Table 4-17.

Table 4-17: RSP Net Savings Summary

Project Category	Free-Ridership Rate		Net Annual Savings		Net Realization Rate	Net Lifetime Therms Savings
	Ex Ante	Ex Post	Ex Ante	Ex Post		
Furnace: Retrofit	21.62%	21.62%	24,838	27,954	112.54%	636,374
Furnace: NC Builder	9.00%	9.00%	5,610	4,971	88.62%	178,959
Furnace: NC Owner	21.62%	21.62%	4,840	4,373	90.35%	157,421
Furnace: Housing Authority	0.00%	0.00%	111	87	78.60%	2,002
Tankless Water Heater: Retrofit	28.30%	28.30%	2,307	2,777	120.40%	55,545
Tankless Water Heater: NC Builder	9.00%	9.00%	713	861	120.79%	17,228
Tankless Water Heater: NC Owner	28.30%	28.30%	2,401	2,903	120.92%	58,059
Smart Thermostat	35.00%	35.00%	7,007	6,787	96.87%	74,661
Home Energy Savings	1.70%	1.70%	544,776	549,000	100.78%	11,447,200
Overall	**3.87%**	**3.98%**	**592,601**	**599,714**	**101.20%**	**12,627,449**

4.4.6 Non-Energy Benefits Summary

Per Protocol L of the Arkansas TRM V10.0, Evaluators calculated non-energy benefits (NEBs) from each program. Program measures provide the following categories of NEBs:

- Benefits of electricity and liquid propane energy savings as in other fuel savings;
- Benefits of public water and wastewater savings; and
- Benefits of avoided and deferred replacement costs.

The Evaluators identified potential NEBs associated with each measure category.

4.4.6.1 RSP NEBs: Other Fuel

Table 4-18: RSP Ex Post Net Electric Savings

Measure Category	Net Annual kWh	Net Peak kW	Lifetime Net kWh
Smart Thermostat	107,989	0.00	1,187,878
Air Sealing	158,462	107.96	3,169,246
Ceiling Insulation	143,148	117.99	4,294,450
Duct Sealing	902,580	572.67	18,051,608
Total	**1,312,180**	**798.62**	**26,703,182**

4.4.6.2 RSP NEBs: Water Savings

Table 4-19: RSP Ex Post Net Water Savings

Pathway	Net Annual Water Saving (Gallons)	Lifetime Net Water Savings (Gallons)
Equipment Rebates	0	0
Home Energy Savings	84,000	839,996
Total	**84,000**	**839,996**

4.4.6.3 RSP NEBs: Avoided Replacement Costs (ARCs)

Residential tankless water heaters have an EUL of 20 years. The baseline system has an EUL of 11 years. This makes the systems eligible for the Avoided Replacement Cost Non-Energy Benefit. This NEB was calculated using the IEM calculation tool[11]. The input assumptions were as follows:

- Full installed cost of tankless system: $1,219
- Full installed cost of baseline storage tank system: $614
- Nominal Discount Rate: 6.61%
- Inflation Rate: 2.50%
- Real Discount Rate: 4.01%

The resulting gross avoided replacement cost is $338.19 per unit. The calculator for this is provided in Appendix B of this report. For individual line items in the BHE program, this value was scaled by the appropriate NTGR.

There were 161 residential tankless systems rebated in PY2025, and the resulting net ARC value is $40,149.31.

4.4.6.4 RSP NEBs: Deferred Replacement Costs (DRCs)

Of 164 furnaces that were either early or standard replacement cases, there were 82 furnaces that were early replacement with a Remaining Useful Life (RUL) of five years. This produces a DRC benefit in that it defers the normal replacement schedule in perpetuity. This NEB was calculated using the IEM calculation tool[12]. The input assumptions were as follows:

- Full installed cost of efficient furnace: $2,548
- Full installed cost of baseline furnace: $2,011
- Nominal Discount Rate: 6.61%
- Inflation Rate: 2.50%
- Real Discount Rate: 4.01%

The resulting gross DRC is $1,387.94 per early retirement. When scaling this to the prevalence of early replacement versus normal replacement, the weighted average gross DRC is $693.97 per retrofit. The calculator for this is provided in Appendix B of this report. For individual line items in the BHE program, this value was scaled by the appropriate NTGR. The resulting net DRC value is $89,353.21.

[11] Protocol L Avoided & Deferred Replacement Cost_08_31_16.xlsx

[12] Protocol L Avoided & Deferred Replacement Cost_08_31_16.xlsx

4.5 Conclusions

The program missed program goal.	The program met 96.7% of its filed net savings goal while spending 84.8% of budget.
Realization rates were high across most measure categories.	The overall net realization rate was 101.20%. Realization was high for all measure groups.

4.6 Key Findings and Recommendations

Recent changes to the residential pathways primarily reflect efforts to improve lead quality and support program outreach. The Home Energy Savings pathway implemented a pre-assessment process in prior years to better screen website-submitted leads and reduce assessment-only visits, and staff reported that this approach continues to help direct contractors toward homes with meaningful savings potential. Marketing activities are also evolving, with newly developed social media materials and other digital assets intended to supplement the long-standing trade-ally-driven outreach model. No major structural changes were reported for the Equipment Rebate pathway.

Program staff indicated that, to date, there has been limited tracking of marketing effectiveness, though efforts are underway to implement follow-up surveys to better understand which channels generate the most customer engagement.

Program staff indicated that tracking of marketing effectiveness has been limited to date. Staff noted that work is underway to add follow-up surveys to help determine which marketing channels generate the most customer engagement, reflecting an effort to strengthen outreach and inform future marketing strategy.

- **Recommendation 1.** To strengthen understanding of which marketing channels drive participation, the program should collect source-of-awareness information at the point of customer intake or within the application process. Gathering this information at enrollment, rather than relying on follow-up surveys, would provide more complete response coverage and improve recall accuracy regarding how customers first learned about the program.

5 Commercial & Industrial Solutions Program (CISP)

CISP is directed at developing and incentivizing energy efficiency measures for commercial and industrial customers. It is implemented by CLEAResult Consulting on behalf of BHE. CLEAResult handles program administration, marketing and outreach, direct install of energy savings measures, and technical review of custom efficiency projects. Program participants are offered:

(1) No-cost direct installation of low flow faucet aerators, showerheads, and pre-rinse spray valves (PRSVs), if the participant has natural gas water heating;

(2) No-cost direct installation of door air infiltration sealing if the participant has natural gas space heating;

(3) Prescriptive incentives for commercial furnaces, water heaters, commercial boilers, boiler controls, and Prescriptive incentives for commercial kitchen equipment;

(4) $.75 per therm for custom projects;

(5) $.20 per therm for Strategic Energy Management (SEM) projects; and

(6) Incentives to trade allies for steam system surveys.

5.1 CISP Overview

CISP's historical performance is summarized in Table 5-1.

Table 5-1: CISP Historical Performance against Goals

Program Year	# Participants		Budget			Net Therms		
	Actual	Goal	Spent	Allocated	%	Achieved	Goal	%
2011	404	790	$486,284	$637,926	76.2%	500,906	451,808	110.9%
2012	518	773	$836,388	$1,012,822	82.6%	560,574	536,810	104.4%
2013	417	723	$1,382,015	$1,410,997	97.9%	954,191	805,150	118.5%
2014	215	762	$1,331,924	$1,525,075	87.3%	789,523	694,577	113.7%
2015	385	800	$1,520,715	$1,698,848	89.5%	811,600	766,630	105.9%
2016	185	2,817	$1,638,167	$1,832,824	89.4%	851,581	798,455	106.7%
2017	157	2,344	$1,331,689	$1,374,482	96.9%	714,913	713,150	100.2%
2018	153	2,344	$1,247,349	$1,374,482	90.8%	713,833	713,150	100.0%
2019	42	2,344	$1,296,563	$1,380,696	93.6%	719,575	713,150	100.9%
2020	58	1,569	$1,325,452	$1,501,198	88.3%	745,692	629,741	118.4%
2021	80	1,569	$1,526,265	$1,501,198	101.7%	705,541	629,741	112.0%
2022	54	1,569	$1,617,667	$1,552,279	104.2%	723,540	629,741	114.8%
2023	159	1,569	$1,700,900	$1,552,279	109.6%	753,681	629,741	119.9%
2024	129	232	$1,364,694	$1,425,198	95.8%	647,132	620,044	104.4%
2025	66	232	$1,672,811	$1,470,078	113.8%	837,897	620,044	135.1%

CISP participants fall into one of four categories:

- Direct install;

- Prescriptive furnace, water heater, boiler, and food service rebates;
- Custom audit recipients;[13] and
- Closed custom projects.

Total net Therms by pathway are summarized in Figure 5-1.

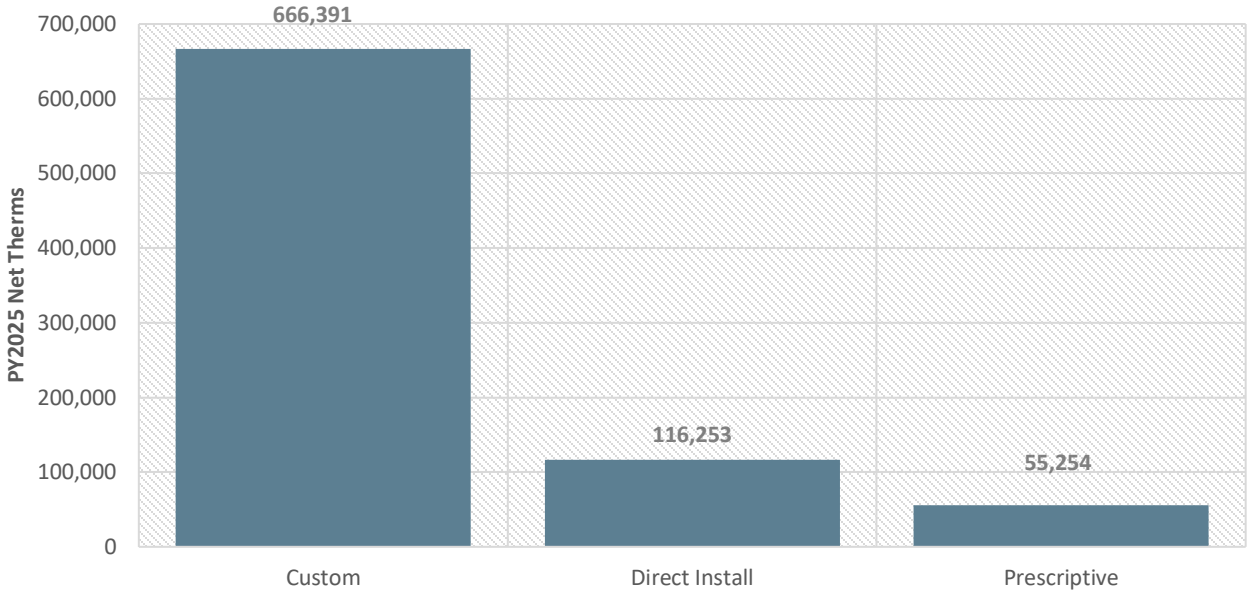


Figure 5-1: Total Net Therms by Program Pathway

These participants are detailed in the subsections to follow.

5.2 Direct Install Participation Summary

In PY2025, there were 19 direct install participants with 32 projects. The summary of participation by project type and the relative share of program therms savings are summarized in Figure 5-2.

[13] The Evaluators tally audit recipients but do not count them towards BHE's participation goal.

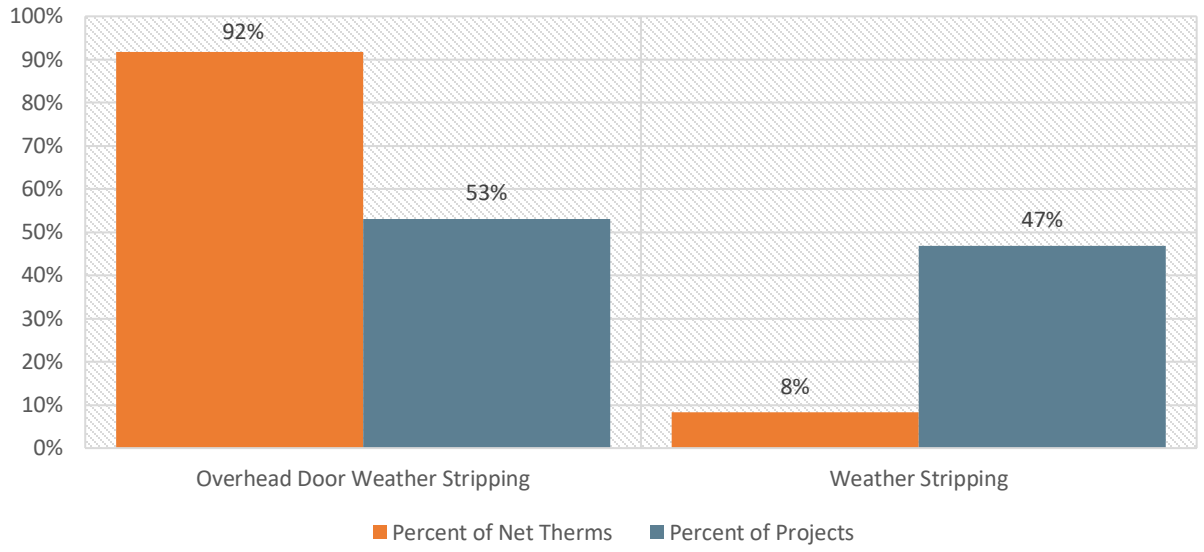


Figure 5-2: Direct Install Participation Summary

5.3 Prescriptive Rebate Summary

Beginning in PY2020, commercial prescriptive furnaces and water heaters were moved from the former Equipment Rebates Program to CISP, fully separating residential and non-residential rebates into discrete programs. Figure 5-3 summarizes CISP PY2025 prescriptive participation and net savings.

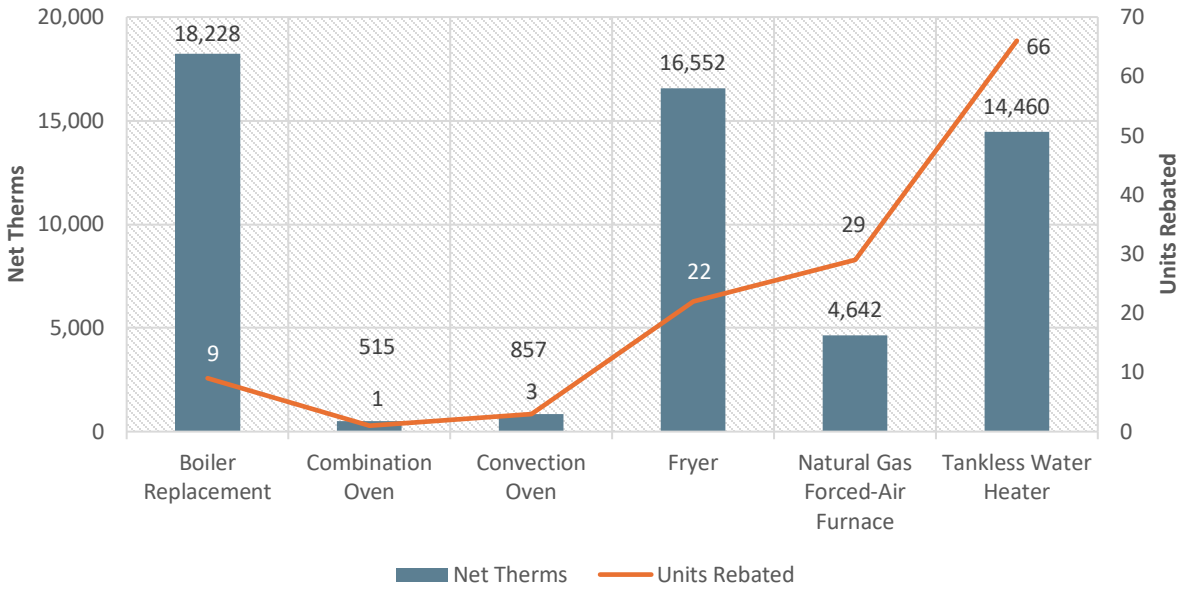


Figure 5-3: CISP Prescriptive Participation Summary

5.4 Closed Custom Project Participation Summary

Table 5-2 summarizes the completed custom projects for the program. Closed custom projects are projects that have been verified by the Evaluators, and an incentive has been issued by BHE.

Table 5-2: Custom Project Participation Summary

Facility Type	Project ID	Measure	Ex Post Savings
Food Processing	EA-0003242061	Steam Trap Replacement	188,958
Industrial	EA-0004700287	Steam Leak Repair Steam Trap Replacement	58,157 169,732
Food Processing	EA-0004701529	Thermal Oxidizer	179,252
Medical	EA-0002479812	Steam Leak Repair Steam Trap Replacement	1,447 7,828
Food Processing	EA-0006631854	SEM	39,184
Retail	EA-0007522681	HVAC Controls	6,481
University	EA-0008460633	Boiler Replacement	15,352

5.5 CISP Process Evaluation

This section presents the results and key findings from the data collection activities. These findings are based upon interviews with BHE and implementation staff, surveys with participants, and thorough and in-depth literature review.

The Evaluators conducted a full process evaluation of the CISP in PY2023 and found that the program was successful in meeting participation, savings, and satisfaction goals. Table 5-3 and Table 5-4 summarize the Evaluators' review of the CISP in comparison to TRM V10.0 Protocol C for timing and conditions of conducting a process evaluation.

Table 5-3: Determining Appropriate Timing to Conduct a Process Evaluation

Component	Determination
New and Innovative Components	No. The program is unchanged from PY2024.
No Previous Process Evaluation	No. The program received a process evaluation in PY2023.
New Vendor or Contractor	No. The program continues to be implemented by CLEAResult.

Table 5-4: Determining Appropriate Conditions to Conduct a Process Evaluation

Component	Determination
Are program impacts lower or slower than expected?	No. The program met savings goals in PY2024.
Are the educational or informational goals not meeting program goals?	No. The program has an established trade ally network.
Are the participation rates lower or slower than expected?	No. The program met participant goals in PY2024.
Are the program's operational or management structure slow to get up and running or not meeting program administrative needs?	No. The PY2024 process evaluation found that operational and management structure to be up to speed and efficient in administering the program.
Is the program's cost-effectiveness less than expected?	No. The program's cost-effectiveness exceeded expectations.
Do participants report problems with the programs or low rates of satisfaction?	No. Participant surveys found high satisfaction levels.
Is the program producing the intended market effects?	Yes. Interviews with participants and trade allies have shown market transformation is occurring.

Based on these findings, process evaluation activities were limited to a small participant survey outreach and review of prior recommendations.

5.5.1 Data Collection Activities

The process evaluation of the CISP included the following data collection activities:

- *Program Actor In-Depth Interviews*. The Evaluators conducted in-depth interviews. These interviews covered a range of topics, including marketing efforts, feedback on program delivery, an assessment of barriers to program implementation and success, and recommendations for program improvement. Program actors interviewed include:
  - *BHE Program Staff*. The Evaluators interviewed a staff member at BHE involved in coordinating energy efficiency for the state of Arkansas.
  - *Third Party Implementation Staff Interviews.* The Evaluators conducted an interview with CLEAResult involved with the CISP. This interview addressed the development of the program over the PY2025 program year as well as CLEAResult's perspective on program pathways and program goals.
- *Participant Surveying*. Custom, prescriptive and direct install participants were surveyed for this evaluation effort. These surveys included net-to-gross, measure verification, and satisfaction questions. The surveys provided data for this process evaluation effort, providing participant feedback about their program participation, recommendations for program improvement, and insight into the decision-making process.

Table 5-5 summarizes the data collection for this process evaluation effort. This includes the titles, roles, and sample sizes for data collection.

Table 5-5: BHE CISP Data Collection Summary

Target	Component	Activity	n	Precision	Role
BHE Program Staff	Coordinator, Energy Efficiency	Interview	1	N/A	Energy efficiency coordinator involved in regulatory and sustainability
CLEAResult Staff	Program Portfolio Manager	Interview	1	N/A	Program manager for BHE's commercial portfolio.
Program Participants	Prescriptive and Direct Install	Participant Survey	15	N/A	Evaluators conducted a survey of customers who participated in the Black Hills Energy commercial programs to gather feedback about customers' engagement with and experience of the programs.

5.5.1.1 Commercial Staff Interview

Evaluators interviewed one Black Hills staff member and one CLEAResult staff member about the commercial programs. BHE staff included the Energy Efficiency Coordinator, and the CLEAResult staff member was the program manager for BHE's commercial portfolio.

5.5.1.1.1 Prescriptive and Direct Install

The commercial prescriptive and direct install program did not undergo any major changes in PY2025. Although there is no official trade-ally network, customers must use a registered professional for equipment installations. A CLEAResult representative installs all the direct installation measures.

5.5.1.1.2 Custom

The commercial custom program did not undergo any major changes in PY2025. Although there is no official trade-ally network, customers must use a registered professional for equipment installations.

5.5.1.2 Participant Survey Summary Results

5.5.1.2.1 Custom

Evaluators conducted a survey of customers in 2024 with low response rate; no additional surveys were conducted during 2025. Free-Ridership reviews are filled out by the implementor and approved by the evaluator for all custom projects

5.5.1.2.2 Commercial Prescriptive and Direct Install

The Evaluator administered surveys to participants in the natural gas utility prescriptive and direct install programs in November 2025 and January and February or 2026. Survey data were collected through web and phone surveys.

- **Web survey:** Respondents with available emails were sent an invitation to the survey. Non-respondents were sent up to two reminder emails.

- **Phone survey:** Some program participants did not have email addresses available in the program tracking data and were contacted by telephone. In addition, the Evaluator attempted to administer the survey by telephone to participants who received prescriptive incentives and did not respond to the email invitation.

5.5.2 Program Theory & Design

The CISP was designed to provide outreach in hard-to-reach sectors of the C&I markets. The bullets below list program activities and their expected outcomes.

- **Direct installation of high-return measures.** The CISP provides no-cost direct installation of weather stripping, low flow faucet aerators, PRSVs, and showerheads. These measures have a high return of savings relative to their cost and as such can be provided free of charge and remain cost-effective. The resulting savings are unlikely to occur absent from the program; generally, if a respondent does not already have the equipment in place, the direct install activities induce an action that was not planned. These activities are also intended to serve as an introduction to energy efficiency for the recipients, and that they will then be further interested in participating in the custom component of the program. For 2025 weather stripping was the only measure installed.
- **Energy audits to medium and large customers.** These audits are conducted by CLEAResult staff, providing recommendations for energy efficiency improvements and an audit report. These audits are intended to generate the bulk of the program savings, yielding high-return custom projects.
- **Steam system survey incentives.** These incentives defray the cost of steam system surveys for participating trade allies, allowing them to provide detailed project scoping at no upfront cost to them or to the customer.
- **Incentives for custom measures.** The CISP provides $0.75 per Therm for verified savings from custom projects ($.20 per therm in the case of Strategic Energy Management). These projects may be driven by a program-funded audit, generated by a trade ally, or be customer-directed.
- **Incentives for prescriptive measures.** This includes furnaces, water heaters, boilers, and food service equipment at fixed incentive rates.

5.5.3 Market and Outreach

Marketing and outreach for the Commercial and Industrial (C&I) Solutions program is primarily managed by the program implementer, with coordination and oversight from the utility. The implementer develops marketing materials and conducts outreach activities, while the utility reviews and approves materials to ensure alignment with corporate standards. Approval

processes are streamlined, with examples indicating same-day turnaround for marketing content.

Marketing efforts include case studies, flyers, and social media content designed to promote prescriptive and custom rebate offerings, as well as Strategic Energy Management (SEM) workshops. The implementer works closely with trade allies and contractors to disseminate these materials and encourage participation. Outreach also occurs through account managers and business development staff, who engage directly with customers and contractors in the field to promote program incentives and identify project opportunities.

Program staff noted that social media and email campaigns are effective tools for reaching customers, while in-person engagement at events and through local business networks remains an important component of outreach. The utility's communications and public relations teams also support marketing by requesting program materials for use at community events, chamber meetings, and other local gatherings. These events provide opportunities to distribute flyers and program information to potential participants.

Joint marketing efforts with SWEPCO, the primary electric utility in the region, play a significant role in outreach for C&I programs. SWEPCO operates a larger energy efficiency portfolio with a deeper marketing budget, and its campaigns often generate leads that benefit Black Hills Energy programs. Because most electric customers in Northwest Arkansas are also gas customers, joint marketing creates opportunities for customers to participate in both utilities' programs. For example, SEM workshops and check presentations are often conducted jointly, and customers receive incentives from both utilities for qualifying projects. This collaboration extends the reach of marketing efforts and helps promote comprehensive energy efficiency solutions across overlapping service territories.

Marketing for the C&I program does not appear to prioritize one pathway over another; prescriptive, custom, and SEM offerings are generally promoted together. However, staff indicated that marketing efforts may be adjusted throughout the year based on program performance and participation levels. For example, additional outreach may be directed toward specific offerings if participation is lower than expected.

5.5.3.1 Marketing Content

The Evaluator reviewed the program website and case studies available from the program website. The table below summarizes the themes.

Table 5-6: Summary of Commercial Marketing Themes

Theme	Summary	Example Phrases from Website	Case Study Examples
No-Cost Assessments & Direct Install	Promotes a simple entry path: a no-cost natural gas energy efficiency assessment, often paired with a	"No-Cost Natural Gas Energy Efficiency	"BRMC received a no-cost energy assessment and was presented with a list of

Theme	Summary	Example Phrases from Website	Case Study Examples
	Direct Install of basic measures to jump-start savings.	Assessment" / "Direct Install Program… no-cost equipment measures are available…"	recommended improvements."
Prescriptive Rebates for Common Equipment	Highlights straightforward rebates on water heating, furnaces, cooking equipment and boilers to enable fast, predictable paybacks.	"Tankless Water Heater… $500" / "Natural Gas Forced-Air Furnace… $500" / "High Efficiency Combi Oven… $1,500"	"$14,850 in rebates… 27 furnaces (≥95% AFUE) installed at Village on the Creeks."
Custom Incentives for Large/Complex Projects	Positions the C&I Solutions Program as a partner for custom, engineered projects with tailored incentives.	"Black Hills Energy will provide cash and non-cash incentives for… custom natural gas energy efficiency projects."	"Pinnacle Foods… $323,068 incentives; 604,418 therms saved."
Quantified Energy Savings	Emphasizes measurable outcomes (therms saved, incentive dollars) to demonstrate ROI and program credibility.	"Example rebates…" paired with program descriptions and outcomes.	"Village… 2,910 therms saved annually; $1,600 estimated annual energy cost savings."
Operations, Comfort & Reliability	Frames efficiency as improving occupant comfort and operational reliability alongside cost savings.	"Reducing your business's energy costs now means bottom line savings for the future."	"Increased savings means increased comfort for every employee and patient." "Provide a warm and welcoming space for employees and customers alike."
Long-Term Partnership Positioning	Communicates continuity of support and multi-year engagement with facilities.	Program language stresses collaboration with energy engineers and facility staff.	"For nearly a decade, Black Hills Energy Arkansas has worked with Pinnacle Foods…"
Segment-Specific Targeting	Distinct pages and offers for Small Business, Commercial & Industrial, and Government entities.	"Programs, Services & Resources for Small Businesses" / "for Commercial and Industrial Businesses" / "Government Entities"	Case studies span multi-tenant retail/office (Village), industrial food processing (Pinnacle), and healthcare (BRMC).
Clear Process & Calls-to-Action	Encourages engagement via scheduling assessments, contacting	"Call… to schedule a natural gas	"Call 855-350-1563 or visit energy-readyarkansas.com…"

Theme	Summary	Example Phrases from Website	Case Study Examples
	program engineers, and applying for rebates.	energy efficiency assessment"	

5.5.4 Contractors and Trade Allies

The program maintains a network of trade allies and certified contractors eligible to perform work under the program. Customers can select contractors from a list posted on the program website. Trade allies must meet program requirements and follow established protocols for documentation and installation. While many trade allies have participated for multiple years, program staff indicated that recruitment is ongoing to maintain adequate coverage and replace underperforming contractors. Recruitment efforts include outreach to contractors with experience in similar programs offered by other utilities, and some new trade allies have approached the program directly to express interest in participation.

For prescriptive rebates, contractors install qualifying equipment such as high-efficiency water heating systems and commercial cooking equipment. For custom projects, contractors work with program staff to develop project plans for complex installations. These projects typically involve larger facilities and require detailed planning to implement.

Contractors submit project documentation through the program's data system, which includes invoices, technical details, and verification of installed measures. The implementer reviews submissions for accuracy and completeness before approving payments. Payments are processed through the utility's financial system, and the implementer provides monthly progress reports and budget reconciliations to the utility.

Quality assurance for C&I projects includes review of documentation and, in some cases, site visits for verification.

5.5.5 Program Administration

The CISP is overseen by the Manager of Energy Efficiency at BHE. This manager's responsibilities primarily include interfacing with CLEAResult, who directly implements the program. Other activities by this manager include providing updated customer lists to CLEAResult to better-facilitate their implementation, review of custom applications, and at times assisting CLEAResult in customer interactions.

For CLEAResult, the program overall is led by the Program Portfolio Manager, who oversees the implementation of the CISP. This manager handles high-level issues across the programs, including regulatory compliance and reporting, as well as some level of intervention on the larger projects.

Much of the day-to-day activity is handled by the Program Portfolio Manager, who reviews direct install and audit activity, and coordinates with the Evaluators in facilitating EM&V activities.

Audit activities are run by engineering staff at CLEAResult. Titles for staff that engage in this activity may vary depending upon the complexity of the facility[14]. These engineers conduct the energy audits. Additionally, their responsibilities include development of the audit report and recommendations. The Direct Install Program Manager oversees crews that perform direct installation. Further, the Account Manager follows up with customers to gauge interest in completing a project.

There were no major changes to program design in 2025.

5.5.6 Program Implementation and Delivery

CLEAResult provides the Evaluators with updates regarding their pipeline of custom projects. These updates listed the full scope of facility audits, expected savings with associated recommended measures, and what stage the project was in. These stages are:

- *Pipeline*. Projects listed as Pipeline are in the first phase of involvement in the CISP. These participants are customers that have discussed the possibility of a facility audit and indicated interest to CLEAResult. These facilities will receive a Pre-Inspection at a later date and have not signed a project application.
- *Pre-Inspected*. Projects listed as Pre-Inspected are in the phase where CLEAResult has completed a facility audit. During these audits, CLEAResult conducts a comprehensive review of the facility's systems and operational practices. On this basis, CLEAResult then formulates initial recommendations for energy efficiency improvements. These are discussed with facility staff during the audit in order to address the feasibility of recommended measures.
- *Pre-Installation Calculation*. At this phase, CLEAResult is compiling high-level data needed to provide an initial estimate of energy savings. This step of the process compiles the information collected in the site audit, which is then used in the development of an Audit Report.

[14] Examples include (but are not limited to) Energy Engineer, Senior Energy Engineer, and Senior Program Consultant.

- *Audit Report Complete*. In this phase, feasible measures from the Pre-Inspection are compiled into a formal audit report, providing the participant with further detail as to the scope of the project, initial savings estimates, associated incentives, expected project costs, and the payback period of the measure. Additionally, should the measure provide operational benefits to the facility (such as improved comfort or product reliability), these are included as well to provide the customer with a full scope of the benefits of the project. This report is provided at no cost to the participant.
- *Project Application*. At this point, the customer has informed CLEAResult and BHE that they intend to install a program-recommended measure. When this occurs, CLEAResult then involves the Evaluators. CLEAResult provides the Evaluators with an M&V plan for the facility, detailing the project scope and proposed data collection and analysis. The Evaluators' engineering staff then reviews the M&V plan and makes recommendations for any changes needed. A project application is then signed, in which the reserved incentive amount is detailed and reflects edits made by the Evaluators.
- *Post-Inspection*. This phase marks the completion of post-inspection for an installed measure. CLEAResult has, at this point, post-inspected a measure and revised savings accordingly if the installed project differs from the proposed project. In some rare instances, the participant may then be paid out for 60% of the reserved incentive, with the remainder held in reserve to true-up the final incentive amount after M&V is completed. There are times when this may occur for a project with an M&V period at extends across the calendar year.
- *M&V*. M&V marks the phase when post-installation data is collected for an installed project to allow for calculation of a final savings estimate, from which the remaining incentive to the customer is determined. There are some measures that do not require post-retrofit data; for such measures, the M&V phase is short and requires completion of calculations based upon inputs verified during the Post-Inspection. For facilities that require post-installation data, the data collection period can range from 30 days to one year.
- *Complete*. Facilities marked as Complete have received their full incentive.

The process flow for the CISP is displayed in the figure below.

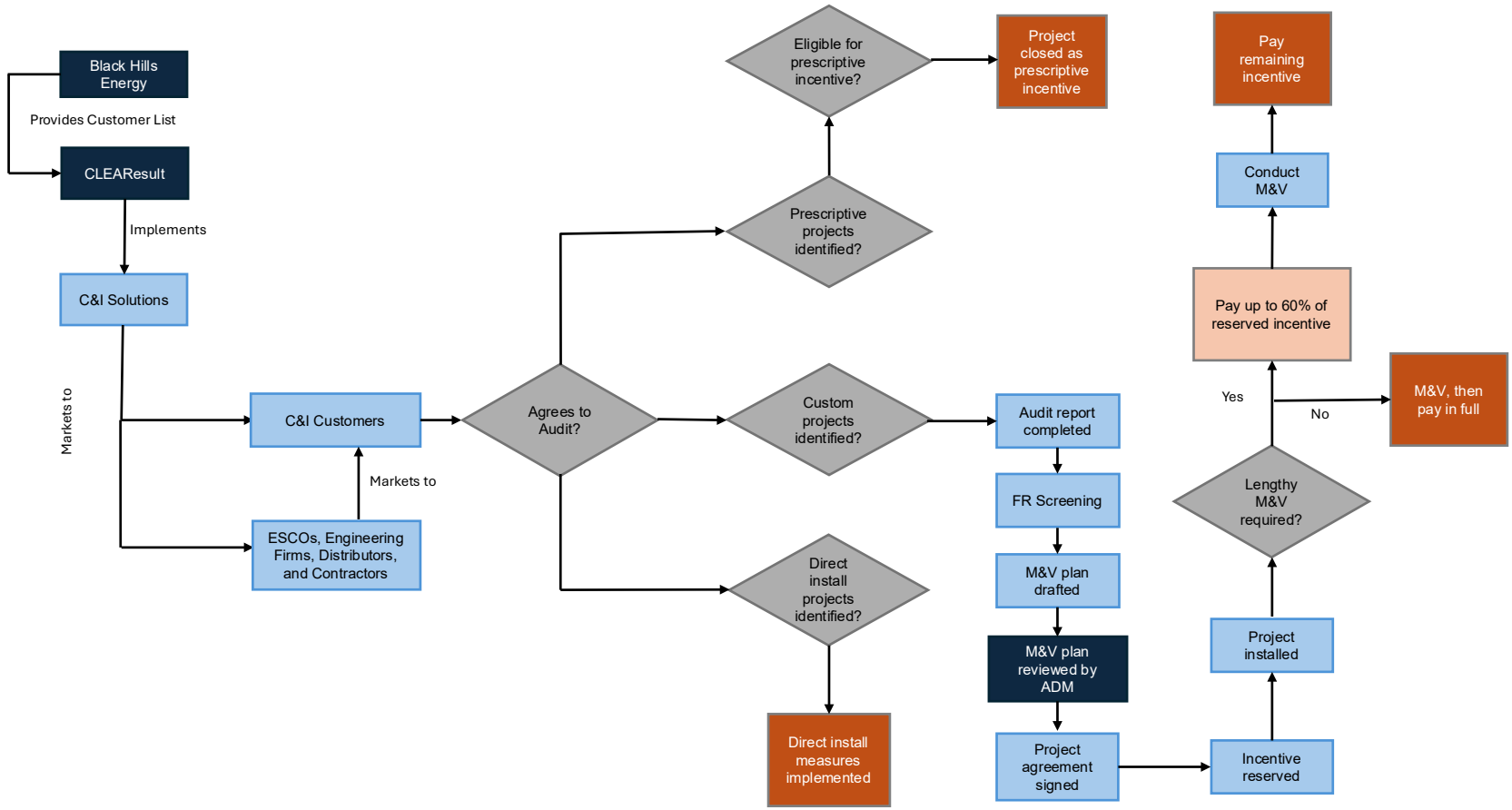


Figure 5-4: C&I Solutions Process Flow

5.6 CISP Impact Evaluation

The impact evaluation of the CISP included the following:

- *Custom Project M&V.* The Evaluators conducted project-specific M&V on a census of custom projects completed through the CISP. Each project included an M&V plan and a project-specific report. The reports are provided in Appendix A.
- *Free-Ridership Estimation.* For 2025 evaluators performed a participant survey for Prescriptive and Direct Install measures. There were 8 surveys completed for Prescriptive and 7 surveys completed for Direct Install.

5.6.1 Impact Evaluation

5.6.1.1 Direct Install Free-Ridership

For Direct Install, the Evaluators applied findings for in-service rates and NTGRs from survey participants and conducted a database review of deemed savings calculations.

In prior evaluations, the methodology for DI Free-Ridership was focused on the participants' past experiences with the appropriate equipment and whether they had organizational policies in place to install such equipment. Respondents were asked:

Q22 Before participating in the C&I Solutions Program, did you have plans to install [LIST MEASURE]?

Q23 Would you have gone ahead with this planned project even if you had not participated in the program?

Twenty percent of respondents stated that they were aware of the savings potential from such equipment.

Q27 If the [PROGRAM] program representative had not recommended installing the [PROJECT_DESCRIPTION], how likely is it that you would have installed it anyway?

1. Definitely would have installed
2. Probably would have installed
3. Probably would not have installed
4. Definitely would not have installed
98. Don't know

These are combined into the following factors:

A. **Prior Plans:** If the respondent indicated plans to install prior to participation, they receive a "1" for this metric.

B. **Installation counterfactual:** If they respondent states that they would have gone ahead with this project without the program, they receive a "1" for this factor.

C. **Program Influence:** If a respondent states that they "Definitely would have" or "probably would have" installed this equipment without the program, they receive a "1" for this factor.

To be found a free rider, a respondent must receive a "1" score for all three factors. The direct install pathway was found to have 100% NTGR for 2025.

5.6.1.2 CISP Prescriptive Projects Impact Evaluation

The CISP processed 42 prescriptive rebates in PY2025. These projects included:

- 13 water heaters;
- 9 fryers;
- 13 furnaces;
- 4 Boilers;
- 1 combination ovens; and
- 2 convection ovens

The Evaluators applied TRM V10.0 protocols and calculated savings by measure. Savings are summarized in Table 5-7.

Table 5-7: BHE CISP Prescriptive Project Summary

Measure	Ex Ante Gross Savings	Ex Post Gross Savings	Gross Realization Rate	Gross Lifetime Savings
Boiler Replacement	19,756	19,756	100%	395,120
Combination Oven	518	558	108%	6,693
Convection Oven	899	928	103%	11,141
Fryer	17,765	17,939	101%	215,272
Natural Gas Forced-Air Furnace	5,039	5,031	100%	100,614
Tankless Water Heater	19,924	15,672	79%	313,441
Total	**63,900**	**59,884**	**94%**	**1,042,280**

Causes for revision in savings included:

- **Water heaters:** The Evaluators cannot discern the source of the discrepancy, other than it is derived from the DHW load lookup value (this being the only input that can affect savings to this magnitude).

- **Combination and Convection ovens:** The Evaluators cannot discern the source of the discrepancy.

5.6.1.3 CISP Custom Project Impact Evaluation

The Evaluators opted for a census of custom projects in order to capture the full variability associated with these projects; the measures are often unique with idiosyncratic issues, and as such extrapolation from the M&V of other projects would be inappropriate. Table 5-8 summarizes the custom projects completed and evaluated in PY2025. "Ex Ante Savings" is the value calculated by CLEAResult after M&V. "Ex Post Savings" is the savings calculation completed by the Evaluators.

Table 5-8: BHE CISP Custom Project Summary

Facility Type	Project ID	Measure	Ex Ante Savings	Ex Post Savings	M&V Protocol
Food Processing	EA-0003242061	Steam Trap Replacement	188,958	188,958	Deemed, Option A
Industrial	EA-0004700287	Steam Trap Replacement Steam Leak Repair	227,889	227,889	Deemed, Option A
Food Processing	EA-0004701529	Thermal Oxidizer	179,252	179,252	Option A
Medical	EA-0005586912	Steam Trap Replacement Steam Leak Repair	9,219	9,275	Deemed, Option A
Retail	EA-0007522681	HVAC Controls	6,481	6,481	Deemed, Option A
University	EA-0008460633	Boiler Replacement	15,352	15,352	Deemed, Option A
Total			**627,151**	**627,207**	

Table 5-9: BHE CISP SEM Project Summary

Facility Type	Project ID	Measure	Ex Ante Savings	Ex Post Savings	M&V Protocol
Food Processing	EA-0006631854	SEM	39,184	39,184	Option A
Total			**39,184**	**39,184**	

5.6.1.4 Custom Free-Ridership

The Evaluators conducted interviews with two decision-makers responsible for the completed custom projects in the CISP program in PY2025. Given the small number of interviews, reporting data in terms of percent response by question does not adequately present the

participant response to the program. The methodology used by the Evaluators in determining the free ridership rates for custom projects examined the following factors:

- *Knowledge gained from program outreach*. If the project originated from program outreach (which may include program-sponsored training courses or facility audits), the respondent is asked if they had prior knowledge of the energy-saving opportunity recommended and eventually installed. If the respondent learned of the measure through the program audit or program–sponsored training, then they are considered to not have been free riders, in that in the absence of the program, the likelihood of the facility receiving a similarly detailed audit are low. Questions used in evaluating this criterion include:

FI-1 Prior to participating in the C&I Solutions Program, did your organization install any equipment similar to [EQUIPMENT/MEASURE] at your facility without financial incentives or rebates?

- ❑ Yes
- ❑ No

FI-1a Did you learn of this measure through your participation in the Commercial & Industrial Solutions Program?

- ❑ Yes [IF YES, ASK FI-1b] Do you recall how you learned of the measure?
- ❑ No

- *Prior plans for a similar measure*. This component is examined in instances where the respondent knew of the measure prior to receiving and technical assistance through the C&I Solutions Program. Respondents are asked a series of questions related to whether they had plans for installing this equipment prior to having learned of the available financial incentives from the C&I Solutions program. Questions used in this component include:

FI-1 Prior to participating in the C&I Solutions Program, did your organization install any equipment similar to [EQUIPMENT/MEASURE] at your facility without financial incentives or rebates?

- ❑ Yes
- ❑ No

FI-2 Did you have plans to install the [EQUIPMENT/MEASURE] that was upgrades through C&I Solutions before participating in the program?

- ❑ Yes
- ❑ No

If Yes: FI-2a Would you have gone ahead with this planned installation without the program rebates?

❑ Yes
❑ No

FI-2b Would this installation have included the same equipment without the program rebates?

❑ Yes
❑ No

- *Analysis of measure payback*. Respondents are asked to indicate what their required payback period is for energy efficiency improvements. This value is compared against the measure payback with and without the program incentive. If the financial incentive brings the project from over the threshold to under the threshold, then the project is considered to have been sufficiently influenced by the program incentive. This includes the following questions:

DM-5 Does your organization require a specific payback period in order to implement energy efficiency improvements?

❑ Yes [ASK DM-5A]
❑ No [SKIP TO DM-6]
❑ Don't know [DON'T READ]

DM-5a What **payback** *length of time* do you normally require in order to consider an energy investment cost effective?

____ Years

❑ Don't know

The stated payback requirement by the respondent is then compared against the payback of the recommended project with and without the program incentive.

- *Modification of the project*. Respondents are asked a series of questions addressing whether they modified the project as a result of their program participation. This includes changes in equipment quantity and/or efficiency level (where appropriate for the measure) and a change in project timing. Questions used to analyze this component include:

FI-5 If the C&I Solutions through C&I Solutions Program were not available, would you have installed the…

❑ Same quantity of energy efficient equipment,
❑ A lower quantity, or
❑ No energy efficient equipment at all?

[IF FI-5 = "Lower Quantity"]: FI-5a: By percentage, how much lower?

FI-6 If the C&I Solutions program were not available, would you have installed …

❑ The same equipment with the same efficiency level,

- ❑ The same equipment with a lower energy efficiency level, but still above minimum code, or
- ❑ standard efficiency equipment?

[IF FI-6 = "Lower efficiency level, but still above minimum code"]: FI-6a: By percentage, how much lower?

FI-7 Did the C&I Solutions rebate allow you to install [EQUIPMENT/MESURE] sooner than you otherwise would have?

- ❑ Yes
- ❑ No

IF YES: FI-7a When would you otherwise have installed the equipment? (READ IF NEEDED)

- ❑ In less than 6 months later
- ❑ In 6-12 months later
- ❑ In 1-2 years later
- ❑ In 3-5 years later
- ❑ In more than 5 years later
- ❑ No, did not affect timing of purchase and installation

The scoring mechanism for custom projects is presented in Figure 5-5.

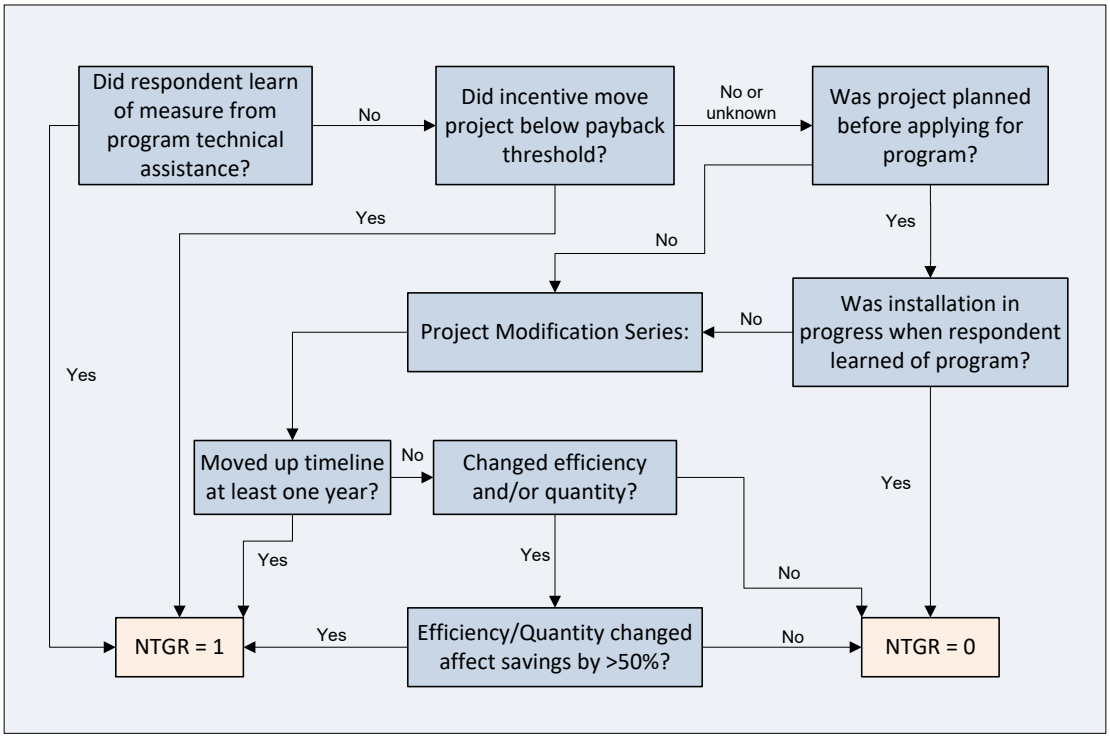


Figure 5-5: CISP Custom Project Free-Ridership Diagram

The resulting NTGRs by project are presented in Table 5-10.

Table 5-10: CISP Custom Project Free-Ridership Results

Facility Type	Project ID	Measure	Ex Post Savings	NTGR
Food Processing	EA-0003242061	Steam Trap Replacement	188,958	100.0%
Industrial	EA-0004700287	Steam Trap Replacement Steam Leak Repair	227,889	100.0%
Food Processing	EA-0004701529	Thermal Oxidizer	179,252	100.0%
Medical	EA-0005586912	Steam Trap Replacement Steam Leak Repair	9,275	100.0%
Retail	EA-0007522681	DCV	6,481	100.0%
University	EA-0008460633	Boiler Replacement	15,352	100.0%
Total			**627,207**	**100.0%**

5.7 Participant Spillover

Participant spillover is defined as savings from program participants that was not incentivized by the BHE programs. During participant surveying, both DI and Custom participants are asked questions addressing whether their participation had led to the installation of equipment that was not rebated by BHE. The estimated savings from these projects are tallied and added to the program savings as Participant Spillover.

OS-3 Has your organization's participation in the C&I Solutions Program led you to buy any energy efficient equipment for which you did not apply for a financial incentive?

- ❑ Yes

  If Yes: OS-3a What type of equipment? _____
- ❑ No
- ❑ Don't know [DON'T READ]

The Evaluators did not identify any participant spillover.

5.8 Summary of Non-Energy Benefits

Table 5-11 summarizes the non-energy benefits by measure that are credited to the CISP.

Table 5-11: CISP Non-Energy Benefits

Measure	Electric Savings	Water Savings	Propane Savings	Avoided Replacement Cost
Steam Leak Repair		✓		
Condensate Return		✓		
Weather Stripping	✓			
Tankless Water Heaters				✓

5.9 Ex Post Savings

Table 5-12 presents the gross savings results of the evaluation of the PY2025 CISP. Total gross savings summarizes the savings calculations performed by TRM protocols for direct install measures as well as the project-specific M&V of custom measures.

Table 5-12: CISP Ex Post Therms Savings

Measure Category	Ex Ante Therms Savings	Ex Post Therms Savings	Gross Realization Rate	EUL	Lifetime Therms Savings
Direct Install	116,249	116,253	100.0%	11.00	1,278,782
Prescriptive	63,900	59,884	93.7%	17.40	1,042,280
Custom	666,335	666,391	100.0%	9.64	6,424,702
Total	**846,484**	**842,528**	**99.5%**	**10.38**	**8,745,764**

Net savings for the CISP were calculated using survey data of direct install and custom participants. The resulting net savings are presented in Table 5-13.

Table 5-13: CISP Net Savings Summary

Measure Category	Free-Ridership Rate		Net Annual Savings		Net Realization Rate	Net Lifetime Therms Savings
	Ex Ante	Ex Post	Ex Ante	Ex Post		
Direct Install	3.85%	0.00%	111,773	116,253	100.0%	1,278,782
Prescriptive	15.89%	7.73%	53,746	55,254	92.3%	961,685
Custom	0.00%	0.00%	666,335	666,391	100.0%	6,424,702
Total	**1.73%**	**0.55%**	**831,854**	**837,897**	**100.7%**	**8,665,169**

The Evaluators applied TRM V10.0 Volume 1, Section II, Protocol L1 to calculated water savings from faucet aerators and low-flow showerheads. Avoided costs for water savings is calculated using TRM V10.0 Volume 1, Section II, Protocol L2. The Evaluators relied on the TRM-calculated marginal water rates. The corrected marginal water rates below are reported both for PY2025.

Table 5-14: Total Marginal Water Rates

Customer Class	Marginal Water Rates (per 1,000 gallons)	Marginal Sewage Rates (per 1,000 gallons)	Total Combined Marginal Water Rates (per 1,000 gallons)
Residential	$4.09	$5.75	$9.84
Commercial	$3.71	$5.86	$9.57
Average Cost $/Gallon	$3.90	$5.81	$9.71

Table 5-15 summarizes water savings from the CISP.

Table 5-15: Commercial & Industrial Solutions Ex Post Net Water Savings

Measure Category	Net Annual Water Saving (Gallons)	Lifetime Net Water Savings (Gallons)
Custom	507,787	5,077,866
Direct Install	0	0
Prescriptive	0	0
Total	**507,787**	**5,077,866**

5.10 Avoided & Deferred Replacement Cost

Commercial tankless water heaters have an EUL of 20 years. The baseline system has an EUL of 15 years. This makes the systems eligible for the Avoided Replacement Cost Non-Energy Benefit. This NEB was calculated using the IEM calculation tool[15]. The input assumptions were as follows:

- Full installed cost of tankless system: $1,219
- Full installed cost of baseline storage tank system: $614
- Nominal Discount Rate: 6.61%
- Inflation Rate: 2.50%
- Real Discount Rate: 4.01%

The resulting gross avoided replacement cost is $136.37 per unit. The calculator for this is provided in Appendix B of this report. For individual line items in the BHE program, this value was scaled by the appropriate NTGR.

There were 66 commercial tankless systems rebated in PY2025, and the resulting ARC value is $8,304.68.

5.11Conclusions

The program met savings goals and was highly cost-effective.	Savings increased by 29.5% compared to PY2024, and the program met 135.1% of its net savings goal
	Participation increased in the Prescriptive Pathway for this Year. Savings by year from this pathway for the last three years were: • PY2023: 26,444 • PY2024: 30,065 • PY2025: 55,254

[15] Protocol L Avoided & Deferred Replacement Cost_08_31_16.xlsx

NEBs remain volatile but significant.	Water savings Decreased significantly compared to PY2024. Savings by year from this pathway for the program cycle were: • PY2023: 1,190,120 • PY2024: 5,062,063 • PY2025: 507,787 This is a volatile value year-over-year as it is heavily driven by the relative prevalence of custom projects that save water.
SEM dropped in prevalence in the Custom Pathway.	SEM constituted 6% of CISP Custom Pathway savings in PY2025, down from 23% in PY2024.

5.12 Key Findings and Recommendations

Below are the key findings and recommendations for the PY2025 evaluation of the Commercial and Industrial Solutions Program.

There were no significant changes to the Commercial and Industrial Solutions Program in PY2025. Interviews did not identify major structural changes to the Commercial & Industrial Solutions program during the current year. Staff noted that program participation patterns can shift significantly from year to year due to the nature of large custom projects, citing that custom incentives were fully subscribed very early in the year because of a single high-savings project. Staff also discussed the expansion of Strategic Energy Management (SEM) in recent years, noting that it has been operating for approximately four to five years and includes joint activities with the overlapping electric utility.

6 Income Qualified Program

The Income Qualified Program (IQP) is designed to comply with Act 1102. IQP is an extension of the Consistent Weatherization Approach (CWA), and it is targeted to customers who meet the income eligibility requirements of the Low Income Home Energy Assistance Program (LIHEAP) as well as customers who are 65 years or older.

The program provides energy assessments, along with direct installation of low-cost measures and pre-qualification for building envelope improvements.

- Direct install measures include:
- Faucet aerators; and
- Low flow showerheads.

Weatherization measures include:

- Air infiltration;
- Duct sealing; and
- Ceiling insulation.

Additionally, the program offers a maximum of $500 per participating residence to meet the health code standards required to weatherize the residence. Health and safety funding may be used to provide carbon monoxide detectors, smoke detectors, or other required measures.

6.1 Program Overview

Table 6-1 summarizes the historical performance of IQP.

Table 6-1: IQP & LIPP Historical Performance against Goals

Program Year	# Participants		Budget			Net Therms		
	Actual	Goal	Spent	Allocated	%	Achieved	Goal	%
2020	41	123	$80,675	$81,904	98.5%	21,782	19,596	111.2%
2021	39	123	$76,619	$81,904	93.5%	25,244	19,596	128.8%
2022	40	123	$100,189	$83,696	119.7%	31,698	19,596	161.8%
2023	40	123	$88,790	$83,696	106.1%	24,150	19,596	123.2%
2024	97	68	$175,707	$216,111	81.3%	51,497	51,718	99.6%
2025	133	68	$197,752	$219,910	89.9%	51,192	51,718	99.0%

6.2 Participation Summary

The IQP had 133 participants in PY2025. Figure 6-1 summarizes savings by measure for PY2025.

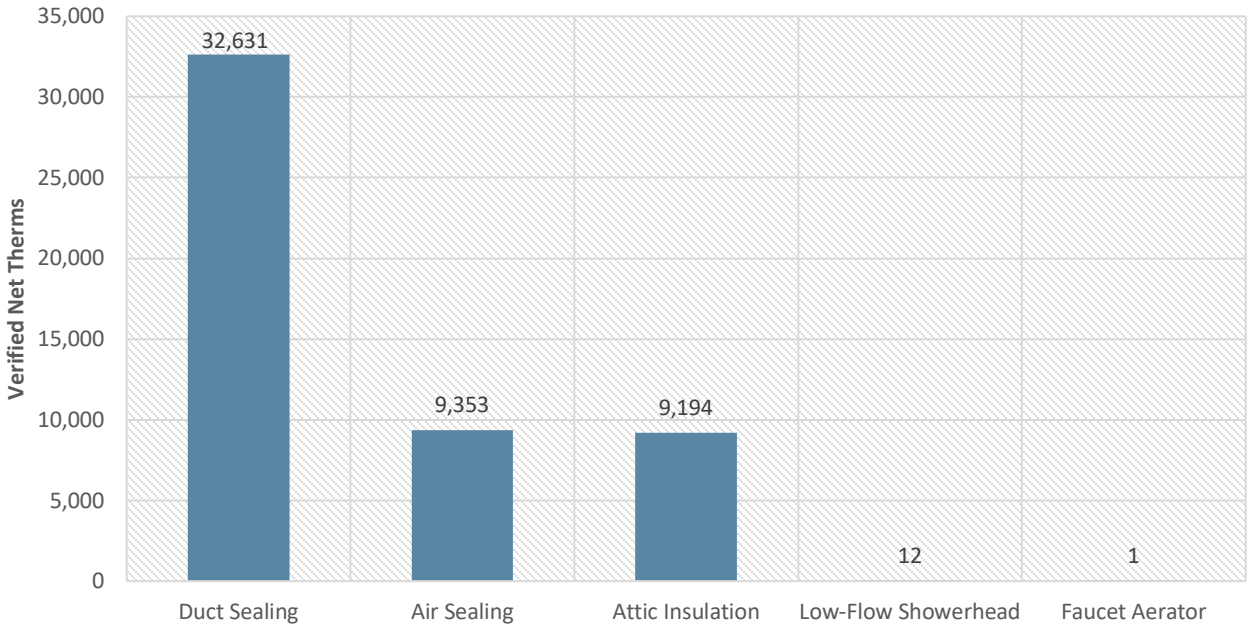


Figure 6-1: Program Savings Share by Measure

In addition, incentives were provided for 121 assessments and health and safety spending at 77 of 133 participant homes.

6.3 Program Theory & Design

The program follows the design of HESP and includes enhanced health and safety measures.

6.3.1 Program Administration

The IQP is overseen by the Manager of Energy Efficiency at BHE. This manager's responsibilities primarily include interfacing with CLEAResult, who directly implements the program. Other activities by this manager include providing updated customer lists to CLEAResult to better facilitate their implementation, participation in outreach events, and at times assisting CLEAResult in customer interactions.

For CLEAResult, the roles and responsibilities of program staff are as follows:

- **Program Manager.** The Program Manager oversees day-to-day activities, supervises program staff, and handles complaints from customers or contractors.
- **Program Specialist.** This staff member coordinates tracking data, develops samples for quality assurance inspection, and supports reporting and invoicing requirements.
- **Field Specialist.** This staff member oversees pre assessments.
- **QA Verification Specialist.** The QA Verification Specialist conducts post inspections and communicates inspection results to contractors.

6.3.2 Program Implementation & Delivery

The key components of IQP implementation are as follows:

- **Customer verification**: Potential customers interested in the program are confirmed as a BHE customer by program staff.
- **A comprehensive assessment of the customer's home:** Once the customer is prequalified by the contractor as residing in a home that fits the program requirements, the contractor schedules a comprehensive audit of the home and develops a recommended action plan of weatherization upgrades for the participant.
- **Direct installation of immediate energy savings measures:** While performing the comprehensive audit, the contractor installs energy efficient measures throughout the home, including low-flow aerators and showerheads.
- **Installation of a set of weatherization and H&S measures:** The contractor and customer will decide on what upgrades will be undertaken for the home. Based on review of the plan, the customer and contractor will develop an installation plan, and upgrades.

6.3.3 Marketing

Marketing for the Income Qualified Program follows a similar structure to the Home Energy Savings pathway but includes additional targeted outreach efforts. The program implementer manages the marketing budget and develops materials such as social media content, flyers, and case studies. These materials are reviewed and approved by the utility before deployment, and the utility's communications team provides final sign-off to ensure consistency with corporate standards. Approval timelines are generally short, with recent examples indicating same-day turnaround.

While marketing for all residential programs begins with a consistent approach, the Income Qualified Program received additional emphasis when it transitioned from a pilot to a full program in the current three-year cycle. Program staff noted that extra efforts were made to ensure customers were aware of the new offering and understood its benefits.

A key distinction for the Income Qualified Program is the involvement of the utility's customer assistance team. This team actively promotes the program by working with customers who qualify for the Low Income Home Energy Assistance Program (LIHEAP). Outreach occurs during application processes and at community events, where staff provide program information and assist customers in completing eligibility documentation. These activities supplement the implementer's marketing efforts and help reach customers who may not engage through traditional channels.

Trade allies also play a role in promoting the program, similar to the Home Energy Savings pathway, by marketing services through their own networks and social media platforms.

Additionally, the implementer supports these efforts by providing marketing materials that trade allies can use in their outreach.

6.3.4 Program Contractors

Contractor roles for the Income Qualified Program follow the same structure and processes as the Home Energy Savings pathway. Trade allies conduct in-home assessments, install weatherization measures such as air sealing, duct sealing, and attic insulation, and submit documentation through the program's data management system. Training and certification requirements, including Building Performance Institute (BPI) certification for crew leads, and quality control procedures are consistent with those used for Home Energy Savings.

The primary difference is in customer eligibility and scope of work. Income Qualified participants must meet Low Income Home Energy Assistance Program (LIHEAP) requirements or be 65 years or older, and the program includes an additional health and safety allowance of up to $500 for measures such as carbon monoxide detectors and smoke alarms. These exceptions are integrated into the same contractor workflow and documentation process as the Home Energy Savings pathway.

6.3.5 CWA Metrics Summary

This section presents the required metrics for BHE's IQP program. Though not explicitly required under Act 1102, the Evaluators have provided this for the purpose of comparability to the HES Pathway.

Table 6-2: CWA Required Process Evaluation Metrics

Metric	Value
Program Name	Income Qualified Program
CWA Implementation	The CWA is implemented using a third-party contractor (CLEAResult) with a network of pre-approved trade allies that market the program. The program coordinates with SWEPCO and Entergy
Total Audits Completed	121
Total Submitted Projects	133 homes, 633 measures
Conversion Rate	109.9%
Measures installed per-project	Energy-saving: 1.59 Health & Safety (no energy savings): 2.25
Cost per participant	No customer co-pay. BHE paid $824.50/home
Percent of contractors promoting program	100%

** The conversion rate is defined as the ratio between the number of unique jobs completed during the Program Year divided by the number of audits completed during the Program Year (jobs/audits).*

Table 6-3: IQP Alignment with CWA Requirements

Requirement	Alignment with Requirement	Percent of Participants Receiving
Includes Applicable DI Measures	Yes	1.50%
Aerators	Yes	0.75%
Air Purifier (H&S)	Yes	50.38%
Showerheads	Yes	0.75%
Smart Thermostat	Yes	0%
Efficient lighting	Yes	N/A
Smart strips	Yes	N/A
Prequalifies homes based on year of construction or energy costs	Yes, the customer must have had a bill in the last twelve months that exceeded. Five cents per square foot or the home's age is 10 years or greater.	Not in tracking data
TRC is used to assess program cost-effectiveness	Yes	N/A
Measures screened using SIR or comparable metric	Program uses TRC	N/A
Includes Core No Cost Measures	Yes	100.00%
Audit (walk through)	Yes	90.98%
Attic insulation	Yes	35.34%
Duct sealing	Yes	57.14%
Air infiltration reduction	Yes	58.65%
Safety testing and/or measures	Yes	57.89%
Offers other utility measures	Yes	N/A
Contractors are certified BPI Building Analyst or RESNET HERS Rater	Yes, for duct sealing, air infiltration, and assessments. Insulation requires Arkansas Home Improvement Specialty License.	N/A

Figure 6-2 summarizes expenditures per-home by measure group. Overall spending per home decreased by 34.7% from PY2024 to PY2025, and H&S per home declined from $291 to $187.

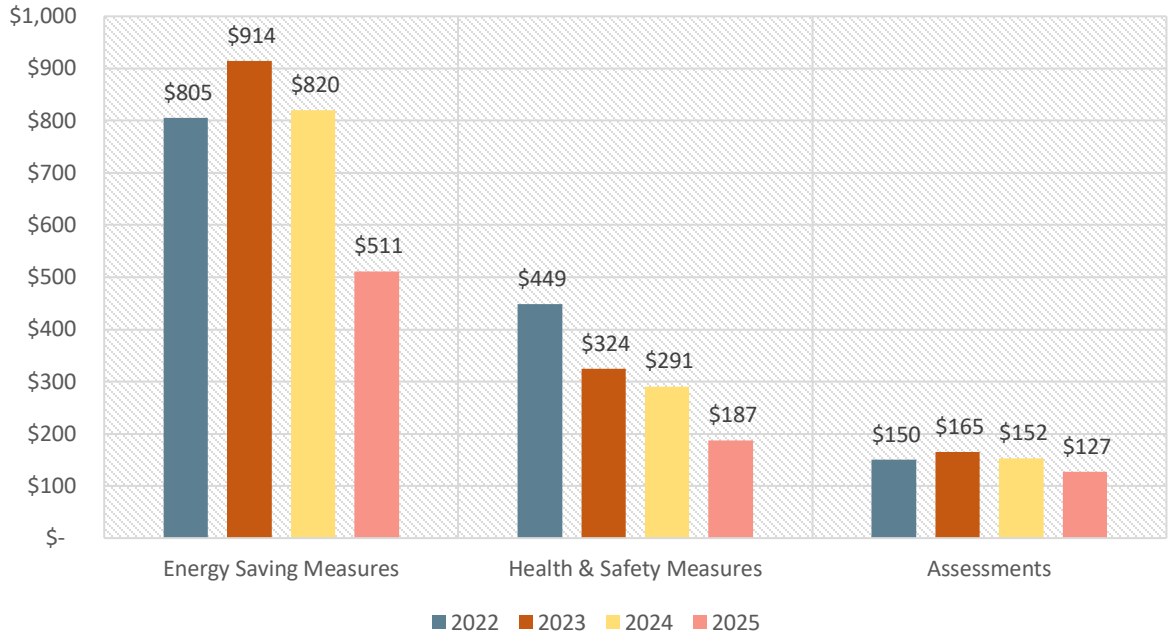


Figure 6-2: IQP Spending Per-Home

6.3.6 Act 1102 Eligibility Summary

Figure 6-3 summarizes the extent to which IQP participants were age-eligible, income-eligible or eligible on both criteria (as a cross-tabulation of the first two categories).

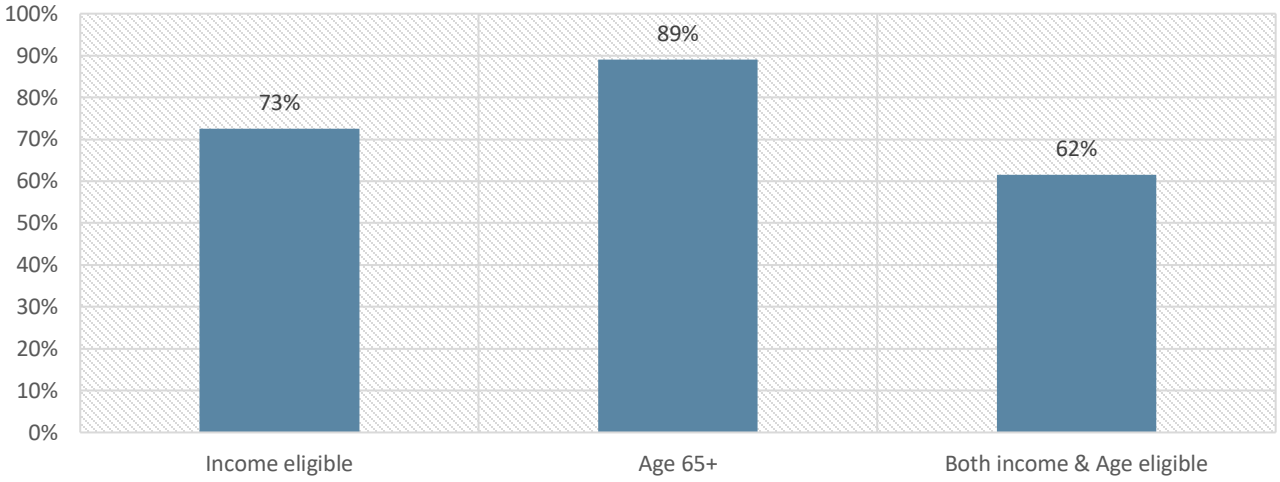


Figure 6-3: BHE IQP Act 1102 Eligibility Summary

6.3.7 Health and Safety Measures

Act 1102 specifies required spending on health and safety improvement in IQP homes. For 2025 the following H&S measures were installed:

- Air Purifier
- Air Cycler Fan Controller
- Clean Dryer Vent from Dryer to termination
- New Bath Fan with Venting to Outside
- Venting for Existing Bath Fan
- CO Detectors
- Smoke Detectors
- Plumbing Services
- Electrical Services
- Other

Figure 6-4 summarizes H&S measure spending and percent of homes receiving each measure.

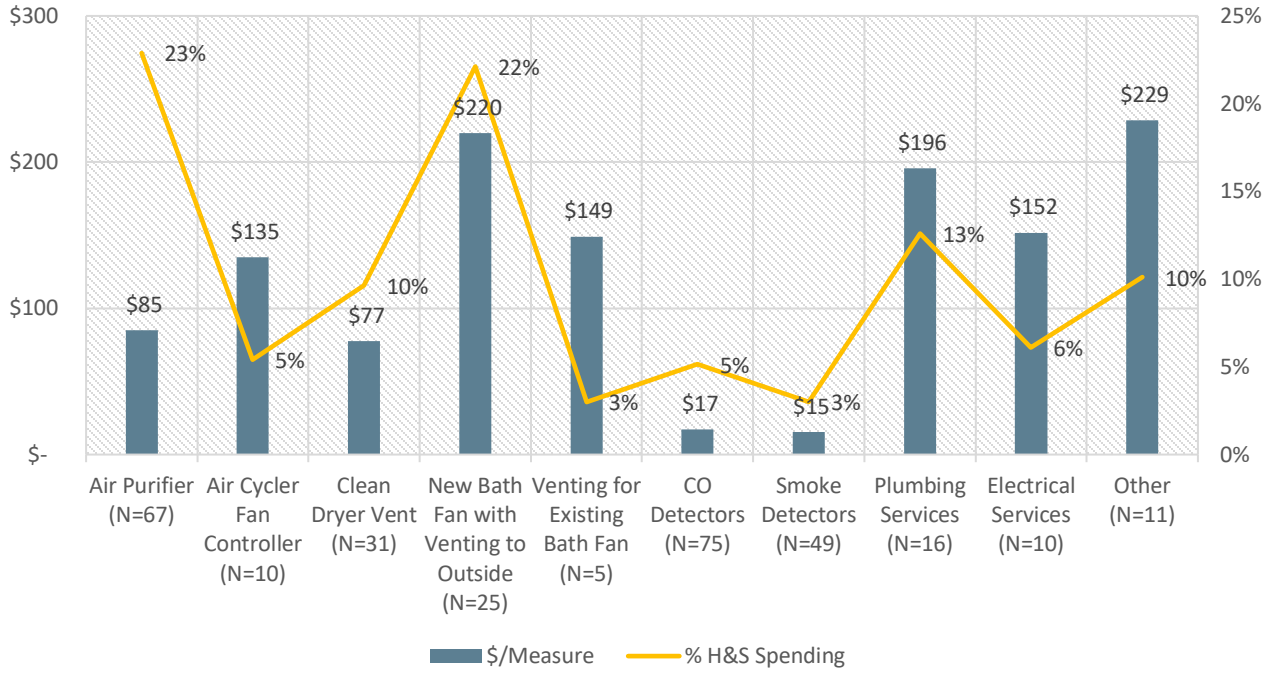


Figure 6-4: Summary of H&S Measure Spending

6.4 Process Evaluation

Table 6-4 and Table 6-5 summarize the Evaluators' review of the IQP in comparison to TRM V10.0 Protocol C for timing and conditions of conducting a process evaluation.

Table 6-4: Determining Appropriate Timing to Conduct a Process Evaluation

Component	Determination
New and Innovative Components	No. The program is implemented in the same manner as in PY2024.
No Previous Process Evaluation	No. The program received a process evaluation in PY2020 and PY2021.
New Vendor or Contractor	No. The program is still implemented by CLEAResult.

Table 6-5: Determining Appropriate Conditions to Conduct a Process Evaluation

Component	Determination
Are program impacts lower or slower than expected?	No. The program met savings goals in PY2024.
Are the educational or informational goals not meeting program goals?	No. The achieved educational goals in PY2024.
Are the participation rates lower or slower than expected?	No. The achieved participation goals in PY2024.
Are the program's operational or management structure slow to get up and running or not meeting program administrative needs?	No. Administration has been effective, providing both energy efficiency and health & safety measures.
Is the program's cost-effectiveness less than expected?	No. Cost-effectiveness exceeded plan expectations.
Do participants report problems with the programs or low rates of satisfaction?	Unknown. Participants not yet surveyed,

The Evaluators conducted a limited process evaluation.

6.4.1 Data Collection Activities

The process evaluation of IQP included the following activities:

- *Program Actor In-Depth Interviews*. The Evaluators conducted in-depth interviews with a series of program actors. These interviews covered a range of topics, including marketing efforts, feedback on program delivery, an assessment of barriers to program implementation and success, and recommendations for program improvement. Program Actors interviewed include:
  - *BHE Program Staff*. The Evaluators interviewed staff at BHE involved in the administration of the IQP.
  - *Third Party Implementation Staff Interviews.* The Evaluators conducted interviews with CLEAResult involved with the IQP.
- *Field Data Collection.* The Evaluators conducted field data collection to verify duct sealing, air sealing, and ceiling insulation projects

Table 6-6 summarizes the data collection for this process evaluation effort. This includes the titles, role, and sample sizes for data collection.

Table 6-6: BHE IQP Data Collection Summary

Target	Component	Activity	n	Precision Met	Role
BHE Program Staff	Energy Efficiency Coordinator	Interview	1	NA	Energy efficiency coordinator involved in regulatory and sustainability.
CLEAResult Staff	Program Manager	Interview	1	NA	Program manager for BHE's residential portfolio. Handles day-to-day operations, application review, billing, and logistics.
Participants	Participants	Field Data Collection	16	-	Field data collection was performed to verify duct sealing, air sealing, and ceiling insulation projects.

6.4.2 Protocol A: Tracking Data Review

Table 6-7 summarizes the Protocol A tracking data review for the IQP. The CLEAResult DSMT tracking database contained all required fields.

Table 6-7: IQP Protocol A Summary

Category	Field	Status	Description of Issue(s)
Participating Customer Information	Unique customer identifier, such as account number	-	Not provided
	Customer contact information – name, mailing address, telephone number	✓	A small share, less than 5% of records were missing email and phone numbers.
	Date/s of major customer milestones such as rebate application date, approval date, rebate processing date, etc.	✓	
Measure-Specific Information	Measure Group (Equipment Type)	✓	
	Equipment Fuel/Energy Source	✓	
	Equipment Quantity	✓	
	Efficiency Level	✓	
	Estimated Savings	✓	
	Estimated incremental measure cost	✓	
	Equipment Useful Life	✓	
	Measure Name – Text Description	✓	
	Measure Name – Numerical Code	N/A	
	Serial Number	N/A	
	Reported age of equipment replaced	N/A	
	Reported measure type of equipment replaced	✓	
	Other inputs necessary for the use and compliance with the TRM	✓	
Vendor-Specific Information	Name and Contact Information for Contractor	✓	
	Contractor Type	✓	
	Date of Installation	✓	
	Cost of the installed equipment	✓	
	Efficiency level of the installed equipment	✓	

Category	Field	Status	Description of Issue(s)
Program Tracking Information	Date of the initial program contact/rebate information	✓	
	Date of rebate/incentive paid	✓	
	Incentive amount paid to-date	✓	
	Incentive amounts remaining	✓	
	Application Status (i.e., number of applications approved, pending, or denied)	✓	
	Reason and reason code for application denial	✓	
Program Costs	Overall program budgets	✓	
	Program expenditures to-date	✓	
	Incentive Costs	✓	
	Administrative Costs	✓	
	Marketing/Outreach Costs	✓	
	Evaluation Costs	✓	
Marketing and Outreach Activities	Advertising and marketing spending levels	-	Not itemized from total marketing costs in data provided to the Evaluators.
	Media schedules	N/A	
	Summary of number of community events/outreach activities	✓	
	Other media activities – estimated impressions via mailings, television/radio; print ads.	✓	

6.5 IQP Impact Evaluation

The evaluation effort of the IQP included the following:

- *Desk Review of Residential Calculations.* The Evaluators utilized TRM V10.0 values in assessing savings from measures included in the program.
- *Field Verification.* The Evaluators conducted field verification of 16 homes in the IQP. Measures included in this sample were as follows; Air Infiltration: 14 homes, Ceiling Insulation: 12 homes, Duct Sealing: 15 homes, and Air Purifiers: 16 homes. The Evaluators conducted duct blaster and blower door tests at all homes that received duct sealing and air sealing (respectively).

6.5.1 Tracking Review

The impact evaluation began with a review of program tracking data. which included a separate row for each measure installed. Table 6-8 summarizes ex ante savings by measure for the IQP.

Table 6-8: IQP Ex Ante Summary

Measure	*Ex Ante Therms*
Duct Sealing	32,631
Air Sealing	9,352
Attic Insulation	9,194
Low-Flow Showerhead	13
Faucet Aerator	1
Total	**51,191**

The tracking data provided measured values for duct pressurization testing and blower door tests, allowing for the recreation of ex ante calculations based on leakage reduction. Ceiling insulation included an indicator for baseline R-value. Program specifications are to bring the home's insulation level up to R-38. The maximum allowed baseline insulation in the program is R-15. The TRM V10.0 allows for up to a minimum of R-22 but the program allows a max of R-15 due to cost-effectiveness issues with preexisting insulation above that level.

- First, the program tracking database was reviewed to determine the scope of the program and to ensure there were no duplicate project entries.
- Next, a detailed desk review was conducted for a census of projects in the tracking system. The desk review process entails recalculation of therms and non-energy benefits for each measure and for each participant.
- Field verification rates from HESP were applied to IQP.

After determining the Ex Post savings impacts for each sampled project, the Ex Post savings were combined with the ex-ante savings from the projects not included in the sample to determine program level savings.

6.5.2 Net Savings Estimates

The Evaluators assigned a NTG of 100% to the IQP, keeping with industry best practices for low income weatherization programs as specified in the Department of Energy Uniform Methods Project[16].

6.6 Ex Post Savings

Table 6-9 presents the gross savings results of the evaluation for the PY2025 IQP, summarizing the savings calculations performed by TRM protocols for program measures.

Table 6-9: IQP Ex Post Savings Summary

Measure	*Ex Ante Therms*	*Ex Post Therms*	*Gross Realization Rate*	*EUL*	*Lifetime Therms*
Duct Sealing	32,631	32,631	100.0%	20	652,617
Air Sealing	9,352	9,194	98.3%	30	275,832
Attic Insulation	9,194	9,353	101.7%	20	187,057
Low-Flow Showerhead	13	12	95.1%	10	124
Faucet Aerator	1	1	95.8%	10	14
Total	**51,191**	**51,192**	**100.0%**	**21.79**	**1,115,644**

[16] https://www.energy.gov/sites/prod/files/2015/02/f19/UMPChapter23-estimating-net-savings_0.pdf

With a 100% NTGR due to the income requirements of the program, net impacts equal gross impacts.

6.6.1 Water & Electric NEBs

In PY2025, the IQP had homes that were solely paid by BHE. The resulting NEBs are summarized in Table 6-10 below.

Table 6-10: IQP Electric NEBs

Measure	Net kWh	Net kW	Net Lifetime kWh
Duct Sealing	11,119	6.88	222,390
Ceiling Insulation	2,477	2.07	74,307
Air Sealing	2,739	1.94	54,771
Total	**16,335**	**10.88**	**351,468**

6.7 Conclusions

The program nearly met savings goals and was highly cost-effective.	The program met 99.0% of its net savings goal while spending 89.9% allocated.

6.8 Key Findings and Recommendations

Below are the key findings and recommendations for the PY2025 evaluation of the Access to Affordable Energy and Conservation Program.

Staff reported a notable increase in participation early in the program year, which they attributed to greater customer awareness and the presence of a trade ally team member who lives within a largely low-income service area, allowing more localized outreach. The utility's customer assistance team also plays a significant role in promoting the program while supporting LIHEAP applications, providing an additional channel for targeted engagement. No major structural changes or new program processes were described during interviews.

7 Appendix A: Site Reports

This appendix contains the individual site reports for CISP.

Program	C&I Solutions
Project ID	EA-0005586912
Facility SIC Code	8093 – Specialty Outpatient Facilities
Measures	Steam Leak Repair, Steam Traps
Annual Consumption	30,303 therms

Project Background

The participant is a healthcare manufacturer that received incentives from Black Hills Energy AR for implementing the following:

- EMC #1: Steam Leak Repair
- EMC #2: Failed Steam Traps

The site uses steam throughout the facility primarily for HVAC and process loads.

M&V Methodology

The M&V effort for this project follows the guidelines of the 2022 International Performance Measurement and Verification Protocol (IPMVP) Option A - Retrofit Isolation: Key Parameter Measurement.

Measurement and verification activities are based on the following assumptions:

- Annual operating hours for the on-site steam system are 8,760 hours
- Site-specific combustion efficiency is 81% (adjusted from commercial boiler baseline to match provided specs)
- Makeup city water will be based on AR TRM 10.0 Table 148 – Average Water Main Temperature (Fayetteville water temperature)
- Feedwater temperature 200 °F

Steam Leak Repairs

The following table shows relevant steam leak parameters required for annual energy savings.

Table 1. Steam Leak Parameters

Leak #	*Description*	*Plume Length (ft)*	*Steam Pressure (psig)*
1	3" GV LEAK YST	0.093	70
2	UNION LEAK	0.031	40

The equation system enthalpy and heat loss are calculated as follows:

Equation 4. Calculation for System Enthalpy

$$h_{system} = h_{steam} - h_{makeup}$$

Equation 5. Calculation for Heat Lost

$$Heat\ Loss\left(\frac{BTU}{hr}\right) = h_{system} \times Discharge\ Rate\left(\frac{lbs}{hr}\right)$$

Where:

h_{makeup} = Enthalpy of makeup water (BTU/lb)

h_{steam} = Enthalpy of steam (BTU/lb)

Discharge Rate (lbs/hr) = Calculated using Dr. Rajan's Method based on steam leak plume length

Calculations for the annual therms savings use the following equation:

Equation 6. Steam Leak Repair Annual Energy Savings

$$Annual\ \ Therms\ Savings = \frac{Heat\ Loss \times AOH}{Therm\ Conversion\ Factor \times Eff_{boiler}}$$

Where:

AOH = Annual Operating Hours

Heat Loss = Calculated using equation 5

Eff_{boiler} = Boiler efficiency, 81%

Therm Conversion Factor = 100,000 (BTU/therm)

Steam Trap Repairs

The following table shows relevant failed steam traps parameters required for annual energy savings.

Table 2. Steam Trap Parameters

Steam Trap #	*Condensate Returned?*	*% Failed*	*Inlet Pressure (psig)*	*Discharge Rate (lb/hr)*	*Operating Hours*
1	Yes	80%	70	35	8,760
2	Yes	100%	40	15	6,730
3	Yes	100%	40	35	8,760
4	Yes	80%	40	15	6,730

Calculations for the annual therms savings use the following equation:

Equation 7. Steam Trap Replacement Annual Energy Savings

$$Annual\ \ therms\ Savings = \frac{\%\ Failed \times Discharge\ Rate \times AOH \times \left(h_{steam} - h_{feed/makeup}\right)}{Eff_{boiler} \times Therm\ Conversion\ Factor}$$

Where:

Discharge Rate = steam loss from the system (lb/hr)

AOH = annual hours system is pressurized (hrs/yr)

h_{steam} = Enthalpy of steam (BTU/lb)

h_{feed} = Enthalpy of feedwater (BTU/lb)

h_{makeup} = Enthalpy of makeup water (BTU/lb)

Eff_{boiler} = Efficiency of boiler (%) 81%

Therm Conversion Factor = 100,000 (BTU/therm)

The discharge rate (lb/hr) was calculated using a combination of Masoneilan's Formula and Napier's Formula:

$$Discharge\ Rate\ \left(\frac{lb}{hr}\right) = C_{D/P} \times C_v \times \Delta P \times A_o$$

$$\Delta P = \sqrt{(P_i - P_o) \times (P_i + P_o)}$$

Where:

$C_{D/P}$ = Service Type Coefficient (Process = 0.9, Drip/Tracer = 1.4)

C_v = Flow Coefficient = 28

ΔP = Pressure differential (psia)

A_o = Area of orifice (sq. in.)

P_i = Steam Inlet Pressure (psia = psig + 14.7)

P_o = Steam Outlet Pressure (psia = psig + 14.7)

Measure Life

Table 3. Estimated Useful Life for Respective Measures

Measure	*EUL*
Steam Leak Repairs	10 years
Steam Trap Repairs	5 years

Calculated Savings:

Table 4. Steam Leak Repair Savings

Leak #	*Description*	*Discharge Rate*	*Eff_{boiler}*	*AOH*	*Steam Enthalpy (BTU/lb)*	*Makeup Water Enthalpy (BTU/lb)*	*Therms Savings*
1	**3" GV LEAK YST**	**5.96**	**81%**	**8,760**	**1,151**	**33.78**	**739**
2	**UNION LEAK**	**5.76**	**81%**	**8,760**	**1,143**	**33.78**	**708**
						Total:	**1,447**

Table 5. Steam Trap Repair Savings

Trap Type	Trap Model	Discharge Rate (lb/hr)	Estimated System Hours	Expected Annual Therm Savings	Calculated Annual Therm Savings	Lifetime Savings	Realization Rate
IB	1032-125	35	8,670	3,064	3,064	15,321	100%
F&T	WFT-125	15	6,730	1,251	1,251	6,253	100%
IB	1032-125	35	8,670	2,387	2,387	11,937	100%
F&T	WFT-125	15	6,730	1,125	1,125	5,627	100%
			Total:	**7,772**	**7,828**	**39,138**	**100%**

Overall, project savings are as follows:

Table 6. Overall Project Savings

Measure	*Expected Annual therms Savings*	*Realized Annual therms Savings*	*Realization Rate*	*Lifetime therms Savings*
Steam Leak Repair	1,447	1,447	100%	14,470
Steam Trap Repair	7,772	7,828	100%	39,138
TOTAL	**9,219**	**9,275**	**100%**	**53,608**

Measure Cost, Incentive, & Payback

The Evaluators reviewed the costs associated with this project and concluded an adjusted incentive cost of $6,956. Measure payback is summarized in the table below.

Table 7. Cost, Incentive, and Payback

Annual Therms Savings	*Cost per Therm*	*Annual Energy Cost Savings*	*Incremental Cost*	*Base Incentive*	*Adjusted Incentive*	*Payback w/ Incentive*	*Payback w/o Incentive*
9,275	$0.60	$5,591	$16,246	$6,914	$6,956	1.67	2.91

Program	C&I Solutions
Project ID	EA-0003242061
Facility SIC Code	2099 – Food Preparations
Measures	Steam Traps
Annual Consumption	2,304,770 therms

Project Background

The participant is a food preparations facility that received incentives from Black Hills Energy AR for implementing the following:

- EMC #1: Failed Steam Traps

The site uses steam throughout the facility primarily for process loads including hot water sanitation. There are six steam boilers that operate at 92 psig and 107 psig for the hot-water processes.

M&V Methodology

The M&V effort for this project follows the guidelines of the 2022 International Performance Measurement and Verification Protocol (IPMVP) Option A - Retrofit Isolation: Key Parameter Measurement.

Measurement and verification activities are based on the following assumptions:

- Annual operating hours for the on-site steam system are 7,384 hours
- Site-specific combustion efficiency is 86.49% (adjusted from commercial boiler baseline to match provided specs)
- Makeup city water will be based on AR TRM 10.0 Table 148 – Average Water Main Temperature (Fayetteville water temperature)
- Feedwater temperature 230 °F

Steam Trap Repairs

The following table shows relevant failed steam traps parameters required for annual energy savings.

Table 2. Steam Trap Parameters

Steam Trap #	*Condensate Returned?*	*% Failed*	*Inlet Pressure (psig)*	*Discharge Rate (lb/hr)*	*Operating Hours*
1	Yes	80%	94	72	7,384
2	Yes	90%	94	72	7,384
3	Yes	60%	94	72	7,384
4	Yes	50%	94	90	7,384
5	Yes	70%	94	90	7,384
6	Yes	100%	94	72	7,384
7	Yes	40%	94	72	7,384
8	Yes	100%	94	45	7,384
9	Yes	80%	94	34	7,384
10	Yes	100%	94	94	7,384
11	Yes	90%	94	34	7,384
12	Yes	40%	94	28	7,384
13	Yes	100%	94	83	7,384
14	Yes	75%	94	83	7,384
15	Yes	75%	94	83	7,384
16	Yes	100%	94	61	7,384
17	Yes	80%	94	94	7,384
18	Yes	30%	94	94	7,384
19	Yes	100%	94	94	7,384
20	Yes	40%	94	34	7,384
21	Yes	40%	94	34	7,384
22	Yes	40%	94	34	7,384
23	Yes	30%	94	157	7,384
24	Yes	70%	94	45	7,384
25	Yes	40%	94	157	7,384
26	Yes	30%	94	45	7,384
27	Yes	100%	94	45	7,384
28	Yes	50%	94	45	7,384
29	Yes	100%	94	45	7,384
30	Yes	100%	94	101	7,384
31	Yes	45%	94	45	7,384
32	Yes	100%	94	94	7,384
33	Yes	50%	94	45	7,384
34	Yes	100%	94	61	7,384
35	Yes	80%	94	101	7,384
36	Yes	70%	94	94	7,384
37	Yes	80%	94	45	7,384
38	Yes	100%	94	94	7,384
39	Yes	100%	94	45	7,384
40	Yes	100%	94	157	7,384
41	Yes	80%	94	101	7,384

42	Yes	100%	94	18	7,384

Calculations for the annual therms savings use the following equation:

Equation 7. Steam Trap Replacement Annual Energy Savings

$$Annual\ \ therms\ Savings = \frac{\%\ Failed \times Discharge\ Rate \times AOH \times \left(h_{steam} - h_{feed/makeup}\right)}{Eff_{boiler} \times Therm\ Conversion\ Factor}$$

Where:

Discharge Rate = steam loss from the system (lb/hr)

AOH = annual hours system is pressurized (hrs/yr)

h_{steam} = Enthalpy of steam (BTU/lb)

h_{feed} = Enthalpy of feedwater (BTU/lb)

h_{makeup} = Enthalpy of makeup water (BTU/lb)

Eff_{boiler} = Efficiency of boiler (%) 86.49%

Therm Conversion Factor = 100,000 (BTU/therm)

The discharge rate (lb/hr) was calculated using a combination of Masoneilan's Formula and Napier's Formula:

$$Discharge\ Rate\ \left(\frac{lb}{hr}\right) = C_{D/P} \times C_v \times \Delta P \times A_o$$

$$\Delta P = \sqrt{(P_i - P_o) \times (P_i + P_o)}$$

Where:

$C_{D/P}$ = Service Type Coefficient (Process = 0.9, Drip/Tracer = 1.4)

C_v = Flow Coefficient = 28

ΔP = Pressure differential (psia)

A_o = Area of orifice (sq. in.)

P_i = Steam Inlet Pressure (psia = psig + 14.7)

P_o = Steam Outlet Pressure (psia = psig + 14.7)

Measure Life

Table 3. Estimated Useful Life for Respective Measures

Measure	*EUL*
Steam Trap Repairs	5 years

Calculated Savings:

Table 4. Steam Trap Repair Savings

Trap Type	Trap Model	Discharge Rate (lb/hr)	Estimated System Hours	Expected Annual Therm Savings	Calculated Annual Therm Savings	Lifetime Savings	Realization Rate
TD	Sarco	72	7,384	4,875	4,875	24,375	100%
TD	Sarco	72	7,384	5,484	5,484	27,421	100%
TD	Sarco	72	7,384	3,656	3,656	18,281	100%
F&T	Sarco	90	7,384	3,809	3,809	19,043	100%
F&T	Sarco	90	7,384	5,332	5,332	26,660	100%
TD	Sarco	72	7,384	6,094	6,094	30,468	100%
TD	Sarco	72	7,384	2,437	2,437	12,187	100%
F&T	Hoffman	45	7,384	3,809	3,809	19,043	100%
TD	WMCD	34	7,384	2,302	2,302	11,510	100%
TD	Sarco	94	7,384	7,956	7,956	39,778	100%
F&T	WMCD	34	7,384	2,590	2,590	12,949	100%
TD	WMCD	28	7,384	948	948	4,739	100%
F&T	Sarco	83	7,384	7,025	7,025	35,123	100%
F&T	Sarco	83	7,384	5,268	5,268	26,342	100%
F&T	Sarco	83	7,384	5,268	5,268	26,342	100%
TD	Sarco	61	7,384	5,163	5,163	25,813	100%
TD	Sarco	94	7,384	6,364	6,364	31,822	100%
TD	Sarco	94	7,384	2,387	2,387	11,933	100%
TD	Sarco	94	7,384	7,956	7,956	39,778	100%
TD	WMCD	34	7,384	1,151	1,151	5,755	100%
TD	WMCD	34	7,384	1,151	1,151	5,755	100%
TD	WMCD	34	7,384	1,151	1,151	5,755	100%
TD	Sarco	157	7,384	3,986	3,986	19,931	100%
F&T	Armstrong	45	7,384	2,666	2,666	13,330	100%
TD	Sarco	157	7,384	5,315	5,315	26,575	100%
TD	Sarco	45	7,384	1,143	1,143	5,713	100%
TD	Sarco	45	7,384	3,809	3,809	19,043	100%
F&T	Sarco	45	7,384	1,904	1,904	9,521	100%

TD	Sarco	45	7,384	3,809	3,809	19,043	100%
F&T	Sarco	101	7,384	8,548	8,548	42,740	100%
F&T	WMCD	45	7,384	1,714	1,714	8,569	100%
F&T	Sarco	94	7,384	7,956	7,956	39,778	100%
IB	Sarco	45	7,384	1,904	1,904	9,521	100%
TD	Sarco	61	7,384	5,163	5,163	25,813	100%
F&T	Sarco	101	7,384	6,838	6,838	34,192	100%
TD	Sarco	94	7,384	5,569	5,569	27,845	100%
F&T	Sarco	45	7,384	3,047	3,047	15,234	100%
TS	WMCD	94	7,384	7,956	7,956	39,778	100%
F&T	Sarco	45	7,384	3,809	3,809	19,043	100%
TD	Sarco	157	7,384	13,288	13,288	66,438	100%
F&T	Sarco	101	7,384	6,838	6,838	34,192	100%
F&T	Sarco	18	7,384	1,523	1,523	7,617	100%
			Total:	**188,958**	**188,958**	**944,789**	**100%**

Overall, project savings are as follows:

Table 5. Overall Project Savings

Measure	*Expected Annual therms Savings*	*Realized Annual therms Savings*	*Realization Rate*	*Lifetime therms Savings*
Steam Trap Repair	188,958	188,958	100%	944,789
TOTAL	**188,958**	**188,958**	**100%**	**944,789**

Measure Cost, Incentive, & Payback

The Evaluators reviewed the costs associated with this project and concluded an adjusted incentive cost of $125,693. Measure payback is summarized in the table below.

Table 6. Cost, Incentive, and Payback

Annual Therms Savings	*Cost per Therm*	*Annual Energy Cost Savings*	*Incremental Cost*	*Base Incentive*	*Adjusted Incentive*	*Payback w/ Incentive*	*Payback w/o Incentive*
188,958	$0.54	$101,395	$125,693	$125,693	$125,693	0.00	1.24

Program	C&I Solutions
Project ID	EA-0004700287
Facility SIC Code	3052 – Rubber and Plastics Hose and Belting
Measures	Steam Leak Repair, Steam Traps
Annual Consumption	2,584,940 therms

Project Background

The participant is a Rubber belt manufacturer that received incentives from Black Hills Energy AR for implementing the following:

- EMC #1: Steam Leak Repair
- EMC #2: Failed Steam Traps

The site uses steam throughout the facility primarily for process loads. The manufacturing process requires two pressures — 275 psi and 100 psi — which are regulated by two 900 hp water tube boilers. Energy and natural gas cost savings result from steam traps and leak repairs.

M&V Methodology

The M&V effort for this project follows the guidelines of the 2022 International Performance Measurement and Verification Protocol (IPMVP) Option A - Retrofit Isolation: Key Parameter Measurement.

Measurement and verification activities are based on the following assumptions:

- Annual operating hours for the on-site steam system are 8,440 hours
- Site-specific combustion efficiency is 82% (adjusted from commercial boiler baseline to match the boiler control screen)
- Makeup city water will be based on AR TRM 10.0 Table 148 – Average Water Main Temperature (Fayetteville water temperature)
- Feedwater temperature 200 °F

Steam Leak Repairs

The following table shows relevant steam leak parameters required for annual energy savings.

Table 1. Steam Leak Parameters

Leak #	*Description*	*Plume Length (ft)*	*Steam Pressure (psig)*
1	Base of Regulator	2	90

2	Union	4	90
3	Threads in Reducer	3	140
4	Union Threads	4	40
5	Gate Valve	3	40
6	Flange	2	40
7	Flange	3	40
8	Flange	2	40
9	Y Strainer	4	125
10	Flange	3	110
11	Union Threads	3	24
12	Flange Gasket	2	90
13	Piping Pin Hole	4	270
14	Union Steam Leak	2	270
15	Y Strainer	2	270

The equation system enthalpy and heat loss are calculated as follows:

Equation 4. Calculation for System Enthalpy

$$h_{system} = h_{steam} - h_{makeup}$$

Equation 5. Calculation for Heat Lost

$$Heat\ Loss\left(\frac{BTU}{hr}\right) = h_{system} \times Discharge\ Rate\left(\frac{lbs}{hr}\right)$$

Where:

h_{makeup} = Enthalpy of makeup water (BTU/lb)

h_{steam} = Enthalpy of steam (BTU/lb)

Discharge Rate (lbs/hr) = Calculated using Dr. Rajan's Method based on steam leak plume length

Calculations for the annual therms savings use the following equation:

Equation 6. Steam Leak Repair Annual Energy Savings

$$Annual\ \ Therms\ Savings = \frac{Heat\ Loss \times AOH}{Therm\ Conversion\ Factor \times Eff_{boiler}}$$

Where:

AOH = Annual Operating Hours

Heat Loss = Calculated using equation 5

Eff_{boiler} = Boiler efficiency, 82%

Therm Conversion Factor = 100,000 (BTU/therm)

Steam Trap Repairs

The following table shows relevant failed steam traps parameters required for annual energy savings.

Table 2. Steam Trap Parameters

Steam Trap #	*Condensate Returned?*	*% Failed*	*Inlet Pressure (psig)*	*Discharge Rate (lb/hr)*	*Operating Hours*
1	Yes	100%	260	184	8,440
2	Yes	50%	260	184	8,440
3	Yes	100%	260	184	8,440
4	Yes	50%	260	184	8,440
5	Yes	50%	260	184	8,440
6	Yes	100%	260	76	8,440
7	Yes	100%	260	87	8,440
8	Yes	100%	260	114	8,440
9	Yes	100%	100	30	8,440
10	Yes	100%	260	239	8,440
11	Yes	50%	260	242	8,440
12	Yes	100%	90	33	8,440
13	Yes	100%	260	87	8,440
14	Yes	100%	260	87	8,440
15	Yes	100%	260	76	8,440

Calculations for the annual therms savings use the following equation:

Equation 7. Steam Trap Replacement Annual Energy Savings

$$Annual\ \ therms\ Savings = \frac{\%\ Failed \times Discharge\ Rate \times AOH \times \left(h_{steam} - h_{feed/makeup}\right)}{Eff_{boiler} \times Therm\ Conversion\ Factor}$$

Where:

Discharge Rate = steam loss from the system (lb/hr)

AOH = annual hours system is pressurized (hrs/yr)

h_{steam} = Enthalpy of steam (BTU/lb)

h_{feed} = Enthalpy of feedwater (BTU/lb)

h_{makeup} = Enthalpy of makeup water (BTU/lb)

Eff_{boiler} = Efficiency of boiler (%) 82%

Therm Conversion Factor = 100,000 (BTU/therm)

The discharge rate (lb/hr) was calculated using a combination of Masoneilan's Formula and Napier's Formula:

$$Discharge\ Rate\ \left(\frac{lb}{hr}\right) = C_{D/P} \times C_v \times \Delta P \times A_o$$

$$\Delta P = \sqrt{(P_i - P_o) \times (P_i + P_o)}$$

Where:

$C_{D/P}$ = Service Type Coefficient (Process = 0.9, Drip/Tracer = 1.4)

C_v = Flow Coefficient = 28

ΔP = Pressure differential (psia)

A_o = Area of orifice (sq. in.)

P_i = Steam Inlet Pressure (psia = psig + 14.7)

P_o = Steam Outlet Pressure (psia = psig + 14.7)

Measure Life

Table 3. Estimated Useful Life for Respective Measures

Measure	*EUL*
Steam Leak Repairs	10 years
Steam Trap Repairs	5 years

Calculated Savings:

Table 4. Steam Leak Repair Savings

Leak #	*Description*	*Discharge Rate*	*Eff_{boiler}*	*AOH*	*Steam Enthalpy (BTU/lb)*	*Makeup Water Enthalpy (BTU/lb)*	*Therms Savings*

1	Base of Regulator	17.42	82%	8,760	1,155	33.68	2,150
2	Union	53.60	82%	8,760	1,155	33.68	6,616
3	Threads in Reducer	30.56	82%	8,760	1,162	33.68	3,793
4	Union Threads	53.60	82%	8,760	1,143	33.68	6,544
5	Gate Valve	30.56	82%	8,760	1,143	33.68	3,731
6	Flange	17.42	82%	8,760	1,143	33.68	2,127
7	Flange	30.56	82%	8,760	1,143	33.68	3,731
8	Flange	17.42	82%	8,760	1,143	33.68	2,127
9	Y Strainer	53.60	82%	8,760	1,160	33.68	6,644
10	Flange	30.56	82%	8,760	1,158	33.68	3,781
11	Union Threads	30.56	82%	8,760	1,136	33.68	3,709
12	Flange Gasket	17.42	82%	8,760	1,155	33.68	2,150
13	Piping Pin Hole	53.60	82%	8,760	1,170	33.68	6,699
14	Union Steam Leak	17.42	82%	8,760	1,170	33.68	2,177
15	Y Strainer	17.42	82%	8,760	1,170	33.68	2,177
						Total:	**58,157**

Table 5. Steam Trap Repair Savings

Trap Type	Trap Model	Discharge Rate (lb/hr)	Estimated System Hours	Expected Annual Therm Savings	Calculated Annual Therm Savings	Lifetime Savings	Realization Rate
TD	TD52L	184	8,440	19,603	19,603	98,014	100%
TD	TD52L	184	8,440	9,801	9,801	49,007	100%
TD	TD52L	184	8,440	19,603	19,603	98,014	100%
TD	TD52L	184	8,440	9,801	9,801	49,007	100%
TD	TD52L	184	8,440	9,801	9,801	49,007	100%
IB	2011-250	76	8,440	8,097	8,097	40,484	100%
TD	TD600	87	8,440	9,269	9,269	46,343	100%
TD	TD42H	114	8,440	12,145	12,145	60,726	100%
IB	811-125	30	8,440	3,157	3,157	15,786	100%
TD	TD52	239	8,440	25,462	25,462	127,311	100%
TD	TD52	242	8,440	12,891	12,891	64,455	100%
IB	1031-125	33	8,440	3,468	3,468	17,339	100%

TD	WD600	87	8,440	9,269	9,269	46,343	100%
TD	WD600	87	8,440	9,269	9,269	46,343	100%
IB	880-150	76	8,440	8,097	8,097	40,484	100%
			Total:	**169,732**	**169,732**	**848,662**	**100%**

Overall, project savings are as follows:

Table 6. Overall Project Savings

Measure	***Expected Annual therms Savings***	***Realized Annual therms Savings***	***Realization Rate***	***Lifetime therms Savings***
Steam Leak Repair	58,157	58,157	100%	581,574
Steam Trap Repair	169,732	169,732	100%	848,662
TOTAL	**227,890**	**227,890**	**100%**	**1,430,236**

Measure Cost, Incentive, & Payback

The Evaluators reviewed the costs associated with this project and measure payback is summarized in the table below.

Table 7. Cost, Incentive, and Payback

Annual Therms Savings	***Cost per Therm***	***Annual Energy Cost Savings***	***Incremental Cost***	***Base Incentive***	***Adjusted Incentive***	***Payback w/ Incentive***	***Payback w/o Incentive***
227,890	$0.54	$122,377	$39,370	$39,370	$39,370	0.00	0.32

Program	C&I Solutions
Project ID	EA-0007522681
Facility SIC Code	5251 - Hardware Stores
Measures	Demand Control Ventilation

Project Background

The participant is a hardware store that received incentives from Black Hills Energy for implementing the following energy conservation measure (ECM):

- Demand Control Ventilation

This included the optimatizating ventilation rates based on occupancy and indoor air quality (IAQ) conditions.

M&V Methodology

The M&V effort for this project follows the guidelines of the 2022 International Performance Measurement and Verification Protocol (IPMVP) Option A - Retrofit Isolation: Key Parameter Measurement using a bin analysis and associated engineering equations.

Measurement and verification activities are based on the following assumptions:

- Baseline temperature heating setpoints are 74°F for occupied and 78°F for unoccupied
- Post installation occupied heating setpoints are all 68°F, unoccupied are 63°F
- Typical full loads are 80% of all heating capacity
- Combustion efficiency is 81% (for both pre-retrofit and post-retrofit condition)

Demand Control Ventilation

To calculate savings, a bin analysis was sent based on typical meteorological year 3 (TMY3) data based on a general building schedule. Some changes were made by Qualus to the methodology upon initial submission to bring calculations more in line with standard methods. A new methodology will be utilized in the next program year for similar measures.

Measure Life

Estimated Useful Life for Respective Measures

Measure	*EUL*
Demand Control Ventilation	10 years

Calculated Savings:

Overall, project savings are as follows:

Overall Project Savings

Measure	*Expected Annual therms Savings*	*Realized Annual therms Savings*	*Realization Rate*	*Lifetime therms Savings*	*Annual Water Gallons Savings*	*Lifetime Water Gallons Savings*
Demand Control Ventilation	6,481	6,481	100%	64,808	N/A	N/A
TOTAL	**6,481**	**6,481**	**100%**	**64,808**	**N/A**	**N/A**

Measure Cost, Incentive, & Payback

Implementers did not provide cost invoices. Measure payback is summarized in the table below, using provided information.

Cost, Incentive, and Payback

Annual Therms Savings	*Cost per Therm*	*Annual Energy Cost Savings*	*Incremental Cost*	*Base Incentive*	*Adjusted Incentive*	*Payback w/Incentive*	*Payback w/o Incentive*
6,481	$1.06	$6,870	$27,300	$4,861	$4,861	3.27	3.97

Program	C&I Solutions
Project ID	EA-0008460633
Facility SIC Code	8221 – Colleges, Universities, and Professional Schools
Measures	Boiler
Annual Consumption	510,000 therms

Project Background

The participant is a university that received incentives from Black Hills Energy for implementing the following:

- ECM #1: Boiler Retrofit

M&V Methodology

The M&V effort for this project follows the guidelines of the 2022 International Performance Measurement and Verification Protocol (IPMVP) Option A - Retrofit Isolation: Key Parameter Measurement.

Measurement and verification activities are based on the following assumptions:

- Baseline thermal efficiency is 85% for both boilers
- Post case thermal efficiency is 96.10% for both boilers
- The new boiler capacity is 4.99 MMBTU/h for both boiler
- Effective full load heating hours are based on a custom case

Boiler Retrofit

For all three steam boilers, the following equation was used.

Equation 1. Boiler Tune Up Annual Energy Savings

$$Therm\ Savings\ = Capacity * EFLH_H * \left(\frac{1}{E_{C_{Eff}}} - \frac{1}{E_{C_{Base}}}\right) * \frac{1}{100{,}000}$$

Where:

Capacity = Boiler capacity, equal to 4,999,000 Btu/hr

$EFLH_H$ = Equivalent Full Load Hours, heating.

$E_{C\text{-}Eff}$ = Boiler combustion efficiency, measured after tune-ups, see Appendix A

$E_{C\text{-}Base}$ = Boiler combustion efficiency, measured before tune-ups, see Appendix A

100,000 Btu/CCF = Conversion factor (BTU/yr to CCF/yr)

The sum of each was totaled to determine the annual therm savings associated with this ECM.

Measure Life

Table 1. Estimated Useful Life for Respective Measures

Measure	*EUL*
Boiler Retrofit	20 years

Calculated Savings:

Boiler Tune Ups

$$Therm\ Savings\ = Quantity * Capacity * \ EFLH_H * \left(\frac{1}{E_{C_{Eff}}} - \frac{1}{E_{C_{Base}}}\right) * \frac{1}{100{,}000}$$

$$Therm\ Savings\ = \mathbf{2} * 4{,}999{,}000\ \left(\frac{Btu}{hr}\right) * \ 1{,}130\ hrs * \left(\frac{1}{0.85} - \frac{1}{0.961}\right) * \frac{1}{100{,}000}$$

$$Therm\ Savings\ = 15{,}352\ therms$$

Measure Cost, Incentive, & Payback

Overall, project savings are as follows:

Table 2. Overall Project Savings

Measure	*Expected Annual therms Savings*	*Realized Annual therms Savings*	*Realization Rate*	*Lifetime therms Savings*
Boiler Retrofit	15,352	15,352	100%	307,045
TOTAL	**15,352**	**15,352**	**100%**	**307,045**

The Evaluators reviewed the invoices associated with this project and verified a cost of $24,449. Measure payback is summarized in the table below.

Table 3. Cost, Incentive, and Payback

Annual Therms Savings	*Cost per Therm*	*Annual Energy Cost Savings*	*Incremental Cost*	*Base Incentive*	*Adjusted Incentive*	*Payback w/Incentive*	*Payback w/o Incentive*
15,352	$0.49	$7,523	$24,449	$11,514	$11,514	1.72	3.25

Program	C&I Solutions
Project ID	EA-0004701529
Facility SIC Code	2099 – Food Preparations
Measures	Thermal Oxidizer
Annual Consumption	888,890 therms

Project Background

The participant is a food preparations facility that received incentives from Black Hills Energy for implementing the following:

- ECM #1: Thermal Oxidizer

M&V Methodology

The M&V effort for this project follows the guidelines of the 2022 International Performance Measurement and Verification Protocol (IPMVP) Option A - Retrofit Isolation: Key Parameter Measurement.

Measurement and verification activities are based on the following assumptions:

- VOC load is 3.67 lb/hr
- Annual operating hours is 7,488
- Thermal efficiency of heat exchanger is 97% as system is Regenerative
- Additional combustion air flow is 3% of design air flow.
- Baseline of Recuperative system since this is a new construction

Thermal Oxidizer

For annual savings, the following equation was used.

Equation 1. Thermal Oxidizer Annual Energy Savings

$$Annual\ Energy\ Savings = \frac{\left(Q_{T_{Regenerative}} - Q_{T_{Recuperative}}\right) * AOH}{100{,}000 * LHV}$$

$$Q_T = Q_i + Q_{CC} + Q_{RL} - Q_{VOC}$$

Where:

Q_T = Total Energy Input

Q_i = Energy used to raise temperature of process air (btuh)

Q_{CC} = Energy used to raise temperature of combustion air (btuh)
Q_{RL} = Radiation heat loss (btuh)
Q_{VOC} = Heat released by VOC combustion (btuh)
AOH = Annual operating hours, 7,488 hrs
LHV = Latent heat of vaporization, 0.953

Equation 2. Energy Used to Raise Process Air Temperature

$$Q_i = F_i * 1.08 * (T_o - T_i)$$

Where:
F_i = Process air flow (cfm), 29,838 cfm fro both baseline and efficient
1.08 = Conversion factor
T_o = Average stack outlet temperature (°F), 559.03°F for baseline and 215.37°F for efficient
T_i = Inlet air temperature (°F), 139°F for both baseline and efficient

Equation 3. Energy Used to Raise Combustion Air Temperature

$$Q_{CC} = F_{CC} * 1.08 * (T_o - T_A)$$

Where:
F_{CC} = Additional combustion air flow (cfm), 895.14 cfm for both baseline and efficient
1.08 = Conversion factor
T_o = Average stack outlet temperature (°F), 559.03°F for baseline and 215.37°F for efficient
T_A = Combustion intake air temperature (°F), 58°F for both baseline and efficient

Equation 4. Radiation Heat Loss

$$Q_{RL} = SA * HLF$$

Where:
SA = Surface area of unit, 500 sq ft
HLF = Heat loss factor, assumed 240 btuh/ft^2 installed outdoors

Equation 5. Heat Released by VOC Combustion

$$Q_{VOC} = VOC * HC * (\frac{\%Dest}{100})$$

Where:
VOC = Average lb/hr from process to oxidizer, 3.67 lb/hr
HC = btu/lb, weighted average for the heat of combustion of VOCs, 91,200 btu/lb
%Dest = Destruction efficiency of VOCs, 0.99%

Measure Life

Table 1. Estimated Useful Life for Respective Measures

Measure	*EUL*
Thermal Oxidizer	20 years

Calculated Savings:

Thermal Oxidizer

$$Therm\ Savings = \frac{\left(Q_{T_{Regenerative}} - Q_{T_{Recuperative}}\right) * AOH}{100{,}000 * LHV}$$

$$Therm\ Savings = \frac{(13{,}808{,}722 - 2{,}402{,}024) * 7{,}488}{100{,}000 * 0.95}$$

$$Therm\ Savings\ = 896{,}258\ therms$$

$$Therm\ Savings\ Split\ into\ 5\ year\ Payout = 179{,}252\ therms$$

Measure Cost, Incentive, & Payback

Overall, project savings are as follows:

Table 2. Overall Reported Year Project Savings

Measure	*Expected Annual therms Savings*	*Realized Annual therms Savings*	*Realization Rate*	*Lifetime therms Savings*
Thermal Oxidizer	179,252	179,252	100%	3,585,040
TOTAL	**179,252**	**179,252**	**100%**	**3,585,040**

The Evaluators reviewed the invoices associated with this project and verified a cost of $172,760 per reported year. Measure payback is summarized in the table below.

Table 3. Cost, Incentive, and Payback

Annual Therms Savings	*Cost per Therm*	*Annual Energy Cost Savings*	*Incremental Cost*	*Base Incentive*	*Adjusted Incentive*	*Payback w/Incentive*	*Payback w/o Incentive*
179,252	$0.49	$87,833	$172,760	$134,439	$134,439	0.44	1.97

8 Appendix B: Deferred Replacement Cost Calculations

This appendix presents the calculations of deferred replacement costs for residential and commercial tankless water heaters as well as residential furnace early retirement.

	Inputs	
Measure Type=	Res Tankless (ROB + NC)	
Nominal Discount Rate=	6.61%	
Inflation Rate=	2.50%	
Real Discount Rate=	4.01%	
	Program	**Baseline**
Equipment Type=	Tankless WH	Storage WH
Effective UsefulLife=	20	11
Remaining Useful Life=		
PW(EUL)=	13.58	8.76
PW(RUL)=		
Installed Cost=	$ 1,219	$ 614
Deferred Replacement Cost=		$338.19
PWF Formula=		$338.19
Incremental Cost=	$ 605.00	

Figure 8-1: Residential Tankless WH Avoided Replacement Cost Calculation

	Inputs	
Measure Type=	C&I Tankless (ROB + NC)	
Nominal Discount Rate=	6.61%	
Inflation Rate=	2.50%	
Real Discount Rate=	4.01%	
	Program	**Baseline**
Equipment Type=	Tankless WH	Storage WH
Effective UsefulLife=	20	15
Remaining Useful Life=		
PW(EUL)=	13.58	11.11
PW(RUL)=		
Installed Cost=	$ 1,219	$ 614
Deferred Replacement Cost=		$136.37
PWF Formula=		$136.37
Incremental Cost=	$ 605.00	

Figure 8-2: C&I Tankless WH Avoided Replacement Cost Calculation

	Inputs	
Measure Type=	Furnace Early Replacement	
Nominal Discount Rate=	6.61%	
Inflation Rate=	2.50%	
Real Discount Rate=	4.01%	
	Program	**Baseline**
Equipment Type=	HE Furnace	SE Furnace
Effective Useful Life=	36	36
Remaining Useful Life=		6.8
PW(EUL)=	18.88	18.88
PW(RUL)=		5.85
Installed Cost=	$ 2,548	$ 2,011
Deferred Replacement Cost=		$1,387.94
PWF Formula=		$1,387.94
	$ 537	

Figure 8-3: Furnace Early Retirement Deferred Replacement Cost Calculation

9 Appendix C: Program Surveys

9.1 Commercial and Industrial Solutions Program – Prescriptive Programs Participant Survey

2. Thank you for taking this survey to tell us about your company/organization's experience with [UTILITY]'s energy efficiency program. Your feedback is very important to us and will help us improve programs for customers like you. This survey should take about 10 minutes. Your responses are confidential and will be used for research purposes only. If you have questions about how we treat collected data, please see ADM's privacy policy at https://www.admenergy.com/privacy.
Upon completion of the survey, we will collect your email address to send a $10 electronic gift card as a token of our thanks.
Once you have entered a response for each question, use the arrow at the bottom right of the screen to get to the next question.

3. We would like to confirm that your organization received an incentive in [YEAR] for completing a [PROJECT_DESCRIPTION] through [UTILITY]'s [PATHWAY_NAME] Program at [LOCATION].
Is that correct?
1. Yes
2. No [Terminate]
98. Not sure [Terminate]

Awareness
4. How did you first learn about [UTILITY]'s [PATHWAY_NAME] Program incentives for efficient equipment or upgrades?
1. From a [UTILITY] Account Representative or Customer Service Representative
2. From a contractor
3. Friends or colleagues
4. From [UTILITY]'s website
5. Social media post
6. Through an internet search (e.g., online search engine)
7. Through an internet advertisement
8. Through a program sponsored workshop
96. Other (Please specify). [OPEN-ENDED]
98. Not sure

Motivation
5. Which factors were most important in your decision to invest in an energy efficiency project at your organization? (Please select all that apply).
[MULTI-SELECT]
1. Potential to save money on utility bills
2. Potential to save energy
3. Potential to reduce maintenance costs
4. Availability of a financial incentive
5. Availability of a facility assessment

6. Need to replace old but still working equipment
7. Need to replace broken equipment
8. Opportunity to adopt newer technology
9. Desire to protect the environment
10. Organizational carbon reduction or environmental goals
11. Recommendation from a [UTILITY] program contact
12. Recommendation from a contractor or trade ally
13. Recommendation from a family member, friend, or colleague
14. Part of a larger remodeling or renovation effort
98. Don't know

Program Experiences

6. The next few questions are about your experience with participating in the program. Did you receive any technical services through the program that helped you identify or select equipment? This may have included a facility assessment completed by program staff or a participating contractor.
1. Yes
2. No
98. Not sure

7. Did you work on the incentive application(s)?
1. Yes
2. No
98. Not sure

[ASK IF Q7= 1]
8. How easy was the overall application process to receive your incentive?
1. Very easy
2. Somewhat easy
3. Neither easy nor difficult
4. Somewhat difficult
5. Very difficult
98. Not sure

[ASK IF Q8 > 3]
9. What did you find difficult about the application process? [OPEN-ENDED]

[ASK IF CONTRACTOR = 0]
10. Did you work with a contractor to install the [PATHWAY_NAME] Program?
1. Yes
2. No
98. Don't know

[ASK IF CONTRACTOR = 1 or Q10 = 1]
11. How did you select the contractor who you worked with through the [PATHWAY_NAME] Program?
1. It was a contractor I've worked with before

2. Word of mouth or recommendation from someone I know
3. I used the [UTILITY] program website
4. The contractor cold-called or contacted me
5. I found the contractor on my own

12. Did you encounter any of the following challenges while completing the [PROJECT_DESCRIPTION]?
[MULTI-SELECT and Randomize order of 2 – 8]
1. Did not have any challenges [MAKE ANSWER EXCLUSIVE]
2. Difficulty understanding equipment eligibility
3. Difficulty finding a trade ally or contractor to complete the project
4. Lack of internal support within my company
5. Confusion about who to contact for information about the program
6. Difficulty understanding the incentive amount
7. Difficulty getting the equipment you installed
8. Difficulty with the contractor that installed the equipment
96. Other challenges. Please specify: [OPEN-ENDED]
98. Not sure [MAKE ANSWER EXCLUSIVE]

[Display if Q11=8]
13. Describe the difficulty you had with the contractor that installed the equipment. [OPEN-ENDED]

[ASK IF Q11=2-96 is selected]
14. What could [UTILITY] have done to help your organization overcome the challenges you faced on this project? (Please select all that apply).
[Multiselect]
1. Provided higher incentives
2. More technical/engineering support
3. Improve application process
4. Make it clearer who to go to for assistance with the application
5. Shorten the pre-approval times
6. Pay the incentives more quickly
7. Provide more information on contractors
8. Nothing else was needed [MAKE ANSWER EXCLUSIVE]
96. Something else (Please describe). [OPEN-ENDED]

Barriers
15. When considering improvements to increase commercial and industrial energy efficiency, what are the most significant challenges that your organization faces? (Please select all that apply).
[MULTI-SELECT]
1. No challenges or barriers [MAKE ANSWER EXCLUSIVE]
2. High initial cost
3. Understanding potential areas for improvement/lack of technical knowledge
4. Funding competition with other investments/improvements
5. Long payback period/return on investment
6. Lack of awareness about available incentives for energy efficient equipment
7. Lack of corporate support for energy efficiency investments

8. Lack of staff time dedicated to energy efficiency upgrades
9. Don't own building
96. Other (Please specify). [OPEN-ENDED]
98. Not sure [MAKE ANSWER EXCLUSIVE]

Program Satisfaction

16. How satisfied are you with [UTILITY]'s [PATHWAY_NAME] program overall? Would you say you are…
1. Very satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Very dissatisfied

17. Can you briefly describe why you gave the program that satisfaction rating? [OPEN-ENDED]

18. How satisfied are you with [UTILITY] overall as your organization's utility service provider? Would you say you are…
1. Very satisfied
2. Somewhat satisfied
3. Neither satisfied nor dissatisfied
4. Somewhat dissatisfied
5. Very dissatisfied

Free Ridership

MEASURE 1

19. Not including the project that your organization received an incentive for in [YEAR], has your organization completed any significant energy efficiency projects in the last three years?
1. Yes
2. No
98. Not sure

[Ask Q19 IF Q18 = 1]

20. Did you complete any of those projects without receiving a program incentive?
1. Yes
2. No
98. Not sure

[Ask Q20 IF Q18 = 1]

21. In the last three years, did your organization or business complete any energy efficiency projects like the [MEASURE1] project you completed at [LOCATION]? Please consider projects completed at this facility or at another facility operated by your organization.
1. Yes
2. No
98. Not sure

22. Did you have previous experience with the [PATHWAY_NAME] Program prior to [IMPLEMENTING1] the [MEASURE1] in [YEAR]?
1. Yes
2. No
98. Not sure

[Ask Q22 IF Q21= 1]
23. How important was your previous experience with the program in making your decision to [IMPLEMENT1] the [MEASURE1] at your facility? Would you say that it was…
1. Very important
2. Somewhat important
3. Only slightly important
4. Not at all important
98. Not sure

24. Did a [PATHWAY_NAME] Program representative or other [UTILITY] representative recommend that you [IMPLEMENT1] the [MEASURE1] at your facility?
1. Yes
2. No
98. Not sure

[Ask Q24 IF Q6 = 1]
25. Was the [MEASURE1] recommended through technical support or the facility assessment that you received?
1. Yes
2. No
98. Not sure

26. Did you have plans to [IMPLEMENT1] the [MEASURE1] at the facility before deciding to participate in the [PATHWAY_NAME] Program?
1. Yes
2. No
98. Not sure

27. Would you have completed the [MEASURE1] project even if you had not participated in the program?
1. Yes
2. No
98. Not sure

[Ask Q27 IF Q6 = 1 OR Q24=1]
28. If the [PATHWAY_NAME1] Program representative had not recommended [IMPLEMENTING1] the [MEASURE1], how likely is it that you would have [IMPLEMENTED1] it anyway? Would you say that you…
1. Definitely would have
2. Probably would have
3. Probably would not have

4. Definitely would not have
98. Not sure

29. Would you have been financially able to [IMPLEMENT1] the [MEASURE1] at your facility if the incentives from the [PATHWAY_NAME1] Program were not available?
1. Yes
2. No
98. Not sure

[Ask Q29 IF Q28 = 2]
30. To confirm, your organization would NOT have allocated the funds to complete a similar energy saving project if the program incentive was not available. Is that correct?
1. Yes, that is correct.
2. No, that is not correct.
98. Not sure

[Ask Q30 IF Q29 = 2]
31. In your own words, can you tell me what your organization would have likely done if the financial incentive was not available from the program? [OPEN-ENDED]

32. Did the program incentive help the [MEASURE1] project receive approval from your organization?
1. Yes
2. No
98. Not sure

33. If the incentive from the [PATHWAY_NAME] Program had not been available, how likely is it that you would have [IMPLEMENTED1] the [MEASURE1] at your facility anyway? Would you say that you…
1 Definitely would have
2 Probably would have
3 Probably would not have
4 Definitely would not have
98. Not sure

34. Did you [IMPLEMENT1] more [MEASURE1] or complete a bigger project than you otherwise would have without the program?
1. Yes
2. No
98. Not sure

[Ask Q34 IF ENERGY_USING1 = 1]
35. Did you choose equipment that was more energy efficient than you would have chosen had you not participated in the program?
1. Yes
2. No
98. Not sure

[Ask Q35 IF Q34 =1]
36. What type of equipment, if any, would you have installed if you had not participated in the program? [OPEN-ENDED]

37. Did you [IMPLEMENT1] the [MEASURE1] earlier than you otherwise would have without the program?
1. Yes
2. No
98. Not sure

[Ask Q37 IF Q36 = 1]
38. When would you otherwise have [IMPLEMENTED1] the [MEASURE1]? Would you have done it …
1. within 6 months
2. 7 months to 1 year
3. more than 1 year up to 2 years
4. more than 2 years up to 3 years
5. more than 3 years up to 5 years
6. More than 5 years
98. Not sure

MEASURE 2 [DISPLAY BLOCK IF SECOND_MEASURE = 1]
39. The next few questions are about the [MEASURE2] that our records say you also implemented. In the last three years, did your organization or business complete any energy efficiency projects like the [MEASURE2] project completed at [LOCATION]? Please consider projects completed at this facility or at another facility operated by your organization.
1. Yes
2. No
98. Not sure

[Ask IF Q38= 1]
40. How important was your previous experience with the program in making your decision to [IMPLEMENT2] the [MEASURE2] at your facility? Would you say that it was…
1. Very important
2. Somewhat important
3. Only slightly important
4. Not at all important
98. Not sure

41. Did a [PATHWAY_NAME] Program representative or other [UTILITY] representative recommend that you [IMPLEMENT2] the [MEASURE2] at your facility?
1. Yes
2. No
98. Not sure

[Ask IF Q40 = 1]

42. Was the [MEASURE2] recommended through the technical support or facility assessment that you received?
1. Yes
2. No
98. Not sure

43. Did you have plans to [IMPLEMENT2] the [MEASURE2] at the facility before deciding to participate in the [PATHWAY_NAME] Program?
1. Yes
2. No
98. Not sure

44. Would you have completed the [MEASURE2] project even if you had not participated in the program?
1. Yes
2. No
98. Not sure

[Ask IF Q40= 1 OR Q41=1]
45. If the [PATHWAY_NAME] Program representative had not recommended [IMPLEMENTING2] the [MEASURE2], how likely is it that you would have [IMPLEMENTED2] it anyway? Would you say that you…
1. Definitely would have
2. Probably would have
3. Probably would not have
4. Definitely would not have
98. Not sure

46. Would you have been financially able to [IMPLEMENT2] the [MEASURE2] at your facility if the incentives from the [PATHWAY_NAME2] Program were not available?
1. Yes
2. No
98. Not sure

[Ask IF Q45 = 2]
47. To confirm, your organization would NOT have allocated the funds to complete a similar energy saving project if the program incentive was not available. Is that correct?
1. Yes, that is correct.
2. No, that is not correct.
98. Not sure

[Ask IF Q46= 2]
48. In your own words, can you tell me what your organization would have likely done if the financial incentive was not available from the program? [OPEN-ENDED]

49. Did the program incentive help the [MEASURE2] project receive approval from your organization?

1. Yes
2. No
98. Not sure

50. If the incentive from the [PATHWAY_NAME] Program had not been available, how likely is it that you would have [IMPLEMENTED2] the [MEASURE2] at your facility anyway? Would you say that you…

1 Definitely would have
2 Probably would have
3 Probably would not have
4 Definitely would not have
98. Not sure

51. Did you [IMPLEMENT2] more units of [MEASURE2] or complete a bigger project than you otherwise would have without the program?

1. Yes
2. No
98. Not sure

[Ask IF ENERGY_USING2 = 1]

52. Did you choose [MEASURE2B] equipment that was more energy efficient than you would have chosen had you not participated in the program?

1. Yes
2. No
98. Not sure

[Ask IF Q51 =1]

53. What type of equipment, if any, would you have installed if you had not participated in the program? [OPEN-ENDED]

54. Did you [IMPLEMENT2] the [MEASURE2] earlier than you otherwise would have without the program?

1. Yes
2. No
98. Not sure

[Ask IF Q53 = 1]

55. When would you otherwise have [IMPLEMENTED2] the [MEASURE2]? Would you have done it …

1. within 6 months
2. 7 months to 1 year
3. more than 1 year up to 2 years
4. more than 2 years up to 3 years
5. more than 3 years up to 5 years
6. More than 5 years
98. Not sure

Spillover

56. Since completing your [UTILITY] project, have you installed any other energy-efficient equipment that saves natural gas at a site served by [UTILITY]?
1. Yes
2. No [Skip to Firmographics]
98. Not sure

[Display if Q55 = 1]
57. Did you install any of that equipment without getting a rebate, free installation, or other discount through a [UTILITY] program?
1. Yes
2. No [Skip to Firmographics]
98. Not sure

[Display if Q56 = 1]
58. What additional energy efficient equipment have you installed without getting a rebate, free installation, or other discount through a [UTILITY] program?
[MULTISELECT]
1. Natural gas boiler cut-out controls
2. Vent dampers on natural gas furnaces or boilers
3. Natural gas boiler reset controls
4. Natural gas boiler tune-up
5. Efficient burner on a natural gas boiler
6. Door weatherstripping to prevent air leakage
7. Low-flow faucet aerators
8. Water heater jackets on natural gas water heaters
9. Water heater pipe insulation
10. Low-flow showerheads
11. Commercial conveyor ovens
12. Combination ovens
13. Commercial fryers
14. Commercial steam cookers
15. Commercial underfired broilers
16. Commercial conveyor broilers
17. Commercial kitchen demand ventilation controls
18. Low-flow pre-rinse spray valves
19. Didn’t implement any measures [Skip to Firmographics]
96. Something else [OPEN-ENDED]
98. Not sure [Skip to Firmographics]

[Display if Q56 = 1]
59. Which of the following best describes why you decided to install this equipment without getting a program incentive?
[MULTI SELECT RANDOMIZE ORDER, BUT FIX OTHER AND NOT SURE]
1. Didn't know whether equipment qualified for financial incentives
2. Equipment did not qualify for financial incentives
3. Too much paperwork for the financial incentive application

4. Financial incentive was insufficient
5. Didn't have time to complete paperwork for financial incentive application
6. Didn't know about financial incentives until after equipment was purchased
7. We did receive an incentive [MAKE ANSWER EXCLUSIVE] [Skip to Firmographics]
96. Other (Please specify). [OPEN-ENDED]
98. Not sure [MAKE ANSWER EXCLUSIVE]

[Display if Q57 = 1, Natural gas boiler cut-out controls]
60. What is the total BTU/hour capacity of all boilers where cut-out controls were installed? [OPEN-ENDED]

[Display if Q57 = 2, Vent dampers installed on natural gas furnace or boiler]
61. What is the total BTU/hour capacity of all furnaces or boilers where vent dampers were installed? [OPEN-ENDED]

[Display if Q57 = 3, Natural gas boiler reset controls]
62. What is the total BTU/hour capacity of all boilers where reset controls were installed? [OPEN-ENDED]

[Display if Q57 = 4, Natural gas boiler tune-up]
63. What is the total BTU/hour capacity of all boilers that received a tune-up? [OPEN-ENDED]

[Display if Q57 = 5, Installed more efficient burner on a boiler]
64. What is the total BTU/hour capacity of the boilers where a more efficient burner was installed? [OPEN-ENDED]

[Display if Q57 = 5, Installed more efficient burner on a boiler]
65. What is the nameplate efficiency of each boiler, or the average if more than one? [Open-ended response, e.g., % efficiency or AFUE]

[Display if Q57 = 6, Door weatherstripping to prevent air leakage]
66. How many total linear feet of door sweeps or weatherstripping did you install? [OPEN-ENDED]

[Display if Q57 = 6, Door weatherstripping to prevent air leakage]
67. What was the average gap width (in inches) before installation? [OPEN-ENDED]

[Display if Q57 = 7, Low flow faucet aerators]
68. How many low-flow faucet aerators did you install? [OPEN-ENDED]

[Display if Q57 = 8, Water heater jackets]
69. On how many water heaters did you install jackets? [OPEN-ENDED]

[Display if Q57 = 9, Water heater pipe insulation]
70. How many feet of pipe insulation did you install on water heater pipes? [OPEN-ENDED]

[Display if Q57 = 10, Low flow showerheads]
71. How many low-flow showerheads did you install? [OPEN-ENDED]

[Display if Q57 = 10, Low flow showerheads]
72. In what type of building were they installed?
1. Hospital/Nursing Home
2. Hospitality (e.g., hotel, motel)
3. Commercial (e.g., office, retail)
4. Fitness Center
5. School
96. Other (Please describe). [OPEN-ENDED]

[Display if Q57 = 11, Commercial conveyor oven]
73. What type(s) of conveyor ovens did you install? (Select all that apply).
[MULTI-SELECT]
1. Single Rack
2. Double Rack

[Display if Q57 = 11, Commercial conveyor oven]
74. How many single rack commercial conveyor ovens did you install? [OPEN-ENDED]

[Display if Q57 = 11, Commercial conveyor oven]
75. How many double rack commercial conveyor ovens did you install? [OPEN-ENDED]

[Display if Q57 = 12, Combination ovens]
76. How many combination ovens did you install? [OPEN-ENDED]

[Display if Q57 = 13, Commercial fryers]
77. How many commercial fryers did you install? [OPEN-ENDED]

[Display if Q57 = 14, Commercial steam cookers]
78. How many commercial steam cookers did you install in each of the following pan sizes?
[Enter a number for each. Enter 0 if none.]
1. 3-pan cookers
2. 4-pan cookers
3. 5-pan cookers
4. 6-pan cookers
5. Larger than 6-pan cookers
98. Not sure of pan sizes

[Display if Q57 = 15, Commercial underfired broilers]
79. How many underfired broilers did you install? [OPEN-ENDED]

[Display if Q57 = 15, Commercial underfired broilers]
80. What is the length of each broiler in feet?
1. 1 foot
2. 2 feet
3. 3 feet
4. 4 feet

5. 5 feet
6. 6 feet
98. Don't know

[Display if Q57 = 15, Commercial underfired broilers]
81. How many underfired broilers did you install in each length?
[Enter a number for each. Enter 0 if none.]
1. 1-foot broilers
2. 2-foot broilers
3. 3-foot broilers
4. 4-foot broilers
5. 5-foot broilers
6. 6-foot broilers
98. Not sure of lengths

[Display if Q57 = 16, Commercial conveyor broilers]
82. How many commercial conveyor broilers did you install? [OPEN-ENDED]

[Display if Q57 = 17, Commercial kitchen demand ventilation controls]
83. What is the total horsepower (HP) of the fans controlled by the demand ventilation system? [OPEN-ENDED]

[Display if Q57 = 17, Commercial kitchen demand ventilation controls]
84. In what type of building were the controls installed?
1. Hotel
2. 24-Hour Restaurant
3. Casual Dining
4. Fast Food
5. Prison
6. University Dining
7. School (includes summer sessions)
8. School (no summer sessions)

[Display if Q57 = 18, Low-flow pre-rinse spray valves]
85. How many low-flow pre-rinse spray valves did you install? [OPEN-ENDED]

ATTRIBUTION QUESTIONS [DISPLAY IF EQUIPMENT IS SELECTED]
[Loop and Merge using Q57 response. The table below displays the merge fields to set up]

Response Option	Merge Field 1	Merge Field 2	Merge Field 3
Natural gas boiler cut-out controls	install the boiler cut-out control(s)	installed the boiler cut-out control(s)	installing the boiler cut-out control(s)
Vent dampers on natural gas furnaces or boilers	install the vent damper(s)	installed the vent damper(s)	installing the vent damper(s)
Natural gas boiler reset controls	install the boiler reset control(s)	installed the boiler reset control(s)	installing the boiler reset control(s)

Natural gas boiler tune-up	complete the boiler tune-up(s)	completed the boiler tune-up(s)	completing the boiler tune-up(s)
Efficient burner on a natural gas boiler	install the efficient burner(s)	installed the efficient burner(s)	installing the efficient burner(s)
Door weatherstripping to prevent air leakage	install the door weatherstripping	installed the door weatherstripping	installing the door weatherstripping
Low-flow faucet aerators	install the low-flow faucet aerator(s)	installed the low-flow faucet aerator(s)	installing the low-flow faucet aerator(s)
Water heater jackets on natural gas water heaters	install the water heater jacket(s)	installed the water heater jacket(s)	installing the water heater jacket(s)
Water heater pipe insulation	install the water heater pipe insulation	installed the water heater pipe insulation	installing the water heater pipe insulation
Low-flow showerheads	install the low-flow showerhead(s)	installed the low-flow showerhead(s)	installing the low-flow showerhead(s)
Commercial conveyor ovens	install the conveyor oven(s)	installed the conveyor oven(s)	installing the conveyor oven(s)
Combination ovens	install the combination oven(s)	installed the combination oven(s)	installing the combination oven(s)
Commercial fryers	install the fryer(s)	installed the fryer(s)	installing the fryer(s)
Commercial steam cookers	install the steam cooker(s)	installed the steam cooker(s)	installing the steam cooker(s)
Commercial underfired broilers	install the underfired broiler(s)	installed the underfired broiler(s)	installing the underfired broiler(s)
Commercial conveyor broilers	install the conveyor broiler(s)	installed the conveyor broiler(s)	installing the conveyor broiler(s)
Commercial kitchen demand ventilation controls	install the kitchen demand ventilation control(s)	installed the kitchen demand ventilation control(s)	installing the kitchen demand ventilation control(s)
Low-flow pre-rinse spray valves	install the pre-rinse spray valve(s)	installed the pre-rinse spray valve(s)	installing the pre-rinse spray valve(s)
Something else	install the other equipment you installed	installed the other equipment you installed	installing the other equipment you installed
Didn't implement any measures	Didn't implement any measures	Didn't implement any measures	Didn't implement any measures

[Ask Q85 if Q56 = 1]
86. How important was your experience with the program in your decision to [Merge Field1]?
[SCALE 0 "Not at all important" - 10 "Very important", 98 = Not sure]

[Ask Q86 if Q56 = 1]
87. If you had NOT participated in the program, how likely is it that your organization would have [Merge Field 2]?
[SCALE 0 "Not at all likely" - 10 "Extremely likely", 98 = Not sure]

[Ask Q87 if [Q85=0,1,2,3 AND Q86=0,1,2,3]
OR IF [Q85=8,9,10 AND Q86=8,9,10]
88. You scored the importance of your program experience to your decision to [Merge Field 1] with [Q85 RESPONSE] out of 10 possible points. You ALSO scored the likelihood of [Merge Field 3] if your organization had not participated in the program with [Q86 RESPONSE] out of 10 possible points. Can you please explain the role the program made in your decision to implement this measure? [OPEN-ENDED]

Firmographics

89. Which best describes your facility where you installed the rebated equipment? Would you say that this facility is…
1. Your company's only location
2. One of several locations owned by your company
3.The headquarters location of a company with several locations
98. Not sure
99. Prefer not to state

90. Does your company rent or own and occupy, or own and rent the facility to someone else at this location?
1. Rent
2. Own and occupy
3. Own and rent to someone else
98. Not sure
99. Prefer not to state

91. How would you describe the building type for the [LOCATION] facility?
1. College / University
2. Grocery or Convenience Store
3. Hotel / Motel
4. Industrial / Manufacturing
5. K-12 School
6. Medical / Healthcare
7. Office
8. Religious Worship
9. Restaurant
10. Retail
11. Warehouse
98. Not sure
99. Prefer not to state

92. How long have you been in business at this location?
1. Less than 1 year
2. 1 – 2 years
3. More than 2 years to 5 years
4. More than 5 years to 10 years
5. More than 10 years
98. Not sure

99. Prefer not to state

93. Do you have any other comments that you would like to relay to [UTILITY] about energy efficiency in the commercial and industrial sector or about their programs? [OPEN-ENDED]

94. Thank you for taking the time today to complete this survey. As stated previously, we will be sending you a $10 electronic gift card as a thank you for your response. The email address we have on file for you is [EMAIL], is this information correct?
1. Yes, please send my electronic gift card to the above email address
2. No, please send my electronic gift card to the following email address [OPEN-ENDED]
3. No, I do not wish to receive a gift card

9.2 Commercial and Industrial Solutions Program – C&I Solutions Direct Install Participant Survey

2. Thank you for taking this survey to tell us about your company/organization's knowledge and awareness of [UTILITY]'s [PROGRAM_DESC] Program. Your feedback is very important to us and will help us improve programs for customers like you. This survey should take about 10 minutes. Your responses are confidential and will be used for research purposes only. If you have questions about how we treat collected data, please see ADM's privacy policy at https://www.admenergy.com/privacy.
Upon completion of the survey, we will collect your email address to send a $10 electronic gift card as a token of our thanks.
Once you have entered a response for each question, use the arrow at the bottom right of the screen to get to the next question.

3. How did you FIRST learn about [UTILITY]'s program for direct installation measures?
1. From a(n) [UTILITY] Account Representative or Customer Service Representative
2. From a(n) [UTILITY] program representative
3. From a Trade Ally/contractor/equipment vendor/ energy consultant
4. Friends or colleagues
5. From [UTILITY]'s website
6. Social media post
7. Through an internet search (e.g., online search engine)
8. Through an internet advertisement
9. Through a program sponsored workshop
96. Other (please explain). [OPEN-ENDED]
98. I don't know

Awareness: DI Measures
4. Our records show the following equipment was installed at [Location].
For each item, please tell us if that is correct.: [MATRIX OPTIONS: Yes=1, No=2, I don't know=98]
1. Weatherstripping [Display if WEATHERSTRIPPING=1]
2. Low-flow faucet aerators [Display if AERATOR=1]
3. Low-flow showerheads [Display if SHOWER=1]
4. Overhead door weatherstripping [Display if OVERHEADWEATHERSTRIPPING=1]

5. Pre-rinse spray valves (PRSVs) [Display if SPRAYVALVE=1]
6. Steam traps [Display if STEAMTRAP=1]
7. DrySmart Controls [Display if DRYSMART=1]

[Display if any in Q4 = 1]
5. Did you remove any of that equipment? [MATRIX OPTIONS: Yes=1, No=2, I don't know=98] [CARRY FORWARD STATEMENTS FROM Q4]

[Display if any in Q5 = 1]
6. Why did you remove the equipment? Please select all that apply. [MULTI-SELECT] [MATRIX OPTIONS: They were no longer working properly=1, I purchased new items that I liked better=2, I liked my old items better, so I reinstalled them=3, I performed some remodeling or maintenance that required the removal of these items=4, Other=96, I don't know=98]

[CARRY FORWARD STATEMENTS FROM Q5 = 1]

Free Ridership
Measure 1
7. Before participating in the [UTILITY] program, had you ever installed any [DI_MEASURE1] at your facility?
1. Yes
2. No
98. I don't know

8. Before participating in the [UTILITY] program, did you have plans to install the [DI_MEASURE1] at your facility?
1. Yes
2. No
98. I don't know

[Display if Q8 = 1]
9. When would you have installed the [DI_MEASURE1] if it wasn't installed through the program?
1. Within 6 months
2. 7 months to 1 year
3. More than 1 year
4. Never
98. I don't know

10. Prior to this project, did your organization participate in any [UTILITY] energy efficiency programs?
1. Yes
2. No
98. I don't know

[Display if Q10 = 1]
11. How important was previous experience with [UTILITY] programs in making your decision to install the [DI_MEASURE1]?

1. Not at all important
2. Slightly important
3. Somewhat important
4. Very important
5. Did not have previous experience with the program
98. I don't know

12. If the [UTILITY] program had not recommended installing the [DI_MEASURE1], how likely is it that you would have installed it anyway?
1. Definitely would not have installed
2. Probably would not have installed
3. Probably would have installed
4. Definitely would have installed
98. I don't know

13. If it was not provided by the program, would your organization have been financially able to install the [DI_MEASURE1]?
1. Yes
2. No
98. I don't know

14. If the program had not installed the [DI_MEASURE1], how likely is it that you would have installed it on your own?
1. Definitely would not have installed
2. Probably would not have installed
3. Probably would have installed
4. Definitely would have installed
98. I don't know

Measure 2 [Display section if DI_MEASURE2 <> empty]

15. Before participating in the [UTILITY] program, had you ever installed any [DI_MEASURE2] at your facility?
1. Yes
2. No
98. I don't know

16. Before participating in the [UTILITY] program, did you have plans to install the [DI_MEASURE2] at your facility?
1. Yes
2. No
98. I don't know

[Display if Q16= 1]

17. When would you have installed the [DI_MEASURE2] if it wasn’t installed through the program?
1. Within 6 months
2. 7 months to 1 year
3. More than 1 year

4. Never
98. I don't know

18. Prior to this project, did your organization participate in any [UTILITY] energy efficiency programs?
1. Yes
2. No
98. I don't know

[Display if Q18= 1]
19. How important was previous experience with [UTILITY] programs in making your decision to install the [DI_MEASURE2]?
1. Not at all important
2. Slightly important
3. Somewhat important
4. Very important
5. Did not have previous experience with the program
98. I don't know

20. If the [UTILITY] program had not recommended installing the [DI_MEASURE2], how likely is it that you would have installed it anyway?
1. Definitely would not have installed
2. Probably would not have installed
3. Probably would have installed
4. Definitely would have installed
98. I don't know

21. If it was not provided by the program, would your organization have been financially able to install the [DI_MEASURE2]?
1. Yes
2. No
98. I don't know

22. If the program had not installed the [DI_MEASURE2], how likely is it that you would have installed it on your own?
1. Definitely would not have installed
2. Probably would not have installed
3. Probably would have installed
4. Definitely would have installed
98. I don't know

Customer Satisfaction
23. How easy was it to schedule the installation?
1. Very easy
2. Somewhat easy
3. Difficult
4. Very difficult

98. Not applicable

[Display if Q23= 3 or 4]
24. What was difficult about scheduling the installation? [OPEN-ENDED]

25. How would you rate the professionalism of the installer(s)?
1. Excellent
2. Good
3. Fair
4. Poor
98. Not applicable

[Display if Q25 = 4]
26. Why do you give the installer that rating? [OPEN-ENDED]

27. Was the work area left clean after the installation?
1. Yes
2. No
98. I don't know

28. Did a program representative mention or promote any of the incentives for additional energy efficiency improvements that [UTILITY] offers?
1. Yes
2. No
98. I don't know

29. On a scale of 1-5, where 1 is “very dissatisfied” and “5” is “very satisfied”, how satisfied are you with:
[Scale: 1 = Very dissatisfied 2= Somewhat dissatisfied 3= Neither satisfied nor dissatisfied
4. Somewhat satisfied 5. Very satisfied, 98 = I don't know/Not applicable]
a) The installation of the [ALL_MEASURES]
b) The steps you had to take to get through the program
c) The amount of time it took to have the [ALL_MEASURES] installed
d) The program overall
e) [UTILITY] as your natural gas service provider

[Display if any in Q29 < 3]
30. Please describe the ways in which you were not satisfied with the aspects of the program mentioned above? [OPEN-ENDED]

31. Would you say that your participation in the [UTILITY] Program has:
1. Greatly decreased your satisfaction with [UTILITY]
2. Somewhat decreased your satisfaction with [UTILITY]
3. Did not affect your satisfaction with [UTILITY]
4. Somewhat increased your satisfaction with [UTILITY]
5. Greatly increased your satisfaction with [UTILITY]

32. How likely is it that you would recommend the [PROGRAM_DESC] Program to a friend or colleague?
[Scale: 0 (Not at all likely) – 10 (Extremely likely)]

33. Why do you give it that rating? [OPEN-ENDED]

34. Do you have any suggestions for improving the program? [OPEN-ENDED]

Firmographics

35. Which best describes your facility at [LOCATION]? Would you say the facility is:
1. Your company's only location
2. One of several locations owned by your company
3. The headquarter location of a company with several locations
4. I don't know
99. Prefer not to answer

36. Does your company rent or own and occupy, or own and rent the facility to someone else at this location?
1. Rent
2. Own and occupy
3. Own and rent to someone else
98. I don't know
99. Prefer not to answer

37. Which of the following best describes how your organization is billed for natural gas used at this location?
1. We are billed directly by [UTILITY] for the natural gas we use
2. We are NOT billed directly by [UTILITY] for the natural gas we use. Our natural gas bill is handled by another part of our company or a third party service provider
3. We are NOT billed directly by [UTILITY] for the natural gas we use. The cost for our natural gas is included in our rent/lease
98. I don't know
99. Prefer not to answer

38. What type of business is at this location?
1. College / University
2. Grocery or convenience store
3. Hotel/Motel
4. Industrial/Manufacturing
5. K-12 School
6. Medical / healthcare
7. Office
8. Religious worship
9. Restaurant
10. Retail
11. Warehouse
12. Other (Specify) [OPEN-ENDED]

98. I don't know
99. Prefer not to answer

Closing

[Display if Mode = Email]

39. Thank you for taking the time today to complete this survey. As stated previously, we will be sending you a $10 electronic gift card as a thank you for your responses. The email address we have on file for you is [EMAIL], is this information correct?
1. Yes, please send my electronic gift card to the above email address
2. No, please send my electronic gift card to the following email address [OPEN-ENDED]
3. No, I do not wish to receive a gift card

[Display if Mode = Phone]

40. Thank you for taking the time today to complete this survey. As stated previously, we will be sending you a $10 electronic gift card as a thank you for your responses.
Please provide an email address to send this card too. [OPEN-ENDED]

10 Appendix D: Survey-Based Free-Ridership Results

This section presents tables of responses to the free-ridership results survey questions. The results are presented for each of the following survey instruments:

- C&I Solutions Prescriptive Rebates
- C&I Solutions Direct Install

Questions are tabulated based on the responses used in the NTG analysis. This may include responses dropped because the questions were skipped by the respondent as well as questions repeated because the respondent was asked about multiple measures. As a result, the counts of responses presented in the following tables may not equal the number of survey responses.

10.1 Commercial and Industrial Solutions Program – Prescriptive Rebates (Multi-utility Results)

Would you have been financially able to install the equipment or measures without the financial incentive from the Program?	Percent (n = 7)
Yes	85.7%
No	0.0%
Don't know	14.3%
To confirm, your organization would NOT have allocated the funds to complete a similar energy saving project if the program incentive was not available. Is that correct?	**Percent (n = 0)**
Yes	N/A
No	N/A
Don't know	N/A
Did you have plans to install the measure before participating in the program?	**Percent (n = 8)**
Yes	87.5%
No	12.5%
Don't know	0.0%
Would you have completed the project even if you had not participated in the program?	**Percent (n = 8)**
Yes	75.0%
No	12.5%
Don't know	12.5%
If the incentive from the Program had not been available, how likely is it that you would have installed [Equipment/Measure] anyway?	**Percent (n = 7)**
Definitely would have	28.6%
Probably would have	42.9%
Probably would not have	14.3%
Definitely would not have	0.0%
Don’t know	14.3%

Did you choose equipment that was more energy efficient than you would have chosen had you not participated in the program? [SKIP, IF MEASURE = CONTROLS]	Percent (n = 7)
Yes	14.3%
No	85.7%
Don't know	0.0%
How important was previous experience with the Program in making your decision to install [Equipment/Measure]?	**Percent (n = 6)**
Very important	50.0%
Somewhat important	50.0%
Only slightly important	0.0%
Not at all important	0.0%
Don’t know	0.0%
If the Program representative had not recommended implementing the [Equipment/Measure], how likely is it that you would have implemented it anyway?	**Percent (n = 0)**
Definitely would have	N/A
Probably would have	N/A
Probably would not have	N/A
Definitely would not have	N/A
Don’t know	N/A
Not including the project that your organization received an incentive for in [YEAR], has your organization completed any significant energy efficiency projects in the last three years?	**Percent (n = 8)**
Yes	75.0%
No	25.0%
Don't know	0.0%
Did you complete any of those projects without receiving a program incentive or rebate?	**Percent (n = 6)**
Yes	33.3%
No	33.3%
Don't know	33.3%
In the last three years, did you complete any energy efficiency projects similar to the [MEASURE] project implemented at the facility located at [LOCATION]?	**Percent (n = 6)**
Yes	83.3%
No	16.7%
Don't know	0.0%
Did you install the [MEASURE1] earlier than you otherwise would have without the program?	**Percent (n = 7)**
Yes	28.6%
No	57.1%
Don't know	14.3%
In the last three years, did you complete any energy efficiency projects similar to the [MEASURE] project implemented at the facility located at [LOCATION]?	**Percent (n = 2)**
within 6 months	50.0%
7 months to 1 year	50.0%

more than 1 year up to 2 years	0.0%
more than 2 years up to 3 years	0.0%
more than 3 years up to 5 years	0.0%
More than 5 years	0.0%
Don’t know	0.0%

10.2 Commercial and Industrial Solutions Program – C&I Solutions Direct Install (Multi-utility Results)

If it was not provided by the program, would your organization have been financially able to install the [Field-DI_MEASURE1]?	Percent (n = 12)
Yes	16.7%
No	75.0%
I don't know	8.3%
If it was not provided by the program, would your organization have been financially able to install the [Field-DI_MEASURE1]?	**Percent (n = 12)**
Yes	16.7%
No	83.3%
I don't know	0.0%
If it was not provided by the program, would your organization have been financially able to install the [Field-DI_MEASURE1]?	**Percent (n = 2)**
Within 6 months	0.0%
7 months to 1 year	0.0%
More than 1 year	50.0%
Never	0.0%
I don't know	50.0%
If it was not provided by the program, would your organization have been financially able to install the [Field-DI_MEASURE1]?	**Percent (n = 3)**
Not at all important	66.7%
Slightly important	0.0%
Somewhat important	0.0%
Very important	33.3%
Did not have previous experience with the program	0.0%
I don't know	0.0%
If it was not provided by the program, would your organization have been financially able to install the [Field-DI_MEASURE1]?	**Percent (n = 12)**
Definitely would not have installed	50.0%
Probably would not have installed	25.0%
Probably would have installed	25.0%
Definitely would have installed	0.0%
I don't know	0.0%
If it was not provided by the program, would your organization have been financially able to install the [Field-DI_MEASURE1]?	**Percent (n = 12)**
Yes	33.3%
No	33.3%
I don't know	33.3%

If it was not provided by the program, would your organization have been financially able to install the [Field-DI_MEASURE1]?	Percent (n = 8)
Definitely would not have installed	37.5%
Probably would not have installed	25.0%
Probably would have installed	37.5%
Definitely would have installed	0.0%
I don't know	0.0%

11 Appendix E: Residential Site Visit Findings

This section provides an overview of discrepancies or issues encountered in site visits. The table below contains the field technician's notes for specific projects.

Table 11-1: Site Visit Findings Overview

Pathway	Measure	Discrepancy Type	Notes
LIPP	Duct Sealing	CFM Test Discrepancy	"I received a duct test result of 233 CFM25 and the trade ally had reported 198 CFM25. I made sure all supply registers and returns were covered for the duct test. I did not spot any obvious reasons for the discrepancy. There was mastic, mastic tape, and spray foam on the ductwork and air handler. It was a cold day (around 30 degrees) when I ran the test which may have contributed to the higher test result." See Figure 11-1 and Figure 11-2
LIPP	Air Infiltration	CFM Test Discrepancy	"I received an air infiltration result of 2992 CFM50 and the trade ally had reported 2521 CFM50. The test was still within 20% of the trade ally's result. The trade ally sealed an attic fan with tape, and the tape had come loose on one side of the fan. Todd with CLEAResult was on site with me and we were able to resecure the tape, but there may have been some leakage from around the area still because the air infiltration test was a little high." See Figure 11-3
LIPP	Air Infiltration	CFM Test Discrepancy	"I did not spot any reasons for the slightly higher air infiltration result. I made sure all windows, and exterior doors were closed for the test." See Figure 11-4
HES	Ceiling Insulation	Measure Not Installed	"No insulation was installed at this site. The homeowner said that the trade ally arranged for insulation to be installed after the air sealing/duct sealing had been performed but when the insulation contractor arrived to install the insulation they said they could not install it because the attic had a radiant barrier laid over top of the insulation. There was a radiant barrier over some of the attic space but not the whole attic." See Figure 11-5

This section provides photographic evidence to support the technician notes outlined in the previous section.

Figure 11-1: Duct Sealing ProjectT – CFM25 Post Duct Test Result

Figure 11-2: Duct Sealing Project- Mastic, Mastic Tape & Spray foam on Air Handler

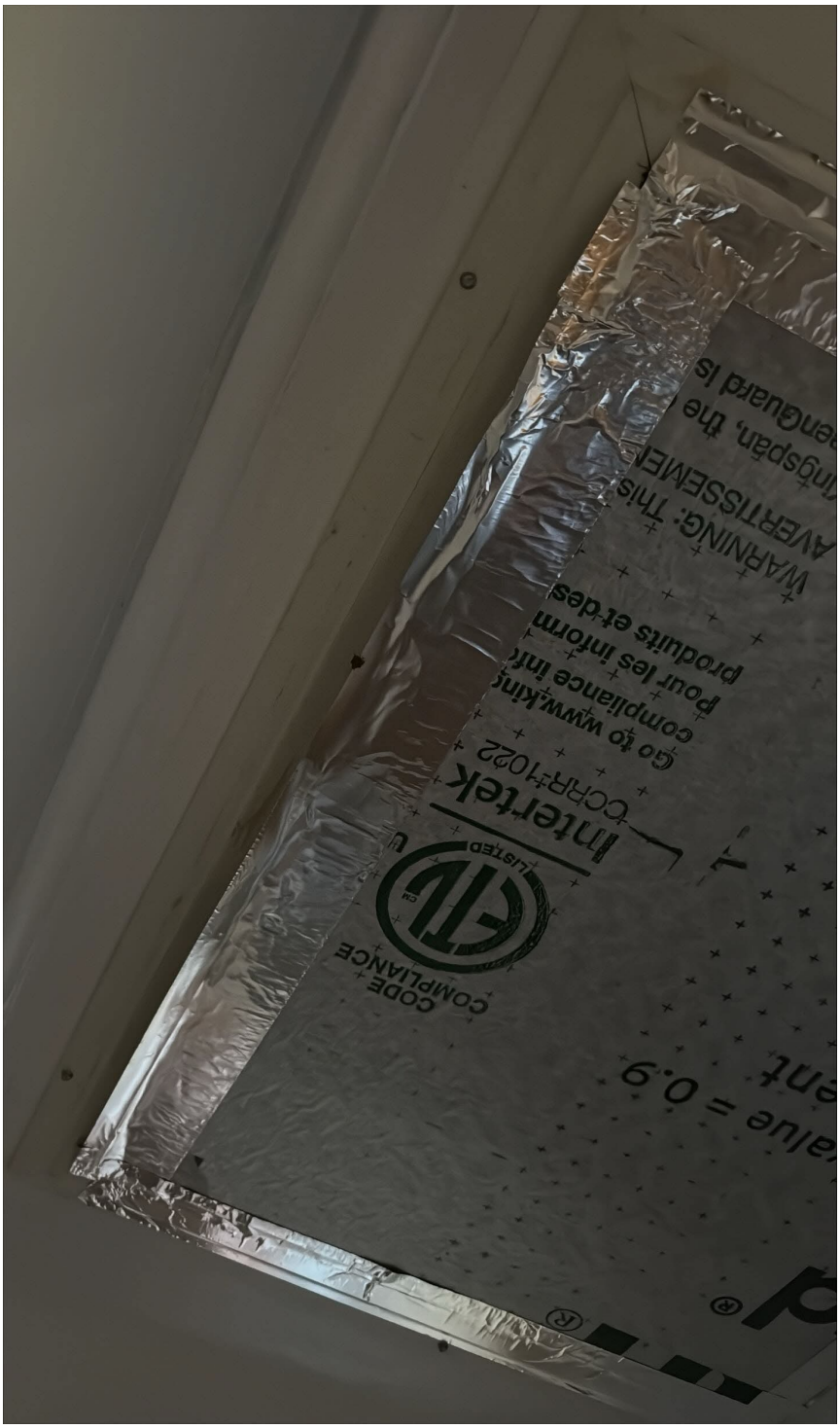


Figure 11-3: Air Infiltration Project- Loose Tape over Sealed Attic Fan

Figure 11-4: Air Infiltration Project- High CFM50 Post Air Infiltration Test Result

Figure 11-5: Ceiling Insulation Project- No Insulation Installed Due to Radiant Barrier

12 Appendix F: Cost-Benefit Inputs

Table 12-1: BHE Avoided Cost Values

Year	$/kWh	$/kW	$/Therm	$/Gallon Water
2025	*$0.0221*	*$67.96*	*$0.0452*	*$0.0097*
2026	*$0.0223*	*$69.27*	*$0.0440*	*$0.0099*
2027	*$0.0223*	*$70.61*	*$0.0452*	*$0.0101*
2028	*$0.0231*	*$71.96*	*$0.0488*	*$0.0104*
2029	*$0.0253*	*$73.35*	*$0.0531*	*$0.0106*
2030	*$0.0262*	*$74.76*	*$0.0561*	*$0.0108*
2031	*$0.0450*	*$76.20*	*$0.0591*	*$0.0111*
2032	*$0.0470*	*$77.67*	*$0.0621*	*$0.0113*
2033	*$0.0476*	*$79.16*	*$0.0640*	*$0.0116*
2034	*$0.0492*	*$80.68*	*$0.0664*	*$0.0118*
2035	*$0.0509*	*$82.24*	*$0.0677*	*$0.0121*
2036	*$0.0544*	*$83.82*	*$0.0689*	*$0.0123*
2037	*$0.0561*	*$85.43*	*$0.0705*	*$0.0126*
2038	*$0.0580*	*$87.08*	*$0.0722*	*$0.0129*
2039	*$0.0594*	*$88.75*	*$0.0741*	*$0.0132*
2040	*$0.0621*	*$90.46*	*$0.0756*	*$0.0135*
2041	*$0.0608*	*$92.20*	*$0.0780*	*$0.0138*
2042	*$0.0616*	*$93.97*	*$0.0797*	*$0.0141*
2043	*$0.0635*	*$95.78*	*$0.0811*	*$0.0144*
2044	*$0.0640*	*$97.63*	*$0.0830*	*$0.0147*

Table 12-2: BHE Discount Rates

Test	Discount Rate
TRC	6.61%
UCT	6.61%
RIM	6.61%
PCT	9.00%

Table 12-3: Line & Distribution Losses

Line & Distribution Loss Type	Rate
Gas Distribution Losses	2.69%
Line Losses – Energy	6.49%
Line Losses – Demand	10.02%

Comprehensive Energy Efficiency Plan

Program Year 2025

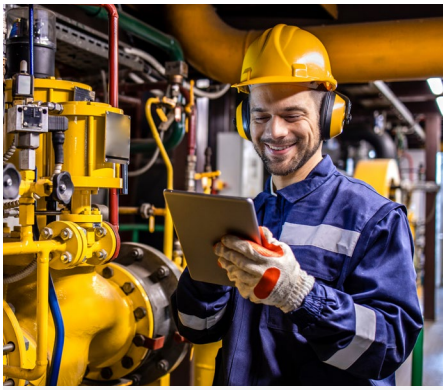
Annual Report

Appendix B – Supplemental Documentation

Black Hills Energy

COMMERCIAL & INDUSTRIAL SOLUTIONS PROGRAM

The Black Hills Energy Commercial & Industrial Solutions Program helps you understand the benefits of energy efficiency, develop and implement plans for improving efficiency throughout your facility, and leverage financial incentives to make energy-saving upgrades.



The Commercial & Industrial Solutions Program will help you:

- Use natural gas more efficiently
- Achieve significant, long-term energy savings
- Earn incentives to help offset the initial cost of upgrades

Who is eligible?

Black Hills Energy commercial and industrial customers who have a valid natural gas account number are eligible.

What are the benefits?

- The opportunity to earn $0.75 for each CCF you save as a result of your energy efficiency project(s)*
- A no-cost facility audit to determine if any natural gas is being used inefficiently

Measures Eligible for Incentives from the 2024–2026

Commercial & Industrial Solutions Program

MEASURE TYPE	MEASURE DESCRIPTION
Steam Trap Survey & Replacement	Evaluation of your steam system and replacement of any failed open traps
Steam & Hot Water Pipe Insulation	Insulation of steam or hot water pipes, tanks, steam valves or fittings
Schedule Optimization Adjusting	HVAC temperature set point reduces load during unoccupied times
Demand Control Ventilation	Optimizing CO_2 sensor set point reduces the amount of outdoor air that needs to be heated or cooled
Recirculating Hot Water Pump Controls	Reduce heat loss and boiler firing rate
Process Boiler	Boilers with an efficiency rating above federal baseline are eligible for incentives
Linkless Controls & Burner	Upgrade a process boiler with linkless controls
Process Equipment	Includes regenerative thermal oxidizers, economizers and furnaces
Space-Heating Equipment	Includes condensing unit heaters, destratification fans and HTHV heaters
Process Controls	Controls or VFDs on industrial equipment reduce gas use
Waste Heat Recovery	Recover heat from HVAC or process systems to offset heating needs elsewhere in your facility

This program also covers other process or comfort improvements that result in natural gas savings. For more information, please see the 2024–2026 Commercial & Industrial Solutions Program manual.

**Incentives paid will not exceed the sum of the incremental measure costs.*

Steps to participate:

1. Contact Black Hills Energy contractor and program administrator, CLEAResult, to schedule a no-cost energy audit.
2. Sign and submit the participation agreement (see back).
3. Work with CLEAResult to formally identify energy efficiency project opportunities, quantify prospective energy savings and reserve Black Hills Energy incentive funding.
4. Schedule the post-project completion inspection(s) once the work is complete.
5. Receive cash rebates from Black Hills Energy.

Black Hills Energy Ready

PROGRAMA DE SOLUCIONES COMERCIALES E INDUSTRIALES

El Programa de Soluciones Comerciales e Industriales de Black Hills Energy le ayuda a comprender los beneficios de la eficiencia energética, desarrollar e implementar planes para mejorar la eficiencia en toda su instalación, y aprovechar incentivos financieros para realizar mejoras que ahorran energía.

El Programa de Soluciones Comerciales e Industriales le ayudará a:

- Utilizar el gas natural de forma más eficiente
- Lograr un ahorro energético significativo y a largo plazo
- Obtener incentivos para ayudar a compensar el coste inicial de las mejoras

¿Quién es elegible?

Los clientes comerciales e industriales de Black Hills Energy que tengan un número de cuenta válido de gas natural son elegibles.

¿Cuáles son los beneficios?

- La oportunidad de ganar $0.75 por cada CCF que ahorre como resultado de su(s) proyecto(s) de eficiencia energética*
- Una auditoría gratuita de la instalación para determinar si algún gas natural se está utilizando de forma ineficiente

Medidas elegibles para incentivos desde 2024-2026

Programa de Soluciones Comerciales e Industriales

TIPO DE MEDIDA	DESCRIPCIÓN DE LA MEDIDA
Inspección y sustitución de trampas de vapor	Evaluación de su sistema de vapor y reemplazo de cualquier sifón abierto que haya fallado
Aislamiento de tuberías de vapor y agua caliente	Aislamiento de tuberías, tanques, válvulas o conexiones de vapor o agua caliente
Ajuste de optimización de horarios	El punto de ajuste de temperatura HVAC reduce la carga durante los tiempos de desocupación
Ventilación de control de la demanda	Optimizar el punto de ajuste del sensor de CO2 reduce la cantidad de aire exterior que necesita calentarse o enfriarse
Controles de la bomba de agua caliente recirculante	Reducir la pérdida de calor y la velocidad de combustión de la caldera
Caldera de proceso	Las calderas con una calificación de eficiencia superior al nivel federal son elegibles para incentivos
Controles & quemador sin enlace	Actualizar una caldera de proceso con controles sin enlace
Equipos de proceso	Incluye oxidantes térmicos regenerativos, economizadores y hornos
Equipos de calefacción espacial	Incluye calefactores de unidad de condensación, v entiladores de desestratificación y calentadores HTHV
Controles de procesos	Los controles o VFD en equipos industriales reducen el consumo de gas
Recuperación de calor residual	Recupera el calor de sistemas HVAC o de proceso para compensar las necesidades de calefacción en otras partes de su instalación

Este programa también cubre otras mejoras de procesos o comodidad que resultan en ahorros de gas natural. Para más información, consulte el manual del Programa de Soluciones Comerciales e Industriales 2024–2026.

**Los incentivos pagados no superarán la suma de los costes de la medida incremental.*

Pasos para participar:

1. Contacte al contratista y administrador del programa de Black Hills Energy, CLEAResult, para programar una auditoría energética sin costo.
2. Firme y presente el acuerdo de participación (ver al final).
3. Trabaje con CLEAResult para identificar formalmente oportunidades de proyectos de eficiencia energética, cuantificar los posibles ahorros energéticos y reservar la financiación de incentivos de Black Hills Energy.
4. Programe la(s) inspección(es) posterior a la finalización del proyecto una vez finalizada la obra.
5. Reciba reembolsos en efectivo de Black Hills Energy.

Black Hills Energy Ready

Black Hills Energy Arkansas Commercial and Industrial Solutions Program Project Application

CUSTOMER INFORMATION			
Customer (Organization Name):			
Contact Name:		Contact Title:	
Address:			
City:		State:	ZIP Code:
Email:	Office Phone:	Mobile Phone:	

MEASURE/PROJECT TYPE	BUILDING NAME/ ADDRESS/ACCT # OR METER #	EST. PROJECT COMPLETION DATE	EST. PROJECT COST ($)	EST. ENERGY SAVINGS (THERM/YR)	EST. INCENTIVE APPLIED FOR ($)
		Totals*			

**The amount listed as the Total Incentives Reserved is based on estimated savings. The actual incentive amount will be based on verified savings. The total incentives paid cannot exceed the amount noted in this section.*

Black Hills Energy Ready

Solicitud del Programa de Soluciones Comerciales e Industriales de Black Hills Energy Arkansas

INFORMACIÓN DEL CLIENTE		
Cliente (Nombre de la organización):		
Nombre de contacto:	Contacto título:	
Dirección:		
Ciudad:	Estado:	Código postal:
Correo electrónico:	Teléfono de oficina:	Teléfono móvil:

TIPO DE MEDIDA/ PROYECTO	NOMBRE DEL EDIFICIO/ DIRECCIÓN/# DE CUENTA O # DE MEDIDOR	FECHA ESTIMADA DE FINALIZACIÓN DEL PROYECTO	COSTO ESTIMADO DEL PROYECTO ($)	AHORROS ENERGÉTICOS ESTIMADOS (TERMO/AÑO)	ESTIMADO DE INCENTIVO SOLICITADO ($)
		Totales*			

**La cantidad que aparece como Incentivos Totales Reservados se basa en los ahorros estimados. La cantidad real del incentivo se basará en los ahorros verificados. El total de incentivos pagados no puede superar la cantidad indicada en esta sección.*

Black Hills Energy Ready

Welcome comfort with a no-cost Home Energy Assessment

See if you qualify for new insulation, air sealing and more.

Your home may be eligible to receive weatherization improvements through the Black Hills Energy Arkansas **Home Energy Savings Pathway**. It all starts with a no-cost Home Energy Assessment.

During your assessment, a certified contractor will help you discover ways to save energy and improve the health and comfort of your home. They'll also determine if you qualify for energy-saving home improvements, all at no cost to you.

No-cost upgrades may include:

Air sealing
Prevents drafts and increases comfort

Duct sealing
Improves HVAC performance and indoor air quality

Attic insulation
Keeps you cozy in winter, cool in summer, and saves on heating and cooling

Efficient products
Showerheads, faucet aerators and more installed on the spot

Please scan the code below to get started.
For questions, visit **energy-readyarkansas.com** or call **855-350-1563**.

Scan to see if you're eligible.

ENERGY STAR

Black Hills Energy Ready

Disfrute de la comodidad con una evaluación de energía del hogar sin costo

Ahorre energía con la climatización del hogar sin costo.

Su hogar puede ser elegible para recibir mejoras de climatización a través de la **vía de ahorro de energía en el hogar** de Black Hills Energy Arkansas. Todo comienza con una evaluación de energía del hogar sin costo.

Durante su evaluación, un contratista certificado lo ayudará a descubrir formas de ahorrar energía y mejorar la salud y la comodidad de su hogar. También determinarán si califica para mejoras en el hogar que ahorran energía, todo sin costo para usted.

Las actualizaciones sin costo pueden incluir:

Sellado de aire
Evita corrientes de aire y aumenta la comodidad

Sellado de conductos
Mejora el rendimiento de HVAC y la calidad del aire interior

Aislamiento del ático
Lo mantiene cómodo en invierno, fresco en verano y ahorra en calefacción y refrigeración

Productos eficientes
Cabezales de ducha, aireadores de grifos y más instalados al momento

Escanee el código a continuación para comenzar.
Si tiene preguntas, visite **energy-readyarkansas.com** o llame al **855-350-1563**.

Escane para ver si es elegible.

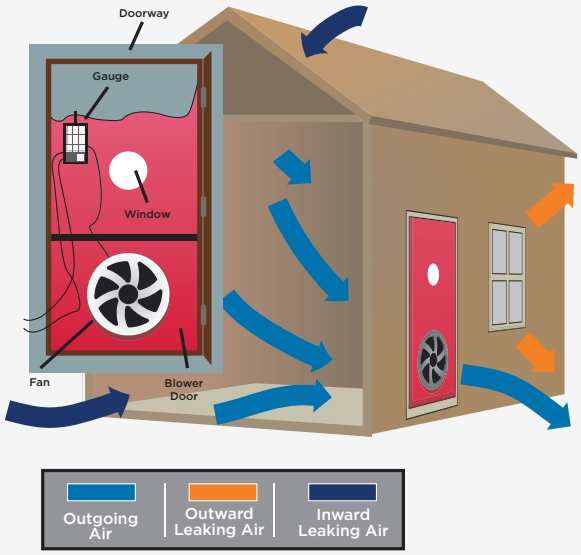
ENERGY STAR

Black Hills Energy Ready

What else can I expect?

During your initial evaluation, a Home Energy Savings contractor may conduct a blower door test to pinpoint air leaks in your home's duct system and exterior. Sealing these leaks will help prevent drafts and increase your home's comfort and efficiency.

Calibrated blower door test



Blower door used to detect air leakage

Additionally, a carbon monoxide analyzer is used to check combustion appliances (stoves, furnaces and water heaters) for carbon monoxide levels.

Equipment Rebate Pathway

Rebates are available through the Equipment Rebate Pathway to help replace old, outdated residential equipment with new energy- and natural gas-saving equipment, which can significantly reduce your home's monthly utility bill and improve comfort.

Rebates are available to help offset the cost of energy-saving equipment upgrades and products for your home, including:

- **$300 rebate** for a tankless water heater[1]
- **$400 rebate** for a natural gas forced-air furnace[2]
- **$50 rebate** for an ENERGY STAR® certified smart thermostat[3]

[1]Limit one unit per account.

[2]If applying for furnace rebates in a newly constructed home, rebates are available for NO MORE THAN two units per account.

[3]Limit two per household.

OVER $1.5 MILLION

How much our customers received in rebates last year.

Ready to get started?

Visit **energy-readyarkansas.com** or call **855-350-1563** or email **bheahes@clearesult.com**.

HOME PERFORMANCE WITH ENERGY STAR

Black Hills Energy Ready

Black Hills Energy Arkansas Residential Solutions Program

Discover how Black Hills Energy Arkansas can help you use less natural gas in your home and start saving energy and money today.

Enjoy benefits such as:

- A healthier, more energy-efficient home
- Long-term money savings
- Improved comfort and air quality
- Increased home value
- Reduced carbon footprint

HOME PERFORMANCE WITH ENERGY STAR

Black Hills Energy Ready

Saving energy begins at home.

Making energy-efficient choices is important to the environment, as well as your wallet. Through the Black Hills Energy Arkansas Residential Solutions Program, qualifying customers can begin their journey to saving energy and money through two easy pathways: the **Home Energy Savings Pathway** and **Equipment Rebate Pathway**.

PLEASE NOTE: The Residential Solutions Program has limited funding. Home Energy Assessments and rebate applications will be provided and processed on a first-come, first-served basis until funds are depleted. To check the availability of program offerings and funding, please visit **energy-readyarkansas.com** or call **855-350-1563**.

Home Energy Savings Pathway

Not sure where to begin when it comes to saving energy? Start with the Home Energy Savings Pathway, where you can get a no-cost Home Energy Assessment. During an assessment, a professional Home Energy Savings contractor will help you discover how and where you can save energy costs while increasing the comfort of your home.

You could qualify for no-cost energy-saving upgrades such as aerators and showerheads, plus potential home improvements such as:

- Air sealing
- Duct sealing
- Ceiling insulation

Not ready for an in-home visit? Go virtual.

Virtual Home Energy Assessments are also offered. Through a smartphone or tablet, an energy advisor will analyze various areas in your home including your heating, cooling and water heating equipment, appliances, lighting and attic insulation to determine where you can save the most energy. After your Virtual Assessment, you may decide to schedule a no-cost in-home assessment conducted by one of our professional Home Energy Savings contractors.

Who's eligible?

To qualify for a no-cost professional in-home energy assessment, your home must:

- Have a valid Black Hills Energy Arkansas residential account (new homes under one year old are not eligible)
- Be at least 10 years old OR have monthly usage (as shown on the bill) of five cents per square foot or higher*
- Have had continuous gas service for the previous 12 months (If less than 12 months, contact us at **855-350-1563**)
- Have not participated in a weatherization program offered either through a utility or the government in the past five years
- Be corrected for any health and safety issues we may discover upon initial inspection

How to calculate cost per square foot:

Divide your highest Black Hills Energy Arkansas bill by the square footage of your home. This will give you your energy cost per square foot.

Equation:
$_____ (bill amt.) ÷ _____ (sq. ft.) = $/sq. ft.

Example:
$200 ÷ 2,000 = $0.10/sq. ft.

What no-cost energy-saving upgrades are available?

When you participate in a Home Energy Assessment, your Home Energy Savings contractor may install some or all of the following upgrades in your home at no cost:

AIR SEALING – Typical houses lose 20% or more of their conditioned air through leaks, holes and poorly connected air ducts. Sealing these leaks will help prevent drafts and increase your home's comfort and efficiency.

DUCT SEALING – Like air sealing, sealing ducts can lead to improvements in comfort and indoor air quality and life of equipment.

CEILING INSULATION – When coupled with air sealing, you can potentially save up to 20% on heating and cooling costs. Insulation helps keep your home cool in the summer and warm in the winter.

DIRECT INSTALL MEASURES – Energy-saving items such as showerheads and faucet aerators are installed by the contractor in your home where needed.

Ready to get started?

Visit **energy-readyarkansas.com** or call **855-350-1563** or email **bheahes@clearesult.com**.

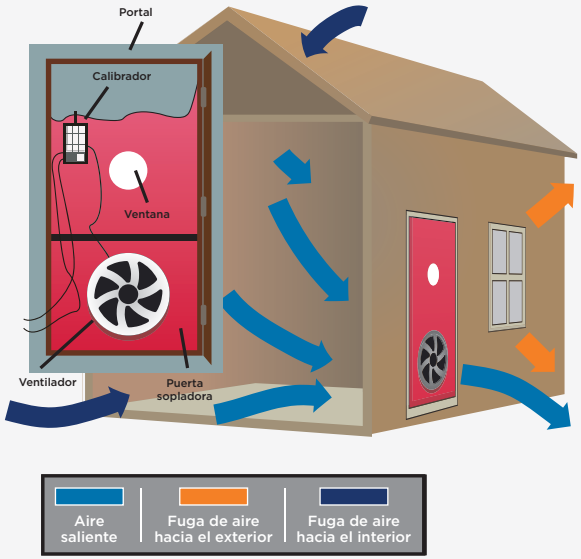
Energy HOME PERFORMANCE WITH ENERGY STAR

Black Hills Energy Ready

¿Qué más puedo esperar?

Durante su evaluación inicial, un contratista de Home Energy Savings puede que lleve a cabo una prueba de puerta sopladora para ver en detalle las fugas de aire en el sistema de ductos de su hogar y en el exterior. Al sellar estas fugas se previenen las corrientes de aire y se mejoran la comodidad y la eficiencia dentro de su hogar.

Prueba calibrada de puerta sopladora



La puerta sopladora se usa para detectar fugas de aire

Adicionalmente, se utiliza un analizador de monóxido de carbono para revisar sus niveles en los enseres de combustión (hornos, hornos de calor y calentadores de agua).

Ruta de Reembolsos de Equipo

Los reembolsos están disponibles a través de la Ruta de Reembolsos de Equipo para reemplazar equipos residenciales antiguos con equipos nuevos que ahorran energía y gas natural, lo cual puede reducir de manera significativa la factura mensual de energía de su hogar y aumentar la comodidad.

Los reembolsos están disponibles para ayudar a compensar por el costo de actualizaciones a equipos que ahorran energía y productos para su hogar, incluso:

- **Reembolso de $300** por un calentador de agua sin tanque[1]
- **Reembolso de $400** por un horno de calor de gas natural forzado[2]
- **Reembolso de $50** por un termostato inteligente con certificación de ENERGY STAR®[3]

[1]Límite de una unidad por cuenta.
[2]Si solicita reembolsos para horno de calor en una casa recientemente construida, los reembolsos están disponibles para NO MÁS DE dos unidades por cuenta.
[3]Límite de dos por vivienda.

MÁS DE $1.5 MILLONES

La cantidad que fueron reembolsados nuestros clientes el año pasado.

¿Listo para comenzar?

Visite **energy-readyarkansas.com** o llame al **855-350-1563** o envíe un correo electrónico a **bheahes@clearesult.com**.

HOME PERFORMANCE WITH ENERGY STAR

Black Hills Energy Ready

Programa de Soluciones Residenciales de Black Hills Energy Arkansas

Descubra cómo Black Hills Energy Arkansas puede ayudarle a consumir menos gas natural en su hogar y comience a ahorrar energía y dinero hoy.

Disfrute de beneficios como:

- Un hogar más saludable y eficiencia energética
- Ahorros de dinero a largo plazo
- Mayor comodidad y mejor calidad del aire
- Aumento de valor de su hogar
- Reducción de huella de carbono

HOME PERFORMANCE WITH ENERGY STAR

Black Hills Energy Ready

Ahorrar energía comienza en casa.

Al tomar las opciones de eficiencia energética usted está ayudando el medio ambiente y también a su bolsillo. A través del Programa de Soluciones Residenciales de Black Hills Energy Arkansas, los clientes que califiquen pueden comenzar el camino hacia los ahorros de energía y dinero por medio de dos rutas sencillas: la **Ruta de Ahorros de Energía del Hogar** y la **Ruta de Reembolsos de Equipo**.

AVISO: El Programa de Soluciones Residenciales tiene fondos limitados. Las Evaluaciones de Energía del Hogar y las solicitudes de reembolso serán proporcionadas y procesadas según el orden de llegada hasta agotar los fondos. Para verificar la disponibilidad de lo que ofrece el programa y los fondos, visite **energy-readyarkansas.com** o llame al **855-350-1563**.

Ruta de Ahorros de Energía del Hogar

¿No sabe dónde comenzar cuando se trata de ahorrar energía? Comience con la Ruta de Ahorros de Energía del Hogar, donde usted puede recibir una Evaluación de Energía del Hogar sin costo. Durante la evaluación, un contratista profesional de Ahorros de Energía del Hogar le ayudará a descubrir cómo y dónde puede ahorrar en costos de energía mientras hace que su hogar sea más cómodo.

Usted también puede calificar para mejoras sin costo de ahorros de energía sin costo como aireadores y cabezales de regaderas, además de mejoras posibles a su hogar como:

- Sellado del aire
- Sellado de ductos
- Aislado del techo

¿No está listo para una visita en casa? Pruebe una visita virtual.

También ofrecemos Evaluaciones de Energía del Hogar virtuales. A través de un smartphone o una tableta, un Asesor de Energía analizará varias áreas de su hogar incluyendo su equipo de calefacción, aire acondicionado, enseres eléctricos, iluminación y aislado del ático para determinar dónde se puede ahorrar la mayor cantidad de energía. Una vez se complete su Evaluación Virtual, usted podrá decidir si quiere programar una evaluación sin costo en el hogar, llevada a cabo por uno de nuestros contratistas profesionales de Ahorros de Energía del Hogar.

¿Quién es elegible?

Para calificar para una evaluación profesional en su casa de energía del hogar sin costo, su hogar debe:

- Tener una cuenta residencial válida de Black Hills Energy Arkansas (casas nuevas de menos de un año no son elegibles)
- Tener al menos 10 años O tener consumo mensual (tal como se ve en la factura) de cinco centavos por pie cuadrado o mayor*
- Haber tenido servicio de gas continuo por los 12 meses previos (si menos de 12 meses, comuníquese con nosotros al **855-350-1563**)
- No haber participado en un programa de climatización ofrecido a través de una compañía de servicios públicos o el gobierno en los últimos cinco años
- Recibir remedio por problemas que presenten riesgos a la salud y la seguridad que descubramos durante la inspección inicial

Cómo calcular pies cuadrados:

Divida el monto de su factura más alta de Black Hills Energy Arkansas por los pies cuadrados de su hogar. Esto le dará el costo de energía por pie cuadrado.

Ecuación:
$_____ ÷ _____ = $/pie²
(cantidad de factura) *(pie²)*

Ejemplo:
$200 ÷ 2,000 = $0.10/pie²

¿Cuáles son las mejoras de ahorros de energía sin costo disponibles?

Cuando usted participa en una Evaluación de Energía del Hogar, su contratista de Ahorros de Energía del Hogar puede instalar algunas o todas de las siguientes mejoras en su hogar sin costo:

SELLADO DEL AIRE – Las casas típicas pierden un 20% o más del aire acondicionado a través de fugas, agujeros o ductos de aire con conexiones inadecuadas. Al sellar estas fugas se previenen las corrientes de aire y se mejoran la comodidad y la eficiencia en su hogar.

SELLADO DE DUCTOS – Al igual que con el sellado del aire, al sellar ductos se pueden mejorar la comodidad, la calidad del aire interior y la vida útil del equipo.

AISLADO DEL TECHO – Al combinarse con el sellado del aire, usted puede potencialmente ahorrar hasta un 20% en costos de calefacción y aire acondicionado. El aislado le permite mantener su hogar fresco en el verano y cálido en el invierno.

MEDIDAS DE INSTALACIÓN DIRECTA– Los artículos de ahorros de energía tales como cabezales de regaderas y aireadores de grifos se instalan por el contratista en su hogar donde sean necesarios.

¿Listo para comenzar?

Visite **energy-readyarkansas.com** o llame al **855-350-1563** o envíe correo electrónico a **bheahes@clearesult.com**.

HOME PERFORMANCE WITH ENERGY STAR

Black Hills Energy Ready

Energy efficiency is more rewarding than ever.

2025 Residential Equipment Rebate Pathway

Black Hills Energy Arkansas makes it easy to keep your home comfortable and energy efficient. The Residential Equipment Rebate Pathway will help you replace old, outdated residential equipment with new energy- and natural gas-saving equipment that can significantly reduce your home's monthly utility bill.

Rebates are available to help offset the cost of energy-saving equipment upgrades and products for your home, including:

$300 rebate for a tankless water heater (.90 EF or higher)[1]

$400 rebate for a natural gas forced-air furnace (95% AFUE or higher)[2]

$50 rebate for an ENERGY STAR® certified smart thermostat[3]

$1,000 rebate for a new home construction package[4]

Last year, our customers received over $1.5 million in rebates. Make sure you receive a portion of the rebate funds we have available this year.

PLEASE NOTE: The Residential Equipment Rebate Pathway has limited funding. Rebate applications will be processed on a first-come, first-served basis until funds are depleted. To check the current status of funds, please visit **energy-readyarkansas.com** or call **855-350-1563**.

Conveniently apply for your energy efficiency rebates by mail or online.

To learn more about rebates for your home or to download rebate applications, please visit **energy-readyarkansas.com** or call **855-350-1563** or email **bheahes@clearesult.com**.

[1]Limited to one unit per account.
[2]If applying for furnaces rebates in a newly constructed home, rebates are available for NO MORE THAN 2 units per account.
[3]Limit 2 per household.
[4]200 rebates available on a first-come, first-served basis.

ENERGY STAR

Black Hills Energy Ready

La eficiencia energética le ofrece mayores ventajas hoy.

Ruta de Reembolsos de Equipo Residencial 2025

Black Hills Energy Arkansas le ayuda a mantener su hogar cómodo y energéticamente eficiente. La Ruta de Reembolsos de Equipo Residencial lo ayudará a reemplazar equipos residenciales antiguos y obsoletos por nuevos equipos de ahorros de energía y de gas natural, los que pueden reducir significativamente la factura mensual de energía de su hogar.

Los reembolsos están disponibles para ayudarle a compensar por los costos de mejoras de equipo y productos de alto rendimiento en su hogar, incluso:

Reembolso de $300 por un calentador de agua sin tanque (.90 EF o mayor)[1]

Reembolso de $400 por un calefactor de aire forzado a gas natural (95% AFUE o mayor)[2]

Reembolso de $50 por un termostato inteligente con certificación ENERGY STAR®[3]

Reembolso de $1,000 por un paquete de construcción de viviendas nuevas[4]

El año pasado, nuestros clientes recibieron más de $1.5 millones en reembolsos. Asegúrese de recibir una porción de los fondos de reembolsos que tenemos disponibles este año.

NOTA: La Ruta de Reembolsos de Equipo Residencial tiene fondos limitados. Las solicitudes de reembolsos serán procesadas por orden de llegada hasta agotar los fondos. Para verificar el estado actual de los fondos, visite **energy-readyarkansas.com** o llame al **855-350-1563**.

Solicite fácilmente por sus reembolsos de energía eficiente a través del correo o en línea.

Para aprender más sobre reembolsos para su hogar o para descargar solicitudes de reembolsos, visite **energy-readyarkansas.com** o llame al **855-350-1563** o envíe correo electrónico a **bheahes@clearesult.com**.

[1]Limitado a una unidad por cuenta.
[2]Si solicita reembolsos por calefacción en una casa recién construida, los reembolsos están disponibles para NO MÁS DE 2 unidades por cuenta.
[3]Límite de 2 por hogar.
[4]200 reembolsos disponibles por orden de llegada.

ENERGY STAR

Black Hills Energy Ready

BOILER EQUIPMENT Rebate

Program dates: January 1, 2025, through December 31, 2025. PLEASE NOTE: This is a program with limited funding. Applications will be processed on a first-come, first-served basis until funds are depleted. To check the current status of funds, please call 855-350-1563.
To receive your rebate, please submit all requested information, **including a copy of the dated invoice from your equipment retailer/installer**, along with all requested signatures. The rebate application must be submitted within 90 days of installation date or within 90 days of connection of natural gas **AND** emailed or postmarked by **December 31, 2025**. **See other side for more information or visit energy-readyarkansas.com. Please send completed application to: Energy Ready, P.O. Box 9567, Fayetteville, AR 72702 or corey.mcanally@clearesult.com.**

INSTALLATION LOCATION

Account holder's name _____
Black Hills Energy Arkansas account # _____
Business phone ( ) _____
Account physical address _____
City/State/ZIP _____
Mailing address _____
City/State/ZIP _____

PURCHASER INFORMATION

(if different from above)

Business name _____
Mailing address _____
City/State/ZIP _____
Email _____
Purchaser is: ❑ Owner ❑ Landlord ❑ Renter ❑ Agency

CONTACT INFORMATION

First name _____
Last name _____
Phone ( ) _____
Email _____

INSTALLER

Company name _____
First name _____
Last name _____
Address _____
City/State/ZIP _____
Phone ( ) _____
Email _____
Installer signature _____
License # _____

It is not the responsibility of the retailer/installer to ensure that the program requirements are met. If program requirements are not met, no rebate will be paid.

Send rebate check to:

❑ Purchaser's address ❑ Installation mailing address
❑ Assigned retailer or installer*

*Rebate assignment requires documentation on invoice, discounting final invoice by the amount of the rebate. If assigned retailer or installer box is checked above, customer signature is required here:

Customer signature:

_____

Type of installation:

❑ New construction ❑ Replacement (failure)
❑ Replacement (upgrade)

Building type:

❑ Small office (<30,000 square feet)
❑ Large office (>30,000 square feet)
❑ Fast food restaurant ❑ Sit-down restaurant
❑ Small retail ❑ Large retail ❑ Grocery ❑ Warehouse
❑ Elementary school ❑ JR/SR high school ❑ Assembly
❑ College/University ❑ Healthcare facility ❑ Motel
❑ Hotel ❑ Other _____

Building square footage (required): _____ square feet

CUSTOMER SIGNATURE

Signature _____
Print first and last name _____
Date _____

By signing this application, you certify that the information provided is accurate to the best of your ability.

Black Hills Energy Ready

EQUIPMENT INSTALLED

❑ 90%–94% efficient boiler ❑ ≥ 94% efficient boiler

❑ Burner replacement ❑ Boiler reset controls

❑ Boiler cutout controls ❑ Boiler vent damper

NEW EQUIPMENT INFORMATION

(See page 3 for rebate amounts.)

Brand _____

Model # _____

Serial # _____

BTU/Hr. input _____

AFUE % _____

Date of installation _____

OLD EQUIPMENT INFORMATION

(See page 3 for rebate amounts.)

Brand _____

Model # _____

Approximate age _____

QUALIFICATIONS

The qualifying equipment must be installed in a business served with natural gas from Black Hills Energy Arkansas. Black Hills Energy Arkansas uses Air-Conditioning, Heating and Refrigeration Institute (AHRI) listings to determine the efficiency of new commercial hot water boilers. Equipment must be certified by AHRI.

REQUIREMENTS

1. All qualifying equipment must be fully installed and operational and is subject to inspection by Black Hills Energy Arkansas or an agent of Black Hills Energy Arkansas's choosing.
2. Enclose invoice showing separate figures for equipment, labor and taxes. Rebates are calculated on equipment cost only, not on taxes, labor, unattached material, piping or controls.
3. Enclose all nameplate data and age of equipment being replaced, if applicable.
4. Include boiler efficiency documentation.
5. All required information must be submitted before the rebate can be paid.
6. The rebate application must be submitted within 90 days of installation and emailed or postmarked by December 31, 2025, whichever comes first.

Equipment installed under warranty replacement does not qualify for the rebate.

Rebate qualifications and amounts are subject to change. Rebate funds are limited. Completed rebate applications will be processed in the order in which they are received. Black Hills Energy Arkansas rebate programs may be canceled or changed at any time.

This program ends December 31, 2025.

Rebates will not be paid if funds are depleted prior to December 31, 2025.

APPLICATION CHECKLIST

❑ Dated sales invoice must include customer name, equipment brand, model and serial number and unit cost. If rebate has been assigned to the retailer/installer by the Black Hills Energy Arkansas customer, the deduction for the rebate must be shown on the invoice.

❑ Customer signature

❑ Black Hills Energy Arkansas account #

OPTIONS TO SUBMIT REBATE

1. **Email (preferred)**: corey.mcanally@clearesult.com
2. **Mail**: Energy Ready
   P.O. Box 9567
   Fayetteville, AR 72702

REBATE DETAILS

Rebate amounts will be issued for equipment installed between January 1, 2025 and December 31, 2025 only. Black Hills Energy Arkansas issues cash rebates in the form of checks, not utility bill credits. Black Hills Energy Arkansas is not responsible if the retailer/installer does not provide accurate information on the rebate amount or equipment eligibility. Rebate checks will be mailed within 6-8 weeks.

QUESTIONS?

For information pertaining to your rebate, call **855-350-1563**. General inquiries can be directed to **479-935-9001** or **corey.mcanally@clearesult.com**.

PROGRAM REBATES

Boiler rebates

This list describes the rebates that are available to customers who are eligible to participate in the program.

Black Hills Energy Ready

MEASURE	REBATE AMOUNT	REBATE DETAILS	MEASURE DESCRIPTION
90%–94% efficient boiler	$1,400 MMBTU/Hr input	Hot water boilers	Commercial comfort heating boilers, between 100,000 BTU and 4 MMBTU
≥ 94% efficient boiler	$2,000 MMBTU/Hr input	Hot water boilers	Commercial comfort heating boilers, between 100,000 BTU and 4 MMBTU
Burner replacement	$1,000 MMBTU/Hr input	Up to 25% of the equipment cost and burner installation	Fully modulating or six-step modulation burners only — not eligible for new boilers
Boiler reset controls	$150 per system	Not to exceed the equipment cost	Assumes 3.8% annual gas savings from controls
Boiler cutout controls	$150 per system	Not to exceed the equipment cost	Assumes 1.7% annual gas savings from cutout controls
Boiler vent damper	$400 per system	Not to exceed the equipment cost	Assumes 7% annual gas savings from vent damper

COMMERCIAL COOKING Equipment Rebate

Program dates: January 1, 2025 through December 31, 2025 PLEASE NOTE: This is a program with limited funding. Applications will be processed on a first-come, first-served basis until funds are depleted. To check the current status of funds, please call 855-350-1563.

To receive your rebate, please submit all requested information, **including a copy of the dated invoice from your equipment retailer/installer**, along with all requested signatures. The rebate application must be submitted within 90 days of installation date or within 90 days of connection of natural gas **AND** emailed or postmarked by **December 31, 2025. See other side for more information or visit energy-readyarkansas.com. Please send completed application to: Energy Ready, P.O. Box 9567, Fayetteville, AR 72702 or corey.mcanally@clearesult.com**.

INSTALLATION LOCATION

Account holder's name _____

Black Hills Energy Arkansas Account # _____

Business phone ( ) _____

Account physical address _____

City/State/ZIP _____

Mailing address _____

City/State/ZIP _____

PURCHASER'S INFORMATION

(if different from above)

Business name _____

Mailing address _____

City/State/ZIP _____

Email _____

Is purchaser: ❑ Owner ❑ Landlord ❑ Renter ❑ Agency

CONTACT INFORMATION

First name _____

Last name _____

Phone ( ) _____

Email _____

INSTALLER

Company name _____

First name _____

Last name _____

Address _____

City/State/ZIP _____

Phone ( ) _____

Email _____

Installer signature _____

License # _____

It is not the responsibility of the retailer/installer to ensure that the program requirements are met. If program requirements are not met, no rebate will be paid.

Send rebate check to:

❑ Purchaser's address ❑ Installation mailing address

❑ Assigned retailer or installer*

*Rebate assignment requires documentation on invoice, discounting final invoice by the amount of the rebate. If assigned retailer or installer box is checked above, customer signature is required here: _____

CUSTOMER SIGNATURE

Signature _____

Print first and last name _____

Date _____

By signing this application, you certify that the information provided is accurate to the best of your ability.

EQUIPMENT INSTALLED

❑ Combination Oven ❑ Convection Oven ❑ Conveyor Oven

❑ Fryer ❑ Rotation Rack Oven

Black Hills Energy Ready

COMMERCIAL COOKING EQUIPMENT INFORMATION

(See page 3 for rebate amounts.)

OLD EQUIPMENT 01 (if replacement)

Brand _____

Model # _____

Approximate age _____

NEW EQUIPMENT 01

Brand _____

Model # _____

Serial # _____

Date of installation _____

OLD EQUIPMENT 02 (if replacement)

Brand _____

Model # _____

Approximate age _____

NEW EQUIPMENT 02

Brand _____

Model # _____

Serial # _____

Date of installation _____

OLD EQUIPMENT 03 (if replacement)

Brand _____

Model # _____

Approximate age _____

NEW EQUIPMENT 03

Brand _____

Model # _____

Serial # _____

Date of installation _____

QUALIFICATIONS

The qualifying equipment must be installed in a business served with natural gas from Black Hills Energy Arkansas. Qualified, commercial natural gas foodservice equipment eligibility:

Equipment must be listed on one of the following accredited websites:

- ENERGY STAR®: energystar.gov/cfs
- Food Service Technology Center: fishnick.com/saveenergy/rebates

A. Only new equipment is eligible for rebate (no refurbished equipment).

B. New construction and replacement equipment installations are eligible.

REQUIREMENTS

1. All qualifying equipment must be fully installed and operational, and is subject to inspection by Black Hills Energy Arkansas or an agent of Black Hills Energy Arkansas's choosing.
2. Enclose invoice showing separate figures for equipment, labor and taxes.
3. Enclose all nameplate data and age of equipment being replaced, if applicable.
4. All required information must be submitted before the rebate can be paid.
5. The rebate application must be submitted within 90 days of installation and emailed or postmarked by December 31, 2025, whichever comes first.

Equipment installed under warranty replacement does not qualify for the rebate.

Rebate qualifications and amounts are subject to change. Rebate funds are limited. Completed rebate forms will be processed in the order in which they are received. Black Hills Energy Arkansas rebate programs may be canceled or changed at any time.

This program ends December 31, 2025.

Rebates will not be paid if funds are depleted prior to December 31, 2025.

APPLICATION CHECKLIST

❑ Dated sales invoice must include customer name, equipment brand, model and serial number and unit cost. If rebate has been assigned to the retailer/installer by the Black Hills Energy Arkansas customer, the deduction for the rebate must be shown on the invoice.

❑ Customer signature

❑ Black Hills Energy Arkansas Account #

OPTIONS TO SUBMIT REBATE

1. **Email (preferred)**: corey.mcanally@clearesult.com

2. **Mail**: Energy Ready
   P.O. Box 9567
   Fayetteville, AR 72702

REBATE DETAILS

Rebate amounts will be issued for equipment installed between January 1, 2025 and December 31, 2025 only. Black Hills Energy Arkansas issues cash rebates in the form of checks, not utility bill credits. Black Hills Energy Arkansas is not responsible if the retailer/installer does not provide accurate information on the rebate amount or equipment eligibility. Rebate checks will be mailed within 6-8 weeks.

QUESTIONS?

For information pertaining to your rebate, call **855-350-1563**. General inquiries can be directed to **479-935-9001** or **corey.mcanally@clearesult.com**.

Black Hills Energy Ready

PROGRAM REBATES

This list describes the rebates that are available to customers who are eligible to participate in the program:

TECHNOLOGY	REBATE AMOUNT
Combination Oven	$1,500
Convection Oven	$400
Conveyor Oven	$1,000
Fryer	$500
Rotation Rack Oven	$1,500

RESIDENTIAL HEATING Equipment Rebate

Program dates: January 1, 2025 through December 31, 2025. PLEASE NOTE: This is a program with limited funding. Applications will be processed on a first-come, first-served basis until funds are depleted. To check the current status of funds, please call 855-350-1563.

To receive your rebate, please submit all requested information, including a copy of the dated invoice from your equipment installer, along with all requested signatures. The rebate application must be submitted within 90 days of installation date or within 90 days of connection of natural gas **AND** emailed or postmarked by **December 31, 2025.** See other side for more information or visit energy-readyarkansas.com. **Please send completed application to: Energy Ready, P.O. Box 9567, Fayetteville, AR 72702 or bheahes@clearesult.com.**

INSTALLATION LOCATION

Account holder's name _____

Black Hills Energy Arkansas Account # (required)

_____

Phone ( ) _____

Email _____

Account location address _____

City/State/ZIP _____

Mailing address _____

City/State/ZIP _____

Electric provider:

❑ Entergy Arkansas ❑ SWEPCO ❑ Other _____

PURCHASER'S INFORMATION

(if different from above)

Business name _____

Mailing address _____

City/State/ZIP _____

Email _____

Is purchaser: ❑ Owner ❑ Landlord ❑ Renter ❑ Agency

INSTALLER

(To be completed by installer. An additional rebate of $50 will be paid to the installer show below.)

Company name _____

First name _____

Last name _____

Address _____

City/State/ZIP _____

Phone ( ) _____

Email _____

Installer signature _____

License # _____

*All suppliers must submit a copy of a completed W-9 to the Black Hills Energy Arkansas Residential Solutions Program in order to be paid. If you have questions about how to submit a W-9, please call **855-350-1563** or email **bheahes@clearesult.com**.*

It is not the responsibility of the installer to ensure that the program requirements are met. If program requirements are not met, no rebate will be paid.

Send rebate check to:

❑ Purchaser's address ❑ Installation address

❑ Assigned installer*

**Rebate assignment requires documentation on invoice discounting final invoice by the amount of the rebate. If assigned installer box is checked above, customer signature is required here:*

_____

Type of installation:

❑ New construction ❑ Replacement (failure)

❑ Replacement (upgrade)

If furnace replacement is due to air conditioning failure, please select Replacement (upgrade).

Building type:

❑ Single-family home

❑ Multi-family home

Square footage (required): _____ square feet

Year of construction (required): _____

CUSTOMER SIGNATURE

Signature _____

Print first and last name _____

Date _____

By signing this application, you certify that the information provided is accurate to the best of your ability.

Black Hills Energy Ready

HEATING EQUIPMENT INFORMATION

(To be completed by installer.)

Brand _____

Complete model # _____

BTU/Hr. input _____

AFUE % _____

Date of installation _____

Serial # _____

QUALIFICATIONS

The qualifying equipment must be installed in an Arkansas home served with natural gas from Black Hills Energy Arkansas and must meet the following efficiencies:

TECHNOLOGY	REBATE AMOUNT
Natural gas forced-air furnaces	**$400** (95% AFUE or higher)

Rebate offer applies only to new natural gas furnaces. If the furnace being replaced is electric or is a heat pump, no rebate is available. Black Hills Energy Arkansas uses Air Conditioning, Heating, and Refrigeration Institute listings to determine the efficiency of the equipment.

If applying for units in a newly constructed home, rebates are available for NO MORE THAN 2 units per account.

If sending rebates for multiple accounts or multiple units on one account, please call to check availability of funding.

Installers are only eligible to receive their customer's rebate if the customer has assigned the rebate to the installer, and there is a discount for the full amount of the rebate shown on the final invoice.

Equipment installed under warranty replacement does not qualify for the rebate.

REQUIREMENTS

Application must be completely filled out with installation location information, purchaser information (if applicable), equipment information (including brand, complete model and serial number, installation date and AFUE rating) and installer information (if applicable). Black Hills Energy Arkansas is unable to accept applications that do not include all this information. A copy of the dated invoice or sales receipt must accompany the completed rebate application and must include the customer name, unit brand, model and serial numbers and unit cost. It is the responsibility of the account holder or purchaser to ensure that the installed equipment qualifies for the rebate. If it does not qualify, no rebate will be paid.

Black Hills Energy Arkansas reserves the right to inspect the installed equipment.

Rebate qualifications and amounts are subject to change.

The rebate application must be submitted within 90 days of installation date or within 90 days of connection of natural gas AND emailed or postmarked by December 31, 2025. To avoid delays in rebate processing, please submit your completed paperwork as soon as possible. Any applications with missing or incomplete information can jeopardize the chance of receiving rebate funds. Rebates are awarded on a first-come, first-served basis until funds are depleted.

REBATE DETAILS

Rebate amounts will be issued for equipment installed between January 1, 2025 and December 31, 2025 only. Black Hills Energy Arkansas issues cash rebates in the form of checks, not utility bill credits. Black Hills Energy Arkansas is not responsible if the installer does not provide accurate information on the rebate amount or equipment eligibility. Rebate checks will be mailed within 6–8 weeks.

APPLICATION CHECKLIST

- ❑ Dated sales invoice must include customer name, equipment brand, model and serial number and unit cost. If rebate has been assigned to the installer by the Black Hills Energy Arkansas customer, the deduction for the rebate must be shown on the invoice.
- ❑ Customer signature
- ❑ Black Hills Energy Arkansas Account #

OPTIONS TO SUBMIT REBATE

1. **Email** (preferred):
   bheahes@clearesult.com
2. **Mail:** Black Hills Energy Arkansas Rebates
   C/O CLEAResult
   P.O. Box 9567
   Fayetteville, AR 72702

QUESTIONS?

For information pertaining to your rebate, call **855-350-1563** or email **bheahes@clearesult.com**.

Black Hills Energy Ready

COMMERCIAL HEATING Equipment Rebate

Program dates: January 1, 2025 through December 31, 2025
PLEASE NOTE: This is a program with limited funding. Applications will be processed on a first-come, first-served basis until funds are depleted. To check the current status of funds, please call 855-350-1563.

To receive your rebate, please submit all requested information, **including a copy of the dated invoice from your equipment retailer/installer**, along with all requested signatures. The rebate application must be submitted within 90 days of installation date or within 90 days of connection of natural gas **AND** emailed or postmarked by **December 31, 2025**. **See other side for more information or visit energy-readyarkansas.com**. **Please send completed application to: Energy Ready, P.O. Box 9567, Fayetteville, AR 72702 or corey.mcanally@clearesult.com**.

INSTALLATION LOCATION

Account holder's name _____

Black Hills Energy Arkansas Account # _____

Business phone ( ) _____

Account physical address _____

City/State/ZIP _____

Mailing address _____

City/State/ZIP _____

PURCHASER'S INFORMATION

(if different from above)

Business name _____

Mailing address _____

City/State/ZIP _____

Email _____

Purchaser is: ❑ Owner ❑ Landlord ❑ Renter ❑ Agency

CONTACT INFORMATION

First name _____

Last name _____

Phone ( ) _____

Email _____

INSTALLER

Company name _____

First name _____

Last name _____

Address _____

City/State/ZIP _____

Phone ( ) _____

Email _____

Installer signature _____

License # _____

It is not the responsibility of the retailer/installer to ensure that the program requirements are met. If program requirements are not met, no rebate will be paid.

Send rebate check to:

❑ Purchaser's address ❑ Installation mailing address

❑ Assigned retailer or installer*

*Rebate assignment requires documentation on invoice, discounting final invoice by the amount of the rebate. If assigned retailer or installer box is checked above, customer signature is required here:

Customer signature:

_____

Type of installation:

❑ New construction

❑ Replacement (failure)

❑ Replacement (upgrade)

Building type:

❑ Small office (<30,000 square feet)

❑ Large office (>30,000 square feet)

❑ Fast food restaurant ❑ Sit-down restaurant ❑ Small retail

❑ Large retail ❑ Grocery ❑ Warehouse ❑ Elementary school

❑ Jr./Sr. high school ❑ Assembly ❑ College/university

❑ Healthcare facility ❑ Motel ❑ Hotel

❑ Other: _____

Building square footage (required): _____ square feet

Black Hills Energy Ready

CUSTOMER SIGNATURE

Signature _____

Print first and last name _____

Date _____

By signing this application, you certify that the information provided is accurate to the best of your ability.

HEATING EQUIPMENT INFORMATION

Brand _____

Complete model # _____

BTU/Hr. input _____

AFUE % _____

Date of installation _____

Serial # _____

QUALIFICATIONS

The qualifying equipment must be installed in an Arkansas business served with natural gas from Black Hills Energy Arkansas and must meet the following efficiency:

TECHNOLOGY	REBATE AMOUNT
Natural gas forced-air furnaces - 95% AFUE or higher	$500

Rebate offer applies only to new natural gas furnaces. If the furnace being replaced is electric or is a heat pump, no rebate is available. Black Hills Energy Arkansas uses Air-Conditioning, Heating and Refrigeration Institute listings to determine the efficiency of the equipment.

If sending rebates for multiple accounts or multiple units on one account, please call to check availability of funding.

Retailers/installers are only eligible to receive their customer's rebate if the customer has assigned the rebate to the retailer/installer, and there is a discount for the full amount of the rebate shown on the final invoice.

Equipment installed under warranty replacement does not qualify for the rebate.

REQUIREMENTS

Application must be completely filled out with installation location information, purchaser information (if applicable), equipment information (including brand, complete model and serial number, installation date and AFUE rating) and retailer/installer information (if applicable). Black Hills Energy Arkansas is unable to accept applications that do not include all this information. A copy of the dated invoice or sales receipt must accompany the completed rebate application and must include the customer name, unit brand, model and serial numbers and unit cost. It is the responsibility of the account holder or purchaser to ensure that the installed equipment qualifies for the rebate. If it does not qualify, no rebate will be paid.

Black Hills Energy Arkansas reserves the right to inspect the installed equipment.

Rebate qualifications and amounts are subject to change. **The rebate application must be submitted within 90 days of installation date or within 90 days of connection of natural gas AND emailed or postmarked by December 31, 2025.** To avoid delays in rebate processing, please submit your completed paperwork as soon as possible. Any applications with missing or incomplete information can jeopardize the chance of receiving rebate funds. Rebates are awarded on a first-come, first-served basis until funds are depleted.

REBATE DETAILS

Rebate amounts will be issued for equipment installed between January 1, 2025 and December 31, 2025 only. Black Hills Energy Arkansas issues cash rebates in the form of checks, not utility bill credits. Black Hills Energy Arkansas is not responsible if the retailer/installer does not provide accurate information on the rebate amount or equipment eligibility. Rebate checks will be mailed within 6-8 weeks.

APPLICATION CHECKLIST

- ❑ Dated sales invoice must include customer name, equipment brand, model and serial number and unit cost. If rebate has been assigned to the retailer/installer by the Black Hills Energy Arkansas customer, the deduction for the rebate must be shown on the invoice.
- ❑ Customer signature
- ❑ Black Hills Energy Arkansas Account #

OPTIONS TO SUBMIT REBATE

1. **Email (preferred)**: corey.mcanally@clearesult.com
2. **Mail**: Energy Ready
   P.O. Box 9567
   Fayetteville, AR 72702

QUESTIONS?

For information pertaining to your rebate, call **855-350-1563**. General inquiries can be directed to **479-935-9001** or **corey.mcanally@clearesult.com**.

Black Hills Energy Ready

NEW HOME CONSTRUCTION Package rebate

Receive a **$1,000 rebate** for installing a qualifying **natural gas forced-air furnace**, **natural gas tankless water heater** and **smart thermostat** in your newly constructed home.

PLEASE NOTE: This is a program with limited funding. Rebates will be limited to the first 200 applicants or until funds are depleted. To check the current status of funds, please call 855-350-1563.

To receive your rebate, please submit all requested information, **including copies of the dated invoice from your equipment retailer/installer**, along with all requested signatures. The rebate application must be submitted within 90 days of installation date or within 90 days of connection of natural gas **AND** emailed or postmarked by **December 31, 2025**. See other side for more information or visit **energy-readyarkansas.com**. **Please send completed application to: Energy Ready, P.O. Box 9567, Fayetteville, AR 72702 or bheahes@clearesult.com**.

Installation location

Account holder's name _____

Black Hills Energy Arkansas Account # (required)

_____

Phone ( ) _____

Email _____

Account physical address _____

City/State/ZIP _____

Mailing address _____

City/State/ZIP _____

Electric provider:

❑ Entergy Arkansas ❑ SWEPCO ❑ Other _____

Purchaser's information

(if different from above)

Name _____

Mailing address _____

City/State/ZIP _____

Email _____

Purchaser is: ❑ Owner ❑ Landlord ❑ Renter ❑ Agency

Installer

(To be completed by installer.)

Company name _____

First name _____

Last name _____

Address _____

City/State/ZIP _____

Phone ( ) _____

Email _____

Installer signature _____

License # _____

All installers must submit a copy of a completed W-9 to the Black Hills Energy Arkansas Residential Solutions Program in order to be paid. If you have questions about how to submit a W-9, please call **855-350-1563** or email **bheahes@clearesult.com**.

It is not the responsibility of the installer to ensure that program requirements are met. If program requirements are not met, no rebate will be paid.

Send rebate check to:

❑ Purchaser's address ❑ Installation mailing address

❑ Assigned installer*

**Rebate assignment requires documentation on invoice discounting final invoice by the amount of the rebate. If assigned retailer or installer box is checked above, customer signature is required here:*

_____

Building type:

❑ Single-family home ❑ Multi-family home

Square footage (required): _____ square feet

Year of construction: _____

Customer signature

Signature _____

Print first and last name _____

Date _____

By signing this application, you certify that the information provided is accurate to the best of your ability.

Furnace information

(To be completed by installer.)

Brand _____

Complete model # _____

BTU/Hr. input _____

AFUE % _____

Serial # _____

Date of installation _____

Rebate offer applies only to new natural gas forced-air furnaces. Black Hills Energy Arkansas uses Air Conditioning, Heating, and Refrigeration Institute listings to determine the efficiency of the equipment.

Black Hills Energy Ready

Water heater information

Brand _____

Complete model # _____

BTU/Hr. input _____

Size or capacity/gallons _____

Energy factor/thermal efficiency_____

Serial # _____

Date of installation _____

Rebate offer applies only to new natural gas tankless water heaters. Black Hills Energy Arkansas uses Air Conditioning, Heating, and Refrigeration Institute listings to determine the efficiency of the equipment.

Thermostat information

Brand _____

Complete model # _____

Serial #_____

Date of installation _____

Rebate offer applies only to new ENERGY STAR® certified smart thermostats with the following features:

1. Successful connection to existing Wi-Fi
2. Remote adjustment via smartphone or online
3. Automatic scheduling
4. Energy history

Efficiency qualifications

EQUIPMENT	QUALIFICATIONS
Natural gas forced-air furnace	**95% AFUE or higher**
Natural gas tankless water heater	**.90 uniform energy factor (UEF) or higher**
Smart thermostat	**ENERGY STAR certified**

If applying for units in a newly constructed home, rebates are available for NO MORE THAN TWO (2) units per account. If applying for rebates for multiple accounts or multiple units on one account, please call to check availability of funding.

Installers are only eligible to receive their customer's rebate if the customer has assigned the rebate to the installer, and there is a discount for the full amount of the rebate shown on the final invoice.

Application requirements

Application must be completely filled out with installation location information, purchaser information (if applicable), equipment information (including brand, complete model and serial number and installation date) and retailer/installer information (if applicable). Black Hills Energy Arkansas is unable to accept applications that do not include all of this information. Copies of the dated invoices or sales receipts must accompany the completed rebate application and must include the customer's name, unit brand, model and serial numbers and unit cost. It is the responsibility of the account holder or purchaser to ensure that the installed equipment qualifies for the rebate. If it does not qualify, no rebate will be paid.

Black Hills Energy Arkansas reserves the right to inspect the installed equipment.

Rebate qualifications and amounts are subject to change. **The rebate application must be submitted within 90 days of installation date or within 90 days of connection of natural gas AND emailed or postmarked by December 31, 2025.** To avoid delays in rebate processing, please submit your completed paperwork as soon as possible. Any applications with missing or incomplete information can jeopardize the chance of receiving rebate funds. Rebates are awarded on a first-come, first-served basis until funds are depleted.

Rebate details

Black Hills Energy Arkansas issues cash rebates in the form of checks, not utility bill credits. Black Hills Energy Arkansas is not responsible if the retailer/installer does not provide accurate information on the rebate amount or equipment eligibility. Rebate checks will be mailed within 6–8 weeks.

Application checklist

- ❑ Dated sales invoice must include customer name, equipment brand, model and serial number and unit cost. If rebate has been assigned to the installer by the Black Hills Energy Arkansas customer, the deduction for the rebate must be shown on the invoice.
- ❑ Customer signature
- ❑ Black Hills Energy Arkansas Account #

Options to submit rebate

1. **Email** (preferred): bheahes@clearesult.com
2. **Mail:** Energy Ready
   P.O. Box 9567
   Fayetteville, AR 72702

Questions?

For information pertaining to your rebate, call **855-350-1563** or email **bheahes@clearesult.com**.

ENERGY STAR

Black Hills Energy Ready

RESIDENTIAL SMART THERMOSTAT Equipment Rebate

Program dates: January 1, 2025 through December 31, 2025
PLEASE NOTE: This is a program with limited funding. Applications will be processed on a first-come, first-served basis until funds are depleted. To check the current status of funds, please call 855-350-1563.

To receive your rebate, please submit all requested information, **including a copy of the dated invoice from your equipment retailer/installer**, along with all requested signatures. The rebate application must be submitted within 90 days of installation date or within 90 days of connection of natural gas **AND** emailed or postmarked by **December 31, 2025**. See other side for more information or visit energy-readyarkansas.com. **Please send completed application to: Energy Ready, P.O. Box 9567, Fayetteville, AR 72702 or bheahes@clearesult.com**.

INSTALLATION LOCATION

Account holder's name _____

Black Hills Energy Arkansas Account # (required)

_____

Phone ( )_____

Email _____

Account physical address _____

City/State/ZIP_____

Mailing address_____

City/State/ZIP_____

Electric provider:

❑ Entergy Arkansas ❑ SWEPCO ❑ Other _____

PURCHASER'S INFORMATION

(if different from above)

Name _____

Mailing address_____

City/State/ZIP_____

Email _____

Purchaser is: ❑ Owner ❑ Landlord ❑ Renter ❑ Agency

RETAILER

(where purchased / if applicable)

Company name _____

First name _____

Last name_____

Phone ( )_____

Email _____

INSTALLER

(if applicable)

Company name _____

First name _____

Last name_____

Address _____

City/State/ZIP _____

Phone ( ) _____

Email _____

Installer signature_____

License # _____

It is not the responsibility of the retailer/installer to ensure that the program requirements are met. If program requirements are not met, no rebate will be paid.

Send rebate check to:

❑ Purchaser's address ❑ Installation mailing address

❑ Assigned retailer or installer*

**Rebate assignment requires documentation on invoice, discounting final invoice by the amount of the rebate. If assigned retailer or installer box is checked above, customer signature is required here:*

_____

Type of installation:

❑ New construction

❑ Replacement (non-repairable thermostat)

❑ Replacement (upgrade of functioning thermostat)

Type of old thermostat:

❑ Programmable - Set as needed

❑ Programmable - On set schedule

❑ Manual

❑ Smart thermostat

Was your old thermostat properly programmed?

❑ Yes

❑ No

Is there a natural gas furnace present?

❑ Yes

❑ No

Black Hills Energy Ready

Building type:

❑ Single-family home

❑ Multi-family home

Square footage (required): _____ square feet

Year of construction (required): _____

CUSTOMER SIGNATURE

Signature _____

Print first and last name _____

Date _____

By signing this application, you certify that the information provided is accurate to the best of your ability.

EQUIPMENT INSTALLED

What ENERGY STAR® certified smart thermostat is being installed?

Brand _____

Complete model # _____

Date of installation _____

Serial # _____

QUALIFICATIONS

The qualifying equipment must be installed in an Arkansas home served with natural gas from Black Hills Energy Arkansas and must meet the following efficiency:

TECHNOLOGY	REBATE AMOUNT
ENERGY STAR® certified smart thermostat	**$50**

Rebate offer applies only to new ENERGY STAR certified smart thermostats with the following features:

1. Successful connection to existing Wi-Fi
2. Remote adjustment via smartphone or online
3. Automatic scheduling
4. Energy history

Only two rebates available per account. If sending rebates for multiple accounts, please call to check availability of funding.

Retailers/installers are only eligible to receive their customer's rebate if the customer has assigned the rebate to the retailer/installer and there is a discount for the full amount of the rebate shown on the final invoice.

Equipment installed under warranty replacement does not qualify for the rebate. Factory refurbished or remanufactured units ARE NOT eligible.

REQUIREMENTS

Application must be completely filled out with installation location information, purchaser information (if applicable), equipment information (including brand, complete model and serial number and installation date) and retailer/installer information (if applicable). Black Hills Energy Arkansas is unable to accept applications that do not include all this information. A copy of the dated invoice or sales receipt must accompany the completed rebate application and must include the customer name, unit brand, model and serial numbers and unit cost. It is the responsibility of the account holder or purchaser to ensure that the installed equipment qualifies for the rebate. If it does not qualify, no rebate will be paid.

Black Hills Energy Arkansas reserves the right to inspect the installed equipment.

Rebate qualifications and amounts are subject to change. **The rebate application must be submitted within 90 days of installation date or within 90 days of connection of natural gas AND emailed or postmarked by December 31, 2025.** To avoid delays in rebate processing, please submit your completed paperwork as soon as possible. Any applications with missing or incomplete information can jeopardize the chance of receiving rebate funds. Rebates are awarded on a first-come, first-served basis until funds are depleted.

REBATE DETAILS

Rebate amounts will be issued for equipment installed between January 1, 2025 and December 31, 2025 only. Black Hills Energy Arkansas issues cash rebates in the form of checks, not utility bill credits. Black Hills Energy Arkansas is not responsible if the retailer/installer does not provide accurate information on the rebate amount or equipment eligibility. Rebate checks will be mailed within 6-8 weeks.

APPLICATION CHECKLIST

❑ Dated sales invoice must include customer name, equipment brand, model and serial number and unit cost. If rebate has been assigned to the retailer/installer by the Black Hills Energy Arkansas customer, the deduction for the rebate must be shown on the invoice.

❑ Customer signature

❑ Black Hills Energy Arkansas Account #

OPTIONS TO SUBMIT REBATE

1. **Email** (preferred): bheahes@clearesult.com
2. **Mail**: Energy Ready
   P.O. Box 9567
   Fayetteville, AR 72702

QUESTIONS?

For information pertaining to your rebate, call **855-350-1563** or email **bheahes@clearesult.com**.

ENERGY STAR

Black Hills Energy Ready

Residential Smart Thermostat Rebate

STEAM TRAPS Rebate Application

Rebates available for qualifying steam traps purchased and installed or repaired from January 1, 2025 to December 31, 2025.
Need help? Call 479-935-9001 or email **corey.mcanally@clearesult.com**.

BEFORE YOU START

Review the eligibility details, requirements and terms and conditions throughout the application to verify that you are eligible for a rebate. Collect all required information to complete your application.

ONCE YOU ARE DONE

Applications must be emailed or postmarked within 90 days of installation or by December 31, 2025, whichever comes first. Send your signed application and contractor installation invoice to:

Mail:
Black Hills Energy Arkansas Rebates
C/O CLEAResult
PO Box 9567
Fayetteville, AR 72702
corey.mcanally@clearesult.com

REBATE DETAILS

Rebate amounts will be issued for equipment installed between January 1, 2025 and December 31, 2025 only. Black Hills Energy Arkansas issues cash rebates in the form of checks, not utility bill credits. Black Hills Energy Arkansas is not responsible if the retailer/installer does not provide accurate information on the rebate amount or equipment eligibility. Rebate checks will be mailed within 6-8 weeks.

REBATE APPLICATION

If you are a commercial customer who uses more than 200,000 CCF annually, you may be eligible for larger incentives for the replacement of steam traps at your facility. Contact a participating Trade Ally or email the Commercial & Industrial Solutions Program at corey.mcanally@clearesult.com to learn if you are eligible.

Incentives are also available for many other steam system improvement projects, including insulation, steam leak repair and equipment replacement, through the Commercial & Industrial Solutions Program. Call us for more details and to sign up for a no-cost energy audit from Black Hills Energy Arkansas.

Building type:

❑ Assembly (theater, hall, arena) ❑ College/university
❑ Elementary school ❑ Healthcare clinic ❑ High school
❑ Hospital ❑ Manufacturing facility ❑ Office >30,000 sq. ft.
❑ Office ≤30,000 sq. ft. ❑ Religious facility

ACCOUNT AND CUSTOMER INFORMATION

Black Hills Energy Arkansas account number

_____

Business/account holder name

_____

Installation address_____

City/State/ZIP _____

Make check payable to: ❑ Account holder ❑ Trade Ally

Mailing address (if different)_____

City/State/ZIP _____

Applicant first name_____

Applicant last name _____

Phone number ( ) _____

Email address_____

Site contact first name _____

Site contact last name _____

Phone number ( ) _____

Email address_____

CONTRACTOR INFORMATION

Contractor business name _____

Contact first name _____

Contact last name _____

Address _____

City/State/ZIP _____

Phone number ( ) _____

Email address (if available) _____

APPLICANT SIGNATURE

Applicant signature

_____

Print applicant name

_____

Date _____

Black Hills Energy Ready

PRODUCT INFORMATION

Steam Traps

Purchase date__________

Install date __________

Total installed cost* (per trap) __________

traps repaired/replaced __________

Manufacturer __________

Model __________

Operating pressure __________ psig

Annual hours of operation __________

Boiler efficiency __________

Orifice size __________

CHECK ONE:	REBATE:
❑ Industrial/process steam trap ≥15 psig	$300 per trap
❑ Dry cleaner system trap ≥15 psig	$300 per trap
❑ Space heating	$300 per trap

Additional Steam Traps

Purchase date__________

Install date __________

Total installed cost* (per trap) __________

traps repaired/replaced __________

Manufacturer __________

Model __________

Operating pressure __________ psig

Annual hours of operation __________

Boiler efficiency __________

Orifice size __________

CHECK ONE:	REBATE:
❑ Industrial/process steam trap ≥15 psig	$300 per trap
❑ Dry cleaner system trap ≥15 psig	$300 per trap
❑ Space heating	$300 per trap

Additional Steam Traps

Purchase date__________

Install date __________

Total installed cost* (per trap) __________

traps repaired/replaced __________

Manufacturer __________

Model __________

Operating pressure __________ psig

Annual hours of operation __________

Boiler efficiency __________

Orifice size __________

CHECK ONE:	REBATE:
❑ Industrial/process steam trap ≥15 psig	$300 per trap
❑ Dry cleaner system trap ≥15 psig	$300 per trap
❑ Space heating	$300 per trap

Additional Steam Traps

Purchase date__________

Install date __________

Total installed cost* (per trap) __________

traps repaired/replaced __________

Manufacturer __________

Model __________

Operating pressure __________ psig

Annual hours of operation __________

Boiler efficiency __________

Orifice size __________

CHECK ONE:	REBATE:
❑ Industrial/process steam trap ≥15 psig	$300 per trap
❑ Dry cleaner system trap ≥15 psig	$300 per trap
❑ Space heating	$300 per trap

*Total installed cost is the total purchase price of an individual piece of equipment, including the cost of the equipment, materials and external labor. Total installed cost must be itemized by each equipment/product installed and entered in the chart above. The itemized contractor invoice must also include this total installed cost, itemized by each qualifying equipment/product. If self-installed, only the cost of the equipment is required.

Please attach additional copies of this sheet if necessary for more steam traps.

ATTACH SUPPLEMENTAL DOCUMENTS

❑ **Copy of the itemized invoice(s) or proof of purchase**

Must include:

- ❑ Professional contractor information (if installed by a professional contractor)
- ❑ Equipment manufacturer and model
- ❑ Total installed cost (itemized per each piece of qualifying equipment)
- ❑ Payment terms (e.g., balance due of zero, financing terms or paid-in-full stamp)
- ❑ Instant discount requirements for Trade Allies members: Total rebate amount provided as an instant discount off the total purchase price. Clearly label as Black Hills Energy Arkansas steam trap rebate and include a customer signature.

❑ **Steam trap survey**

- ❑ Industrial/process steam traps and dry cleaner steam trap applications only
- ❑ Record of a third-party steam trap survey must be submitted with your rebate application that includes all of the required information listed below. If work is done internally and a survey is not conducted, a program representative must be present to inspect failed traps prior to completing the steam trap repair/replacement.

Must include:

- ❑ Customer business name
- ❑ Site address where survey was completed
- ❑ For each steam trap:
  - ❑ Steam trap location
  - ❑ Steam trap function status
  - ❑ Steam system pressure
  - ❑ Picture of failed open steam trap

ELIGIBILITY REQUIREMENTS

General requirements for all steam trap rebates

Steam trap repairs and/or replacements must be completed and/or installed on an existing boiler for non-residential use, except for multifamily customers. Improvements must be made on equipment installed in a non-residential space with an active Black Hills Energy Arkansas account. Improvements must be completed/installed at the site address listed on this application. Rebates are paid per steam trap and will not exceed the cost of the repair/replacement. Equipment must be purchased and installed between January 1, 2025 and December 31, 2025, unless otherwise noted.

Industrial/process and dry cleaner steam traps ≥15 psig

Steam trap repairs and/or replacements must be made on existing, failed steam traps, one for one. Faulty traps (failed, leaking or blow-through) are eligible. Blocked traps do not qualify.

- Record of a third-party steam trap survey must be submitted with your rebate application that includes all of the required information. If work is done internally and a survey is not conducted, a program representative must be present to inspect failed traps prior to completing the steam trap repair/replacement.
- To qualify for the industrial/process steam trap rebate, system must have operating pressure ≥15 psig.
- Orifice- and venturi-type traps are not eligible for steam trap rebates.

Commercial steam traps

- Rebate available for all steam systems. New steam traps must replace existing steam traps, one for one. Repairs must be made on existing steam traps.
- Orifice and venturi-type traps are not eligible for steam trap rebates.

RESIDENTIAL TANKLESS WATER HEATER Equipment Rebate

Program dates: January 1, 2025 through December 31, 2025
PLEASE NOTE: This is a program with limited funding. Applications will be processed on a first-come, first-served basis until funds are depleted. To check the current status of funds, please call 855-350-1563.

To receive your rebate, please submit all requested information, **including a copy of the dated invoice from your equipment installer**, along with all requested signatures. The rebate application must be submitted within 90 days of installation date or within 90 days of connection of natural gas **AND** emailed or postmarked by **December 31, 2025**. See other side for more information or visit energy-readyarkansas.com. **Please send completed application to: Energy Ready, P.O. Box 9567, Fayetteville, AR 72702 or bheahes@clearesult.com**.

INSTALLATION LOCATION

Account holder's name _____

Black Hills Energy Arkansas Account # (required)

_____

Phone ( )_____

Email _____

Account physical address _____

City/State/ZIP_____

Mailing address_____

City/State/ZIP_____

Electric provider:

❑ Entergy Arkansas ❑ SWEPCO ❑ Other _____

PURCHASER'S INFORMATION

(if different from above)

Name _____

Mailing address_____

City/State/ZIP_____

Email _____

Is purchaser: ❑ Owner ❑ Landlord ❑ Renter ❑ Agency

INSTALLER

(To be completed by installer. An additional rebate of $50 will be paid to the installer show below.)

Company name _____

First name _____

Last name_____

Address _____

City/State/ZIP _____

Phone ( )_____

Email _____

Installer signature_____

License # _____

*All installers must submit a copy of a completed W-9 to the Black Hills Energy Arkansas Residential Solutions Program in order to be paid. If you have questions about how to submit a W-9, please call **855-350-1563** or email **bheahes@clearesult.com**.*

It is not the responsibly of the installer to ensure that the program requirements are met. If program requirements are not met, no rebate will be paid.

Send rebate check to:

❑ Purchaser's address ❑ Installation mailing address

❑ Assigned installer*

**Rebate assignment requires documentation on invoice, discounting final invoice by the amount of the rebate. If assigned installer box is checked above, customer signature is required here:*

_____

Type of installation:

❑ New construction ❑ Replacement (non-repairable water heater) ❑ Replacement upgrade of functioning equipment

Square footage (required): _____ square feet

Year of construction (required): _____

CUSTOMER SIGNATURE

Signature _____

Print first and last name _____

Date _____

By signing this application, you certify that the information provided is accurate to the best of your ability.

Black Hills Energy Ready

NEW EQUIPMENT INFORMATION

Brand _____

Complete model # _____

BTU/Hr. input _____

Serial # _____

Size or capacity/gallons _____

Energy factor/thermal efficiency _____

Date of installation _____

EXISTING EQUIPMENT INFORMATION

Existing unit brand _____

Replaced unit's tank capacity/gallons (required)

_____

QUALIFICATIONS

The qualifying equipment must be installed in an Arkansas home served with natural gas from Black Hills Energy Arkansas and must meet the following efficiencies:

Rebate offer applies only to new equipment. If the equipment replaced is electric, no rebate is available. Black Hills Energy Arkansas uses Air Conditioning, Heating, and Refrigeration Institute listings to determine the efficiency of the equipment.

NATURAL GAS EQUIPMENT	REBATE AMOUNT
Tankless water heater	**$300** (.90 uniform energy factor or higher)

Only one rebate available per account. If sending rebates for multiple accounts or multiple units on one account, please call to check availability of funding.

Installers are only eligible to receive their customer's rebate if the customer has assigned the rebate to the installer, and there is a discount for the full amount of the rebate shown on the final invoice.

Equipment installed under warranty replacement does not qualify for the rebate.

REQUIREMENTS

Application must be completely filled out with installation location information, purchaser information (if applicable), equipment information (including brand, complete model and serial numbers, installation date and AFUE rating) and installer information (if applicable). Black Hills Energy Arkansas is unable to accept applications that do not include all this information. A copy of the dated invoice or sales receipt must accompany the completed rebate application and must include the customer name, unit brand, model and serial numbers and unit cost. It is the responsibility of the account holder or purchaser to ensure that the installed equipment qualifies for the rebate. If it does not qualify, no rebate will be paid.

Black Hills Energy Arkansas reserves the right to inspect the installed equipment.

Rebate qualifications and amounts are subject to change. **The rebate application must be submitted within 90 days of installation date or within 90 days of connection of natural gas AND emailed or postmarked by December 31, 2025.** To avoid delays in rebate processing, please submit your completed paperwork as soon as possible. Any applications with missing or incomplete information can jeopardize the chance of receiving rebate funds. Rebates are awarded on a first-come, first-served basis until funds are depleted.

REBATE DETAILS

Rebate amounts will be issued for equipment installed between January 1, 2025 and December 31, 2025 only. Black Hills Energy Arkansas issues cash rebates in the form of checks, not utility bill credits. Black Hills Energy Arkansas is not responsible if the installer does not provide accurate information on the rebate amount or equipment eligibility. Rebate checks will be mailed within 6–8 weeks.

APPLICATION CHECKLIST

- ❑ Dated sales invoice must include customer name, equipment brand, model and serial number and unit cost. If rebate has been assigned to the installer by the Black Hills Energy Arkansas customer, the deduction for the rebate must be shown on the invoice.
- ❑ Customer signature
- ❑ Black Hills Energy Arkansas Account #

OPTIONS TO SUBMIT REBATE

1. **Email** (preferred):
   bheahes@clearesult.com
2. **Mail:** Energy Ready
   P.O. Box 9567
   Fayetteville, AR 72702

QUESTIONS?

For information pertaining to your rebate, call **855-350-1563** or email **bheahes@clearesult.com**.

Residential Tankless Water Heater Equipment Rebate

Black Hills Energy Ready

COMMERCIAL WATER HEATER Equipment Rebate

Program dates: January 1, 2025 through December 31, 2025
PLEASE NOTE: This is a program with limited funding. Applications will be processed on a first-come, first-served basis until funds are depleted. To check the current status of funds, please call 855-350-1563.

To receive your rebate, please submit all requested information, **including a copy of the dated invoice from your equipment retailer/installer**, along with all requested signatures. The rebate application must be submitted within 90 days of installation date or within 90 days of connection of natural gas **AND** emailed or postmarked by **December 31, 2025**. See other side for more information or visit energy-readyarkansas.com. **Please send completed application to: Energy Ready, P.O. Box 9567, Fayetteville, AR 72702 or corey.mcanally@clearesult.com**.

INSTALLATION LOCATION

Account holder's name _____

Black Hills Energy Arkansas Account # _____

Business phone ( ) _____

Account physical address _____

City/State/ZIP _____

Mailing address _____

City/State/ZIP _____

PURCHASER'S INFORMATION

(if different from above)

Business name _____

Mailing address _____

City/State/ZIP _____

Email _____

Is purchaser: ❑ Owner ❑ Landlord ❑ Renter ❑ Agency

CONTACT INFORMATION

First name _____

Last name _____

Phone ( ) _____

Email _____

INSTALLER

Company name _____

First name _____

Last name _____

Address _____

City/State/ZIP _____

Phone ( ) _____

Email _____

Installer signature _____

License # _____

It is not the responsibility of the retailer/installer to ensure that the program requirements are met. If program requirements are not met, no rebate will be paid.

Send rebate check to:

❑ Purchaser's address ❑ Installation mailing address

❑ Assigned retailer or installer*

**Rebate assignment requires documentation on invoice, discounting final invoice by the amount of the rebate. If assigned retailer or installer box is checked above, customer signature is required here:*

Customer signature:

_____

Building type:

❑ Small office (<30,000 square feet)

❑ Large office (>30,000 square feet)

❑ Fast food restaurant ❑ Sit-down restaurant ❑ Small retail

❑ Large retail ❑ Grocery ❑ Warehouse ❑ Elementary school

❑ Jr./Sr. high school ❑ Assembly ❑ College/university

❑ Healthcare facility ❑ Motel ❑ Hotel

❑ Other: _____

Building square footage (required): _____ square feet

CUSTOMER SIGNATURE

Signature _____

Print first and last name _____

Date _____

By signing this application, you certify that the information provided is accurate to the best of your ability.

Black Hills Energy Ready

NEW EQUIPMENT INFORMATION

Type of water heater: ❑ Tankless

❑ Hybrid tankless _____ gallons
(*must be less than 5 gallons*)

Brand _____

Complete model # _____

BTU/Hr. input _____

Serial # _____

Size or capacity/gallons _____

Energy factor/thermal efficiency _____

Date of installation _____

EXISTING EQUIPMENT INFORMATION

Existing unit brand _____

Replaced unit's tank capacity/gallons _____

QUALIFICATIONS

The qualifying equipment must be installed in an Arkansas business served with natural gas from Black Hills Energy Arkansas and must meet the following efficiencies:

NATURAL GAS EQUIPMENT	REBATE AMOUNT
Tankless water heater	**$500 (.90 uniform energy factor or higher)**
Hybrid tankless water heater (must be less than 5 gallons)	**$500 (.90 uniform energy factor or higher)**

Rebate offer applies only to new equipment. If the equipment replaced is electric, no rebate is available. Black Hills Energy Arkansas uses Air-Conditioning, Heating and Refrigeration Institute listings to determine the efficiency of the equipment.

If sending rebates for multiple accounts or multiple units on one account, please call to check availability of funding.

Retailers/installers are only eligible to receive their customer's rebate if the customer has assigned the rebate to the retailer/installer and there is a discount for the full amount of the rebate shown on the final invoice.

Equipment installed under warranty replacement does not qualify for the rebate.

REQUIREMENTS

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Black Hills Energy Arkansas reserves the right to inspect the installed equipment.

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REBATE DETAILS

Rebate amounts will be issued for equipment installed between January 1, 2025 and December 31, 2025 only. Black Hills Energy Arkansas issues cash rebates in the form of checks, not utility bill credits. Black Hills Energy Arkansas is not responsible if the retailer/installer does not provide accurate information on the rebate amount or equipment eligibility. Rebate checks will be mailed within 6-8 weeks.

APPLICATION CHECKLIST

❑ Dated sales invoice must include customer name, equipment brand, model and serial number and unit cost. If rebate has been assigned to the retailer/installer by the Black Hills Energy Arkansas customer, the deduction for the rebate must be shown on the invoice.

❑ Customer signature

❑ Black Hills Energy Arkansas Account #

OPTIONS TO SUBMIT REBATE

1. **Email** (preferred): corey.mcanally@clearesult.com

2. **Mail:** Energy Ready
   P.O. Box 9567
   Fayetteville, AR 72702

QUESTIONS?

For information pertaining to your rebate, call **855-350-1563**. General inquiries can be directed to **479-935-9001** or **corey.mcanally@clearesult.com**.

Black Hills Energy Ready