



2023 DEMAND-SIDE MANAGEMENT ANNUAL STATUS REPORT

Electric and Natural Gas
Public Service Company of Colorado

2023 Demand-Side Management Annual Status Report

Public Service Company of Colorado (“Public Service” or “the Company”) continues to provide customers the choices and the tools they need to make educated decisions about their electricity use. Public Service helps customers manage their energy consumption through one of the largest energy-saving program portfolios in the United States. These energy efficiency programs help customers save money, benefit all of Colorado by avoiding emissions, and reduce the Company’s need to purchase, produce, and deliver additional energy. The Demand-Side Management (“DSM”) portfolio continues to be cost-effective while delivering significant energy efficiency savings and demand reductions.

This 2023 DSM Annual Status Report summarizes the beneficial electrification, natural gas and electric energy efficiency achievements made in 2023. This report also explores the challenges and lessons learned from a diverse and comprehensive portfolio of programs, products, and pilots designed to provide customers control of their energy use.

Report Highlights:

- Public Service continued to adapt its DSM portfolio to find new and creative ways to deliver value to our customers. Notable examples from 2023 include significantly increased participation in the Company’s beneficial electrification measures over 2022 levels, continued outreach efforts to hard-to-reach customers at food banks and community centers across its service territory, and additional support to customers affected by the Marshall Fire through the ENERGY STAR® New Homes and Insulation and Air Sealing products. These efforts are further evident through the Company’s electric energy efficiency portfolio achievement of energy savings of over 519 GWh, representing 105% of the energy efficiency goal of 495 GWh. The natural gas portfolio achieved energy savings in excess of 109% of the target.
- **All programs were cost-effective for both electric and natural gas offerings.** For the fourth year in a row, all programs – including the Income Qualified Program – were cost effective both with and without Social Cost of Carbon benefits; and the Modified Total Resource Cost (“mTRC”) ratios were up year over year for both the Residential and Income Qualified Programs. The Income Qualified Program continued strong performance from 2023 as demonstrated by an mTRC ratio of 3.68 for electric and 3.12 for natural gas.
- **A total of 290,095 tons of carbon dioxide (“CO₂”) were avoided in 2023 through the natural gas and electric DSM achievements.** Additionally, approximately 3.2 million tons of CO₂ emissions will be avoided over the lifetime of the installed measures. The greatest contributors were Home Lighting & Recycling, Lighting Efficiency, and New Construction. The electric portfolio also avoided 172,423 pounds of sulfur oxide (“SO_x”) emissions in 2023, with expected lifetime emissions reduction of just under 1.0 million pounds.
- **Income-Qualified (“IQ”) offerings exceed electric and natural gas energy savings goal expectations.** In 2023, the IQ portfolio’s natural gas energy savings realized 313% of its target which accounted for 33% of the Company’s natural gas energy savings. While the portfolio’s electric energy savings achieved approximately 97,000 above target in lifetime emissions savings. This success was accomplished in large part to LED distribution efforts to income qualified customers for residential installation.
- **Beneficial Electrification (“BE”) offerings continue to expand as part of the Company’s portfolio offerings.** BE products in the residential and income-qualified programs provided a net savings of 134,972 Dth with a total of 53,513 tons of avoided lifetime carbon dioxide emissions savings.

Looking ahead, the Company will continue to offer more cost-effective choices for customers to help Coloradans meet and exceed their energy, climate, and sustainability goals. The Company takes pride in its environmental leadership and commitment to managing customer bill impacts responsibly. These achievements also exemplify the Company's commitment to customers and communities by providing a wide variety of choices to meet the diverse energy needs of Coloradans.

2023 Demand-Side Management Annual Status Report

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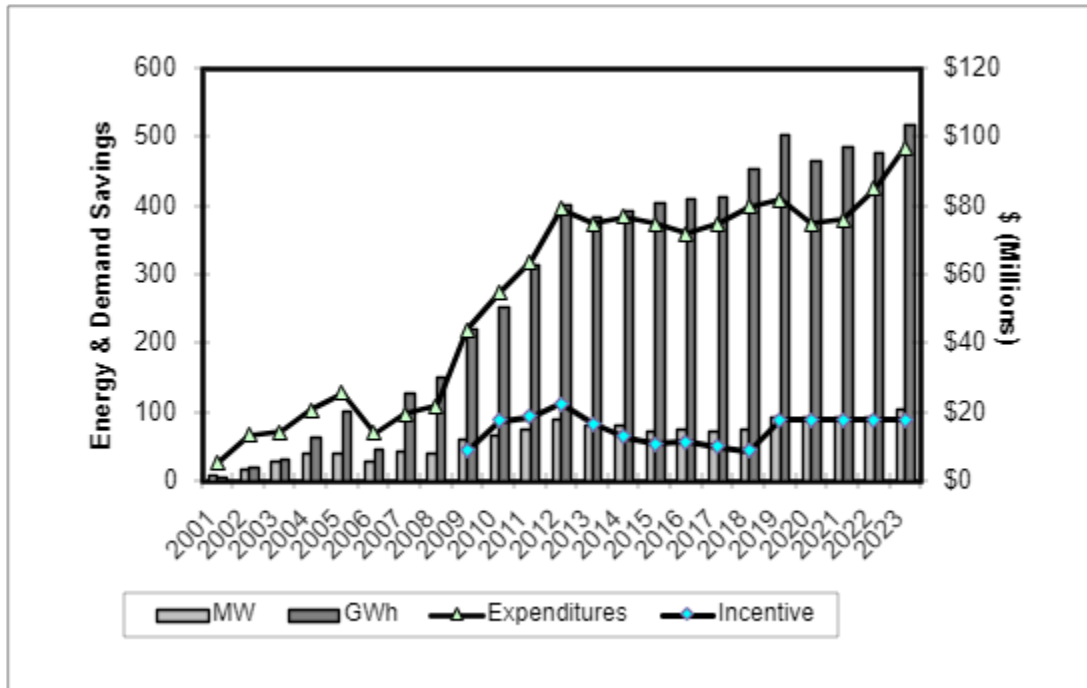
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Executive Summary

Public Service respectfully submits this combined electric, natural gas, and beneficial electrification 2023 Colorado DSM Annual Status Report (“Status Report”) to the Colorado Public Utilities Commission (“Commission”). In this filing, the Company will report on its electric, natural gas and beneficial electrification DSM achievements from January 1, 2023 through December 31, 2023. In this Status Report, Public Service presents 2023 electric and natural gas savings, goals, targets, and budgets prorated between two separate proceedings. As the Company’s 2023 DSM & BE Plan (Proceeding No. 22A-0315EG) went into effect on September 1, 2023,¹ and the time period of January 1, 2023 through August 31, 2023, reflects the goals, targets and budgets from the requirements in the 2021-2022 DSM Plan (Proceeding No. 20A-0287EG).²

The electric energy efficiency savings of over 519 GWh are a significant accomplishment in 2023. The 2023 electric savings exceeded the prior 5-year average savings by 8.9% and represent 105% of the goal of 495 GWh from Proceeding No. 22A-0315EG. Natural gas savings of 914,655 Dth exceeded the prorated goal of 832,724 Dth by 9.8%. To achieve these savings, the Company spent a total of \$114.6 million (\$97.1 million electric energy efficiency, \$17.5 million demand response) on its electric programs and \$23.6 million on its natural gas energy efficiency programs. While this year’s electric energy efficiency spending is slightly above the approved electric energy efficiency budget of \$93.6 million³ with 20% budget flexibility, the overall electric energy efficiency spending over the last Strategic Issues period (2019-2023) was lower at only \$83.1 million per year. The demand response spending was less than the approved demand response budget of \$24.1 million. Below in Figures 1 and 2 are Public Service’s historical achievements and expenditures for its electric and natural gas DSM Programs.

Figure 1: Historical Electric Program Savings and Expenditures

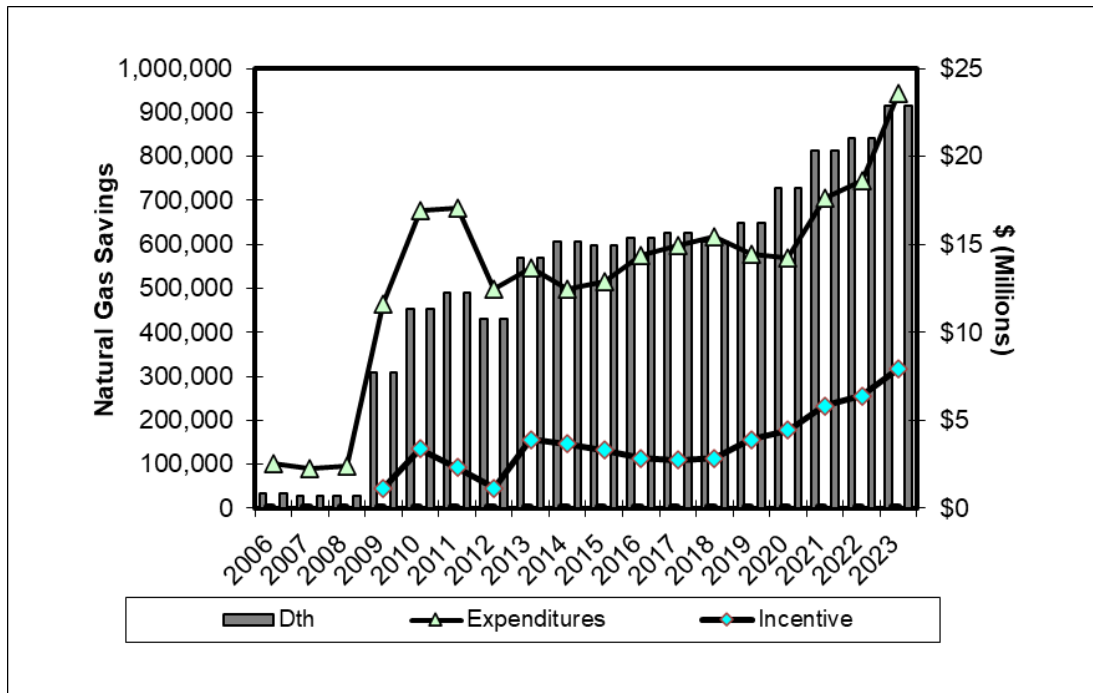


¹ See Decision No. C23-0381.

² See Decision No. R21-0081.

³ See Decision No. C18-0417 at ¶ 97.

Figure 2: Historical Natural Gas Program Savings and Expenditures



History of the Plan

Over the last twenty-five years, Public Service has entered into several regulatory settlements involving DSM in conjunction with its integrated resource/least-cost planning process. The following table identifies those significant to DSM:

Table 1a: Regulatory Settlements Involving DSM and Resource Planning

Proceeding	Proceeding No.	Decision No.	Summary
1999 Integrated Resource Plan	00A-008E	C00-1057	<ul style="list-style-type: none"> • 124 MW (~21 MW) of DSM resources • \$75 million
2003 Least Cost Resource Plan	04A-214E	C05-0049	<ul style="list-style-type: none"> • 320 MW (Avg. of 40 MW per year) • 800 GWh (Avg. of 100 GWh per year) • \$196 million • 2006 – 2013
2008 CPCN at Fort St. Vrain Generation Station	07A-469E	C08-0369	<ul style="list-style-type: none"> • Expansion of ISOC and Saver’s Switch programs • Initiation of Third-Party Demand Response Program
2011 Electric Resource Plan	11A-869E	C13-0094 & C13-0323	<ul style="list-style-type: none"> • Informed the methodologies and values for avoided costs
2016 Electric Resource Plan	16A-0396E	C17-0316 & C18-0761	<ul style="list-style-type: none"> • Informed the methodologies and values for avoided costs

In addition, both legislation and the Strategic Issues proceedings at the Commission have addressed major policy issues for DSM programs. The following table identifies the applicable legislation and Commission proceedings:

Table 1b: Legislative and Regulatory Policy Directives for DSM

Proceeding	Proceeding No.	Decision No.	Summary
House Bill 07-1037	N/A	N/A	<ul style="list-style-type: none"> • Established intent of DSM programs • Established ten-year goals for energy and demand
2010 Strategic Issues	10A-554EG	C11-0442	<ul style="list-style-type: none"> • Established energy and demand savings goals • Established incentive mechanism • Defined program administration requirements
2013 Strategic Issues	13A-0686EG	C14-0731	<ul style="list-style-type: none"> • Increased energy and demand savings goals • Modified the incentive mechanism • Established a budget cap
House Bill 17-1227	N/A	N/A	<ul style="list-style-type: none"> • Extended energy and demand savings goals through 2028
2017 Strategic Issues	17A-0462EG	C18-0417	<ul style="list-style-type: none"> • Increased energy savings goals and budget for 2019 - 2023 • Modified incentive mechanism for 2019 - 2023 • Grandfathering of ISOC customers
House Bill 19-1231	N/A	N/A	<ul style="list-style-type: none"> • Established efficiency standards for new products sold in Colorado
Senate Bill 19-236	N/A	N/A	<ul style="list-style-type: none"> • Established the valuation and application of the Social Cost of Carbon
Winter Storm Uri	21A-0192EG	C22-0512	<ul style="list-style-type: none"> • Required evaluation of economic-based and winter-specific Demand Response programs

Proceeding	Proceeding No.	Decision No.	Summary
2022 Strategic Issues	22A-0309EG	C23-0413 C23-0523	<ul style="list-style-type: none"> Established energy savings goals and budgets for 2024-2026 Established seasonal Demand Response goals Ordered the development of advanced meter technology opportunities to fully optimize the grid infrastructure Required the phase-out of rebates for certain appliances for non-IQ customers Established IQ/DI budget spending percentages Required non-IQ offerings in DI communities Required an all-electric new construction project for affordable housing Required reassessment of a demand response performance incentive mechanism Required an IRA cost-effectiveness analysis
House Bill 23-1161	N/A	N/A	<ul style="list-style-type: none"> Established environmental standards for certain lighting products

High-Level Achievements

In 2023, Public Service’s electric energy efficiency and demand response portfolio achieved demand savings of 163,476 net generator kW (83% of filed target) and energy savings of 520,330,711 net generator kWh (102% of achievement target) at a cost of \$114,591,689 (100% of budget target). Table 2a below shows the Company’s electric portfolio achievements, including mTRC Test ratio results at the program level.

Demand response achievement is calculated using the new or renewed participation in programs with a one-year measure life, plus any incremental capacity (*i.e.*, new participants) in a program with greater than one year of measure life. Programs with a one-year measure life include Critical Peak Pricing, Electric

Vehicle Critical Peak Pricing, Peak Day Partners, and Peak Partner Rewards. The Company considers these programs to have a one-year life because participant agreements are one year in duration with the option to renew and there is no physical equipment installed at the customer’s site controlling load.

Table 2a: High-Level Electric Targets and Achievements for 2023

2023 Programs	Electric Budget	Electric Expenditures (Actual)	Gen. kW Target	Net Gen. Realized kW	Net Gen. kWh Target	Net Gen. Realized kWh	MTRC Target	MTRC Actual	MTRC Target (w/SCC)	MTRC Actual (w/SCC)
Business	\$ 49,772,310	\$56,887,477	65,112	67,343	350,932,869	350,270,567	1.52	2.00	2.03	2.90
Residential	\$ 28,132,502	\$27,964,037	31,115	32,327	130,687,786	127,807,532	1.61	2.07	2.04	2.89
Income-Qualified	\$ 5,045,943	\$4,505,588	4,025	5,702	28,327,743	41,762,203	2.65	3.68	3.49	5.91
Indirect	\$ 7,991,687	\$7,774,203	0	0	0	0	-	-	-	-
Demand Response	\$ 24,090,807	\$17,460,385	97,875	58,104	1,446,142	490,409	2.03	2.16	2.04	2.17
2023 TOTAL	\$ 115,033,249	\$114,591,689	198,127	163,476	511,394,541	520,330,711	1.59	2.03	2.03	2.86

The natural gas portfolio achieved savings of 914,655 Dth (110% of prorated achievement target) at a cost of \$23,614,178 (114% of prorated budget target). Table 2b below shows the Company’s natural gas portfolio achievements, including mTRC test ratio results at the program level.

Table 2b: High-Level Natural Gas Targets and Achievements for 2023

2023 Programs	Natural Gas Budget	Natural Gas Expenditures (Actual)	Dth Target	Net. Realized Dth	MTRC Target	MTRC (Actual)
Business	\$1,484,787	\$1,448,744	128,273	78,468	2.65	3.15
Residential	\$11,451,225	\$13,785,542	614,909	555,109	1.55	1.07
Income-Qualified	\$6,036,843	\$6,293,454	89,543	281,077	1.17	3.12
Indirect	\$1,741,468	\$2,086,439	0	0	-	-
2023 TOTAL	\$20,714,322	\$23,614,178	832,724	914,655	1.54	1.62

These achievements shown in Tables 2a and 2b have provided electric net benefits of approximately \$206 million and natural gas net benefits of \$34.1 million. Based on these achievements and net benefits, the Company has calculated an associated financial incentive of \$18 million for its electric portfolio and \$8.0 million for its natural gas portfolio. The gas figure of includes \$5,134,323 for the incentive and an acknowledgement of lost revenues (“ALR”) associated with gas DSM programs of \$2,819,344. The DSM portfolio’s overall costs and benefits, as determined by the mTRC test, along with the Company’s lost revenue and incentive resulting from these achievements, is shown in Table 2c below. Additional incentive calculation details are shown in the Financial Incentive Calculation section of this Report.

Table 2c: mTRC Test Results with Financial Incentive

	Electric	Gas
MTRC Benefits w/Adder	\$405,450,132	\$89,231,078
MTRC Costs	\$199,916,964	\$55,135,523
MTRC Ratio	2.03	1.62
MTRC Benefits w/Adder		
	\$405,450,132	\$89,231,078
Incentive	\$18,000,000	\$5,134,323
Acknowledgement of Lost Revenue (ALR)	n/a	\$2,819,344
MTRC Costs w/Incentive & ALR	\$217,916,964	\$63,089,190
MTRC Ratio w/Incentive & ALR	1.86	1.41

In accordance with the 2019/2020 DSM Plan Settlement Agreement,⁴ Table 2d includes a portfolio-level sensitivity cost-benefit analysis for the electric and natural gas portfolios using the Social Cost of Carbon as established in Senate Bill 19-236. Avoided emissions provide an additional \$165.7 million of electric net benefits and \$50.7 million of natural gas net benefits. Program-level emissions reductions and benefits are shown in Table 7.

Table 2d: mTRC Test Results with Social Cost of Carbon

	Electric	Gas
MTRC Benefits w/Adder + SCC	\$571,136,653	\$139,901,382
MTRC Costs	\$199,916,964	\$55,135,523
MTRC Ratio	2.86	2.54
MTRC Benefits w/Adder + SCC		
	\$571,136,653	\$139,901,382
Incentive	\$18,000,000	\$5,134,323
Acknowledgement of Lost Revenue (ALR)	n/a	\$2,819,344
MTRC Costs w/Incentive & ALR	\$217,916,964	\$63,089,190
MTRC Ratio w/Incentive & ALR	2.62	2.22

Some of the products that are part of the Company's portfolio did not pass the mTRC Test in 2023. While each product listed below is discussed in more detail in the 2023 Status Report section of this report, below is a bulleted summary of the primary reason for the failing of mTRC Test ratios (natural gas and/or electric), and brief discussion of plans to improve the ratios in 2024.

Business Program

- *Custom Efficiency – Natural Gas (0.71 mTRC)*
 - The custom efficiency product had substantial administrative costs overall due to management of the program and analysis of new custom projects, some of which did not pass preapproval analysis, and some that have not yet been implemented. These administrative costs were not offset by the benefits of savings achievements due to a small pipeline and market challenges such as high capital and labor costs for participants.

⁴ Proceeding No. 18A-0606EG, Unopposed Comprehensive Settlement Agreement, at Section III(I)(ii).

Efforts to improve for 2024:

The Company is working to identify new and unique technologies to analyze through the custom product. Through this process, the Company will identify measures that can support the program through savings achievements in the short term and eventually be turned into prescriptive products to contribute to portfolio success.

- *Data Center Efficiency - Electric (0.87 mTRC)*
 - The product had high administration and incremental costs that were not in line with 2023 energy savings due to customer equipment utilization. In addition, under-utilization of data center facilities prevents full optimization of energy saving equipment and prevents the product from claiming savings in the same calendar year as administrative costs.

Efforts to improve for 2024:

The Company is working with customers to ensure that their equipment utilization matches incremental capital costs incurred with projects. The Company is also implementing pre-analysis steps to ensure that customers have optimized facility utilization before administrative costs are incurred internally.

- *Energy Management Systems – Electric (0.93 mTRC)*
 - Energy Management Systems suffered from high incremental equipment costs and low peak coincident demand savings. While many of the passing and failing yield substantial energy savings, the cost to administer the program and the number of rejected projects contributed to the cost-effectiveness test results.

Efforts to improve for 2024:

A 60-day notice that included program modifications was submitted in June 2023 to address some of the issues identified through the product development process. The primary changes are the addition of three prescriptive measures and reducing the incremental cost provided by contractors. The prescriptive measures are intended to streamline valuable measures for trade partners to implement and reduce administrative time. For incremental cost, it was found that a portion of the costs of an EMS project are due to the large quantity of non-energy benefits and or other program impacts. These impacts include customer resource savings, health and safety, comfort, alarms, productivity improvement, property value, among many others, that the customer pays for that is not directly tied to energy efficiency.

In addition to these changes, a greater emphasis on trade partner peak coincident demand savings education was implemented and will continue on an annual basis.

- *LED Street Lighting – Electric (0.67 mTRC)*
 - Due to the nature of streetlights strictly being an outdoor, overnight lighting application, there are no peak capacity savings associated with the project. As a result, while this program had strong energy savings, the lack of capacity savings reduces overall cost-effectiveness.

Efforts to improve for 2024:

We are open to exploring the possibility of offering incentives to increase the number of participants in the program and drive additional energy savings, which should help overcome the lack of demand savings.

- *Small Business Solutions – Natural Gas (0.62 mTRC)*
 - Efforts to improve the Small Business Solutions gas portfolio 2023 achievement involved an increase in cost/Dth largely due to Inside Sales costs to drive customer participation and savings achievement. Gas savings achievement in the small business market is particularly challenging when you consider the sensitive profitability margins small business face, the high upfront capital investment of gas measures, and the timeline on return from such investments. As such, efforts to grow the gas portfolio and increase customer participation require aggressive marketing/customer acquisition tactics that can be costly.

Efforts to improve for 2024:

In 2024, gas portfolio cost management will be balanced relative to achievement with an improved marketing strategy that significantly reduces inside sales budget in favor of more cost-effective initiatives and through leveraging marketing consolidation and collaboration efforts with other programs with similar portfolio offerings. As a result, we anticipate higher savings achievement with lower costs.

Residential Program

- *EnergyStar New Homes – Natural Gas (0.97 mTRC)*
 - Among other factors, the square footage of homes has declined industry-wide, including in Colorado. While performance better than code has remained consistent, leading to consistent rebate levels, savings have declined leading to lower savings for the same cost causing downward pressure on savings and cost effectiveness.

Efforts to improve for 2024:

While home builders are advising that housing sizes are going to continue the trend downwards, many of the trainings we are offering in 2024 to help builders comply with the new Residential New Home Construction all-electric requirements can also increase savings in gas-heated homes, increasing performance and thus cost effectiveness.

- *Home Energy Squad – Electric (0.37 mTRC) and Natural Gas (0.37 mTRC)*
 - The program expanded mid-year with increased staffing and promotion to reach more customers with energy saving measures as well as reduced visit lead time. The expansion goal of the expansion increased customer satisfaction through improved visit availability and reduced lead times. Additionally, increasing technical staff has been a priority for the program over the last several years. The product expansion significantly increased costs exceeding electric and natural gas budgets. The costs were attributed to increased staff, equipment, fleet vehicles, and upgrading the scheduling site.

Efforts to improve for 2024:

Through the RFP process the program cost structure has been addressed making the program more cost-effective while being able to deliver a high volume of Home Energy Squad and Home Energy Squad Plus visits to customers in the Company territory.

- *Insulation & Air Sealing – Electric (0.58 mTRC) and Natural Gas (0.57 mTRC)*
 - The Insulation & Air Sealing program had low customer adoption throughout the year which was attributed to the mild shoulder seasons. This program also has a high incremental cost compared to the energy savings from the measures.

Efforts to improve for 2024:

In the 2024 – 2026 DSM & BE Plan, the Company increased rebates to attract more participation while maintaining energy savings.

- *Refrigerator & Freezer Recycling – Electric (0.86 mTRC)*
 - The Refrigerator & Freezer Recycling program experienced some issues mid-way through the year with our sole program implementer. The program had to be paused for several weeks, which resulted in many pickup cancellations. Once a new vendor was selected, the program reopened with limited capacity. The cost to implement the program also increased due to the short timeframe available to implement a solution.

Efforts to improve for 2024:

The program will explore marketing opportunities through new channels, which will raise both program awareness and participation. Cost effective marketing tactics will also be heavily relied upon to reduce program costs as much as possible.

- *Residential Heating & Cooling – Natural Gas (0.79 mTRC)*
 - The Residential Heating & Cooling program did not pass the mTRC test due to program measures having high incremental costs relative to the energy savings.

Efforts to improve for 2024:

The Company will focus efforts on measures with lower incremental costs.

- *Whole Home Efficiency – Electric (0.18 mTRC) and Natural Gas (0.35 mTRC)*
 - The Whole Home Efficiency program experienced low participation in 2023. Also, the most common installed measures have high incremental costs and low energy savings.

Efforts to improve for 2024:

In the 2024 – 2026 DSM & BE Plan, the Company altered the program's requirements to allow more customers to qualify for rebates and allowed more program participation flexibility.

Income-Qualified Program

- *Multifamily Weatherization – Electric (0.97 mTRC) and Natural Gas (0.93 mTRC)*
 - The Multifamily Weatherization program experienced delays in project completion which directly impacted the overall cost effectiveness. A large portion of this impact was a direct result of inherently complex and expensive BE Pilot projects with extended lead times.

Efforts to improve for 2024:

The Company looks to improve project timelines by improving custom analysis turnaround times and improved communications with property owners and contractors to increase overall project completion.

Summary of Program Changes via 60-/90-Day Notice

In recognition of the need to afford the Company discretion to make changes to the Plan to achieve the greatest level of energy savings, the 2010 Stipulation and Settlement Agreement⁵ provided for a 60-/90-Day Notice process to advise interested stakeholders of changes to the Plan. A 60-Day Notice is required

⁵ Proceeding No. 08A-366EG, Stipulation and Settlement Agreement, at 6.

for any proposal to add a new DSM product, reduce rebate levels, adopt new or discontinue existing measures, or change technical assumptions or eligibility requirements. DSM roundtable participants have 30 days from the time of the Notice date to provide comments to Public Service on the proposed changes. The Company will have 30 days thereafter to consider comments. A 90-Day Notice is required for any product discontinuation.

Nine 60-Day Notices were posted in 2023, all of which affected calendar year 2023 as shown in Table 3 below. These included the addition of new measures to the portfolio, updates to technical assumptions, and information regarding clarifications and intentions of the Company. A detailed description of the changes made via 60-/90-Day Notice can be found on the Company’s Colorado DSM webpage:

https://www.xcelenergy.com/company/rates_and_regulations/filings/colorado_demand-side_management

Table 3: 60/90-Day Notices in 2023

Product, Pilot, or Measure	Notice Date	Notice Type	
Business Program			
Lighting Efficiency	06/30/2023	60-Day	Comprehensive evaluation update, deemed savings
Energy Management Systems	06/30/2023	60-Day	Comprehensive evaluation update, deemed savings, technical assumptions
HVAC+R Systems	07/31/2023	60-Day	Deemed savings, technical assumptions
HVAC+R Systems	10/24/2023	60-Day	Deemed savings, technical assumption, updated cost-benefit analysis
Residential Program			
Home Energy Insights	06/30/2023	60-Day	Comprehensive evaluation update
Heating and Cooling	10/04/2023	60-Day	Preliminary design for a midstream incentive offering
Income Qualified Program			
Geographic Prequalification Pilot	06/30/2023	60-Day	Comprehensive evaluation update
Energy Savings Kits	06/30/2023	60-Day	Comprehensive evaluation update
Demand Response Program			
Electric Vehicle Optimization	09/01/2023	60-Day	Technical assumption, cost-benefit analysis

Additional detail on the impact of these changes can be found in the 2023 Status Report section of this report, within each DSM product summary.

RFP Administrative Costs for Third-Party Implementation

As required by Decision No. C11-0442 (Proceeding No. 10A-554EG),⁶ the Company continues to track administrative costs incurred for conducting requests for proposals (“RFPs”), shown in Table 4 below.

Table 4: RFP Administrative Costs in 2023

Product	2023 Expenditures
Energy Savings Kits	\$850
Home Energy Audits	\$500
Home Energy Squad	\$1,000
Multifamily Buildings	\$1,200
Strategic Energy Management	\$14,000
Whole Home Efficiency	\$500
TOTAL	\$18,050

Program Achievements and Expenditures

Tables 5a, 6a and 7a below provide the electric, natural gas, and beneficial electrification savings targets, budgets, and forecasted cost-effectiveness approved in the 2022 DSM Plan in Proceeding No. 20A-0287EG and the 2023 DSM & BE Plan in Proceeding No. 22A-0315EG. Table 5a presents the 2023 electric targets and budgets as approved in the 2022 DSM Plan (Proceeding No. 20A-0287EG) and the 2023 DSM & BE Plan (Proceeding No. 22A-0315EG). Table 6a presents the 2023 natural gas savings targets and budgets as approved in the 2022 DSM Plan (Proceeding No. 20A-0287EG) and the 2023 DSM & BE Plan (Proceeding No. 22A-0315EG). And, lastly Table 7a presents the 2023 beneficial electrification savings targets and budgets as approved in the 2023 DSM & BE Plan (Proceeding No. 22A-0315EG). Although The BE savings targets, budgets and cost-effectiveness results are shown separately, they represent a subset of the natural gas energy efficiency portfolio. The BE impacts are also included in the overall natural gas energy efficiency portfolio results. Decision No. C23-0381 in Proceeding No. 22A-0315EG did not become final until June 8, 2023; therefore, Tables 5a and 6a presents the 2023 electric and natural gas savings targets and budgets as a pro-ration of the energy savings targets and budgets approved for 2022 in Proceeding No. 20A-0287EG and those approved for 2023 in Proceeding No. 22A-0315EG accounting for a September 1, 2023 implementation date for the 2023 DSM Plan. This follows the methodology first approved in Proceeding No. 13A-0773EG⁷ for calculating goals and budgets against which the Company’s performance shall be measured for purposed of calculating any incentives earned when a new DSM Plan is implemented on a date later than January 1 of the given year. See the [Financial Incentive Calculations](#) section for more details. Tables 5b, 6b and 7b provide the Company’s 2023 achievements, actual expenditures, and cost-effectiveness results by product.

⁶ “Public Service is directed to quantify and track any additional costs it incurs in the use of third-party DSM providers.” See Decision No. C11-0442 at ¶81.

⁷ See Decision No. R12-1204-1.

Table 5a: 2023 Electric Program Targets and Budgets

2023	Electric Budget	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio	Lifetime Emissions Savings (Tons CO2)	SCC Benefits	Electric MTRC Test Ratio with SCC
Business Program							
Business Energy Assessments	\$1,049,619	1,098	8,890,639	1.25	38,337	\$2,030,762	1.81
Business HVAC+R Systems	\$7,832,413	11,439	34,537,436	2.00	172,030	\$8,502,004	2.50
Compressed Air Efficiency	\$1,017,395	921	5,548,505	1.42	25,160	\$1,205,384	1.93
Custom Efficiency	\$801,096	844	4,744,214	1.21	24,350	\$1,170,009	1.31
Data Center Efficiency	\$1,637,692	2,342	15,552,238	1.81	87,720	\$4,273,536	2.54
Energy Management Systems	\$561,480	233	4,965,374	1.23	24,401	\$1,057,729	1.74
LED Street Lighting	\$0	0	1,468,252	1.53	9,647	\$451,866	2.77
Lighting Efficiency	\$12,943,014	15,793	99,084,935	1.36	460,115	\$22,272,815	1.89
New Construction	\$8,082,387	13,091	50,672,795	1.50	284,078	\$13,649,151	1.94
Self Direct	\$1,001,107	1,468	6,561,548	1.14	34,769	\$1,809,521	1.49
Small Business Solutions	\$5,380,028	6,906	42,418,420	1.56	171,354	\$8,125,285	2.18
Strategic Energy Management	\$8,664,793	10,978	76,488,513	1.82	315,459	\$15,143,177	2.52
General Advertising-Bus	\$801,284	0	0	0	0	0	0
Business Program Total	\$49,772,310	65,112	350,932,869	1.52	1,647,422	\$79,691,239	2.03
Residential Program							
Energy Efficient Showerhead	\$39,719	61	750,046	11.75	2,770	\$154,465	14.41
Energy Star New Homes	\$3,351,930	2,556	8,846,810	0.96	50,899	\$2,233,324	1.18
Home Energy Insights	\$3,707,906	5,062	27,507,043	1.09	32,184	\$1,860,575	1.60
Home Energy Squad	\$1,358,709	1,022	4,806,956	1.52	21,925	\$1,050,068	2.05
Home Lighting & Recycling	\$3,671,123	7,410	50,669,663	2.61	182,252	\$8,434,989	3.78
Insulation & Air Sealing	\$259,131	395	475,085	0.75	2,583	\$123,625	0.84
Multifamily Buildings	\$2,402,778	1,750	10,721,164	1.44	50,247	\$2,403,937	1.94
Refrigerator & Freezer Recycling	\$1,128,423	439	3,675,108	1.16	11,672	\$609,906	1.70
Residential Heating & Cooling	\$8,758,573	10,198	11,209,912	1.80	55,408	\$2,464,641	1.94
School Education Kits	\$2,349,191	1,958	11,388,999	2.14	58,300	\$2,767,311	2.85
Whole Home Efficiency	\$274,757	264	637,001	0.92	3,013	\$141,659	1.10
General Advertising-Res	\$830,262	0	0	0	0	0	0
Residential Program Total	\$28,132,502	31,115	130,687,786	1.61	471,252	\$22,244,499	2.04
Income Qualified Program							
Energy Savings Kit	\$372,533	212	1,523,634	2.44	8,108	\$411,421	3.34
Multifamily Weatherization	\$1,219,680	262	2,090,801	0.98	11,680	\$548,018	1.19
Non-Profit	\$1,139,680	377	1,673,291	1.00	8,955	\$420,082	1.18
Single-Family Weatherization	\$2,314,050	3,174	23,040,018	4.71	136,811	\$6,356,852	6.38
Income Qualified Program Total	\$5,045,943	4,025	28,327,743	2.65	165,554	\$7,736,372	3.49
Indirect Products & Services							
Education/Market Transformation							
Business Education	\$176,000	0	0	0	0	\$0	0
Business Energy Analysis	\$1,166,744	0	0	0	0	\$0	0
Consumer Education	\$961,808	0	0	0	0	\$0	0
Energy Benchmarking	\$129,908	0	0	0	0	\$0	0
Energy Efficiency Financing	\$196,696	0	0	0	0	\$0	0
Home Energy Audit	\$451,630	0	0	0	0	\$0	0
Partners in Energy	\$1,034,604	0	0	0	0	\$0	0
Education/Market Transformation Total	\$4,117,390	0	0	0	0	\$0	0
Planning and Research							
EE Market Research	\$443,570	0	0	0	0	\$0	0
EE Evaluation, Measurement & Verification	\$871,752	0	0	0	0	\$0	0
EE Planning & Administration	\$559,517	0	0	0	0	\$0	0
EE Product Development	\$1,975,386	0	0	0	0	\$0	0
Geo-targeting Pilot - EE	\$24,073	0	0	0	0	\$0	0
EE Product Development Total	\$1,999,459	0	0	0	0	\$0	0
EE Planning and Research Total	\$3,874,296	0	0	0	0	\$0	0
EE Indirect Products & Services Total	\$7,991,687	0	0	0	0	\$0	0
EE PORTFOLIO TOTAL	\$90,942,442	100,252	509,948,399	1.54	2,284,227	\$109,672,110	2.03
Demand Response Program							
Critical Peak Pricing	\$268,848	17,273	465,733	0	263	\$19,854	0
Electric Vehicle Critical Peak Pricing	\$514,517	691	0	0	0	\$0	0
Electric Vehicle Optimization	\$1,098,322	3,567	0	1.21	2,020	\$111,112	1.31
Peak Day Partners	\$503,858	10,843	323,995	0	165	\$10,159	0
Peak Partner Rewards	\$1,663,326	33,754	322,824	0	240	\$15,641	0
Residential Battery Demand Response	\$190,012	556	-5,226	0	0	\$0	0
Residential Demand Response	\$16,809,763	28,706	116,005	1.96	461	\$24,059	1.96
Small Commercial Building Controls	\$537,291	2,485	222,811	2.22	868	\$54,573	2.28
DR Program Total	\$21,385,937	97,875	1,446,142	2.18	3,992	\$233,787	2.19
Planning and Research							
DR Planning & Administration	\$66,903	0	0	0	0	\$0	0
DR Program Evaluations	\$338,482	0	0	0	0	\$0	0
DR Product Development	\$1,978,226	0	0	0	0	\$0	0
Geo-targeting Pilot - DR	\$321,259	0	0	0	0	\$0	0
DR Planning and Research Total	\$2,704,870	0	0	0	0	\$0	0
DR PORTFOLIO TOTAL	\$24,090,807	97,875	1,446,142	2.03	3,992	\$233,787	2.04
PORTFOLIO TOTAL	\$115,033,249	198,903	511,394,541	1.59	2,288,220	\$109,905,897	2.03

Table 5b: 2023 Electric Program Achievements and Expenditures

2023	Electric Budget	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio	Lifetime Emissions Savings (Tons CO2)	SCC Benefits	Electric MTRC Test Ratio with SCC
Business Program							
Business Energy Assessments	\$8,595,661	10,214	60,458,057	2.50	325,028	\$22,286,358	3.84
Business HVAC+R Systems	\$5,141,284	3,867	13,811,012	1.30	71,085	\$4,932,114	1.79
Compressed Air Efficiency	\$365,968	272	1,829,129	1.48	9,678	\$612,700	2.20
Custom Efficiency	\$237,849	0	0	N/A	N/A	\$0	N/A
Data Center Efficiency	\$223,019	46	499,839	0.87	2,045	\$108,431	1.22
Energy Management Systems	\$218,931	56	712,182	0.93	3,439	\$183,838	1.29
LED Street Lighting	\$0	0	3,692,223	0.67	23,710	\$1,560,619	1.45
Lighting Efficiency	\$15,922,416	23,210	130,380,979	2.35	647,626	\$41,323,876	3.42
New Construction	\$11,186,970	12,986	47,553,123	1.76	261,601	\$17,346,600	2.44
Self Direct	\$113,381	141	1,070,700	1.76	4,627	\$247,314	2.48
Small Business Solutions	\$5,730,077	5,685	27,942,426	1.31	98,964	\$6,520,421	1.84
Strategic Energy Management	\$8,363,701	10,864	62,320,898	2.41	245,790	\$16,240,133	3.44
General Advertising-Bus	\$788,220	0	0				
Business Program Total	\$56,887,477	67,343	350,270,567	2.00	1,693,592	\$111,362,404	2.90
Residential Program							
Energy Efficient Showerhead	\$31,375	14	177,360	4.51	715	\$55,296	6.14
Energy Star New Homes	\$2,327,584	3,760	6,117,401	2.11	39,873	\$3,009,841	2.72
Home Energy Insights	\$1,120,798	6,605	23,122,513	1.63	10,849	\$723,713	2.28
Home Energy Squad	\$3,517,353	495	2,751,531	0.36	11,545	\$859,784	0.59
Home Lighting & Recycling	\$7,939,467	9,551	68,913,242	2.91	307,173	\$19,949,768	4.56
Insulation & Air Sealing	\$420,892	514	416,763	0.58	2,154	\$131,525	0.64
Multifamily Buildings	\$983,606	632	4,553,677	1.40	18,336	\$1,096,556	1.98
Refrigerator & Freezer Recycling	\$856,637	247	2,034,903	0.86	6,370	\$366,850	1.29
Residential Heating & Cooling	\$7,271,632	8,778	5,948,921	2.46	30,201	\$1,965,473	2.65
School Education Kits	\$2,157,135	1,724	13,767,360	2.29	81,647	\$6,651,395	4.19
Whole Home Efficiency	\$73,274	7	3,859	0.18	25	\$1,770	0.20
General Advertising-Res	\$1,264,284	0	0				
Residential Program Total	\$27,964,037	32,327	127,807,532	2.07	508,889	\$34,811,971	2.89
Income Qualified Program							
Energy Savings Kit	\$188,313	242	2,202,516	5.60	11,099	\$852,496	9.08
Multifamily Weatherization	\$1,084,903	316	1,365,627	0.97	9,382	\$765,859	1.33
Non-Profit	\$1,173,531	775	4,607,156	1.73	27,203	\$1,987,927	2.54
Single-Family Weatherization	\$2,058,840	4,369	33,586,904	6.28	214,920	\$15,714,596	10.37
Income Qualified Program Total	\$4,505,588	5,702	41,762,203	3.68	262,604	\$19,320,878	5.91
Indirect Products & Services							
Education/Market Transformation							
Business Education	\$146,364	0	0		0	\$0	
Business Energy Analysis	\$545,692	0	0		0	\$0	
Consumer Education	\$1,184,990	0	0		0	\$0	
Energy Benchmarking	\$159,868	0	0		0	\$0	
Energy Efficiency Financing	\$8,023	0	0		0	\$0	
Home Energy Audit	\$510,013	0	0		0	\$0	
Partners in Energy	\$1,342,513	0	0		0	\$0	
Education/Market Transformation Total	\$3,897,464	0	0		0	\$0	
Planning and Research							
EE Market Research	\$368,975	0	0		0	\$0	
EE Evaluation, Measurement & Verification	\$999,653	0	0		0	\$0	
EE Planning & Administration	\$749,096	0	0		0	\$0	
EE Product Development	\$1,759,015	0	0		0	\$0	
Geo-targeting Pilot - EE	\$0	0	0		0	\$0	
EE Product Development Total	\$1,759,015	0	0		0	\$0	
EE Planning and Research Total	\$3,876,739	0	0		0	\$0	
EE Indirect Products & Services Total	\$7,774,203	0	0		0	\$0	
EE PORTFOLIO TOTAL	\$97,131,304	105,372	519,840,302	2.02	2,465,085	\$165,495,254	2.92
Demand Response Program							
Critical Peak Pricing	\$255,840	1,330	339,137		195	\$15,092	
Electric Vehicle Critical Peak Pricing	\$48,971	239	0		N/A	\$0	
Electric Vehicle Optimization	\$782,586	2,591	0	0.74	1,669	\$129,104	0.91
Peak Day Partners	\$50,220	22,213	16,877		10	\$751	
Peak Partner Rewards	\$582,919	81	3,507		4	\$302	
Residential Battery Demand Response	\$143,583	0	0	N/A	N/A	\$0	N/A
Residential Demand Response	\$14,657,103	31,559	129,431	2.31	604	\$45,523	2.31
Small Commercial Building Controls	\$89,351	91	1,458	1.02	6	\$494	1.02
DR Program Total	\$16,610,572	58,104	490,409	2.27	2,488	\$191,267	2.28
Planning and Research							
DR Planning & Administration	\$8,482	0	0		0	\$0	
DR Program Evaluations	\$119,060	0	0		0	\$0	
DR Product Development	\$722,271	0	0		0	\$0	
Geo-targeting Pilot - DR	\$0	0	0		0	\$0	
DR Planning and Research Total	\$849,813	0	0		0	\$0	
DR PORTFOLIO TOTAL	\$17,460,385	58,104	490,409	2.16	2,488	\$191,267	2.17
PORTFOLIO TOTAL	\$114,591,689	163,476	520,330,711	2.03	2,467,572	\$165,686,521	2.86

Table 6a: 2023 Natural Gas Program Targets and Budgets

2023	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Program					
Business Energy Assessments	\$15,107	3,926	263,184	\$95,042	3.56
Business HVAC+R Systems	\$416,862	17,854	38,740	\$245,804	1.17
Custom Efficiency	\$66,038	6,626	100,388	\$50,604	1.15
Energy Management Systems	\$27,032	2,169	82,671	\$28,307	1.32
New Construction	\$729,127	81,986	115,789	\$8,392,036	3.18
Small Business Solutions	\$147,157	15,712	121,961	\$889,161	6.70
General Advertising-Bus	\$83,463	0	0		
Business Program Total	\$1,484,787	128,273	87,723	\$9,617,489	2.65
Residential Program					
Energy Efficient Showerhead	\$356,380	36,197	100,990	\$5,642,562	12.31
Energy Star New Homes	\$3,942,130	153,682	42,617	-\$930,242	0.95
Home Energy Insights	\$830,222	107,042	129,831	\$270,153	1.25
Home Energy Squad	\$526,837	22,202	42,725	\$797,968	2.17
Insulation & Air Sealing	\$469,099	23,185	51,731	-\$487,942	0.75
Multifamily Buildings	\$941,820	29,668	32,561	\$3,485,590	3.36
Residential Heating & Cooling	\$3,186,206	171,207	54,700	-\$713,931	0.95
School Education Kits	\$805,128	63,197	78,908	\$8,106,003	9.09
Whole Home Efficiency	\$198,431	8,529	43,131	-\$226,545	0.70
General Advertising-Res	\$194,972	0	0		
Residential Program Total	\$11,451,225	614,909	55,168	\$15,748,643	1.55
Income Qualified Program					
Energy Savings Kit	\$200,566	17,675	81,838	\$2,943,996	10.96
Multifamily Weatherization	\$924,843	10,796	12,163	-\$308,674	0.82
Non-Profit	\$587,967	5,204	8,940	-\$205,619	0.81
Single-Family Weatherization	\$4,323,467	55,868	12,890	-\$387,603	0.96
Income Qualified Program Total	\$6,036,843	89,543	14,801	\$2,042,100	1.17
Indirect Products & Services					
Education/Market Transformation					
Business Education	\$19,600	0	0		
Business Energy Analysis	\$218,477	0	0		
Consumer Education	\$65,178	0	0		
Energy Benchmarking	\$35,682	0	0		
Energy Efficiency Financing	\$84,245	0	0		
Home Energy Audit	\$608,484	0	0		
Partners in Energy	\$121,533	0	0		
Education/Market Transformation Total	\$1,153,199	0	0		
Planning and Research					
EE Market Research	\$184,967	0	0		
EE Evaluation, Measurement & Verification	\$184,330	0	0		
EE Planning & Administration	\$50,962	0	0		
EE Product Development	\$168,010	0	0		
EE Product Development Total	\$168,010	0	0		
EE Planning and Research Total	\$588,269	0	0		
EE Indirect Products & Services Total	\$1,741,468	0	0		
EE PORTFOLIO TOTAL	\$20,714,322	832,724	40,733	\$26,186,267	1.54

Table 6b: 2023 Natural Gas Program Achievements and Expenditures

2023	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Program					
Business Energy Assessments	\$26,551	600	22,601	\$37,986	2.37
Business HVAC+R Systems	\$564,906	13,754	24,347	\$8,934	1.01
Custom Efficiency	\$39,081	847	21,674	-\$16,989	0.71
Energy Management Systems	\$16,287	2,007	123,251	\$24,886	1.26
New Construction	\$673,587	60,525	89,855	\$7,638,391	4.45
Small Business Solutions	\$46,908	735	15,675	-\$23,033	0.62
General Advertising-Bus	\$81,423	0	0		
Business Program Total	\$1,448,744	78,468	54,163	\$7,588,752	3.15
Residential Program					
Energy Efficient Showerhead	\$215,649	10,809	50,122	\$1,702,944	7.70
Energy Star New Homes	\$3,111,509	101,013	32,464	\$122,659	1.01
Home Energy Insights	\$319,796	72,905	227,973	\$42,789	1.13
Home Energy Squad	\$2,498,886	9,000	3,601	-\$1,653,535	0.35
Insulation & Air Sealing	\$696,038	36,404	52,302	-\$1,678,063	0.57
Multifamily Buildings	\$481,841	3,886	8,064	\$540,093	2.06
Residential Heating & Cooling	\$5,422,654	261,243	48,176	-\$4,364,683	0.79
School Education Kits	\$695,873	59,328	85,257	\$8,228,332	10.34
Whole Home Efficiency	\$59,949	523	8,724	-\$72,081	0.35
General Advertising-Res	\$283,348	0	0		
Residential Program Total	\$13,785,542	555,109	40,268	\$2,585,108	1.07
Income Qualified Program					
Energy Savings Kit	\$130,402	11,057	84,789	\$1,688,871	10.88
Multifamily Weatherization	\$846,398	7,233	8,545	-\$101,163	0.93
Non-Profit	\$405,150	21,593	53,297	\$1,043,775	2.64
Single-Family Weatherization	\$4,911,504	241,195	49,108	\$22,872,123	3.33
Income Qualified Program Total	\$6,293,454	281,077	44,662	\$25,503,607	3.12
Indirect Products & Services					
Education/Market Transformation					
Business Education	\$18,914	0	0		
Business Energy Analysis	\$66,237	0	0		
Consumer Education	\$119,956	0	0		
Energy Benchmarking	\$46,266	0	0		
Energy Efficiency Financing	\$7,086	0	0		
Home Energy Audit	\$659,652	0	0		
Partners in Energy	\$143,727	0	0		
Education/Market Transformation Total	\$1,061,840	0	0		
Planning and Research					
EE Market Research	\$163,438	0	0		
EE Evaluation, Measurement & Verification	\$512,167	0	0		
EE Planning & Administration	\$196,311	0	0		
EE Product Development	\$152,683	0	0		
EE Product Development Total	\$152,683	0	0		
EE Planning and Research Total	\$1,024,599	0	0		
EE Indirect Products & Services Total	\$2,086,439	0	0		
EE PORTFOLIO TOTAL	\$23,614,178	914,655	38,733	\$34,095,555	1.62

Table 7a: 2023 Beneficial Electrification Program Targets and Budgets

2023	Participants	Budget	EE Net Gen kW	Net Generator kWh	Net Annual Dth Savings	Annual Dth/\$M	MTRC Net Benefits	MTRC Test Ratio	Lifetime Carbon Emissions Savings (Tons CO2)	Social Cost of Carbon Benefits	Lifetime Methane Emissions Savings (Tons CH4)	Social Cost of Methane Benefits	MTRC Test Ratio with SCC & SCM
Business Program - BE													
Business Program BE Total	0	\$0	0	0	0		\$0	N/A	N/A	\$0	N/A	\$0	N/A
Residential Program - BE													
Residential Heating & Cooling - BE	652	\$972,958	0	-1,146,545	10,887	11,190	-\$1,897,295	0.40	3,273	\$650,473	5.6	\$9,535	0.47
Whole Home Efficiency - BE	45	\$49,966	0	-131,036	1,394	27,889	-\$68,846	0.60	528	\$83,825	0.7	\$1,229	0.81
Residential Program BE Total	697	\$1,022,923	0	-1,277,582	12,280	12,005	-\$1,966,140	0.41	3,801	\$734,298	6.3	\$10,764	0.49
Income Qualified Program - BE													
Multifamily Weatherization - BE	35	\$426,800	0	-61,957	648	1,518	-\$395,448	0.54	200	\$34,769	0.3	\$506	0.55
Non-Profit - BE	15	\$159,600	0	-24,152	273	1,708	-\$146,416	0.54	90	\$14,196	0.1	\$206	0.56
Single-Family Weatherization - BE	31	\$229,084	0	-95,629	969	4,231	-\$60,105	0.82	309	\$56,898	0.5	\$833	0.89
Income Qualified Program BE Total	81	\$815,484	0	-181,738	1,890	2,317	-\$601,969	0.60	599	\$105,862	0.9	\$1,544	0.63
Indirect Products & Services													
Education/Market Transformation													
Education/Market Transformation BE Total	0	\$0	0	0	0		\$0	N/A	N/A	N/A	N/A	N/A	N/A
Planning and Research													
EE Product Development BE Total	5	\$0	0	0	0		\$0	N/A	N/A	N/A	N/A	N/A	N/A
EE Planning and Research BE Total	5	\$0	0	0	0		\$0	N/A	N/A	N/A	N/A	N/A	N/A
EE Indirect Products & Services BE Total	5	\$0	0	0	0		\$0	N/A	N/A	N/A	N/A	N/A	N/A
BE PORTFOLIO TOTAL	783	\$1,838,407	0	-1,459,320	14,170	7,708	-\$2,568,109	0.47	4,400	\$840,160	7.2	\$12,309	0.53

Table 7b: 2023 Beneficial Electrification Program Achievements and Expenditures

2023	Participants	Budget	EE Net Gen kW	Net Generator kWh	Net Annual Dth Savings	Annual Dth/\$M	MTRC Net Benefits	MTRC Test Ratio	Lifetime Carbon Emissions Savings (Tons CO2)	Social Cost of Carbon Benefits	Lifetime Methane Emissions Savings (Tons CH4)	Social Cost of Methane Benefits	MTRC Test Ratio with SCC & SCM
Business Program - BE													
Business Program BE Total	0	\$0	0	0	0		\$0	N/A	N/A	\$0	N/A	\$0	N/A
Residential Program - BE													
Residential Heating & Cooling - BE	2,683	\$2,794,291	0	-11,825,381	134,618	48,176	-\$7,884,810	0.51	53,385	\$10,922,219	68.2	\$161,531	0.63
Residential Program BE Total	2,683	\$2,794,291	0	-11,825,381	134,618	48,176	-\$7,884,810	0.51	53,385	\$10,922,219	68.2	\$161,531	0.63
Income Qualified Program - BE													
Multifamily Weatherization - BE	0	\$0	0	0	0		\$0	N/A	N/A	N/A	N/A	N/A	N/A
Non-Profit - BE	0	\$0	0	0	0		\$0	N/A	N/A	N/A	N/A	N/A	N/A
Single-Family Weatherization - BE	55	\$7,205	0	-33,623	354	49,108	-\$86,321	0.62	128	\$29,470	0.2	\$437	0.64
Income Qualified Program BE Total	55	\$7,205	0	-33,623	354	49,108	-\$86,321	0.62	128	\$29,470	0.2	\$437	0.64
Indirect Products & Services													
Education/Market Transformation													
Education/Market Transformation BE Total	0	\$0	0	0	0		\$0	N/A	N/A	N/A	N/A	N/A	N/A
Planning and Research													
EE Indirect Products & Services BE Total	5	\$0	0	0	0		\$0	N/A	N/A	N/A	N/A	N/A	N/A
BE PORTFOLIO TOTAL	2,738	\$2,801,496	0	-11,859,004	134,972	48,179	-\$7,971,131	0.51	53,513	\$10,951,689	68.4	\$161,968	0.63

Table 8 below provides the CO₂ and SO_x emissions avoided through 2023 achievements in both first-year savings and cumulatively over the lifetime for each product.

Table 8: 2023 Avoided Emissions

2023	Annual				Cumulative over Lifetime				Social Cost of Carbon	
	Tons CO ₂			lbs SO _x	Tons CO ₂			lbs SO _x	NPV of Avoided Emissions	
	Electric	Gas	Total	Electric	Electric	Gas	Total	Electric	Electric	Gas
Business Program										
Business Energy Assessments	27,871	35	27,907	20,053	325,028	515	325,543	114,017	\$22,286,358	\$45,701
Business HVAC+R Systems	6,432	804	7,236	4,581	71,085	13,447	84,532	26,532	\$4,932,114	\$1,195,856
Compressed Air Efficiency	805	0	805	607	9,678	0	9,678	3,458	\$612,700	\$0
Custom Efficiency	0	49	49	0	0	594	594	0	\$0	\$52,821
Data Center Efficiency	224	0	224	166	2,045	0	2,045	968	\$108,431	\$0
Energy Management Systems	302	117	419	236	3,439	1,759	5,198	1,307	\$183,838	\$156,224
LED Street Lighting	1,664	0	1,664	1,225	23,710	0	23,710	6,962	\$1,560,619	\$0
Lighting Efficiency	59,343	0	59,343	43,245	647,626	0	647,626	256,777	\$41,323,876	\$0
New Construction	21,467	3,536	25,003	15,773	261,601	69,495	331,096	90,879	\$17,346,600	\$6,206,825
Self Direct	473	0	473	355	4,627	0	4,627	2,017	\$247,314	\$0
Small Business Solutions	12,686	43	12,728	9,268	98,964	499	99,463	48,229	\$6,520,421	\$44,419
Strategic Energy Management	26,215	0	26,215	20,671	245,790	0	245,790	120,015	\$16,240,133	\$0
General Advertising-Bus	0	0	0	0	0	0	0	0	\$0	\$0
Business Program EE Total	157,482	4,584	162,066	116,179	1,693,592	86,309	1,779,901	671,161	\$111,362,404	\$7,701,846
Residential Program										
Energy Efficient Showerhead	82	631	714	59	715	6,315	7,030	301	\$55,296	\$564,926
Energy Star New Homes	2,842	5,901	8,743	2,029	39,873	113,551	153,424	11,890	\$3,009,841	\$10,134,141
Home Energy Insights	10,849	4,259	15,109	7,669	10,849	4,259	15,109	7,669	\$723,713	\$662,367
Home Energy Squad	1,329	526	1,854	913	11,545	5,250	16,795	5,030	\$859,784	\$469,721
Home Lighting & Recycling	31,492	0	31,492	22,857	307,173	0	307,173	125,844	\$19,949,768	\$0
Insulation & Air Sealing	206	2,127	2,332	138	2,154	31,624	33,777	781	\$131,525	\$2,808,390
Multifamily Buildings	2,045	227	2,272	1,510	18,336	2,270	20,606	8,336	\$1,096,556	\$203,088
Refrigerator & Freezer Recycling	895	0	895	675	6,370	0	6,370	3,370	\$366,850	\$0
Residential Heating & Cooling	3,019	15,262	18,281	1,973	30,201	258,771	288,972	10,773	\$1,965,473	\$23,017,359
School Education Kits	6,759	3,466	10,225	4,566	81,647	34,661	116,308	29,635	\$6,651,395	\$3,100,796
Whole Home Efficiency	2	31	33	1	25	491	516	7	\$1,770	\$43,665
General Advertising-Res	0	0	0	0	0	0	0	0	\$0	\$0
Residential Program EE Total	59,520	32,431	91,951	42,392	508,889	457,192	966,081	203,637	\$34,811,971	\$41,004,453
Income Qualified Program										
Energy Savings Kit	1,055	646	1,701	731	11,099	6,460	17,559	4,185	\$852,496	\$577,883
Multifamily Weatherization	614	423	1,037	453	9,382	5,916	15,298	2,574	\$765,859	\$525,291
Non-Profit	2,047	1,262	3,309	1,528	27,203	20,184	47,388	8,682	\$1,987,927	\$1,793,651
Single-Family Weatherization	15,942	14,091	30,033	11,140	214,920	154,017	368,937	63,320	\$15,714,596	\$13,733,391
Income Qualified Program Total	19,658	16,421	36,079	13,852	262,604	186,577	449,181	78,761	\$19,320,878	\$16,630,216
EE PORTFOLIO TOTAL	236,659	53,436	290,095	172,423	2,465,085	730,078	3,195,163	953,559	\$165,495,254	\$65,336,515
Demand Response Program										
Critical Peak Pricing	195	0	195	112	195	0	195	112	\$15,092	\$0
Electric Vehicle Critical Peak Pricing	0	0	0	0	0	0	0	0	\$0	\$0
Electric Vehicle Optimization	1,669	0	1,669	0	1,669	0	1,669	0	\$129,104	\$0
Peak Day Partners	10	0	10	6	10	0	10	6	\$751	\$0
Peak Partner Rewards	2	0	2	1	4	0	4	2	\$302	\$0
Residential Battery Demand Response	0	0	0	0	0	0	0	0	\$0	\$0
Residential Demand Response	80	0	80	43	604	0	604	226	\$45,523	\$0
Small Commercial Building Controls	1	0	1	0	6	0	6	3	\$494	\$0
DR PORTFOLIO TOTAL	1,957	0	1,957	163	2,488	0	2,488	349	\$191,267	\$0
PORTFOLIO TOTAL	238,616	53,436	292,052	172,585	2,467,572	730,078	3,197,650	953,908	\$165,686,521	\$65,336,515

Program Costs by Budget Category

The Company uses the following six budget categories to track and report its annual expenditures for DSM programs and products within its portfolio:

1. Program Planning and Design

Expenditures for:

- Labor for new pilot/product development and management.
- Expenditures related to product development, planning, and design.

2. Administration and Program Delivery

Expenditures for:

- Labor for program managers, sales representatives, call center, rebate processing, technical consulting, and other fulfillment activities associated with delivering a product directly to the customer.
- Labor for installation contractors, vendors, technical consultants, fulfillment contractors, and alternative providers that the Company contracts with to provide DSM services.
- Project fulfillment, implementation and program support activities associated with delivering a program directly to the customer.

3. Advertising / Promotion / Customer Education

Expenditures for:

- Labor for communications staff and others.
- TV, radio, newspaper, and print media; direct promotion and sales support materials; postage, promotional events; contracted outbound telephone sales.
- Customer education through seminars, pamphlets, videos, and computer games.

4. Participant Rebates and Incentives

Expenditures for:

- Customer rebates, finance interest subsidies, subsidies for engineering studies, trade incentives, and incentives given in the form of subsidized products or equipment.

5. Equipment and Installation

Expenditures for:

- The costs to purchase energy efficient equipment and to install efficiency equipment at the customer site.

6. Measurement and Verification

Expenditures for:

- Labor for market research and load research.
- Labor for product development staff, product development, external consultants, and product development research activities.
- Customer surveys and program evaluation expenses.

Table 9a: 2023 Electric Program Costs by Category (Budget)

2023	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Business Program							
Business Energy Assessments	\$ -	\$ 426,349	\$ -	\$ 623,270	\$ -	\$ -	\$ 1,049,619
Business HVAC+R Systems	\$ -	\$ 3,626,276	\$ -	\$ 4,167,264	\$ -	\$ 38,873	\$ 7,832,413
Compressed Air Efficiency	\$ -	\$ 205,692	\$ 60,722	\$ 718,582	\$ -	\$ 32,400	\$ 1,017,395
Custom Efficiency	\$ -	\$ 480,319	\$ 333	\$ 316,444	\$ -	\$ 4,000	\$ 801,096
Data Center Efficiency	\$ -	\$ 248,291	\$ 31,658	\$ 1,342,744	\$ -	\$ 15,000	\$ 1,637,692
Energy Management Systems	\$ -	\$ 230,503	\$ 1,398	\$ 285,302	\$ -	\$ 44,276	\$ 561,480
LED Street Lighting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lighting Efficiency	\$ -	\$ 2,838,204	\$ 1,205,014	\$ 8,846,468	\$ -	\$ 53,329	\$ 12,943,014
New Construction	\$ -	\$ 2,220,277	\$ 3,000	\$ 5,312,512	\$ -	\$ 546,598	\$ 8,082,387
Self Direct	\$ -	\$ 131,059	\$ -	\$ 870,048	\$ -	\$ -	\$ 1,001,107
Small Business Solutions	\$ -	\$ 2,090,160	\$ 203,068	\$ 3,053,136	\$ -	\$ 33,663	\$ 5,380,028
Strategic Energy Management	\$ -	\$ 2,081,247	\$ 94,437	\$ 6,259,912	\$ -	\$ 229,197	\$ 8,664,793
General Advertising-Bus	\$ -	\$ 32,997	\$ 768,288	\$ -	\$ -	\$ -	\$ 801,284
Business Program Total	\$ -	\$ 14,611,374	\$ 2,367,918	\$ 31,795,682	\$ -	\$ 997,336	\$ 49,772,310
Residential Program							
Energy Efficient Showerhead	\$ -	\$ 29,820	\$ 35	\$ 9,864	\$ -	\$ -	\$ 39,719
Energy Star New Homes	\$ -	\$ 377,713	\$ 239,825	\$ 2,633,890	\$ -	\$ 100,502	\$ 3,351,930
Home Energy Insights	\$ -	\$ 3,707,906	\$ -	\$ -	\$ -	\$ -	\$ 3,707,906
Home Energy Squad	\$ -	\$ 150,444	\$ 143,336	\$ 443,058	\$ 619,371	\$ 2,500	\$ 1,358,709
Home Lighting & Recycling	\$ -	\$ 675,841	\$ 583,219	\$ 2,408,734	\$ -	\$ 3,329	\$ 3,671,123
Insulation & Air Sealing	\$ -	\$ 33,426	\$ 1,664	\$ 212,931	\$ -	\$ 11,110	\$ 259,131
Multifamily Buildings	\$ -	\$ 765,381	\$ -	\$ 1,637,397	\$ -	\$ -	\$ 2,402,778
Refrigerator & Freezer Recycling	\$ -	\$ 676,848	\$ 104,959	\$ 336,616	\$ -	\$ 10,000	\$ 1,128,423
Residential Heating & Cooling	\$ -	\$ 1,526,932	\$ 1,524,505	\$ 5,653,465	\$ -	\$ 53,671	\$ 8,758,573
School Education Kits	\$ -	\$ 857,952	\$ 5,000	\$ 1,486,239	\$ -	\$ -	\$ 2,349,191
Whole Home Efficiency	\$ -	\$ 90,899	\$ -	\$ 137,146	\$ -	\$ 46,712	\$ 274,757
General Advertising-Res	\$ -	\$ 38,974	\$ 791,288	\$ -	\$ -	\$ -	\$ 830,262
Residential Program Total	\$ -	\$ 8,932,136	\$ 3,393,831	\$ 14,959,341	\$ 619,371	\$ 227,825	\$ 28,132,502
Income Qualified Program							
Energy Savings Kit	\$ -	\$ 164,600	\$ 100,000	\$ 107,932	\$ -	\$ -	\$ 372,533
Multifamily Weatherization	\$ -	\$ 152,184	\$ 40,000	\$ 1,004,812	\$ -	\$ 22,685	\$ 1,219,680
Non-Profit	\$ -	\$ 191,846	\$ 31,000	\$ 870,149	\$ -	\$ 46,685	\$ 1,139,680
Single-Family Weatherization	\$ -	\$ 152,789	\$ 190,000	\$ 1,863,204	\$ -	\$ 108,058	\$ 2,314,050
Income Qualified Program Total	\$ -	\$ 661,418	\$ 361,000	\$ 3,846,097	\$ -	\$ 177,427	\$ 5,045,943
Indirect Products & Services							
Education/Market Transformation							
Business Education	\$ -	\$ 76,000	\$ 100,000	\$ -	\$ -	\$ -	\$ 176,000
Business Energy Analysis	\$ -	\$ 156,799	\$ 253,329	\$ 756,616	\$ -	\$ -	\$ 1,166,744
Consumer Education	\$ -	\$ 316,808	\$ 645,000	\$ -	\$ -	\$ -	\$ 961,808
Energy Benchmarking	\$ -	\$ 129,908	\$ -	\$ -	\$ -	\$ -	\$ 129,908
Energy Efficiency Financing	\$ -	\$ 29,336	\$ 41,282	\$ 126,078	\$ -	\$ -	\$ 196,696
Home Energy Audit	\$ -	\$ 205,271	\$ 22,061	\$ 189,867	\$ -	\$ 34,430	\$ 451,630
Partners in Energy	\$ -	\$ 1,025,783	\$ 8,821	\$ -	\$ -	\$ -	\$ 1,034,604
Education/Market Transformation Total	\$ -	\$ 1,939,905	\$ 1,070,494	\$ 1,072,562	\$ -	\$ 34,430	\$ 4,117,390
Planning and Research							
EE Market Research	\$ -	\$ 443,570	\$ -	\$ -	\$ -	\$ -	\$ 443,570
EE Evaluation, Measurement & Verification	\$ -	\$ 47,486	\$ -	\$ -	\$ -	\$ 824,265	\$ 871,752
EE Planning & Administration	\$ -	\$ 559,517	\$ -	\$ -	\$ -	\$ -	\$ 559,517
EE Product Development	\$ -	\$ 1,975,386	\$ -	\$ -	\$ -	\$ -	\$ 1,975,386
Geo-targeting Pilot - EE	\$ -	\$ 3,735	\$ 3,735	\$ 11,000	\$ -	\$ 5,603	\$ 24,073
EE Product Development Total	\$ -	\$ 1,979,121	\$ 3,735	\$ 11,000	\$ -	\$ 5,603	\$ 1,999,459
EE Planning and Research Total	\$ -	\$ 3,029,693	\$ 3,735	\$ 11,000	\$ -	\$ 829,868	\$ 3,874,296
EE Indirect Products & Services Total	\$ -	\$ 4,969,598	\$ 1,074,229	\$ 1,083,562	\$ -	\$ 864,298	\$ 7,991,687
EE PORTFOLIO TOTAL	\$ -	\$ 29,174,526	\$ 7,196,977	\$ 51,684,681	\$ 619,371	\$ 2,266,887	\$ 90,942,442
Demand Response Program							
Critical Peak Pricing	\$ -	\$ 218,848	\$ 25,000	\$ -	\$ -	\$ 25,000	\$ 268,848
Electric Vehicle Critical Peak Pricing	\$ -	\$ 155,446	\$ 5,000	\$ -	\$ 137,427	\$ 16,644	\$ 314,517
Electric Vehicle Optimization	\$ -	\$ 574,056	\$ 51,678	\$ 374,877	\$ -	\$ 97,711	\$ 1,098,322
Peak Day Partners	\$ -	\$ 41,163	\$ 16,644	\$ 429,407	\$ 16,644	\$ -	\$ 503,858
Peak Partner Rewards	\$ -	\$ 315,375	\$ 105,000	\$ 1,217,951	\$ -	\$ 25,000	\$ 1,663,326
Residential Battery Demand Response	\$ -	\$ 85,560	\$ -	\$ 104,452	\$ -	\$ -	\$ 190,012
Residential Demand Response	\$ -	\$ 6,269,637	\$ 925,403	\$ 9,484,723	\$ -	\$ 130,000	\$ 16,809,763
Small Commercial Building Controls	\$ -	\$ 159,506	\$ 37,521	\$ 323,593	\$ -	\$ 16,671	\$ 537,291
DR Program Total	\$ -	\$ 7,819,591	\$ 1,166,245	\$ 11,935,003	\$ 154,071	\$ 311,026	\$ 21,385,937
Planning and Research							
DR Planning & Administration	\$ -	\$ 66,903	\$ -	\$ -	\$ -	\$ -	\$ 66,903
DR Program Evaluations	\$ -	\$ 13,482	\$ -	\$ -	\$ -	\$ 325,000	\$ 338,482
DR Product Development	\$ -	\$ 1,811,103	\$ -	\$ 167,123	\$ -	\$ -	\$ 1,978,226
Geo-targeting Pilot - DR	\$ -	\$ 49,605	\$ 46,265	\$ 155,992	\$ -	\$ 69,397	\$ 321,259
DR Planning and Research Total	\$ -	\$ 1,941,093	\$ 46,265	\$ 323,115	\$ -	\$ 394,397	\$ 2,704,870
DR PORTFOLIO TOTAL	\$ -	\$ 9,760,684	\$ 1,212,510	\$ 12,258,119	\$ 154,071	\$ 705,424	\$ 24,090,807
PORTFOLIO TOTAL	\$ -	\$ 38,935,210	\$ 8,409,487	\$ 63,942,800	\$ 773,442	\$ 2,972,310	\$ 115,033,249

Table 9b: 2023 Electric Program Costs by Category (Actual Expenditures)

2023	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Business Program							
Business Energy Assessments	\$ -	\$ 2,197,284	\$ -	\$ 6,398,377	\$ -	\$ -	\$ 8,595,661
Business HVAC+R Systems	\$ -	\$ 2,089,237	\$ 108,352	\$ 2,918,063	\$ -	\$ 25,631	\$ 5,141,284
Compressed Air Efficiency	\$ -	\$ 189,797	\$ -	\$ 174,171	\$ -	\$ 2,000	\$ 365,968
Custom Efficiency	\$ -	\$ 236,071	\$ -	\$ -	\$ -	\$ 1,778	\$ 237,849
Data Center Efficiency	\$ -	\$ 159,291	\$ -	\$ 63,728	\$ -	\$ -	\$ 223,019
Energy Management Systems	\$ -	\$ 146,378	\$ 177	\$ 71,533	\$ -	\$ 842	\$ 218,931
LED Street Lighting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lighting Efficiency	\$ -	\$ 2,583,230	\$ 476,911	\$ 12,837,115	\$ -	\$ 25,161	\$ 15,922,416
New Construction	\$ -	\$ 3,585,511	\$ 100,750	\$ 7,086,434	\$ -	\$ 414,275	\$ 11,186,970
Self Direct	\$ -	\$ 38,297	\$ -	\$ 75,084	\$ -	\$ -	\$ 113,381
Small Business Solutions	\$ -	\$ 681,028	\$ 149,987	\$ 4,878,662	\$ -	\$ 20,400	\$ 5,730,077
Strategic Energy Management	\$ -	\$ 1,241,954	\$ -	\$ 6,768,508	\$ -	\$ 353,239	\$ 8,363,701
General Advertising-Bus	\$ -	\$ 384,626	\$ 403,594	\$ -	\$ -	\$ -	\$ 788,220
Business Program Total	\$ -	\$ 13,532,704	\$ 1,239,771	\$ 41,271,675	\$ -	\$ 843,326	\$ 56,887,477
Residential Program							
Energy Efficient Showerhead	\$ -	\$ 22,394	\$ 530	\$ 8,451	\$ -	\$ -	\$ 31,375
Energy Star New Homes	\$ -	\$ 344,099	\$ 133,125	\$ 1,850,360	\$ -	\$ -	\$ 2,327,584
Home Energy Insights	\$ -	\$ 1,071,220	\$ 6,062	\$ 43,516	\$ -	\$ -	\$ 1,120,798
Home Energy Squad	\$ -	\$ 1,235,355	\$ 57,194	\$ 253,476	\$ 1,971,329	\$ -	\$ 3,517,353
Home Lighting & Recycling	\$ -	\$ 1,008,595	\$ 675,358	\$ 6,252,264	\$ -	\$ 3,250	\$ 7,939,467
Insulation & Air Sealing	\$ -	\$ 25,834	\$ -	\$ 394,058	\$ -	\$ 1,000	\$ 420,892
Multifamily Buildings	\$ -	\$ 199,293	\$ -	\$ 784,313	\$ -	\$ -	\$ 983,606
Refrigerator & Freezer Recycling	\$ -	\$ 658,989	\$ 13,519	\$ 180,879	\$ -	\$ 3,250	\$ 856,637
Residential Heating & Cooling	\$ -	\$ 1,600,944	\$ 293,762	\$ 5,311,834	\$ -	\$ 65,092	\$ 7,271,632
School Education Kits	\$ -	\$ 776,459	\$ 1,919	\$ 1,378,757	\$ -	\$ -	\$ 2,157,135
Whole Home Efficiency	\$ -	\$ 67,902	\$ -	\$ 5,372	\$ -	\$ -	\$ 73,274
General Advertising-Res	\$ -	\$ 437,702	\$ 826,582	\$ -	\$ -	\$ -	\$ 1,264,284
Residential Program Total	\$ -	\$ 7,448,786	\$ 2,008,051	\$ 16,463,280	\$ 1,971,329	\$ 72,592	\$ 27,964,037
Income Qualified Program							
Energy Savings Kit	\$ -	\$ 161,508	\$ -	\$ 26,805	\$ -	\$ -	\$ 188,313
Multifamily Weatherization	\$ -	\$ 170,285	\$ 42,946	\$ 851,211	\$ -	\$ 20,460	\$ 1,084,903
Non-Profit	\$ -	\$ 120,312	\$ 33,000	\$ 1,005,005	\$ -	\$ 15,214	\$ 1,173,531
Single-Family Weatherization	\$ -	\$ 243,417	\$ 134,468	\$ 1,637,148	\$ -	\$ 43,808	\$ 2,058,840
Income Qualified Program Total	\$ -	\$ 695,522	\$ 210,414	\$ 3,520,169	\$ -	\$ 79,483	\$ 4,505,588
Indirect Products & Services							
Education/Market Transformation							
Business Education	\$ -	\$ 28,897	\$ 117,467	\$ -	\$ -	\$ -	\$ 146,364
Business Energy Analysis	\$ -	\$ 64,944	\$ 362	\$ 480,386	\$ -	\$ -	\$ 545,692
Consumer Education	\$ -	\$ 206,923	\$ 978,067	\$ -	\$ -	\$ -	\$ 1,184,990
Energy Benchmarking	\$ -	\$ 159,868	\$ -	\$ -	\$ -	\$ -	\$ 159,868
Energy Efficiency Financing	\$ -	\$ 8,023	\$ -	\$ -	\$ -	\$ -	\$ 8,023
Home Energy Audit	\$ -	\$ 208,616	\$ 4,978	\$ 259,088	\$ -	\$ 37,332	\$ 510,013
Partners in Energy	\$ -	\$ 1,338,180	\$ 4,333	\$ -	\$ -	\$ -	\$ 1,342,513
Education/Market Transformation Total	\$ -	\$ 2,015,451	\$ 1,105,207	\$ 739,474	\$ -	\$ 37,332	\$ 3,897,464
Planning and Research							
EE Market Research	\$ -	\$ 368,975	\$ -	\$ -	\$ -	\$ -	\$ 368,975
EE Evaluation, Measurement & Verification	\$ -	\$ 105,616	\$ -	\$ -	\$ -	\$ 894,037	\$ 999,653
EE Planning & Administration	\$ -	\$ 739,195	\$ -	\$ -	\$ -	\$ 9,900	\$ 749,096
EE Product Development	\$ -	\$ 1,759,015	\$ -	\$ -	\$ -	\$ -	\$ 1,759,015
Geo-targeting Pilot - EE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
EE Product Development Total	\$ -	\$ 1,759,015	\$ -	\$ -	\$ -	\$ -	\$ 1,759,015
EE Planning and Research Total	\$ -	\$ 2,972,802	\$ -	\$ -	\$ -	\$ 903,937	\$ 3,876,739
EE Indirect Products & Services Total	\$ -	\$ 4,988,253	\$ 1,105,207	\$ 739,474	\$ -	\$ 941,269	\$ 7,774,203
EE PORTFOLIO TOTAL	\$ -	\$ 26,665,265	\$ 4,563,443	\$ 61,994,598	\$ 1,971,329	\$ 1,936,669	\$ 97,131,304
Demand Response Program							
Critical Peak Pricing	\$ -	\$ 195,908	\$ 59,932	\$ -	\$ -	\$ -	\$ 255,840
Electric Vehicle Critical Peak Pricing	\$ -	\$ 46,344	\$ 2,627	\$ -	\$ -	\$ -	\$ 48,971
Electric Vehicle Optimization	\$ -	\$ 537,836	\$ 98,400	\$ 146,350	\$ -	\$ -	\$ 782,586
Peak Day Partners	\$ -	\$ 40,599	\$ -	\$ 9,621	\$ -	\$ -	\$ 50,220
Peak Partner Rewards	\$ -	\$ 269,296	\$ 68,382	\$ 245,241	\$ -	\$ -	\$ 582,919
Residential Battery Demand Response	\$ -	\$ 103,786	\$ 100	\$ -	\$ -	\$ 39,698	\$ 143,583
Residential Demand Response	\$ -	\$ 5,124,456	\$ 371,701	\$ 9,092,856	\$ -	\$ 68,090	\$ 14,657,103
Small Commercial Building Controls	\$ -	\$ 84,142	\$ 5,209	\$ -	\$ -	\$ -	\$ 89,351
DR Program Total	\$ -	\$ 6,402,366	\$ 606,351	\$ 9,494,067	\$ -	\$ 107,787	\$ 16,610,572
Planning and Research							
DR Planning & Administration	\$ -	\$ 5,435	\$ -	\$ -	\$ -	\$ 3,046	\$ 8,482
DR Program Evaluations	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 119,060	\$ 119,060
DR Product Development	\$ -	\$ 722,271	\$ -	\$ -	\$ -	\$ -	\$ 722,271
Geo-targeting Pilot - DR	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
DR Planning and Research Total	\$ -	\$ 727,706	\$ -	\$ -	\$ -	\$ 122,107	\$ 849,813
DR PORTFOLIO TOTAL	\$ -	\$ 7,130,072	\$ 606,351	\$ 9,494,067	\$ -	\$ 229,894	\$ 17,460,385
PORTFOLIO TOTAL	\$ -	\$ 33,795,337	\$ 5,169,795	\$ 71,488,666	\$ 1,971,329	\$ 2,166,563	\$ 114,591,689

Table 10a: 2023 Gas Program Costs by Category (Budget)

2023	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Business Program							
Business Energy Assessments	\$ -	\$ 8,494	\$ -	\$ 6,613	\$ -	\$ -	\$ 15,107
Business HVAC+R Systems	\$ -	\$ 274,680	\$ 834	\$ 134,664	\$ -	\$ 6,685	\$ 416,862
Compressed Air Efficiency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Custom Efficiency	\$ -	\$ 31,218	\$ 33	\$ 34,370	\$ -	\$ 417	\$ 66,038
Data Center Efficiency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Energy Management Systems	\$ -	\$ 14,131	\$ 333	\$ 12,255	\$ -	\$ 333	\$ 27,032
LED Street Lighting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Lighting Efficiency	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
New Construction	\$ -	\$ 143,772	\$ -	\$ 487,481	\$ -	\$ 97,873	\$ 729,127
Self Direct	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Small Business Solutions	\$ -	\$ 34,767	\$ 16,644	\$ 92,417	\$ -	\$ 3,329	\$ 147,157
Strategic Energy Management	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
General Advertising-Bus	\$ -	\$ 3,763	\$ 79,700	\$ -	\$ -	\$ -	\$ 83,463
Business Program Total	\$ -	\$ 510,826	\$ 97,544	\$ 767,781	\$ -	\$ 108,637	\$ 1,484,787
Residential Program							
Energy Efficient Showerhead	\$ -	\$ 234,212	\$ 450	\$ 121,719	\$ -	\$ -	\$ 356,380
Energy Star New Homes	\$ -	\$ 558,926	\$ 387,068	\$ 2,710,118	\$ -	\$ 286,018	\$ 3,942,130
Home Energy Insights	\$ -	\$ 830,222	\$ -	\$ -	\$ -	\$ -	\$ 830,222
Home Energy Squad	\$ -	\$ 138,013	\$ 131,229	\$ 87,469	\$ 167,626	\$ 2,500	\$ 526,837
Home Lighting & Recycling	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Insulation & Air Sealing	\$ -	\$ 30,654	\$ 1,997	\$ 428,615	\$ -	\$ 7,833	\$ 469,099
Multifamily Buildings	\$ -	\$ 404,867	\$ -	\$ 536,953	\$ -	\$ -	\$ 941,820
Refrigerator & Freezer Recycling	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Residential Heating & Cooling	\$ -	\$ 576,288	\$ 473,509	\$ 2,117,077	\$ -	\$ 19,332	\$ 3,186,206
School Education Kits	\$ -	\$ 587,089	\$ 2,500	\$ 215,539	\$ -	\$ -	\$ 805,128
Whole Home Efficiency	\$ -	\$ 60,207	\$ -	\$ 108,224	\$ -	\$ 30,000	\$ 198,431
General Advertising-Res	\$ -	\$ 13,123	\$ 181,849	\$ -	\$ -	\$ -	\$ 194,972
Residential Program Total	\$ -	\$ 3,433,601	\$ 1,178,603	\$ 6,325,713	\$ 167,626	\$ 345,682	\$ 11,451,225
Income Qualified Program							
Energy Savings Kit	\$ -	\$ 88,269	\$ 44,000	\$ 68,297	\$ -	\$ -	\$ 200,566
Multifamily Weatherization	\$ -	\$ 100,511	\$ 28,000	\$ 781,997	\$ -	\$ 14,334	\$ 924,843
Non-Profit	\$ -	\$ 70,120	\$ 20,334	\$ 477,513	\$ -	\$ 20,000	\$ 587,967
Single-Family Weatherization	\$ -	\$ 179,899	\$ 60,000	\$ 3,967,968	\$ -	\$ 115,600	\$ 4,323,467
Income Qualified Program Total	\$ -	\$ 438,799	\$ 152,334	\$ 5,295,776	\$ -	\$ 149,934	\$ 6,036,843
Indirect Products & Services							
Education/Market Transformation							
Business Education	\$ -	\$ 10,000	\$ 9,600	\$ -	\$ -	\$ -	\$ 19,600
Business Energy Analysis	\$ -	\$ 18,148	\$ 17,000	\$ 183,329	\$ -	\$ -	\$ 218,477
Consumer Education	\$ -	\$ 27,178	\$ 38,000	\$ -	\$ -	\$ -	\$ 65,178
Energy Benchmarking	\$ -	\$ 35,682	\$ -	\$ -	\$ -	\$ -	\$ 35,682
Energy Efficiency Financing	\$ -	\$ 16,834	\$ 10,822	\$ 56,589	\$ -	\$ -	\$ 84,245
Home Energy Audit	\$ -	\$ 243,258	\$ 37,980	\$ 279,584	\$ -	\$ 47,662	\$ 608,484
Partners in Energy	\$ -	\$ 119,769	\$ 1,764	\$ -	\$ -	\$ -	\$ 121,533
Education/Market Transformation Total	\$ -	\$ 470,869	\$ 115,166	\$ 519,502	\$ -	\$ 47,662	\$ 1,153,199
Planning and Research							
EE Market Research	\$ -	\$ 178,429	\$ -	\$ -	\$ -	\$ -	\$ 178,429
EE Evaluation, Measurement & Verification	\$ -	\$ 15,013	\$ -	\$ -	\$ -	\$ 169,317	\$ 184,330
EE Planning & Administration	\$ -	\$ 50,962	\$ -	\$ -	\$ -	\$ -	\$ 50,962
EE Product Development	\$ -	\$ 168,010	\$ -	\$ -	\$ -	\$ -	\$ 168,010
Geo-targeting Pilot - EE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
EE Product Development Total	\$ -	\$ 168,010	\$ -	\$ -	\$ -	\$ -	\$ 168,010
EE Planning and Research Total	\$ -	\$ 418,952	\$ -	\$ -	\$ -	\$ 169,317	\$ 588,269
EE Indirect Products & Services Total	\$ -	\$ 889,821	\$ 115,166	\$ 519,502	\$ -	\$ 216,979	\$ 1,741,468
EE PORTFOLIO TOTAL	\$ -	\$ 5,273,047	\$ 1,543,646	\$ 12,908,771	\$ 167,626	\$ 821,232	\$ 20,714,322

Table 10b: 2023 Gas Program Costs by Category (Actual Expenditures)

2023	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Business Program							
Business Energy Assessments	\$ -	\$ 24,078	\$ -	\$ 2,473	\$ -	\$ -	\$ 26,551
Business HVAC+R Systems	\$ -	\$ 247,455	\$ -	\$ 304,751	\$ -	\$ 12,700	\$ 564,906
Custom Efficiency	\$ -	\$ 35,033	\$ -	\$ 3,894	\$ -	\$ 154	\$ 39,081
Energy Management Systems	\$ -	\$ 6,550	\$ 177	\$ 9,559	\$ -	\$ -	\$ 16,287
New Construction	\$ -	\$ 337,654	\$ -	\$ 264,500	\$ -	\$ 71,433	\$ 673,587
Small Business Solutions	\$ -	\$ 40,820	\$ 1,196	\$ 4,893	\$ -	\$ -	\$ 46,908
General Advertising-Bus	\$ -	\$ 40,034	\$ 41,389	\$ -	\$ -	\$ -	\$ 81,423
Business Program Total	\$ -	\$ 731,625	\$ 42,763	\$ 590,070	\$ -	\$ 84,287	\$ 1,448,744
Residential Program							
Energy Efficient Showerhead	\$ -	\$ 148,567	\$ 2,028	\$ 65,053	\$ -	\$ -	\$ 215,649
Energy Star New Homes	\$ -	\$ 508,791	\$ 159,291	\$ 2,443,427	\$ -	\$ -	\$ 3,111,509
Home Energy Insights	\$ -	\$ 319,007	\$ 789	\$ -	\$ -	\$ -	\$ 319,796
Home Energy Squad	\$ -	\$ 1,048,102	\$ 56,424	\$ 126,017	\$ 1,268,343	\$ -	\$ 2,498,886
Insulation & Air Sealing	\$ -	\$ 27,254	\$ -	\$ 666,534	\$ -	\$ 2,250	\$ 696,038
Multifamily Buildings	\$ -	\$ 31,937	\$ 13,393	\$ 434,511	\$ -	\$ -	\$ 481,841
Residential Heating & Cooling	\$ -	\$ 305,296	\$ 38,450	\$ 5,064,009	\$ -	\$ 14,900	\$ 5,422,654
School Education Kits	\$ -	\$ 499,588	\$ 959	\$ 195,326	\$ -	\$ -	\$ 695,873
Whole Home Efficiency	\$ -	\$ 47,471	\$ -	\$ 12,478	\$ -	\$ -	\$ 59,949
General Advertising-Res	\$ -	\$ 140,654	\$ 142,693	\$ -	\$ -	\$ -	\$ 283,348
Residential Program Total	\$ -	\$ 3,076,666	\$ 416,027	\$ 9,007,356	\$ 1,268,343	\$ 17,150	\$ 13,785,542
Income Qualified Program							
Energy Savings Kit	\$ -	\$ 103,106	\$ -	\$ 27,296	\$ -	\$ -	\$ 130,402
Multifamily Weatherization	\$ -	\$ 284,345	\$ 28,000	\$ 569,058	\$ -	\$ (35,005)	\$ 846,398
Non-Profit	\$ -	\$ 113,827	\$ 22,000	\$ 281,434	\$ -	\$ (12,112)	\$ 405,150
Single-Family Weatherization	\$ -	\$ 424,337	\$ 200,145	\$ 4,261,758	\$ -	\$ 25,265	\$ 4,911,504
Income Qualified Program Total	\$ -	\$ 925,616	\$ 250,145	\$ 5,139,545	\$ -	\$ (21,852)	\$ 6,293,454
Indirect Products & Services							
Education/Market Transformation							
Business Education	\$ -	\$ 5,862	\$ 13,052	\$ -	\$ -	\$ -	\$ 18,914
Business Energy Analysis	\$ -	\$ 12,694	\$ -	\$ 53,543	\$ -	\$ -	\$ 66,237
Consumer Education	\$ -	\$ 57,555	\$ 62,402	\$ -	\$ -	\$ -	\$ 119,956
Energy Benchmarking	\$ -	\$ 46,266	\$ -	\$ -	\$ -	\$ -	\$ 46,266
Energy Efficiency Financing	\$ -	\$ 7,086	\$ -	\$ -	\$ -	\$ -	\$ 7,086
Home Energy Audit	\$ -	\$ 192,433	\$ 4,978	\$ 424,910	\$ -	\$ 37,332	\$ 659,652
Partners in Energy	\$ -	\$ 143,727	\$ -	\$ -	\$ -	\$ -	\$ 143,727
Education/Market Transformation Total	\$ -	\$ 465,624	\$ 80,431	\$ 478,453	\$ -	\$ 37,332	\$ 1,061,840
Planning and Research							
EE Market Research	\$ -	\$ 163,438	\$ -	\$ -	\$ -	\$ -	\$ 163,438
EE Evaluation, Measurement & Verification	\$ -	\$ 37,094	\$ -	\$ -	\$ -	\$ 475,073	\$ 512,167
EE Planning & Administration	\$ -	\$ 194,026	\$ -	\$ -	\$ -	\$ 2,285	\$ 196,311
EE Product Development	\$ -	\$ 126,609	\$ -	\$ 26,073	\$ -	\$ -	\$ 152,683
EE Product Development Total	\$ -	\$ 126,609	\$ -	\$ 26,073	\$ -	\$ -	\$ 152,683
EE Planning and Research Total	\$ -	\$ 521,167	\$ -	\$ 26,073	\$ -	\$ 477,358	\$ 1,024,599
EE Indirect Products & Services Total	\$ -	\$ 986,791	\$ 80,431	\$ 504,527	\$ -	\$ 514,690	\$ 2,086,439
EE PORTFOLIO TOTAL	\$ -	\$ 5,720,698	\$ 789,366	\$ 15,241,497	\$ 1,268,343	\$ 594,275	\$ 23,614,178

Participation Analysis

Decision No. C14-0731 within the 2013 DSM Strategic Issues Proceeding⁸ directed the Company to “collect, define, and analyze participant and non-participant rates. In future DSM plan filings, the Company shall explain how these data were collected and used for each program.”⁹ Furthermore, the Commission clarified in Decision No. C14-0997 that “we also require that the Company set forth proposals for tracking participants and non-participants for specific programs and measures and to provide estimates of participant and non-participant counts in its DSM Plans. While we recognize that, for certain programs or measures it may be difficult or prohibitively expensive to collect such data, it is reasonable for the Commission to consider plans for tracking participation and non-participation when programs and measures are proposed in a DSM Plan filing and when we review the cost-effectiveness and ratepayer impacts of those programs and measures.”¹⁰

2023 Participation

Participant counts have been reported at the premise level for each electric DSM product and by customer class, as well as the portfolio total counts for the 2023 calendar year. These values are shown in Tables 11a, 11b, 11c and 11d.

Table 11a: 2023 Electric Participation, Percentage of Total by Customer Class

	DSM Participants		TOTAL PSCO		Participating		Non-Participating	
	Count	%	Count	%	Count	%	Count	%
2023 Total	899,081		1,521,518		899,081	59.09%	622,437	40.91%
Bus	9,942	1.11%	168,802	11.09%	9,942	5.89%	158,860	94.11%
Res	889,139	98.89%	1,352,716	88.91%	889,139	65.73%	463,577	34.27%

Table 11b: 2023 Gas Participation, Percentage of Total by Customer Class

	DSM Participants		TOTAL PSCO		Participating		Non-Participating	
	Count	%	Count	%	Count	%	Count	%
2023 Total	589,056		1,495,464		589,056	39.39%	906,408	60.61%
Bus	749	0.13%	106,427	7.12%	749	0.70%	105,678	99.30%
Res	588,307	99.87%	1,389,037	92.88%	588,307	42.35%	800,730	57.65%

⁸ Proceeding No. 13A-0686EG.

⁹ See Decision No. C14-0731 at ¶115.

¹⁰ See Decision No. C14-0997 at ¶24.

Table 11c: 2023 Electric Participation

Product	2023 Participants	Average Rebate per Customer	Average Bill Impacts	Average kWh Savings per Customer
Business Program				
Business Energy Assessments	204	\$31,364.59	\$16,084.49	280,561
Business HVAC+R Systems	1,324	\$2,203.98	\$753.08	11,761
Compressed Air Efficiency	31	\$5,618.42	\$2,804.88	62,107
Custom Efficiency	16	\$0.00		0
Data Center Efficiency	1	\$63,728.00	\$31,661.63	591,484
Energy Management Systems	7	\$10,219.00	\$3,809.04	114,661
Lighting Efficiency	1,563	\$8,213.13	\$4,664.85	89,637
New Construction	137	\$51,725.80	\$18,255.84	372,870
Self Direct	3	\$25,028.00	\$20,950.66	371,286
Small Business Solutions	6,614	\$737.63	\$279.73	4,747
Strategic Energy Management	42	\$161,154.94	\$85,112.01	1,404,713
Residential Program				
Energy Efficient Showerhead	1,036	\$8.16	\$16.71	256
Home Energy Insights	756,856	\$2.44	\$0.65	17
Energy Star New Homes	3,151	\$13.81	\$950.31	6,870
Home Energy Squad	2,996	\$84.60	\$81.64	860
Home Lighting & Recycling	225,540	\$27.72	\$25.69	593
Insulation & Air Sealing	1,559	\$252.76	\$26.67	281
Multifamily Buildings	234	\$3,351.77	\$1,209.73	18,389
Refrigerator & Freezer Recycling	3,419	\$52.90	\$60.61	763
Residential Heating & Cooling	22,592	\$235.12	\$25.72	312
School Education Kits	49,235	\$28.00	\$27.17	545
Whole Home Efficiency	17	\$316.01	\$23.17	269
Income Qualified Program				
Energy Savings Kit	5,359	\$5.00	\$36.25	506
Multifamily Weatherization	31	\$27,458.43	\$3,602.72	41,242
Non-Profit	37	\$27,162.31	\$5,493.96	117,878
Single-Family Weatherization	1,592	\$1,028.36	\$1,768.38	19,944
Indirect Products & Services				
Business Education	2,070	\$0.00	N/A	0
Business Energy Analysis	189	\$2,541.73	N/A	0
Consumer Education	28,662	\$0.00	N/A	0
Energy Benchmarking	1,147	\$0.00	N/A	0
Energy Efficiency Financing	0	\$0.00	N/A	0
Home Energy Audit	2,560	\$101.21	N/A	0
Demand Response Program				
Residential Demand Response	25,072	N/A	N/A	5
Small Commercial Building Controls	46	\$0.00	\$2.17	30

Table 11d: 2023 Natural Gas Participation

Product	2023 Participants	Average Rebate Per Customer	Average Bill Impacts	Average Dth Savings Per Customer
Business Program				
Business Energy Assessments	157	\$15.75	\$19.95	3.8
Business HVAC+R Systems	83	\$3,671.70	\$968.96	165.7
Custom Efficiency	2	\$1,947.00	\$2,855.17	423.5
Energy Management Systems	2	\$4,779.50	\$6,614.30	1003.7
New Construction	41	\$6,451.21	\$8,307.93	1476.2
Small Business Solutions	464	\$10.54	\$10.11	1.6
Residential Program				
Energy Efficient Showerhead	4,555	\$14.28	\$14.46	2.4
Energy Star New Homes	5,241	\$466.21	\$116.81	19.3
Home Energy Insights	541,750	\$0.00	\$1.16	0.1
Home Energy Squad	2,626	\$47.99	\$22.18	3.4
Insulation & Air Sealing	1,785	\$373.41	\$138.54	20.4
Multifamily Buildings	171	\$2,541.00	\$169.34	22.7
Residential Heating & Cooling	12,177	\$415.87	\$141.55	21.5
School Education Kits	42,908	\$4.55	\$8.32	1.4
Whole Home Efficiency	22	\$567.19	\$139.27	23.8
Income Qualified Program				
Energy Savings Kit	5,768	\$4.73	\$12.11	1.9
Multifamily Weatherization	23	\$24,741.64	\$1,799.41	314.5
Non-Profit	20	\$14,071.70	\$6,138.03	1079.7
Single-Family Weatherization	2,094	\$2,035.22	\$743.63	115.2
Indirect Products & Services				
Business Education	316	\$0.00	N/A	0.0
Business Energy Analysis	189	\$237.18	N/A	0.0
Consumer Education	9,009	\$0.00	N/A	0.0
Energy Benchmarking	1,108	\$0.00	N/A	0.0
Energy Efficiency Financing	0	\$0.00	N/A	0.0
Home Energy Audit	3,188	\$101.47	N/A	0.0

Compliance

Table 12a: Reporting Requirements and Compliance Electric

Item #	Compliance Point – Description	Statute / Rule / Proceeding Reference	Status Report Reference	Comments
ELECTRIC				
1	The annual DSM report will be filed with the Commission on April 1 of each year, starting in 2010.	Proceeding No. 07A-420E, Decision No. C08-560, p.53, ¶173.	---	Report filed April 1, 2024.
2	Shall include the results achieved during the previous plan year in total and by program, including achieved energy and demand savings, avoided annual and cumulative CO ₂ and SO _x emissions in metric tons, actual expenditures, expenditures expressed in terms of \$/kWh over the lifetime of the measures installed, and net economic benefits achieved.	Proceeding No. 08A-366EG, Stipulation & Settlement Agreement, p.16, ¶11(b)	See Tables 5a - 8 in Executive Summary	\$/kWh over lifetime and net economic benefits achieved by product in Cost-Effectiveness Section.
3	Public Service shall use the technical assumptions relating to the energy savings calculations for such measures actually installed during calendar years 2015 and 2023.	Proceeding No. 14A-1057EG, Stipulation & Settlement Agreement, p.17, ¶8	---	Technical assumptions approved in Proceeding No. 20-0287EG were used to calculate prescriptive product achievements for 1/1/2023-12/31/2023, unless amended via 60-Day Notice during 2023.

4	Use the net-to-gross ratios and the technical assumptions relating to incremental customer O&M savings (for prescriptive measures only), customer O&M costs (for prescriptive measures only), incremental customer capital costs (for prescriptive measures only), the deemed savings formulas and other technical assumptions set forth in the Appendix G for purposes of determining program and portfolio cost-effectiveness and for calculating annual portfolio net economic benefits based on measures actually installed during calendar years 2015 and 2022.	Proceeding No. 14A-1057EG, Stipulation & Settlement Agreement, p.17, ¶8	See Cost-Effectiveness and Financial Incentive Calculations sections	Technical assumptions approved in Proceeding No. 22A-0315EG were used to calculate prescriptive product achievements for 1/1/2023-12/31/2023, unless amended via 60-Day Notice during 2023.
5	All Participant O&M data should be treated as proprietary in the absence of a written agreement signed by the Participant authorizing disclosure.	Proceeding No. 08A-366EG, Stipulation & Settlement Agreement, p.8, ¶4	---	---
6	Do not include Participant O&M data in incentive calculations unless there is authorization to disclose such data.	Proceeding No. 08A-366EG, Stipulation & Settlement Agreement, p.8, ¶4	See Financial Incentive Calculations	---
7	<p>PSCo may only disclose the results, by cost category, of calculations made using the privileged values, but not values themselves, by making such results available for inspection by both the Staff of the Commission and OCC at the Company’s Colorado offices, pursuant to the following procedures:</p> <ul style="list-style-type: none"> • PSCo will provide the customer 10 business-days’ notice of the place and time of the inspection and provide the opportunity for a customer representative to be present during the inspection. • PSCo shall maintain a log of persons, dates, times and documents reviewed. • Participant O&M data shall not be disclosed to any other party or by any other means, except after receipt of written authorization from the Participant. 	Proceeding No. 08A-366EG, Stipulation & Settlement Agreement, p.9, ¶4	---	Participant O&M data has been neither requested nor disclosed to any external party.

8	Track the expenditures, energy savings, and paybacks associated with each approved project under the Self-Directed Custom Efficiency Program.	Proceeding No. 08A-366EG, Stipulation & Settlement Agreement, p.8, ¶3	See Evaluation, Measurement and Verification	---
9	Approve Self-Directed customers' projects for which the customer meets TRC test value at least equal to one (1), rather than limiting this product to installations that have a TRC value at least equal to the TRC value for the overall DSM portfolio.	Proceeding No. 08A-366EG, Stipulation & Settlement Agreement, p.7, ¶3	---	Ongoing.
10	Offer the Self-Directed Custom Efficiency product to commercial and industrial customers who have an aggregated peak demand at all meters of at least 2 MW in any single month and an aggregated annual energy usage of at least 10 GWh. The customer of record must be the same for all meters aggregated to qualify for this program.	Proceeding No. 08A-366EG, Stipulation & Settlement Agreement, p.8, ¶3	---	Ongoing.
11	All incentive payments must be included in the final TRC calculation. At the time of the annual report following the DSM performance year, the incentive amounts will be "proposed" versus "final." PSCo shall include the proposed incentive amounts in their annual report.	Proceeding No. 07A-420E, Decision No. C08-0560, p.37, ¶117	See Table 2c in Executive Summary	---
12	Public Service will calculate a proposed incentive amount based upon its calculation of the DSM savings achieved and costs incurred. Public Service's annual report will delineate the DSM activities that occurred, the costs and benefits related to these activities, and the net economic benefits. Based upon the percentage of the DSM goal achieved, a percentage of the net economic benefits will comprise Public Service's incentive payment. That value, along with the disincentive offset, will also be presented in the annual report, as a proposed performance incentive. This is the procedure that Public Service is to follow in its annual DSM report. The Decision does not require that the incentive amount be recalculated after the inclusion of the incentive payment amounts into the final TRC calculation.	Proceeding No. 07A-420E, Decision No. C08-0769, pg. 19-20, ¶63	See Financial Incentive Calculations	---

13	For any low-income program that achieves a TRC<1.0, the costs and benefits may be excluded from the calculation of net economic benefits. The energy and demand savings may be applied toward the calculation of overall energy and demand savings, for the purposes of determining progress toward annual goals.	Proceeding No. 07A-420E, Decision No, C08-560, p.44, ¶140	See Financial Incentive Calculations	---
14	Beginning with the 2012 Annual Status Report, PSCo will quantify and track certain costs incurred through the use of third-party providers.	Proceeding No. 10A-554EG, Decision No. C11-0442, p. 52, Ordering ¶4	See Table 4 in Executive Summary	---
15	“Indirect impact programs” (customer education, market transformation and pilot programs) do not need to individually pass a TRC test, but need to be incorporated into the overall costs used to calculate the TRC of the DSM portfolio. Market Transformation efforts shall have a presumptive TRC of 1.0 so as to not adversely affect the financial incentive calculation.	Proceeding No. 07A-420E, Decision No. C08-0560, pg. 44-45, ¶141	See Indirect Program and Financial Incentive Calculations	Included within Report filed April 1, 2024.
16	Distribute a bi-monthly DSM Pilot/Product Development e-mail update.	Proceeding No. 14A-1057EG, Settlement Agreement, Para. 5(j)(i)	---	The Company continued to provide comprehensive PD updates as part of its DSM Roundtables in lieu of the e-mail update.
17	Offer to hold at least two meetings with interested stakeholder, for each pilot that the Company decides to pursue, prior to 60-Day Notice.	Proceeding No. 14A-1057EG, Settlement Agreement, Para. 5(j)(iv)	See Table 3 in Executive Summary	---
18	Provide an annual total of DSM program participants and non-participants in its annual status reports filed with the Commission.	Decision No. C14-00997, Para. 24	See Participation Analysis	Included within Report filed April 1, 2024.
19	Commit to report the number of leads generated and shared with internal product management and customer service specialists from all customer outreach event categories	Proceeding No. 16A-0512EG, Settlement Agreement, Para. III(S)(iii)	See Consumer Education write up included in the Indirect Program section	---

20	Include in its annual status report filing the number of customers under the tariff, the number of interruptions called, and the number of interruptions that were coincident with the system peak.	Proceeding No. 16A-0512EG, Settlement Agreement, Para. III(BB)(i)	See Peak Partner Rewards write up included in the Demand Response Program section	---
21	We therefore approve the base budget of \$78 million annually as proposed in the Settlement but modify the additional amount Public Service may spend by increasing the additional expenditures the Company may devote to electric DSM from 10 percent to 20 percent with an attendant presumption of prudence. This modification to the terms of the Settlement will allow for total spending of up to \$93.6 million for Public Service to meet the goals established by this Decision and to achieve the associated net economic benefits for ratepayers.	Decision No. C18-0417, Para. 97	See Table 5b in Executive Summary	The Company spent a total of \$97.1 million on its Energy Efficiency Program in 2023, which falls within the 10% budget flexibility allowed under Decision No. C18-041.
22	In addition to the goals set forth above, the Company agrees to include in its annual DSM Report a narrative describing Public Service's contributions to the 2% statewide energy savings goal set forth in Executive Order D2017-015.	Proceeding No. 17A-0462EG, Settlement Agreement, Para. III(A)	---	The Company reported 520 GWh of savings in 2023 representing 1.8% of retail sales.
23	The Company will spend not less than \$3.8 million annually on its low-income electric energy efficiency program from 2019 through 2023. The Company's low-income energy efficiency budget will also include an incremental \$275,000 annually to address health and safety measures.	Proceeding No. 17A-0462EG, Settlement Agreement, Para. III(H)(i)	See Table 5b in Executive Summary	The Company spent a total of \$4.5 million on its Income Qualified electric energy efficiency program in 2023.
24	In each DSM Status Report until a final order is issued in the next DSM Strategic Issues proceeding, the Company will conduct a sensitivity cost-benefit analysis at the portfolio level using the Social Cost of Carbon or the Regulatory Cost of Carbon scenarios ordered in the most recent ERP.	Proceeding No. 17A-0462EG, Settlement Agreement, Para. III(I)(ii)	See Table 2d in Executive Summary	---

25	Public Service will provide documentation of its Commercial & Industrial behavioral savings calculations with its annual DSM Status Report.	Proceeding No. 17A-0462EG, Settlement Agreement, Para. III(J)(i)	See Strategic Energy Management (“SEM”) write up included in the Business Program section	Under the Strategic Energy Management product, the Company claimed savings from twenty-one Systemic Operational projects (resulting in savings from specific actions that need programming or verified policy changes and that would need specific effort to reverse).
26	The Settling Parties agree that Public Service may claim secondary site savings in its energy, demand, and net benefit calculations for purposes of the Company’s electric DSM offerings, to the extent these savings have not otherwise been claimed by the Company. The Company will provide documentation showing how it calculated secondary site savings and associated benefits along with its annual DSM Report.	Proceeding No. 17A-0462EG, Settlement Agreement, Para. III(J)(ii)	---	The Company did not claim secondary site savings in 2023.
27	The Settling Parties agree that the Company will offer the following core services as part of its 2019-2023 DSM plans: <ul style="list-style-type: none"> • Residential weatherization and building envelope; • Heating and cooling; • Commercial new construction; • Energy audits and design assistance; and, • Commercial lighting. 	Proceeding No. 17A-0462EG, Settlement Agreement, Para. III(L)(i)	See product write ups included in the Business Program, Residential Program, and Indirect Program sections	All listed services were provided in 2023.

28	The Settling Parties agree that going forward, the Company shall include reporting on participation by customers in arrears and the impact of weatherization within its DSM Annual Status Reports.	Proceeding No. 20A-0287EG, Settlement Agreement, Item II, page 4.	See Single-Family Weatherization write up included in the Income Qualified Program section.	Public Service will include this information in the Q1 2024 DSM roundtable presentation.
29	The Company shall allow commercial Beneficial Electrification projects through the Custom Efficiency product.	Proceeding No. 20A-0287EG, Settlement Agreement, Item III, page 5.	---	Ongoing.
30	The Company shall support the development community through technical trainings, technical design review, design charettes focused on all-electric construction, cost-benefit analysis tools, or Request for Proposals (“RFP”) language adjustments support in its Energy Star New Home (“ESNH”) and Business New Construction offerings.	Proceeding No. 20A-0287EG, Settlement Agreement, Item III, page 5.	---	Both ESNH and Business New Construction offered these services to support all-electric construction throughout 2023.

31	<p>The Settling Parties agree that the Company shall expand its engagement with existing Oil and Gas customers by: (1) Marketing the Strategic Energy Management product to each existing customer who meets the program requirements; (2) engaging regularly with existing customers and non-grid connected customers to identify efficiency opportunities; (3) engaging a third-party implementer to assist the Company personnel with all activities listed above and to help simplify the DSM process for Oil and Gas customers; and (4) reporting on these efforts in the Company's DSM Annual Status Reports.</p>	<p>Proceeding No. 20A-0287EG, Settlement Agreement, Item VI.</p>	<p>See Strategic Energy Management write up included in the Business Program section</p>	<p>Marketing efforts by Managed Accounts resulted in SEM enrollment by two new oil & gas operators in 2021 and generated additional leads being pursued in 2022. The Company also engaged a third-party implementer in 2021 to help assist Managed Accounts staff with outreach to oil & gas customers. The third-party implementer has continued working multiple customers to identify savings opportunities in 2022 and into 2023.</p>
32	<p>The Company shall promote the Electric Vehicle-CPP ("EV-CPP") product to eligible entities serving IQ customers.</p>	<p>Proceeding No. 20A-0287EG, Settlement Agreement, Item VII, page 9.</p>	<p>See Electric Vehicle Critical Peak Pricing write up included in the Demand Response Program section</p>	<p>The Company promoted EV-CPP to customers participating in the EV Supply Infrastructure programs under the Company's Transportation Electrification Plan, including those installing EV charging equipment at multifamily facilities that may serve Income-Qualified Customers.</p>

33	<p>The Company shall evaluate Codes and Standards savings attribution in its evaluation plan to validate claimed savings, and further, shall provide a summary of its evaluation methodology and results in its DSM Annual Status Report. The Settling Parties agree that the Company shall evaluate Green Codes/Stretch Codes that support electrification and the transition to net-zero carbon emissions, as well as the potential opportunities for influencing the adoption of these codes. The Company shall discuss the Green Codes/Stretch Codes evaluation findings during the quarterly DSM Roundtable beginning in 2021 and agrees to work with stakeholders to encourage participation by eligible and interested stakeholders.</p>	<p>Proceeding No. 20A-0287EG, Settlement Agreement, Item VIII.</p>	---	<p>The Company selected Guidehouse to evaluate its Codes & Standards support offering. The evaluation findings were considered in the code support offering filed in 23A-0589EG.</p>
34	<p>The Company shall work with smart thermostats manufacturers to identify additional products compatible with the DR portfolio and eligible for inclusion in DSM offerings.</p>	<p>Proceeding No. 20A-0287EG, Settlement Agreement, Item IX.</p>	<p>See Residential Demand Response write up included in the Demand Response Program section</p>	<p>In 2023, the Company continued working with additional device manufacturers and added Google Nest thermostats to the list of devices compatible with the AC Rewards product. The Company continues to work with manufacturers to assess devices for potential eligibility as they enter the market.</p>

35	The Company shall develop or identify a set of Quality Installation guidelines relevant to heat pump installations.	Proceeding No. 20A-0287EG, Settlement Agreement, Item IX.	---	The Company is working with its vendor for Quality Installation inspections, and inspected heat pumps as part of its QI inspections in 2023. Additional data points were collected in 2023 for heat pump QI, but currently this is just for information gathering. The Company is continuing to gather data, will review the results of this analysis, and consider incorporating additional components for QI savings for heat pumps in future years.
36	The Settling Parties agree that the Company shall continue gathering data on both free cooling measures and variable refrigerant flow under the Custom Product and periodically report on measure cost-effectiveness during the DSM Roundtable with the goal of developing prescriptive rebates for these measures when a reasonable expectation of cost effectiveness exists in the broad application of the measures.	Proceeding No. 20A-0287EG, Settlement Agreement, Item X.	---	The Company continued to offer free cooling and variable refrigerant flow measures under the Custom Efficiency product; however, no projects including these types of measures closed in 2023.

37	The Company shall continue to support commercial heat pumps as part of the Custom Efficiency product and shall continue to gather data on these projects and periodically measure and report on cost-effectiveness during the DSM Roundtable to evaluate the potential for developing prescriptive rebates for these measures when a reasonable expectation of cost-effectiveness exists in the broad application of the measures.	Proceeding No. 20A-0287EG, Settlement Agreement, Item X.	---	The Company continued to offer commercial heat pumps under the Custom Efficiency product; however, no projects including these types of measures closed in 2023. The Company also launched prescriptive rebates for some heat pumps starting 9/1/23 through the HVAC+R Systems product, however, no projects including these types of measures closed in 2023.
38	The Company shall commit to: (1) responding to a building owner’s inquiry within two business days; (2) maintaining communication through issue resolution; and (3) enhancing data checks to improve accuracy of benchmarking reports.	Proceeding No. 20A-0287EG, Settlement Agreement, Item XII.	See Energy Benchmarking write up included in the Indirect Program_section	The Energy Benchmarking team maintained a two-business day response time and continued to improve response times when available. Any data discrepancies were responded to and resolved in a timely manner for Company customers.
39	The Company shall evaluate the potential for streamlined weatherization upgrades, including, but not limited to, developing standardized pricing options and participating contractor lists. The Company shall discuss pay-per-performance incentive levels during the DSM Roundtable beginning in 2021 and evaluate the potential to launch a new offering through the 60-Day Notice process as a result of that discussion, if a viable design can be identified.	Proceeding No. 20A-0287EG, Settlement Agreement, Item XVII.	---	The Company filed the pay-per-performance model as an option in the Whole Home Efficiency program in the 2023 DSM & BE plan filing.

40	Public Service shall work with stakeholders in 2021 to evaluate the potential for an on-bill financing offering (tariffed on-bill financing, or other model) that could potentially expand customer adoption of various technologies, including EE and Beneficial Electrification technologies, across a number of customer types, specifically focusing on solutions aimed at credit-constrained customers and tenants and landlords facing a split incentive challenge. The Settling Parties agree that Public Service shall bring an on-bill financing proposal forward to the Commission for approval if the Company and the parties reach a general agreement on an approach through the stakeholder meetings. The Settling Parties reserve their right to take any position on that future filing.	Proceeding No. 20A-0287EG, Settlement Agreement, Item XIX.	---	The Company held a stakeholder outreach meeting on August 23, 2023.
41	The Company agrees to modify its 60-/90-Day Notice processes to issue 60-/90-Day Notices on a scheduled basis, once per quarter, to allow for a streamlined consideration of various mid-Plan DSM proposals. The Company shall track and report on budgetary impacts of 60-/90-Day Notices during quarterly DSM Roundtables.	Proceeding No. 20A-0287EG, Settlement Agreement, Item XX.	See Table 3 in Executive Summary	The Company issued 60-Day Notices in 2023. These notices were discussed in each of the 2023 DSM Roundtables.
42	The Settlement Agreement proposes a \$92.9 million budget for the electric DSM programs in 2023.	Proceeding No. 22A-0315EG, Settlement Agreement, Section I.A., paragraph 2	See Table 5b in Executive Summary	Electric DSM expenditures in 2023 totaled 97.1 million.
43	The Settlement Agreement proposes revised energy savings targets of 484 GWh.	Proceeding No. 22A-0315EG, Settlement Agreement, I.A., paragraph 3.	See Table 5b in Executive Summary	Energy savings targets in 2023 totaled 520 GWh.
44	The Settlement Agreement proposes a \$24.6 million budget for DR in 2023.	Proceeding No. 22A-0315EG, Section I.C., paragraph 6	See Table 5b in Executive Summary	DR DSM expenditures in 2023 totaled \$17.5 million.

45	The Company agrees to educate contractors and customers on the Inflation Reduction Act's incentives and/or tax credits	Proceeding No. 22A-0315EG, Section I.E., paragraph 8	---	The Company conducted three different Contractor trainings in 2023 and included staff from the Colorado Energy Office ("CEO") to provide updates on the development of the IRA program status.
46	If DSM and/or BE IRA or IIJA incentives are implemented during 2023, the Company will review its rebates and stakeholders at a DSM Roundtable meeting.	Proceeding No. 22A-0315EG, Section I.E., paragraph 9	---	Ongoing
47	Public Service will provide two live, in-person trainings on BE strategies to residential and commercial and/or distributors in 2013	Proceeding No. 22A-0315EG, Section I.E., paragraph 10	---	The Company conducted three in person BE focused contractor trainings in 2023.
48	Public Service will communicate upcoming RFPs at quarterly round table meetings, post RFPs on the Company's website and notify interested parties of RFPs	Proceeding No. 22A-0315EG, Section I.E., paragraph 11	---	Ongoing
49	The Company will ask heat pump system installation contractors to document the pre-existing heating system and the type of backup heat.	Proceeding No. 22A-0315EG, Section IE, paragraph 12		The Company added this question to the rebate application.
50	The Company will estimate net GHG emissions on an incremental basis from BE	Proceeding No. 22A-0315EG, Section I.E., paragraph 13	See Table 7b in the Executive Summary.	The Company calculated and presented net greenhouse gas emissions in the 2023 annual status report.
51	The Company will create a top tier of rebates within the EnergyStar® New Homes program for highly efficient homes.	Proceeding No. 22A-0315EG, Section I.F., paragraph 14	---	The Company introduced bonus rebates for homes that achieved both EnergyStar® NextGen and Zero Energy Ready Homes.
52	Public Service will add a \$500 additional bonus rebate for customers who install major weatherization measures within six months of heat pump installation	Proceeding No. 22A-0315EG, Section I.F., paragraph 15	---	This bonus is active within the portfolio. Also, additional language as added to the applicable product rebate applications.

53	Public Service to increase electric heat pump rebates by at least 10%.	Proceeding No. 22A-0315EG, Section I.F., paragraph 16	---	The Company increased its heat pump rebates by at least 10%, starting on the effective date of the 2023 DSM & BE plan.
54	Public Service to develop at least three geographically targeted campaigns in 2023	Proceeding No. 22A-0315EG, Section I.F., paragraph 17	---	The Company launched its geographically targeted campaigns in October 2023 with plans to complete more in 2024 to coincide with the cooling and heating seasons.
55	Public Service to consult with external stakeholders and research EER variable capacity heat pumps requirements and remove/modify minimum EER variable capacity heat pump requirements.	Proceeding No. 22A-0315EG, Section I.F., paragraph 18	---	The Company held several meetings with a stakeholder working group in 2023. Based on discussions in this meeting, the EER2 requirements have been lowered significantly within the 2024-2026 DSM & BE Plan. The group continues to discuss alternate means of determining the summer peak coincident kW impact for variable speed equipment.
56	The Company agrees to remove programmable thermostats or offer smart thermostats in the Home Energy Squad program.	Proceeding No. 22A-0315EG, Section I.F., paragraph 19	See Home Energy Squad write-up in the Residential Products section	Programmable thermostats were removed, and smart thermostats continue to be available for purchase and installation.

57	Public Service to remove big box stores from Residential Lighting product no later than October 1, 2023	Proceeding No. 22A-0315EG, Section I.F., paragraph 20	See Home Lighting & Recycling write-up in the Residential Program section	Big box stores were removed from the Residential Lighting product in 2023.
58	Public Service to add a midstream incentive approach for heat pump water heaters	Proceeding No. 22A-0315EG, Section I.F., paragraph 21	---	The Company met with distributors and implementers to develop a product offering. An RFP will be out for bid by the end of Q2 2024.
59	Public Service to research adding advanced duct sealing to insulation/air sealing, whole home efficiency, and/or new homes products	Proceeding No. 22A-0315EG, Section I.F., paragraph 23	---	In 2023, the Company met with stakeholders and reviewed data regarding the possible addition of an advanced duct sealing measure. The savings indicated in the vendor studies were primarily focused on duct repair work by technicians rather than duct sealing accomplished by the recommended product. This weighed more heavily in the average savings and skewed results. Therefore, the Company will not be offering a standalone duct sealing measure but will instead continue to support duct sealing as a portion of the Quality Install practices for Heat Pump measures.

60	Public Service to launch a geographic prequalification approach pilot to DI Community neighborhood Weatherization	Proceeding No. 22A-0315EG, Section I.G., paragraph 24	---	The Company started development of a Geographic Prequalification Pilot to launch in 2024.
61	Public Service to discuss its IQ/DI outreach and community efforts at the quarterly roundtable meetings	Proceeding No. 22A-0315EG, Section I.G., paragraph 25	---	Ongoing
62	Public Service to develop an IQ program that includes auto enrollment in the Company's electric and natural gas affordability programs	Proceeding No. 22A-0315EG, Section I.G., paragraph 26	---	The Company will deliver a pilot that provides geographic prequalification.
63	Public Service to increase the refrigerator rebate in the IQ single-family weatherization product from \$630 to \$900	Proceeding No. 22A-0315EG, Section I.G., paragraph 27	See Single-Family Weatherization write-up included in the Income Qualified Products section.	The Company increased the IQ Single-Family Weatherization refrigerator rebate to \$900.
64	The Company to study prescriptive BE measures for commercial customers	Proceeding No. 22A-0315EG, Section I.H., paragraph 28	See Business HVAC+R Systems write-up included in the Business Program section.	The Company continues to study Beneficial Electrification technologies and the possibility of prescriptive cost-effective rebate additions to the HVAC-R program.

65	Public Service to expand BE measure promotion in the Business Energy Assessment product	Proceeding No. 22A-0315EG, Section I.H., paragraph 29	---	The Company added BE measures and is exploring cost-effective measures that beneficial electrification ambassador customers can take advantage of to lower their energy-use intensity thus increasing energy savings that adhere to building performance standards and ordinances.
66	The Company to adopt 2022 business lighting bonuses from the lighting program	Proceeding No. 22A-0315EG, Section I.H., paragraph 30	See the Lighting Efficiency write up included in the Business Program section.	In 2023, the Business Lighting Program adopted the 2022 bonus and provided two more bonus options for customers. For further information see this document: 23-09-402 BusinessLightingBonus Rebates IS P02.pdf (xcelenergy.com) .
67	The Company will annually review and adjust wattage requirements for Business Lighting products	Proceeding No. 22A-0315EG, Section I.H., paragraph 31	---	Ongoing.
68	Public Service to increase lighting control incentives	Proceeding No. 22A-0315EG, Section I.H., paragraph 32	See the Lighting Efficiency write up included in the Business Program section.	The Company increased the lighting control incentive to \$0.15/W.

69	Public Service to publish criteria to be met by third-party providers who wish to participate in the New Construction – Energy Design Assistance product	Proceeding No. 22A-0315EG, Section I.H., paragraph 33.1	See the New Construction Energy Design write-up included in the Business Program section.	The New Construction – Energy Design Assistance product participation criteria was published in October 2023.
70	The Company to issue an RFP for Business Energy Assessment and Strategic Energy products by June 30, 2023	Proceeding No. 22A-0315EG, Section I.H., paragraph 33.2	---	See https://www.xcelenergy.com/company/rates_and_regulations/filings/colorado_demand-side_management
71	The Company to discuss the New Construction – EDA product model with stakeholders	Proceeding No. 22A-0315EG, Section I.H., paragraph 33.3	---	This topic was discussed at the November 8, 2023 quarterly roundtable.

Table 12b: Reporting Requirements and Compliance Natural Gas

Item #	Compliance Point – Description	Statute / Rule / Proceeding Reference	Status Report Reference	Comments
NATURAL GAS				
1	Each utility shall submit its annual DSM report on or before April 1 of each year. The advice letter shall be filed on or before May 31 of each year, and each utility seeking a G-DSM bonus shall include the amount and its calculation in its advice letter adjusting the G-DSMCA.	Rule 4752(b); Rule 4752(c); Rule 4752(d); Rule 4760	---	Included within Report filed on April 1, 2024.
2	The utility’s annual expenditure target for DSM programs shall be consistent with the estimated budget for DSM program expenditures established by the Commission in the utility’s most recent strategic issues proceeding.	Rule 4753(j)(I)	---	Public Service spent a total of \$23.6 million on its natural gas DSM programs. This exceeded the blended budgets of the 2022 and 2023 DSM Plans. The Company’s most recent gas strategic issues proceeding concluded during calendar year 2023 and established budgets for gas DSM of \$18 million per year for 2024-2026.
3	In the annual DSM report the utility shall describe its actual DSM programs as implemented. For each DSM program, the utility shall document actual program expenditures, energy savings, and peak demand reduction as a result of energy efficiency programs, peak demand reduction as a result of specific demand reduction programs, avoided greenhouse gas emissions, cost-effectiveness, and participation levels at the measure level for census block groups or zip codes if restrictions apply at the census block group.	Rule 4754(a)	---	Included within Report filed on April 1, 2024. Note that the Company was not tracking certain reporting elements required by changes to the gas rules in 2023. Those items are not included in this Report but will be included in the 2024 Report filed on or before April 1, 2025.

4	Annual program expenditures shall be separated into cost categories contained in the approved DSM plan.	Rule 4754(b)	See Tables 8a, 8b, 9a, 9b in Executive Summary	Included within Report filed on April 1, 2024.
5	For each DSM program, the utility shall compare the program's proposed and actual expenditures, savings, participation rate, avoided greenhouse gas emissions, and cost-effectiveness; in addition, the utility shall prepare an assessment of the success of the program and list any suggestions for improvement and greater customer involvement.	Rule 4754(c)	---	Included within Report filed on April 1, 2024.
6	The utility shall provide actual benefit/cost results for the overall DSM plan and individual DSM programs implemented during the plan year. The benefit/cost analysis shall be based on the costs incurred and benefits achieved, as identified in the modified TRC test. Benefit values are to be based upon the results of M&V evaluation, when such has been conducted as set forth in rule 4755. Otherwise, the benefit values of the currently approved DSM plan are to be used.	Rule 4754(d)	See Cost-Effectiveness	Business, Residential, and Low-Income cost-benefit analysis (CBA) results are included in CBA work paper.
7	If the annual report covers a year within which an M&V evaluation was completed, the complete M&V results are to be included as part of the annual report.	Rule 4754(e)	See Evaluation, Measurement & Verification	Included within Report filed on April 1, 2024.
8	The greenhouse gas emissions reductions achieved from DSM programs shall be calculated consistent with rules 4525 through 4528.	Rule 4754(f)	---	Included within Report filed on April 1, 2024.
9	The annual DSM report shall contain the level of greenhouse gas emissions reductions from DSM programs that qualify as a clean heat resource, reported in levels of carbon dioxide, methane, and carbon dioxide equivalents as well as a report of DSM measures approved as part of a clean heat plan.	Rule 4754(g)	---	Included within Report filed on April 1, 2024. Note that the Company's inaugural Clean Heat Plan is pending Commission approval at the time of this Report filing.

10	Further, the Company will spend not less than \$3.3 million annually on its low-income gas energy efficiency program from 2019 through 2023.	Proceeding No. 17A-0462EG, Settlement Agreement, Para. III(H)(i)	See Table 6b in Executive Summary	The Company spent a total of \$6.2 million on its Low-Income gas energy efficiency program in 2023.
11	The Settlement Agreement proposes a \$25.1 million budget for the gas DSM programs in 2023.	Proceeding No. 22A-0315EG, Settlement Agreement, Section I.A., paragraph 2.	See Table 6b in Executive Summary	Natural gas DSM expenditures in 2023 totaled \$23.6 million.
12	The Settlement Agreement proposes a savings target of 898,487 Dth	Proceeding No. 22A-0315EG, Settlement Agreement, Section I.A., paragraph 2	See Table 6b in Executive Summary	Natural gas savings target in 2023 totaled 914,655 Dth.
13	The Company agrees to initiate an RFP in Q1 or Q2 2023 to solicit ideas from vendors for new DR offerings to achieve peak demand reduction by residential customers.	Proceeding No. 22A-0315EG, Settlement Agreement, Section I.I., paragraph 34	---	A natural gas demand response RFP was issued on January 30. The RFP can be found here: https://www.xcelenergy.com/company/rates_and_regulations/filings/colorado_demand-side_management .
14	If the peak demand reduction RFP leads to a reasonably cost-effective offering, the Company agrees to design a pilot.	Proceeding No. 22A-0315EG, Settlement Agreement, Section I.I., paragraph 34	---	A pilot is targeted for the 2024-2025 heating season.

Financial Incentive Calculations

Electric Financial Incentive: Summary

Table 13 below summarizes the Company's Financial Incentive for electric energy efficiency based upon the Company's achievement of 520 GWh and net benefits of \$155,713,352 in 2023. The performance goal and incentive structure for 2023 were established in Proceeding No. 17A-0462EG.

Table 13: Summary of 2023 Electric Incentive

	Amount
Disincentive Offset	\$3,000,000
Performance Incentive	\$15,000,000
Total	\$18,000,000

Disincentive Offset

A Disincentive Offset of 3.0 million is awarded because the Company achieved over 100% of the annual energy savings goal of 500 GWh. That threshold was ordered in Decision No. C18-0417.

Performance Incentive

The Performance Incentive for the 2023 Plan year is 40% of net economic benefits¹¹ for all savings above 280 GWh and up to 550 GWh, provided that the Company achieves at least 400 GWh in energy efficiency savings. Savings over 550 GWh are not eligible for incentive earnings. The performance incentive in combination with the disincentive offsets is subject to an \$18 million incentive cap. That threshold was ordered in Decision No. C18-0743.

Electric Financial Incentive: Calculation

The combination of the pre-tax Disincentive Offset and the Performance Incentive cannot exceed \$18 million. The total financial incentive is recovered in the year following the 2023 performance year. The full calculation of the Company's financial incentive for electric DSM is shown in Table 14 below.

¹¹ A minor adjustment is made for market transformation programs, allowing for the costs of these programs to be excluded from net economic benefits.

Table 14: Public Service 2023 Electric DSM Incentive

Disincentive Offset (Grossed-up for Income Taxes)	\$3,000,000
Performance Incentive Calculation	
Approved 2023 kWh Goal	494,652,055
kWh from YE Achievements	519,969,733
Net Economic Benefits from YE Achievements (Excluding NEB Adder + SCC)	\$145,940,298
<i>Net Economic Benefits Adjustments</i>	
Total Low-Income Allowance	\$458,088
Total Market Transformation Allowance from YE Achieve.	\$3,897,464
Total Beneficial Electrification Allowance	\$5,417,502
FINAL Net Benefits from YE Achievements	\$155,713,352
% of Net Benefits Eligible for Incentive (Achievement over 280 GWh)	46.2%
% of Eligible Net Benefits Awarded	40%
Performance Incentive	\$28,745,128
Total Incentive: Disincentive Offset Total + Performance Incentive	\$31,745,128
Incentive Cap (Hard Cap of \$18,000,000)	\$18,000,000
Total 2023 Proposed Electric Financial Incentive Pre-Tax	\$18,000,000

Natural Gas Bonus

The natural gas incentive mechanism (“Gas DSM Bonus”) is calculated as set forth in 4 CCR 723-4-4760 (“Rule 4760”). The Gas DSM Bonus is awarded in a single installment, requested by application and approved in the first status report year following the natural gas DSM program year in which the savings were achieved. The approved Gas DSM Bonus amount is recovered through the Gas Demand-Side Management Cost Adjustment (“G-DSMCA”) over a same twelve-month period after approval of the bonus. (See Rule 4760(h)).

The natural gas incentive is awarded on a sliding scale of net benefits, calculated based on an Energy Factor (percent of Dth goal achieved) and a Savings Factor (Dth per \$1 million spend). The Gas DSM Bonus is capped at 25% of expenditure, or 20% of net benefits, whichever is less. In 2023, neither of these caps apply, and net benefits from gas DSM achievements exceeded \$36 million. However, actual natural gas DSM spending exceeded the authorized budget by \$2,899,856. The Company thus conservatively calculated the incentive for purposes of applying a cap by using 25 percent of the budget, rather than on actual expenditures, ensuring that the Company is not rewarded for exceeding the budget. Even under this more conservative cap, the Company’s performance results did not reach the cap amount. The natural gas incentive is calculated to be \$5,134,323. That amount is equal to the percent of eligible net benefits awarded 14.0% times the total net economic benefits achieved of \$36,750,347. In addition, the Company is filing for an acknowledgement of lost revenues associated with natural gas DSM programs of \$2,819,244. The total award is \$7,953,667. The full calculation of Public Service’s 2023 Natural Gas Incentive is detailed in Table 15 below.

Rule 4760 (i) requires that “Any combined electric and gas utility seeking a G-DSM bonus for new residential or commercial construction shall provide a narrative discussion that explains why that gas DSM program does not incent additional gas usage as compared to a beneficial electrification alternative.” In 2023, the Company’s gas DSM programming included both gas energy efficiency and beneficial electrification offerings for new construction. The Company offered higher incentives for all-electric new homes than those available for new homes that were connected to the natural gas system. The gas programming thus did not incent greater gas use than under “a beneficial electrification alternative.” In the Company’s 2022 Strategic Issues proceeding, the Commission directed the Company to phase out incentives for gas-using appliances in the retrofit market and to “support only all-electric housing by June 30, 2024.”¹² The Company thus anticipates the issue of “incenting additional gas usage” will be moot in future Annual Reports.

¹² Decision C23-0413, ¶231.

Table 15: Public Service 2023 Natural Gas Bonus and Acknowledgement of Lost Revenue¹³

Approved Energy Target (Goal) ¹²	832,724	Dekatherm per year		
Energy Target Achieved - YE Forecast	914,655	Dekatherm per year		
Percent of Energy Target Achieved	109.8%			
			Dth	Spend
Approved Savings Target	40,200	Dekatherm per \$1M	832,724	\$20,714,322
Savings Target Achieved - Portfolio Total	38,733	Dekatherm per \$1M	914,655	\$23,614,178
Savings Target Achieved - Low-Income Program Adjustments				
Energy Savings Kit			11,057	\$130,402
Multi-Family Weatherization			7,233	\$846,398
Non-Profit Energy Efficiency			21,593	\$405,150
Single-Family Weatherization			241,195	\$4,911,504
Total Savings Target Achieved - Low-Income Program Adjustments	44,662	Dekatherm per \$1M	281,077	\$6,293,454
Savings Target Achieved - Adjusted*	38,733	Dekatherm per \$1M	914,655	\$23,614,178
Total DSM Expenditures	\$20,714,322			
Energy Factor	14.5%			
Savings Factor	0.963504505			
Percent of Net Benefits Awarded	14.0%	= Energy Factor * Savings Factor		
Net Economic Benefits Achieved	\$34,095,555			
<i>Net Economic Benefits Adjustments</i>				
Energy Savings Kit	\$0			
Multi-Family Weatherization	\$101,163			
Non-Profit Energy Efficiency	\$0			
Single-Family Weatherization	\$0			
Low-Income Allowance from Plan	\$101,163			
Beneficial Electrification Allowance	\$2,553,629			
FINAL Net Economic Benefits Achieved	\$36,750,347			
Incentive Cap	\$5,178,581	=Less of 20% of net economic benefits or 25% of expenditures		
Total 2023 Proposed Gas Financial Incentive Pre-Tax	\$5,134,323	=Product of Net Benefits Awarded and FINAL Net Economic Benefits Achieved		
Business/Residential Allocation				
Business Actual Savings (Dth)	78,468	9%		
Residential & Low-Income Actual Savings (Dth)	836,186	91%		
Total Savings	914,655	100%		
Allocated Bonus				
Business	\$440,473			
Residential & Low Income	\$4,693,850			
Total	\$5,134,323			
Acknowledgement of Lost Revenue [ALR] Calculation:				
Dollar Value Per Therm				
Business (Non-residential)	\$0.21208			
Residential	\$0.31727			
12-Month Therm Reduction Impact From 2023 Programs				
Business (Non-residential)	784,681			
Residential	8,361,864			
ALR Totals				
Business (Non-residential)	\$166,415			
Residential	\$2,652,928			
Total ALR	\$2,819,344			
Total Gas Bonus and ALR	\$7,953,667			

Business Program

The Company’s Business Program—for commercial and industrial customers of all sizes—offers a broad portfolio of DSM products designed to meet the needs of this varied segment. Eligible customers are on a Public Service business rate for electric service and/or retail natural gas service. The portfolio has three primary components:

1. *Prescriptive products* focus on the most common equipment.
2. *Custom products* encourage savings from unique situations, often involving newer technologies or measures.
3. *Study and educational products* help customers identify energy efficiency opportunities.

Electric

In 2023, the electric products in the Company’s Business Program achieved 99.8% of the net generator kWh target with spending coming in close to the filed budget. A summary of the Company’s Business Program achievements for electric DSM products is shown in Table 16a below.

Table 16a: Business Program – Electric DSM Products (Target to Actual)

Business Program - 2023	Budgets / Targets					Expenditures / Achievements				
	Electric Budget	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio	Electric MTRC Test Ratio (w/SCC)	Electric Expenditures	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio	Electric MTRC Test Ratio (w/SCC)
Business Energy Assessments	\$ 1,049,619	1,098	8,890,639	1.25	1.81	\$ 8,595,661	10,214	60,458,057	2.50	3.84
Business HVAC+R Systems	\$ 7,832,413	11,439	34,537,436	2.00	2.50	\$ 5,141,284	3,867	13,811,012	1.30	1.79
Compressed Air Efficiency	\$ 1,017,395	921	5,548,505	1.42	1.93	\$ 365,968	272	1,829,129	1.48	2.20
Custom Efficiency	\$ 801,096	844	4,744,214	1.21	1.31	\$ 237,849	-	-	N/A	N/A
Data Center Efficiency	\$ 1,637,692	2,342	15,552,238	1.81	2.54	\$ 223,019	46	499,839	0.87	1.22
Energy Management Systems	\$ 561,480	233	4,965,374	1.23	1.74	\$ 218,931	56	712,182	0.93	1.29
LED Street Lighting	\$ -	-	1,468,252	1.53	2.77	\$ -	-	3,692,223	0.67	1.45
Lighting Efficiency	\$12,943,014	15,793	99,084,935	1.36	1.89	\$ 15,922,416	23,210	130,380,979	2.35	3.42
New Construction	\$ 8,082,387	13,091	50,672,795	1.50	1.94	\$ 11,186,970	12,986	47,553,123	1.76	2.44
Self Direct	\$ 1,001,107	1,468	6,561,548	1.14	1.49	\$ 113,381	141	1,070,700	1.76	2.48
Small Business Solutions	\$ 5,380,028	6,906	42,418,420	1.56	2.18	\$ 5,730,077	5,685	27,942,426	1.31	1.84
Strategic Energy Management	\$ 8,664,793	10,978	76,488,513	1.82	2.52	\$ 8,363,701	10,864	62,320,898	2.41	3.44
General Advertising-Bus	\$ 801,284	-	-	-	-	\$ 788,220	-	-	-	-
Business Program Total	\$49,772,310	65,112	350,932,869	1.52	2.03	\$ 56,887,477	67,343	350,270,567	2.00	2.90

Natural Gas

In 2023, the natural gas products in the Company’s Business Program achieved 61% of the Dth savings target. Strong performance by New Construction and Business HVAC+R Systems were the main drivers of this performance. The Business Program also exceeded its overall budget, driven primarily by higher customer incentive spending associated with high levels of savings. A summary of the Company’s Business Program achievements for natural gas DSM products is shown in Table 16b below.

¹³ See Decision No. R12-1204-1 in 20A-0287EG; Proceeding No. ; Decision No. C23-0381 in Proceeding No. 22A-0315EG.

Table 16b: Business Program – Natural Gas DSM Products (Target to Actual)

Business Program - 2023	Budgets / Targets					Expenditures / Achievements				
	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio	Gas Expenditures	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Energy Assessments	\$ 15,107	3,926	263,184	\$95,042	3.56	\$ 26,551	600	22,601	\$37,986	2.37
Business HVAC+R Systems	\$ 416,862	17,854	38,740	\$245,804	1.17	\$ 564,906	13,754	24,347	\$8,934	1.01
Custom Efficiency	\$ 66,038	6,626	100,388	\$50,604	1.15	\$ 39,081	847	21,674	-\$16,989	0.71
Energy Management Systems	\$ 27,032	2,169	82,671	\$28,307	1.32	\$ 16,287	2,007	123,251	\$24,886	1.26
New Construction	\$ 729,127	81,986	115,789	\$8,392,036	3.18	\$ 673,587	60,525	89,855	\$7,638,391	4.45
Small Business Solutions	\$ 147,157	15,712	121,961	\$889,161	6.70	\$ 46,908	735	15,675	-\$23,033	0.62
General Advertising-Bus	\$ 83,463	-	-	-	-	\$ 81,423	-	-	\$0	-
Business Program Total	\$ 1,484,787	128,273	87,723	\$9,617,489	2.65	\$ 1,448,744	78,468	54,163	\$7,588,752	3.15

Business Products

The following provides a summary of the performance of each DSM business product in 2023.

Business Energy Assessments

The Business Energy Assessments product is designed to assist electric and/or natural gas business customers to improve the efficiency of their existing building operations through assessments. These assessments identify functional systems that can be “tuned up” to run as efficiently as possible through low or no-cost improvements, suggest updates to equipment, and help with direct installation. There are several tiers of assessments depending on the needs of the business including: Building Assessments, Targeted Assessments, Commercial Streamlined Assessments, Indoor Agriculture Assessments and Outdoor Agriculture Assessments. Business Energy Assessments includes two steps: (1) study or assessment by an energy efficiency expert (2) implementation of energy conservation opportunities found.

2023 Product Achievement

The product exceeded its 2023 electric commodity target and did not achieve its gas target. The electric savings were a result of indoor agriculture bonuses. Most of the savings were directly due to indoor agriculture prescriptive lighting measures. The response from the indoor agriculture market was incredibly positive. Due to that target market communicating closely, marketing was not necessary to increase the pipeline. Grassroots marketing helped spread the word about the indoor agriculture energy assessments and the positive outcome of the assessments. The natural gas goal is more difficult to reach due to indoor agriculture segment having extraordinarily little opportunity for natural gas savings and the push for customers to implement cost-effective measures for their business. Many natural gas related measures are more expensive for the customer to implement. Customers must regulate their plant temperatures and condensation. By implementing some of the gas measures the customer would have to be harvesting plants and not in the grow cycle.

Changes in 2023

The product allowed a 20% BEA bonus on implemented projects post assessment in 2023 with required invoicing May 1, 2023 – November 15, 2023.

An RFP was issued in 2023. Five vendors were awarded the RFP. All vendors may conduct building and targeted assessments and two vendors may conduct outdoor agriculture assessments.

The product worked closely with Energize Denver and Boulder to align building performance ordinances with current product offerings.

Business HVAC+R Systems

The Business Heating, Ventilation, Air Conditioning, and Refrigeration (“HVAC+R”) Systems product combines legacy products including Heating Efficiency, Cooling Efficiency, and Motors, Drives and Pumps, Commercial Refrigeration, and Food Service into a holistic and integrated product. The product offers a broad range of prescriptive rebates, and midstream incentives for high-efficiency equipment options. The product also leverages custom opportunities to evaluate demand management opportunities. Such projects are evaluated under the Custom Efficiency analysis and must follow the rules of the Custom Efficiency program.

Prescriptive participants receive rebates to help buy down the initial capital cost and shorten the payback period for new equipment. New equipment provides better reliability, lower maintenance costs, and lower utility bills via energy savings. The Company currently follows the guidelines of the International Energy Conservation Code (“IECC”) 2018 for equipment definitions, standard formulas, and minimum recommended efficiencies. These sources, along with Public Service’s historical experience, allowed the Company to develop influential prescriptive rebates that encourage the most efficient choice of equipment in most equipment categories.

Midstream measures under this product are designed to deliver incentives to market actors who sell qualifying high-efficiency HVAC equipment by increasing stocking levels and upselling. The midstream measures are designed to adapt to market changes, and the Company will continue working with relevant industry players to enhance the product to include new midstream incentives for equipment.

2023 Product Achievement

The product did not achieve its electric or natural gas targets but did surpass previous year’s numbers. Customers and contractors continue to see difficulties in procuring equipment due to manufacturing delays, shipping delays, staffing shortages and turnover, though we are seeing improvements. Program analysis has shown more of the electric and gas savings are being claimed by holistic programs such as Business Energy Assessment and Strategic Energy Management, and these programs have shown a positive increase in their participation. A rebate bonus was created that went through 2023 and the Company saw increased participation in equipment with longer procurement lead times.

Changes in 2023

As a result of the 2023 DSM & BE Plan settlement agreement, residential and commercial sized prescriptive heat pump rebates are now being offered. This includes air source, variable refrigerant flow, ground source, dual fuel rooftop unit heat pumps, and heat pump water heater rebates. Heat pumps that were previously offered through the midstream cooling program will remain there and include mini split, packaged terminal, and water source heat pumps. The Company continues to study Beneficial Electrification technologies and the possibility of prescriptive rebate additions to the HVAC-R program that are seen as cost effective.

The midstream cooling program will now offer pass through rebates to our customers starting September 1, 2023 for heat pumps and January 1, 2024 for air cooled chillers and DX units over 20 tons in retrofit situations. Customers can expect their equipment to be discounted by guaranteed amounts going forward.

Based on the settlement agreement reached in the 2022 Strategic Issues proceeding, we have removed many gas heating measures. These include new construction gas water heaters, unit heaters, infrared heaters, non-condensing boilers, and DX cooling units with gas heating. To improve gas efficiency

in the marketplace we added retrofit condensing boiler and unit heater rebates. We also added a boiler tune-up rebate program.

Compressed Air Efficiency

The Compressed Air Efficiency product helps customers identify and address inefficiencies in their compressed air systems. The product encourages the repair and redesign of existing systems and the purchase of efficient options for new and replacement systems. The product has three components:

1. Prescriptive rebates for the most common high-efficiency options, such as no air loss drains, and for certain variable frequency drive (“VFD”) compressors;
2. Rebates for studies that help customers identify efficiency opportunities from repair to redesign or replacement of system components; and
3. Custom rebates for implementation of unique improvements identified by studies. Improvements can include a wide range of capital purchases and “process” improvements, such as piping modifications or horsepower reductions.
 - Customers that have completed a compressed air study are eligible for \$600 per kW saved for system peak savings, with an additional \$100 per kW when non-peak savings exceed system peak savings. This amount is reduced to \$400 per kW saved for system peak savings, with an additional \$100 per kW when non-peak savings exceed system peak savings for customers without a compressed air study completed in advance.

Trade partners support the product through direct equipment sales and system studies.

2023 Product Achievement

The product did not achieve its 2023 electric savings target. This is due to several factors including the following: a reduction in the implementation of improvement projects due to customer financial restraints; the need for more trade education and product updates due to industry turnover; and customers postponing projects into future years. Supply chain issues continued to restrict customers’ ability to order and install new equipment in a timely manner and created higher prices which influenced customers’ decision to delay ordering equipment and implementing the Company’s study suggestions.

Increasing connections with market players was a priority in 2023. This effort included in-person meetings with industry trade members to improve the understanding of the product and digital application process. Trade communications were also delivered to remind our partners to submit prescriptive rebate applications. Program spending was commensurate with achieved savings, and the product was cost effective.

Changes in 2023

There were no changes to this product.

Custom Efficiency

The Custom Efficiency product is designed to provide rebates on a wide variety of equipment and process improvements that do not fall within the Company’s prescriptive rebate products. Custom Efficiency projects require submission for pre-approval before equipment purchase and installation and must pass the mTRC test as part of that analysis. The product is an important piece of the Company’s portfolio as it provides a place to evaluate unique savings opportunities and serves as a launch pad for new product ideas.

2023 Product Achievement

The Custom Efficiency product did not meet its electric savings, natural gas savings, electric participation, and gas participation targets in 2023. Equipment and labor costs continued to increase, which posed a challenge with passing the mTRC test, and therefore decreasing the quantity of projects approved. Administrative costs to evaluate projects, whether claimed or not, significantly affected the overall product cost effectiveness. The product underspent its forecasted electric and gas budgets, aligning with the lower savings achievements. The Company offered internal training seminars to encourage earlier involvement of technical resources to improve project analysis rates and share information on custom products best practices.

Changes in 2023

There were no changes to this product.

Data Center Efficiency

The Data Center Efficiency product offers study and implementation rebates to customers who make energy saving improvements to a data center. The product encourages a holistic approach by providing energy efficiency information, site evaluations, and project analyses for customers. The Company's portfolio of prescriptive and custom rebates is also available to data center customers to encourage the implementation of additional energy saving upgrades.

2023 Product Achievement

The Data Center Efficiency product did not achieve its 2023 electric savings target. Electric spending was under target and in line with savings achieved. The explanation for these results included:

- Some projects that were expected to close in 2023 had longer timelines than expected and are now slated for 2024.
- In existing data centers, staffing turnover, economic slowdown, and long sales cycles due to continuing supply chain challenges have impacted the ability for customers to implement improvements and gain business justifications within defined financial timelines.
- For new data centers, ramp-up time of IT load can take years, with spaces often underused and energy efficiency not fully optimized until IT loads are filled.

Education was a key focus area in 2023 to build pipeline and industry connections. The product team collaborated with the Colorado Department of Public Health and Environment to host webinars that educated customers and trade partners on data center optimization as well as regulations that impact the sector.

Changes in 2023

There were no changes to this product.

Energy Management Systems

The Energy Management Systems ("EMS") product encourages customers to install or upgrade automated controls in existing buildings. The product covers new systems in an existing building, the replacement of an obsolete system, and adding functionality or control points to an existing system. An EMS helps reduce a building's on- and off-peak energy usage through sensors and controls that are centrally operated. Through automation, the systems may control heating, cooling, or ventilation functions. The product includes lighting controls only when they are integrated with the control system.

2023 Product Achievement

The product reached 11% of its electric goal and 83% of its natural gas goal. The product change improvements involving regulatory and product development did not go into effect until September 1, 2023, and the prescriptive measures became available to customers in 2024.

Additional electric and gas savings are being claimed by Colorado's two holistic programs (Business Energy Assessment and Strategic Energy Management) which have shown a positive increase in their participation.

Changes in 2023

The product added three prescriptive measures on September 1, 2023. These were welcomed by our trade partners but did not increase product participation before the year's end. The product also made adjustments to account for non-energy costs in controls projects, which has resulted in more project evaluation submissions in 2023. The Company is confident the product changes will gain momentum in 2024.

LED Street Lights

The Company's light emitting diode ("LED") Street Lights product captures energy savings for local municipalities on the Street Lighting Service ("SL") Rate by replacing legacy Company-owned streetlights with LED fixtures.

2023 Product Achievement

The product had a strong year exceeding filed targets with savings driven by additional light conversions in Denver.

Changes in 2023

There were no changes to this product.

Lighting Efficiency

The Lighting Efficiency product offers rebates to customers who purchase and install qualifying energy-efficient lighting. Prescriptive rebates are offered to encourage customers to purchase energy-efficient lighting and control systems by lowering the up-front premium costs associated with this equipment. Custom lighting rebates are also available for energy-saving lighting solutions not currently available as prescriptive rebate measures.

2023 Product Achievement

The Lighting Efficiency product exceeded its goals in 2023 as a result of a 60-Day Notice submitted on June 30 which revised its energy target to 130.2 GWhs due to the success of the prescriptive grow lighting rebate. Second, the grow lighting rebate accounted for 93.9 GWhs of the overall program savings. Savings for the grow lighting measure will start to trend down in 2024 as these savings are neither sustainable nor attainable year after year. While the program exceeded its savings goals, program spend was in-line with the program savings.

The program created a promotional plan that was bundled with the HVAC+R program for bonus layering. Customer outreach included mailings, trade publication promotion, monthly onsets, and case studies.

Changes in 2023

Per Decision No. C23-081, the Lighting Efficiency program extended the lighting bonus to September 30, 2024 to accommodate customers wanting to participate in the bonus but whose projects would not be installed within the original timeframe.

Additional program changes included: revisions to the net-to-gross ratios; new efficiency product in response to the 2022 lighting retrofit comprehensive evaluation measures; additional trade partner training and engagement opportunities; new measure assessments for inclusion in prescriptive rebates; promotion of new and emerging measures to customers and trade partners; simplified application process for customers and trade partners; outreach to underperforming business segments regarding LED installations; and increased network lighting controls marketing emphasis.

New Construction

The New Construction product's mission is to help business customers prioritize energy efficiency when constructing new buildings. By providing whole-building energy analysis for larger buildings, as well as consultation and checklists of energy savings opportunities for smaller buildings, the Company is helping customers achieve their energy and sustainability goals.

The Energy Design Assistance (“EDA”) component of the New Construction product was the primary offering to customers in 2023. Features include comprehensive energy consulting services in support of integrated design processes by providing computer modeling of planned designs, funding to offset the cost of design time associated with increased energy analyses, financial rebates to reduce the upfront cost of packages of energy-efficient measures, and field verification to ensure that the strategies are installed per the design intent.

The Energy Efficient Buildings (“EEB”) component of the product is a combination of prescriptive measures and custom analyses that allows customers to package numerous measures in just one application. The EEB process provides preliminary rebate amounts per measure, giving the customer the tools to make early decisions to influence efficient equipment choices.

The New Construction Lighting component of the product is a prescriptive offering intended for customers that do not fit the size, scope, or timing requirements of the EDA or EEB program. New Construction Lighting focuses on energy saved above a 2018 International Energy Conservation Code baseline, using ComCheck documentation to identify allowed wattage versus proposed wattage based on Lighting Power Density.

The Codes and Standards component of the product proactively encourages and supports jurisdictions that are attempting to adopt an updated code. In addition, it gives the communities the tools to improve compliance with new codes, ultimately helping to reach their energy performance and economic development goals. Specific strategies include one-on-one support for local officials, marketing materials, and trainings designed to support code awareness and implementation.

2023 Product Achievement

The Business New Construction program fell short of the filed targets mainly due to extended project times due to challenges posed by inflation, labor shortages and supply chain disruptions. The Company continues to work closely with its vendors to maintain and update customer projects. Business New Construction enrollment stayed strong through 2023 to continue to build the pipeline.

Changes in 2023

The Energy Design Assistance Product launched a new application process that expands the Company's approved providers. The application process is an open model that allows interested parties to apply and become part of the program. The full process is laid out on the Colorado Energy Design Webpage

(<https://www.economicdevelopment.xcelenergy.com/incentives/Colorado/Energy-Design-Assistance>).

Self-Direct

The Self-Direct product provides large commercial and industrial electric customers the opportunity to manage their energy saving projects' process. Customers perform the required activities and incur all the costs for the study, design, engineering, Measurement & Verification ("M&V"), and reporting associated with energy savings projects. These steps are comparable to the Company's Custom Efficiency product but because the customer is responsible for the administrative and engineering activities, the customer is eligible to receive a higher rebate offer. The Company's role in this process is one of support through the project stages: verification of customer eligibility, pre-approval of proposed projects, development of the approved M&V plan, and verification of project completion prior to rebate processing.

Self-Direct is open to those customers who have an aggregated peak load of at least 2 MW in any single month and an aggregated annual energy consumption of at least 10 GWh.

2023 Product Achievement

The Self-Direct product did not achieve its 2023 savings target but remained a cost-effective offering. A few of the anticipated projects were delayed into 2024 by customers. The program incurred typical project management costs during the year.

The Company continues to work with vendors and recognizes that most customers gravitate to holistic, full-service programs. The Company offers this product to eligible customers interested in self-managing their energy efficiency projects.

Changes in 2023

There were no changes to this product.

Small Business Solutions

The Small Business Solutions product offers recommendations for energy-saving measures, special services, and attractive rebates to business customers who purchase and install energy-efficient equipment in existing facilities. In addition, the product offers a free energy assessment, a recommendation report outlining energy saving opportunities and rebates, free energy-saving products, and support throughout the customers energy-efficiency project. Customers with a peak demand under 100kW are eligible to receive free direct installation of certain lighting and non-lighting measures. The product is available to businesses with peak demand of up to 400 kW and allows businesses to overcome barriers that often prevent them from investing in energy-efficiency; these include limited financial resources and time, low awareness of energy efficiency equipment, and lack of access to quality contractors.

2023 Product Achievement

The Small Business Solutions product fell short of achieving 2023 savings targets due to the decrease in achievement from the Instant Rebate product. Also, regulatory changes, market saturation, and economic conditions are drivers of the savings decrease. Conversely, the Direct Install product has grown more than two-fold from last year's achievement and the last six months of the year were the highest savings grossing months since the Direct Install launched in 2021. More than 1,400 customers benefited from free equipment upgrades that can lower their energy bill. This success was brought about by targeted and diversified marketing efforts including digital ads, presence at local community events, and segment-specific email campaigns.

Changes in 2023

There were no changes to this product.

Strategic Energy Management

SEM is a holistic approach to managing energy for persistent savings and continuous improvement. It is a high value offer that draws from the portfolio's prescriptive and custom products and adds on-going coaching. The product influences business practices by stressing system-level operational change. It also promotes cultural change among customers' senior management, mid-management, and operational personnel.

The product provides customers a Strategic Energy Management Consultant ("SEMC"). The Company usually sources SEMCs via a third-party subcontractor. SEMCs are shared, in that they are assigned to multiple customers. However, the same individual(s) remain assigned to the customer throughout the customer's engagement in the product.

The Company and SEMC customize activities to meet the individual customer's needs. Where applicable, SEM delivery includes providing or facilitating three categories of activities:

1. Fostering customer commitment, by helping the customer:
 - Set or affirm goals and policies related to considering energy use in all decisions.
 - Quantify and justify resources needed for goal attainment.
 - Establish an internal Energy Team with defined roles and responsibilities.
2. Planning and Implementation
 - Creating a high-level energy map identifying the major uses and areas for further study.
 - Establishing the most effective Energy Performance Indicators.
 - Performing energy scans and/or detailed studies.
 - Maintaining a project register and driving implementation through formalized, regularly scheduled follow-up sessions.
 - Engaging employee operators
 - Reassessing and reprioritizing projects
3. Supporting a system for measuring and reporting energy performance; the Company
 - Assists customers in determining the most appropriate Energy Performance Indicators
 - Demonstrates analysis techniques.
 - Sets examples for the regular communication of results.

2023 Product Achievement

The product did not meet its 2023 energy savings target; however, it did meet demand savings expectations. Spending was within budget and commensurate with the energy savings achievement.

A wide range of industrial and institutional customers (*e.g.*, manufacturing including food processors, indoor agriculture, offices, hospitals, wastewater treatment plants, school districts, universities, and government buildings) completed projects.

The product enrolled new customer organizations and renewed several others. For medium-sized prospective customers, the Company offered a free SEM Qualification Assessment. Assessments include an on-site technical review and a management interview. Assessments conclude with a brief report which better informs decisions about enrollment.

Where possible, the SEMCs leverage existing measurement and management tools. They also offer consultation for scoping analytical systems. System incentives are available for enrollees who need sub-metering or need to augment their systems. System incentives require specific approval based on savings potential.

As the product evolves based on customer needs, the Company continues to seek and share best practices through interaction with the Consortium for Energy Efficiency, the American Council for an Energy-Efficient Economy, ESource, the Northwest Energy Efficiency Alliance (“NEEA”), and the Southwest Energy Efficiency Project (“SWEEP”).

Table 17: SEM Systemic Operational Savings

<u>Projects</u>	<u>Segment</u>	<u>Energy Savings (kWh)</u>	<u>Primary Actions</u>
Project 1	Office (campus with embedded data center)		Programmed economizer; Reset SAT and static discharge pressure; Reduced run time for AHUs to match post-Covid schedule;
Project 2	School District		Scheduled MAUs and AHUs; CHW Reset; with new CHW sensors; Optimized system flow, including VRF Scheduling and outside supply fans; Added/calibrated CO2 sensors; Added direct evaporative precooling (not rebated separately); Fine-tuned control sequences, including chiller sequence with monitoring of airflow over Cleaned CHW coils; Setbacks for unoccupied schedules; Programmed increase in flat plate usage for lower condenser water temps; Reduced CHW loop differential pressure; Tuned for OA, including new OA flow sensors and repair of mixed air damper actuators;
Project 3	Food & Beverage Processor		Changed O ₂ setpoints on wastewater compressor to reduce venting; Reduced compressor discharge pressure; Reduced ammonia system condensing pressure; Eliminated flow to offline equipment and locked out bypasses;

Project 4	Food Processor		<p>Refrigeration compressor sequencing; Calibrated condensing pressure transducer, and sensors for compressor suction, discharge pressure, and slide valves; Calibrated CT factors so compressors use their capacity instead of partial loading; Changed compressor sequencing for optimized base/trim loads; Repair compressor unloading and a compressor control panel; Setback engine room heater thermostat; Adjusted cooler defrost settings; Reduced freezer back pressure regulators; Repaired freezer suction valves; Implemented evaporator fan cycling; Replaced or tightened belts; Repaired leaking valves at shell and tube compressors;</p>
Project 5	Higher Education		<p>Setback unoccupied schedules; Upgraded kitchen ventilation controls; Removed override capability; Closed lab hood sashes (policy); Reduced CHW pumping hours by interlocking with chiller operation; Removed building loop overrides; Repaired air compressor leaks;</p>
Project 6	Government Facilities		<p>Changed of pneumatics to DDCs (not rebated in another product), including OA intake dampers, chiller controls, multizone units (MZUs), and several single zone AHUs; Replaced failed chilled water coils and failed AHU condensers; Replaced several heat pumps and integrated into BAS; Repaired compressed air leaks, repaired lighting control panels; Integrated BAS with a management dashboard and implemented FDD.</p>
Project 7	Wastewater Treatment		<p>Improved recovery from backwash process; Programmed controls for best compressor combination; Auto-shut doors between production area and offices; Turned off Neutralizing Recirculation pumps (policy/procedure); Scheduled train offline during shoulder season; Shutdown other power during Backwashes; Programed VFDs on non-EGL pumps (non-rebated VFDs);</p>
Project 8	School District		<p>Installed new time clocks on unit heaters; Repaired condensing units; Standardized scheduling practices; Programed fan-powered box parallel fans; Optimized (with training) use of the customers EIS dashboard;</p>

Project 9	Hospital		ACH Reductions; AHU static pressure reset; RTU scheduling; Lowering hot water circulation set points; Lowering the flat plate to mechanical cooling changeover set points; Removing chilled water bypass valve overrides, and reporting/monitoring of all other overrides; Optimizing space humidity setpoints;
Project 10	Wastewater Treatment		Optimized Ammonia-Based-Aeration System controls; Adjusted aeration profiles for basin zones; Optimized plant grit Pumps;
Project 11	School District		Reduced schedules for AHUs and RTUs; eliminated Saturday schedule reduced weekend lighting schedules; Scheduled MAUs and optimized starts for all air-side equipment; Reduced the enable temperature on hot water coil to match operation of heating plant; Improved tracking and BAS reports, to avoid set point overrides;
Project 12	School District		Reset HW differential pressure (2 campuses); Reset Duct Static Pressure (4 campuses);
Project 13	Offices		Eliminated excessive runtime and adjusted occupied setpoints; Reduced the optimal start operation window; Switched from faulty outside air sensor to local weather station readings; Increased summertime cooling setpoints on fan-powered boxes;
Project 14	Office		Scheduled RTUs; Adjusted SAT; Changed morning warmup schedules; Upgraded select BAS controllers;
Project 15	Hospital		Reset CHW differential pressure; Performed air balancing;
Project 16	Government Facilities		Reset static pressure (2 facilities); Scheduled Trim (2 facilities);
Project 17	Food Processor		Reduced minimum condensing pressure;
Project 18	Manufacturing		Reduced Compressed Air pressure; Repaired air leaks.
Project 19	University		Installed new AHU controller and programed it in BAS for economizing/reduced OA;
Project 20	Indoor Ag		Setback lighting to align with grow cycles;
Project 21	Food Distribution/ Warehouse		Reduced ammonia system suction pressure programming and system condensing pressure; Fixed compressed air leaks; Widened load/unload dead band;

Term Definitions:
AHU: Air Handling Unit

BAS: Building Automation System
CHW: Chilled Water
CT: Current Transformer
DDC: Direct Digital Controls
FDD: Fault Detection and Diagnostics
OA: Outside Air
RTU: Roof Top Unit
SAT: Supply Air Temperature
VRF: Variable Refrigerant Flow

Changes in 2023

There were no changes to this product.

General Advertising - Business

The General Advertising - Business budget provides the opportunity to implement a variety of cross-product advertising for business customers.

2023 Product Achievement

In 2023, advertising became vital to build awareness and motivate business customers, many of whom are facing inflation related challenges. Strategies used to connect with customers focused on bonus incentives for lighting, heating and cross-product advertising designed to enhance customer and trade partner engagement. Digital and interactive components targeting high-impact venues played a large part in the plan.

Changes in 2023

This year in advertising, the Company pulled more budget than usual from HVAC/Lighting to combat inflation and trailing pandemic impacts. Also, Public Service contributed to efforts to reach the Black, Indigenous and People of Color (“BIPOC”) audience through digital media and other targeting strategies.

Residential Program

The Residential Program serves customers who live in single-family dwellings, apartments, or condominiums and receive electric and/or natural gas from Public Service. The Company focuses on cost-effective, direct-impact products. This effort is supplemented with educational services intended to further increase customer understanding and interest in conservation and energy efficiency.

Electric

In 2023, the Residential Program was slightly below its targeted electric energy savings. However, electric expenditures were below the targeted budget and the program was, overall, cost effective. Home Lighting & Recycling and School Education Kits were the primary contributors to the program by delivering the majority of the program's electric energy savings and exceeding their targets. A summary of the Company's Residential Program achievements for electric DSM products is shown in Table 18a below.

Table 18a: Residential Program – Electric DSM Products (Budget to Actual)

Residential Program - 2023	Budgets / Targets					Expenditures / Achievements				
	Electric Budget	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio	Electric MTRC Test Ratio (w/SCC)	Electric Expenditures	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio	Electric MTRC Test Ratio (w/SCC)
Energy Efficient Showerhead	\$ 39,719	61	750,046	11.75	14.41	\$ 31,375	14	177,360	4.51	6.14
Energy Star New Homes	\$ 3,351,930	2,556	8,846,810	0.96	1.18	\$ 2,327,584	3,760	6,117,401	2.11	2.72
Home Energy Insights	\$ 3,707,906	5,062	27,507,043	1.09	1.60	\$ 1,120,798	6,605	23,122,513	1.63	2.28
Home Energy Squad	\$ 1,358,709	1,022	4,806,956	1.52	2.05	\$ 3,517,353	495	2,751,531	0.36	0.59
Home Lighting & Recycling	\$ 3,671,123	7,410	50,669,663	2.61	3.78	\$ 7,939,467	9,551	68,913,242	2.91	4.56
Insulation & Air Sealing	\$ 259,131	395	475,085	0.75	0.84	\$ 420,892	514	416,763	0.58	0.64
Multifamily Buildings	\$ 2,402,778	1,750	10,721,164	1.44	1.94	\$ 983,606	632	4,553,677	1.40	1.98
Refrigerator & Freezer Recycling	\$ 1,128,423	439	3,675,108	1.16	1.70	\$ 856,637	247	2,034,903	0.86	1.29
Residential Heating & Cooling	\$ 8,758,573	10,198	11,209,912	1.80	1.94	\$ 7,271,632	8,778	5,948,921	2.46	2.65
School Education Kits	\$ 2,349,191	1,958	11,388,999	2.14	2.85	\$ 2,157,135	1,724	13,767,360	2.29	4.19
Whole Home Efficiency	\$ 274,757	264	637,001	0.92	1.10	\$ 73,274	7	3,859	0.18	0.20
General Advertising-Res	\$ 830,262	-	-	-	-	\$ 1,264,284	-	-	-	-
Residential Program Total	\$28,132,502	31,115	130,687,786	1.61	2.04	\$ 27,964,037	32,327	127,807,532	2.07	2.89

Natural Gas

The Residential Program did not meet its natural gas savings target. Expenditures were slightly above the targeted budget. Residential Heating and Cooling, ENERGY STAR® New Homes, Home Energy Insights and Insulation and Air Sealing were the primary contributors to the program's gas savings in 2023. A summary of the Company's Residential Program achievements for natural gas DSM products is shown in Table 18b below.

Table 18b: Residential Program – Natural Gas DSM Products (Budget to Actual)

Residential Program - 2023	Budgets / Targets					Expenditures / Achievements				
	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio	Gas Expenditures	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Energy Efficient Showerhead	\$ 356,380	36,197	100,990	\$5,642,562	12.31	\$ 215,649	10,809	50,122	\$1,702,944	7.70
Energy Star New Homes	\$ 3,942,130	153,682	42,617	-\$930,242	0.95	\$ 3,111,509	101,013	32,464	\$122,659	1.01
Home Energy Insights	\$ 830,222	107,042	129,831	\$270,153	1.25	\$ 319,796	72,905	227,973	\$42,789	1.13
Home Energy Squad	\$ 526,837	22,202	42,725	797,968	2.17	\$ 2,498,886	9,000	3,601	(\$1,653,535)	0.35
Insulation & Air Sealing	\$ 469,099	23,185	51,731	-\$487,942	0.75	\$ 696,038	36,404	52,302	-\$1,678,063	0.57
Multifamily Buildings	\$ 941,820	29,668	32,561	3,485,590	3.36	\$ 481,841	3,886	8,064	540,093	2.06
Residential Heating & Cooling	\$ 3,186,206	171,207	54,700	-\$713,931	0.95	\$ 5,422,654	261,243	48,176	-\$4,364,683	0.79
School Education Kits	\$ 805,128	63,197	78,908	8,106,003	9.09	\$ 695,873	59,328	85,257	\$,228,332	10.34
Whole Home Efficiency	\$ 198,431	8,529	43,131	-\$226,545	0.70	\$ 59,949	523	8,724	-\$72,081	0.35
General Advertising-Res	\$ 194,972	-	-	-	-	\$ 283,348	-	-	-	-
Residential Program Total	\$ 11,451,225	614,909	55,168	\$15,748,643	1.55	\$ 13,785,542	555,109	40,268	\$2,585,108	1.07

Residential Products

The following provides a brief summary of the performance of each residential DSM product in 2023.

Energy Efficiency Showerhead

The Energy Efficient Showerheads product is designed to offer year-round natural gas and electric savings to customers. The product has delivered reliable and cost-effective natural gas and electric savings since 2009. Residential natural gas and combination natural gas and electric customers are eligible to receive a free kit containing energy-efficient showerheads and aerators to help reduce their energy and water use costs. Customers accept the offer by mailing in a business reply card, signing up via an online portal, or calling the vendor's toll-free number prior to the promotion's deadline. Following sign-up, customers are mailed a showerhead kit free of charge. Recognizing that many customers have more than one shower and one-bathroom sink in their home, participants are offered the choice of a free one- or two- bathroom kit to retrofit their current configuration, which also includes a kitchen faucet aerator. Customers also have the option of purchasing upgraded showerhead kits for a small fee if additional items are needed beyond the items included in the free kits. Customers are provided with education, instructions for installing the units and thread sealing tape.

2023 Product Achievement

In 2023, the Energy Efficient Showerhead product fell short of electric and gas targets. Email campaigns did not result in the same level of customer engagement as they have in past years. Direct mail proved to be the most successful engagement tactic but resulted in slower response times bringing participation in much later in the year than intended.

Changes in 2023

There were no changes to this product.

Residential New Home Construction

The Residential New Home Construction product provides builders of single-family and small multifamily homes with an incentive to exceed local building codes and go beyond common construction practices. Homes must achieve at least a 10% improvement over their local jurisdiction's energy code to qualify. All homes are evaluated and rated by an independent third-party Home Energy Rating System ("HERS") rater. The Residential Energy Services Network accredited HERS raters consult with homebuilders during the construction process and ensure the energy-efficiency measures have been properly installed in the home. Homeowners benefit from lower energy bills, fewer maintenance concerns, higher resale value, and a more comfortable, quiet home.

2023 Product Achievement

The program exceeded its 2023 electric savings targets, but failed to achieve the natural gas savings targets for the year. Participation also lagged targets, as a combination of changes in construction practice and advancing energy codes in the Company's service territory made it more difficult for home builders to exceed the code minimum by 10%. Nevertheless, savings from advancing code and improved code compliance were captured in this program through the Company's Energy Codes Support program.

Changes in 2023

The Residential New Home Construction program removed water conservation measures due to lack of participation. Bonus rebate eligibility included builders who achieved ENERGY STAR® NextGen and Department of Energy Zero Energy Ready Homes, Phius, or PHI compliance. Finally, the program eliminated IECC 2006 and 2009 for baseline homes, making the minimum default code baseline IECC 2012.

Home Energy Insights

The Home Energy Insights (“HEI”) (formerly known as Energy Feedback Residential) product is a behavioral conservation product. The product provides targeted direct mail, email, and messaging to a designated group of residential customers, giving them specific information and recommendations on ways to reduce their energy consumption. Customers receive new information with each Report. Savings are quantified by comparing the energy consumption of the recipient group to that of a non-participating control group. The product also offers an online web portal that features even more ways for customers to learn about energy use in their homes and possibilities for energy savings, load management, and cost reductions. The web portal is available to all customers, with the only qualification being enrollment in My Account – online account access.

2023 Product Achievement

The Home Energy Insights product fell short of its 2023 electric and natural gas targets. Customer participation within the product fell due to natural attrition and the Company retired older cohorts. Customers were added into the product mid-year to increased participation to forecasted levels and improve statistical relevance in future years.

Changes in 2023

Additional customers were added into the program mid-year to offset attrition which naturally occurs in the product.

Home Energy Squad

The Home Energy Squad product offers energy-efficiency installation services and discounted equipment costs to customers who seek to improve their homes’ energy efficiency and comfort levels and lower their utility bills. For a small trip fee, the Home Energy Squad product installs several moderate-impact, low-cost measures for customers at no additional cost, and offers additional “a la carte” measures at a discounted cost. The product seeks to assist customers in overcoming barriers related to making energy efficiency improvements. Such barriers include confusion about which products are right for their home, product cost and payback, and finding qualified installers.

2023 Product Achievement

The Home Energy Squad product increased participation and savings in 2023 compared to 2022 but did not achieve its 2023 energy savings targets. The product expanded the program mid-year with increased staffing and promotion to reach more customers with energy saving measures as well as reduce visit lead time. Increasing technical staff has been a program priority over the past several years with the Company finally seeing positive results mid-year. The product expansion increased costs which caused the product to exceed its electric and natural gas budgets.

The virtual visit continued to decline as customers were more interested in the in-home experience. The virtual option is still offered for customers who are not comfortable with in-home visits or see the virtual visit type as a convenient option. Through these virtual interactions, customers took part in a video chat-based walk through of their home with a Squad technician to identify opportunities to save energy in their home. Customers also had the opportunity to receive a customized kit of small energy-saving measures (e.g., LED bulbs), following their virtual visit.

The product increased marketing to expand participation by utilizing a multi-channel marketing campaign to promote the product, including digital advertising, social media, radio, events, and targeted emails with a major push in the second half of the year. The product also worked closely with the Partners in Energy

product to promote Home Energy Squad through its participating communities across the Company's service territory. The partner cities initiative (communities could subsidize the cost of a Squad visit for their residents) continued in 2023 and contributed participation and awareness for the product.

Changes in 2023

Programmable thermostats were eliminated from the product offering. Smart thermostats were available at reduced cost or no cost with AC Rewards enrollment. Staffing and marketing were increased to serve more customers and eliminate or drastically reduce the lead time on appointments.

Home Lighting & Recycling

The Home Lighting & Recycling product offers discounted prices, via upstream incentives to retailers and manufacturers, on ENERGY STAR® LEDs as well as an environmentally friendly way to dispose of spent compact fluorescent lights ("CFLs"). Energy-efficient light bulbs are an easy and low-cost way for customers to save energy and reduce their monthly electric bills.

The Home Lighting & Recycling product is widely promoted through a variety of marketing channels, including radio, TV, social media, print publications, bill inserts, community events, and point-of-purchase displays.

2023 Product Achievement

The product exceeded its 2023 electric energy/demand savings target and the budget target, which was in line with the extra savings achieved. Sales continued to remain steady throughout the year, but the Company saw a large sales decrease when big box stores were eliminated from the program on October 1, 2023.

Promotion plans focused on low-cost ways to save energy and money while at home by using LEDs. The product ran advertising campaigns at the beginning and end of the year to increase awareness of the product. Enhancements were made to our "bulb finder" tool that allows customers to easily find participating stores near them and the discounted bulbs offered at each store.

The Company continued having a presence at community events throughout the year. Community events provided an opportunity to drive one-on-one engagements with customers and allowed the product to promote the benefits of LEDs via LED giveaways at these events. The Company offered a deep discount promotion on A-line and BR30 multi-packs in select stores during the year, which was well received by customers.

Changes in 2023

As of October 1, 2023, the program reduced the number of stores and locations our discounts are available in to meet the income qualified/disproportionately impacted community standards and removed all big box stores from our participating store list. This action was a compliance issue per the settlement agreement in the 2023 DSM & BE Plan.

Insulation & Air Sealing

The Insulation & Air Sealing product offers prescriptive rebates to increase the energy efficiency of single-family homes and one to four-unit residential properties. This product is available to combination electric and natural gas service customers, natural gas service residential customers, or electric service customers who heat their homes with electricity. To qualify for the rebate, customers must have the insulation professionally installed by a contractor who is certified with the Building Performance Institute; and must demonstrate air sealing improvements first via a blower test, unless the house does not require additional air sealing improvements.

Rebates for cellular shades were first introduced in 2019 and are currently available as a measure under this product. This is a different trade partner segment than traditional insulation companies and we continue to engage and educate the cellular shade trade partners on this relatively new measure.

2023 Product Achievement

The Insulation & Air Sealing product did not meet its 2023 electric and natural gas targets. Mild shoulder seasons and the expiration of the temporary Marshall Fire insulation bonus attributed to the lower participation and energy savings numbers.

Changes in 2023

There were no changes to this product.

Multifamily Buildings

The Multifamily Buildings product is designed to engage multifamily building owners in deploying DSM measures that will lower energy consumption. The multifamily customer segment has historically been a difficult market to reach with traditional DSM products because building/equipment owners may not be responsible for energy bills or have access to the metered usage for individual units. The product first launched as a pilot in 2014 and was designed to encourage DSM participation by offering an energy assessment and direct-install improvements for individual units as well as common areas at no cost to the customer. The assessments are also used to identify larger prescriptive and custom efficiency opportunities for improvements to mechanical and lighting systems and for common areas.

The product engages customers in a three-stage process:

Stage 1. Energy assessment

Stage 2. Direct-install measures

Stage 3. Traditional energy efficiency improvements (comprehensive building upgrades, instant rebate lighting measures, custom/prescriptive projects, etc.)

2023 Product Achievement

The Multifamily Buildings product its 2023 electric and natural gas targets. Also, the product's spend was proportionate to savings achieved and under budget. The program found success in outreach strategies that focused on working with property managers for multiple sites at the regional level versus a property-by-property approach, and additional work through event marketing expanded program contacts into new groups. The ability to drive conservation in the premises visited was impacted by a reduced proportion of lighting opportunities due to LED saturation and current GPM flow thresholds restricting the opportunities to install aerators and showerheads. Furthermore, Stage 3 projects continue to be challenging to convert due to extended paybacks.

Changes in 2023

There were no changes to this product.

Refrigerator & Freezer Recycling

The Refrigerator & Freezer Recycling product is designed to decrease the number of inefficient refrigerators, freezers, and air conditioners in the Company's service territory in an environmentally safe and compliant manner and, by doing so, achieve electric energy savings and peak demand reduction. Customers receive an incentive plus free pickup and disposal of their operable, inefficient refrigerator and freezer. A third-party implementer administers the product, including customer scheduling, pickup,

recycling, and rebating. This product is primarily marketed through email, bill inserts, and online/social media efforts.

2023 Product Achievement

The Refrigerator & Freezer Recycling product fell short of its 2023 electric savings target in 2023. This result was due to a major disruption in the appliance recycling industry, which affected not only the Company, but many utilities nationwide. The program had to be temporarily paused in Q3 and Q4 while the Company explored viable solutions. Before this disruption, the product was on track to meet electric savings targets. Therefore, the product came in under budget due to lower-than-expected participation numbers.

Marketing plans focused primarily on cross-promotional efforts with other products that complemented Refrigerator Recycling. The Company also identified customers most likely to participate in the program and launched a targeted email campaign.

Changes in 2023

The Company switched implementers in late-2023. The Company also started claiming savings on units manufactured after 2014.

Residential Heating & Cooling

The Residential Heating & Cooling product combines offerings from several legacy products – Evaporative Cooling, High Efficiency Air Conditioning, Residential Heating, Thermostat Optimization, and Water Heating – to comprehensively address energy-efficiency opportunities related to central air conditioning (“AC”), air source heat pumps (“ASHP”), quality installation (“QI”), mini-split heat pumps (“MSHP”), ground source heat pumps (“GSHP”), evaporative coolers, natural gas furnaces, natural gas water heaters, heat pump water heaters, smart thermostats, and the Western Cooling Control (“WCC”). This holistic approach to residential customers’ heating and cooling needs is designed to improve the experience for customers and trade partners to improve participation, energy savings, and customer satisfaction.

2023 Product Achievement

The Residential Heating & Cooling product exceeded its 2023 natural gas and electric targets. The Company underspent its electric budget, but overspent its natural gas budget, commensurate with savings.

Overall, heat pumps represented approximately 34% of the air conditioning/heat pump rebates. While further improvement is still needed, this is a dramatic increase over 2022 participation, with participation doubling since 2022.

Changes in 2023

The Company made the following changes to the program during 2023:

- Updated efficiency ratings for air conditioners and heat pumps to SEER2/EER2/HSPF2
- Modestly increased rebates for heat pumps by about 10% over prior rebate levels
- Removed the requirement for installation of a mixing valve for heat pump water heaters

School Education Kits

The School Education Kits program offers a multi-component kit that combines classroom activities and in-home projects primarily to fifth or sixth grade students and their parents to teach energy and water conservation. The program offers additional conservation education to high school students and through

community outreach. The kits include energy saving and water conservation measures that students implement at home with their families, including LED bulbs, a high-efficiency showerhead, and faucet aerators. The program offers gas and electric savings, supports state education standards, and educates the next generation of energy consumers on how to be energy efficient. Additional low-cost incentives are offered to encourage students to return their Home Energy Worksheets, which help ensure installation of the provided measures and help determine installation rates. Marketing and outreach communications are implemented by the program vendor and consist of email and direct mail to teachers at eligible schools.

2023 Product Achievement

The School Education Kits product met or exceeded its 2023 electric and natural gas savings target through strong participation in classrooms throughout the service territory. A joint effort with Fort Collins utilities produced strong participation for students in the Company's natural gas-only service territory. Collaboration with Fort Collins allowed the product to reach additional customers and deliver cost-effective gas savings exceeding gas participation and savings targets. The success of the product can be attributed to continuous participation from teachers and follow-up communications to emphasize the importance of installing the provided measures. Installation rates remained high in 2023 due to the educational messaging, popularity of LED bulbs, and accounting for customers planning to install measures soon.

Changes in 2023

The 13W LED bulb replaced the 15W LED bulb.

Whole Home Efficiency

The Whole Home Efficiency ("WHE") product (formerly known as Home Performance with ENERGY STAR[®]) is a comprehensive, whole-home retrofit product designed to give cash rebates to customers for implementation of measures identified during a Home Energy Audit or Home Energy Squad Plus visit.

Upon completion of the product improvements, a post-improvement verification inspection is conducted on a percentage of projects. The Company's third-party implementer is responsible for performing quality assurance on the in-home inspections, the home energy audit reports, and the audit itself. The implementer also provides customer support, contractor management, and oversight of the energy modeling software.

The Company promoted the product through community program partnerships, Insulation and HVAC trade education and promotion, and Program Implementer led email outreach to customers.

2023 Product Achievement

The Whole Home Efficiency product did not meet its 2023 electric and natural gas targets. Participation in the product increased in 2023. In past years, a barrier breakdown existed between the Trade Partners and the Implementer of the product.

Changes in 2023

The Company increased the program's bonus from 10% to 25%. In 2023, a bonus for insulation products participation within six months of a heat pump product installation was added to the program. Lastly, a pay for performance attic insulation rebate based on energy savings was introduced.

General Advertising - Residential

The General Advertising - Residential budget allows Xcel Energy to implement a variety of cross-product residential advertising and promotional plans.

2023 Product Achievement

In 2023, the Company increased residential promotional efforts in response to the increase in customer bills driving awareness of the programs and steps available to manage these higher costs. The Residential Program marketing strategies planned through this offering included multimedia advertising and promotion of our residential DSM products. These strategies allowed the Company to reach large customer targets, build general awareness of and educate consumers on portfolio offerings, and promote specific products' benefits as well as increase engagement with our products. Products with specific marketing efforts included Home Energy Squad, and the Home Lighting products. Both the electric advertising spending and gas advertising spending exceeded forecasted levels as the Company sought to promote its DSM offerings as a tool for customers to manage energy costs. Additionally, gas spending specifically targeted high-propensity gas customers to provide education on gas usage reduction during the heating season through energy efficiency products and services. No realized savings are tied to this budget.

Changes in 2023

There were no changes to this product.

Income Qualified Program

The Income Qualified Program consists of the Energy Savings Kit, Multifamily Weatherization, Non-Profit and Single-Family Weatherization products. In addition to supporting the income qualified market with energy-saving measures through rebates and distribution of DIY conservation measures, these products analyze natural gas and electric consumption for income qualified customers to educate participants on energy saving opportunities that assist in further lowering their energy bills and provide other non-energy related benefits like health, safety, and comfort.

Electric

In 2023, the Income Qualified portfolio programs performed well exceeding its energy savings target. The Non-Profit product, Single-Family Weatherization, and Energy Saving Kits performed strongly, with Multi-Family Weatherization failing to reach its target. A portion of the portfolio's success can be attributed to the distribution of LEDs directly to income qualified customers for installation into their homes. The portfolio has found innovative distribution channels that incorporate local entities already serving the income qualified to engage these hard-to-reach customers in the installation of energy saving measures to lower their bills.

A summary of the Company's Income Qualified Program achievements for electric DSM products is shown in Table 19a below.

Table 19a: Income Qualified Program – Electric DSM Products (Budget to Actual)

	Budgets / Targets					Expenditures / Achievements				
	Electric Budget	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio	Electric MTRC Test Ratio (w/SCC)	Electric Expenditures	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio	Electric MTRC Test Ratio (w/SCC)
Income Qualified Program - 2023										
Energy Savings Kit	\$ 372,533	212	1,523,634	2.44	3.34	\$ 188,313	242	2,202,516	5.60	9.08
Multifamily Weatherization	\$1,219,680	262	2,090,801	0.98	1.19	\$ 1,084,903	316	1,365,627	0.97	1.33
Non-Profit	\$1,139,680	377	1,673,291	1.00	1.18	\$ 1,173,531	775	4,607,156	1.73	2.54
Single-Family Weatherization	\$2,314,050	3,174	23,040,018	4.71	6.38	\$ 2,058,840	4,369	33,586,904	6.28	10.37
Income Qualified Program Total	\$5,045,943	4,025	28,327,743	2.65	3.49	\$ 4,505,588	5,702	41,762,203	3.68	5.91

Natural Gas

In 2023, the Income Qualified portfolio was also successful exceeding its natural gas target. The Non-Profit product, Single-Family Weatherization, and Energy Saving Kits performed strongly, with Multi-Family Weatherization failing to reach its target. The gas portfolio also experienced increased budgetary pressure due to the necessity and cost of health and safety measures related to the efficiency upgrades. A summary of the Company's Low-Income Program achievements for natural gas DSM products is shown in Table 19b below.

Table 19b: Income Qualified Program – Natural Gas DSM Products (Budget to Actual)

	Budgets / Targets					Expenditures / Achievements				
	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio	Gas Expenditures	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Income Qualified Program - 2023										
Energy Savings Kit	\$ 200,566	17,675	81,838	\$2,943,996	10.96	\$ 130,402	11,057	84,789	\$1,688,871	10.88
Multifamily Weatherization	\$ 924,843	10,796	12,163	-\$308,674	0.82	\$ 846,398	7,233	8,545	-\$101,163	0.93
Non-Profit	\$ 587,967	5,204	8,940	-\$205,619	0.81	\$ 405,150	21,593	53,297	\$1,043,775	2.64
Single-Family Weatherization	\$ 4,323,467	55,868	12,890	-\$387,603	0.96	\$ 4,911,504	241,195	49,108	\$22,872,123	3.33
Income Qualified Program Total	\$ 6,036,843	89,543	14,801	\$2,042,100	1.17	\$ 6,293,454	281,077	44,662	\$25,503,607	3.12

Income Qualified Products

In partnership with Energy Outreach Colorado (“EOC”), the Company continued to recruit and deliver the Income Qualified Beneficial Electrification pilot designed to expand participation of heat pump technologies within the Multifamily Weatherization, Non-Profit and Single-Family Weatherization

products. The focus of the pilot is to address customer bill impacts and identify best practices for minimizing energy burden. Independent load calculations, design review, and quality install verification through a 3rd party were incorporated into pilot design. It is scheduled for completion in 2024.

The following provides a brief summary of the performance of each income qualified product in 2023.

Energy Savings Kit

The Energy Savings Kit product provides income-qualified customers with a free package of energy- and money-saving measures (*e.g.*, LED lamps, showerheads, faucet aerators, and educational materials) delivered by mail. The Company's electric and/or natural gas customers who qualify for energy assistance funding through the Colorado Low-income Energy Assistance Program ("LEAP") or other state assistance programs will be contacted through direct mail, email, or a partner agency, to receive a free kit. Income-qualified customers are only eligible to receive a kit once every ten years so that the energy savings can be realized over the lifetime of the measures.

2023 Product Achievement

The Energy Savings Kit product exceeded both the 2023 natural gas and electric savings targets and was under budget. The traditional marketing channel (email) resulted in higher-than-expected participation leading to an increase in orders compared to past years.

Changes in 2023

A smaller version of the kit was ordered and distributed through the Company's RED Truck initiative where income qualified customers are engaged in person by Xcel Energy representatives.

Multifamily Weatherization

The Multifamily Weatherization product provides funding for a wide variety of natural gas and electric equipment retrofit measures, energy-related process improvements, facility audits, studies, and behavioral change efforts for income qualified multifamily buildings. The energy saving opportunities in these buildings are significant because they have common areas, greater square footage, more appliances, and more potential retrofit measures than single-family homes.

The product's implementer, EOC, combines Company-budgeted rebates, administration, and product delivery with funding from the Denver Office of Nonprofit Engagement and other sources to propose comprehensive energy efficiency and demand management solutions to qualifying affordable housing customers. Each submitted project is evaluated using a custom analysis by the Company's energy efficiency engineers to determine cost-effectiveness. In some cases, to offer greater flexibility, market rate prescriptive rebates are offered for retrofit measures when the equipment would otherwise be ineligible for inclusion in the custom project bundle. The program includes funding for delivery of education and outreach to tenants on additional opportunities to save energy.

2023 Product Achievement

The Multifamily Weatherization product fell short of both its 2023 electric and natural gas targets. A significant portion of the program savings are tied to the Beneficial Electrification Pilot. Those projects are inherently more complicated, expensive and require a deeper analysis. In addition, the product experienced delays driven by the contractor, and equipment availability, which impacted the overall program savings. Lastly, spend was under budget for electric and over on the gas. The gas spend was primarily driven by additional health and safety measures.

Changes in 2023

There were no changes in 2023.

Non-Profit

The Non-Profit product provides funding for a wide variety of energy-efficient equipment upgrades and process improvements for qualified Section 501©(3) non-profit organizations within the Company's service territory whose core mission serves low-income individuals and families. Examples include shelters, safe houses, and residential treatment centers.

The Company's rebates, administration, and product delivery, coupled with funding from the Denver Office of Strategic Partnerships, grants and other sources enable EOC, the product's implementer, to offer cost-effective natural gas and electric efficiency and demand management proposals to qualified non-profit facilities. Each submitted project is evaluated using a custom analysis by the Company's energy efficiency engineers to determine cost-effectiveness. In some instances, to offer greater flexibility, prescriptive rebates are offered for retrofit measures when the equipment would otherwise be ineligible for inclusion in the custom project bundle.

In addition to offering upgrades for efficient equipment and system improvements, the Company, in partnership with EOC, facilitates "Energy in Action" plans for non-profit organizations that participate in the product. These plans provide non-profit organization staff with bill analysis services and education on how to further reduce energy usage and save money by making easy changes and encouraging continued engagement in saving energy. While no behavioral savings are presently captured, customer understanding, informed equipment use, and customer satisfaction have improved.

The partnership with EOC allows the Company to reach more customers and increase community impact. EOC leverages additional funding sources to decrease property owner contribution, allowing these organizations to put more of their budget back into serving the income-qualified community, driving increased impact and product participation.

2023 Product Achievement

The product achieved both its electric and gas targets. A significant portion of those savings came from the additional distribution of Energy Savings Kits through local non-profit organizations to their income-qualified clients. This timely distribution during the holidays allowed for a tremendous impact beyond the traditional savings achieved. Spend was slightly over for the electric side, but under on the gas side.

Changes in 2023

There were no changes in 2023.

Single-Family Weatherization

The Single-Family Weatherization product offers free natural gas and electric efficiency measures – insulation, air sealing, furnace repair or replacement, water heaters, smart or programmable thermostats, showerheads and faucet aerators, refrigerator replacements, LED lighting and more – to income-qualified, single-family households in the Company's electric and natural gas service territory. In addition to energy-efficient equipment and installation, a major focus of the product is customer education on additional opportunities to reduce energy use in the home.

The product is implemented in partnership with EOC. Funding provided through the product supplements both the federally funded Weatherization Assistance Program ("WAP"), aligning with state qualification guidelines, and the Colorado Residential Affordable Energy ("CARE") program. CARE

serves an additional segment as it accepts customers that are 80% of Area Median Income (“AMI”), this local metric is important in the state of Colorado as it reflects the rising cost of living.

2023 Product Achievement

The product performed well and exceeded both the electric and gas savings targets. The program was bolstered by a strong distribution of both electric and gas measures through food banks across the territory. Electric spend was under budget and the gas budget was exceeded due to necessary health and safety measures being implemented in several homes.

Changes in 2023

The Company increased the refrigerator rebate to \$900.

Indirect Program

The Indirect Program includes products and services that support the overall development and implementation of the DSM Plan. Most of these products and services do not directly produce energy or demand savings and are not independently evaluated for cost-effectiveness. However, DSM pilots that are being evaluated to become direct impact products and have measured savings do go through a cost-effectiveness evaluation. The costs of the entire Indirect Program are included in the overall portfolio cost-effectiveness evaluation. The Indirect Program has two core elements: Education/Market Transformation and Planning and Research.

Within Education/Market Transformation, the Company offered seven customer-facing products in 2023, including: Business Education, Business Energy Analysis, Consumer Education, Energy Benchmarking, Energy Efficiency Financing, Home Energy Audit, and Partners in Energy. These products did not deliver measured savings in 2023 and, therefore, were not evaluated for cost-effectiveness. However, these services do encourage participation in other direct-impact DSM products.

Within Planning and Research, the Company continued four internal services: EE Market Research; EE Evaluation, Measurement & Verification; EE Planning & Administration, and EE Product Development.

Electric

A summary of the Company's Indirect Program achievements for electric DSM products and services is shown in Table 20a below.

Table 20a: Indirect Program – Electric DSM Products (Budget to Actual)

Indirect Products & Services - 2023	Budgets / Targets					Expenditures / Achievements				
	Electric Budget	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio	Electric MTRC Test Ratio (w/SCC)	Electric Expenditures	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio	Electric MTRC Test Ratio (w/SCC)
Education/Market Transformation										
Business Education	\$176,000	-	-	-	-	\$146,364	-	-	-	-
Business Energy Analysis	\$1,166,744	-	-	-	-	\$545,692	-	-	-	-
Consumer Education	\$961,808	-	-	-	-	\$1,184,990	-	-	-	-
Energy Benchmarking	\$129,908	-	-	-	-	\$159,868	-	-	-	-
Energy Efficiency Financing	\$196,696	-	-	-	-	\$8,023	-	-	-	-
Home Energy Audit	\$451,630	-	-	-	-	\$10,013	-	-	-	-
Partners in Energy	\$1,034,604	-	-	-	-	\$1,342,513	-	-	-	-
Education/Market Transformation Total	\$4,117,390	-	-	-	-	\$3,897,464	-	-	-	-
Planning and Research										
EE Market Research	\$443,570	-	-	-	-	\$368,975	-	-	-	-
EE Evaluation, Measurement & Verification	\$871,752	-	-	-	-	\$999,653	-	-	-	-
EE Planning & Administration	\$559,517	-	-	-	-	\$749,096	-	-	-	-
EE Product Development	\$1,975,386	-	-	-	-	\$1,759,015	-	-	-	-
Geo-targeting Pilot - EE	\$24,073	-	-	-	-	\$0	-	-	-	-
EE Product Development Total	\$1,999,459	-	-	-	-	\$1,759,015	-	-	-	-
EE Planning and Research Total	\$3,874,296	-	-	-	-	\$3,876,739	-	-	-	-
EE Indirect Products & Services Total	\$7,991,687	-	-	-	-	\$7,774,203	-	-	-	-

Natural Gas

A summary of the Company's Indirect Program achievements for natural gas DSM products and services is shown in Table 20b below.

Table 20b: Indirect Program – Natural Gas DSM Products (Budget to Actual)

Indirect Products & Services - 2023	Budgets / Targets					Expenditures / Achievements				
	Gas Budget	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio	Gas Expenditures	Net Annual Dth Savings	Annual Dth/\$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Education/Market Transformation										
Business Education	\$19,600	-	-	-	-	\$18,914	-	-	-	-
Business Energy Analysis	\$218,477	-	-	-	-	\$66,237	-	-	-	-
Consumer Education	\$65,178	-	-	-	-	\$119,956	-	-	-	-
Energy Benchmarking	\$35,682	-	-	-	-	\$46,266	-	-	-	-
Energy Efficiency Financing	\$84,245	-	-	-	-	\$7,086	-	-	-	-
Home Energy Audit	\$608,484	-	-	-	-	659,652	-	-	-	-
Partners in Energy	\$121,533	-	-	-	-	\$143,727	-	-	-	-
Education/Market Transformation Total	\$1,153,199	-	-	-	-	\$1,061,840	-	-	-	-
Planning and Research										
EE Market Research	\$184,967	-	-	-	-	\$163,438	-	-	-	-
EE Evaluation, Measurement & Verification	\$184,330	-	-	-	-	\$512,167	-	-	-	-
EE Planning & Administration	\$50,962	-	-	-	-	\$196,311	-	-	-	-
EE Product Development	\$168,010	-	-	-	-	\$152,683	-	-	-	-
EE Product Development Total	\$168,010	-	-	-	-	\$152,683	-	-	-	-
EE Planning and Research Total	\$588,269	-	-	-	-	\$1,024,599	-	-	-	-
EE Indirect Products & Services Total	\$1,741,468	-	-	-	-	\$2,086,439	-	-	-	-

The Indirect Program budget consists primarily of labor, educational materials, and study costs. Most studies are conducted by outside experts, generally selected through a competitive bid.

Education / Market Transformation Products

The following provides a brief summary of the performance of each education / market transformation product in 2023.

Business Education

The Business Education product creates awareness of energy conservation by providing business customers with information and resources to reduce their business' energy use. The Company provides customers with opportunities to actively learn about and engage in energy efficiency by offering product information at event sponsorships and other onsite outreach, along with print and digital communications to drive overall education and thoughtful messaging.

2023 Product Achievement

Through Q4 2023, the Business Education product exceeded the year-end target of consumer participation/engagement. The product has found success in driving education, awareness and engagement with local business customers via in-person events. Partnerships with local teams and organizations allow for greater business and relationship development opportunities. The Company continues to participate as a sponsor in Broncos Business Boost which highlights Xcel Energy's commitment to educating and supporting local small to medium-sized business customers. Digital and print advertising also offered great opportunities to get messaging in front of the right business audiences. A mixture of face-to-face event opportunities, along with print and digital advertising, will continue to be important in engaging with our business customers in 2024.

Changes in 2023

There were no changes in 2023.

Business Energy Analysis

Business Energy Analysis is an indirect impact product that offers analysis services to identify energy saving opportunities for Colorado business customers. The product includes two different types of assessments: Walk-through energy audits, and Commercial Streamlined Assessments. The reports in these assessments provide varying levels of detailed information about cost and payback, which support the business case for the customer to make energy-efficiency upgrades. Implementation of the energy savings opportunities identified by these assessments is conducted through the Business Energy Assessments product.

2023 Product Achievement

The product achieved enough savings in electric to be cost-effective but did not hit its internal savings goal. There was an increase in assessment pipeline in Q4 due to state mandates and building performance ordinances and standards. With customers being required to have 90% LED lighting in their facilities, there are many customers looking for a energy analysis and for our vendors to sign attestation forms for their current LED lighting. The product and vendor are finding ways to streamline the experience for customers who want an assessment or audit and need to adhere to Energize Denver guidelines and standards.

Changes in 2023

There were no changes in 2023.

Consumer Education

The Consumer Education product creates awareness of energy conservation by providing residential customers with information and resources to reduce their homes' energy use. The Company provides customers with opportunities to actively engage by learning more about energy usage in their homes and ways they can save energy and money with Xcel Energy's tools, rebates, and programs. Awareness-driving tactics include sponsored community events with opportunities to engage customers face-to-face, larger sponsorships that provide highly visible in-person and digital messaging opportunities (such as sporting events), social media, email, website advertising, and newsletter outreach with the intention of empowering customers to take action and participate in programs to help them save energy and money.

2023 Product Achievement

The Consumer Education product overachieved its target for customer participation/engagement in 2023. The product continues to find success in sponsoring local events and meeting customers directly at the places they love to visit. The team works closely with local organizations to ensure the Company is getting value in each partnership. On-site presence allows for face-to-face interactions with customers to answer questions and educate them on the energy-saving programs and rebates Xcel Energy offers. The intention is to reach as many customers as possible with creative and engaging messaging. Some key partnerships and events included: Denver Botanic Gardens, Parade of Lights, Denver Zoo, Denver Broncos, CU Boulder, Home Shows, Cinco de Mayo Denver, Pride Festivals, Adams County Fair, Grand Junction Air Show and more.

The Program was over budget for the year due to an increased focus and effort on showing up for customers in the community. With data and insights, the product is aware that an increased effort will be put into showing up for customers in person and supporting the local community. These face-to-face engagement opportunities provide the Company with valuable ways to drive energy and money-saving educational messaging that support the Company's DSM residential programs and resources. The Program will continue to drive messaging via sponsored events as those provide the greatest opportunity for direct engagement and outreach.

Changes in 2023

There were no changes to this product.

Energy Benchmarking

The Benchmarking service is a free data aggregation and upload product provided to the Company's electric and natural gas customers seeking to track whole building data. The service allows building owners to receive monthly whole-building energy consumption data for their buildings without violating customer privacy. Once the service is implemented, it continues to upload data automatically to the Environmental Protection Agency's online tool, Energy Star Portfolio Manager.

The product is marketed to larger building customers with multiple premises on their property. It primarily targets customers in those cities with a benchmarking ordinance who are required to report whole building energy consumption data to the cities. Currently, the cities with active benchmarking ordinances are Denver, Boulder, Fort Collins and Aspen, alongside a new Colorado statewide benchmarking ordinance that reports annually on June 1st.

There is a sub-program that falls under the Energy Benchmarking program's umbrella, the Community Energy Reporting program. The focus of the Community Energy Reporting program is to provide aggregated data at the city, county, and state levels in the form of Community Energy Reports, which are published on the Company's website each year by June 1. These Community Energy Reports contain a variety of useful data tables such as: energy consumption, utility systems characteristics, renewable program participation, demand management program participation, energy efficiency program participation and EV program participation. These reports are automatically produced for cities with populations larger than 50,000 residents and counties with populations larger than 100,000 residents. New cities and counties can be added to the annual production upon request, and the Company anticipates a significant growth in this program over the next several years.

2023 Product Achievement

Participation in the program continued to increase due to expanded city ordinances in compliance with the statewide mandate which required benchmarking reporting for buildings 50,000 square feet and larger. Due to greater than anticipated participation and the extension of municipal and state ordinance reporting deadlines, increased labor costs were incurred resulting in over budget spending.

There were 1,584 new benchmarking requests in Colorado in 2023. Continuous efforts were made to upgrade the Company's benchmarking software to accommodate the influx in aggregated whole-building data requests. Additionally, work has begun to analyze processes in the benchmarking software that are candidates for automation so that processing building data requests is faster and less labor intensive. The benchmarking team improved response times for customer inquiries and corrected any data discrepancies in a timely manner for Company customers. The Company is vetting multiple options to continually enhance its benchmarking software to accommodate significantly more participation while prioritizing a seamless customer experience. Additionally, the Community Energy Reporting team has made investments in its business systems that allows for a more streamlined process in putting together the annual Community Energy Reports.

Changes in 2023

There were no changes to this product.

Energy Efficiency Financing

Energy Efficiency Financing is an indirect impact product, connecting residential and business customers with third-party lending institutions to encourage the use of financing, where needed, for implementation of DSM projects. The financing proposal is typically initiated by the trade partner implementing the energy efficiency project for the customer. Financing options are promoted through the Company website, other product collateral, and Company trade partner presentations.

2023 Product Achievement

The product fell short of the targeted spend. The Company is not currently under contract with any third-party financing vendors which would have accounted for a portion of the targeted spend.

Changes in 2023

There were no changes to this product.

Home Energy Audit

The Home Energy Audit product provides rebates to the Company's natural gas and/or electric customers who receive an in-home energy audit. Considered a gateway to other residential products, Home Energy Audit is designed to encourage customers to understand their home's energy usage and is typically promoted through bundled marketing efforts with other products such as Home Energy Squad and Whole Home Efficiency which can lead to improvements in energy savings in residential homes. An Energy Advising component has been incorporated as a value-added service to customers who are unsure of which next steps to take to achieve their energy goals. There are three types of in-home audit rebates offered through this product that can earn the customer a rebate: (1) standard audit; (2) standard audit with blower door test; or (3) infrared audit which includes the standard audit, the blower door test, and infrared imaging.

2023 Product Achievement

The Home Energy Audit product exceeded participation targets increasing customer interaction significantly through the network of Trade Partner Auditors as well as through the Home Energy Squad program. The Company continued to offer audits in combination with a Home Energy Squad visit to increase participation and lead customers to take additional action. The significant increase in participation led to the product exceeding electric and gas budgets. Feedback from customers continues to be very positive, and the Company will continue to develop these combined visits to improve the customer experience and encourage participation in other DSM products.

Changes in 2023

There were no changes to this product.

Partners in Energy

Partners in Energy supports communities in identifying and achieving energy-related goals. The Company works with a third-party implementation partner to provide tools and resources to enable community-driven energy planning and support for plan implementation providing outreach, education, energy and program expertise and project management that results in increased participation in energy efficiency and beneficial electrification. Traditional participation in the program spans approximately 24-months but the offering has expanded to provide support to a broader market of communities served by Xcel Energy. This includes working with graduate communities to continue their promotion of energy saving opportunities beyond the original 24-month window and working to partner with a community that already has a defined goal and just needs support to implement a strategy. The program has also expanded to support a regional approach (e.g., county-level) to promoting energy conservation. Communities within

that region may develop specific plans to leverage the momentum of larger initiatives while focusing on their unique goals and resources.

In addition to energy efficiency and beneficial electrification, communities can incorporate renewables, electric vehicles, and other carbon reduction efforts into their plans. Costs associated directly with incremental participation in direct impact programs is reflected in those program budgets and not charged to the DSM budget.

Partners in Energy staff work with community teams to develop workplans and conservation promotion materials, identify target markets, and incorporate local resources and communication channels to drive energy efficiency. The program continues to support communities in expanding their outreach and educational messaging around conservation. Support can include helping communities set and track carbon reduction goals and identify the impacts necessary from energy efficiency. An increasing number of communities are working with the program to deliver educational information around beneficial electrification and its potential to reduce energy use. In addition, the program provides resources to support communities and encourages expansion of their work to drive energy savings through networking events, access to subject matter experts, relevant local energy data, online tools, and resources.

2023 Product Achievement

Participation in Partners in Energy was strong, driven by Energy Action and Beneficial Electrification planning from new and returning communities. Six communities completed energy plans in Colorado. One of these was a Beneficial Electrification Workplan that prioritized, as other electrification plans do, addressing energy efficiency as the first step towards electrification.

Changes in 2023

Communities implementing their plans and graduate communities were particularly interested in electrification. The program focused on promoting energy conservation to help communities, businesses and individuals prepare buildings for new electrification projects. Many of these graduate communities requested additional support and extended their scope beyond the standard implementation periods. More communities have requested, and received, help from Partners in Energy in reaching out to underserved communities including tabling at events and providing translated materials.

EE Product Evaluations

The Company procures third-party comprehensive evaluations, including impact and/or process evaluations, of products in the DSM Portfolio. The evaluations identify product strengths as well as opportunities for improvement and enable comparison with industry best practices. In 2023, comprehensive evaluations were conducted for four products: Home Energy Squad, Lighting Efficiency-Midstream, Multifamily Buildings, and Small Business Solutions (Direct Install and Midstream). A process-only evaluation was conducted for Home Energy Audits and Income Qualified Multifamily Weatherization. The results from the Lighting Efficiency-Midstream and Small Business Solutions evaluations are not available at the time of this report due to significant delays in primary data collection with business customers. Consistent with past evaluations, a summary of those results and recommendations will be included in a future DSM Roundtable and posted on the Company's website.

High-level outcomes from these evaluations include:

- *Home Energy Audit (Residential)*: This evaluation offered insights into both customer and trade partner experiences. Key findings show that single family programs driven by trade partners have the largest gaps in equity and that trade partners want more support from Xcel Energy partners. Additionally, primary barriers to customer participation are initial cost and slow payback. The

evaluation team recommends adding trade partners who serve a wider customer base, addressing gaps in trade partner experience, and exploring possible financing strategies that could reduce the customer burden.

- *Home Energy Squad (Residential)*: The evaluation provided an updated net-to-gross analysis for this product and several process recommendations. Important findings show that most customers were proactively seeking out the program, customers were interesting in equipment upgrades but lacked recommendations, and the primary barrier to participation was difficulty scheduling appointments due to long wait times. Recommendations include improving outreach efforts to expand awareness, clearly directing customers to applicable Xcel Energy products, and for Xcel to track the effect that program changes have on wait times.
- *Multi-Family Buildings (Residential)*: Process recommendations and an updated net-to-gross analysis were outlined in this program's evaluation. Findings show a lack of communication between property representatives and tenants, and primary concerns for property representatives being over-reliance on the electrical grid, low return on investment, and high cost. Recommendations from the evaluation team are to develop and carry out an occupant communication plan, increase education on the benefits of electrification to both trade partners and property representatives, and encourage implementors to estimate cost ranges and benefits to property representatives during the assessment stage of the project.
- *Multi-Family Weatherization (Residential)*: The evaluation of the program produced insights on successes and possible process improvements. Findings include satisfaction with being able to install energy savings equipment at no or low cost and with the program experience. The evaluation team also included findings that show that trade partners struggle with tracking code changes and calculating savings. Recommendations include working with the implementors to better understand expectations and the timeline of savings calculations and to offer listening and information sessions to trade partners on jurisdictional differences and changes.

Evaluation reports are found on the Company's website, here:

https://www.xcelenergy.com/company/rates_and_regulations/filings/colorado_demand-side_management

2023 Product Achievement

The EM&V expenditures for electric and natural gas both exceeded the budget due to two factors: increased cost for evaluation services due to inflation and inclusion of more programs compared to 2022. Natural gas was particularly affected because the programs evaluated in 2023 have a larger share of gas savings when compared to 2022, which, when combined with the split year (*i.e.*, continuation of the 2022 DSM plan into 2023) resulted in a much lower budget for natural gas than what the Company predicted when filing the 2023 plan.

Changes in 2023

There were no changes in 2023.

Measurement and Verification

Measurement and verification activities ensure that all direct electric and natural gas DSM savings are properly calculated in the system of record (Salesforce) and accurately reported for compliance purposes, on a quarterly and annual basis. This M&V ensures that technical assumptions, NTG ratios, and realization rates used in energy savings calculations are as accurate as possible. The M&V process also includes projects that are managed by implementors to ensure accuracy of the savings that Company is taking credit for.

The expenditures associated with M&V, as reported in the Executive Summary of this report, include only the internal labor to manage the overall M&V process. M&V expenses from third-party verification contractors are charged directly to individual products supported.

The intensity of third-party M&V methods is balanced with the costs of the M&V approaches, being mindful of the objectives to ensure accurate savings while keeping expenditures prudent and maintaining the cost-effectiveness of the products. Product savings are validated through a multi-step process designed to ensure that rebates are correctly processed, rebated measures were installed, and equipment is performing as intended. The M&V activities also provide opportunities to evaluate customer satisfaction and identify strategies for improving product delivery and effectiveness. Results of M&V analyses are reported in the section of this Report labeled “Evaluation, Measurement, and Verification: 2023 Results”.

DSM Market Research

The Company conducts surveys and studies throughout the year to gauge energy awareness and customer interest around DSM. Internal market research functions are needed to provide overall support for clarifying DSM issues and thoroughly understanding current and potential DSM customers. In 2023, the Company conducted the following general research and analytical services:

- Maintain an Xcel Energy-specific residential customer segmentation model;
- Support a Product Experience Survey that monitors customer satisfaction by surveying most participants after a rebate has been processed or program participation has completed;
- Subscribe to E Source Consultative services and research;
- Purchase updated Dun & Bradstreet business customer classification information;
- Continue Residential Campaign Effectiveness Tracking research.

Market research is used internally by the Company as a resource for planning marketing activities and initiating efforts to reduce the number of non-participants.

2023 Product Achievement

In 2023 Market Research was slightly under budget for both electric and natural gas.

Changes in 2023

There were no changes in 2023.

Planning & Research Products

The following provides a brief summary of the performance of each Energy Efficiency planning and research product in 2023.

EE Planning & Administration

DSM Planning & Administration is an indirect product with internal staff that manages all energy efficiency-related filings, including the annual DSM Status Report, DSM Plans and Notices, and Strategic Issues proceedings. This group performs cost-benefit analyses of all the energy efficiency and demand response products, provides tracking of the energy and demand savings, and collaborates with the Company’s Resource Planning group to develop inputs for the resource plans. DSM Planning & Administration conducts all planning and implementation of the quarterly DSM Roundtable Meetings and associated filings; and provides management oversight of all evaluation, measurement and verification planning and policies. These staff members work with outside consultants and stakeholders as needed throughout the year. These functions are necessary to ensure a cohesive and high-quality DSM portfolio

that meets all legal requirements as well as the expectations of internal and external customers and the Commission.

2023 Product Achievement

In 2023, the Company's EE Planning & Administration expenditures for electric and gas were both over budget for the year. Major projects included developing and supporting the 2024-2026 DSM BE Plan application, which was filed on December 1, 2023.

Changes in 2023

There were no changes in 2023.

EE Product Development

The product development process starts with ideas and concepts from customers, regulators, energy professionals, interest groups, and Company staff. The Company's Product Development team identifies, assesses, and develops new energy efficiency products, services, and measures for the Company. This work enables the Company to identify and promote promising new EE products, measures, delivery mechanisms, and other opportunities for its customers.

In 2023, the Company introduced new EE products or measures via 60-Day Notices, managed ongoing pilots, and worked to develop new products and measures that may be introduced via a 60-Day notice in 2024. A summary of these activities in 2023 follows:

- Commercial dual-fuel heat pumps
- Commercial air source heat pumps
- Commercial water source heat pumps
- Commercial heat pump water heaters
- Commercial variable refrigerant flow systems
- Virtual recommissioning
- Integrated lighting and HVAC controls
- Redesigned Energy Management Systems
- Residential cold climate heat pumps
- Appliance standards
- Heat Savers, a winter thermostat demand response program
- Behavioral demand response
- Direct load control switches with two-way communications that control air conditioners and water heaters

2023 Product Achievement

None

Changes in 2023

None

Geo-targeting Pilot – EE

The objective of the Company's Geo-Targeting pilot was to demonstrate that the targeted deployment of DSM resources can defer the need for investment in a new distribution transformer and associated feeder upgrades. To accomplish this, the Company used traditional EE and DR resources to address localized system constraints coordination and dispatching of demand response and validation of cost effectiveness.

2023 Product Achievement

The pilot completed engagement with the Company's distribution operations team to demonstrate that DSM products can be utilized to manage grid operations. The pilot successfully demonstrated that localized DR events can defer the need to invest in infrastructure upgrades. Additional testing of the saver-switch and AC Rewards control systems was not implemented because slower than expected load growth in the targeted area allows the Company to continue to defer investment in a new distribution transformer. The team remains confident in its ability to call targeted feeder-specific events based on historic results.

Changes in 2023

This pilot concluded in 2023.

Demand Response Program

Demand Response provides utilities with a valuable tool for managing peak demand on the electric system. The Company offered three types of DR products in 2023: (1) Direct Load Control, (2) Interruptible DR, and (3) Non-Dispatchable DR.¹⁴ The Company's DR Program includes participation opportunities for business and residential customers on a Public Service firm demand rate for electric service. DR results for 2023 are shown in Table 21 below.

Table 21: 2023 DR Results (MW)

	Goal¹⁵	Actual
Demand Response (DR)	520 ¹⁶	578
Demand Reduction from Energy Efficiency (EE-DR)	75	105
Total	595	683

Ordering Paragraph 86 of Decision No. C18-0417 directed the Company to achieve total demand response reduction goals of 595 MW in 2023. The Company's Demand Response program overachieved its goals. The portfolio was largely stable in 2023, with incremental growth slightly outpacing program attrition. The Company expects the DR portfolio to grow and increase available load in the future. The Demand Response programs typically have a longer sales cycle and more customized approach with commercial customers. The Company has been working on tools and resources to better meet customer needs, such as site visits to help identify curtailment opportunities. The Company hosted a Demand Management Summit for customers not currently enrolled in Demand Management to help educate and build a customer pipeline. The residential programs continue to explore and expand partnership opportunities for new and evolving technologies to better support our customers and the grid needs.

¹⁴ 2015/16 DSM Plan at 312. (Proceeding No. 14A-1057EG).

¹⁵ See Decision No. C18-0417, at ¶ 86 (Proceeding No. 17A-0462EG). Includes 75 MW from Energy Efficiency Demand Reduction as affirmed in the Non-Unanimous Comprehensive Settlement Agreement, at Section III(A)(9).

¹⁶ Cumulative DR achievement.

Table 22: Demand Response Program¹⁷ – Electric DSM products (Budget to Actual)

Demand Response Program - 2023	Budgets / Targets					Expenditures / Achievements				
	Electric Budget	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio	Electric MTRC Test Ratio (w/SCC)	Electric Expenditures	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio	Electric MTRC Test Ratio (w/SCC)
Critical Peak Pricing	\$268,848	17,273	465,733	-	-	\$255,840	1,330	339,137	-	-
Electric Vehicle Critical Peak Pricing	\$314,517	691	-	-	-	\$48,971	239	-	-	-
Electric Vehicle Optimization	\$1,098,322	3,567	-	1.21	1.31	\$782,586	2,591	-	0.74	0.91
Peak Day Partners	\$503,858	10,843	323,995	-	-	\$50,220	22,213	16,877	-	-
Peak Partner Rewards	\$1,663,326	33,754	322,824	-	-	\$582,919	81	3,507	-	-
Residential Battery Demand Response	\$190,012	556	(5,226)	-	-	\$143,583	-	-	N/A	N/A
Residential Demand Response	\$16,809,763	28,706	116,005	1.96	1.96	\$14,657,103	31,559	129,431	2.31	2.31
Small Commercial Building Controls	\$537,291	2,485	222,811	2.22	2.28	\$89,351	91	1,458	1.02	1.02
DR Program Total	\$21,385,937	97,875	1,446,142	2.18	2.19	\$16,610,572	58,104	490,409	2.27	2.28
Planning and Research										
DR Planning & Administration	\$66,903	-	-	-	-	\$8,482	-	-	-	-
DR Program Evaluations	\$338,482	-	-	-	-	\$119,060	-	-	-	-
DR Product Development	\$1,978,226	-	-	-	-	\$722,271	-	-	-	-
Geo-targeting Pilot - DR	\$321,259	-	-	-	-	\$0	-	-	-	-
DR Planning and Research Total	\$2,704,870	-	-	-	-	\$849,813	-	-	-	-
DR PORTFOLIO TOTAL	\$24,090,807	97,875	1,446,142	2.03	2.04	\$17,460,385	58,104	490,409	2.16	2.17

Demand Response Products

The following provides a brief summary of the performance of each Demand Response product in 2023.

Critical Peak Pricing

During periods of peak energy demand, such as hot summer days, the electric system may require more power than is typically available. The Critical Peak Pricing (“CPP”) product provides participants a price signal to encourage them to reduce their electricity usage during these periods. Under the CPP rate, participating customers receive a discounted demand charge but are subject to higher energy charges during CPP events. CPP events can occur up to 15 times a year during the hours of noon and eight P.M. and may be up to four hours in duration. Participating customers receive day-ahead notification of when “critical peak” days will occur.

To better manage their energy usage during peak events, participants are provided access to their electric load profile data in near-real-time. Access to this data not only allows participants to monitor their performance during events, but also provide insight into their energy use throughout the year.

The CPP product is marketed directly by the Company’s account management staff and is available to commercial and industrial customers under rate schedules SG, PG or TG who have an existing interval meter.

2023 Product Achievement

During the 2023 control season, the Company dispatched six CPP events in July, August, and September. Preliminary results show demand reductions varied from event to event, which is typical performance for a critical peak product, but on average demand reductions per event exceeded the Company’s 20% load reduction planning estimate of approximately 22,823 kW during the 2023 control season. The product added two new participants and no participants unenrolled in 2023, ending the year with 36 total participants. The Company will continue to increase the number of participants and improve total available demand reduction.

¹⁷ Table provides the breakout of incremental DR achievement.

In 2023, the Company created performance report cards for customers analyzing their 2022 performance, and then in late Q4 also compiled customer performance report cards for 2023 performance. The goal is to encourage consistent demand reductions across events, so participants will maximize their benefits.

Lastly, the Company hosted an in-person Demand Management Summit to educate customers on demand management and available Colorado Demand Management programs such as Critical Peak Pricing.

Changes in 2023

There were no changes to this product.

Electric Vehicle Critical Peak Pricing

The Electric Vehicle Critical Peak Pricing (“EV-CPP”) product operationalizes a tariff rate introduced by the Company as Secondary Voltage Time-of-Use Electrical Vehicles Service (“S-EV-CPP”) through Advice Letter No. 1798 to the Public Utilities Commission on May 24, 2019. The Company developed the S-EV-CPP rate to help business customers manage the potential costs associated with charging fleet EVs. A component of this rate includes CPP charges to strongly encourage customers to reduce their usage during periods when forecasts indicate the electric grid will experience high system loads as a percentage of available generation capacity.

2023 Product Achievement

In 2023, the Company successfully dispatched six EV-CPP events in July, August, and September. The product did not add any participants. Also, no participants unenrolled in 2023. The program ended the year with 18 total participants. Product enrollment has stalled due to the introduction of the new S-EV rate in 2022 that does not include a CPP component.

The Company ended the year under budget for this Product. The Company will continue to market the product to commercial customers with electric vehicle fleets.

Changes in 2023

There were no changes made to this product.

Electric Vehicle Optimization

The Company offers the Electric Vehicle Optimization product to customers to mitigate grid impacts associated with electric vehicle (“EV”) charging, while also starting to evaluate how to harness the potential grid flexibility that EVs can provide. The Electric Vehicle Optimization product has two offerings:

- Static Optimization (also known as “Optimize Your Charge”); and
- Dynamic Optimization (also known as “Charging Perks”).

Static Optimization (also known as “Optimize Your Charge”)

Static Optimization is an offering that seeks to manage the grid impacts of EVs by working with customers to schedule their daily EV charging based on the customer’s selection of a preferred static schedule that ensures charging occurs outside the Company’s system peak. EV customers will typically start charging their EV at the beginning of their preferred static schedule.

2023 Product Achievement

In 2023, the Company expanded the Optimize Your Charge offering to include automakers Toyota and Lexus. The Company has continued its partnership with WeaveGrid to collect Hyundai, Kia, Tesla,

Toyota, and Lexus data from various models within Static Optimization. Slightly more than 2,000 new Optimize Your Charge customers were enrolled in 2023.

Marketing for Static Optimization was included under the Electric Vehicle marketing umbrella in 2023 and will continue to be included in this marketing plan in 2024.

Changes in 2023

There were no changes made to this product.

Dynamic Optimization (also known as “Charging Perks”)

Dynamic Optimization is an active managed charging offering for eligible electric vehicles that manages the charging demand of EVs through a more innovative approach by working directly with various automakers and EV charging integration vendors to formulate a customer’s daily charging schedule based on day-ahead forecasts of power production costs, customers charging schedule, state-of-charge preferences, and renewable energy production. The daily charging schedule is dynamic because the ideal charging period is likely to change every day based on the most conducive times for the grid. Charging Perks tries to charge customer EVs during off-peak periods when renewables are abundant. Charging Perks was implemented through a small-scale pilot in 2021, but the popularity has grown year over year as more EV customers want their vehicle charged during lower cost periods when renewables are abundant.

2023 Product Achievement

In 2023, the Charging Perks offering expanded beyond its current cap of 1,000 EVs to nearly 1,200 vehicles. The Company continues to surpass enrollment targets as this offering grows. The dynamic nature of Charging Perks depends on a daily Price Signal that mimics power production costs and renewable energy production. The Company has worked with an M&V partner to analyze how effectively these Price Signals are helping avoid renewable curtailments, reduce CO₂ emissions, and avoid additional capacity.

Marketing for Dynamic Optimization is mainly conducted by the automakers and EV integration vendors as mentioned in the 2023 Demand Side Management & Beneficial Electrification Plan. The Company will also leverage digital placement strategies online.

Changes in 2023

Dynamic Optimization added Wallbox Chargers as another eligible pathway for participation in 2023. The Wallbox Charger pathway gives customers an EV agnostic option to participate. The Company developed several automation upgrades to make product operations more efficient, including the integration of computer coding, algorithms, and macros to expedite the customer enrollment processes. Honda chose to stop participating in the Charging Perks product at the end of Q1 2023 due to unforeseen issues with their data collection process. Honda has the option to participate in the product again when ready.

Interruptible Service Option Credit

The Interruptible Service Option Credit (“ISOC”) product offers savings opportunities for business customers on the ISOC Tariff¹⁸ that can reduce their electric demand when notified. In return for participating, customers receive a monthly credit based on the program options they signed up for. Participating customers must have a Contract Interruptible Load (“CIL”) of 300 kW or more.

¹⁸ Advice Letter No. 1524 (Second Amended); Electric Tariff Sheet No. 90.

The ISOC program is composed of one service option, the “Within Ten-Minute Notice” option. Participating customers that take service on the Within Ten-Minute Notice option must provide load relief to Public Service’s system in less than 10 minutes. Within Ten-Minute load therefore acts as an operating reserve. This reserve requirement, called the Control Performance Standards (“CPS”), is established by the North American Electric Reliability Corporation (“NERC”). NERC guidelines, combined with Western Electricity Coordinating Council (“WECC”) and Rocky Mountain Reserve Group (“RMRG”) guidelines, require that Public Service carry approximately 400 MW of operating reserves at all times, of which 50% must be online and spinning. The remaining reserves can be offline quick-start units or Within Ten-Minute notice ISOC load. If the system does not have sufficient quick-start units to meet 50% of the reserve, the Company will need to carry more than 50% as online and unloaded spinning capacity. This is undesirable due to the hourly cost associated with carrying spinning reserves. Public Service can treat all subscribed Within Ten-Minute notice ISOC load as offline operating reserves, allowing the Company to reduce its level of spinning reserves significantly.

Intermittent generation resources also play a role in the evaluation of the ISOC program as they contribute to the system’s operating reserve requirement via the CPS. The Company meets this reserve requirement by maintaining enough 30-minute reserve capability to cover the corresponding amount of generation in intermittent resources. The ISOC program helps meet this standard as it is a source of reserve capability available within 10 minutes. Public Service anticipates it will continue to add intermittent renewable generation capacity into the Company’s resource portfolio. Thus, ISOC will continue to be a valuable resource as the Company integrates higher levels of variable output generation.

Beyond meeting operating reserves requirements, the Within Ten-Minute ISOC option can also be called upon to meet constraints on the Company’s generation and transmission system by reducing peak demand requirements. These peak demand periods are classified as Economic, Capacity, and Contingency events, and are defined within the ISOC Tariff.

By providing a substitute for constructing new, supply-side resources, specifically a combustion turbine (“CT”), the ISOC program provides a cost-effective addition to Public Service’s resource portfolio. Although there may be years where the program is triggered less frequently, it still carries significant value by contributing to the Company’s reserve margin requirement and ensuring the reliability of the electric system.

2023 Product Achievement

During the 2023 control season, the Company dispatched three ISOC events in February, March, and August. The product did not add any new participants. One participant unenrolled in 2023. This program ended the year with 68 total participants. Of those, 67 participants are enrolled into Part B and one participant is enrolled into Part C of the ISOC tariff.

The Company ended the year under budget for this Product by 7%. The Company will continue to promote ISOC to improve total available demand reduction.

Changes in 2023

There were no changes to this product.

Peak Day Partners

Peak Day Partners (“PDP”) provides the Company with an additional power purchase resource to manage system requirements more efficiently during periods of high demand, as well as providing customers with the option of receiving pricing associated with energy supply markets during such periods. The PDP

product offers commercial and industrial customers a bid for a level of demand they are willing to reduce, at times of system peaks. The Company will send offers to participating customers for a specific load reduction amount at a given price and a specific date and time. Customers will have the option to accept, decline, or provide a counteroffer. If accepted, the customer will be responsible for curtailing load to meet the accepted demand reduction during the specified hours. This is a voluntarily participation product and there is no penalty for non-participation.

2023 Product Achievement

The PDP product finished 2023 with four enrolled participants. Product participation is in line with projections while demand reduction achievements are ahead of target as the average participant is indicating higher load reductions than forecasted. In 2023 there were two accepted control events.

Changes in 2023

There were no changes to this product.

Peak Partner Rewards

During periods of peak energy demand, such as hot summer days, the electric system may require more power than is typically available. Customers who participate in the Peak Partner Rewards product agree to reduce their electricity use at the Company's request during these periods. The Peak Partner Rewards product is available to all business customers that agree to reduce usage between the hours of 12 P.M. and 8 P.M. by a minimum of 25 kilowatts ("kW").

2023 Product Achievement

During the 2023 control season, the Company dispatched four Peak Partner Rewards events in January, July, and August. This is the second year of calling a winter event with two February events called in 2022 and one January event called in 2023.

The product added two new participants in 2023. One participant unenrolled in 2023. This program ended the year with 32 total participants. The one participant that unenrolled was due to new facility management choosing to end their participation. The Company will continue to increase the number of participants and improve total available demand reduction.

In 2023, the Company created performance report cards for customers analyzing their 2022 performance, and then in late Q4 also compiled customer performance report cards for 2023 performance. The goal is to encourage participants to achieve deeper demand reductions so participants can maximize the incentives earned through Peak Partner Rewards, while also resulting in more consistent event performance.

Additionally in 2023, the Company hosted an in-person Demand Management Summit to educate customers on demand management and available Colorado Demand Management programs such as Peak Partner Rewards.

Changes in 2023

Effective January 1, 2023, the Load Reduction Obligation Period ("LROP") was moved to events called between the hours of noon (12 P.M.) to 8 P.M. The previous LROP was 2 to 6 P.M. Customers were notified in Q4 2022 of this change.

Residential Battery Demand Response

The previous Residential Battery Demand Response Pilot (marketed as “Battery Connect” to customers) began in February 2021 and ran for one and a half years. The Battery Connect pilot successfully evaluated various energy storage concepts related to residential battery use. Renewable Battery Connect represents the next version of this product and was originally filed in the 2022-25 Renewable Energy Plan¹⁹ approved by the Colorado PUC in September 2022. The primary product design changes from the pilot are the increased upfront incentive amount and the requirement for the battery to be 100% charged by an on-site solar system which enables the battery to qualify as a renewable energy resource.

Renewable Battery Connect is focused on testing the ability of a customer’s home battery to provide demand response services such as peak load reduction and solar time shifting. Participants receive an upfront enrollment incentive and annual payment for five years in exchange for allowing the Company to use 60% of their battery’s available capacity for up to 60 events per year. This program is one of several programs around the country that allow the customer to utilize their own battery to participate in a utility-managed demand response program.

2023 Product Achievement

No achievements were reported in 2023 due to the pilot officially ending in September 2022.

Changes in 2023

No changes in 2023.

Residential Demand Response

The Company has three residential demand response products:

- Saver’s Switch® is a demand response offering that provides residential customers with central AC an annual rebate on their bill in exchange for allowing the Company to control their AC during times of peak demand.
- AC Rewards is a demand response offering that uses smart communicating thermostats for reducing AC load during a control event. Participating customers receive incentives for enrolling eligible thermostats in AC Rewards. They also receive annual bill credits for their participation. Unlike Saver’s Switch®, participants can opt out of a control event.
- Smart Water Heaters is a demand response offering where customers installing qualifying electric heat pump water heaters capable of receiving control signals from the utility are eligible for enrollment. This product launched in the Spring of 2021.

2023 Product Achievement

In 2023 the Company continued a maintenance replacement effort for Saver’s Switch® devices in the field more than 15 years old. To minimize confusion in the marketplace, marketing Saver’s Switch® took a back seat to AC Rewards beginning in 2018. The AC Rewards product had an increase in participation compared to prior years; however, additional efforts to grow the AC Rewards program through more market segments are a continued effort.

With the strong marketplace presence of Saver’s Switch®, approximately half of the new AC Rewards participants in 2023 were previously participants in, and removed from, the Saver’s Switch® offering. AC Rewards participation continued to show healthy growth, primarily through the Bring Your Own Thermostat enrollments. The Company continued marketing AC Rewards and added additional device

¹⁹ Proceeding No. 21A-0625EG

manufacturers to the qualified product list as well as adding more devices with pre-enrollment capability to the online marketplace. Overall, the product exceeded forecasted participation targets.

The Company's Smart Water Heater product launched in 2021 but has experienced a slow start. The selected supplier of communications modules for the controllable heat pump water heaters has struggled with supply chain issues, providing only a small number of modules in 2021 but no additional modules supplied in 2023. The Company is hopeful shipments will arrive in the spring of 2024.

Changes in 2023

Google Nest thermostats were fully incorporated into the qualified product list for AC Rewards.

Small Commercial Building Controls

The Small Commercial Building Controls product provides simple demand management solutions that are more accessible to small commercial customers than the Company's larger performance-based demand response programs. This product currently offers thermostat-controlled demand response measures, as part of the AC Rewards for Business offering, with planned additions of dispatchable demand response measures as they become more available:

- AC Rewards for Business is a demand response product that uses smart communicating thermostats for reducing AC load during a control event. Participating customers receive incentives for enrolling eligible thermostats in AC Rewards. They also receive annual bill credits for their participation.

2023 Product Achievement

The product continued to see slow growth in 2023 due to a challenging recruiting and enrollment environment for new participants and the absence of an installation partner in Colorado. With fewer thermostats installed than anticipated, the program costs were also below expectations. The Company streamlined marketing efforts and established better enrollment processes to help expand the program going forward.

Changes in 2023

There were no changes to this product.

Evaluation, Measurement, and Verification: 2023 Results

Background

An Evaluation, Measurement, and Verification (“EM&V”) Plan is necessary to help ensure that Public Service’s DSM programs are delivering reliable energy and demand savings and to improve overall program design and operation. Public Service developed its EM&V Plan to evaluate, measure, and verify savings for gas and electric DSM products during and after each performance year, to confirm that savings and technical assumptions are accurate. The robustness of any EM&V Plan must be balanced against the cost of performing EM&V, keeping in mind the objectives of ensuring accurate savings calculations while keeping expenditures prudent and maintaining the cost-effectiveness of programs.

Description of Process

Public Service uses a variety of providers to conduct its measurement and verification activities. In 2023, measurement and verification for the majority of direct-impact prescriptive products was conducted by a verification contractor, Resource Innovations. For other products, such as ENERGY STAR® New Homes, Whole Home Efficiency, and Business New Construction, the third-party product implementer verified all the installations to ensure that reported gross savings were accurate. Custom projects were verified through internal engineering reviews, as described below.

The Company’s EM&V approach includes both performance year and post-performance year activities. Performance year activities are conducted on an ongoing basis during the reporting year and include rebate application validation and ongoing M&V. Post-performance year activities occur in the year following the reporting year and include all comprehensive product (process and impact) evaluations. Each of these EM&V activities is described in more detail below.

Performance Year EM&V Activities

- **Rebate Application Validation** takes place on a daily basis during the program year and involves auditing all rebate applications received by the Company. The Company’s Rebate Operations Department has a two-step process (described in the EM&V sections of the 2021-2022 DSM Plan and 2023 DSM & BE Plan). The first step entails validating every application for accuracy and completeness as it is received prior to processing. In the second step, all rebates that have been entered into a tracking system are audited each day prior to issuing a rebate. The objective of this validation is to ensure that the rebate forms and the reported gross savings that are entered into the Company’s databases are as accurate as possible and that customers are receiving the correct rebates.
- **Ongoing Measurement and Verification** is conducted with the primary objective of ensuring that the gross energy and demand savings reported by the Company are accurate. Ongoing M&V takes place during and just after the performance year. Ongoing measurement and verification of savings differs for prescriptive, custom, load management, and pilot products. For direct impact prescriptive products, Public Service contracts with third-party verification contractors and product implementers to perform M&V. Custom projects are verified through either engineering reviews of savings or through pre- and post-metering, depending on the size of the savings. The following sections describe the general M&V methods that have been used for prescriptive, custom, load management, and pilot products.

- For Prescriptive products, the verification activities follow a Deemed Savings approach, where the primary goal is to conduct field inspections for a sample of projects to determine that the measures are properly installed and have the potential to generate savings. The contractor selects a statistically valid number of projects to verify through field inspections or phone surveys. The sample size is designed to achieve accuracy levels of between 10% and 20% given a confidence level of 90% around the “realization rate” and is weighted to select larger projects. Inspection parameters gathered onsite will vary based on the product and sector but will generally confirm that the installed equipment matches equipment listed on rebate application. If they don’t match, the product’s reported savings are adjusted using the realization rate which reflects the actual results of these inspections.
- For Custom products, the M&V process depends on the size and scope of the project. Each project is typically pre-approved through an engineering analysis performed by one of the Company’s internal energy efficiency engineers. Within the initial engineering analysis, the expected project savings and payback are calculated using technical assumptions that fit the specific measure(s) being implemented. Depending on the size of the project, these calculations are then reviewed by a second internal energy efficiency engineer and/or manager and a random sampling is sent for third-party review. After installation of the efficiency measure, an internal engineer reviews the efficiency measure invoices to determine if the project savings remained within $\pm 10\%$ of its original scope. If the project did not remain within scope, then the project is re-analyzed. For projects with savings greater than or equal to 1 GWh and/or 20,000 Dth, pre- and post-installation metering is performed for a minimum of two weeks to measure and verify savings. For all metered projects, the analysis of the metering data is conducted by one of the Company's internal energy efficiency engineers, and then reviewed by a team of internal engineers and a manager. For all custom projects, installation and realization rates of 100% are applied and a net-to-gross of 87% is used.
- For direct impact Pilot products, the M&V treatment depends on the measures or services being tested. Often, additional testing beyond that performed for prescriptive or custom products is required. Typically, a control group is established and then a third-party contractor compares the results from the test group to those in the control group.

Post-Performance Year EM&V Activities

- **Comprehensive Product Process and Impact Evaluations** are conducted periodically for individual products to assess their overall effectiveness and to determine what improvements or other changes should be implemented in the future. The objectives of the process evaluation include: determining customer satisfaction with the product; identifying the populations that participate in the product and target markets that are potentially receptive, but do not currently participate in the product; identifying areas where the product, processes, or marketing could be improved; quantifying the product’s market saturation levels; suggesting appropriate rebate design; and determining attribution factors, such as free-ridership and spillover. The objectives of the impact evaluation include estimating net product impacts. These evaluations do not verify the savings of a specific performance year and are not applied retrospectively to performance year activities. Comprehensive evaluations are not conducted

on every product each year, but instead are staggered over several years in order to comprehensively evaluate most of the portfolio of products.

Outline of Gas M&V Requirements

The Commission has provided overarching guidance on the requirements for Public Service's EM&V activities in the Gas Rule (4 Code of Colorado Regulations ("C.C.R.") 723-4-4755.

The Gas Rule contains the following requirements:

4755. Measurement and Verification.

- (a) Each utility shall implement a measurement and verification (M&V) program to evaluate the actual performance of its DSM program. The utility shall present its M&V plan as a part of its DSM plan application, pursuant to rule 4753, and shall include the complete M&V evaluation results with its annual DSM report in those years when the M&V is conducted.
- (b) As a part of its M&V process, the utility shall, at a minimum, design an M&V plan to evaluate the effectiveness of the actual DSM measures and programs implemented by the utility. The M&V plan shall address: sampling bias; a data gathering process sufficient to yield statistically significant results; and generally accepted methods of data analysis. The M&V plan shall also include an evaluation of free ridership, spillover, and the net-to-gross ratio. The M&V evaluation shall be implemented at least once per DSM plan period. Subsequent DSM plan applications shall reflect the results of all completed M&V evaluations.
- (c) The M&V evaluation shall, at a minimum, include the following:
 - (I) An assessment of whether the DSM programs have been implemented as set forth in its Commission approved DSM plan;
 - (II) A measurement of the actual energy savings for each DSM program, in dekatherms per dollar expended and in total dollars, and a comparison to the corresponding utility projections in the approved DSM plan;
 - (III) To the extent feasible, an assessment of the period of time that each DSM measure actually remains in service, and a comparison to the corresponding utility projections in the approved DSM plan;
 - (IV) A summary of the actual benefit/cost ratio for each DSM program within the approved DSM plan;
 - (V) An assessment of the extent to which education and market transformation efforts are achieving the desired results; and
 - (VI) Recommendations for how the utility can improve the market penetration and cost effectiveness of individual DSM programs.

In compliance with these requirements, Public Service has applied the following concepts to its EM&V Plan:

- The ongoing M&V Plan will be conducted annually for all products. Comprehensive evaluations will be conducted on a staggered schedule over several years.
- The ongoing M&V Plan results will be reported with each annual DSM Status Report.
- For products that use a sampling methodology for M&V, the Plan will address sampling bias and all samples will be designed to yield statistically significant results.
- For products that are selected for a comprehensive evaluation, an evaluation of free ridership, spillover, and the net-to-gross ratio will be included as a study objective.

- Subsequent DSM Plan applications shall reflect the results of ongoing M&V, results of completed comprehensive evaluations, and results of any other DSM studies that are reviewed.
- The annual M&V evaluation report will include an assessment of whether the DSM products have been implemented as set forth in the Commission-approved Plan.

M&V Assessment Year & Technical Assumptions

Beginning in 2016, the Company used the November 1 – October 31 time period to collect the M&V data utilized in the DSM Annual Status Report. This November through October M&V data collection time period was used for 2021 results and will continue to be used going forward.

For 2023, the product year is split into two distinct segments, with different technical assumptions applied to each time period. For the achievements realized between January 1 and August 31, 2023, the 2021 - 2022 DSM Plan technical assumptions, and subsequent 60-Day Notice changes, were applied to calculate net savings. For the achievements realized between September 1 and December 31, 2023, the 2023 DSM & BE Plan technical assumptions, and subsequent 60-Day Notice changes, were applied to calculate net savings. All savings achieved in 2023 have the same realization and installation rates applied to them, resulting from M&V conducted in 2022 and 2023.

Use of Resource Innovations Verification Results

In its recent DSM Plans, Public Service has shifted many of its products from focusing on single end-uses to more holistic offerings. To properly and accurately perform the measurement and verification of the prescriptive measures within these holistic products, this analysis applied the end-use realization rates, as determined by Resource Innovations, to the relevant measures within the holistic programs. As a result, it is no longer straightforward to present these realization rates at a program-level. For continued transparency, Public Service presents the following realization rate results as determined by Resource Innovations based on their sampling and inspection efforts.

Table 23: Resource Innovations' 2023 Realization Rate Results

Products Sampled	Confidence / Precision / Cv	Sample Size	kW RR	kWh RR	Therm RR
<i>Business End-Uses</i>					
Compressed Air Efficiency	90 / 20 / 0.40	7	100.0%	100.0%	
Cooling Efficiency	90 / 10 / 0.40	42	100.2%	100.1%	
Heating Efficiency	90 / 10 / 0.40	30	100.0%	100.0%	100.0%
Lighting Efficiency	90 / 10 / 0.40	44	100.0%	100.0%	
Motor Efficiency	90 / 10 / 0.40	31	100.0%	100.0%	
Refrigeration	90 / 20 / 0.40	7	100.0%	100.0%	100.0%
Small Business Lighting	90 / 10 / 0.40	44	100.1%	100.1%	
<i>Residential End-Uses</i>					
Evaporative Cooling	90 / 20 / 0.40	11	100.0%	100.0%	
Home Lighting & Recycling	90 / 10 / 0.40	30	100.0%	100.0%	
Insulation/Air Sealing	90 / 10 / 0.40	11	100.0%	100.0%	100.0%
Refrigerator Recycling	90 / 10 / 0.40	11	100.0%	100.0%	
Residential Heating Systems	90 / 10 / 0.40	44	100.0%	100.0%	100.0%
Smart Thermostats	90 / 10 / 0.40	11	100.0%	100.0%	100.0%
Water Heaters	90 / 20 / 0.40	11			100.0%

2023 M&V Results

Portfolio Results

With its best efforts, Public Service achieved energy efficiency portfolio realization rates of 99.7% for electric demand, 100.0% for electric energy, and 99.7% for natural gas energy in 2023. Applying the results to the portfolio's gross savings, the Company achieved energy efficiency savings of 103,372 net generator kW, 519,840,302 net generator kWh, and 914,655 net Dth.

Program Results

The following paragraphs provide the M&V activities and results for each of the DSM products offered by the Company in 2023. All M&V activities followed the processes described above and outlined in the M&V Plan filed with the 2021 - 2022 DSM Plan and 2023 DSM & BE Plan, unless noted below. Where sampling was used in the M&V process for prescriptive measures, the achieved precision and confidence level is provided.

Business Segment

Business Energy Assessments

The Business Energy Assessments product offers study funding and electric and natural gas implementation rebates to commercial and industrial customers who improve their building performance through an energy assessment. This product combines and expands on the Recommissioning product and engineering assistance offerings included in previous DSM Plans. In 2023, savings came from Building Operator Certifications, Lighting, and Motors projects. For

measurement and verification purposes, the respective approved technical assumptions and realization rates were applied to each end-use.

Business HVAC+R Systems

This product combines Heating Efficiency, Motor & Drive Efficiency, Cooling Efficiency, and Commercial Refrigeration products into a single marketing platform, to better align with products and technologies in market. The Business HVAC+R Systems product continues to offer both prescriptive and custom rebates in each of the end-use measure groups. Despite this product being marketed as a combined offering, Resource Innovations performed sampling and inspections at the prescriptive end-use measure type (Heating, Cooling, Motors & Drives, and Refrigeration) level. For measurement and verification purposes, the end-use realization rates were applied to the applicable individual measures within this product offering.

Compressed Air Efficiency

The Compressed Air Efficiency product offers prescriptive, custom, and study rebates. M&V of the prescriptive component of the product was performed by Resource Innovations, following the prescriptive protocols described above. Resource Innovations performed seven field inspections of installed energy efficient equipment at randomly-selected participant locations to verify key savings factors. Custom measures were reviewed by internal engineers following the custom protocols described above.

Custom Efficiency

The Custom Efficiency product offers custom rebates. All Custom projects were reviewed by internal engineers following the custom protocols described above.

Data Center Efficiency

The Data Center Efficiency product offers rebates for study-driven and non-study-driven prescriptive and custom projects. The projects completed in 2023 were all related to new construction. As a result, Resource Innovations did not perform site verifications to determine prescriptive realization rates for the 2023. All Custom measures were reviewed by internal engineers following the custom protocols described above.

Energy Management Systems

The Energy Management Systems product provides custom rebates. Measurement and verification of this product follows the custom protocols. All projects were reviewed by internal engineers following the custom protocols described above.

LED Street Lighting

The LED Street Lighting product captures energy savings for local municipalities on the Street Lighting Service (“SL”) Rate achieved by replacing legacy Company-owned streetlights with LED fixtures.

Lighting Efficiency

The Lighting Efficiency product offers prescriptive, custom, and study rebates. In 2023, M&V of the prescriptive component of the product were performed by Resource Innovations, following the prescriptive protocols described above. Resource Innovations performed 44 prescriptive field inspections of installed energy efficient equipment at randomly-selected participant locations to verify

key savings factors. Custom measures were reviewed by internal engineers following the custom protocols described above.

New Construction

Public Service's New Construction product offers prescriptive Energy Efficient Buildings and custom Energy Design Assistance rebates. Measurement and verification are performed on all New Construction projects, whether prescriptive or custom. All adopted measures received a visual verification. This information was used in our savings reports and for rebate payment. Since all project savings are calculated based on independent verification, this product has a realization rate of 100%.

Self-Direct

The Self-Direct product offers custom rebates. The product was measured and verified using individualized customer-developed and Public-Service approved M&V Plans. All measurement and verification are required to be performed in accordance with the International Performance Measurement and Verification Protocol guidelines. Upon project completion, participants submitted project completion reports that include raw metering results and engineering calculations to demonstrate actual energy and demand savings based on pre- and post-monitoring results. All projects were reviewed by the internal energy efficiency engineers and/or managers, depending on their size. The rebate amount was based on these results.

Small Business Solutions

This program combines previous plan offerings for Small Business Lighting and Commercial Refrigeration, and expands the types of measures and support available, including a facility walk-through audit to support Public Service's small- and mid-sized business customers with annual peak demand of up to 400 kW.

Strategic Energy Management

The SEM product offers visualization and analysis of real-time energy data from across a customer's facility to capture low-cost recommissioning opportunities as well as behavioral and operational energy savings. All SEM projects were reviewed by internal engineers following the M&V processes as described in the 2021-2022 DSM Plan and 2023 DSM & BE Plan.

Residential Products

Energy Efficient Showerheads

The Energy Efficient Showerheads product provides customers with free showerheads, a kitchen faucet aerator, and bathroom faucet aerators. Public Service performed a phone survey of a random sampling of customers who received a free showerhead and aerators.

ENERGY STAR® New Homes

Public Service's ENERGY STAR® New Homes product offers prescriptive rebates. All homes rebated through this product were subject to verification by a qualified Home Energy Rating Service ("HERS") Rater and their associated Residential Energy Services Network Provider. The HERS Rater completed a minimum of two site visits to each home during the construction phase. Hundreds of data points are collected and submitted for each home, including the duct blaster test results and the final HERS rating. Upon completion, Residential Science Resources reviewed each home and its HERS rating to confirm the accuracy of the energy modeling. Energy saving impacts for each home

rebated were calculated based on the actual construction as compared to the reference (baseline) home for that particular jurisdiction. As a result, the realization rate for this product is 100%.

Home Energy Insights

The Home Energy Insights (formerly Energy Feedback Residential) product is a behavioral conservation product. The product provides targeted direct mail, email, and other messaging to a designated group of residential customers, giving them specific information and recommendations on ways to reduce their energy consumption. Measurement and verification of this product is performed by the third-party implementer.

Home Energy Squad

The Home Energy Squad product offers installation services and discounted equipment to residential customers. The third-party implementer performs measurement and verification of this product.

Home Lighting & Recycling

The Home Lighting & Recycling product provides prescriptive point-of-sale rebates to customers who purchase qualifying LED light bulbs. In 2023, Resource Innovations performed the Home Lighting & Recycling product measurement and verification. The verification process consisted of cross-checking Public Service's tracking databases with a sample of monthly or weekly invoices and invoice details from various manufacturers submitted to retailers.

Insulation & Air Sealing

The Insulation & Air Sealing product provides prescriptive rebates to customers who add insulation to their homes. In 2023, M&V of this product was performed by Resource Innovations, following the prescriptive protocols described above. Of these projects, Resource Innovations performed 11 field inspections of installed energy efficient equipment at randomly-selected participant locations to verify key savings factors.

Multifamily Buildings

The Multifamily Buildings product offers the residential multifamily housing market energy assessments, direct-install of energy savings measures, and custom projects. The third-party implementer is responsible for the measurement and verification of the product. This product follows the Company's standard prescriptive product measurement and verification process.

Refrigerator & Freezer Recycling

The Refrigerator & Freezer Recycling product provides a rebate to customers who retire their old, inefficient, but operational refrigerators and freezers. In 2023, M&V of this product was performed by Resource Innovations, following the prescriptive protocols described above. To verify these results, Resource Innovations performed phone of 11 randomly-selected participants and confirmed that the old refrigerator or freezer was operational and removed from the home as reported.

Residential Heating & Cooling

The Residential Heating & Cooling product provides incentives to the Company's customers who purchase a variety of qualifying heating and cooling equipment for residential use, including air conditioners, evaporative coolers, heat pumps, natural gas furnaces, natural gas water heaters, electric heat pump water heaters, smart thermostats, and the Western Cooling Control device. In 2023, M&V of these offerings was performed by Resource Innovations, following the prescriptive protocols described above.

School Education Kits

The School Education Kits product provides curriculum and educational materials to teachers and efficiency measures to school children to teach them more about energy efficiency. Product administration, measurement, and verification for School Education Kits were conducted by the third-party vendor which used parental surveys to determine whether measures were installed in the home.

Whole Home Efficiency

This product provides prescriptive rebates to residential customers. The third-party implementer performed verification of home improvements, including a blower door test to verify the natural air changes per hour, a Combustion Appliance Zone test, and inspections of all work performed. Due to the extensive testing performed on each home, this product is assumed to have a realization rate of 100%.

Low-Income Products

Energy Savings Kits

The Energy Savings Kits product provides energy efficiency kits to low-income customers. This product was implemented by a third-party provider who identified income-qualified customers to receive kits. Phone surveys were conducted to determine those customers who received a kit and the associated installation rates.

Multifamily Weatherization

The Multifamily Weatherization product offers weatherization measures to qualifying low-income multi-family buildings. The third-party program implementer audited each building to confirm that all work was completed correctly. Savings were calculated for each project based on the measures installed. As a result, the realization rate for this program is 100%.

Non-Profit

The Non-Profit product offers weatherization services to non-profit organizations. Public Service's third-party program implementer audited each building to confirm that all work was completed correctly. Savings were calculated for each project based on the measures installed. As a result, the realization rate for this program is 100%.

Single-Family Weatherization

The Single-Family Weatherization product provides weatherization to low-income single-family homes. Public Service's third-party product implementer managed the weatherization agencies that performed energy savings measures in each income-qualified single-family home. One hundred percent of homes weatherized were subject to verification from Public Service at any given time. The Company received a signed or electronic form from each customer attesting to the work performed. Energy savings were calculated on a per-measure, per-home basis. Savings were calculated for each project based on the measures installed. As a result, the realization rate for this program is 100%.

Post-Program Year Activities

All measurement and verification activities for the 2023 performance year were completed in late 2022 through 2023 and all results are included in this report. Public Service intends to complete all future M&V activities annually prior to filing its M&V Report.

Product Process and Impact Evaluations Performed in 2023

Public Service contracted for evaluators to perform evaluations on the following energy efficiency products in 2023: Home Energy Audits, Home Energy Squad, Multifamily Buildings, and Multifamily Weatherization. The following sections provide an overview of the findings of the evaluations and the evaluators recommendations. The Company intends to address any recommended changes coming from these comprehensive evaluations through 60-Day Notices corresponding to the evaluation recommendations and Company responses.

Home Energy Audits

An evaluation team led by TRC conducted a process evaluation of Xcel Energy's Colorado Home Energy Audits product. The evaluation was conducted through interviews with Xcel Energy staff, trade partners, and other utilities, as well as surveys sent to participating and non-participating customers, collaboration with community-based organizations. The evaluation's key findings are paraphrased below:

- Key Finding 1: Large equity gaps. Customers less represented in the participant population included customers who were black, low income, and/or speak Spanish. This finding suggests that this product design has had less ability to target underserved customers due to its reliance on trade partners to drive product participation.
 - Recommendation 1a: Focus on adding trade partners who provide services to underrepresented customer groups.
 - Recommendation 1b: Coordinate with the other products, including Home Energy Squad, to over-target customer groups with lower participation in the Home Energy Audit product.
- Key Finding 2: Half of the participating respondents discovered the Home Energy Audit product through their own research. Its heavy reliance on customer-driven discovery highlights an opportunity to enhance program visibility, accessibility, and overall engagement by implementing proactive marketing strategies.
 - Recommendation 2a: Develop joint marketing strategies with trade partners to increase Home Energy Audit marketing.
 - Recommendation 2b: Assess viability of developing a propensity model to target new customers.
- Key Finding 3: Learning which efficient home upgrades to prioritize was one of the greatest motivations to enroll in Home Energy Audit, but customers were least satisfied with the support they received taking the next steps. The misalignment between customer expectations and recommendations presents an opportunity to enhance the overall customer journey, supporting a seamless transition from motivation to action.
 - Recommendation 3a: Recommendations resulting from a Home Energy Audit should address a range of top customer interests and clearly direct them to applicable Xcel Energy products. To implement this, staff could utilize a customizable and templated

set of recommendations to reduce the burden on trade partners to recommend particular products.

- Recommendation 3b: Work with trade partners to explicitly connect recommendations to Xcel Energy programs and advising services.
- Recommendation 3c: Explore how a future dashboard could be designed to include Home Energy Audit recommendations. The Xcel Energy MyEnergy Dashboard can serve as tool to allow for better customer tracking of recommendations.
- Key Finding 4: Initial cost and slow payback are the primary barriers to future portfolio participation for busy customers who have limited Xcel Energy product knowledge to justify the investment.
 - Recommendation 4a: Explore strategies that help reduce upfront cost associated with audit recommendations.
 - Recommendation 4b: Educate contractors on all financing options for energy efficiency upgrades. Include a variety of options in marketing materials.
 - Recommendation 4c: In both audit reports and marketing materials, provide a clear path to progress from the Home Energy Squad to participate in other products with greater savings.
- Key Finding 5: Both participating and non-participating trade partners want more support from Xcel Energy throughout the process.
 - Recommendation 5: Address gaps across the trade partner experience in terms of rigor of training, clarity of marketing, and responsiveness of administration. Below provides more detail on each gap:
 - Audit training gaps: Currently, there are disparities in the knowledge and skills needed to perform the audit effectively, particularly for non-participating auditors interested in participating in the product.
 - Marketing gaps: trade partners wanted more comprehensive assistance to effectively promote the Home Energy Audit product to their customers, specifically around deploying marketing materials and targeting customers.
 - Administrative-related gaps: Gaps included unclear processes and communication breakdowns. Clarifying the quality control process through training around common rejections minimizes errors and ensures a smoother process, reducing frustration for trade partners and improving overall efficiency.
- Key Finding 6: Peer programs offer less comprehensive assessments and focus on providing customer-centric tools to build more portfolio engagement.
 - Recommendation 6: Improve internal coordination and marketing with Home Energy Squad, with the goal of directing customers who want a less comprehensive assessment to a Home Energy Squad Standard visit. A less comprehensive offering could mitigate these barriers while still encouraging customers to pursue energy

All these recommendations are currently being reviewed by Public Service. Any changes that affect impact assumptions will be publicized through 60-Day Notice prior to implementation.

Home Energy Squad

An evaluation team led by TRC conducted a process and impact evaluation of Xcel Energy's Colorado Home Energy Squad product. The evaluation was conducted through interviews with Xcel Energy

staff, surveys of participating and non-participating customers, and analyses of desktop and participant data. The evaluation's key findings are paraphrased below:

- Key Finding 1: Product influenced customers to install energy-efficient equipment sooner than otherwise.
 - Recommendation 1: The evaluation team recommends using the retrospective NTGR of 0.94 if the product does not pursue any changes; however, the NTGR Xcel Energy pursues Recommendation 2 and 3.
- Key Finding 2: Most participating customers proactively sought out the product and selected the offering that aligned with their needs.
 - Recommendation 2: Improve outreach efforts by targeting customer demographics and geographies with lower participation rates.
- Key Finding 3: Energy bill savings was one of the greatest motivations to enroll in the product but received the lowest satisfaction scores.
 - Recommendation 3: Adapt product materials to highlight benefits beyond energy bill savings.
- Key Finding 4: The primary barrier to participation was scheduling an appointment.
 - Recommendation 4: Assess effectiveness of recent product changes designed to decrease wait times. Monitor any differences, such as across offerings or geography, and attempt to address them.
- Key Finding 5: Participating customers were interested in upgrading equipment in their homes but lacked specific recommendations connecting them to products.
 - Recommendation 5: Home Energy Squad recommendations should address a range of top customer interests and clearly direct them to applicable Xcel Energy products.
- Key Finding 6: Significant data analysis is required to track whether participating customers pursued Home Energy Squad recommendations.
 - Recommendation 6: Add identification flag for Home Energy Squad Plus participants in product trackers.

All these recommendations are currently being reviewed by Public Service. Any changes that might affect impact assumptions will be publicized through 60-Day Notice prior to implementation.

Multifamily Buildings

An evaluation team led by TRC conducted a process and impact evaluation of Xcel Energy's Colorado Multifamily Buildings product. The evaluation was conducted through interviews with: Xcel Energy staff, trade partners, participating property representatives, and peer utilities. The team also surveyed occupants and non-participants. The evaluation's key findings are paraphrased below:

- Key Finding 1: The Multifamily Buildings Efficiency product is very influential in encouraging property representatives to make energy-efficient upgrades in their buildings. The evaluation team estimated a retrospective NTGR of 0.88 with supporting qualitative data that the product helped participants to install more energy efficient measures, sooner than they would have without the product.
 - Recommendation 1: The evaluation team recommends using a prospective NTGR of 0.90 if the following recommendations are met.
 - Develop longer-term relationships with property representatives to encourage more participants to pursue Stage 3 projects.
 - Focus on non-lighting equipment.

- Key Finding 2: Most trade partners are satisfied with the quality and cadence of Xcel Energy’s marketing efforts, but some trade partners still are not getting the necessary information to stay up to date with product details.
 - Recommendation 2: Conduct user experience testing on both marketing materials and website accessibility with trade partners.
- Key Finding 3: Property representatives remained concerned about the return on investment, particularly for larger scale projects.
 - Recommendation 3: Encourage the implementor to estimate ranges on costs and benefits to property representatives during the energy assessment stage of the product.
- Key Finding 4: Both trade partners and tenants had suggestions for additional measures to be offered as part of the Multifamily Buildings product.
 - Recommendation 4: Conduct analysis for adding the equipment suggested by occupants and trade allies, including clothes washers and dryers and smart thermostats. For equipment that is already offered in other Xcel Energy programs, ensure that there is a smooth transition for participants.
- Key Finding 5: Property representatives are not consistently communicating to occupants about Xcel Energy programs and services. Occupants’ most common complaints revolve around not receiving enough notice from property representatives about upgrades happening in their buildings.
 - Recommendation 5: Develop and carry out an occupant communication plan so that occupants are more informed about product offerings and installation occurrences.
- Key Finding 6: While all market actors are prepared for the shift towards electrifying multifamily buildings, they also raised some concerns about high costs and an over-reliance on the electrical grid.
 - Recommendation 6: Increase education on the benefits of electrification to both trade partners and property representatives.

All these recommendations are currently being reviewed by Public Service. Any changes that might affect impact assumptions will be publicized through 60-Day Notice prior to implementation.

Multifamily Weatherization

An evaluation team led by TRC conducted a process and impact evaluation of Xcel Energy’s Colorado Multifamily Buildings product. The evaluation was conducted through interviews with: Xcel Energy staff, trade partners, participating property representatives, and peer utilities. The team also surveyed tenants. The evaluation’s key findings are paraphrased below:

- Key Finding 1: Participants reported satisfaction with being able to install energy-saving equipment at no-to-low cost. But, as the product is currently delivered, most of these upgrades are lighting upgrades rather than larger water heating or HVAC upgrades.
 - Recommendation 1: Track the age of participants’ equipment during the audit portion of the product. Align the reminder of the recommendations with the age of the equipment to encourage more participation in the deeper energy efficiency upgrades.

- Key Finding 2: The implementer is an effective partner at implementing the product. The implementer also seems to be effective at marketing the product.
 - Recommendation 2: Continue to have the implementer, a well-known partner statewide in affordable energy efficiency, be the marketer of the product.
- Key Finding 3: Relationships, either through the implementer or through professional connections, were key for both property representative and trade partner awareness of and participation in the product.
 - Recommendation 3: Leverage personal relationships to promote the product and expand the diversity of projects.
- Key Finding 4: Participating buildings most frequently experienced language barriers in communicating with tenants.
 - Recommendation 4.1: Provide product materials in multiple languages, including Spanish and Somali.
 - Recommendation 4.2: Assess feasibility of recording occurrences the product staff encounters a language barriers with a participant.
- Key Finding 5: Participating buildings and trade partners expressed that they would appreciate more frequent outreach from the product.
 - Recommendation 5: Increase outreach efforts by having a newsletter or Listserv for the product with updates on new offerings, reminders of product offerings and a place to form connections with the participants.
- Key Finding 6: A key barrier for trade partners to completing work accessing tenant units and completing in-unit work.
 - Recommendation 6: Determine if feasible to have a product representative be a liaison for any in-unit work to help manage and document issues with getting into tenant units.
- Key Finding 7: Trade partners said they experienced difficulties keeping track of code changes across jurisdictions. This was especially true of new code changes like electrification.
 - Recommendation 7.1: Coordinate with other products who track code changes across jurisdictions, such as the New Construction product, and make this information easily accessible to trade partners in cut sheets or on a trade partner site.
 - Recommendation 7.2: In addition to tracking these changes, offer info/listening sessions to trade partners on these different jurisdictions, especially for electrification related changes.
- Key Finding 8: Due to the custom nature of the product, most, if not all, measures desired by participants are covered. Although the custom savings of the product allow for flexibility of which measures to include, custom savings calculations were the biggest pain point mentioned by the trade partners and Xcel Energy.
 - Recommendation 8: Work with the implementer to better understand a trade partner's expectations of timeline and documentation of savings calculations.
- Key Finding 9: Property representatives were most concerned about the impacts of electrification upgrades on residents and the hypothetical situation where electrification resulted in increased rates.
 - Recommendation 9: Continue approach implemented by pilot to minimize bill impacts to affordable housing after the implementation of electrification. For many income-qualified housing providers, electric costs are included in rent, while gas costs are an additional bill for the tenant. Property representatives expressed concerns with maintaining operability if they switched to all-electric equipment, especially if rates increased.

All of these recommendations are currently being reviewed by Public Service. Any changes that might affect impact assumptions will be publicized through 60-Day Notice prior to implementation.

M&V Results

The following pages provide Tables 25a and 25b, which describe the installation rates and realization rates used to calculate net, verified savings by program component. The column headings of Tables 25a and 25b are defined in the following table:

Table 24: Defined Terms

Column Heading	Definition
2023 Product	The DSM product offered by Public Service in 2023.
End-Use Measure Type	Whether the product was prescriptive or custom, or the product components, if the M&V process differed for different projects within a single product.
Customer kWh	The quantity of energy savings achieved as measured at the customer meter.
Peak Coincident Customer kW	The quantity of demand savings achieved during system peak, measured at the customer meter.
Gross Dth	The gross natural gas energy savings as measured at the customer meter.
Demand Line Loss	The amount of electricity demand that is lost during transmission and distribution of electricity across the electric grid.
Energy Line Loss	The amount of electricity energy that is lost during transmission and distribution of electricity across the electric grid.
Elec(tric) Demand NTG	The net-to-gross ratio (percentage) represents the percent of customers who installed efficient equipment due to the influence of the utility energy efficiency program. This value is applied to the Verified Gross Gen kW value to arrive at the Verified Net Gen kW value.
Elec(tric) Energy NTG	The net-to-gross ratio (percentage) represents the percent of customers who installed efficient equipment due to the influence of the utility energy efficiency program. This value is applied to the Verified Gross Gen kWh value to arrive at the Verified Net Gen kWh value.
Gas NTG	The net-to-gross ratio (percentage) represents the percent of customers who installed efficient equipment due to the influence of the utility energy efficiency program. This value is applied to the Verified Gross Dth value to arrive at the Verified Net Dth value.
Installation Rate	The percent of measures that were installed, as opposed to purchased.
Demand (kW) Realization Rate	The ratio of gross electric demand savings measured in the M&V process to the electric demand savings claimed in the rebate application, expressed as a percentage.
Energy (kWh) Realization Rate	The ratio of gross electric energy savings measured in the M&V process to the electric energy savings claimed in the rebate application, expressed as a percentage.
Energy (Dth) Realization Rate	The ratio of gross natural gas energy savings measured in the M&V process to the gas energy savings claimed in the rebate application, expressed as a percentage.
Verified Gross Gen kW	The gross demand savings at the generator after the installation and demand realization rates have been applied.
Verified Gross Gen kWh	The gross energy savings at the generator after the installation and energy realization rates have been applied.
Verified Gross Dth	The gross savings after the installation and gas realization rates have been applied.
Verified Net Gen kW	The final demand savings at the generator achieved once the installation rate, realization rate, and net-to-gross ratio were applied.
Verified Net Gen kWh	The final energy savings at the generator achieved once the installation rate, realization rate, and net-to-gross ratio were applied.
Verified Net Dth	The final gas savings achieved once the installation rate, realization rate, and net-to-gross ratio were applied.

Table 25a: 2023 Total Energy Efficiency Final, Net Verified Savings by Program Component

2023 Products	Customer kWh	Peak Coincident Customer kW	Gross Dth	Demand Line Loss	Energy Line Loss	Elec Energy NTG	Elec Demand NTG	Gas NTG	Installation Rate (kW)	Realization Rate (kW)	Gross Peak Gen kW	Gross Gen kWh	Verified Gross Gen kW	Verified Gross Gen kWh	Verified Gross Dth	Verified Net DR Gen kW	Verified Net EE Gen kW	Verified Net Gen kWh	Verified Net Dth
Business Program																			
Business Energy Assessments	57,234,433	9,427	600	7.711%	5.332%	100.0%	100.0%	100.0%	100.0%	100.0%	10,214	60,458,057	10,214	60,458,057	600		10,214	60,458,057	600
Business HVAC+R Systems	15,571,314	4,218	14,801	7.711%	5.332%	83.9%	84.5%	92.9%	100.1%	100.1%	4,571	16,448,339	4,584	16,480,723	14,823		3,867	13,811,012	13,754
Compressed Air Efficiency	1,925,303	280	0	7.711%	5.332%	89.9%	89.9%	100.0%	100.0%	100.0%	303	2,033,742	303	2,033,742	0		272	1,829,129	0
Custom Efficiency	0	0	974	7.711%	5.332%	87.0%	87.0%	87.0%	100.0%	100.0%	0	0	0	0	974		0	0	847
Data Center Efficiency	591,484	53	0	7.711%	5.332%	80.0%	80.0%	N/A	100.0%	100.0%	57	624,798	57	624,798	0		46	499,839	0
Energy Management Systems	802,629	62	2,390	7.711%	5.332%	84.0%	84.0%	84.0%	100.0%	100.0%	67	847,836	67	847,836	2,390		56	712,182	2,007
LED Street Lighting	3,883,726	0	0	7.711%	5.332%	90.0%	N/A	N/A	100.0%	100.0%	0	4,102,470	0	4,102,470	0		0	3,692,223	0
Lighting Efficiency	140,102,953	24,298	0	7.711%	5.332%	88.1%	88.2%	N/A	100.0%	99.8%	26,328	147,993,993	26,267	147,640,141	0		23,210	130,380,979	0
New Construction	51,083,174	13,759	68,923	7.711%	5.332%	88.1%	87.1%	87.8%	100.0%	100.0%	14,909	53,960,339	14,909	53,960,339	68,923		12,986	47,553,123	60,525
Self Direct	1,113,857	143	0	7.711%	5.332%	91.0%	91.0%	N/A	100.0%	100.0%	155	1,176,593	155	1,176,593	0		141	1,070,700	0
Small Business Solutions	31,394,609	6,154	782	7.711%	5.332%	84.7%	85.7%	94.0%	99.5%	100.1%	6,668	33,162,852	6,641	33,015,300	783		5,685	27,942,426	735
Strategic Energy Management	58,997,948	10,027	0	7.711%	5.332%	100.0%	100.0%	100.0%	100.0%	100.0%	10,864	62,320,898	10,864	62,320,898	0		10,864	62,320,898	0
Business Program Total	362,701,430	68,419	88,470	7.711%	5.332%	91.5%	90.9%	88.7%	100.0%	100.0%	74,136	383,129,918	74,061	382,660,896	88,493	0	67,343	350,270,567	78,468
Residential Program																			
Energy Efficient Showerheads	264,990	23	17,377	9.130%	6.380%	94.0%	94.0%	64.0%	61.1%	100.0%	25	283,048	15	188,681	11,499		14	177,360	10,809
ENERGY STAR New Home	12,979,614	10,062	174,615	9.130%	6.380%	44.1%	34.0%	57.8%	100.0%	100.0%	11,073	13,864,147	11,073	13,864,147	174,615		3,760	6,117,401	101,013
Home Energy Insights	21,647,297	6,002	72,905	9.130%	6.380%	100.0%	100.0%	100.0%	100.0%	100.0%	6,605	23,122,513	6,605	23,122,513	72,905		6,605	23,122,513	72,905
Home Energy Squad	2,575,983	450	9,000	9.130%	6.380%	100.0%	100.0%	100.0%	100.0%	100.0%	495	2,751,531	495	2,751,531	9,000		495	2,751,531	9,000
Home Lighting & Recycling	133,705,244	17,967	0	9.130%	6.380%	48.9%	49.0%	N/A	99.0%	100.0%	19,772	142,816,966	19,574	141,388,797	0		9,551	68,913,242	0
Insulation & Air Sealing	90,235	524	7,956	9.130%	6.380%	89.0%	89.0%	89.0%	100.0%	100.0%	577	96,384	577	96,384	7,956		514	416,763	36,404
Multifamily Buildings	4,303,077	583	3,886	7.711%	5.332%	99.9%	99.9%	100.0%	99.9%	99.5%	632	4,545,440	628	4,523,623	3,867		632	4,553,677	3,886
Refrigerator & Freezer Recycle	2,609,694	308	0	9.130%	6.380%	73.0%	73.0%	N/A	100.0%	100.0%	339	2,787,539	339	2,787,539	0		247	2,034,903	0
Residential Heating & Cooling	7,053,303	10,090	290,384	9.130%	6.380%	81.4%	81.6%	91.5%	96.9%	97.1%	11,104	7,533,970	10,453	7,094,687	282,016		8,778	5,948,921	261,243
School Education Kits	26,839,270	10,900	554,951	9.130%	6.380%	100.0%	100.0%	10.7%	14.4%	100.0%	11,995	28,668,308	1,724	13,767,360	59,328		1,724	13,767,360	59,328
Whole Home Efficiency	4,579	8	663	9.130%	6.380%	78.9%	78.9%	78.9%	100.0%	100.0%	9	4,891	9	4,891	663		7	3,859	523
Residential Program Total	212,073,286	56,915	1,131,735	9.130%	6.380%	61.0%	62.8%	89.3%	88.4%	99.5%	62,624	226,474,738	51,491	209,590,153	621,848	0	32,327	127,807,532	555,109
Low-Income Program																			
Energy Savings Kits	2,712,181	288	15,749	9.130%	6.380%	100.0%	100.0%	N/A	76.3%	100.0%	317	2,897,010	242	2,202,516	11,057		242	2,202,516	11,057
Multifamily Weatherization	1,278,500	287	7,233	9.130%	6.380%	100.0%	100.0%	100.0%	100.0%	100.0%	316	1,365,627	316	1,365,627	7,233		316	1,365,627	7,233
Non-Profit	4,361,502	716	21,593	7.711%	5.332%	100.0%	100.0%	100.0%	100.0%	100.0%	775	4,607,156	775	4,607,156	21,593		775	4,607,156	21,593
Single Family Weatherization	31,750,385	4,009	241,195	9.130%	6.380%	100.0%	100.0%	100.0%	99.0%	100.0%	4,412	33,914,105	4,369	33,586,904	241,195		4,369	33,586,904	241,195
Low-Income Program Total	40,102,568	5,300	285,769	8.941%	6.267%	100.0%	100.0%	100.0%	97.6%	100.0%	5,821	42,783,897	5,702	41,762,203	281,077	0	5,702	41,762,203	281,077
Demand Response Program																			
Critical Peak Pricing	321,054	1,227	0	7.711%	5.332%	100.0%	100.0%	N/A	100.0%	100.0%	1,330	339,137	1,330	339,137	0	1,330		339,137	0
EV Critical Peak Pricing	0	220	0	7.711%	5.332%	100.0%	100.0%	N/A	100.0%	100.0%	239	0	239	0	0		239	0	0
Electric Vehicle Optimization	0	2,355	0	9.130%	6.380%	100.0%	100.0%	N/A	100.0%	100.0%	2,591	0	2,591	0	0	2,591		0	0
Peak Day Partners	15,977	20,500	0	7.711%	5.332%	100.0%	100.0%	N/A	100.0%	100.0%	22,213	16,877	22,213	16,877	0	22,213		16,877	0
Peak Partner Rewards	3,320	75	0	7.711%	5.332%	100.0%	100.0%	N/A	100.0%	100.0%	81	3,507	81	3,507	0	81		3,507	0
Residential Battery DR	0	0	0	9.130%	6.380%	100.0%	100.0%	N/A	100.0%	100.0%	0	0	0	0	0	0	0	0	0
Residential DR	121,173	28,678	0	9.130%	6.380%	100.0%	100.0%	N/A	100.0%	100.0%	31,559	129,431	31,559	129,431	0	31,559		129,431	0
Small Comm Building Control	1,380	84	0	7.711%	5.332%	100.0%	100.0%	N/A	100.0%	100.0%	91	1,458	91	1,458	0		91	1,458	0
DR Program Total	462,904	53,139	0	8.545%	5.609%	100.0%	100.0%	100.0%	100.0%	100.0%	58,104	490,409	58,104	490,409	0	58,013	91	490,409	0
2023 Total EE Savings	615,340,188	130,635	1,505,974	8.4%	5.8%	82.0%	80.3%	92.3%	93.2%	99.7%	142,581	652,388,553	131,255	634,013,252	991,418	58,013	105,372	519,840,302	914,655

Table 25b: 2023 Beneficial Electrification Final Net, Verified Savings by Program Component

2023 BE Products	Gross Customer kWh	Peak Coincident Customer kW	Gross Dth	Demand Line Loss	Energy Line Loss	Elec Demand NTG	Elec Energy NTG	Gas NTG	Installation Rate	Energy (kWh) Realization Rate	Gross Peak Gen kW	Gross Gen kWh	Verified Gross Gen kW	Verified Gross Gen kWh	Verified Gross Dth	Verified Net Gen kW	Verified Net Gen kWh	Verified Net Dth
Business Program																		
Business Program Total	0	0	0	7.711%	5.332%	100.0%	100.0%	100.0%	100.0%	100.0%	0	0	0	0	0	0	0	0
Residential Program																		
Residential Heating & Cooling - BE	-1,862,521	0	20,564	9.130%	6.380%	100.0%	100.0%	100.0%	100.0%	92.3%	0	-1,989,448	0	-1,836,857	18,987	0	-1,836,857	18,987
	0	0	3,372	9.130%	6.380%	100.0%	100.0%	100.0%	100.0%	96.9%	0	0	0	3,266	0	0	0	3,266
	-1,318,020	0	15,042	9.130%	6.380%	100.0%	100.0%	100.0%	100.0%	100.0%	0	-1,407,840	0	-1,407,840	15,042	0	-1,407,840	15,042
Residential Program Total	-3,180,541	0	38,979	9.130%	6.380%	100.0%	100.0%	100.0%	100.0%	95.5%	0	-3,397,287	0	-3,244,697	37,295	0	-3,244,697	37,295
Low-Income Program																		
Single Family Weatherization	-31,477	0	354	9.130%	6.380%	100.0%	100.0%	100.0%	100.0%	100.0%	0	-33,623	0	-33,623	354	0.00	-33,623	354
Low-Income Program Total	-31,477	0	354	9.130%	6.380%	100.0%	100.0%	100.0%	100.0%	100.0%	0	-33,623	0	-33,623	354	0	-33,623	354
023 Total BE Savings	-3,212,018	0	39,332	9.130%	6.380%	100.0%	100.0%	100.0%	100.0%	95.6%	0	-3,430,910	0	-3,278,319	37,649	0	-3,278,319	37,649

Cost-Effectiveness

Cost-effectiveness (“cost-benefit”) analyses represent the ratio of a product’s benefits to its costs. By varying which benefits and costs are included in the calculation, the ratio can show how beneficial a DSM portfolio, program, product, or measure might be from a number of different perspectives (the Participant, Utility, Rate Impact, or modified Total Resource Cost). In Colorado, the Commission calls for utilities to use the mTRC test for evaluating the cost-effectiveness of DSM programs. The mTRC test takes into account system and other benefits, utility and participant costs, as well as environmental adders. These analyses are performed in a multi-step process that takes into account, among other factors, the:

- Savings achieved by the program;
- Participant and utility expenditures on the product, by budget category;
- Avoided costs for the product (discussed in more detail in the next section of this report);
- Incremental O&M, and capital spending and savings, of the product; and
- Lifetime, operating hours, coincidence of savings with summer peak, net-to-gross, transmission loss factors, and realization rates for the product.

The cost-benefit analysis is built-up from the net-present value of system impacts of that consider the lifetime and loadshapes of individual measures are then combined with product-level spend to produce the product-level mTRC, and further the program-level mTRC. All products in the portfolio (electric and natural gas) are then combined to create the portfolio-level cost-benefit analysis, as provided in Tables 27 and 28 below.

The Company is reporting 2023 electric and natural gas portfolio mTRC test ratio results of 2.86 and 2.54, respectively. These results are shown in Table 26 and Table 27. The portfolio results are based upon electric net economic benefits of \$ 371.2 million (including social cost of carbon emissions benefits of \$165.7 million) and natural gas net economic benefits \$ 84.7 million. The Company has provided the cost-effectiveness results (mTRC test ratios) for electric and natural gas products in the following tables within this report:²⁰

- Business Program: Tables 16a (electric) and 16b (gas)
- Residential Program: Tables 18a (electric) and 18b (gas)
- Low-Income Program: Tables 19a (electric) and 19b (gas)
- Indirect Program: Tables 20a (electric) and 20b (gas)
- Demand Response Program: Table 22 (electric)

²⁰ Sections 40-3.2-104(6)(d) and (e), C.R.S. require that the Company submit an annual report to the Commission that estimates the cost-effectiveness and net economic benefits of DSM programs, among other documentation.

Table 26: 2023 Electric DSM Portfolio Cost-Benefit Analysis (CBA)

PORTFOLIO TOTAL					2023	ELECTRIC	ACTUALS
2023 Net Present Cost Benefit Summary Analysis For All Participants					Input Summary and Totals		
	Participant	Utility	Rate	Modified Total	Program "Inputs" per Customer kW and per Participant		
	Test	Test	Impact	Resource	Lifetime (Weighted on Generator kWh)	A	15.7 years
	(\$Total)	(\$Total)	(\$Total)	(\$Total)	T & D Loss Factor (Energy)	B	5.69%
					T & D Loss Factor (Demand)	C	8.30%
Benefits					Net-to-Gross (Energy)	D	82.36%
Avoided Revenue Requirements					Net-to-Gross (Demand)	E	86.91%
Generation Capacity	N/A	\$136,546,941	\$136,546,941	\$136,546,941	Installation Rate (Energy)	F	97.27%
Trans. & Dist. Capacity	N/A	\$14,043,391	\$14,043,391	\$14,043,391	Installation Rate (Demand)	G	93.85%
Marginal Energy	N/A	\$117,084,413	\$117,084,413	\$117,084,413	Net coincident kW Saved at Generator	H	27.86 kW
Avoided Emissions (CO2)	N/A	N/A	N/A	\$165,686,521	Gross Annual kWh Saved at Customer	I	104,923.03 kWh
Subtotal				\$433,361,267	Net Annual kWh Saved at Generator	J	88,672.58 kWh
Non-Energy Benefits Adder (22.1%)				\$59,142,758			
Subtotal	N/A	\$267,674,745	\$267,674,745	\$492,504,025			
Participant Benefits					Program Summary All Participants		
Bill Reduction - Electric	\$528,745,222	N/A	N/A	N/A	Total Budget	K	\$114,591,689
Participant Rebates and Incentives	\$71,488,666	N/A	N/A	\$71,488,666	Net coincident kW Saved at Generator	L	163,476 kW
Incremental Capital Savings	\$8,501,849	N/A	N/A	\$5,951,337	Gross Annual kWh Saved at Customer	M	615,688,350 kWh
Incremental O&M Savings	\$1,245,220	N/A	N/A	\$1,192,626	Net Annual kWh Saved at Generator	N	520,330,711 kWh
Subtotal	\$609,980,957	N/A	N/A	\$78,632,628	Total MTRC Net Benefits with Adder	O	\$371,219,690
					Total MTRC Net Benefits without Adder	P	\$312,076,932
Total Benefits	\$609,980,957	\$267,674,745	\$267,674,745	\$571,136,653			
Costs					Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0140
Utility Project Costs					Utility Program Cost per kW at Gen	K/ L	\$701
Program Planning & Design	N/A	\$0	\$0	\$0	Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		
Administration & Program Delivery	N/A	\$33,795,337	\$33,795,337	\$33,795,337			2,467,572
Advertising/Promotion/Customer Ed	N/A	\$5,169,795	\$5,169,795	\$5,169,795			
Participant Rebates and Incentives	N/A	\$71,488,666	\$71,488,666	\$71,488,666			
Equipment & Installation	N/A	\$1,971,329	\$1,971,329	\$1,971,329			
Measurement and Verification	N/A	\$2,166,563	\$2,166,563	\$2,166,563			
Subtotal	N/A	\$114,591,689	\$114,591,689	\$114,591,689			
Utility Revenue Reduction							
Revenue Reduction - Electric	N/A	N/A	\$528,745,222	N/A			
Subtotal	N/A	N/A	\$528,745,222	N/A			
Participant Costs							
Incremental Capital Costs	\$94,957,513	N/A	N/A	\$84,126,631			
Incremental O&M Costs	\$1,415,606	N/A	N/A	\$1,198,644			
Subtotal	\$96,373,119	N/A	N/A	\$85,325,275			
Total Costs	\$96,373,119	\$114,591,689	\$643,336,911	\$199,916,964			
Net Benefit (Cost)	\$513,607,838	\$153,083,056	(\$375,662,166)	\$371,219,690			
Benefit/Cost Ratio	6.33	2.34	0.42	2.86			

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Table 27: 2023 Natural Gas DSM Portfolio Cost-Benefit Analysis (CBA)

PORTFOLIO TOTAL					2023	GAS	ACTUALS
2023 Net Present Cost Benefit Summary Analysis For All Participants					Input Summary and Totals		
	Participant	Utility	Rate	Modified	Program "Inputs" per Dth		
	Test	Test	Impact	Total Resource	Lifetime (Weighted on Dth) A 13.7 years		
	(\$Total)	(\$Total)	(\$Total)	(\$Total)	Net-to-Gross (Weighted on Dth) B 59.80%		
					Install Rate (Weighted on Dth) C 67.11%		
Benefits					Program Summary per Participant		
Avoided Revenue Requirements					Gross Annual Dth Saved D 6,493.3		
Commodity Cost Reduction	N/A	\$28,492,332	\$28,492,332	\$28,492,332	Net Annual Dth Saved E 3,859.3		
Variable O&M Savings	N/A	\$413,400	\$413,400	\$413,400			
Demand Savings	N/A	\$4,444,611	\$4,444,611	\$4,444,611			
Avoided Emissions (CO2)	N/A	N/A	N/A	\$49,777,803			
Avoided Emissions (CH4)	N/A	N/A	N/A	\$892,501			
Subtotal				\$84,020,648			
Non-Energy Benefits Adder (8.7%)				\$7,274,545			
Subtotal	N/A	\$33,350,343	\$33,350,343	\$91,295,193	Program Summary All Participants		
Participant Benefits					Total Budget F \$23,614,178		
Bill Reduction - Gas	\$79,125,282	N/A	N/A	N/A	Gross Annual Dth Saved G 1,538,922 Dth		
Participant Rebates and Incentives	\$15,241,497	N/A	N/A	\$15,241,497	Net Annual Dth Saved H 914,655 Dth		
Incremental Capital Savings	\$271	N/A	N/A	\$271	Total MTRC Net Benefits with Adder I \$84,765,859		
Incremental O&M Savings	\$34,443,308	N/A	N/A	\$33,364,421	Total MTRC Net Benefits without Adder J \$77,491,314		
Subtotal	\$128,810,359	N/A	N/A	\$48,606,190	Utility Program Cost per Dth Lifetime F / (A x H) \$1.8897		
Total Benefits	\$128,810,359	\$33,350,343	\$33,350,343	\$139,901,382	Avoided Lifetime CO2 Emissions, Total Program (tons CO2) 731,047		
Costs					Avoided Lifetime CH4 Emissions, Total Program (tons CH4) 380.8		
Utility Project Costs							
Program Planning & Design	N/A	\$0	\$0	\$0			
Administration & Program Delivery	N/A	\$5,720,698	\$5,720,698	\$5,720,698			
Advertising/Promotion/Customer Ed	N/A	\$789,366	\$789,366	\$789,366			
Participant Rebates and Incentives	N/A	\$15,241,497	\$15,241,497	\$15,241,497			
Equipment & Installation	N/A	\$1,268,343	\$1,268,343	\$1,268,343			
Measurement and Verification	N/A	\$594,275	\$594,275	\$594,275			
Subtotal	N/A	\$23,614,178	\$23,614,178	\$23,614,178			
Utility Revenue Reduction							
Revenue Reduction - Gas	N/A	N/A	\$79,125,282	N/A			
Subtotal	N/A	N/A	\$79,125,282	N/A			
Participant Costs							
Incremental Capital Costs	\$35,061,787	N/A	N/A	\$31,519,275			
Incremental O&M Costs	\$2,069	N/A	N/A	\$2,069			
Subtotal	\$35,063,857	N/A	N/A	\$31,521,345			
Total Costs	\$35,063,857	\$23,614,178	\$102,739,461	\$55,135,523			
Net Benefit (Cost)	\$93,746,502	\$9,736,165	(\$69,389,118)	\$84,765,859			
Benefit/Cost Ratio	3.67	1.41	0.32	2.54			

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

Appendix A: Avoided Cost Assumptions

The following sections summarize the avoided cost assumptions Public Service has made in order to perform the cost-effectiveness tests for electric and gas programs, and for which the Company asked approval of and received for use in the status report and incentives calculations for 2023 calendar year achievements.

A. 2023 Electric Programs (January 1, 2023 through August 31, 2023)

In order to determine the cost-effectiveness of its electric energy efficiency and load management programs from January 1, 2023 through August 31, 2023, Public Service must first calculate the avoided generation, transmission, distribution, and marginal energy costs these programs avoid. Below are tables showing the avoided cost assumptions used in this report.

1. Estimated Annual Avoided Generation Capacity Costs (*Source: Public Service Resource Planning*)

Capacity costs reflect the generic capacity cost estimates used in Phase I and Phase II of the Public Service Company of Colorado’s 2016 Electric Resource Plan in Proceeding No. 16A-0396E for a gas-fired CT referred to as a “Large or Generic CT” in compliance with the Non-Unanimous Settlement Agreement²¹ within Proceeding No. 17A-0462EG.

	CT		CT
Year	Gen Capacity \$/kW-yr	Year	Gen Capacity \$/kW-yr
2023	\$93.89	2033	\$114.44
2024	\$95.76	2034	\$116.73
2025	\$97.68	2035	\$119.07
2026	\$99.63	2036	\$121.45
2027	\$101.62	2037	\$123.88
2028	\$103.66	2038	\$126.36
2029	\$105.73	2039	\$128.88
2030	\$107.85	2040	\$131.46
2031	\$110.00	2041	\$134.10
2032	\$112.20	2042	\$136.78

2. Estimated Annual Avoided Transmission and Distribution (“T&D”) Capacity Costs (*Source: Public Service Resource Planning*)

Decision No. C14-0731 within Proceeding No. 13A-0686EG required the Company to “...study the avoided transmission and distribution capacity costs and propose values in its DSM Biennial Plan for 2015 through 2016.”²² Consistent with the Commission’s decision in C15-0735, the Company undertook a study, specific to its own territory, utilizing the system planning approach

²¹ Approved by Decision No. C18-0417 at ¶104.

²² See Decision No. C14-0731 at ¶97.

to estimate T&D costs. The study is included as Attachment SMW-6 to the Direct Testimony of Shawn M. White in Proceeding No. 16A-0512EG and affirmed in Proceeding No. 17A-0462EG.²³ The table below documents the annual values of avoided T&D costs from this study:

Avoided Capacity \$/kW-yr				Avoided Capacity \$/kW-yr			
Year	Transmission	Distribution	T&D	Year	Transmission	Distribution	T&D
2023	\$9.24	\$2.51	\$11.76	2033	\$11.27	\$3.07	\$14.33
2024	\$9.43	\$2.57	\$11.99	2034	\$11.49	\$3.13	\$14.62
2025	\$9.62	\$2.62	\$12.23	2035	\$11.72	\$3.19	\$14.91
2026	\$9.81	\$2.67	\$12.48	2036	\$11.96	\$3.25	\$15.21
2027	\$10.01	\$2.72	\$12.73	2037	\$12.20	\$3.32	\$15.51
2028	\$10.21	\$2.78	\$12.98	2038	\$12.44	\$3.38	\$15.82
2029	\$10.41	\$2.83	\$13.24	2039	\$12.69	\$3.45	\$16.14
2030	\$10.62	\$2.89	\$13.51	2040	\$12.94	\$3.52	\$16.46
2031	\$10.83	\$2.95	\$13.78	2041	\$13.20	\$3.59	\$16.79
2032	\$11.05	\$3.01	\$14.05	2042	\$13.47	\$3.66	\$17.13

3. Estimated Annual Avoided Energy Costs (*Source: Public Service Generation Modelling Services*)

In order to determine avoided energy costs, the Company’s Generation Modelling Services group produced a PLEXOS run to produce hourly marginal energy estimates. These runs follow the provisions stated in the settlement agreement in Proceeding No. 17A-0462EG. For each individual measure in the Plan, an hourly load shape is assigned, and the estimated annual avoided energy resulting from the product of hourly marginal energy estimates and the hourly load shape is used to determine the estimate annual avoided energy costs for each measure. The following table outlines the avoided marginal energy costs as approved in Proceeding No. 20A-0287EG.

Simple-Average Hourly DSM Avoided Energy			
Year	\$/MWh	Year	\$/MWh
2023	\$17.46	2033	\$24.85
2024	\$18.01	2034	\$26.08
2025	\$18.90	2035	\$27.40
2026	\$20.78	2036	\$27.28
2027	\$23.47	2037	\$28.45
2028	\$24.50	2038	\$29.67
2029	\$24.26	2039	\$30.95
2030	\$23.17	2040	\$32.28
2031	\$23.79	2041	\$33.67
2032	\$25.19	2042	\$35.11

²³ See Decision No. C18-0417 at Ordering ¶104.

4. Estimated Annual Avoided Emissions Costs (includes CO₂) (Source: Public Service Resource Planning)

In 2019, the Colorado State Legislature passed Senate Bill 19-236 which established a methodology to calculate the social cost of carbon to be used in various electric utility planning processes include electric demand-side management programs. The following table outlines the social cost of carbon forecast approved in Proceeding 20A-0287EG.

Avoided Emissions Costs Social Cost of Carbon			
Year	\$/Short Ton	Year	\$/Short Ton
2023	\$50.19	2033	\$73.98
2024	\$52.38	2034	\$76.91
2025	\$54.64	2035	\$79.93
2026	\$56.97	2036	\$83.04
2027	\$59.38	2037	\$86.24
2028	\$61.85	2038	\$89.53
2029	\$64.40	2039	\$92.93
2030	\$65.69	2040	\$96.42
2031	\$68.37	2041	\$100.01
2032	\$71.13	2042	\$103.71

B. 2023 Electric Programs (September 1, 2023 through December 31, 2023)

In order to determine the cost-effectiveness of its electric energy efficiency and load management programs from September 1, 2023 through December 31, 2023, Public Service must first calculate the avoided generation, transmission, distribution, and marginal energy costs these programs avoid. Below are tables showing the avoided cost assumptions used in this report.

1. Estimated Annual Avoided Generation Capacity Costs (Source: Public Service Resource Planning)

Capacity costs reflect the generic capacity cost estimates used in Phase I and Phase II of the Public Service Company of Colorado’s 2021 Electric Resource Plan in Proceeding No. 21A-0141E for a gas-fired CT referred to as a “Large or Generic CT” in compliance with the Non-Unanimous Settlement Agreement²⁴ within Proceeding No. 17A-0462EG.

²⁴ Approved by Decision No. C18-0417 at ¶104.

	CT		CT
Year	Gen Capacity \$/kW-yr	Year	Gen Capacity \$/kW-yr
2023	\$100.20	2033	\$118.80
2024	\$102.00	2034	\$120.84
2025	\$103.68	2035	\$122.88
2026	\$105.48	2036	\$125.04
2027	\$107.16	2037	\$127.32
2028	\$109.08	2038	\$129.48
2029	\$110.88	2039	\$131.64
2030	\$112.80	2040	\$134.04
2031	\$114.72	2041	\$136.32
2032	\$116.64	2042	\$138.72

2. Estimated Annual Avoided Transmission and Distribution (“T&D”) Capacity Costs (Source: Public Service Resource Planning)

Decision No. C14-0731 within Proceeding No. 13A-0686EG required the Company to “...study the avoided transmission and distribution capacity costs and propose values in its DSM Biennial Plan for 2015 through 2016.”²⁵ Consistent with the Commission’s decision in C15-0735, the Company undertook a study, specific to its own territory, utilizing the system planning approach to estimate T&D costs. The study is included as Attachment SMW-6 to the Direct Testimony of Shawn M. White in Proceeding No. 16A-0512EG and affirmed in Proceeding No. 17A-0462EG.²⁶ The table below documents the annual values of avoided T&D costs from this study:

Year	Avoided Capacity \$/kW-yr			Year	Avoided Capacity \$/kW-yr		
	Transmission	Distribution	T&D		Transmission	Distribution	T&D
2023	\$9.43	\$2.57	\$11.53	2033	\$11.49	\$3.13	\$14.62
2024	\$9.62	\$2.62	\$11.76	2034	\$11.72	\$3.19	\$14.91
2025	\$9.81	\$2.67	\$11.99	2035	\$11.96	\$3.25	\$15.21
2026	\$10.01	\$2.72	\$12.23	2036	\$12.20	\$3.32	\$15.51
2027	\$10.21	\$2.78	\$12.48	2037	\$12.44	\$3.38	\$15.82
2028	\$10.41	\$2.83	\$12.73	2038	\$12.69	\$3.45	\$16.14
2029	\$10.62	\$2.89	\$12.98	2039	\$12.94	\$3.52	\$16.46
2030	\$10.83	\$2.95	\$13.24	2040	\$13.20	\$3.59	\$16.79
2031	\$11.05	\$3.01	\$14.05	2041	\$13.47	\$3.66	\$17.13
2032	\$11.27	\$3.07	\$14.33	2042	\$13.73	\$3.74	\$17.47

²⁵ See Decision No. C14-0731 at ¶97.

²⁶ See Decision No. C18-0417 at Ordering ¶104.

3. Estimated Annual Avoided Energy Costs (Source: Public Service Generation Modelling Services)

In order to determine avoided energy costs, the Company’s Generation Modelling Services group produced a PLEXOS run to produce hourly marginal energy estimates. These runs follow the provisions stated in the settlement agreement in Proceeding No. 17A-0462EG. For each individual measure in the Plan, an hourly load shape is assigned, and the estimated annual avoided energy resulting from the product of hourly marginal energy estimates and the hourly load shape is used to determine the estimate annual avoided energy costs for each measure. The following table outlines the avoided marginal energy costs as approved in Proceeding No. 22A-0315EG.

Simple-Average Hourly DSM Avoided Energy			
Year	\$/MWh	Year	\$/MWh
2023	\$37.15	2033	\$19.65
2024	\$18.44	2034	\$19.98
2025	\$16.84	2035	\$20.74
2026	\$17.99	2036	\$20.44
2027	\$17.07	2037	\$20.04
2028	\$17.51	2038	\$21.01
2029	\$19.33	2039	\$21.48
2030	\$17.78	2040	\$23.51
2031	\$19.39	2041	\$29.24
2032	\$19.75	2042	\$33.63

4. Estimated Annual Avoided Emissions Costs (includes CO₂) (Source: Public Service Resource Planning)

In 2019, the Colorado State Legislature passed Senate Bill 19-236 which established a methodology to calculate the social cost of carbon to be used in various electric utility planning processes include electric demand-side management programs. The following table outlines the social cost of carbon forecast approved in Proceeding 22A-0315EG.

Avoided Emissions Costs Social Cost of Carbon			
Year	\$/Short Ton	Year	\$/Short Ton
2023	\$77.34	2033	\$109.81
2024	\$80.17	2034	\$113.64
2025	\$83.08	2035	\$117.57
2026	\$86.08	2036	\$121.62
2027	\$89.16	2037	\$125.79
2028	\$92.33	2038	\$130.07
2029	\$95.60	2039	\$134.47
2030	\$98.95	2040	\$139.00
2031	\$102.47	2041	\$143.62
2032	\$106.09	2042	\$148.39

C. 2021 Natural Gas Programs (January 1, 2023 through August 31, 2023)

In order to determine the cost-effectiveness of its gas programs from January 1, 2023 through August 31, 2023, Public Service must calculate the avoided commodity cost of gas, avoided capacity costs, and any avoided variable O&M costs associated with gas energy efficiency savings. Below are the avoided cost assumptions used for this time period.

1. Estimated Commodity Cost of Gas (Source: Public Service Gas Resource Planning)

The following table outlines the gas price forecast as approved in Proceeding No. 20A-0287EG.

Year	\$/Dth		Year	\$/Dth	
	Residential	Business		Residential	Business
2023	\$2.17	\$2.14	2033	\$3.74	\$3.71
2024	\$2.32	\$2.31	2034	\$3.87	\$3.84
2025	\$2.38	\$2.36	2035	\$4.01	\$3.98
2026	\$2.57	\$2.55	2036	\$4.22	\$4.19
2027	\$2.76	\$2.73	2037	\$4.35	\$4.32
2028	\$2.95	\$2.93	2038	\$4.55	\$4.52
2029	\$3.10	\$3.07	2039	\$4.73	\$4.70
2030	\$3.26	\$3.24	2040	\$4.91	\$4.89
2031	\$3.44	\$3.41	2041	\$5.07	\$5.04
2032	\$3.60	\$3.57	2042	\$5.32	\$5.28

2. Estimated Avoided Variable O&M Costs (Source: Public Service Pricing and Planning)

The following table outlines the gas price forecast as approved in Proceeding No. 20A-0287EG.

Year	\$/Dth
2023-2042	\$0.05

3. Estimated Annual Avoided Reservation Costs (used to estimate capacity savings – Peak Day Dth savings estimated as 1% of annual Dth savings) (Source: Public Service Gas Resource Planning)

The following table outlines the gas price forecast as approved in Proceeding No. 20A-0287EG.

Year	\$/Dth
2023-2042	\$35.02

D. 2021 Natural Gas Programs (September 1, 2023 through December 31, 2023)

In order to determine the cost-effectiveness of its gas programs from September 1, 2023 through December 31, 2023, Public Service must calculate the avoided commodity cost of gas, avoided capacity costs, and any avoided variable O&M costs associated with gas energy efficiency savings. Below are the avoided cost assumptions used for this time period.

1. Estimated Commodity Cost of Gas (Source: Public Service Gas Resource Planning)

The following table outlines the gas price forecast as approved in Proceeding No. 22A-0315EG.

	\$/Dth			\$/Dth	
Year	Residential	Business	Year	Residential	Business
2023	\$4.27	\$4.23	2033	\$4.21	\$4.19
2024	\$3.48	\$3.46	2034	\$4.34	\$4.33
2025	\$3.20	\$3.19	2035	\$4.52	\$4.51
2026	\$3.34	\$3.33	2036	\$4.65	\$4.63
2027	\$3.40	\$3.39	2037	\$4.77	\$4.76
2028	\$3.48	\$3.47	2038	\$4.92	\$4.91
2029	\$3.60	\$3.59	2039	\$5.06	\$5.05
2030	\$3.72	\$3.71	2040	\$5.22	\$5.20
2031	\$3.86	\$3.85	2041	\$5.46	\$5.45
2032	\$4.05	\$4.04	2042	\$5.63	\$5.61

2. Estimated Avoided Variable O&M Costs (Source: Public Service Pricing and Planning)

The following table outlines the gas price forecast as approved in Proceeding No. 22A-0315EG.

Year	\$/Dth
2023-2042	\$ 0.05

3. Estimated Annual Avoided Reservation Costs (used to estimate capacity savings – Peak Day Dth savings estimated as 1% of annual Dth savings) (Source: Public Service Gas Resource Planning)

The following table outlines the gas price forecast as approved in Proceeding No. 22A-0315EG.

Year	\$/Dth
2023-2042	\$75.57

Appendix B: Cost-Benefit Analyses

The following section provides the cost-effectiveness analyses for all products and programs included in the Company's 2023 DSM Plan.

PORTFOLIO TOTAL

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$136,546,941	\$136,546,941	\$136,546,941
Trans. & Dist. Capacity	N/A	\$14,043,391	\$14,043,391	\$14,043,391
Marginal Energy	N/A	\$117,084,413	\$117,084,413	\$117,084,413
Avoided Emissions (CO2)	N/A	N/A	N/A	\$165,686,521
Subtotal				\$433,361,267
Non-Energy Benefits Adder (22.1%)				\$59,142,758
Subtotal	N/A	\$267,674,745	\$267,674,745	\$492,504,025
Participant Benefits				
Bill Reduction - Electric	\$528,745,222	N/A	N/A	N/A
Participant Rebates and Incentives	\$71,488,666	N/A	N/A	\$71,488,666
Incremental Capital Savings	\$8,501,849	N/A	N/A	\$5,951,337
Incremental O&M Savings	\$1,245,220	N/A	N/A	\$1,192,626
Subtotal	\$609,980,957	N/A	N/A	\$78,632,628
Total Benefits	\$609,980,957	\$267,674,745	\$267,674,745	\$571,136,653
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$33,795,337	\$33,795,337	\$33,795,337
Advertising/Promotion/Customer Ed	N/A	\$5,169,795	\$5,169,795	\$5,169,795
Participant Rebates and Incentives	N/A	\$71,488,666	\$71,488,666	\$71,488,666
Equipment & Installation	N/A	\$1,971,329	\$1,971,329	\$1,971,329
Measurement and Verification	N/A	\$2,166,563	\$2,166,563	\$2,166,563
Subtotal	N/A	\$114,591,689	\$114,591,689	\$114,591,689
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$528,745,222	N/A
Subtotal	N/A	N/A	\$528,745,222	N/A
Participant Costs				
Incremental Capital Costs	\$94,957,513	N/A	N/A	\$84,126,631
Incremental O&M Costs	\$1,415,606	N/A	N/A	\$1,198,644
Subtotal	\$96,373,119	N/A	N/A	\$85,325,275
Total Costs	\$96,373,119	\$114,591,689	\$643,336,911	\$199,916,964
Net Benefit (Cost)	\$513,607,838	\$153,083,056	(\$375,662,166)	\$371,219,690
Benefit/Cost Ratio	6.33	2.34	0.42	2.86

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	15.7 years
T & D Loss Factor (Energy)	B	5.69%
T & D Loss Factor (Demand)	C	8.30%
Net-to-Gross (Energy)	D	82.36%
Net-to-Gross (Demand)	E	86.91%
Installation Rate (Energy)	F	97.27%
Installation Rate (Demand)	G	93.85%
Net coincident kW Saved at Generator	H	27.86 kW
Gross Annual kWh Saved at Customer	I	104,923.03 kWh
Net Annual kWh Saved at Generator	J	88,672.58 kWh

Program Summary All Participants

Total Budget	K	\$114,591,689
Net coincident kW Saved at Generator	L	163,476 kW
Gross Annual kWh Saved at Customer	M	615,688,350 kWh
Net Annual kWh Saved at Generator	N	520,330,711 kWh
Total MTRC Net Benefits with Adder	O	\$371,219,690
Total MTRC Net Benefits without Adder	P	\$312,076,932
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0140
Utility Program Cost per kW at Gen	K/L	\$701
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		2,467,572

EE PORTFOLIO TOTAL

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$113,227,556	\$113,227,556	\$113,227,556
Trans. & Dist. Capacity	N/A	\$14,034,378	\$14,034,378	\$14,034,378
Marginal Energy	N/A	\$116,940,677	\$116,940,677	\$116,940,677
Avoided Emissions (CO2)	N/A	N/A	N/A	\$165,495,254
Subtotal				\$409,697,864
Non-Energy Benefits Adder (22.3%)				\$54,448,331
Subtotal	N/A	\$244,202,610	\$244,202,610	\$464,146,195
Participant Benefits				
Bill Reduction - Electric	\$528,556,110	N/A	N/A	N/A
Participant Rebates and Incentives	\$61,994,598	N/A	N/A	\$61,994,598
Incremental Capital Savings	\$8,501,849	N/A	N/A	\$5,951,337
Incremental O&M Savings	\$1,245,220	N/A	N/A	\$1,192,626
Subtotal	\$600,297,778	N/A	N/A	\$69,138,561
Total Benefits	\$600,297,778	\$244,202,610	\$244,202,610	\$533,284,756
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$26,665,265	\$26,665,265	\$26,665,265
Advertising/Promotion/Customer Ed	N/A	\$4,563,443	\$4,563,443	\$4,563,443
Participant Rebates and Incentives	N/A	\$61,994,598	\$61,994,598	\$61,994,598
Equipment & Installation	N/A	\$1,971,329	\$1,971,329	\$1,971,329
Measurement and Verification	N/A	\$1,936,669	\$1,936,669	\$1,936,669
Subtotal	N/A	\$97,131,304	\$97,131,304	\$97,131,304
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$528,556,110	N/A
Subtotal	N/A	N/A	\$528,556,110	N/A
Participant Costs				
Incremental Capital Costs	\$94,948,016	N/A	N/A	\$84,117,134
Incremental O&M Costs	\$1,415,606	N/A	N/A	\$1,198,644
Subtotal	\$96,363,622	N/A	N/A	\$85,315,777
Total Costs	\$96,363,622	\$97,131,304	\$625,687,414	\$182,447,082
Net Benefit (Cost)	\$503,934,156	\$147,071,306	(\$381,484,804)	\$350,837,675
Benefit/Cost Ratio	6.23	2.51	0.39	2.92

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	15.7 years
T & D Loss Factor (Energy)	B	5.69%
T & D Loss Factor (Demand)	C	8.17%
Net-to-Gross (Energy)	D	82.35%
Net-to-Gross (Demand)	E	81.59%
Installation Rate (Energy)	F	97.27%
Installation Rate (Demand)	G	90.79%
Net coincident kW Saved at Generator	H	115.54 kW
Gross Annual kWh Saved at Customer	I	674,589.30 kWh
Net Annual kWh Saved at Generator	J	570,000.33 kWh

Program Summary All Participants

Total Budget	K	\$97,131,304
Net coincident kW Saved at Generator	L	105,372 kW
Gross Annual kWh Saved at Customer	M	615,225,446 kWh
Net Annual kWh Saved at Generator	N	519,840,302 kWh
Total MTRC Net Benefits with Adder	O	\$350,837,675
Total MTRC Net Benefits without Adder	P	\$296,389,344

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0119
Utility Program Cost per kW at Gen	K/L	\$922

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	2,465,085
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BUSINESS PROGRAM EE TOTAL

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$79,379,498	\$79,379,498	\$79,379,498
Trans. & Dist. Capacity	N/A	\$9,855,087	\$9,855,087	\$9,855,087
Marginal Energy	N/A	\$83,181,743	\$83,181,743	\$83,181,743
Avoided Emissions (CO2)	N/A	N/A	N/A	\$111,362,404
Subtotal				\$283,778,733
Non-Energy Benefits Adder (20.0%)				\$34,483,266
Subtotal	N/A	\$172,416,329	\$172,416,329	\$318,261,999
Participant Benefits				
Bill Reduction - Electric	\$345,601,036	N/A	N/A	N/A
Participant Rebates and Incentives	\$41,271,675	N/A	N/A	\$41,271,675
Incremental Capital Savings	\$99	N/A	N/A	\$78
Incremental O&M Savings	\$346,293	N/A	N/A	\$310,236
Subtotal	\$387,219,103	N/A	N/A	\$41,581,989
Total Benefits	\$387,219,103	\$172,416,329	\$172,416,329	\$359,843,988
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$13,532,704	\$13,532,704	\$13,532,704
Advertising/Promotion/Customer Ed	N/A	\$1,239,771	\$1,239,771	\$1,239,771
Participant Rebates and Incentives	N/A	\$41,271,675	\$41,271,675	\$41,271,675
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$843,326	\$843,326	\$843,326
Subtotal	N/A	\$56,887,477	\$56,887,477	\$56,887,477
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$345,601,036	N/A
Subtotal	N/A	N/A	\$345,601,036	N/A
Participant Costs				
Incremental Capital Costs	\$74,532,093	N/A	N/A	\$66,361,224
Incremental O&M Costs	\$869,604	N/A	N/A	\$766,739
Subtotal	\$75,401,697	N/A	N/A	\$67,127,963
Total Costs	\$75,401,697	\$56,887,477	\$402,488,513	\$124,015,440
Net Benefit (Cost)	\$311,817,406	\$115,528,852	(\$230,072,184)	\$235,828,548
Benefit/Cost Ratio	5.14	3.03	0.43	2.90

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	17.5 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	91.47%
Net-to-Gross (Demand)	E	90.88%
Installation Rate (Energy)	F	99.93%
Installation Rate (Demand)	G	99.95%
Net coincident kW Saved at Generator	H	114.33 kW
Gross Annual kWh Saved at Customer	I	615,791.90 kWh
Net Annual kWh Saved at Generator	J	594,686.87 kWh

Program Summary All Participants

Total Budget	K	\$56,887,477
Net coincident kW Saved at Generator	L	67,343 kW
Gross Annual kWh Saved at Customer	M	362,701,430 kWh
Net Annual kWh Saved at Generator	N	350,270,567 kWh
Total MTRC Net Benefits with Adder	O	\$235,828,548
Total MTRC Net Benefits without Adder	P	\$201,345,282
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0093
Utility Program Cost per kW at Gen	K/L	\$845
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		1,693,592

RESIDENTIAL PROGRAM EE TOTAL

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$26,848,487	\$26,848,487	\$26,848,487
Trans. & Dist. Capacity	N/A	\$3,317,566	\$3,317,566	\$3,317,566
Marginal Energy	N/A	\$22,927,532	\$22,927,532	\$22,927,532
Avoided Emissions (CO2)	N/A	N/A	N/A	\$34,811,971
Subtotal				\$87,905,556
Non-Energy Benefits Adder (20.0%)				\$10,618,717
Subtotal	N/A	\$53,093,585	\$53,093,585	\$98,524,273
Participant Benefits				
Bill Reduction - Electric	\$123,968,545	N/A	N/A	N/A
Participant Rebates and Incentives	\$16,463,280	N/A	N/A	\$16,463,280
Incremental Capital Savings	\$8,501,750	N/A	N/A	\$5,951,260
Incremental O&M Savings	\$620,336	N/A	N/A	\$603,798
Subtotal	\$149,553,911	N/A	N/A	\$23,018,337
Total Benefits	\$149,553,911	\$53,093,585	\$53,093,585	\$121,542,610
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$7,448,786	\$7,448,786	\$7,448,786
Advertising/Promotion/Customer Ed	N/A	\$2,008,051	\$2,008,051	\$2,008,051
Participant Rebates and Incentives	N/A	\$16,463,280	\$16,463,280	\$16,463,280
Equipment & Installation	N/A	\$1,971,329	\$1,971,329	\$1,971,329
Measurement and Verification	N/A	\$72,592	\$72,592	\$72,592
Subtotal	N/A	\$27,964,037	\$27,964,037	\$27,964,037
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$123,968,545	N/A
Subtotal	N/A	N/A	\$123,968,545	N/A
Participant Costs				
Incremental Capital Costs	\$16,321,082	N/A	N/A	\$13,661,068
Incremental O&M Costs	\$488,284	N/A	N/A	\$374,187
Subtotal	\$16,809,366	N/A	N/A	\$14,035,255
Total Costs	\$16,809,366	\$27,964,037	\$151,932,583	\$41,999,293
Net Benefit (Cost)	\$132,744,546	\$25,129,547	(\$98,838,998)	\$79,543,318
Benefit/Cost Ratio	8.90	1.90	0.35	2.89

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	12.3 years
T & D Loss Factor (Energy)	B	6.20%
T & D Loss Factor (Demand)	C	8.98%
Net-to-Gross (Energy)	D	63.43%
Net-to-Gross (Demand)	E	68.71%
Installation Rate (Energy)	F	92.66%
Installation Rate (Demand)	G	75.24%
Net coincident kW Saved at Generator	H	119.29 kW
Gross Annual kWh Saved at Customer	I	783,842.98 kWh
Net Annual kWh Saved at Generator	J	471,614.51 kWh

Program Summary All Participants

Total Budget	K	\$27,964,037
Net coincident kW Saved at Generator	L	32,327 kW
Gross Annual kWh Saved at Customer	M	212,421,448 kWh
Net Annual kWh Saved at Generator	N	127,807,532 kWh
Total MTRC Net Benefits with Adder	O	\$79,543,318
Total MTRC Net Benefits without Adder	P	\$68,924,601

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0178
Utility Program Cost per kW at Gen	K/L	\$865

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	508,889
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INCOME QUALIFIED PROGRAM TOTAL

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$6,999,571	\$6,999,571	\$6,999,571
Trans. & Dist. Capacity	N/A	\$861,724	\$861,724	\$861,724
Marginal Energy	N/A	\$10,831,402	\$10,831,402	\$10,831,402
Avoided Emissions (CO2)	N/A	N/A	N/A	\$19,320,878
Subtotal				\$38,013,575
Non-Energy Benefits Adder (50.0%)				\$9,346,349
Subtotal	N/A	\$18,692,697	\$18,692,697	\$47,359,924
Participant Benefits				
Bill Reduction - Electric	\$58,986,529	N/A	N/A	N/A
Participant Rebates and Incentives	\$3,520,169	N/A	N/A	\$3,520,169
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$278,591	N/A	N/A	\$278,591
Subtotal	\$62,785,290	N/A	N/A	\$3,798,761
Total Benefits	\$62,785,290	\$18,692,697	\$18,692,697	\$51,158,685
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$695,522	\$695,522	\$695,522
Advertising/Promotion/Customer Ed	N/A	\$210,414	\$210,414	\$210,414
Participant Rebates and Incentives	N/A	\$3,520,169	\$3,520,169	\$3,520,169
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$79,483	\$79,483	\$79,483
Subtotal	N/A	\$4,505,588	\$4,505,588	\$4,505,588
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$58,986,529	N/A
Subtotal	N/A	N/A	\$58,986,529	N/A
Participant Costs				
Incremental Capital Costs	\$4,094,842	N/A	N/A	\$4,094,842
Incremental O&M Costs	\$57,717	N/A	N/A	\$57,717
Subtotal	\$4,152,559	N/A	N/A	\$4,152,559
Total Costs	\$4,152,559	\$4,505,588	\$63,492,116	\$8,658,147
Net Benefit (Cost)	\$58,632,731	\$14,187,110	(\$44,799,419)	\$42,500,538
Benefit/Cost Ratio	15.12	4.15	0.29	5.91

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	17.7 years
T & D Loss Factor (Energy)	B	6.27%
T & D Loss Factor (Demand)	C	8.94%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	97.61%
Installation Rate (Demand)	G	97.97%
Net coincident kW Saved at Generator	H	109.66 kW
Gross Annual kWh Saved at Customer	I	771,203.22 kWh
Net Annual kWh Saved at Generator	J	803,119.29 kWh

Program Summary All Participants

Total Budget	K	\$4,505,588
Net coincident kW Saved at Generator	L	5,702 kW
Gross Annual kWh Saved at Customer	M	40,102,568 kWh
Net Annual kWh Saved at Generator	N	41,762,203 kWh
Total MTRC Net Benefits with Adder	O	\$42,500,538
Total MTRC Net Benefits without Adder	P	\$33,154,190
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0061
Utility Program Cost per kW at Gen	K/L	\$790
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		262,604

DR PORTFOLIO TOTAL

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$23,319,385	\$23,319,385	\$23,319,385
Trans. & Dist. Capacity	N/A	\$9,014	\$9,014	\$9,014
Marginal Energy	N/A	\$143,737	\$143,737	\$143,737
Avoided Emissions (CO2)	N/A	N/A	N/A	\$191,267
Subtotal				\$23,663,403
Non-Energy Benefits Adder (20.0%)				\$4,694,427
Subtotal	N/A	\$23,472,135	\$23,472,135	\$28,357,830
Participant Benefits				
Bill Reduction - Electric	\$189,112	N/A	N/A	N/A
Participant Rebates and Incentives	\$9,494,067	N/A	N/A	\$9,494,067
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$9,683,179	N/A	N/A	\$9,494,067
Total Benefits	\$9,683,179	\$23,472,135	\$23,472,135	\$37,851,897
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$7,130,072	\$7,130,072	\$7,130,072
Advertising/Promotion/Customer Ed	N/A	\$606,351	\$606,351	\$606,351
Participant Rebates and Incentives	N/A	\$9,494,067	\$9,494,067	\$9,494,067
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$229,894	\$229,894	\$229,894
Subtotal	N/A	\$17,460,385	\$17,460,385	\$17,460,385
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$189,112	N/A
Subtotal	N/A	N/A	\$189,112	N/A
Participant Costs				
Incremental Capital Costs	\$9,497	N/A	N/A	\$9,497
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$9,497	N/A	N/A	\$9,497
Total Costs	\$9,497	\$17,460,385	\$17,649,497	\$17,469,882
Net Benefit (Cost)	\$9,673,682	\$6,011,750	\$5,822,639	\$20,382,015
Benefit/Cost Ratio	1,019.59	1.34	1.33	2.17

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	3.3 years
T & D Loss Factor (Energy)	B	5.61%
T & D Loss Factor (Demand)	C	8.55%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	11.72 kW
Gross Annual kWh Saved at Customer	I	93.40 kWh
Net Annual kWh Saved at Generator	J	98.95 kWh

Program Summary All Participants

Total Budget	K	\$17,460,385
Net coincident kW Saved at Generator	L	58,104 kW
Gross Annual kWh Saved at Customer	M	462,904 kWh
Net Annual kWh Saved at Generator	N	490,409 kWh
Total MTRC Net Benefits with Adder	O	\$20,382,015
Total MTRC Net Benefits without Adder	P	\$15,687,588
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$10.9286
Utility Program Cost per kW at Gen	K/L	\$301
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		2,488

DR PROGRAM TOTAL

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$23,319,385	\$23,319,385	\$23,319,385
Trans. & Dist. Capacity	N/A	\$9,014	\$9,014	\$9,014
Marginal Energy	N/A	\$143,737	\$143,737	\$143,737
Avoided Emissions (CO2)	N/A	N/A	N/A	\$191,267
Subtotal				\$23,663,403
Non-Energy Benefits Adder (20.0%)				\$4,694,427
Subtotal	N/A	\$23,472,135	\$23,472,135	\$28,357,830
Participant Benefits				
Bill Reduction - Electric	\$189,112	N/A	N/A	N/A
Participant Rebates and Incentives	\$9,494,067	N/A	N/A	\$9,494,067
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$9,683,179	N/A	N/A	\$9,494,067
Total Benefits	\$9,683,179	\$23,472,135	\$23,472,135	\$37,851,897
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$6,402,366	\$6,402,366	\$6,402,366
Advertising/Promotion/Customer Ed	N/A	\$606,351	\$606,351	\$606,351
Participant Rebates and Incentives	N/A	\$9,494,067	\$9,494,067	\$9,494,067
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$107,787	\$107,787	\$107,787
Subtotal	N/A	\$16,610,572	\$16,610,572	\$16,610,572
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$189,112	N/A
Subtotal	N/A	N/A	\$189,112	N/A
Participant Costs				
Incremental Capital Costs	\$9,497	N/A	N/A	\$9,497
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$9,497	N/A	N/A	\$9,497
Total Costs	\$9,497	\$16,610,572	\$16,799,684	\$16,620,069
Net Benefit (Cost)	\$9,673,682	\$6,861,563	\$6,672,451	\$21,231,828
Benefit/Cost Ratio	1,019.59	1.41	1.40	2.28

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	3.3 years
T & D Loss Factor (Energy)	B	5.61%
T & D Loss Factor (Demand)	C	8.55%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	11.72 kW
Gross Annual kWh Saved at Customer	I	93.40 kWh
Net Annual kWh Saved at Generator	J	98.95 kWh

Program Summary All Participants

Total Budget	K	\$16,610,572
Net coincident kW Saved at Generator	L	58,104 kW
Gross Annual kWh Saved at Customer	M	462,904 kWh
Net Annual kWh Saved at Generator	N	490,409 kWh
Total MTRC Net Benefits with Adder	O	\$21,231,828
Total MTRC Net Benefits without Adder	P	\$16,537,400
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$10.3967
Utility Program Cost per kW at Gen	K/ L	\$286
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		2,488

BUSINESS ENERGY ASSESSMENTS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$12,881,974	\$12,881,974	\$12,881,974
Trans. & Dist. Capacity	N/A	\$1,596,678	\$1,596,678	\$1,596,678
Marginal Energy	N/A	\$14,989,591	\$14,989,591	\$14,989,591
Avoided Emissions (CO2)	N/A	N/A	N/A	\$22,286,358
Subtotal				\$51,754,602
Non-Energy Benefits Adder (20.0%)				\$5,893,649
Subtotal	N/A	\$29,468,243	\$29,468,243	\$57,648,250
Participant Benefits				
Bill Reduction - Electric	\$62,368,418	N/A	N/A	N/A
Participant Rebates and Incentives	\$6,398,377	N/A	N/A	\$6,398,377
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$14,408	N/A	N/A	\$14,408
Subtotal	\$68,781,202	N/A	N/A	\$64,12,785
Total Benefits	\$68,781,202	\$29,468,243	\$29,468,243	\$64,061,035
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$2,197,284	\$2,197,284	\$2,197,284
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$6,398,377	\$6,398,377	\$6,398,377
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$8,595,661	\$8,595,661	\$8,595,661
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$62,368,418	N/A
Subtotal	N/A	N/A	\$62,368,418	N/A
Participant Costs				
Incremental Capital Costs	\$8,033,212	N/A	N/A	\$8,033,212
Incremental O&M Costs	\$72,001	N/A	N/A	\$72,001
Subtotal	\$8,105,213	N/A	N/A	\$8,105,213
Total Costs	\$8,105,213	\$8,595,661	\$70,964,078	\$16,700,874
Net Benefit (Cost)	\$60,675,989	\$20,872,583	(\$41,495,835)	\$47,360,161
Benefit/Cost Ratio	8.49	3.43	0.42	3.84

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	19.0 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	121.60 kW
Gross Annual kWh Saved at Customer	I	681,362.30 kWh
Net Annual kWh Saved at Generator	J	719,738.77 kWh

Program Summary All Participants

Total Budget	K	\$8,595,661
Net coincident kW Saved at Generator	L	10,214 kW
Gross Annual kWh Saved at Customer	M	57,234,433 kWh
Net Annual kWh Saved at Generator	N	60,458,057 kWh
Total MTRC Net Benefits with Adder	O	\$47,360,161
Total MTRC Net Benefits without Adder	P	\$41,466,513
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0075
Utility Program Cost per kW at Gen	K/ L	\$842
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		325,028

BUSINESS HVAC+R SYSTEMS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$4,790,880	\$4,790,880	\$4,790,880
Trans. & Dist. Capacity		\$592,303	\$592,303	\$592,303
Marginal Energy	N/A	\$3,145,084	\$3,145,084	\$3,145,084
Avoided Emissions (CO2)	N/A	N/A	N/A	\$4,932,114
Subtotal				\$13,460,381
Non-Energy Benefits Adder (20.0%)				\$1,705,653
Subtotal	N/A	\$8,528,267	\$8,528,267	\$15,166,034
Participant Benefits				
Bill Reduction - Electric	\$17,294,915	N/A	N/A	N/A
Participant Rebates and Incentives	\$2,918,063	N/A	N/A	\$2,918,063
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$14,726	N/A	N/A	\$14,726
Subtotal	\$20,227,705	N/A	N/A	\$2,932,790
Total Benefits	\$20,227,705	\$8,528,267	\$8,528,267	\$18,098,824
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$2,089,237	\$2,089,237	\$2,089,237
Advertising/Promotion/Customer Ed	N/A	\$108,352	\$108,352	\$108,352
Participant Rebates and Incentives	N/A	\$2,918,063	\$2,918,063	\$2,918,063
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$25,631	\$25,631	\$25,631
Subtotal	N/A	\$5,141,284	\$5,141,284	\$5,141,284
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$17,294,915	N/A
Subtotal	N/A	N/A	\$17,294,915	N/A
Participant Costs				
Incremental Capital Costs	\$5,749,298	N/A	N/A	\$4,972,140
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$5,749,298	N/A	N/A	\$4,972,140
Total Costs	\$5,749,298	\$5,141,284	\$22,436,198	\$10,113,424
Net Benefit (Cost)	\$14,478,406	\$3,386,983	(\$13,907,931)	\$7,985,400
Benefit/Cost Ratio	3.52	1.66	0.38	1.79

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	17.3 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	83.92%
Net-to-Gross (Demand)	E	84.49%
Installation Rate (Energy)	F	100.05%
Installation Rate (Demand)	G	100.15%
Net coincident kW Saved at Generator	H	37.19 kW
Gross Annual kWh Saved at Customer	I	149,724.17 kWh
Net Annual kWh Saved at Generator	J	132,798.19 kWh

Program Summary All Participants

Total Budget	K	\$5,141,284
Net coincident kW Saved at Generator	L	3,867 kW
Gross Annual kWh Saved at Customer	M	15,571,314 kWh
Net Annual kWh Saved at Generator	N	13,811,012 kWh
Total MTRC Net Benefits with Adder	O	\$7,985,400
Total MTRC Net Benefits without Adder	P	\$6,279,747

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0215
Utility Program Cost per kW at Gen	K/ L	\$1,329

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		71,085
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COMPRESSED AIR EFFICIENCY

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$368,775	\$368,775	\$368,775
Trans. & Dist. Capacity	N/A	\$45,545	\$45,545	\$45,545
Marginal Energy	N/A	\$483,425	\$483,425	\$483,425
Avoided Emissions (CO2)	N/A	N/A	N/A	\$612,700
Subtotal				\$1,510,446
Non-Energy Benefits Adder (20.0%)				\$179,549
Subtotal	N/A	\$897,746	\$897,746	\$1,689,995
Participant Benefits				
Bill Reduction - Electric	\$1,655,814	N/A	N/A	N/A
Participant Rebates and Incentives	\$174,171	N/A	N/A	\$174,171
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$1,720	N/A	N/A	\$1,548
Subtotal	\$1,831,705	N/A	N/A	\$175,719
Total Benefits	\$1,831,705	\$897,746	\$897,746	\$1,865,714
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$189,797	\$189,797	\$189,797
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$174,171	\$174,171	\$174,171
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$2,000	\$2,000	\$2,000
Subtotal	N/A	\$365,968	\$365,968	\$365,968
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$1,655,814	N/A
Subtotal	N/A	N/A	\$1,655,814	N/A
Participant Costs				
Incremental Capital Costs	\$537,283	N/A	N/A	\$483,383
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$537,283	N/A	N/A	\$483,383
Total Costs	\$537,283	\$365,968	\$2,021,783	\$849,351
Net Benefit (Cost)	\$1,294,422	\$531,777	(\$1,124,037)	\$1,016,362
Benefit/Cost Ratio	3.41	2.45	0.44	2.20

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	19.0 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	89.94%
Net-to-Gross (Demand)	E	89.93%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	20.95 kW
Gross Annual kWh Saved at Customer	I	148,100.23 kWh
Net Annual kWh Saved at Generator	J	140,702.25 kWh

Program Summary All Participants

Total Budget	K	\$365,968
Net coincident kW Saved at Generator	L	272 kW
Gross Annual kWh Saved at Customer	M	1,925,303 kWh
Net Annual kWh Saved at Generator	N	1,829,129 kWh
Total MTRC Net Benefits with Adder	O	\$1,016,362
Total MTRC Net Benefits without Adder	P	\$836,813
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0105
Utility Program Cost per kW at Gen	K/ L	\$1,344
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		9,678

CUSTOM EFFICIENCY

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$0	\$0	\$0
Trans. & Dist. Capacity	N/A	\$0	\$0	\$0
Marginal Energy	N/A	\$0	\$0	\$0
Avoided Emissions (CO2)	N/A	N/A	N/A	\$0
Subtotal				\$0
Non-Energy Benefits Adder				
Subtotal	N/A	\$0	\$0	\$0
Participant Benefits				
Bill Reduction - Electric	\$0	N/A	N/A	N/A
Participant Rebates and Incentives	\$0	N/A	N/A	\$0
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$0	N/A	N/A	\$0
Total Benefits	\$0	\$0	\$0	\$0
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$236,071	\$236,071	\$236,071
Advertising/Promotion/ Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$0	\$0	\$0
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$1,778	\$1,778	\$1,778
Subtotal	N/A	\$237,849	\$237,849	\$237,849
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$0	N/A
Subtotal	N/A	N/A	\$0	N/A
Participant Costs				
Incremental Capital Costs	\$0	N/A	N/A	\$0
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$0	N/A	N/A	\$0
Total Costs	\$0	\$237,849	\$237,849	\$237,849
Net Benefit (Cost)	\$0	(\$237,849)	(\$237,849)	(\$237,849)
Benefit/Cost Ratio	INF	-	-	-

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	A	N/A
T & D Loss Factor (Energy)	B	N/A
T & D Loss Factor (Demand)	C	N/A
Net-to-Gross (Energy)	D	N/A
Net-to-Gross (Demand)	E	N/A
Installation Rate (Energy)	F	N/A
Installation Rate (Demand)	G	N/A
Net coincident kW Saved at Generator	H	#DIV/0!
Gross Annual kWh Saved at Customer	I	#DIV/0!
Net Annual kWh Saved at Generator	J	#DIV/0!

Program Summary All Participants

Total Budget	K	\$237,849
Net coincident kW Saved at Generator	L	#DIV/0!
Gross Annual kWh Saved at Customer	M	#DIV/0!
Net Annual kWh Saved at Generator	N	#DIV/0!
Total MTRC Net Benefits with Adder	O	(\$237,849)
Total MTRC Net Benefits without Adder	P	(\$237,849)

Utility Program Cost per kWh Lifetime	K/(A x N)	N/A
Utility Program Cost per kW at Gen	K/ L	#DIV/0!

Avoided Lifetime CO2 Emissions, Total Program (tons CO2) N/A

DATA CENTER EFFICIENCY

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$48,272	\$48,272	\$48,272
Trans. & Dist. Capacity	N/A	\$6,045	\$6,045	\$6,045
Marginal Energy	N/A	\$110,958	\$110,958	\$110,958
Avoided Emissions (CO2)	N/A	N/A	N/A	\$108,431
Subtotal				\$273,706
Non-Energy Benefits Adder (20.0%)				\$33,055
Subtotal	N/A	\$165,276	\$165,276	\$306,761
Participant Benefits				
Bill Reduction - Electric	\$474,924	N/A	N/A	N/A
Participant Rebates and Incentives	\$63,728	N/A	N/A	\$63,728
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$538,652	N/A	N/A	\$63,728
Total Benefits	\$538,652	\$165,276	\$165,276	\$370,489
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$159,291	\$159,291	\$159,291
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$63,728	\$63,728	\$63,728
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$223,019	\$223,019	\$223,019
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$474,924	N/A
Subtotal	N/A	N/A	\$474,924	N/A
Participant Costs				
Incremental Capital Costs	\$99,713	N/A	N/A	\$79,771
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$99,713	N/A	N/A	\$79,771
Total Costs	\$99,713	\$223,019	\$697,943	\$302,790
Net Benefit (Cost)	\$438,939	(\$57,743)	(\$532,668)	\$67,700
Benefit/Cost Ratio	5.40	0.74	0.24	1.22

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	15.0 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	80.00%
Net-to-Gross (Demand)	E	80.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	15.22 kW
Gross Annual kWh Saved at Customer	I	197,161.33 kWh
Net Annual kWh Saved at Generator	J	166,612.86 kWh

Program Summary All Participants

Total Budget	K	\$223,019
Net coincident kW Saved at Generator	L	46 kW
Gross Annual kWh Saved at Customer	M	591,484 kWh
Net Annual kWh Saved at Generator	N	499,839 kWh
Total MTRC Net Benefits with Adder	O	\$67,700
Total MTRC Net Benefits without Adder	P	\$34,645
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0297
Utility Program Cost per kW at Gen	K/L	\$4,885
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		2,045

ENERGY MANAGEMENT SYSTEMS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$71,099	\$71,099	\$71,099
Trans. & Dist. Capacity	N/A	\$8,904	\$8,904	\$8,904
Marginal Energy	N/A	\$189,411	\$189,411	\$189,411
Avoided Emissions (CO2)	N/A	N/A	N/A	\$183,838
Subtotal				\$453,252
Non-Energy Benefits Adder (20.0%)				\$53,883
Subtotal	N/A	\$269,414	\$269,414	\$507,135
Participant Benefits				
Bill Reduction - Electric	\$399,949	N/A	N/A	N/A
Participant Rebates and Incentives	\$71,533	N/A	N/A	\$71,533
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$80,780	N/A	N/A	\$67,855
Subtotal	\$552,262	N/A	N/A	\$139,388
Total Benefits	\$552,262	\$269,414	\$269,414	\$646,523
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$146,378	\$146,378	\$146,378
Advertising/Promotion/Customer Ed	N/A	\$177	\$177	\$177
Participant Rebates and Incentives	N/A	\$71,533	\$71,533	\$71,533
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$842	\$842	\$842
Subtotal	N/A	\$218,931	\$218,931	\$218,931
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$399,949	N/A
Subtotal	N/A	N/A	\$399,949	N/A
Participant Costs				
Incremental Capital Costs	\$334,631	N/A	N/A	\$281,090
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$334,631	N/A	N/A	\$281,090
Total Costs	\$334,631	\$218,931	\$618,880	\$500,021
Net Benefit (Cost)	\$217,631	\$50,483	(\$349,466)	\$146,502
Benefit/Cost Ratio	1.65	1.23	0.44	1.29

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	15.0 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	84.00%
Net-to-Gross (Demand)	E	84.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	56.48 kW
Gross Annual kWh Saved at Customer	I	802,629.00 kWh
Net Annual kWh Saved at Generator	J	712,181.90 kWh

Program Summary All Participants

Total Budget	K	\$218,931
Net coincident kW Saved at Generator	L	56 kW
Gross Annual kWh Saved at Customer	M	802,629 kWh
Net Annual kWh Saved at Generator	N	712,182 kWh
Total MTRC Net Benefits with Adder	O	\$146,502
Total MTRC Net Benefits without Adder	P	\$92,619
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0205
Utility Program Cost per kW at Gen	K/L	\$3,876
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		3,439

LED STREET LIGHTING

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$0	\$0	\$0
Trans. & Dist. Capacity	N/A	\$0	\$0	\$0
Marginal Energy	N/A	\$1,118,821	\$1,118,821	\$1,118,821
Avoided Emissions (CO2)	N/A	N/A	N/A	\$1,560,619
Subtotal				\$2,679,440
Non-Energy Benefits Adder (20.0%)				\$223,764
Subtotal	N/A	\$1,118,821	\$1,118,821	\$2,903,204
Participant Benefits				
Bill Reduction - Electric	\$3,310,664	N/A	N/A	N/A
Participant Rebates and Incentives	\$0	N/A	N/A	\$0
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$3,310,664	N/A	N/A	\$0
Total Benefits	\$3,310,664	\$1,118,821	\$1,118,821	\$2,903,204
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$0	\$0	\$0
Advertising/Promotion/ Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$0	\$0	\$0
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$0	\$0	\$0
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$3,310,664	N/A
Subtotal	N/A	N/A	\$3,310,664	N/A
Participant Costs				
Incremental Capital Costs	\$2,230,621	N/A	N/A	\$2,007,558
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$2,230,621	N/A	N/A	\$2,007,558
Total Costs	\$2,230,621	\$0	\$3,310,664	\$2,007,558
Net Benefit (Cost)	\$1,080,043	\$1,118,821	(\$2,191,843)	\$895,646
Benefit/Cost Ratio	1.48	INF	0.34	1.45

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	20.0 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	N/A
Net-to-Gross (Energy)	D	90.00%
Net-to-Gross (Demand)	E	N/A
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	N/A
Net coincident kW Saved at Generator	H	0.00 kW
Gross Annual kWh Saved at Customer	I	1,941,863.00 kWh
Net Annual kWh Saved at Generator	J	1,846,111.36 kWh

Program Summary All Participants

Total Budget	K	\$0
Net coincident kW Saved at Generator	L	0 kW
Gross Annual kWh Saved at Customer	M	3,883,726 kWh
Net Annual kWh Saved at Generator	N	3,692,223 kWh
Total MTRC Net Benefits with Adder	O	\$895,646
Total MTRC Net Benefits without Adder	P	\$671,882
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0000
Utility Program Cost per kW at Gen	K/ L	N/A
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		23,710

LIGHTING EFFICIENCY

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$28,639,636	\$28,639,636	\$28,639,636
Trans. & Dist. Capacity	N/A	\$3,561,715	\$3,561,715	\$3,561,715
Marginal Energy	N/A	\$32,773,460	\$32,773,460	\$32,773,460
Avoided Emissions (CO2)	N/A	N/A	N/A	\$41,323,876
Subtotal				\$106,298,686
Non-Energy Benefits Adder (20.0%)				\$12,994,962
Subtotal	N/A	\$64,974,810	\$64,974,810	\$119,293,648
Participant Benefits				
Bill Reduction - Electric	\$135,949,289	N/A	N/A	N/A
Participant Rebates and Incentives	\$12,837,115	N/A	N/A	\$12,837,115
Incremental Capital Savings	\$99	N/A	N/A	\$78
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$148,786,503	N/A	N/A	\$12,837,192
Total Benefits	\$148,786,503	\$64,974,810	\$64,974,810	\$132,130,840
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$2,583,230	\$2,583,230	\$2,583,230
Advertising/Promotion/Customer Ed	N/A	\$476,911	\$476,911	\$476,911
Participant Rebates and Incentives	N/A	\$12,837,115	\$12,837,115	\$12,837,115
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$25,161	\$25,161	\$25,161
Subtotal	N/A	\$15,922,416	\$15,922,416	\$15,922,416
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$135,949,289	N/A
Subtotal	N/A	N/A	\$135,949,289	N/A
Participant Costs				
Incremental Capital Costs	\$26,543,309	N/A	N/A	\$22,463,815
Incremental O&M Costs	\$370,567	N/A	N/A	\$297,770
Subtotal	\$26,913,877	N/A	N/A	\$22,761,585
Total Costs	\$26,913,877	\$15,922,416	\$151,871,705	\$38,684,001
Net Benefit (Cost)	\$121,872,626	\$49,052,394	(\$86,896,895)	\$93,446,839
Benefit/Cost Ratio	5.53	4.08	0.43	3.42

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	18.6 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	88.14%
Net-to-Gross (Demand)	E	88.20%
Installation Rate (Energy)	F	99.95%
Installation Rate (Demand)	G	99.95%
Net coincident kW Saved at Generator	H	174.51 kW
Gross Annual kWh Saved at Customer	I	1,053,405.66 kWh
Net Annual kWh Saved at Generator	J	980,308.11 kWh

Program Summary All Participants

Total Budget	K	\$15,922,416
Net coincident kW Saved at Generator	L	23,210 kW
Gross Annual kWh Saved at Customer	M	140,102,953 kWh
Net Annual kWh Saved at Generator	N	130,380,979 kWh
Total MTRC Net Benefits with Adder	O	\$93,446,839
Total MTRC Net Benefits without Adder	P	\$80,451,877
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0065
Utility Program Cost per kW at Gen	K/ L	\$686
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		647,626

NEW CONSTRUCTION

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$16,714,934	\$16,714,934	\$16,714,934
Trans. & Dist. Capacity	N/A	\$2,075,204	\$2,075,204	\$2,075,204
Marginal Energy	N/A	\$12,307,521	\$12,307,521	\$12,307,521
Avoided Emissions (CO2)	N/A	N/A	N/A	\$17,346,600
Subtotal				\$48,444,259
Non-Energy Benefits Adder (20.0%)				\$6,219,532
Subtotal	N/A	\$31,097,659	\$31,097,659	\$54,663,791
Participant Benefits				
Bill Reduction - Electric	\$48,284,757	N/A	N/A	N/A
Participant Rebates and Incentives	\$7,086,434	N/A	N/A	\$7,086,434
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$161,694	N/A	N/A	\$139,057
Subtotal	\$55,532,885	N/A	N/A	\$7,225,491
Total Benefits	\$55,532,885	\$31,097,659	\$31,097,659	\$61,889,282
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$3,585,511	\$3,585,511	\$3,585,511
Advertising/Promotion/Customer Ed	N/A	\$100,750	\$100,750	\$100,750
Participant Rebates and Incentives	N/A	\$7,086,434	\$7,086,434	\$7,086,434
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$414,275	\$414,275	\$414,275
Subtotal	N/A	\$11,186,970	\$11,186,970	\$11,186,970
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$48,284,757	N/A
Subtotal	N/A	N/A	\$48,284,757	N/A
Participant Costs				
Incremental Capital Costs	\$16,109,166	N/A	N/A	\$14,009,598
Incremental O&M Costs	\$139,280	N/A	N/A	\$131,244
Subtotal	\$16,248,446	N/A	N/A	\$14,140,842
Total Costs	\$16,248,446	\$11,186,970	\$59,471,727	\$25,327,812
Net Benefit (Cost)	\$39,284,439	\$19,910,689	(\$28,374,068)	\$36,561,470
Benefit/Cost Ratio	3.42	2.78	0.52	2.44

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	19.3 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	88.13%
Net-to-Gross (Demand)	E	87.10%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	618.39 kW
Gross Annual kWh Saved at Customer	I	2,432,532.10 kWh
Net Annual kWh Saved at Generator	J	2,264,434.45 kWh

Program Summary All Participants

Total Budget	K	\$11,186,970
Net coincident kW Saved at Generator	L	12,986 kW
Gross Annual kWh Saved at Customer	M	51,083,174 kWh
Net Annual kWh Saved at Generator	N	47,553,123 kWh
Total MTRC Net Benefits with Adder	O	\$36,561,470
Total MTRC Net Benefits without Adder	P	\$30,341,938
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0122
Utility Program Cost per kW at Gen	K/L	\$861
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		261,601

SELF DIRECT

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$162,448	\$162,448	\$162,448
Trans. & Dist. Capacity	N/A	\$20,345	\$20,345	\$20,345
Marginal Energy	N/A	\$258,588	\$258,588	\$258,588
Avoided Emissions (CO2)	N/A	N/A	N/A	\$247,314
Subtotal				\$688,695
Non-Energy Benefits Adder (20.0%)				\$88,276
Subtotal	N/A	\$441,381	\$441,381	\$776,971
Participant Benefits				
Bill Reduction - Electric	\$1,068,484	N/A	N/A	N/A
Participant Rebates and Incentives	\$75,084	N/A	N/A	\$75,084
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$1,143,568	N/A	N/A	\$75,084
Total Benefits	\$1,143,568	\$441,381	\$441,381	\$852,055
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$38,297	\$38,297	\$38,297
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$75,084	\$75,084	\$75,084
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$113,381	\$113,381	\$113,381
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$1,068,484	N/A
Subtotal	N/A	N/A	\$1,068,484	N/A
Participant Costs				
Incremental Capital Costs	\$252,793	N/A	N/A	\$230,042
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$252,793	N/A	N/A	\$230,042
Total Costs	\$252,793	\$113,381	\$1,181,865	\$343,423
Net Benefit (Cost)	\$890,775	\$328,000	(\$740,484)	\$508,632
Benefit/Cost Ratio	4.52	3.89	0.37	2.48

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	17.0 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	91.00%
Net-to-Gross (Demand)	E	91.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	140.88 kW
Gross Annual kWh Saved at Customer	I	1,113,857.00 kWh
Net Annual kWh Saved at Generator	J	1,070,699.57 kWh

Program Summary All Participants

Total Budget	K	\$113,381
Net coincident kW Saved at Generator	L	141 kW
Gross Annual kWh Saved at Customer	M	1,113,857 kWh
Net Annual kWh Saved at Generator	N	1,070,700 kWh
Total MTRC Net Benefits with Adder	O	\$508,632
Total MTRC Net Benefits without Adder	P	\$420,356
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0062
Utility Program Cost per kW at Gen	K/ L	\$805
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		4,627

SMALL BUSINESS SOLUTIONS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$4,493,493	\$4,493,493	\$4,493,493
Trans. & Dist. Capacity	N/A	\$554,146	\$554,146	\$554,146
Marginal Energy	N/A	\$4,449,608	\$4,449,608	\$4,449,608
Avoided Emissions (CO2)	N/A	N/A	N/A	\$6,520,421
Subtotal				\$16,017,669
Non-Energy Benefits Adder (20.0%)				\$1,899,450
Subtotal	N/A	\$9,497,248	\$9,497,248	\$17,917,119
Participant Benefits				
Bill Reduction - Electric	\$18,510,180	N/A	N/A	N/A
Participant Rebates and Incentives	\$4,878,662	N/A	N/A	\$4,878,662
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$5,374	N/A	N/A	\$5,051
Subtotal	\$23,394,216	N/A	N/A	\$4,883,714
Total Benefits	\$23,394,216	\$9,497,248	\$9,497,248	\$22,800,832
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$681,028	\$681,028	\$681,028
Advertising/Promotion/ Customer Ed	N/A	\$149,987	\$149,987	\$149,987
Participant Rebates and Incentives	N/A	\$4,878,662	\$4,878,662	\$4,878,662
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$20,400	\$20,400	\$20,400
Subtotal	N/A	\$5,730,077	\$5,730,077	\$5,730,077
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$18,510,180	N/A
Subtotal	N/A	N/A	\$18,510,180	N/A
Participant Costs				
Incremental Capital Costs	\$7,246,985	N/A	N/A	\$6,405,535
Incremental O&M Costs	\$271,332	N/A	N/A	\$249,300
Subtotal	\$7,518,317	N/A	N/A	\$6,654,834
Total Costs	\$7,518,317	\$5,730,077	\$24,240,257	\$12,384,911
Net Benefit (Cost)	\$15,875,900	\$3,767,171	(\$14,743,009)	\$10,415,921
Benefit/Cost Ratio	3.11	1.66	0.39	1.84

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	10.0 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	84.67%
Net-to-Gross (Demand)	E	85.69%
Installation Rate (Energy)	F	99.46%
Installation Rate (Demand)	G	99.50%
Net coincident kW Saved at Generator	H	48.59 kW
Gross Annual kWh Saved at Customer	I	268,329.99 kWh
Net Annual kWh Saved at Generator	J	238,824.16 kWh

Program Summary All Participants

Total Budget	K	\$5,730,077
Net coincident kW Saved at Generator	L	5,685 kW
Gross Annual kWh Saved at Customer	M	31,394,609 kWh
Net Annual kWh Saved at Generator	N	27,942,426 kWh
Total MTRC Net Benefits with Adder	O	\$10,415,921
Total MTRC Net Benefits without Adder	P	\$8,516,472

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0205
Utility Program Cost per kW at Gen	K/ L	\$1,008

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	98,964
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STRATEGIC ENERGY MANAGEMENT

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$11,207,986	\$11,207,986	\$11,207,986
Trans. & Dist. Capacity	N/A	\$1,394,202	\$1,394,202	\$1,394,202
Marginal Energy	N/A	\$13,355,276	\$13,355,276	\$13,355,276
Avoided Emissions (CO2)	N/A	N/A	N/A	\$16,240,133
Subtotal				\$42,197,597
Non-Energy Benefits Adder (20.0%)				\$5,191,493
Subtotal	N/A	\$25,957,464	\$25,957,464	\$47,389,090
Participant Benefits				
Bill Reduction - Electric	\$56,283,642	N/A	N/A	N/A
Participant Rebates and Incentives	\$6,768,508	N/A	N/A	\$6,768,508
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$67,591	N/A	N/A	\$67,591
Subtotal	\$63,119,741	N/A	N/A	\$6,836,099
Total Benefits	\$63,119,741	\$25,957,464	\$25,957,464	\$54,225,188
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$1,241,954	\$1,241,954	\$1,241,954
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$6,768,508	\$6,768,508	\$6,768,508
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$353,239	\$353,239	\$353,239
Subtotal	N/A	\$8,363,701	\$8,363,701	\$8,363,701
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$56,283,642	N/A
Subtotal	N/A	N/A	\$56,283,642	N/A
Participant Costs				
Incremental Capital Costs	\$7,395,082	N/A	N/A	\$7,395,082
Incremental O&M Costs	\$16,424	N/A	N/A	\$16,424
Subtotal	\$7,411,506	N/A	N/A	\$7,411,506
Total Costs	\$7,411,506	\$8,363,701	\$64,647,343	\$15,775,206
Net Benefit (Cost)	\$55,708,235	\$17,593,763	(\$38,689,878)	\$38,449,982
Benefit/Cost Ratio	8.52	3.10	0.40	3.44

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	15.7 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	98.77 kW
Gross Annual kWh Saved at Customer	I	536,344.98 kWh
Net Annual kWh Saved at Generator	J	566,553.62 kWh

Program Summary All Participants

Total Budget	K	\$8,363,701
Net coincident kW Saved at Generator	L	10,864 kW
Gross Annual kWh Saved at Customer	M	58,997,948 kWh
Net Annual kWh Saved at Generator	N	62,320,898 kWh
Total MTRC Net Benefits with Adder	O	\$38,449,982
Total MTRC Net Benefits without Adder	P	\$33,258,489

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0085
Utility Program Cost per kW at Gen	K/ L	\$770

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	245,790
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ENERGY EFFICIENT SHOWERHEAD

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$11,700	\$11,700	\$11,700
Trans. & Dist. Capacity	N/A	\$1,420	\$1,420	\$1,420
Marginal Energy	N/A	\$27,670	\$27,670	\$27,670
Avoided Emissions (CO2)	N/A	N/A	N/A	\$55,296
Subtotal				\$96,087
Non-Energy Benefits Adder (20.0%)				\$8,158
Subtotal	N/A	\$40,791	\$40,791	\$104,245
Participant Benefits				
Bill Reduction - Electric	\$173,142	N/A	N/A	N/A
Participant Rebates and Incentives	\$8,451	N/A	N/A	\$8,451
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$102,012	N/A	N/A	\$95,891
Subtotal	\$283,604	N/A	N/A	\$104,342
Total Benefits	\$283,604	\$40,791	\$40,791	\$208,587
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$22,394	\$22,394	\$22,394
Advertising/Promotion/Customer Ed	N/A	\$530	\$530	\$530
Participant Rebates and Incentives	N/A	\$8,451	\$8,451	\$8,451
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$31,375	\$31,375	\$31,375
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$173,142	N/A
Subtotal	N/A	N/A	\$173,142	N/A
Participant Costs				
Incremental Capital Costs	\$2,761	N/A	N/A	\$2,595
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$2,761	N/A	N/A	\$2,595
Total Costs	\$2,761	\$31,375	\$204,516	\$33,970
Net Benefit (Cost)	\$280,843	\$9,416	(\$163,725)	\$174,617
Benefit/Cost Ratio	102.72	1.30	0.20	6.14

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	10.0 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	94.00%
Net-to-Gross (Demand)	E	94.00%
Installation Rate (Energy)	F	66.66%
Installation Rate (Demand)	G	61.10%
Net coincident kW Saved at Generator	H	0.84 kW
Gross Annual kWh Saved at Customer	I	15,587.65 kWh
Net Annual kWh Saved at Generator	J	10,432.94 kWh

Program Summary All Participants

Total Budget	K	\$31,375
Net coincident kW Saved at Generator	L	14 kW
Gross Annual kWh Saved at Customer	M	264,990 kWh
Net Annual kWh Saved at Generator	N	177,360 kWh
Total MTRC Net Benefits with Adder	O	\$174,617
Total MTRC Net Benefits without Adder	P	\$166,459

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0177
Utility Program Cost per kW at Gen	K/ L	\$2,192

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	715
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ENERGY STAR NEW HOMES

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$4,924,131	\$4,924,131	\$4,924,131
Trans. & Dist. Capacity	N/A	\$603,879	\$603,879	\$603,879
Marginal Energy	N/A	\$1,600,660	\$1,600,660	\$1,600,660
Avoided Emissions (CO2)	N/A	N/A	N/A	\$3,009,841
Subtotal				\$10,138,512
Non-Energy Benefits Adder (20.0%)				\$1,425,734
Subtotal	N/A	\$7,128,670	\$7,128,670	\$11,564,246
Participant Benefits				
Bill Reduction - Electric	\$9,666,268	N/A	N/A	N/A
Participant Rebates and Incentives	\$1,850,360	N/A	N/A	\$1,850,360
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$38,584	N/A	N/A	\$28,166
Subtotal	\$11,555,212	N/A	N/A	\$1,878,526
Total Benefits	\$11,555,212	\$7,128,670	\$7,128,670	\$13,442,771
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$344,099	\$344,099	\$344,099
Advertising/Promotion/Customer Ed	N/A	\$133,125	\$133,125	\$133,125
Participant Rebates and Incentives	N/A	\$1,850,360	\$1,850,360	\$1,850,360
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$2,327,584	\$2,327,584	\$2,327,584
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$9,666,268	N/A
Subtotal	N/A	N/A	\$9,666,268	N/A
Participant Costs				
Incremental Capital Costs	\$3,568,902	N/A	N/A	\$2,605,298
Incremental O&M Costs	\$8,745	N/A	N/A	\$6,384
Subtotal	\$3,577,647	N/A	N/A	\$2,611,682
Total Costs	\$3,577,647	\$2,327,584	\$11,993,852	\$4,939,266
Net Benefit (Cost)	\$7,977,565	\$4,801,087	(\$4,865,182)	\$8,503,506
Benefit/Cost Ratio	3.23	3.06	0.59	2.72

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	19.8 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	44.12%
Net-to-Gross (Demand)	E	33.95%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	125.32 kW
Gross Annual kWh Saved at Customer	I	432,653.80 kWh
Net Annual kWh Saved at Generator	J	203,913.38 kWh

Program Summary All Participants

Total Budget	K	\$2,327,584
Net coincident kW Saved at Generator	L	3,760 kW
Gross Annual kWh Saved at Customer	M	12,979,614 kWh
Net Annual kWh Saved at Generator	N	6,117,401 kWh
Total MTRC Net Benefits with Adder	O	\$8,503,506
Total MTRC Net Benefits without Adder	P	\$7,077,772
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0193
Utility Program Cost per kW at Gen	K/ L	\$619
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		39,873

HOME ENERGY INSIGHTS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$661,788	\$661,788	\$661,788
Trans. & Dist. Capacity	N/A	\$79,211	\$79,211	\$79,211
Marginal Energy	N/A	\$747,365	\$747,365	\$747,365
Avoided Emissions (CO2)	N/A	N/A	N/A	\$723,713
Subtotal				\$2,212,077
Non-Energy Benefits Adder (20.0%)				\$297,673
Subtotal	N/A	\$1,488,364	\$1,488,364	\$2,509,749
Participant Benefits				
Bill Reduction - Electric	\$2,994,434	N/A	N/A	N/A
Participant Rebates and Incentives	\$43,516	N/A	N/A	\$43,516
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$3,037,949	N/A	N/A	\$43,516
Total Benefits	\$3,037,949	\$1,488,364	\$1,488,364	\$2,553,265
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$1,071,220	\$1,071,220	\$1,071,220
Advertising/Promotion/Customer Ed	N/A	\$6,062	\$6,062	\$6,062
Participant Rebates and Incentives	N/A	\$43,516	\$43,516	\$43,516
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$1,120,798	\$1,120,798	\$1,120,798
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$2,994,434	N/A
Subtotal	N/A	N/A	\$2,994,434	N/A
Participant Costs				
Incremental Capital Costs	\$0	N/A	N/A	\$0
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$0	N/A	N/A	\$0
Total Costs	\$0	\$1,120,798	\$4,115,231	\$1,120,798
Net Benefit (Cost)	\$3,037,949	\$367,566	(\$2,626,867)	\$1,432,467
Benefit/Cost Ratio	INF	1.33	0.36	2.28

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	1.0 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	1320.93 kW
Gross Annual kWh Saved at Customer	I	4,329,459.40 kWh
Net Annual kWh Saved at Generator	J	4,624,502.67 kWh

Program Summary All Participants

Total Budget	K	\$1,120,798
Net coincident kW Saved at Generator	L	6,605 kW
Gross Annual kWh Saved at Customer	M	21,647,297 kWh
Net Annual kWh Saved at Generator	N	23,122,513 kWh
Total MTRC Net Benefits with Adder	O	\$1,432,467
Total MTRC Net Benefits without Adder	P	\$1,134,795

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0485
Utility Program Cost per kW at Gen	K/L	\$170

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		10,849
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HOME ENERGY SQUAD

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$390,620	\$390,620	\$390,620
Trans. & Dist. Capacity	N/A	\$47,888	\$47,888	\$47,888
Marginal Energy	N/A	\$473,499	\$473,499	\$473,499
Avoided Emissions (CO2)	N/A	N/A	N/A	\$859,784
Subtotal				\$1,771,791
Non-Energy Benefits Adder (20.0%)				\$182,401
Subtotal	N/A	\$912,007	\$912,007	\$1,954,193
Participant Benefits				
Bill Reduction - Electric	\$2,637,454	N/A	N/A	N/A
Participant Rebates and Incentives	\$253,476	N/A	N/A	\$253,476
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$12,556	N/A	N/A	\$12,556
Subtotal	\$2,903,486	N/A	N/A	\$266,032
Total Benefits	\$2,903,486	\$912,007	\$912,007	\$2,220,225
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$1,235,355	\$1,235,355	\$1,235,355
Advertising/Promotion/Customer Ed	N/A	\$57,194	\$57,194	\$57,194
Participant Rebates and Incentives	N/A	\$253,476	\$253,476	\$253,476
Equipment & Installation	N/A	\$1,971,329	\$1,971,329	\$1,971,329
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$3,517,353	\$3,517,353	\$3,517,353
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$2,637,454	N/A
Subtotal	N/A	N/A	\$2,637,454	N/A
Participant Costs				
Incremental Capital Costs	\$247,880	N/A	N/A	\$247,880
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$247,880	N/A	N/A	\$247,880
Total Costs	\$247,880	\$3,517,353	\$6,154,807	\$3,765,233
Net Benefit (Cost)	\$2,655,606	(\$2,605,346)	(\$5,242,800)	(\$1,545,008)
Benefit/Cost Ratio	11.71	0.26	0.15	0.59

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	10.8 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	17.68 kW
Gross Annual kWh Saved at Customer	I	91,999.39 kWh
Net Annual kWh Saved at Generator	J	98,268.95 kWh

Program Summary All Participants

Total Budget	K	\$3,517,353
Net coincident kW Saved at Generator	L	495 kW
Gross Annual kWh Saved at Customer	M	2,575,983 kWh
Net Annual kWh Saved at Generator	N	2,751,531 kWh
Total MTRC Net Benefits with Adder	O	(\$1,545,008)
Total MTRC Net Benefits without Adder	P	(\$1,727,409)

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.1185
Utility Program Cost per kW at Gen	K/ L	\$7,106

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		11,545
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HOME LIGHTING & RECYCLING

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$8,637,214	\$8,637,214	\$8,637,214
Trans. & Dist. Capacity	N/A	\$1,071,851	\$1,071,851	\$1,071,851
Marginal Energy	N/A	\$14,299,033	\$14,299,033	\$14,299,033
Avoided Emissions (CO2)	N/A	N/A	N/A	\$19,949,768
Subtotal				\$43,957,864
Non-Energy Benefits Adder (20.0%)				\$4,801,619
Subtotal	N/A	\$24,008,097	\$24,008,097	\$48,759,484
Participant Benefits				
Bill Reduction - Electric	\$76,552,230	N/A	N/A	N/A
Participant Rebates and Incentives	\$6,252,264	N/A	N/A	\$6,252,264
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$82,804,495	N/A	N/A	\$6,252,264
Total Benefits	\$82,804,495	\$24,008,097	\$24,008,097	\$55,011,748
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$1,008,595	\$1,008,595	\$1,008,595
Advertising/Promotion/Customer Ed	N/A	\$675,358	\$675,358	\$675,358
Participant Rebates and Incentives	N/A	\$6,252,264	\$6,252,264	\$6,252,264
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$3,250	\$3,250	\$3,250
Subtotal	N/A	\$7,939,467	\$7,939,467	\$7,939,467
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$76,552,230	N/A
Subtotal	N/A	N/A	\$76,552,230	N/A
Participant Costs				
Incremental Capital Costs	\$7,105,477	N/A	N/A	\$4,113,901
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$7,105,477	N/A	N/A	\$4,113,901
Total Costs	\$7,105,477	\$7,939,467	\$84,491,698	\$12,053,369
Net Benefit (Cost)	\$75,699,017	\$16,068,629	(\$60,483,601)	\$42,958,379
Benefit/Cost Ratio	11.65	3.02	0.28	4.56

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	13.2 years
T & D Loss Factor (Energy)	B	6.12%
T & D Loss Factor (Demand)	C	8.71%
Net-to-Gross (Energy)	D	48.88%
Net-to-Gross (Demand)	E	49.02%
Installation Rate (Energy)	F	99.00%
Installation Rate (Demand)	G	99.00%
Net coincident kW Saved at Generator	H	382.03 kW
Gross Annual kWh Saved at Customer	I	5,348,209.76 kWh
Net Annual kWh Saved at Generator	J	2,756,529.69 kWh

Program Summary All Participants

Total Budget	K	\$7,939,467
Net coincident kW Saved at Generator	L	9,551 kW
Gross Annual kWh Saved at Customer	M	133,705,244 kWh
Net Annual kWh Saved at Generator	N	68,913,242 kWh
Total MTRC Net Benefits with Adder	O	\$42,958,379
Total MTRC Net Benefits without Adder	P	\$38,156,760

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0087
Utility Program Cost per kW at Gen	K/ L	\$831

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	307,173
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INSULATION & AIR SEALING

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$553,999	\$553,999	\$553,999
Trans. & Dist. Capacity	N/A	\$69,030	\$69,030	\$69,030
Marginal Energy	N/A	\$111,251	\$111,251	\$111,251
Avoided Emissions (CO2)	N/A	N/A	N/A	\$131,525
Subtotal				\$865,805
Non-Energy Benefits Adder (20.0%)				\$146,856
Subtotal	N/A	\$734,280	\$734,280	\$1,012,661
Participant Benefits				
Bill Reduction - Electric	\$637,333	N/A	N/A	N/A
Participant Rebates and Incentives	\$394,058	N/A	N/A	\$394,058
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$1,031,392	N/A	N/A	\$394,058
Total Benefits	\$1,031,392	\$734,280	\$734,280	\$1,406,719
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$25,834	\$25,834	\$25,834
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$394,058	\$394,058	\$394,058
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$1,000	\$1,000	\$1,000
Subtotal	N/A	\$420,892	\$420,892	\$420,892
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$637,333	N/A
Subtotal	N/A	N/A	\$637,333	N/A
Participant Costs				
Incremental Capital Costs	\$2,001,619	N/A	N/A	\$1,781,441
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$2,001,619	N/A	N/A	\$1,781,441
Total Costs	\$2,001,619	\$420,892	\$1,058,225	\$2,202,333
Net Benefit (Cost)	(\$970,227)	\$313,388	(\$323,946)	(\$795,614)
Benefit/Cost Ratio	0.52	1.74	0.69	0.64

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	15.3 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	89.00%
Net-to-Gross (Demand)	E	89.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	24.46 kW
Gross Annual kWh Saved at Customer	I	20,876.05 kWh
Net Annual kWh Saved at Generator	J	19,845.85 kWh

Program Summary All Participants

Total Budget	K	\$420,892
Net coincident kW Saved at Generator	L	514 kW
Gross Annual kWh Saved at Customer	M	438,397 kWh
Net Annual kWh Saved at Generator	N	416,763 kWh
Total MTRC Net Benefits with Adder	O	(\$795,614)
Total MTRC Net Benefits without Adder	P	(\$942,470)
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0659
Utility Program Cost per kW at Gen	K/L	\$819
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		2,154

MULTIFAMILY BUILDINGS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$558,739	\$558,739	\$558,739
Trans. & Dist. Capacity	N/A	\$69,648	\$69,648	\$69,648
Marginal Energy	N/A	\$947,536	\$947,536	\$947,536
Avoided Emissions (CO2)	N/A	N/A	N/A	\$1,096,556
Subtotal				\$2,672,478
Non-Energy Benefits Adder (20.0%)				\$315,184
Subtotal	N/A	\$1,575,922	\$1,575,922	\$2,987,662
Participant Benefits				
Bill Reduction - Electric	\$4,012,146	N/A	N/A	N/A
Participant Rebates and Incentives	\$784,313	N/A	N/A	\$784,313
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$4,796,459	N/A	N/A	\$784,313
Total Benefits	\$4,796,459	\$1,575,922	\$1,575,922	\$3,771,975
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$199,293	\$199,293	\$199,293
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$784,313	\$784,313	\$784,313
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$983,606	\$983,606	\$983,606
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$4,012,146	N/A
Subtotal	N/A	N/A	\$4,012,146	N/A
Participant Costs				
Incremental Capital Costs	\$886,880	N/A	N/A	\$886,310
Incremental O&M Costs	\$39,649	N/A	N/A	\$39,638
Subtotal	\$926,529	N/A	N/A	\$925,948
Total Costs	\$926,529	\$983,606	\$4,995,752	\$1,909,555
Net Benefit (Cost)	\$3,869,930	\$592,316	(\$3,419,831)	\$1,862,421
Benefit/Cost Ratio	5.18	1.60	0.32	1.98

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	14.2 years
T & D Loss Factor (Energy)	B	5.5%
T & D Loss Factor (Demand)	C	8.01%
Net-to-Gross (Energy)	D	99.94%
Net-to-Gross (Demand)	E	99.92%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	99.89%
Net coincident kW Saved at Generator	H	9.44 kW
Gross Annual kWh Saved at Customer	I	64,225.03 kWh
Net Annual kWh Saved at Generator	J	67,965.33 kWh

Program Summary All Participants

Total Budget	K	\$983,606
Net coincident kW Saved at Generator	L	632 kW
Gross Annual kWh Saved at Customer	M	4,303,077 kWh
Net Annual kWh Saved at Generator	N	4,553,677 kWh
Total MTRC Net Benefits with Adder	O	\$1,862,421
Total MTRC Net Benefits without Adder	P	\$1,547,236

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0152
Utility Program Cost per kW at Gen	K/ L	\$1,555

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		18,336
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REFRIGERATOR & FREEZER RECYCLING

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$162,034	\$162,034	\$162,034
Trans. & Dist. Capacity	N/A	\$20,149	\$20,149	\$20,149
Marginal Energy	N/A	\$279,637	\$279,637	\$279,637
Avoided Emissions (CO2)	N/A	N/A	N/A	\$366,850
Subtotal				\$828,670
Non-Energy Benefits Adder (20.0%)				\$92,364
Subtotal	N/A	\$461,820	\$461,820	\$921,034
Participant Benefits				
Bill Reduction - Electric	\$1,678,442	N/A	N/A	N/A
Participant Rebates and Incentives	\$180,879	N/A	N/A	\$180,879
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$1,859,321	N/A	N/A	\$180,879
Total Benefits	\$1,859,321	\$461,820	\$461,820	\$1,101,913
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$658,989	\$658,989	\$658,989
Advertising/Promotion/Customer Ed	N/A	\$13,519	\$13,519	\$13,519
Participant Rebates and Incentives	N/A	\$180,879	\$180,879	\$180,879
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$3,250	\$3,250	\$3,250
Subtotal	N/A	\$856,637	\$856,637	\$856,637
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$1,678,442	N/A
Subtotal	N/A	N/A	\$1,678,442	N/A
Participant Costs				
Incremental Capital Costs	\$0	N/A	N/A	\$0
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$0	N/A	N/A	\$0
Total Costs	\$0	\$856,637	\$2,535,079	\$856,637
Net Benefit (Cost)	\$1,859,321	(\$394,817)	(\$2,073,259)	\$245,276
Benefit/Cost Ratio	INF	0.54	0.18	1.29

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	8.1 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	73.00%
Net-to-Gross (Demand)	E	73.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	35.36 kW
Gross Annual kWh Saved at Customer	I	372,813.43 kWh
Net Annual kWh Saved at Generator	J	290,700.49 kWh

Program Summary All Participants

Total Budget	K	\$856,637
Net coincident kW Saved at Generator	L	247 kW
Gross Annual kWh Saved at Customer	M	2,609,694 kWh
Net Annual kWh Saved at Generator	N	2,034,903 kWh
Total MTRC Net Benefits with Adder	O	\$245,276
Total MTRC Net Benefits without Adder	P	\$152,911

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0520
Utility Program Cost per kW at Gen	K/ L	\$3,461

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	6,370
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RESIDENTIAL HEATING & COOLING

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$9,006,122	\$9,006,122	\$9,006,122
Trans. & Dist. Capacity	N/A	\$1,117,344	\$1,117,344	\$1,117,344
Marginal Energy	N/A	\$1,490,838	\$1,490,838	\$1,490,838
Avoided Emissions (CO2)	N/A	N/A	N/A	\$1,965,473
Subtotal				\$13,579,777
Non-Energy Benefits Adder (20.0%)				\$2,322,861
Subtotal	N/A	\$11,614,304	\$11,614,304	\$15,902,637
Participant Benefits				
Bill Reduction - Electric	\$8,822,495	N/A	N/A	N/A
Participant Rebates and Incentives	\$5,311,834	N/A	N/A	\$5,311,834
Incremental Capital Savings	\$8,501,750	N/A	N/A	\$5,951,260
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$22,636,078	N/A	N/A	\$11,263,094
Total Benefits	\$22,636,078	\$11,614,304	\$11,614,304	\$27,165,731
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$1,600,944	\$1,600,944	\$1,600,944
Advertising/Promotion/Customer Ed	N/A	\$293,762	\$293,762	\$293,762
Participant Rebates and Incentives	N/A	\$5,311,834	\$5,311,834	\$5,311,834
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$65,092	\$65,092	\$65,092
Subtotal	N/A	\$7,271,632	\$7,271,632	\$7,271,632
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$8,822,495	N/A
Subtotal	N/A	N/A	\$8,822,495	N/A
Participant Costs				
Incremental Capital Costs	\$1,141,542	N/A	N/A	\$2,664,175
Incremental O&M Costs	\$439,890	N/A	N/A	\$328,165
Subtotal	\$1,581,432	N/A	N/A	\$2,992,341
Total Costs	\$1,581,432	\$7,271,632	\$16,094,126	\$10,263,972
Net Benefit (Cost)	\$21,054,647	\$4,342,672	(\$4,479,823)	\$16,901,759
Benefit/Cost Ratio	14.31	1.60	0.72	2.65

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	15.2 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	81.40%
Net-to-Gross (Demand)	E	81.56%
Installation Rate (Energy)	F	96.96%
Installation Rate (Demand)	G	96.93%
Net coincident kW Saved at Generator	H	165.62 kW
Gross Annual kWh Saved at Customer	I	133,081.19 kWh
Net Annual kWh Saved at Generator	J	112,243.79 kWh

Program Summary All Participants

Total Budget	K	\$7,271,632
Net coincident kW Saved at Generator	L	8,778 kW
Gross Annual kWh Saved at Customer	M	7,053,303 kWh
Net Annual kWh Saved at Generator	N	5,948,921 kWh
Total MTRC Net Benefits with Adder	O	\$16,901,759
Total MTRC Net Benefits without Adder	P	\$14,578,898
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0805
Utility Program Cost per kW at Gen	K/L	\$828
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		30,201

SCHOOL EDUCATION KITS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$1,934,272	\$1,934,272	\$1,934,272
Trans. & Dist. Capacity	N/A	\$236,174	\$236,174	\$236,174
Marginal Energy	N/A	\$2,948,914	\$2,948,914	\$2,948,914
Avoided Emissions (CO2)	N/A	N/A	N/A	\$6,651,395
Subtotal				\$11,770,755
Non-Energy Benefits Adder (20.0%)				\$1,023,872
Subtotal	N/A	\$5,119,360	\$5,119,360	\$12,794,627
Participant Benefits				
Bill Reduction - Electric	\$16,787,822	N/A	N/A	N/A
Participant Rebates and Incentives	\$1,378,757	N/A	N/A	\$1,378,757
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$467,184	N/A	N/A	\$467,184
Subtotal	\$18,633,763	N/A	N/A	\$1,845,941
Total Benefits	\$18,633,763	\$5,119,360	\$5,119,360	\$14,640,569
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$776,459	\$776,459	\$776,459
Advertising/Promotion/Customer Ed	N/A	\$1,919	\$1,919	\$1,919
Participant Rebates and Incentives	N/A	\$1,378,757	\$1,378,757	\$1,378,757
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$2,157,135	\$2,157,135	\$2,157,135
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$16,787,822	N/A
Subtotal	N/A	N/A	\$16,787,822	N/A
Participant Costs				
Incremental Capital Costs	\$1,334,956	N/A	N/A	\$1,334,956
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$1,334,956	N/A	N/A	\$1,334,956
Total Costs	\$1,334,956	\$2,157,135	\$18,944,957	\$3,492,091
Net Benefit (Cost)	\$17,298,807	\$2,962,225	(\$13,825,597)	\$11,148,478
Benefit/Cost Ratio	13.96	2.37	0.27	4.19

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	12.5 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	48.02%
Installation Rate (Demand)	G	14.37%
Net coincident kW Saved at Generator	H	132.63 kW
Gross Annual kWh Saved at Customer	I	2,064,559.23 kWh
Net Annual kWh Saved at Generator	J	1,059,027.72 kWh

Program Summary All Participants

Total Budget	K	\$2,157,135
Net coincident kW Saved at Generator	L	1,724 kW
Gross Annual kWh Saved at Customer	M	26,839,270 kWh
Net Annual kWh Saved at Generator	N	13,767,360 kWh
Total MTRC Net Benefits with Adder	O	\$11,148,478
Total MTRC Net Benefits without Adder	P	\$10,124,606

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0125
Utility Program Cost per kW at Gen	K/ L	\$1,251

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		81,647
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WHOLE HOME EFFICIENCY

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$7,868	\$7,868	\$7,868
Trans. & Dist. Capacity	N/A	\$973	\$973	\$973
Marginal Energy	N/A	\$1,130	\$1,130	\$1,130
Avoided Emissions (CO2)	N/A	N/A	N/A	\$1,770
Subtotal				\$11,740
Non-Energy Benefits Adder (20.0%)				\$1,994
Subtotal	N/A	\$9,970	\$9,970	\$13,734
Participant Benefits				
Bill Reduction - Electric	\$6,780	N/A	N/A	N/A
Participant Rebates and Incentives	\$5,372	N/A	N/A	\$5,372
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$12,152	N/A	N/A	\$5,372
Total Benefits	\$12,152	\$9,970	\$9,970	\$19,107
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$67,902	\$67,902	\$67,902
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$5,372	\$5,372	\$5,372
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$73,274	\$73,274	\$73,274
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$6,780	N/A
Subtotal	N/A	N/A	\$6,780	N/A
Participant Costs				
Incremental Capital Costs	\$31,066	N/A	N/A	\$24,511
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$31,066	N/A	N/A	\$24,511
Total Costs	\$31,066	\$73,274	\$80,054	\$97,785
Net Benefit (Cost)	(\$18,914)	(\$63,304)	(\$70,084)	(\$78,679)
Benefit/Cost Ratio	0.39	0.14	0.12	0.20

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	17.2 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	78.90%
Net-to-Gross (Demand)	E	78.90%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	1.35 kW
Gross Annual kWh Saved at Customer	I	915.80 kWh
Net Annual kWh Saved at Generator	J	771.81 kWh

Program Summary All Participants

Total Budget	K	\$73,274
Net coincident kW Saved at Generator	L	7 kW
Gross Annual kWh Saved at Customer	M	4,579 kWh
Net Annual kWh Saved at Generator	N	3,859 kWh
Total MTRC Net Benefits with Adder	O	(\$78,679)
Total MTRC Net Benefits without Adder	P	(\$80,673)

Utility Program Cost per kWh Lifetime	K/(A x N)	\$1.1032
Utility Program Cost per kW at Gen	K/ L	\$10,871

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	25
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ENERGY SAVINGS KIT

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$250,451	\$250,451	\$250,451
Trans. & Dist. Capacity	N/A	\$30,656	\$30,656	\$30,656
Marginal Energy	N/A	\$435,165	\$435,165	\$435,165
Avoided Emissions (CO2)	N/A	N/A	N/A	\$852,496
Subtotal				\$1,568,768
Non-Energy Benefits Adder (50.0%)				\$358,136
Subtotal	N/A	\$716,272	\$716,272	\$1,926,904
Participant Benefits				
Bill Reduction - Electric	\$2,509,543	N/A	N/A	N/A
Participant Rebates and Incentives	\$26,805	N/A	N/A	\$26,805
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$271,973	N/A	N/A	\$271,973
Subtotal	\$2,808,321	N/A	N/A	\$298,778
Total Benefits	\$2,808,321	\$716,272	\$716,272	\$2,225,682
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$161,508	\$161,508	\$161,508
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$26,805	\$26,805	\$26,805
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$188,313	\$188,313	\$188,313
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$2,509,543	N/A
Subtotal	N/A	N/A	\$2,509,543	N/A
Participant Costs				
Incremental Capital Costs	\$56,867	N/A	N/A	\$56,867
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$56,867	N/A	N/A	\$56,867
Total Costs	\$56,867	\$188,313	\$2,697,856	\$245,180
Net Benefit (Cost)	\$2,751,454	\$527,959	(\$1,981,584)	\$1,980,502
Benefit/Cost Ratio	49.38	3.80	0.27	9.08

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	12.9 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	76.03%
Installation Rate (Demand)	G	76.27%
Net coincident kW Saved at Generator	H	20.14 kW
Gross Annual kWh Saved at Customer	I	226,015.04 kWh
Net Annual kWh Saved at Generator	J	183,543.01 kWh

Program Summary All Participants

Total Budget	K	\$188,313
Net coincident kW Saved at Generator	L	242 kW
Gross Annual kWh Saved at Customer	M	2,712,181 kWh
Net Annual kWh Saved at Generator	N	2,202,516 kWh
Total MTRC Net Benefits with Adder	O	\$1,980,502
Total MTRC Net Benefits without Adder	P	\$1,622,366
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0066
Utility Program Cost per kW at Gen	K/ L	\$779
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		11,099

MULTIFAMILY WEATHERIZATION

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$409,787	\$409,787	\$409,787
Trans. & Dist. Capacity	N/A	\$50,104	\$50,104	\$50,104
Marginal Energy	N/A	\$325,345	\$325,345	\$325,345
Avoided Emissions (CO2)	N/A	N/A	N/A	\$765,859
Subtotal				\$1,551,095
Non-Energy Benefits Adder (50.0%)				\$392,618
Subtotal	N/A	\$785,236	\$785,236	\$1,943,714
Participant Benefits				
Bill Reduction - Electric	\$2,122,000	N/A	N/A	N/A
Participant Rebates and Incentives	\$851,211	N/A	N/A	\$851,211
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$521	N/A	N/A	\$521
Subtotal	\$2,973,732	N/A	N/A	\$851,732
Total Benefits	\$2,973,732	\$785,236	\$785,236	\$2,795,446
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$170,285	\$170,285	\$170,285
Advertising/Promotion/Customer Ed	N/A	\$42,946	\$42,946	\$42,946
Participant Rebates and Incentives	N/A	\$851,211	\$851,211	\$851,211
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$20,460	\$20,460	\$20,460
Subtotal	N/A	\$1,084,903	\$1,084,903	\$1,084,903
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$2,122,000	N/A
Subtotal	N/A	N/A	\$2,122,000	N/A
Participant Costs				
Incremental Capital Costs	\$1,010,153	N/A	N/A	\$1,010,153
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$1,010,153	N/A	N/A	\$1,010,153
Total Costs	\$1,010,153	\$1,084,903	\$3,206,903	\$2,095,056
Net Benefit (Cost)	\$1,963,579	(\$299,667)	(\$2,421,667)	\$700,389
Benefit/Cost Ratio	2.94	0.72	0.24	1.33

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	19.0 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	316.31 kW
Gross Annual kWh Saved at Customer	I	1,278,500.00 kWh
Net Annual kWh Saved at Generator	J	1,365,627.00 kWh

Program Summary All Participants

Total Budget	K	\$1,084,903
Net coincident kW Saved at Generator	L	316 kW
Gross Annual kWh Saved at Customer	M	1,278,500 kWh
Net Annual kWh Saved at Generator	N	1,365,627 kWh
Total MTRC Net Benefits with Adder	O	\$700,389
Total MTRC Net Benefits without Adder	P	\$307,771
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0418
Utility Program Cost per kW at Gen	K/ L	\$3,430
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		9,382

NON-PROFIT

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$957,407	\$957,407	\$957,407
Trans. & Dist. Capacity	N/A	\$117,866	\$117,866	\$117,866
Marginal Energy	N/A	\$1,109,343	\$1,109,343	\$1,109,343
Avoided Emissions (CO2)	N/A	N/A	N/A	\$1,987,927
Subtotal				\$4,172,544
Non-Energy Benefits Adder (50.0%)				\$1,092,308
Subtotal	N/A	\$2,184,617	\$2,184,617	\$5,264,853
Participant Benefits				
Bill Reduction - Electric	\$3,658,977	N/A	N/A	N/A
Participant Rebates and Incentives	\$1,005,005	N/A	N/A	\$1,005,005
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$4,663,983	N/A	N/A	\$1,005,005
Total Benefits	\$4,663,983	\$2,184,617	\$2,184,617	\$6,269,858
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$120,312	\$120,312	\$120,312
Advertising/Promotion/Customer Ed	N/A	\$33,000	\$33,000	\$33,000
Participant Rebates and Incentives	N/A	\$1,005,005	\$1,005,005	\$1,005,005
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$15,214	\$15,214	\$15,214
Subtotal	N/A	\$1,173,531	\$1,173,531	\$1,173,531
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$3,658,977	N/A
Subtotal	N/A	N/A	\$3,658,977	N/A
Participant Costs				
Incremental Capital Costs	\$1,240,913	N/A	N/A	\$1,240,913
Incremental O&M Costs	\$57,251	N/A	N/A	\$57,251
Subtotal	\$1,298,164	N/A	N/A	\$1,298,164
Total Costs	\$1,298,164	\$1,173,531	\$4,832,509	\$2,471,696
Net Benefit (Cost)	\$3,365,818	\$1,011,085	(\$2,647,892)	\$3,798,162
Benefit/Cost Ratio	3.59	1.86	0.45	2.54

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	18.0 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	387.73 kW
Gross Annual kWh Saved at Customer	I	2,180,751.00 kWh
Net Annual kWh Saved at Generator	J	2,303,577.77 kWh

Program Summary All Participants

Total Budget	K	\$1,173,531
Net coincident kW Saved at Generator	L	775 kW
Gross Annual kWh Saved at Customer	M	4,361,502 kWh
Net Annual kWh Saved at Generator	N	4,607,156 kWh
Total MTRC Net Benefits with Adder	O	\$3,798,162
Total MTRC Net Benefits without Adder	P	\$2,705,854

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0142
Utility Program Cost per kW at Gen	K/ L	\$1,513

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		27,203
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SINGLE-FAMILY WEATHERIZATION

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$5,381,926	\$5,381,926	\$5,381,926
Trans. & Dist. Capacity	N/A	\$663,098	\$663,098	\$663,098
Marginal Energy	N/A	\$8,961,549	\$8,961,549	\$8,961,549
Avoided Emissions (CO2)	N/A	N/A	N/A	\$15,714,596
Subtotal				\$30,721,168
Non-Energy Benefits Adder (50.0%)				\$7,503,286
Subtotal	N/A	\$15,006,572	\$15,006,572	\$38,224,454
Participant Benefits				
Bill Reduction - Electric	\$50,696,009	N/A	N/A	N/A
Participant Rebates and Incentives	\$1,637,148	N/A	N/A	\$1,637,148
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$6,098	N/A	N/A	\$6,098
Subtotal	\$52,339,254	N/A	N/A	\$1,643,245
Total Benefits	\$52,339,254	\$15,006,572	\$15,006,572	\$39,867,700
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$243,417	\$243,417	\$243,417
Advertising/Promotion/Customer Ed	N/A	\$134,468	\$134,468	\$134,468
Participant Rebates and Incentives	N/A	\$1,637,148	\$1,637,148	\$1,637,148
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$43,808	\$43,808	\$43,808
Subtotal	N/A	\$2,058,840	\$2,058,840	\$2,058,840
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$50,696,009	N/A
Subtotal	N/A	N/A	\$50,696,009	N/A
Participant Costs				
Incremental Capital Costs	\$1,786,908	N/A	N/A	\$1,786,908
Incremental O&M Costs	\$466	N/A	N/A	\$466
Subtotal	\$1,787,374	N/A	N/A	\$1,787,374
Total Costs	\$1,787,374	\$2,058,840	\$52,754,849	\$3,846,214
Net Benefit (Cost)	\$50,551,880	\$12,947,732	(\$37,748,277)	\$36,021,485
Benefit/Cost Ratio	29.28	7.29	0.28	10.37

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	18.0 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	99.04%
Installation Rate (Demand)	G	99.02%
Net coincident kW Saved at Generator	H	118.08 kW
Gross Annual kWh Saved at Customer	I	858,118.51 kWh
Net Annual kWh Saved at Generator	J	907,754.17 kWh

Program Summary All Participants

Total Budget	K	\$2,058,840
Net coincident kW Saved at Generator	L	4,369 kW
Gross Annual kWh Saved at Customer	M	31,750,385 kWh
Net Annual kWh Saved at Generator	N	33,586,904 kWh
Total MTRC Net Benefits with Adder	O	\$36,021,485
Total MTRC Net Benefits without Adder	P	\$28,518,199
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0034
Utility Program Cost per kW at Gen	K/ L	\$471
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		214,920

ELECTRIC VEHICLE OPTIMIZATION

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$259,653	\$259,653	\$259,653
Trans. & Dist. Capacity	N/A	\$0	\$0	\$0
Marginal Energy	N/A	\$102,562	\$102,562	\$102,562
Avoided Emissions (CO2)	N/A	N/A	N/A	\$129,104
Subtotal				\$491,320
Non-Energy Benefits Adder (20.0%)				\$72,443
Subtotal	N/A	\$362,215	\$362,215	\$563,763
Participant Benefits				
Bill Reduction - Electric	\$0	N/A	N/A	N/A
Participant Rebates and Incentives	\$146,350	N/A	N/A	\$146,350
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$146,350	N/A	N/A	\$146,350
Total Benefits	\$146,350	\$362,215	\$362,215	\$710,113
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$537,836	\$537,836	\$537,836
Advertising/Promotion/Customer Ed	N/A	\$98,400	\$98,400	\$98,400
Participant Rebates and Incentives	N/A	\$146,350	\$146,350	\$146,350
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$782,586	\$782,586	\$782,586
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$0	N/A
Subtotal	N/A	N/A	\$0	N/A
Participant Costs				
Incremental Capital Costs	\$0	N/A	N/A	\$0
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$0	N/A	N/A	\$0
Total Costs	\$0	\$782,586	\$782,586	\$782,586
Net Benefit (Cost)	\$146,350	(\$420,371)	(\$420,371)	(\$72,473)
Benefit/Cost Ratio	INF	0.46	0.46	0.91

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	N/A
T & D Loss Factor (Energy)	B	N/A
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	N/A
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	N/A
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	0.52 kW
Gross Annual kWh Saved at Customer	I	0.00 kWh
Net Annual kWh Saved at Generator	J	0.00 kWh

Program Summary All Participants

Total Budget	K	\$782,586
Net coincident kW Saved at Generator	L	2,591 kW
Gross Annual kWh Saved at Customer	M	0 kWh
Net Annual kWh Saved at Generator	N	0 kWh
Total MTRC Net Benefits with Adder	O	(\$72,473)
Total MTRC Net Benefits without Adder	P	(\$144,916)
<hr/>		
Utility Program Cost per kWh Lifetime	K/(A x N)	N/A
Utility Program Cost per kW at Gen	K/ L	\$302
<hr/>		
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		1,669

RESIDENTIAL BATTERY DEMAND RESPONSE

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$0	\$0	\$0
Trans. & Dist. Capacity	N/A	\$0	\$0	\$0
Marginal Energy	N/A	\$0	\$0	\$0
Avoided Emissions (CO2)	N/A	N/A	N/A	\$0
Subtotal				\$0
Non-Energy Benefits Adder				\$0
Subtotal	N/A	\$0	\$0	\$0
Participant Benefits				
Bill Reduction - Electric	\$0	N/A	N/A	N/A
Participant Rebates and Incentives	\$0	N/A	N/A	\$0
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$0	N/A	N/A	\$0
Total Benefits	\$0	\$0	\$0	\$0
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$103,786	\$103,786	\$103,786
Advertising/Promotion/Customer Ed	N/A	\$100	\$100	\$100
Participant Rebates and Incentives	N/A	\$0	\$0	\$0
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$39,698	\$39,698	\$39,698
Subtotal	N/A	\$143,583	\$143,583	\$143,583
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$0	N/A
Subtotal	N/A	N/A	\$0	N/A
Participant Costs				
Incremental Capital Costs	\$0	N/A	N/A	\$0
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$0	N/A	N/A	\$0
Total Costs	\$0	\$143,583	\$143,583	\$143,583
Net Benefit (Cost)	\$0	(\$143,583)	(\$143,583)	(\$143,583)
Benefit/Cost Ratio	INF	-	-	-

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	N/A
T & D Loss Factor (Energy)	B	N/A
T & D Loss Factor (Demand)	C	N/A
Net-to-Gross (Energy)	D	N/A
Net-to-Gross (Demand)	E	N/A
Installation Rate (Energy)	F	N/A
Installation Rate (Demand)	G	N/A
Net coincident kW Saved at Generator	H	#DIV/0!
Gross Annual kWh Saved at Customer	I	#DIV/0!
Net Annual kWh Saved at Generator	J	#DIV/0!

Program Summary All Participants

Total Budget	K	\$143,583
Net coincident kW Saved at Generator	L	#DIV/0!
Gross Annual kWh Saved at Customer	M	#DIV/0!
Net Annual kWh Saved at Generator	N	#DIV/0!
Total MTRC Net Benefits with Adder	O	(\$143,583)
Total MTRC Net Benefits without Adder	P	(\$143,583)

Utility Program Cost per kWh Lifetime	K/(A x N)	N/A
Utility Program Cost per kW at Gen	K/ L	#DIV/0!

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	N/A
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RESIDENTIAL DEMAND RESPONSE

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$20,586,458	\$20,586,458	\$20,586,458
Trans. & Dist. Capacity	N/A	\$0	\$0	\$0
Marginal Energy	N/A	\$23,998	\$23,998	\$23,998
Avoided Emissions (CO2)	N/A	N/A	N/A	\$45,523
Subtotal				\$20,655,979
Non-Energy Benefits Adder (20.0%)				\$4,122,091
Subtotal	N/A	\$20,610,456	\$20,610,456	\$24,778,070
Participant Benefits				
Bill Reduction - Electric	\$140,051	N/A	N/A	N/A
Participant Rebates and Incentives	\$9,092,856	N/A	N/A	\$9,092,856
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$9,232,907	N/A	N/A	\$9,092,856
Total Benefits	\$9,232,907	\$20,610,456	\$20,610,456	\$33,870,926
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$5,124,456	\$5,124,456	\$5,124,456
Advertising/Promotion/Customer Ed	N/A	\$371,701	\$371,701	\$371,701
Participant Rebates and Incentives	N/A	\$9,092,856	\$9,092,856	\$9,092,856
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$68,090	\$68,090	\$68,090
Subtotal	N/A	\$14,657,103	\$14,657,103	\$14,657,103
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$140,051	N/A
Subtotal	N/A	N/A	\$140,051	N/A
Participant Costs				
Incremental Capital Costs	\$0	N/A	N/A	\$0
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$0	N/A	N/A	\$0
Total Costs	\$0	\$14,657,103	\$14,797,155	\$14,657,103
Net Benefit (Cost)	\$9,232,907	\$5,953,353	\$5,813,301	\$19,213,823
Benefit/Cost Ratio	INF	1.41	1.39	2.31

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	9.4 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	10519.66 kW
Gross Annual kWh Saved at Customer	I	40,391.00 kWh
Net Annual kWh Saved at Generator	J	43,143.56 kWh

Program Summary All Participants

Total Budget	K	\$14,657,103
Net coincident kW Saved at Generator	L	31,559 kW
Gross Annual kWh Saved at Customer	M	121,173 kWh
Net Annual kWh Saved at Generator	N	129,431 kWh
Total MTRC Net Benefits with Adder	O	\$19,213,823
Total MTRC Net Benefits without Adder	P	\$15,091,732

Utility Program Cost per kWh Lifetime	K/(A x N)	\$12.0133
Utility Program Cost per kW at Gen	K/ L	\$464

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		604
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SMALL COMMERCIAL BUILDING CONTROLS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$74,424	\$74,424	\$74,424
Trans. & Dist. Capacity	N/A	\$9,014	\$9,014	\$9,014
Marginal Energy	N/A	\$235	\$235	\$235
Avoided Emissions (CO2)	N/A	N/A	N/A	\$494
Subtotal				\$84,167
Non-Energy Benefits Adder (20.0%)				\$16,735
Subtotal	N/A	\$83,673	\$83,673	\$100,902
Participant Benefits				
Bill Reduction - Electric	\$1,000	N/A	N/A	N/A
Participant Rebates and Incentives	\$0	N/A	N/A	\$0
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$1,000	N/A	N/A	\$0
Total Benefits	\$1,000	\$83,673	\$83,673	\$100,902
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$84,142	\$84,142	\$84,142
Advertising/Promotion/Customer Ed	N/A	\$5,209	\$5,209	\$5,209
Participant Rebates and Incentives	N/A	\$0	\$0	\$0
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$89,351	\$89,351	\$89,351
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$1,000	N/A
Subtotal	N/A	N/A	\$1,000	N/A
Participant Costs				
Incremental Capital Costs	\$9,497	N/A	N/A	\$9,497
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$9,497	N/A	N/A	\$9,497
Total Costs	\$9,497	\$89,351	\$90,351	\$98,848
Net Benefit (Cost)	(\$8,497)	(\$5,678)	(\$6,678)	\$2,054
Benefit/Cost Ratio	0.11	0.94	0.93	1.02

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	10.0 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	45.36 kW
Gross Annual kWh Saved at Customer	I	690.00 kWh
Net Annual kWh Saved at Generator	J	728.86 kWh

Program Summary All Participants

Total Budget	K	\$89,351
Net coincident kW Saved at Generator	L	91 kW
Gross Annual kWh Saved at Customer	M	1,380 kWh
Net Annual kWh Saved at Generator	N	1,458 kWh
Total MTRC Net Benefits with Adder	O	\$2,054
Total MTRC Net Benefits without Adder	P	(\$14,681)

Utility Program Cost per kWh Lifetime	K/(A x N)	\$6.1295
Utility Program Cost per kW at Gen	K/ L	\$985

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	6
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GEO-TARGETING PILOT - DR

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$0	\$0	\$0
Trans. & Dist. Capacity	N/A	\$0	\$0	\$0
Marginal Energy	N/A	\$0	\$0	\$0
Avoided Emissions (CO2)	N/A	N/A	N/A	\$0
Subtotal				\$0
Non-Energy Benefits Adder				
Subtotal	N/A	\$0	\$0	\$0
Participant Benefits				
Bill Reduction - Electric	\$0	N/A	N/A	N/A
Participant Rebates and Incentives	\$0	N/A	N/A	\$0
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$0	N/A	N/A	\$0
Total Benefits				
	\$0	\$0	\$0	\$0
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$0	\$0	\$0
Advertising/Promotion/ Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$0	\$0	\$0
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$0	\$0	\$0
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$0	N/A
Subtotal	N/A	N/A	\$0	N/A
Participant Costs				
Incremental Capital Costs	\$0	N/A	N/A	\$0
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$0	N/A	N/A	\$0
Total Costs				
	\$0	\$0	\$0	\$0
Net Benefit (Cost)	\$0	\$0	\$0	\$0
Benefit/Cost Ratio	INF	INF	INF	INF

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	N/A
T & D Loss Factor (Energy)	B	N/A
T & D Loss Factor (Demand)	C	N/A
Net-to-Gross (Energy)	D	N/A
Net-to-Gross (Demand)	E	N/A
Installation Rate (Energy)	F	N/A
Installation Rate (Demand)	G	N/A
Net coincident kW Saved at Generator	H	#DIV/0!
Gross Annual kWh Saved at Customer	I	#DIV/0!
Net Annual kWh Saved at Generator	J	#DIV/0!

Program Summary All Participants

Total Budget	K	\$0
Net coincident kW Saved at Generator	L	#DIV/0!
Gross Annual kWh Saved at Customer	M	#DIV/0!
Net Annual kWh Saved at Generator	N	#DIV/0!
Total MTRC Net Benefits with Adder	O	\$0
Total MTRC Net Benefits without Adder	P	\$0

Utility Program Cost per kWh Lifetime	K/(A x N)	N/A
Utility Program Cost per kW at Gen	K/ L	#DIV/0!

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	N/A
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GEO-TARGETING PILOT - EE

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$0	\$0	\$0
Trans. & Dist. Capacity	N/A	\$0	\$0	\$0
Marginal Energy	N/A	\$0	\$0	\$0
Avoided Emissions (CO2)	N/A	N/A	N/A	\$0
Subtotal				\$0
Non-Energy Benefits Adder				
Subtotal	N/A	\$0	\$0	\$0
Participant Benefits				
Bill Reduction - Electric	\$0	N/A	N/A	N/A
Participant Rebates and Incentives	\$0	N/A	N/A	\$0
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$0	N/A	N/A	\$0
Total Benefits	\$0	\$0	\$0	\$0
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$0	\$0	\$0
Advertising/Promotion/ Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$0	\$0	\$0
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$0	\$0	\$0
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$0	N/A
Subtotal	N/A	N/A	\$0	N/A
Participant Costs				
Incremental Capital Costs	\$0	N/A	N/A	\$0
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$0	N/A	N/A	\$0
Total Costs	\$0	\$0	\$0	\$0
Net Benefit (Cost)	\$0	\$0	\$0	\$0
Benefit/Cost Ratio	INF	INF	INF	INF

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 ELECTRIC

ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	N/A
T & D Loss Factor (Energy)	B	N/A
T & D Loss Factor (Demand)	C	N/A
Net-to-Gross (Energy)	D	N/A
Net-to-Gross (Demand)	E	N/A
Installation Rate (Energy)	F	N/A
Installation Rate (Demand)	G	N/A
Net coincident kW Saved at Generator	H	#DIV/0!
Gross Annual kWh Saved at Customer	I	#DIV/0!
Net Annual kWh Saved at Generator	J	#DIV/0!

Program Summary All Participants

Total Budget	K	\$0
Net coincident kW Saved at Generator	L	#DIV/0!
Gross Annual kWh Saved at Customer	M	#DIV/0!
Net Annual kWh Saved at Generator	N	#DIV/0!
Total MTRC Net Benefits with Adder	O	\$0
Total MTRC Net Benefits without Adder	P	\$0

Utility Program Cost per kWh Lifetime	K/(A x N)	N/A
Utility Program Cost per kW at Gen	K/ L	#DIV/0!

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		N/A
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PORTFOLIO TOTAL

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$28,492,332	\$28,492,332	\$28,492,332
Variable O&M Savings	N/A	\$413,400	\$413,400	\$413,400
Demand Savings	N/A	\$4,444,611	\$4,444,611	\$4,444,611
Avoided Emissions (CO2)	N/A	N/A	N/A	\$49,777,803
Avoided Emissions (CH4)	N/A	N/A	N/A	\$892,501
Subtotal				\$84,020,648
Non-Energy Benefits Adder (8.7%)				\$7,274,545
Subtotal	N/A	\$33,350,343	\$33,350,343	\$91,295,193
Participant Benefits				
Bill Reduction - Gas	\$79,125,282	N/A	N/A	N/A
Participant Rebates and Incentives	\$15,241,497	N/A	N/A	\$15,241,497
Incremental Capital Savings	\$271	N/A	N/A	\$271
Incremental O&M Savings	\$34,443,308	N/A	N/A	\$33,364,421
Subtotal	\$128,810,359	N/A	N/A	\$48,606,190
Total Benefits	\$128,810,359	\$33,350,343	\$33,350,343	\$139,901,382
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$5,720,698	\$5,720,698	\$5,720,698
Advertising/Promotion/Customer Ed	N/A	\$789,366	\$789,366	\$789,366
Participant Rebates and Incentives	N/A	\$15,241,497	\$15,241,497	\$15,241,497
Equipment & Installation	N/A	\$1,268,343	\$1,268,343	\$1,268,343
Measurement and Verification	N/A	\$594,275	\$594,275	\$594,275
Subtotal	N/A	\$23,614,178	\$23,614,178	\$23,614,178
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$79,125,282	N/A
Subtotal	N/A	N/A	\$79,125,282	N/A
Participant Costs				
Incremental Capital Costs	\$35,061,787	N/A	N/A	\$31,519,275
Incremental O&M Costs	\$2,069	N/A	N/A	\$2,069
Subtotal	\$35,063,857	N/A	N/A	\$31,521,345
Total Costs	\$35,063,857	\$23,614,178	\$102,739,461	\$55,135,523
Net Benefit (Cost)	\$93,746,502	\$9,736,165	(\$69,389,118)	\$84,765,859
Benefit/Cost Ratio	3.67	1.41	0.32	2.54

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	13.7 years
Net-to-Gross (Weighted on Dth)	B	59.80%
Install Rate (Weighted on Dth)	C	67.11%

Program Summary per Participant

Gross Annual Dth Saved	D	6,493.3
Net Annual Dth Saved	E	3,859.3

Program Summary All Participants

Total Budget	F	\$23,614,178
Gross Annual Dth Saved	G	1,538,922 Dth
Net Annual Dth Saved	H	914,655 Dth
Total MTRC Net Benefits with Adder	I	\$84,765,859
Total MTRC Net Benefits without Adder	J	\$77,491,314

Utility Program Cost per Dth Lifetime	F / (A x H)	\$1.8897
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	731,047
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	380.8

EE PORTFOLIO TOTAL

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$28,492,332	\$28,492,332	\$28,492,332
Variable O&M Savings	N/A	\$413,400	\$413,400	\$413,400
Demand Savings	N/A	\$4,444,611	\$4,444,611	\$4,444,611
Avoided Emissions (CO2)	N/A	N/A	N/A	\$49,777,803
Avoided Emissions (CH4)	N/A	N/A	N/A	\$892,501
Subtotal				\$84,020,648
Non-Energy Benefits Adder (8.7%)				\$7,274,545
Subtotal	N/A	\$33,350,343	\$33,350,343	\$91,295,193
Participant Benefits				
Bill Reduction - Gas	\$79,125,282	N/A	N/A	N/A
Participant Rebates and Incentives	\$15,241,497	N/A	N/A	\$15,241,497
Incremental Capital Savings	\$271	N/A	N/A	\$271
Incremental O&M Savings	\$34,443,308	N/A	N/A	\$33,364,421
Subtotal	\$128,810,359	N/A	N/A	\$48,606,190
Total Benefits	\$128,810,359	\$33,350,343	\$33,350,343	\$139,901,382
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$5,720,698	\$5,720,698	\$5,720,698
Advertising/Promotion/Customer Ed	N/A	\$789,366	\$789,366	\$789,366
Participant Rebates and Incentives	N/A	\$15,241,497	\$15,241,497	\$15,241,497
Equipment & Installation	N/A	\$1,268,343	\$1,268,343	\$1,268,343
Measurement and Verification	N/A	\$594,275	\$594,275	\$594,275
Subtotal	N/A	\$23,614,178	\$23,614,178	\$23,614,178
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$79,125,282	N/A
Subtotal	N/A	N/A	\$79,125,282	N/A
Participant Costs				
Incremental Capital Costs	\$35,061,787	N/A	N/A	\$31,519,275
Incremental O&M Costs	\$2,069	N/A	N/A	\$2,069
Subtotal	\$35,063,857	N/A	N/A	\$31,521,345
Total Costs	\$35,063,857	\$23,614,178	\$102,739,461	\$55,135,523
Net Benefit (Cost)	\$93,746,502	\$9,736,165	(\$69,389,118)	\$84,765,859
Benefit/Cost Ratio	3.67	1.41	0.32	2.54

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	13.7 years
Net-to-Gross (Weighted on Dth)	B	59.80%
Install Rate (Weighted on Dth)	C	67.11%

Program Summary per Participant

Gross Annual Dth Saved	D	6,493.3
Net Annual Dth Saved	E	3,859.3

Program Summary All Participants

Total Budget	F	\$23,614,178
Gross Annual Dth Saved	G	1,538,922 Dth
Net Annual Dth Saved	H	914,655 Dth
Total MTRC Net Benefits with Adder	I	\$84,765,859
Total MTRC Net Benefits without Adder	J	\$77,491,314

Utility Program Cost per Dth Lifetime	F / (A x H)	\$1.8897
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	731,047
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	380.8

BUSINESS PROGRAM EE TOTAL

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$3,195,664	\$3,195,664	\$3,195,664
Variable O&M Savings	N/A	\$45,200	\$45,200	\$45,200
Demand Savings	N/A	\$456,797	\$456,797	\$456,797
Avoided Emissions (CO2)	N/A	N/A	N/A	\$5,897,027
Avoided Emissions (CH4)	N/A	N/A	N/A	\$108,835
Subtotal				\$9,703,524
Non-Energy Benefits Adder (7.6%)				\$739,532
Subtotal	N/A	\$3,697,662	\$3,697,662	\$10,443,056
Participant Benefits				
Bill Reduction - Gas	\$8,407,895	N/A	N/A	N/A
Participant Rebates and Incentives	\$590,070	N/A	N/A	\$590,070
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$7,075,376	N/A	N/A	\$6,089,575
Subtotal	\$16,073,341	N/A	N/A	\$6,679,645
Total Benefits	\$16,073,341	\$3,697,662	\$3,697,662	\$17,122,700
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$731,625	\$731,625	\$731,625
Advertising/Promotion/Customer Ed	N/A	\$42,763	\$42,763	\$42,763
Participant Rebates and Incentives	N/A	\$590,070	\$590,070	\$590,070
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$84,287	\$84,287	\$84,287
Subtotal	N/A	\$1,448,744	\$1,448,744	\$1,448,744
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$8,407,895	N/A
Subtotal	N/A	N/A	\$8,407,895	N/A
Participant Costs				
Incremental Capital Costs	\$2,369,924	N/A	N/A	\$2,079,343
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$2,369,924	N/A	N/A	\$2,079,343
Total Costs	\$2,369,924	\$1,448,744	\$9,856,639	\$3,528,087
Net Benefit (Cost)	\$13,703,417	\$2,248,918	(\$6,158,977)	\$13,594,614
Benefit/Cost Ratio	6.78	2.55	0.38	4.85

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	18.8 years
Net-to-Gross (Weighted on Dth)	B	88.69%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	1,769.4
Net Annual Dth Saved	E	1,569.4

Program Summary All Participants

Total Budget	F	\$1,448,744
Gross Annual Dth Saved	G	88,470 Dth
Net Annual Dth Saved	H	78,468 Dth
Total MTRC Net Benefits with Adder	I	\$13,594,614
Total MTRC Net Benefits without Adder	J	\$12,855,081

Utility Program Cost per Dth Lifetime F / (A x H) **\$0.9807**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	86,424
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	45.0

RESIDENTIAL PROGRAM EE TOTAL

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$17,463,891	\$17,463,891	\$17,463,891
Variable O&M Savings	N/A	\$251,938	\$251,938	\$251,938
Demand Savings	N/A	\$2,605,653	\$2,605,653	\$2,605,653
Avoided Emissions (CO2)	N/A	N/A	N/A	\$30,635,235
Avoided Emissions (CH4)	N/A	N/A	N/A	\$563,815
Subtotal				\$51,520,533
Non-Energy Benefits Adder (3.6%)				\$1,869,413
Subtotal	N/A	\$20,321,482	\$20,321,482	\$53,389,946
Participant Benefits				
Bill Reduction - Gas	\$50,455,696	N/A	N/A	N/A
Participant Rebates and Incentives	\$9,007,356	N/A	N/A	\$9,007,356
Incremental Capital Savings	\$271	N/A	N/A	\$271
Incremental O&M Savings	\$8,985,062	N/A	N/A	\$8,891,977
Subtotal	\$68,448,385	N/A	N/A	\$17,899,604
Total Benefits	\$68,448,385	\$20,321,482	\$20,321,482	\$71,289,550
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$3,076,666	\$3,076,666	\$3,076,666
Advertising/Promotion/Customer Ed	N/A	\$416,027	\$416,027	\$416,027
Participant Rebates and Incentives	N/A	\$9,007,356	\$9,007,356	\$9,007,356
Equipment & Installation	N/A	\$1,268,343	\$1,268,343	\$1,268,343
Measurement and Verification	N/A	\$17,150	\$17,150	\$17,150
Subtotal	N/A	\$13,785,542	\$13,785,542	\$13,785,542
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$50,455,696	N/A
Subtotal	N/A	N/A	\$50,455,696	N/A
Participant Costs				
Incremental Capital Costs	\$26,971,780	N/A	N/A	\$23,719,848
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$26,971,780	N/A	N/A	\$23,719,848
Total Costs	\$26,971,780	\$13,785,542	\$64,241,238	\$37,505,391
Net Benefit (Cost)	\$41,476,606	\$6,535,940	(\$43,919,756)	\$33,784,159
Benefit/Cost Ratio	2.54	1.47	0.32	1.90

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	14.1 years
Net-to-Gross (Weighted on Dth)	B	48.08%
Install Rate (Weighted on Dth)	C	56.94%

Program Summary per Participant

Gross Annual Dth Saved	D	8,501.3
Net Annual Dth Saved	E	4,051.9

Program Summary All Participants

Total Budget	F	\$13,785,542
Gross Annual Dth Saved	G	1,164,683 Dth
Net Annual Dth Saved	H	555,109 Dth
Total MTRC Net Benefits with Adder	I	\$33,784,159
Total MTRC Net Benefits without Adder	J	\$31,914,746

Utility Program Cost per Dth Lifetime F / (A x H) **\$1.7616**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	457,799
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	238.5

INCOME QUALIFIED PROGRAM TOTAL

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$7,832,777	\$7,832,777	\$7,832,777
Variable O&M Savings	N/A	\$116,261	\$116,261	\$116,261
Demand Savings	N/A	\$1,382,161	\$1,382,161	\$1,382,161
Avoided Emissions (CO2)	N/A	N/A	N/A	\$13,245,540
Avoided Emissions (CH4)	N/A	N/A	N/A	\$219,851
Subtotal				\$22,796,591
Non-Energy Benefits Adder (20.5%)				\$4,665,600
Subtotal	N/A	\$9,331,200	\$9,331,200	\$27,462,191
Participant Benefits				
Bill Reduction - Gas	\$20,261,692	N/A	N/A	N/A
Participant Rebates and Incentives	\$5,139,545	N/A	N/A	\$5,139,545
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$18,382,870	N/A	N/A	\$18,382,870
Subtotal	\$43,784,106	N/A	N/A	\$23,522,414
Total Benefits	\$43,784,106	\$9,331,200	\$9,331,200	\$50,984,605
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$925,616	\$925,616	\$925,616
Advertising/Promotion/Customer Ed	N/A	\$250,145	\$250,145	\$250,145
Participant Rebates and Incentives	N/A	\$5,139,545	\$5,139,545	\$5,139,545
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	(\$21,852)	(\$21,852)	(\$21,852)
Subtotal	N/A	\$6,293,454	\$6,293,454	\$6,293,454
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$20,261,692	N/A
Subtotal	N/A	N/A	\$20,261,692	N/A
Participant Costs				
Incremental Capital Costs	\$5,720,084	N/A	N/A	\$5,720,084
Incremental O&M Costs	\$2,069	N/A	N/A	\$2,069
Subtotal	\$5,722,153	N/A	N/A	\$5,722,153
Total Costs	\$5,722,153	\$6,293,454	\$26,555,145	\$12,015,607
Net Benefit (Cost)	\$38,061,953	\$3,037,746	(\$17,223,946)	\$38,968,998
Benefit/Cost Ratio	7.65	1.48	0.35	4.24

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	11.4 years
Net-to-Gross (Weighted on Dth)	B	98.63%
Install Rate (Weighted on Dth)	C	98.36%

Program Summary per Participant

Gross Annual Dth Saved	D	5,715.4
Net Annual Dth Saved	E	5,621.5

Program Summary All Participants

Total Budget	F	\$6,293,454
Gross Annual Dth Saved	G	285,769 Dth
Net Annual Dth Saved	H	281,077 Dth
Total MTRC Net Benefits with Adder	I	\$38,968,998
Total MTRC Net Benefits without Adder	J	\$34,303,398

Utility Program Cost per Dth Lifetime F / (A x H) **\$1.9707**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	186,825
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	97.3

BUSINESS ENERGY ASSESSMENTS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$20,786	\$20,786	\$20,786
Variable O&M Savings	N/A	\$101	\$101	\$101
Demand Savings	N/A	\$3,708	\$3,708	\$3,708
Avoided Emissions (CO2)	N/A	N/A	N/A	\$39,824
Avoided Emissions (CH4)	N/A	N/A	N/A	\$632
Subtotal				\$65,052
Non-Energy Benefits Adder (7.6%)				\$4,919
Subtotal	N/A	\$24,596	\$24,596	\$69,971
Participant Benefits				
Bill Reduction - Gas	\$45,979	N/A	N/A	N/A
Participant Rebates and Incentives	\$2,473	N/A	N/A	\$2,473
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$33,771	N/A	N/A	\$33,771
Subtotal	\$82,223	N/A	N/A	\$36,245
Total Benefits	\$82,223	\$24,596	\$24,596	\$106,215
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$24,078	\$24,078	\$24,078
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$2,473	\$2,473	\$2,473
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$26,551	\$26,551	\$26,551
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$45,979	N/A
Subtotal	N/A	N/A	\$45,979	N/A
Participant Costs				
Incremental Capital Costs	\$1,222	N/A	N/A	\$1,222
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$1,222	N/A	N/A	\$1,222
Total Costs	\$1,222	\$26,551	\$72,530	\$27,773
Net Benefit (Cost)	\$81,001	(\$1,956)	(\$47,934)	\$78,442
Benefit/Cost Ratio	67.29	0.93	0.34	3.82

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	14.7 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	150.0
Net Annual Dth Saved	E	150.0

Program Summary All Participants

Total Budget	F	\$26,551
Gross Annual Dth Saved	G	600 Dth
Net Annual Dth Saved	H	600 Dth
Total MTRC Net Benefits with Adder	I	\$78,442
Total MTRC Net Benefits without Adder	J	\$73,523

Utility Program Cost per Dth Lifetime	F / (A x H)	\$3.0143
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		515
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)		0.3

BUSINESS HVAC+R SYSTEMS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$499,681	\$499,681	\$499,681
Variable O&M Savings	N/A	\$7,303	\$7,303	\$7,303
Demand Savings	N/A	\$72,960	\$72,960	\$72,960
Avoided Emissions (CO2)	N/A	N/A	N/A	\$896,002
Avoided Emissions (CH4)	N/A	N/A	N/A	\$16,633
Subtotal				\$1,492,578
Non-Energy Benefits Adder (7.8%)				\$115,989
Subtotal	N/A	\$579,944	\$579,944	\$1,608,567
Participant Benefits				
Bill Reduction - Gas	\$1,345,942	N/A	N/A	N/A
Participant Rebates and Incentives	\$304,751	N/A	N/A	\$304,751
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$30	N/A	N/A	\$30
Subtotal	\$1,650,723	N/A	N/A	\$304,781
Total Benefits	\$1,650,723	\$579,944	\$579,944	\$1,913,348
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$247,455	\$247,455	\$247,455
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$304,751	\$304,751	\$304,751
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$12,700	\$12,700	\$12,700
Subtotal	N/A	\$564,906	\$564,906	\$564,906
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$1,345,942	N/A
Subtotal	N/A	N/A	\$1,345,942	N/A
Participant Costs				
Incremental Capital Costs	\$448,074	N/A	N/A	\$426,873
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$448,074	N/A	N/A	\$426,873
Total Costs	\$448,074	\$564,906	\$1,910,848	\$991,779
Net Benefit (Cost)	\$1,202,649	\$15,037	(\$1,350,904)	\$921,569
Benefit/Cost Ratio	3.68	1.03	0.30	1.93

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	16.7 years
Net-to-Gross (Weighted on Dth)	B	92.90%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	548.2
Net Annual Dth Saved	E	509.4

Program Summary All Participants

Total Budget	F	\$564,906
Gross Annual Dth Saved	G	14,801 Dth
Net Annual Dth Saved	H	13,754 Dth
Total MTRC Net Benefits with Adder	I	\$921,569
Total MTRC Net Benefits without Adder	J	\$805,580

Utility Program Cost per Dth Lifetime	F / (A x H)	\$2,4543
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	13,465
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	7.0

CUSTOM EFFICIENCY

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$27,785	\$27,785	\$27,785
Variable O&M Savings	N/A	\$0	\$0	\$0
Demand Savings	N/A	\$3,212	\$3,212	\$3,212
Avoided Emissions (CO2)	N/A	N/A	N/A	\$32,296
Avoided Emissions (CH4)	N/A	N/A	N/A	\$702
Subtotal				\$63,996
Non-Energy Benefits Adder (9.7%)				\$6,199
Subtotal	N/A	\$30,997	\$30,997	\$70,195
Participant Benefits				
Bill Reduction - Gas	\$68,524	N/A	N/A	N/A
Participant Rebates and Incentives	\$3,894	N/A	N/A	\$3,894
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$72,418	N/A	N/A	\$3,894
Total Benefits	\$72,418	\$30,997	\$30,997	\$74,089
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$35,033	\$35,033	\$35,033
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$3,894	\$3,894	\$3,894
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$154	\$154	\$154
Subtotal	N/A	\$39,081	\$39,081	\$39,081
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$68,524	N/A
Subtotal	N/A	N/A	\$68,524	N/A
Participant Costs				
Incremental Capital Costs	\$21,838	N/A	N/A	\$18,999
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$21,838	N/A	N/A	\$18,999
Total Costs	\$21,838	\$39,081	\$107,605	\$58,080
Net Benefit (Cost)	\$50,580	(\$8,083)	(\$76,608)	\$16,009
Benefit/Cost Ratio	3.32	0.79	0.29	1.28

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth

Lifetime (Weighted on Dth)	A	12.0 years
Net-to-Gross (Weighted on Dth)	B	87.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	973.6
Net Annual Dth Saved	E	847.0

Program Summary All Participants

Total Budget	F	\$39,081
Gross Annual Dth Saved	G	974 Dth
Net Annual Dth Saved	H	847 Dth
Total MTRC Net Benefits with Adder	I	\$16,009
Total MTRC Net Benefits without Adder	J	\$9,810

Utility Program Cost per Dth Lifetime	F / (A x H)	\$3,8449
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	595
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	0.3

ENERGY MANAGEMENT SYSTEMS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$73,139	\$73,139	\$73,139
Variable O&M Savings	N/A	\$2,083	\$2,083	\$2,083
Demand Savings	N/A	\$334	\$334	\$334
Avoided Emissions (CO2)	N/A	N/A	N/A	\$97,556
Avoided Emissions (CH4)	N/A	N/A	N/A	\$2,140
Subtotal				\$175,253
Non-Energy Benefits Adder (8.6%)				\$15,111
Subtotal	N/A	\$75,556	\$75,556	\$190,364
Participant Benefits				
Bill Reduction - Gas	\$198,429	N/A	N/A	N/A
Participant Rebates and Incentives	\$9,559	N/A	N/A	\$9,559
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$23,715	N/A	N/A	\$19,921
Subtotal	\$231,703	N/A	N/A	\$29,480
Total Benefits	\$231,703	\$75,556	\$75,556	\$219,844
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$6,550	\$6,550	\$6,550
Advertising/Promotion/Customer Ed	N/A	\$177	\$177	\$177
Participant Rebates and Incentives	N/A	\$9,559	\$9,559	\$9,559
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$16,287	\$16,287	\$16,287
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$198,429	N/A
Subtotal	N/A	N/A	\$198,429	N/A
Participant Costs				
Incremental Capital Costs	\$94,017	N/A	N/A	\$78,974
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$94,017	N/A	N/A	\$78,974
Total Costs	\$94,017	\$16,287	\$214,716	\$95,261
Net Benefit (Cost)	\$137,686	\$59,269	(\$139,160)	\$124,583
Benefit/Cost Ratio	2.46	4.64	0.35	2.31

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth

Lifetime (Weighted on Dth)	A	15.0 years
Net-to-Gross (Weighted on Dth)	B	84.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	2,389.7
Net Annual Dth Saved	E	2,007.3

Program Summary All Participants

Total Budget	F	\$16,287
Gross Annual Dth Saved	G	2,390 Dth
Net Annual Dth Saved	H	2,007 Dth
Total MTRC Net Benefits with Adder	I	\$124,583
Total MTRC Net Benefits without Adder	J	\$109,471

Utility Program Cost per Dth Lifetime	F / (A x H)	\$0.5409
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	1,761
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	0.9

NEW CONSTRUCTION

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$2,555,010	\$2,555,010	\$2,555,010
Variable O&M Savings	N/A	\$35,401	\$35,401	\$35,401
Demand Savings	N/A	\$373,714	\$373,714	\$373,714
Avoided Emissions (CO2)	N/A	N/A	N/A	\$4,800,664
Avoided Emissions (CH4)	N/A	N/A	N/A	\$88,140
Subtotal				\$7,852,929
Non-Energy Benefits Adder (7.5%)				\$592,825
Subtotal	N/A	\$2,964,125	\$2,964,125	\$8,445,754
Participant Benefits				
Bill Reduction - Gas	\$6,694,530	N/A	N/A	N/A
Participant Rebates and Incentives	\$264,500	N/A	N/A	\$264,500
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$7,011,692	N/A	N/A	\$6,030,055
Subtotal	\$13,970,722	N/A	N/A	\$6,294,555
Total Benefits	\$13,970,722	\$2,964,125	\$2,964,125	\$14,740,309
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$337,654	\$337,654	\$337,654
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$264,500	\$264,500	\$264,500
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$71,433	\$71,433	\$71,433
Subtotal	N/A	\$673,587	\$673,587	\$673,587
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$6,694,530	N/A
Subtotal	N/A	N/A	\$6,694,530	N/A
Participant Costs				
Incremental Capital Costs	\$1,790,147	N/A	N/A	\$1,539,527
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$1,790,147	N/A	N/A	\$1,539,527
Total Costs	\$1,790,147	\$673,587	\$7,368,116	\$2,213,113
Net Benefit (Cost)	\$12,180,574	\$2,290,538	(\$4,403,992)	\$12,527,195
Benefit/Cost Ratio	7.80	4.40	0.40	6.66

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth

Lifetime (Weighted on Dth)	A	19.7 years
Net-to-Gross (Weighted on Dth)	B	87.81%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	6,265.8
Net Annual Dth Saved	E	5,502.3

Program Summary All Participants

Total Budget	F	\$673,587
Gross Annual Dth Saved	G	68,923 Dth
Net Annual Dth Saved	H	60,525 Dth
Total MTRC Net Benefits with Adder	I	\$12,527,195
Total MTRC Net Benefits without Adder	J	\$11,934,370

Utility Program Cost per Dth Lifetime	F / (A x H)	\$0.5663
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	69,588
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	36.2

SMALL BUSINESS SOLUTIONS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$19,263	\$19,263	\$19,263
Variable O&M Savings	N/A	\$312	\$312	\$312
Demand Savings	N/A	\$2,869	\$2,869	\$2,869
Avoided Emissions (CO2)	N/A	N/A	N/A	\$30,685
Avoided Emissions (CH4)	N/A	N/A	N/A	\$588
Subtotal				\$53,717
Non-Energy Benefits Adder (8.4%)				\$4,489
Subtotal	N/A	\$22,444	\$22,444	\$58,205
Participant Benefits				
Bill Reduction - Gas	\$54,492	N/A	N/A	N/A
Participant Rebates and Incentives	\$4,893	N/A	N/A	\$4,893
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$6,167	N/A	N/A	\$5,797
Subtotal	\$65,552	N/A	N/A	\$10,690
Total Benefits	\$65,552	\$22,444	\$22,444	\$68,896
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$40,820	\$40,820	\$40,820
Advertising/Promotion/Customer Ed	N/A	\$1,196	\$1,196	\$1,196
Participant Rebates and Incentives	N/A	\$4,893	\$4,893	\$4,893
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$46,908	\$46,908	\$46,908
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$54,492	N/A
Subtotal	N/A	N/A	\$54,492	N/A
Participant Costs				
Incremental Capital Costs	\$14,626	N/A	N/A	\$13,748
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$14,626	N/A	N/A	\$13,748
Total Costs	\$14,626	\$46,908	\$101,400	\$60,656
Net Benefit (Cost)	\$50,926	(\$24,464)	(\$78,956)	\$8,239
Benefit/Cost Ratio	4.48	0.48	0.22	1.14

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth

Lifetime (Weighted on Dth)	A	11.6 years
Net-to-Gross (Weighted on Dth)	B	94.01%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	130.4
Net Annual Dth Saved	E	122.5

Program Summary All Participants

Total Budget	F	\$46,908
Gross Annual Dth Saved	G	782 Dth
Net Annual Dth Saved	H	735 Dth
Total MTRC Net Benefits with Adder	I	\$8,239
Total MTRC Net Benefits without Adder	J	\$3,751

Utility Program Cost per Dth Lifetime	F / (A x H)	\$5.4923
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	500
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	0.3

ENERGY EFFICIENT SHOWERHEAD

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$297,588	\$297,588	\$297,588
Variable O&M Savings	N/A	\$4,150	\$4,150	\$4,150
Demand Savings	N/A	\$60,949	\$60,949	\$60,949
Avoided Emissions (CO2)	N/A	N/A	N/A	\$502,011
Avoided Emissions (CH4)	N/A	N/A	N/A	\$7,329
Subtotal				\$872,027
Non-Energy Benefits Adder (8.3%)				\$72,538
Subtotal	N/A	\$362,688	\$362,688	\$944,565
Participant Benefits				
Bill Reduction - Gas	\$658,513	N/A	N/A	N/A
Participant Rebates and Incentives	\$65,053	N/A	N/A	\$65,053
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$1,549,893	N/A	N/A	\$1,456,899
Subtotal	\$2,273,460	N/A	N/A	\$1,521,953
Total Benefits	\$2,273,460	\$362,688	\$362,688	\$2,466,517
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$148,567	\$148,567	\$148,567
Advertising/Promotion/Customer Ed	N/A	\$2,028	\$2,028	\$2,028
Participant Rebates and Incentives	N/A	\$65,053	\$65,053	\$65,053
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$215,649	\$215,649	\$215,649
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$658,513	N/A
Subtotal	N/A	N/A	\$658,513	N/A
Participant Costs				
Incremental Capital Costs	\$41,048	N/A	N/A	\$38,585
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$41,048	N/A	N/A	\$38,585
Total Costs	\$41,048	\$215,649	\$874,163	\$254,234
Net Benefit (Cost)	\$2,232,412	\$147,038	(\$511,475)	\$2,212,283
Benefit/Cost Ratio	55.39	1.68	0.41	9.70

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth

Lifetime (Weighted on Dth)	A	10.0 years
Net-to-Gross (Weighted on Dth)	B	63.96%
Install Rate (Weighted on Dth)	C	66.17%

Program Summary per Participant

Gross Annual Dth Saved	D	1,022.1
Net Annual Dth Saved	E	635.8

Program Summary All Participants

Total Budget	F	\$215,649
Gross Annual Dth Saved	G	17,377 Dth
Net Annual Dth Saved	H	10,809 Dth
Total MTRC Net Benefits with Adder	I	\$2,212,283
Total MTRC Net Benefits without Adder	J	\$2,139,746

Utility Program Cost per Dth Lifetime	F / (A x H)	\$1.9951
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	6,323
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	3.3

ENERGY STAR NEW HOMES

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$4,249,280	\$4,249,280	\$4,249,280
Variable O&M Savings	N/A	\$58,043	\$58,043	\$58,043
Demand Savings	N/A	\$640,782	\$640,782	\$640,782
Avoided Emissions (CO2)	N/A	N/A	N/A	\$8,027,936
Avoided Emissions (CH4)	N/A	N/A	N/A	\$143,499
Subtotal				\$13,119,541
Non-Energy Benefits Adder (7.5%)				\$989,621
Subtotal	N/A	\$4,948,105	\$4,948,105	\$14,109,161
Participant Benefits				
Bill Reduction - Gas	\$11,779,575	N/A	N/A	N/A
Participant Rebates and Incentives	\$2,443,427	N/A	N/A	\$2,443,427
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$339	N/A	N/A	\$248
Subtotal	\$14,223,342	N/A	N/A	\$2,443,675
Total Benefits	\$14,223,342	\$4,948,105	\$4,948,105	\$16,552,836
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$508,791	\$508,791	\$508,791
Advertising/Promotion/Customer Ed	N/A	\$159,291	\$159,291	\$159,291
Participant Rebates and Incentives	N/A	\$2,443,427	\$2,443,427	\$2,443,427
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$3,111,509	\$3,111,509	\$3,111,509
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$11,779,575	N/A
Subtotal	N/A	N/A	\$11,779,575	N/A
Participant Costs				
Incremental Capital Costs	\$7,051,003	N/A	N/A	\$5,147,232
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$7,051,003	N/A	N/A	\$5,147,232
Total Costs	\$7,051,003	\$3,111,509	\$14,891,085	\$8,258,741
Net Benefit (Cost)	\$7,172,339	\$1,836,595	(\$9,942,980)	\$8,294,095
Benefit/Cost Ratio	2.02	1.59	0.33	2.00

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth

Lifetime (Weighted on Dth)	A	19.2 years
Net-to-Gross (Weighted on Dth)	B	57.85%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	7,275.6
Net Annual Dth Saved	E	4,208.9

Program Summary All Participants

Total Budget	F	\$3,111,509
Gross Annual Dth Saved	G	174,615 Dth
Net Annual Dth Saved	H	101,013 Dth
Total MTRC Net Benefits with Adder	I	\$8,294,095
Total MTRC Net Benefits without Adder	J	\$7,304,474

Utility Program Cost per Dth Lifetime	F / (A x H)	\$1.6009
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	113,702
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	59.2

HOME ENERGY INSIGHTS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$254,361	\$254,361	\$254,361
Variable O&M Savings	N/A	\$3,645	\$3,645	\$3,645
Demand Savings	N/A	\$44,147	\$44,147	\$44,147
Avoided Emissions (CO2)	N/A	N/A	N/A	\$286,588
Avoided Emissions (CH4)	N/A	N/A	N/A	\$4,533
Subtotal				\$593,275
Non-Energy Benefits Adder (10.2%)				\$60,431
Subtotal	N/A	\$302,154	\$302,154	\$653,706
Participant Benefits				
Bill Reduction - Gas	\$628,101	N/A	N/A	N/A
Participant Rebates and Incentives	\$0	N/A	N/A	\$0
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$628,101	N/A	N/A	\$0
Total Benefits	\$628,101	\$302,154	\$302,154	\$653,706
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$319,007	\$319,007	\$319,007
Advertising/Promotion/Customer Ed	N/A	\$789	\$789	\$789
Participant Rebates and Incentives	N/A	\$0	\$0	\$0
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$319,796	\$319,796	\$319,796
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$628,101	N/A
Subtotal	N/A	N/A	\$628,101	N/A
Participant Costs				
Incremental Capital Costs	\$0	N/A	N/A	\$0
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$0	N/A	N/A	\$0
Total Costs	\$0	\$319,796	\$947,897	\$319,796
Net Benefit (Cost)	\$628,101	(\$17,641)	(\$645,742)	\$333,910
Benefit/Cost Ratio	INF	0.94	0.32	2.04

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth

Lifetime (Weighted on Dth)	A	1.0 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	18,226.2
Net Annual Dth Saved	E	18,226.2

Program Summary All Participants

Total Budget	F	\$319,796
Gross Annual Dth Saved	G	72,905 Dth
Net Annual Dth Saved	H	72,905 Dth
Total MTRC Net Benefits with Adder	I	\$333,910
Total MTRC Net Benefits without Adder	J	\$273,480

Utility Program Cost per Dth Lifetime	F / (A x H)	\$4.3865
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	4,265
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	2.2

HOME ENERGY SQUAD

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$232,121	\$232,121	\$232,121
Variable O&M Savings	N/A	\$3,452	\$3,452	\$3,452
Demand Savings	N/A	\$43,439	\$43,439	\$43,439
Avoided Emissions (CO2)	N/A	N/A	N/A	\$380,295
Avoided Emissions (CH4)	N/A	N/A	N/A	\$6,093
Subtotal				\$665,399
Non-Energy Benefits Adder (8.4%)				\$55,802
Subtotal	N/A	\$279,012	\$279,012	\$721,202
Participant Benefits				
Bill Reduction - Gas	\$581,729	N/A	N/A	N/A
Participant Rebates and Incentives	\$126,017	N/A	N/A	\$126,017
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$447,721	N/A	N/A	\$447,721
Subtotal	\$1,155,467	N/A	N/A	\$573,738
Total Benefits	\$1,155,467	\$279,012	\$279,012	\$1,294,939
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$1,048,102	\$1,048,102	\$1,048,102
Advertising/Promotion/Customer Ed	N/A	\$56,424	\$56,424	\$56,424
Participant Rebates and Incentives	N/A	\$126,017	\$126,017	\$126,017
Equipment & Installation	N/A	\$1,268,343	\$1,268,343	\$1,268,343
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$2,498,886	\$2,498,886	\$2,498,886
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$581,729	N/A
Subtotal	N/A	N/A	\$581,729	N/A
Participant Costs				
Incremental Capital Costs	\$63,201	N/A	N/A	\$63,201
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$63,201	N/A	N/A	\$63,201
Total Costs	\$63,201	\$2,498,886	\$3,080,614	\$2,562,087
Net Benefit (Cost)	\$1,092,266	(\$2,219,874)	(\$2,801,603)	(\$1,267,147)
Benefit/Cost Ratio	18.28	0.11	0.09	0.51

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth

Lifetime (Weighted on Dth)	A	10.0 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	391.3
Net Annual Dth Saved	E	391.3

Program Summary All Participants

Total Budget	F	\$2,498,886
Gross Annual Dth Saved	G	9,000 Dth
Net Annual Dth Saved	H	9,000 Dth
Total MTRC Net Benefits with Adder	I	(\$1,267,147)
Total MTRC Net Benefits without Adder	J	(\$1,322,950)

Utility Program Cost per Dth Lifetime	F / (A x H)	\$27.8067
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	5,257
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	2.7

INSULATION & AIR SEALING

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$1,148,373	\$1,148,373	\$1,148,373
Variable O&M Savings	N/A	\$17,640	\$17,640	\$17,640
Demand Savings	N/A	\$151,207	\$151,207	\$151,207
Avoided Emissions (CO2)	N/A	N/A	N/A	\$1,919,409
Avoided Emissions (CH4)	N/A	N/A	N/A	\$38,428
Subtotal				\$3,275,057
Non-Energy Benefits Adder (8.0%)				\$263,444
Subtotal	N/A	\$1,317,220	\$1,317,220	\$3,538,501
Participant Benefits				
Bill Reduction - Gas	\$3,677,039	N/A	N/A	N/A
Participant Rebates and Incentives	\$666,534	N/A	N/A	\$666,534
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$4,343,573	N/A	N/A	\$666,534
Total Benefits	\$4,343,573	\$1,317,220	\$1,317,220	\$4,205,035
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$27,254	\$27,254	\$27,254
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$666,534	\$666,534	\$666,534
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$2,250	\$2,250	\$2,250
Subtotal	N/A	\$696,038	\$696,038	\$696,038
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$3,677,039	N/A
Subtotal	N/A	N/A	\$3,677,039	N/A
Participant Costs				
Incremental Capital Costs	\$3,628,341	N/A	N/A	\$3,229,223
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$3,628,341	N/A	N/A	\$3,229,223
Total Costs	\$3,628,341	\$696,038	\$4,373,077	\$3,925,261
Net Benefit (Cost)	\$715,232	\$621,182	(\$3,055,857)	\$279,774
Benefit/Cost Ratio	1.20	1.89	0.30	1.07

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	14.9 years
Net-to-Gross (Weighted on Dth)	B	89.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	3,146.4
Net Annual Dth Saved	E	2,800.3

Program Summary All Participants

Total Budget	F	\$696,038
Gross Annual Dth Saved	G	40,904 Dth
Net Annual Dth Saved	H	36,404 Dth
Total MTRC Net Benefits with Adder	I	\$279,774
Total MTRC Net Benefits without Adder	J	\$16,330

Utility Program Cost per Dth Lifetime	F / (A x H)	\$1,2859
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	31,666
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	16.5

MULTIFAMILY BUILDINGS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$83,239	\$83,239	\$83,239
Variable O&M Savings	N/A	\$1,492	\$1,492	\$1,492
Demand Savings	N/A	\$10,691	\$10,691	\$10,691
Avoided Emissions (CO2)	N/A	N/A	N/A	\$123,112
Avoided Emissions (CH4)	N/A	N/A	N/A	\$2,635
Subtotal				\$221,169
Non-Energy Benefits Adder (8.6%)				\$19,084
Subtotal	N/A	\$95,422	\$95,422	\$240,253
Participant Benefits				
Bill Reduction - Gas	\$289,564	N/A	N/A	N/A
Participant Rebates and Incentives	\$434,511	N/A	N/A	\$434,511
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$498,400	N/A	N/A	\$498,400
Subtotal	\$1,222,476	N/A	N/A	\$932,912
Total Benefits	\$1,222,476	\$95,422	\$95,422	\$1,173,165
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$31,937	\$31,937	\$31,937
Advertising/Promotion/Customer Ed	N/A	\$15,393	\$15,393	\$15,393
Participant Rebates and Incentives	N/A	\$434,511	\$434,511	\$434,511
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$481,841	\$481,841	\$481,841
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$289,564	N/A
Subtotal	N/A	N/A	\$289,564	N/A
Participant Costs				
Incremental Capital Costs	\$25,484	N/A	N/A	\$25,484
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$25,484	N/A	N/A	\$25,484
Total Costs	\$25,484	\$481,841	\$771,405	\$507,325
Net Benefit (Cost)	\$1,196,992	(\$386,419)	(\$675,983)	\$665,840
Benefit/Cost Ratio	47.97	0.20	0.12	2.31

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	10.0 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	555.1
Net Annual Dth Saved	E	555.1

Program Summary All Participants

Total Budget	F	\$481,841
Gross Annual Dth Saved	G	3,886 Dth
Net Annual Dth Saved	H	3,886 Dth
Total MTRC Net Benefits with Adder	I	\$665,840
Total MTRC Net Benefits without Adder	J	\$646,756

Utility Program Cost per Dth Lifetime	F / (A x H)	\$12,4004
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	2,273
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	1.2

RESIDENTIAL HEATING & COOLING

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$9,526,480	\$9,526,480	\$9,526,480
Variable O&M Savings	N/A	\$140,471	\$140,471	\$140,471
Demand Savings	N/A	\$1,307,466	\$1,307,466	\$1,307,466
Avoided Emissions (CO2)	N/A	N/A	N/A	\$16,558,098
Avoided Emissions (CH4)	N/A	N/A	N/A	\$320,469
Subtotal				\$27,852,984
Non-Energy Benefits Adder (0.0%)				\$0
Subtotal	N/A	\$10,974,417	\$10,974,417	\$27,852,984
Participant Benefits				
Bill Reduction - Gas	\$29,223,344	N/A	N/A	N/A
Participant Rebates and Incentives	\$5,064,009	N/A	N/A	\$5,064,009
Incremental Capital Savings	\$271	N/A	N/A	\$271
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$34,287,623	N/A	N/A	\$5,064,280
Total Benefits	\$34,287,623	\$10,974,417	\$10,974,417	\$32,917,263
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$305,296	\$305,296	\$305,296
Advertising/Promotion/Customer Ed	N/A	\$38,450	\$38,450	\$38,450
Participant Rebates and Incentives	N/A	\$5,064,009	\$5,064,009	\$5,064,009
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$14,900	\$14,900	\$14,900
Subtotal	N/A	\$5,422,654	\$5,422,654	\$5,422,654
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$29,223,344	N/A
Subtotal	N/A	N/A	\$29,223,344	N/A
Participant Costs				
Incremental Capital Costs	\$15,913,879	N/A	N/A	\$14,980,726
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$15,913,879	N/A	N/A	\$14,980,726
Total Costs	\$15,913,879	\$5,422,654	\$34,645,998	\$20,403,380
Net Benefit (Cost)	\$18,373,745	\$5,551,763	(\$23,671,581)	\$12,513,883
Benefit/Cost Ratio	2.15	2.02	0.32	1.61

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth

Lifetime (Weighted on Dth)	A	17.0 years
Net-to-Gross (Weighted on Dth)	B	91.53%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	7,848.2
Net Annual Dth Saved	E	7,060.6

Program Summary All Participants

Total Budget	F	\$5,422,654
Gross Annual Dth Saved	G	290,384 Dth
Net Annual Dth Saved	H	261,243 Dth
Total MTRC Net Benefits with Adder	I	\$12,513,883
Total MTRC Net Benefits without Adder	J	\$12,513,883

Utility Program Cost per Dth Lifetime F / (A x H) **\$1.2243**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	259,115
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	135.0

SCHOOL EDUCATION KITS

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$1,654,057	\$1,654,057	\$1,654,057
Variable O&M Savings	N/A	\$22,779	\$22,779	\$22,779
Demand Savings	N/A	\$344,295	\$344,295	\$344,295
Avoided Emissions (CO2)	N/A	N/A	N/A	\$2,805,322
Avoided Emissions (CH4)	N/A	N/A	N/A	\$40,227
Subtotal				\$4,866,680
Non-Energy Benefits Adder (8.3%)				\$404,226
Subtotal	N/A	\$2,021,131	\$2,021,131	\$5,270,906
Participant Benefits				
Bill Reduction - Gas	\$3,568,563	N/A	N/A	N/A
Participant Rebates and Incentives	\$195,326	N/A	N/A	\$195,326
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$6,488,709	N/A	N/A	\$6,488,709
Subtotal	\$10,252,597	N/A	N/A	\$6,684,035
Total Benefits	\$10,252,597	\$2,021,131	\$2,021,131	\$11,954,941
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$499,588	\$499,588	\$499,588
Advertising/Promotion/Customer Ed	N/A	\$959	\$959	\$959
Participant Rebates and Incentives	N/A	\$195,326	\$195,326	\$195,326
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$695,873	\$695,873	\$695,873
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$3,568,563	N/A
Subtotal	N/A	N/A	\$3,568,563	N/A
Participant Costs				
Incremental Capital Costs	\$185,187	N/A	N/A	\$185,187
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$185,187	N/A	N/A	\$185,187
Total Costs	\$185,187	\$695,873	\$4,264,435	\$881,059
Net Benefit (Cost)	\$10,067,411	\$1,325,258	(\$2,243,304)	\$11,073,882
Benefit/Cost Ratio	55.36	2.90	0.47	13.57

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth

Lifetime (Weighted on Dth)	A	10.0 years
Net-to-Gross (Weighted on Dth)	B	10.69%
Install Rate (Weighted on Dth)	C	10.69%

Program Summary per Participant

Gross Annual Dth Saved	D	138,737.6
Net Annual Dth Saved	E	14,832.0

Program Summary All Participants

Total Budget	F	\$695,873
Gross Annual Dth Saved	G	554,951 Dth
Net Annual Dth Saved	H	59,328 Dth
Total MTRC Net Benefits with Adder	I	\$11,073,882
Total MTRC Net Benefits without Adder	J	\$10,669,655

Utility Program Cost per Dth Lifetime	F / (A x H)	\$1.1729
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	34,707
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	18.1

WHOLE HOME EFFICIENCY

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$18,392	\$18,392	\$18,392
Variable O&M Savings	N/A	\$266	\$266	\$266
Demand Savings	N/A	\$2,676	\$2,676	\$2,676
Avoided Emissions (CO2)	N/A	N/A	N/A	\$32,464
Avoided Emissions (CH4)	N/A	N/A	N/A	\$604
Subtotal				\$54,402
Non-Energy Benefits Adder (7.8%)				\$4,267
Subtotal	N/A	\$21,334	\$21,334	\$58,668
Participant Benefits				
Bill Reduction - Gas	\$49,268	N/A	N/A	N/A
Participant Rebates and Incentives	\$12,478	N/A	N/A	\$12,478
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$61,746	N/A	N/A	\$12,478
Total Benefits	\$61,746	\$21,334	\$21,334	\$71,147
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$47,471	\$47,471	\$47,471
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$12,478	\$12,478	\$12,478
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$59,949	\$59,949	\$59,949
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$49,268	N/A
Subtotal	N/A	N/A	\$49,268	N/A
Participant Costs				
Incremental Capital Costs	\$63,638	N/A	N/A	\$50,210
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$63,638	N/A	N/A	\$50,210
Total Costs	\$63,638	\$59,949	\$109,217	\$110,160
Net Benefit (Cost)	(\$1,892)	(\$38,616)	(\$87,883)	(\$39,013)
Benefit/Cost Ratio	0.97	0.36	0.20	0.65

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth

Lifetime (Weighted on Dth)	A	16.1 years
Net-to-Gross (Weighted on Dth)	B	78.90%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	82.9
Net Annual Dth Saved	E	65.4

Program Summary All Participants

Total Budget	F	\$59,949
Gross Annual Dth Saved	G	663 Dth
Net Annual Dth Saved	H	523 Dth
Total MTRC Net Benefits with Adder	I	(\$39,013)
Total MTRC Net Benefits without Adder	J	(\$43,280)

Utility Program Cost per Dth Lifetime	F / (A x H)	\$7.1284
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	492
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	0.3

ENERGY SAVINGS KIT

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$293,304	\$293,304	\$293,304
Variable O&M Savings	N/A	\$4,246	\$4,246	\$4,246
Demand Savings	N/A	\$57,097	\$57,097	\$57,097
Avoided Emissions (CO2)	N/A	N/A	N/A	\$486,685
Avoided Emissions (CH4)	N/A	N/A	N/A	\$7,497
Subtotal				\$848,828
Non-Energy Benefits Adder (20.9%)				\$177,323
Subtotal	N/A	\$354,646	\$354,646	\$1,026,151
Participant Benefits				
Bill Reduction - Gas	\$698,339	N/A	N/A	N/A
Participant Rebates and Incentives	\$27,296	N/A	N/A	\$27,296
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$1,300,550	N/A	N/A	\$1,300,550
Subtotal	\$2,026,185	N/A	N/A	\$1,327,845
Total Benefits	\$2,026,185	\$354,646	\$354,646	\$2,353,996
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$103,106	\$103,106	\$103,106
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$27,296	\$27,296	\$27,296
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$0	\$0	\$0
Subtotal	N/A	\$130,402	\$130,402	\$130,402
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$698,339	N/A
Subtotal	N/A	N/A	\$698,339	N/A
Participant Costs				
Incremental Capital Costs	\$40,541	N/A	N/A	\$40,541
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$40,541	N/A	N/A	\$40,541
Total Costs	\$40,541	\$130,402	\$828,741	\$170,943
Net Benefit (Cost)	\$1,985,643	\$224,244	(\$474,095)	\$2,183,053
Benefit/Cost Ratio	49.98	2.72	0.43	13.77

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth

Lifetime (Weighted on Dth)	A	10.0 years
Net-to-Gross (Weighted on Dth)	B	75.07%
Install Rate (Weighted on Dth)	C	70.21%

Program Summary per Participant

Gross Annual Dth Saved	D	2,624.8
Net Annual Dth Saved	E	1,842.8

Program Summary All Participants

Total Budget	F	\$130,402
Gross Annual Dth Saved	G	15,749 Dth
Net Annual Dth Saved	H	11,057 Dth
Total MTRC Net Benefits with Adder	I	\$2,183,053
Total MTRC Net Benefits without Adder	J	\$2,005,730

Utility Program Cost per Dth Lifetime	F / (A x H)	\$1.1794
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	6,468
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	3.4

MULTIFAMILY WEATHERIZATION

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$261,293	\$261,293	\$261,293
Variable O&M Savings	N/A	\$3,486	\$3,486	\$3,486
Demand Savings	N/A	\$51,132	\$51,132	\$51,132
Avoided Emissions (CO2)	N/A	N/A	N/A	\$479,078
Avoided Emissions (CH4)	N/A	N/A	N/A	\$7,130
Subtotal				\$802,119
Non-Energy Benefits Adder (19.7%)				\$157,955
Subtotal	N/A	\$315,911	\$315,911	\$960,074
Participant Benefits				
Bill Reduction - Gas	\$579,410	N/A	N/A	N/A
Participant Rebates and Incentives	\$569,058	N/A	N/A	\$569,058
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$231,264	N/A	N/A	\$231,264
Subtotal	\$1,379,732	N/A	N/A	\$800,321
Total Benefits	\$1,379,732	\$315,911	\$315,911	\$1,760,396
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$284,345	\$284,345	\$284,345
Advertising/Promotion/Customer Ed	N/A	\$28,000	\$28,000	\$28,000
Participant Rebates and Incentives	N/A	\$569,058	\$569,058	\$569,058
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	(\$35,005)	(\$35,005)	(\$35,005)
Subtotal	N/A	\$846,398	\$846,398	\$846,398
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$579,410	N/A
Subtotal	N/A	N/A	\$579,410	N/A
Participant Costs				
Incremental Capital Costs	\$528,953	N/A	N/A	\$528,953
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$528,953	N/A	N/A	\$528,953
Total Costs	\$528,953	\$846,398	\$1,425,808	\$1,375,351
Net Benefit (Cost)	\$850,779	(\$530,487)	(\$1,109,897)	\$385,045
Benefit/Cost Ratio	2.61	0.37	0.22	1.28

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	14.0 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	3,616.3
Net Annual Dth Saved	E	3,616.3

Program Summary All Participants

Total Budget	F	\$846,398
Gross Annual Dth Saved	G	7,233 Dth
Net Annual Dth Saved	H	7,233 Dth
Total MTRC Net Benefits with Adder	I	\$385,045
Total MTRC Net Benefits without Adder	J	\$227,089

Utility Program Cost per Dth Lifetime F / (A x H) **\$8.3590**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	5,923
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	3.1

NON-PROFIT

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$792,866	\$792,866	\$792,866
Variable O&M Savings	N/A	\$11,287	\$11,287	\$11,287
Demand Savings	N/A	\$128,998	\$128,998	\$128,998
Avoided Emissions (CO2)	N/A	N/A	N/A	\$1,428,931
Avoided Emissions (CH4)	N/A	N/A	N/A	\$24,781
Subtotal				\$2,386,864
Non-Energy Benefits Adder (19.5%)				\$466,576
Subtotal	N/A	\$933,152	\$933,152	\$2,853,439
Participant Benefits				
Bill Reduction - Gas	\$1,964,169	N/A	N/A	N/A
Participant Rebates and Incentives	\$281,434	N/A	N/A	\$281,434
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$2,245,603	N/A	N/A	\$281,434
Total Benefits	\$2,245,603	\$933,152	\$933,152	\$3,134,873
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$113,827	\$113,827	\$113,827
Advertising/Promotion/Customer Ed	N/A	\$22,000	\$22,000	\$22,000
Participant Rebates and Incentives	N/A	\$281,434	\$281,434	\$281,434
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	(\$12,112)	(\$12,112)	(\$12,112)
Subtotal	N/A	\$405,150	\$405,150	\$405,150
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$1,964,169	N/A
Subtotal	N/A	N/A	\$1,964,169	N/A
Participant Costs				
Incremental Capital Costs	\$230,167	N/A	N/A	\$230,167
Incremental O&M Costs	\$2,069	N/A	N/A	\$2,069
Subtotal	\$232,237	N/A	N/A	\$232,237
Total Costs	\$232,237	\$405,150	\$2,369,319	\$637,386
Net Benefit (Cost)	\$2,013,367	\$528,002	(\$1,436,167)	\$2,497,487
Benefit/Cost Ratio	9.67	2.30	0.39	4.92

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	16.0 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	10,796.6
Net Annual Dth Saved	E	10,796.6

Program Summary All Participants

Total Budget	F	\$405,150
Gross Annual Dth Saved	G	21,593 Dth
Net Annual Dth Saved	H	21,593 Dth
Total MTRC Net Benefits with Adder	I	\$2,497,487
Total MTRC Net Benefits without Adder	J	\$2,030,911

Utility Program Cost per Dth Lifetime	F / (A x H)	\$1.1727
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Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	20,211
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	10.5

SINGLE-FAMILY WEATHERIZATION

2023 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$6,485,314	\$6,485,314	\$6,485,314
Variable O&M Savings	N/A	\$97,243	\$97,243	\$97,243
Demand Savings	N/A	\$1,144,934	\$1,144,934	\$1,144,934
Avoided Emissions (CO2)	N/A	N/A	N/A	\$10,850,847
Avoided Emissions (CH4)	N/A	N/A	N/A	\$180,443
Subtotal				\$18,758,781
Non-Energy Benefits Adder (20.6%)				\$3,863,745
Subtotal	N/A	\$7,727,491	\$7,727,491	\$22,622,526
Participant Benefits				
Bill Reduction - Gas	\$17,019,773	N/A	N/A	N/A
Participant Rebates and Incentives	\$4,261,758	N/A	N/A	\$4,261,758
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$16,851,056	N/A	N/A	\$16,851,056
Subtotal	\$38,132,587	N/A	N/A	\$21,112,814
Total Benefits	\$38,132,587	\$7,727,491	\$7,727,491	\$43,735,340
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$424,337	\$424,337	\$424,337
Advertising/Promotion/Customer Ed	N/A	\$200,145	\$200,145	\$200,145
Participant Rebates and Incentives	N/A	\$4,261,758	\$4,261,758	\$4,261,758
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$25,265	\$25,265	\$25,265
Subtotal	N/A	\$4,911,504	\$4,911,504	\$4,911,504
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$17,019,773	N/A
Subtotal	N/A	N/A	\$17,019,773	N/A
Participant Costs				
Incremental Capital Costs	\$4,920,422	N/A	N/A	\$4,920,422
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$4,920,422	N/A	N/A	\$4,920,422
Total Costs	\$4,920,422	\$4,911,504	\$21,931,277	\$9,831,927
Net Benefit (Cost)	\$33,212,164	\$2,815,987	(\$14,203,786)	\$33,903,413
Benefit/Cost Ratio	7.75	1.57	0.35	4.45

Note: Dollar values represent present value of impacts accumulated over the lifetime of the measures.

2023

GAS

ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	10.9 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	6,029.9
Net Annual Dth Saved	E	6,029.9

Program Summary All Participants

Total Budget	F	\$4,911,504
Gross Annual Dth Saved	G	241,195 Dth
Net Annual Dth Saved	H	241,195 Dth
Total MTRC Net Benefits with Adder	I	\$33,903,413
Total MTRC Net Benefits without Adder	J	\$30,039,668

Utility Program Cost per Dth Lifetime F / (A x H) **\$1.8631**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	154,222
Avoided Lifetime CH4 Emissions, Total Program (tons CH4)	80.3

Confidential Appendix C: ISOC Product Cost and Benefit Summary

The following section summarizes both the cost and benefits of the ISOC product for 2023 in terms of capacity and energy.

Appendix C: 2023 ISOC Program Cost and Benefit Summary

Avoided Capacity Benefit													Total kW at transmission	Capacity Savings Rate/kw-year	Total Capacity Savings
Contract Interruptible: Within 10-minute Notice Capacity -														\$191.64	
Contract Interruptible: Within 10-minute Notice Capacity - New														\$135.24	
Total Avoided Capacity Benefit															\$36,365,211.48
Economic Interruptions															
	January	February	March	April	May	June	July	August	September	October	November	December	Total		
Interruption Energy Savings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Buy Through Energy Savings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
Capacity/Contingency Interruptions															
	January	February	March	April	May	June	July	August	September	October	November	December	Total		
Energy Savings		\$511,130.23	\$132,463.02	\$ -	\$ -	\$ -	\$ -	\$881,760.02	\$ -	\$ -	\$ -	\$ -	\$ 1,525,353.27		
Total Energy Savings	\$ -	\$511,130.23	\$132,463.02	\$ -	\$ -	\$ -	\$ -	\$881,760.02	\$ -	\$ -	\$ -	\$ -	\$ 1,525,353.27		
Total ISOC Benefits													\$37,890,564.75		
Total ISOC Costs													\$ (25,773,793.94)		
Total Admin Costs															
Total Customer Credits															
Total Program Net Benefit													\$12,116,770.81		

Appendix D: Green Button Connect/Download Certification



Please note: Authorization to use the “Green Button Certified CMD” mark is contingent on the following:

1. Completion of the GREEN BUTTON CERTIFIED MARKS LICENSE AGREEMENT and
2. Any other forms/agreements requested by the Green Button Alliance or its designees.

See the “Green Button Certified Marks Style Guide” for information on the use of the certification mark and other trademarks in print material, advertising, and where appropriate, on the product itself; and for criteria for maintenance of the certification over time:

<https://www.greenbuttonalliance.org/trademarks>

Please notify the Green Button Alliance if any of the following conditions apply at present or at any point in the future:

1. Change in software.
2. Change in server.
3. Changes in the standards to which compliance was granted.
4. Changes in the ownership.
5. If the product may no longer comply with the requirements.

A new application for product authorization shall be filed whenever there is a change in the design or construction of a product for which a certificate has been issued.

Certified by:

Donald F. Coffin

Technical Manger

Green Button Alliance, Inc.

06 DECEMBER 2023 (2023-12-06)



Please note: Authorization to use the “Green Button Certified DMD” mark is contingent on the following:

1. Completion of the GREEN BUTTON CERTIFIED MARKS LICENSE AGREEMENT and
2. Any other forms/agreements requested by the Green Button Alliance or its designees.

See the “Green Button Certified Marks Style Guide” for information on the use of the certification mark and other trademarks in print material, advertising, and where appropriate, on the product itself; and for criteria for maintenance of the certification over time:

<https://www.greenbuttonalliance.org/trademarks>

Please notify the Green Button Alliance if any of the following conditions apply at present or at any point in the future:

1. Change in software.
2. Change in server.
3. Changes in the standards to which compliance was granted.
4. Changes in the ownership.
5. If the product may no longer comply with the requirements.

A new application for product authorization shall be filed whenever there is a change in the design or construction of a product for which a certificate has been issued.

Certified by:

Donald F. Coffin

Technical Manger

Green Button Alliance, Inc.

06 DECEMBER 2023 (2023-12-06)



Franklin Energy began engaging and communicating our intention with the Green Button Alliance (GBA) on getting Xcel Energy certified late 2022, first by submitting our application for certification of Green Button Connect (GBC) and Green Button Download (GBD). We were informed at that time that there had been changes in requirements from previous engagement in 2020. GBA lists requirements in function blocks, each requirement having its own function block, some of which are optional, and others required. Specificities within these function blocks had also adjusted from previous documentation provided from GBA due to a new version published, adjustments to our current build to satisfy requirements had to be made.

Late 2022 and throughout 2023, Franklin held many pre-certification meetings with GBA, where they run the full certification test suite application, to determine readiness for an official certification test. Due to how GBA's test suite works (testing one function block at a time), we were only able to get through their tests up until the first couple of deficiencies (or changes in GBC format since the product was first developed in 2020) were identified. We would then fix these offline and have another pre-certification meeting to get further through the test suite. In December 2023, we were able to pass all pre-certification tests, followed by official certification for GBC and GBD, test results provided. We released all code changes required by certification to production mid-December.

Xcel Energy now being certified in the GBC and GBD product's allow uniformity of data extracts to be provided to approved third party vendors. As well, Xcel Energy now is allowed to publish they are on the short list of Utilities nationwide to be fully GBA certified, found here: <https://www.greenbuttonalliance.org/directoryservices>.

Ryan Zubizarreta, Sr. Technology Program Manager

Test Summary

Test Session Type: ***** CMD Certification Session *****

Test Platform: CMD Certification Platform ver. 3.3 EU/RC

Test start date: Wed Dec 06 14:05:49 EST 2023

Test end date: Wed Dec 06 19:35:54 UTC 2023

Test Configuration	
Config file:/home/don/Git/GreenButtonAlliance/OpenESPI-GreenButtonCMDTest/SOAPUI/etc/gbcmcert_target.conf	
Parameter	Value
FileName	gbcmdcert_target.conf
applicantName	Xcel Energy Inc.
GBACertId	16014996-8d13-5f93-8d78-2876085772aa
authorizationServerDomain	xe-staging.planetecosystems.com
resourceServerDomain	xe-staging.planetecosystems.com
SFTPServerDomain	...EMPTY...
dataCustodianResourceEndpoint	https://xe-staging.planetecosystems.com/greenbutton-connect/gbc/espi/1_1/resource
authorizationServerAuthorizationEndpoint	https://xe-staging.planetecosystems.com/greenbutton-connect/gbc/espi/1_1/oauth/authorize
authorizationServerTokenEndpoint	https://xe-staging.planetecosystems.com/greenbutton-connect/gbc/espi/1_1/oauth/token
accessTokenLatency	0
cacheLoadDelay	0
client_id	a168f8dc5861dfdc9956
client_secret	8c159ea6a2a8b26061cd3e648aa4c5ff19ae9dad3f60cfc2462c783d96dbb2f5
applicationInformationId	dcafc9f-156a-5acd-9d04-9df4c037c6a6
authorizationId	...EMPTY...
registration_access_token	de548a1d604de3cc45cc17a824b537017c39362c
registration_access_token_client_id	...EMPTY...
registration_access_token_secret	...EMPTY...
client_access_token	...EMPTY...
client_access_token_client_id	a168f8dc5861dfdc9956
client_access_token_secret	8c159ea6a2a8b26061cd3e648aa4c5ff19ae9dad3f60cfc2462c783d96dbb2f5
certDataScopeFBs	FB=1_3_4_5_10_13_15_31_37_39
offlineAuthorizationID	...EMPTY...
offlineAccess_token	...EMPTY...

Test Suite [FB_01] Energy Usage Common	
Result: PASS	
Test Case	Result
TR_CPYRT001 Verify the implementer has purchased the NAESB ESPI standard	PASS

CERT001 [POS] Verify ApplicationInformation entry contains valid Certification Link	PASS
CERT002 [POS] Verify Authorization feed contains valid Certification Link	PASS
CERT003 [POS] Verify Authorization entry contains valid Certification Link	PASS
CERT004 [POS] Verify Batch/Subscription feed contains valid Certification Link	PASS

Test Suite [FB_03] Energy Usage Connect My Data	
Result: PASS	
Test Case	Result
FND002 [POS][R] Authorized GET access to ApplicationInformation entry	PASS
FND003 [POS][C] Authorized GET access to Authorization feed	PASS
FND004 [POS][C] Authorized GET access to Authorization entry	PASS
FND005 [POS][A] Authorized GET access to Batch/Subscription feed	PASS
FND006 [POS][C] Authorized GET access to ReadServiceStatus	PASS

Test Suite [FB_13] Energy Usage Security and Privacy	
Result: PASS	
Test Case	Result
TC001 Use of HTTPS	PASS
TC003 Data Custodian implements TLS 1.2	PASS
TC004 Verify Data Custodian does NOT support TLSv1.0 and TLSv1.1	PASS
TC005 Reject TLS_RSA_WITH_NULL_SHA cipher suite	PASS
TC008 Quality of Certificate	PASS
TC009 Root of trust	PASS
TC010 Tokens and IDs have no PII	PASS

Test Suite [FB_31] Energy Usage Authorization and Authentication w/o Pre-Negotiated Scope	
Result: PASS	
Test Case	Result
OAD001 [NEG] Malformed Authorization Code Requests	PASS
OAD002 [NEG] Authorization Code Request (Retail Customer Passes Authentication and DENIES access)	PASS
OAD003 [NEG] Access Token Request Authorization Header and malformed Access Token Authorization Code Request Rejection	PASS
OAD004 [NEG] Invalid Authorization Code Grant Access Token Request (code field-value pair contains a previously used authorization code)	PASS
OAD005 [POS] Successful Access Token Request	PASS
OAD006 [NEG] Invalid Access Token Requests for ApplicationInformation	PASS
OAD007 [NEG] Invalid Access Token Requests for Authorization entry	PASS
OAD008 [NEG] Invalid Access Token Requests for Authorization feed	PASS
OAD009 [NEG] Invalid Access Token Request (GET RESTful Batch/Subscription request contains registration_access_token)	PASS
OAD010 [NEG] Invalid Access Token Request (GET RESTful ReadServiceStatus request contain invalid access tokens)	PASS
OAD011 [NEG] Malformed Refresh Token Requests	PASS

OAD012 [POS] Valid refresh_token request	PASS
OAD013 [NEG][old A] Valid refresh_token request invalidates prior access_token	PASS
OAD014 [NEG] Malformed Client Credentials Grant Access Token Requests	PASS
OAD015 [POS] Validate JSON structure returned for Client_Credentials Grant Access Token Request	PASS
OAD016 [NEG] Invalid Access Token Request (Access Token contained in the Authorization Header has expired)	PASS

Test Suite [FB_37] Energy Usage Query Parameters	
Result: PASS	
Test Case	Result
QRY001 [POS][A] Query Parameters - published-min/max	PASS
QRY002 [NEG][A] Query Parameters - Verify Query Parameter Contents are Validated	PASS

Test Suite [FB_39] Energy Usage PUSH Model	
Result: PASS	
Test Case	Result
PSH001 [POS] Notification Push/POST to ThirdParty of ApplicationInformation	PASS
PSH002 [POS] Notification Push/POST to ThirdParty of Authorization	PASS
PSH003 [POS] Notification Push/POST to ThirdParty of Subscription	PASS

