2022 DEMAND-SIDE MANAGEMENT ANNUAL STATUS REPORT

Electric and Natural Gas
Public Service Company of Colorado

March 31, 2023 / Proceeding No. 20A-0287EG

2022 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 2022 DSM Annual Status Report summarizes the natural gas and electric energy efficiency achievements made in 2022. 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:

- The DSM portfolio adapted to the post pandemic environment as society returned to near-normal activity relative to pre-pandemic levels. Although some impacts of the COVID-19 pandemic lingered throughout its service territory, notably in continued supply chain issues and office building occupancy not yet back to pre-pandemic levels, Public Service continued to adapt its DSM portfolio to find new and creative ways to deliver value to our customers. Notable examples from 2022 include significantly increased participation in the Company's beneficial electrification measures over 2021 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 477 GWh, representing 95 percent of the energy efficiency goal of 500 GWh. The natural gas portfolio realized even greater success, achieving energy savings in excess of 105 percent of the target at 101 percent of budget.
- **All programs were cost-effective for both electric and natural gas offerings.** For the third year in a row, all programs – including the Income Qualified Program – were cost effective both with and without Social Cost of Carbon benefits; however, Modified Total Resource Cost ("MTRC") ratios were down year over year for both the Residential and Income Qualified Programs. The Income Qualified Program continued strong performance from 2021 as demonstrated by an MTRC ratio of 3.42 for electric and 2.59 for natural gas.
- **A total of 262,382 tons of carbon dioxide ("CO_2") were avoided in 2022 through the natural gas and electric DSM achievements.** Additionally, approximately 2.8 million tons of CO_2 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 143,187 pounds of sulfur oxide ("SOx") emissions in 2020, with expected lifetime emissions reduction of just under 1.2 million pounds. For the first time, the lifetime CO_2 emissions avoided by residential natural gas offerings exceeded the corresponding figure for electric programming, reflecting both the increased emphasis on natural gas savings and the impact of the Company's clean energy transition.
- **Lighting offerings continued to contribute the majority of the electric energy savings**. Lighting offerings across all products and program contributed to approximately 57 percent of the energy savings realized in 2022.
- **New products and pilots expanded customer choice.** The Company launched new offerings including the Income Qualified Beneficial Electrification Pilot and Energy Action Days, a behavioral demand response offering targeting residential heating and cooling end uses.

Looking ahead, the Company will continue to offer more cost-effective choices for customers in an effort 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.

2022 Demand-Side Management Annual Status Report

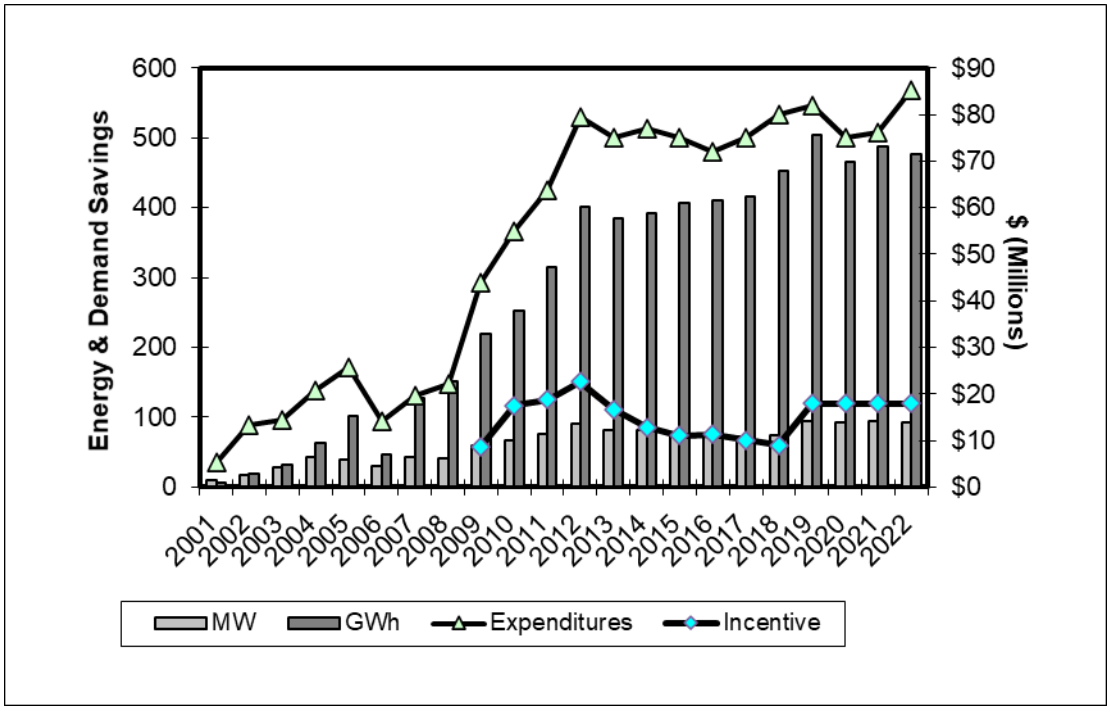
Table of Contents

Executive Summary

Public Service respectfully submits this combined electric and natural gas 2022 Colorado DSM Annual Status Report ("Status Report") to the Colorado Public Utilities Commission ("Commission"). In this filing, the Company will report on its electric and natural gas DSM achievements from January 1, 2022 through December 31, 2022.

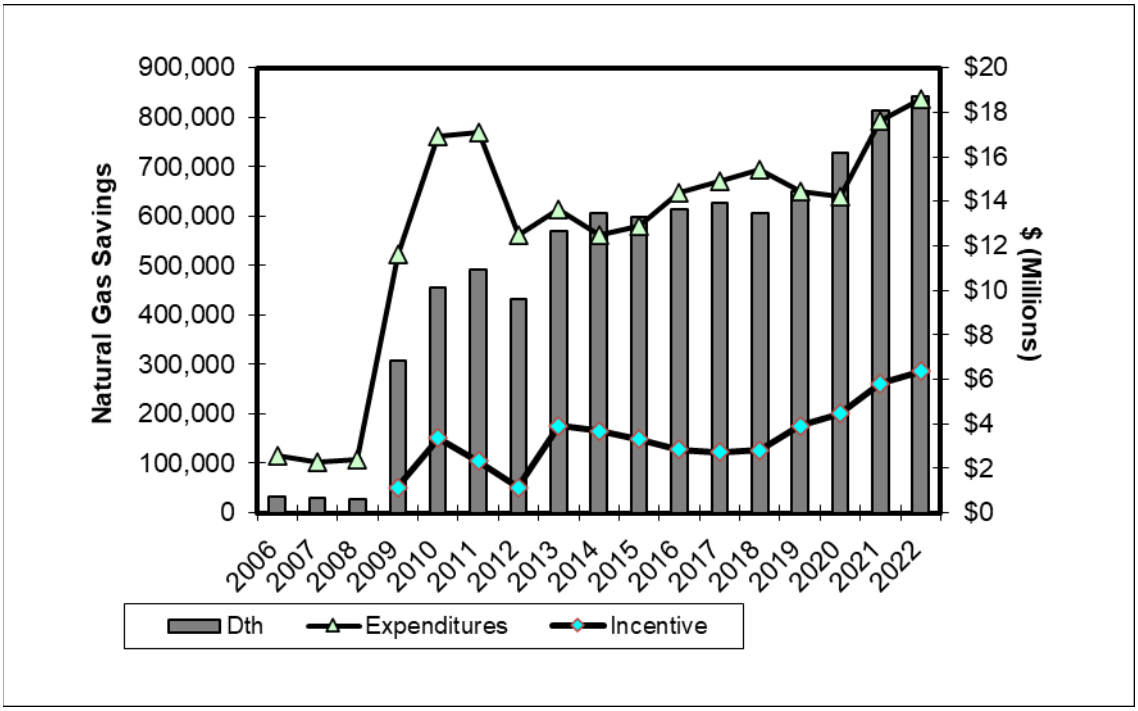
The electric energy efficiency savings of 477 GWh are a significant accomplishment given lingering economy-wide impacts of the COVID-19 pandemic in 2022. 2022 electric savings exceeded the prior 5-year average savings by 2.5 percent and represent 95 percent of the goal of 500 GWh. Natural gas savings of 841,127 Dth was 105 percent of the goal of 799,708 Dth. To achieve these savings, the Company spent a total of $101,929,406 million ($85.1 million electric energy efficiency, $16.8 million demand response) on its electric programs and $18.6 million on its natural gas energy efficiency programs. The electric energy efficiency spending was less than the approved electric energy efficiency budget of $93.6 million[1], the demand response spending was less than the approved demand response budget of $23.4 million, and the natural gas energy efficiency spending was more than the minimum natural gas expenditure requirement of $12 million[2], but slightly more than the budget of $18.5 million[3]. 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. C18-0417 at ¶ 97.
[2] *See* Decision No. C14-0731 at ¶ 69.
[3] See Decision No. R21-0081 at ¶ 47-49.

Figure 2: Historical Natural Gas Program Savings and Expenditures



History of the Plan

Over the last twenty-four 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	• 124 MW (~21 MW) of DSM resources • $75 million
2003 Least Cost Resource Plan	04A-214E	C05-0049	• 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	• 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	• Informed the methodologies and values for avoided costs
2016 Electric Resource Plan	16A-0396E	C17-0316 & C18-0761	• 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	• Established intent of DSM programs • Established ten-year goals for energy and demand
2010 Strategic Issues	10A-554EG	C11-0442	• Established energy and demand savings goals • Established incentive mechanism • Defined program administration requirements
2013 Strategic Issues	13A-0686EG	C14-0731	• Increased energy and demand savings goals • Modified the incentive mechanism • Established a budget cap
House Bill 17-1227	N/A	N/A	• Extended energy and demand savings goals though 2028
2017 Strategic Issues	17A-0462EG	C18-0417	• 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	• Established efficiency standards for new products sold in Colorado
Senate Bill 19-236	N/A	N/A	• Established the valuation and application of the Social Cost of Carbon

High-Level Achievements

In 2022, Public Service's electric energy efficiency and demand response portfolio achieved demand savings of 170,520 net generator kW (79 percent of filed target) and energy savings of 477,289,002 net

generator kWh (91 percent of filed target) at a cost of $101,929,406 (90 percent of filed budget). Table 2a below shows the Company's electric portfolio achievements, including Modified Total Resource Cost ("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 2022

2022 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	$ 48,223,585	$48,343,214	61,320	57,363	347,187,862	295,162,001	1.52	1.60	1.91	1.99
Residential	$ 28,738,108	$25,373,752	35,187	30,614	147,943,002	151,475,141	1.67	2.40	2.03	2.96
Low-Income	$ 5,103,245	$4,424,856	3,991	4,085	27,658,569	29,975,713	2.68	3.42	3.28	4.25
Indirect	$ 7,895,204	$6,989,521	0	0	0	0	-	-	-	-
Demand Response	$ 23,820,175	$16,798,063	116,098	78,458	809,843	676,147	2.08	1.83	2.09	1.84
2022 TOTAL	**$ 113,780,317**	**$101,929,406**	**216,596**	**170,520**	**523,599,275**	**477,289,002**	1.61	1.80	1.95	2.19

The natural gas portfolio achieved savings of 841,127 Dth (105 percent of filed target) at a cost of $18,633,357 (101 percent of filed budget). 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 2022

2022 Programs	Natural Gas Budget	Natural Gas Expenditures (Actual)	Dth Target	Net. Realized Dth	MTRC Target	MTRC (Actual)
Business	$1,225,252	$1,832,897	112,171	152,019	2.51	4.06
Residential	$9,947,057	$9,392,200	604,623	535,806	1.65	1.22
Low-Income	$5,718,247	$5,753,047	82,914	153,301	1.03	2.59
Indirect	$1,607,999	$1,655,213	0	0	-	-
2022 TOTAL	**$18,498,555**	$18,633,357	**799,708**	**841,127**	**1.54**	**1.82**

These achievements shown in Tables 2a and 2b have provided electric net benefits of approximately $154.4 million and natural gas net benefits of $38.6 million. Based on these achievements and net benefits, the Company has calculated an associated financial incentive of $18 million for its electric portfolio and $6.4 million for its natural gas portfolio. The gas figure of $6.4 million includes $4,624,639 for the incentive and an acknowledgement of lost revenues ("ALR") associated with gas DSM programs of $1,747,041. 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	$347,211,332	$85,560,992
MTRC Costs	$192,833,697	$46,925,565
MTRC Ratio	1.80	1.82
MTRC Benefits w/Adder	$347,211,332	$85,560,992
Incentive	$18,000,000	$4,624,639
Acknowledgement of Lost Revenue (ALR)	n/a	$1,747,041
MTRC Costs w/Incentive & ALR	$210,833,697	$53,297,245
MTRC Ratio w/Incentive & ALR	1.65	1.61

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 $75.6 million of electric net benefits and $26.5 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	$422,901,729	$112,058,881
MTRC Costs	$192,833,697	$46,925,565
MTRC Ratio	2.19	2.39
MTRC Benefits w/Adder + SCC	$422,901,729	$112,058,881
Incentive	$18,000,000	$4,624,639
Acknowledgement of Lost Revenue (ALR)	n/a	$1,747,041
MTRC Costs w/Incentive & ALR	$210,833,697	$53,297,245
MTRC Ratio w/Incentive & ALR	2.01	2.10

Some of the products that are part of the Company's portfolio did not pass the MTRC Test in 2022. While each product listed below is discussed in more detail in the 2022 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 2023.

Business Program

- *Custom Efficiency – – Electric (0.90 MTRC) and Natural Gas (0.64 MTRC)*
    - The custom efficiency product had substantial administrative costs on both the electric and gas sides due to management of the program and analysis of new custom projects which have not yet been implemented. This administrative cost combined with lower achievement in both fuels led to an overall failing MTRC test.

  Efforts to improve for 2023: In 2023, efforts will be made to educate sales representatives about which custom projects are the most likely to pass MTRC and about which custom projects to pursue for each customer type. This will help reduce administrative spending on non-cost-

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

effective projects as well as increase the project pipeline, resulting in a more cost-effective program overall.

- *Business Energy Assessments – Natural Gas (0.46 MTRC)*
    - Several components of the product did not launch until June 2022 which hindered the ability to achieve gas savings. Specifically, assessments began but there was not enough time to complete implementation for these projects due to the late launch, resulting in costs to the program in 2022 and an implementation pipeline that can be realized in subsequent years. Much of the product does not target gas savings (specifically commercial streamlined assessments which is an indirect product and rolls up to BEA). The indoor agriculture portion has focused heavily on electric savings given the importance of lighting for that sector.

Efforts to improve for 2023: In 2023 there is going to be a large push for both indoor and outdoor agriculture products. The Company plans to stress the importance of HVACR savings opportunities, in addition to lighting opportunities, to indoor agriculture customers. There remain a significant number of customers in the cannabis industry who have not had free assessments to help with their energy consumption, meaning considerable potential for savings remains. In 2022, the Company offered a bonus implementation incentive, which it plans to continue offering in 2023 and which should help these customers to implement both electric and gas opportunities.

- *Business HVAC+R Systems – Electric (0.92 MTRC)*
    - The HVAC-R portfolio had large costs for administrative work and promotional efforts. Many of the popular measures in the portfolio are not cost effective. The program has seen less usage as more of the savings are being claimed by holistic programs.

Efforts to improve for 2023: A rebate bonus is continuing into 2023 to increase program participation. Marketing efforts will be aimed at trade partners and larger customers to promote the usage of more cost-effective measures.

- *Energy Management Systems – Electric (0.85 MTRC)*
    - The product had 41 applications and only 5 passed cost-effectiveness screening, an 88% fail rate due to the high cost of non-energy-related costs in controls projects. Modern controls projects frequently include additional functions unrelated to energy management such as security, safety, and alarm features. Trade partners are unable to isolate these incremental costs and the project cannot pass the MTRC. Secondly, the trade has reduced submissions due to the large number of failed projects. Finally, small commercial buildings often struggle to reduce peak coincident energy usage, reducing cost-effectiveness.

Efforts to improve for 2023: The EMS product was evaluated by TRC, Inc. in 2022 and the findings will be incorporated in the upcoming DSM Plan filing:

1. To reduce project incremental costs by 50% to off-set non-energy project costs.
2. To add three to four prescriptive measures to increase participation.
3. To provide education and engineering assistance to customers and trade partners to capture load shifting opportunities.

Residential Program

- *Home Energy Insights – Electric (0.55 MTRC)*

Attrition led to lower participation. In addition, customers affected, or potentially affected, by the Marshall Fire were removed from receiving reports in 2022.

Efforts to improve for 2023: The Company is actively working with the vendor to increase population and the associated savings in 2023.

- *Residential Heating & Cooling – Natural Gas (0.79 MTRC)*
    - Higher than expected participation in measures that score lower on the MTRC test led to the variance.

Efforts to improve for 2023: The Company will utilize marketing and contractor outreach to pursue higher participation in cost-effective measures.

- *Energy Star New Homes – Electric (0.78 MTRC) and Natural Gas (0.81 MTRC)*
    - Lower-than-anticipated overall participation, combined with high participation in performance tiers with low-cost effectiveness led to the variance in Energy Star New Homes.

Efforts to improve for 2023: The Company continues to monitor administrative spending for the program and will continue to put effort into growing the Energy Codes compliance services to offset MTRC challenges in the beyond-code program offerings.

- *Insulation and Air Sealing – Electric (0.68 MTRC) and Natural Gas (0.66 MTRC)*
    - The MTRC for Insulation and Air Sealing was below the filed goal due to higher participation in measures with lower cost effectiveness but which provide long-term value to the building and which complement other efficiency measures like right-sizing a furnace or a heat pump.

Efforts to improve for 2023: Increase marketing of measures that are more cost effective and increase participation in support of other products aligning with beneficial electrification measures.

- *Whole Home Efficiency – Electric (0.03 MTRC) and Natural Gas (0.11 MTRC)*
    - The MTRC was below the filed goal due to lower than forecasted participation.

Efforts to improve for 2023: Increase awareness, marketing and Trade Partner participation through trainings and communication efforts throughout the year. Marketing efforts will target previous participants in related products such as Home Energy Audits and Home Energy Squad.

Income-Qualified Program

- *Multifamily Weatherization – Electric (0.94 MTRC) and Natural Gas (0.76 MTRC)*
    - The product continued with increased participation in measures with high incremental costs such as furnaces, and natural gas water heaters. In addition, the product supports projects that do not always pass cost-effectiveness tests, but which provide long-term value to the building and residents. Some of these projects include emergency replacement of failing equipment as well. In addition, the BE Pilot project costs are affecting the product cost effectiveness. The main purpose of the BE Pilot continues to be increasing heat pump installation and beneficial electrification. The pilot covers the full cost of the installation, with the end goal of identifying complete bill impact.

Efforts to improve for 2023: The company will continue to pursue cost-effective opportunities while ensuring that the product is providing the necessary assistance.

- *Non-Profit – Natural Gas (0.63 MTRC)*
    - The product completed projects with increased participation in measures with higher incremental costs such as furnaces and natural gas water heaters. The product supports projects that do not always pass cost-effectiveness tests but that provide long –term value and benefits to the organization and its buildings. In addition, the BE Pilot project costs are affecting the product cost effectiveness. The main purpose of the BE Pilot continues to be increasing heat pump installation and beneficial electrification. The pilot covers the full cost of the installation, with the end goal of identifying complete bill impact.

  Efforts to improve for 2023: The company will continue to pursue cost-effective opportunities while ensuring that the product is providing the necessary assistance.

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 in order to achieve the greatest level of energy savings, the 2010 Stipulation and Settlement Agreement[5] provided for a 60/90-Day Notice process to advise interested stakeholders of changes to the Plan. A 60-Day Notice is required 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.

Twelve 60-Day Notices were posted in 2022, all of which affected calendar year 2022 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

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

Table 3: 60/90-Day Notices In 2022

Product, Pilot, or Measure	Notice Date	Notice Type	
Business Program			
Compressed Air Efficiency	4/12/2022	60-Day	Comprehensive Evaluation update
HVAC+R Systems	4/28/2022	60-Day	Technical Assumptions, deemed savings, and rebate update
Lighting Efficiency	4/28/2022	60-Day	Technical Assumptions, deemed savings, and rebate update
New Construction	4/28/2022	60-Day	Comprehensive Evaluation update
Residential Program			
Home Lighting and Recycling	4/12/2022	60-Day	Comprehensive Evaluation update
Energy Star New Homes	4/12/2022	60-Day	Comprehensive Evaluation update
AC Rewards	4/12/2022	60-Day	Comprehensive Evaluation update
Heat Pump	4/12/2022	60-Day	Technical Assumptions, deemed savings
LED Nightlights	4/28/2022	60-Day	Technical Assumptions
Residential Heating & Cooling	4/28/2022	60-Day	Comprehensive Evaluation update
Income Qualified Program			
Heat Pump	4/12/2022	60-Day	Technical Assumptions, deemed savings
LED Nightlights	4/28/2022	60-Day	Technical Assumptions

Additional detail on the impact of these changes can be found in the 2022 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 2022

Product	2022 Expenditures
Home Energy Insights	$5,000
Partners in Energy	$1,250
Business Energy Assessments	$8,000
Research & Evaluation Multi-Project RFP	$1,750
TOTAL	**$16,000**

Program Achievements and Expenditures

Tables 5a and 6a below provide the electric and natural gas savings targets, budgets, and forecasted cost-effectiveness approved in the 2022 DSM Plan in Proceeding No. 20A-0287EG. Table 5a presents the 2022 electric targets and budgets as approved in Proceeding No. 20A-0287EG, while Table 6a presents the 2022 natural gas savings targets and budgets. Tables 5b and 6b provide the Company's 2021 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.

Table 5a: 2022 Electric Program Targets and Budgets

2022	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	$881,670	808	6,561,660	1.26	24,850	$1,035,085	1.68
Business HVAC+R Systems	$7,948,011	10,402	31,602,611	1.94	134,615	$5,479,253	2.29
Compressed Air Efficiency	$1,054,137	920	5,550,053	1.40	21,879	$885,660	1.77
Custom Efficiency	$791,855	818	4,600,068	1.21	20,413	$820,691	1.29
Data Center Efficiency	$1,487,425	1,904	13,259,748	1.73	63,206	$2,510,373	2.24
Energy Management Systems	$533,915	168	6,525,155	1.11	31,147	$1,259,164	1.53
LED Street Lighting	$0	0	1,320,510	1.60	7,536	$289,945	2.52
Lighting Efficiency	$12,116,819	15,717	100,137,739	1.38	382,992	$15,670,606	1.78
New Construction	$6,778,211	11,626	45,987,879	1.53	217,386	$8,617,803	1.87
Self Direct	$774,687	996	4,452,063	1.13	19,238	$779,479	1.38
Small Business Solutions	$6,081,333	7,149	45,965,672	1.41	173,588	$7,102,794	1.83
Strategic Energy Management	$8,973,831	10,810	81,224,704	1.83	310,650	$12,849,076	2.37
General Advertising-Bus	$801,690	0	0				
Business Program Total	**$48,223,585**	**61,320**	**347,187,862**	**1.52**	**1,407,499**	**$57,299,928**	**1.91**
Residential Program							
Energy Efficient Showerhead	$30,162	42	519,308	11.03	1,676	$72,159	12.92
Energy Star New Homes	$2,807,953	2,716	10,361,702	0.98	54,712	$2,130,456	1.19
Home Energy Insights	$3,915,440	5,759	29,918,260	1.00	34,767	$1,744,773	1.45
Home Energy Squad	$1,323,902	1,007	4,613,935	1.57	19,484	$770,881	1.99
Home Lighting & Recycling	$4,197,145	8,928	62,405,952	2.54	205,788	$8,604,323	3.44
Insulation & Air Sealing	$262,869	291	696,826	1.00	3,025	$123,160	1.16
Multifamily Buildings	$2,505,013	1,987	10,982,228	1.49	44,813	$1,826,079	1.87
Refrigerator & Freezer Recycling	$238,807	368	465,099	0.74	2,235	$89,409	0.82
Residential Heating & Cooling	$1,147,206	509	3,569,530	1.19	10,806	$471,506	1.60
School Education Kits	$9,135,054	11,614	14,050,068	1.90	64,808	$2,613,946	2.04
Whole Home Efficiency (HPwES)	$2,335,622	1,967	10,360,093	2.14	49,338	$1,948,209	2.66
General Advertising-Res	$838,934	0	0				
Residential Program Total	**$28,738,108**	**35,187**	**147,943,002**	**1.67**	**491,452**	**$20,394,903**	**2.03**
Income Qualified Program							
Energy Savings Kit	$384,036	169	1,019,143	1.96	5,172	$202,687	2.36
Multifamily Weatherization	$1,150,104	255	2,051,058	1.01	10,058	$396,889	1.17
Non-Profit	$1,120,472	383	1,701,175	1.02	8,104	$322,592	1.16
Single-Family Weatherization	$2,448,633	3,184	22,887,193	4.59	124,304	$4,818,402	5.71
Income Qualified Program Total	**$5,103,245**	**3,991**	**27,658,569**	**2.68**	**147,639**	**$5,740,570**	**3.28**
Indirect Products & Services							
Education/Market Transformation							
Business Education	$176,000	0	0		0	$0	
Business Energy Analysis	$1,208,863	0	0		0	$0	
Consumer Education	$971,000	0	0		0	$0	
Energy Benchmarking	$125,111	0	0		0	$0	
Energy Efficiency Financing	$246,833	0	0		0	$0	
Home Energy Audit	$435,126	0	0		0	$0	
Partners in Energy	$936,517	0	0		0	$0	
Education/Market Transformation Total	**$4,099,450**	**0**	**0**		**0**	**$0**	
Planning and Research							
EE Market Research	$428,091	0	0		0	$0	
EE Evaluation, Measurement & Verification	$769,435	0	0		0	$0	
EE Planning & Administration	$553,962	0	0		0	$0	
EE Product Development	$2,020,193	0	0		0	$0	
Geo-targeting Pilot - EE	$24,073	0	0		0	$0	
EE Product Development Total	**$2,044,266**	**0**	**0**		**0**	**$0**	
EE Planning and Research Total	**$3,795,754**	**0**	**0**		**0**	**$0**	
EE Indirect Products & Services Total	**$7,895,204**	**0**	**0**		**0**	**$0**	
EE PORTFOLIO TOTAL	**$89,960,142**	**100,498**	**522,789,432**	**1.56**	**2,046,590**	**$83,435,402**	**1.94**
Demand Response Program							
Critical Peak Pricing	$235,816	10,630	62,175		29	$1,457	
Electric Vehicle Critical Peak Pricing	$394,975	1,094	0		0	$0	
Electric Vehicle Optimization	$1,054,805	7,621	0	1.46	2,496	$125,275	1.58
Peak Day Partners	$490,000	13,544	303,693		142	$7,117	
Peak Partner Rewards	$1,892,323	47,963	280,547		131	$6,575	
Residential Battery Demand Response	$0	0	0		0	$0	
Residential Demand Response	$16,708,730	32,092	113,371	2.09	353	$15,115	2.09
Small Commercial Building Controls	$530,093	3,153	50,057	2.27	112	$5,064	2.27
DR Program Total	**$21,306,742**	**116,098**	**809,843**	**2.23**	**3,263**	**$160,603**	**2.24**
Planning and Research							
DR Planning & Administration	$61,551	0	0		0	$0	
DR Program Evaluations	$335,227	0	0		0	$0	
DR Product Development	$1,811,103	0	0		0	$0	
Geo-targeting Pilot - DR	$305,552	0	0		0	$0	
DR Planning and Research Total	**$2,513,433**	**0**	**0**		**0**	**$0**	
DR PORTFOLIO TOTAL	**$23,820,175**	**116,098**	**809,843**	**2.08**	**3,263**	**$160,603**	**2.09**
PORTFOLIO TOTAL	**$113,780,317**	**216,596**	**523,599,275**	**1.61**	**2,049,852**	**$83,596,005**	**1.95**

Table 5b: 2022 Electric Program Achievements and Expenditures

2022	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	$4,785,043	4,075	26,264,829	1.51	108,360	$4,435,318	1.92
Business HVAC+R Systems	$4,761,726	3,269	11,196,422	1.20	46,713	$1,907,508	1.41
Compressed Air Efficiency	$358,609	245	1,426,863	1.45	5,899	$237,260	1.82
Custom Efficiency	$390,673	121	790,646	0.90	3,509	$141,058	1.09
Data Center Efficiency	$451,914	597	5,009,810	1.29	25,241	$987,516	1.63
Energy Management Systems	$302,556	124	927,624	1.06	4,480	$180,893	1.36
LED Street Lighting	$0	0	1,525,437	1.28	8,706	$334,940	2.03
Lighting Efficiency	$10,303,160	13,642	79,482,937	1.89	334,887	$13,529,699	2.35
New Construction	$12,804,790	15,076	62,162,594	1.47	281,674	$11,283,755	1.78
Self Direct	$187,885	175	1,695,126	1.75	7,325	$296,787	2.34
Small Business Solutions	$4,965,443	6,451	34,519,317	1.49	105,112	$4,491,091	1.89
Strategic Energy Management	$8,198,603	13,588	70,160,395	1.89	238,434	$9,898,591	2.42
General Advertising-Bus	$832,813	0	0			$0	
Business Program Total	**$48,343,214**	**57,363**	**295,162,001**	**1.60**	**1,170,340**	**$47,724,415**	**1.99**
Residential Program							
Energy Efficient Showerhead	$48,647	35	423,406	6.22	1,366	$58,833	7.28
Energy Star New Homes	$1,342,624	712	3,566,922	0.78	18,906	$735,870	0.95
Home Energy Insights	$1,639,935	2,719	19,858,992	0.55	9,706	$487,094	0.85
Home Energy Squad	$711,824	426	1,936,997	1.12	6,383	$258,300	1.40
Home Lighting & Recycling	$8,063,780	13,300	95,615,379	3.30	371,215	$15,029,130	4.37
Insulation & Air Sealing	$765,018	875	558,047	0.68	2,763	$110,579	0.72
Multifamily Buildings	$1,111,049	689	5,605,897	1.40	22,926	$913,650	1.80
Refrigerator & Freezer Recycling	$997,453	377	3,109,456	1.15	9,476	$413,120	1.57
Residential Heating & Cooling	$6,893,755	9,366	5,700,792	4.03	24,970	$1,010,953	4.18
School Education Kits	$2,395,499	2,114	15,098,513	2.52	66,864	$2,653,476	3.22
Whole Home Efficiency	$70,788	1	740	0.03	3	$138	0.04
General Advertising-Res	$1,333,379	0	0			$0	
Residential Program Total	**$25,373,752**	**30,614**	**151,475,141**	**2.40**	**534,580**	**$21,671,144**	**2.96**
Income Qualified Program							
Energy Savings Kit	$197,031	32	289,316	1.48	1,320	$52,493	1.74
Multifamily Weatherization	$1,154,158	187	1,439,762	0.94	7,060	$278,601	1.08
Non-Profit	$1,231,293	404	1,707,158	1.05	8,133	$323,726	1.19
Single-Family Weatherization	$1,842,375	3,463	26,539,477	7.03	144,225	$5,589,761	8.88
Income Qualified Program Total	**$4,424,856**	**4,085**	**29,975,713**	**3.42**	**160,739**	**$6,244,581**	**4.25**
Indirect Products & Services							
Education/Market Transformation							
Business Education	$108,679	0	0		0	$0	
Business Energy Analysis	$483,484	0	0		0	$0	
Consumer Education	$1,080,292	0	0		0	$0	
Energy Benchmarking	$139,420	0	0		0	$0	
Energy Efficiency Financing	$21,166	0	0		0	$0	
Home Energy Audit	$460,647	0	0		0	$0	
Partners in Energy	$982,995	0	0		0	$0	
Education/Market Transformation Total	**$3,276,683**	**0**	**0**		**0**	**$0**	
Planning and Research							
EE Market Research	$544,336	0	0		0	$0	
EE Evaluation, Measurement & Verification	$815,584	0	0		0	$0	
EE Planning & Administration	$589,690	0	0		0	$0	
EE Product Development	$1,763,073	0	0		0	$0	
Geo-targeting Pilot - EE	$154	0	0		0	$0	
EE Product Development Total	**$1,763,228**	**0**	**0**		**0**	**$0**	
EE Planning and Research Total	**$3,712,838**	**0**	**0**		**0**	**$0**	
EE Indirect Products & Services Total	**$6,989,521**	**0**	**0**		**0**	**$0**	
EE PORTFOLIO TOTAL	**$85,131,343**	**92,062**	**476,612,855**	**1.80**	**1,865,658**	**$75,640,140**	**2.23**
Demand Response Program							
Critical Peak Pricing	$188,036	24,196	520,128		243	$12,189	
Electric Vehicle Critical Peak Pricing	$48,229	226	0		0	$0	
Electric Vehicle Optimization	$765,956	1,291	0	0.36	553	$27,730	0.40
Peak Day Partners	$79,991	22,213	96,548		45	$2,263	
Peak Partner Rewards	$645,766	12,389	0		0	$0	
Residential Battery Demand Response	$160,369	392	-11,527	2.54	-44	-$1,894	2.53
Residential Demand Response	$13,328,888	17,275	63,352	1.70	207	$8,851	1.70
Small Commercial Building Controls	$233,204	477	7,647	1.60	26	$1,119	1.61
DR Program Total	**$15,450,438**	**78,458**	**676,147**	**1.99**	**1,029**	**$50,258**	**1.99**
Planning and Research							
DR Planning & Administration	$14,427	0	0		0	$0	
DR Program Evaluations	$192,730	0	0		0	$0	
DR Product Development	$1,140,314	0	0		0	$0	
Geo-targeting Pilot - DR	$154	0	0		0	$0	
DR Planning and Research Total	**$1,347,625**	**0**	**0**		**0**	**$0**	
DR PORTFOLIO TOTAL	**$16,798,063**	**78,458**	**676,147**	**1.83**	**1,029**	**$50,258**	**1.84**
PORTFOLIO TOTAL	**$101,929,406**	**170,520**	**477,289,002**	**1.80**	**1,866,687**	**$75,690,397**	**2.19**

Table 6a: 2022 Natural Gas Program Targets and Budgets

2022	Gas Budget	Net Annual Dth Savings	Annual Dth/$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Program					
Business Energy Assessments	$13,548	3,784	279,297	$72,042	3.14
Business HVAC+R Systems	$266,540	8,809	33,048	$26,429	1.05
Custom Efficiency	$65,005	6,626	101,935	$14,644	1.04
Energy Management Systems	$25,336	2,590	102,224	$23,952	1.17
New Construction	$586,125	72,887	124,354	$6,807,758	3.13
Small Business Solutions	$186,717	17,475	93,593	$432,776	1.82
General Advertising-Bus	$81,982	0			
Business Program Total	**$1,225,252**	**112,171**	**91,549**	**$7,295,619**	**2.51**
Residential Program					
Energy Efficient Showerhead	$339,395	32,205	94,888	$4,756,713	11.17
Energy Star New Homes	$3,053,505	154,836	50,708	$126,760	1.01
Home Energy Insights	$692,365	91,772	132,549	$24,903	1.04
Home Energy Squad	$496,647	23,753	47,827	$828,112	2.25
Insulation & Air Sealing	$393,661	23,199	58,932	-$470,991	0.74
Multifamily Buildings	$870,941	34,522	39,638	$4,276,998	3.99
Residential Heating & Cooling	$2,862,451	170,237	59,472	$63,519	1.01
School Education Kits	$858,161	65,000	75,743	$7,486,315	8.02
Whole Home Efficiency	$194,389	9,098	46,805	-$259,640	0.66
General Advertising-Res	$185,540	0			
Residential Program Total	**$9,947,057**	**604,623**	**60,784**	**$16,647,148**	**1.65**
Income Qualified Program					
Energy Savings Kit	$163,002	10,593	64,986	$1,589,954	9.14
Multifamily Weatherization	$657,414	8,554	13,012	-$238,819	0.81
Non-Profit	$439,235	4,005	9,118	-$179,463	0.79
Single-Family Weatherization	$4,458,596	59,762	13,404	-$847,155	0.90
Income Qualified Program Total	**$5,718,247**	**82,914**	**14,500**	**$324,516**	**1.03**
Indirect Products & Services					
Education/Market Transformation					
Business Education	$19,600	0	0		
Business Energy Analysis	$222,698	0	0		
Consumer Education	$61,000	0	0		
Energy Benchmarking	$31,869	0	0		
Energy Efficiency Financing	$100,957	0	0		
Home Energy Audit	$586,249	0	0		
Partners in Energy	$100,689	0	0		
Education/Market Transformation Total	**$1,123,061**	**0**	**0**		
Planning and Research					
EE Market Research	$178,429	0	0		
EE Evaluation, Measurement & Verification	$141,520	0	0		
EE Planning & Administration	$12,404	0	0		
EE Product Development	$152,585	0	0		
EE Product Development Total	**$152,585**	**0**	**0**		
EE Planning and Research Total	**$484,938**	**0**	**0**		
EE Indirect Products & Services Total	**$1,607,999**	**0**	**0**		
EE PORTFOLIO TOTAL	**$18,498,555**	**799,708**	**43,231**	**$23,182,091**	**1.54**

Table 6b: 2022 Natural Gas Program Achievements and Expenditures

2022	Gas Budget	Net Annual Dth Savings	Annual Dth/$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Program					
Business Energy Assessments	$110,297	1,814	16,442	-$175,592	0.46
Business HVAC+R Systems	$486,484	16,292	33,488	-$90,596	0.92
Custom Efficiency	$46,647	710	15,225	-$26,069	0.64
Energy Management Systems	$9,470	383	40,411	-$4,467	0.83
New Construction	$1,060,810	131,291	123,765	$18,308,848	5.38
Small Business Solutions	$40,594	1,530	37,682	$14,917	1.26
General Advertising-Bus	$78,594	0	0		
Business Program Total	**$1,832,897**	**152,019**	**82,939**	**$17,948,448**	**4.06**
Residential Program					
Energy Efficient Showerhead	$176,210	26,793	152,051	$3,962,852	15.21
Energy Star New Homes	$2,743,662	100,109	36,488	-$1,604,020	0.81
Home Energy Insights	$88,860	83,799	943,048	$169,295	2.91
Home Energy Squad	$338,096	8,102	23,962	$165,497	1.40
Insulation & Air Sealing	$1,218,690	57,571	47,240	-$1,873,550	0.66
Multifamily Buildings	$247,293	2,262	9,145	$284,271	2.04
Residential Heating & Cooling	$3,479,261	192,207	55,244	-$2,779,611	0.79
School Education Kits	$731,582	64,797	88,571	$8,542,875	9.97
Whole Home Efficiency	$50,539	168	3,316	-$59,625	0.11
General Advertising-Res	$318,010	0	0		
Residential Program Total	**$9,392,200**	**535,806**	**57,048**	**$6,489,974**	**1.22**
Income Qualified Program					
Energy Savings Kit	$36,855	1,847	50,121	$260,373	6.95
Multifamily Weatherization	$1,312,423	6,842	5,213	-$503,432	0.76
Non-Profit	$414,326	1,643	3,965	-$197,970	0.63
Single-Family Weatherization	$3,989,442	142,970	35,837	$15,907,650	3.26
Income Qualified Program Total	**$5,753,047**	**153,301**	**26,647**	**$15,466,621**	**2.59**
Indirect Products & Services					
Education/Market Transformation					
Business Education	$14,422	0	0		
Business Energy Analysis	$49,457	0	0		
Consumer Education	$131,005	0	0		
Energy Benchmarking	$43,398	0	0		
Energy Efficiency Financing	$12,570	0	0		
Home Energy Audit	$544,764	0	0		
Partners in Energy	$107,987	0	0		
Education/Market Transformation Total	**$903,602**	**0**	**0**		
Planning and Research					
EE Market Research	$158,249	0	0		
EE Evaluation, Measurement & Verification	$247,396	0	0		
EE Planning & Administration	$168,336	0	0		
EE Product Development	$177,629	0	0		
EE Product Development Total	**$177,629**	**0**	**0**		
EE Planning and Research Total	**$751,610**	**0**	**0**		
EE Indirect Products & Services Total	**$1,655,213**	**0**	**0**		
EE PORTFOLIO TOTAL	**$18,633,357**	**841,127**	**45,141**	**$38,635,427**	**1.82**

Table 7 below provides the CO_2 and SO_X emissions avoided through 2022 achievements in both first-year savings and cumulatively over the lifetime for each product.

Table 7: 2022 Avoided Emission

	Annual				Cumulative over Lifetime				Social Cost of Carbon	
	Tons CO_2			lbs SOx	Tons CO_2			lbs SOx	NPV of Avoided Emissions	
2022	**Electric**	**Gas**	**Total**	**Electric**	**Electric**	**Gas**	**Total**	**Electric**	**Electric**	**Gas**
Business Program										
Business Energy Assessments	11,644	106	11,750	7,879	108,360	1,849	110,209	70,269	$4,435,318	$68,134
Business HVAC+R Systems	5,073	952	6,025	3,359	46,713	17,734	64,447	32,692	$1,907,508	$652,764
Compressed Air Efficiency	623	0	623	428	5,899	0	5,899	3,815	$237,260	$0
Custom Efficiency	349	41	391	237	3,509	811	4,319	2,439	$141,058	$29,781
Data Center Efficiency	2,181	0	2,181	1,503	25,241	0	25,241	17,169	$987,516	$0
Energy Management Systems	394	22	416	278	4,480	373	4,852	2,384	$180,893	$13,931
LED Street Lighting	665	0	665	458	8,706	0	8,706	5,228	$334,940	$0
Lighting Efficiency	35,325	0	35,325	23,845	334,887	0	334,887	227,532	$13,529,699	$0
New Construction	27,624	7,670	35,295	18,649	281,674	172,173	453,847	191,317	$11,283,755	$5,519,863
Self Direct	749	0	749	509	7,325	0	7,325	4,938	$296,787	$0
Small Business Solutions	15,424	89	15,513	10,356	105,112	1,084	106,195	58,606	$4,491,091	$38,783
Strategic Energy Management	31,023	0	31,023	21,048	238,434	0	238,434	147,978	$9,898,591	$0
General Advertising-Bus	0	0	0	0	0	0	0	0	$0	$0
Business Program EE Total	**131,074**	**8,881**	**139,955**	**88,549**	**1,170,340**	**194,023**	**1,364,363**	**764,366**	**$47,724,415**	**$6,323,257**
Residential Program										
Energy Efficient Showerhead	187	1,565	1,752	127	1,366	26,032	27,398	726	$58,833	$697,064
Energy Star New Homes	1,586	5,849	7,435	1,070	18,906	155,882	174,789	12,048	$735,870	$4,497,411
Home Energy Insights	9,706	4,896	14,602	5,958	9,706	4,896	14,602	3,403	$487,094	$245,693
Home Energy Squad	861	473	1,334	581	6,383	4,729	11,113	3,675	$258,300	$229,869
Home Lighting & Recycling	42,281	0	42,281	28,685	371,215	0	371,215	214,684	$15,029,130	$0
Insulation & Air Sealing	270	3,363	3,633	167	2,763	58,244	61,008	1,545	$110,579	$2,222,451
Multifamily Buildings	2,472	132	2,604	1,682	22,926	1,428	24,354	14,306	$913,650	$81,859
Refrigerator & Freezer Recycling	1,354	0	1,354	933	9,476	0	9,476	4,355	$413,120	$0
Residential Heating & Cooling	2,716	11,229	13,946	1,710	24,970	217,810	242,780	14,329	$1,010,953	$7,026,394
School Education Kits	6,668	3,786	10,453	4,530	66,864	182,470	249,334	40,011	$2,653,476	$2,157,542
Whole Home Efficiency	0	10	10	0	3	105	108	2	$138	$5,768
General Advertising-Res	0	0	0	0	0	0	0	0	$0	$0
Residential Program EE Total	**68,101**	**31,303**	**99,404**	**45,443**	**534,580**	**651,596**	**1,186,176**	**309,084**	**$21,671,144**	**$17,164,052**
Income Qualified Program										
Energy Savings Kit	128	108	235	87	1,320	1,444	2,764	799	$52,493	$70,858
Multifamily Weatherization	627	400	1,026	432	7,060	5,596	12,656	4,687	$278,601	$298,749
Non-Profit	743	96	839	512	8,133	1,535	9,668	5,265	$323,726	$68,881
Single-Family Weatherization	11,699	8,353	20,051	7,962	144,225	95,021	239,246	90,492	$5,589,761	$6,459,212
Income Qualified Program Total	**13,196**	**8,956**	**22,152**	**8,993**	**160,739**	**103,596**	**264,335**	**101,243**	**$6,244,581**	**$6,897,700**
EE PORTFOLIO TOTAL	**212,371**	**49,141**	**261,512**	**142,984**	**1,865,658**	**949,215**	**2,814,874**	**1,174,694**	**$75,640,140**	**$30,385,009**
Demand Response Program										
Critical Peak Pricing	243	0	243	156	243	0	243	89	$12,189	$0
Electric Vehicle Critical Peak Pricing	0	0	0	0	0	0	0	0	$0	$0
Electric Vehicle Optimization	553	0	553	0	553	0	553	0	$27,730	$0
Peak Day Partners	45	0	45	29	45	0	45	17	$2,263	$0
Peak Partner Rewards	0	0	0	0	0	0	0	0	$0	$0
Residential Battery Demand Response	-5	0	-5	-3	-44	0	-44	0	-$1,894	$0
Residential Demand Response	32	0	32	19	207	0	207	102	$8,851	$0
Small Commercial Building Controls	3	0	3	2	26	0	26	13	$1,119	$0
DR PORTFOLIO TOTAL	**871**	**0**	**871**	**203**	**1,029**	**0**	**1,029**	**221**	**$50,258**	**$0**
PORTFOLIO TOTAL	**213,242**	**49,141**	**262,382**	**143,187**	**1,866,687**	**949,215**	**2,815,903**	**1,174,915**	**$75,690,397**	**$30,385,009**

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 8a: 2022 Electric Program Costs by Category (Budget)

2022	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Business Program							
Business Energy Assessments	$ -	$ 387,033	$ -	$ 494,638	$ -	$ -	$ 881,670
Business HVAC+R Systems	$ -	$ 3,725,771	$ -	$ 4,186,910	$ -	$ 35,330	$ 7,948,011
Compressed Air Efficiency	$ -	$ 229,742	$ 64,800	$ 727,195	$ -	$ 32,400	$ 1,054,137
Custom Efficiency	$ -	$ 484,070	$ 500	$ 303,285	$ -	$ 4,000	$ 791,855
Data Center Efficiency	$ -	$ 281,154	$ 35,000	$ 1,156,271	$ -	$ 15,000	$ 1,487,425
Energy Management Systems	$ -	$ 213,953	$ 2,100	$ 301,562	$ -	$ 16,300	$ 533,915
LED Street Lighting	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lighting Efficiency	$ -	$ 2,685,624	$ 1,200,000	$ 8,176,196	$ -	$ 55,000	$ 12,116,819
New Construction	$ -	$ 2,175,505	$ 3,000	$ 4,053,108	$ -	$ 546,598	$ 6,778,211
Self Direct	$ -	$ 153,710	$ -	$ 620,977	$ -	$ -	$ 774,687
Small Business Solutions	$ -	$ 2,667,320	$ 300,000	$ 3,079,013	$ -	$ 35,000	$ 6,081,333
Strategic Energy Management	$ -	$ 1,950,633	$ 104,146	$ 6,762,052	$ -	$ 157,000	$ 8,973,831
General Advertising-Bus	$ -	$ 16,690	$ 785,000	$ -	$ -	$ -	$ 801,690
Business Program Total	**$ -**	**$ 14,971,205**	**$ 2,494,546**	**$ 29,861,206**	**$ -**	**$ 896,628**	**$ 48,223,585**
Residential Program							
Energy Efficient Showerhead	$ -	$ 23,253	$ 52	$ 6,857	$ -	$ -	$ 30,162
Energy Star New Homes	$ -	$ 341,644	$ 60,000	$ 2,255,349	$ -	$ 150,960	$ 2,807,953
Home Energy Insights	$ -	$ 3,915,440	$ -	$ -	$ -	$ -	$ 3,915,440
Home Energy Squad	$ -	$ 142,096	$ 145,000	$ 428,944	$ 605,362	$ 2,500	$ 1,323,902
Home Lighting & Recycling	$ -	$ 759,863	$ 625,000	$ 2,807,282	$ -	$ 5,000	$ 4,197,145
Insulation & Air Sealing	$ -	$ 31,129	$ 2,500	$ 189,996	$ -	$ 15,182	$ 238,807
Multifamily Buildings	$ -	$ 903,836	$ -	$ 1,601,177	$ -	$ -	$ 2,505,013
Refrigerator & Freezer Recycling	$ -	$ 662,206	$ 120,000	$ 355,000	$ -	$ 10,000	$ 1,147,206
Residential Heating & Cooling	$ -	$ 1,544,002	$ 1,244,610	$ 6,294,442	$ -	$ 52,000	$ 9,135,054
School Education Kits	$ -	$ 899,802	$ 5,000	$ 1,430,820	$ -	$ -	$ 2,335,622
Whole Home Efficiency	$ -	$ 109,926	$ -	$ 122,943	$ -	$ 30,000	$ 262,869
General Advertising-Res	$ -	$ 30,934	$ 808,000	$ -	$ -	$ -	$ 838,934
Residential Program Total	**$ -**	**$ 9,364,132**	**$ 3,010,162**	**$ 15,492,810**	**$ 605,362**	**$ 265,642**	**$ 28,738,108**
Income Qualified Program							
Energy Savings Kit	$ -	$ 166,917	$ 100,000	$ 117,119	$ -	$ -	$ 384,036
Multifamily Weatherization	$ -	$ 132,678	$ 40,000	$ 961,426	$ -	$ 16,000	$ 1,150,104
Non-Profit	$ -	$ 173,126	$ 31,000	$ 876,346	$ -	$ 40,000	$ 1,120,472
Single-Family Weatherization	$ -	$ 128,456	$ 190,000	$ 2,043,177	$ -	$ 87,000	$ 2,448,633
Income Qualified Program Total	**$ -**	**$ 601,177**	**$ 361,000**	**$ 3,998,068**	**$ -**	**$ 143,000**	**$ 5,103,245**

Table 8a: (Cont.)

2022	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Indirect Products & Services							
Education/Market Transformation							
Business Education	$ -	$ 76,000	$ 100,000	$ -	$ -	$ -	$ 176,000
Business Energy Analysis	$ -	$ 178,863	$ 255,000	$ 775,000	$ -	$ -	$ 1,208,863
Consumer Education	$ -	$ 326,000	$ 645,000	$ -	$ -	$ -	$ 971,000
Energy Benchmarking	$ -	$ 125,111	$ -	$ -	$ -	$ -	$ 125,111
Energy Efficiency Financing	$ -	$ 11,833	$ 60,000	$ 175,000	$ -	$ -	$ 246,833
Home Energy Audit	$ -	$ 196,455	$ 18,719	$ 187,193	$ -	$ 32,759	$ 435,126
Partners in Energy	$ -	$ 923,267	$ 13,250	$ -	$ -	$ -	$ 936,517
Education/Market Transformation Total	**$ -**	**$ 1,837,529**	**$ 1,091,969**	**$ 1,137,193**	**$ -**	**$ 32,759**	**$ 4,099,450**
Planning and Research							
EE Market Research	$ -	$ 428,091	$ -	$ -	$ -	$ -	$ 428,091
EE Evaluation, Measurement & Verification	$ -	$ 30,676	$ -	$ -	$ -	$ 738,760	$ 769,435
EE Planning & Administration	$ -	$ 553,962	$ -	$ -	$ -	$ -	$ 553,962
EE Product Development	$ -	$ 2,020,193	$ -	$ -	$ -	$ -	$ 2,020,193
Geo-targeting Pilot - EE	$ -	$ 3,735	$ 3,735	$ 11,000	$ -	$ 5,603	$ 24,073
EE Product Development Total	**$ -**	**$ 2,023,928**	**$ 3,735**	**$ 11,000**	**$ -**	**$ 5,603**	**$ 2,044,266**
EE Planning and Research Total	**$ -**	**$ 3,036,656**	**$ 3,735**	**$ 11,000**	**$ -**	**$ 744,363**	**$ 3,795,754**
EE Indirect Products & Services Total	**$ -**	**$ 4,874,186**	**$ 1,095,704**	**$ 1,148,193**	**$ -**	**$ 777,122**	**$ 7,895,204**
EE PORTFOLIO TOTAL	**$ -**	**$ 29,810,700**	**$ 6,961,412**	**$ 50,500,276**	**$ 605,362**	**$ 2,082,392**	**$ 89,960,142**
Demand Response Program							
Critical Peak Pricing	$ -	$ 185,816	$ 25,000	$ -	$ -	$ 25,000	$ 235,816
Electric Vehicle Critical Peak Pricing	$ -	$ 206,925	$ 5,000	$ -	$ 158,050	$ 25,000	$ 394,975
Electric Vehicle Optimization	$ -	$ 440,537	$ 47,500	$ 420,000	$ -	$ 146,768	$ 1,054,805
Peak Day Partners	$ -	$ 37,500	$ 25,000	$ 402,500	$ 25,000	$ -	$ 490,000
Peak Partner Rewards	$ -	$ 341,426	$ 105,000	$ 1,420,897	$ -	$ 25,000	$ 1,892,323
Residential Battery Demand Response	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Residential Demand Response	$ -	$ 6,153,730	$ 900,000	$ 9,525,000	$ -	$ 130,000	$ 16,708,730
Small Commercial Building Controls	$ -	$ 142,540	$ 30,000	$ 342,553	$ -	$ 15,000	$ 530,093
DR Program Total	**$ -**	**$ 7,508,474**	**$ 1,137,500**	**$ 12,110,950**	**$ 183,050**	**$ 366,768**	**$ 21,306,742**
Planning and Research							
DR Planning & Administration	$ -	$ 61,551	$ -	$ -	$ -	$ -	$ 61,551
DR Program Evaluations	$ -	$ 10,227	$ -	$ -	$ -	$ 325,000	$ 335,227
DR Product Development	$ -	$ 1,811,103	$ -	$ -	$ -	$ -	$ 1,811,103
Geo-targeting Pilot - DR	$ -	$ 46,265	$ 46,265	$ 143,625	$ -	$ 69,397	$ 305,552
DR Planning and Research Total	**$ -**	**$ 1,929,146**	**$ 46,265**	**$ 143,625**	**$ -**	**$ 394,397**	**$ 2,513,433**
DR PORTFOLIO TOTAL	**$ -**	**$ 9,437,620**	**$ 1,183,765**	**$ 12,254,575**	**$ 183,050**	**$ 761,165**	**$ 23,820,175**
PORTFOLIO TOTAL	**$ -**	**$ 39,248,320**	**$ 8,145,177**	**$ 62,754,851**	**$ 788,412**	**$ 2,843,557**	**$ 113,780,317**

Table 8b: 2022 Electric Program Costs by Category (Actual Expenditures)

2022	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Business Program							
Business Energy Assessments	$ -	$ 1,678,967	$ 1,231	$ 3,104,845	$ -	$ -	$ 4,785,043
Business HVAC+R Systems	$ -	$ 2,353,061	$ 2,239	$ 2,337,767	$ -	$ 68,659	$ 4,761,726
Compressed Air Efficiency	$ -	$ 187,294	$ -	$ 167,015	$ -	$ 4,300	$ 358,609
Custom Efficiency	$ -	$ 319,287	$ -	$ 70,677	$ -	$ 709	$ 390,673
Data Center Efficiency	$ -	$ 163,177	$ -	$ 288,028	$ -	$ 709	$ 451,914
Energy Management Systems	$ -	$ 191,504	$ 10	$ 110,536	$ -	$ 506	$ 302,556
LED Street Lighting	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lighting Efficiency	$ -	$ 2,289,707	$ 381,182	$ 7,604,363	$ -	$ 27,908	$ 10,303,160
New Construction	$ -	$ 3,757,547	$ -	$ 8,562,931	$ -	$ 484,312	$ 12,804,790
Self Direct	$ -	$ 66,802	$ -	$ 121,083	$ -	$ -	$ 187,885
Small Business Solutions	$ -	$ 1,261,628	$ 4,354	$ 3,673,737	$ -	$ 25,725	$ 4,965,443
Strategic Energy Management	$ -	$ 1,439,388	$ 20	$ 6,191,859	$ -	$ 567,337	$ 8,198,603
General Advertising-Bus	$ -	$ 367,045	$ 465,767	$ -	$ -	$ -	$ 832,813
Business Program Total	**$ -**	**$ 14,075,406**	**$ 854,803**	**$ 32,232,840**	**$ -**	**$ 1,180,165**	**$ 48,343,214**
Residential Program							
Energy Efficient Showerhead	$ -	$ 41,480	$ 786	$ 6,382	$ -	$ -	$ 48,647
Energy Star New Homes	$ -	$ 250,035	$ 1,236	$ 912,230	$ -	$ 179,123	$ 1,342,624
Home Energy Insights	$ -	$ 1,638,191	$ 1,744	$ -	$ -	$ -	$ 1,639,935
Home Energy Squad	$ -	$ 152,310	$ 48,711	$ 166,389	$ 344,414	$ -	$ 711,824
Home Lighting & Recycling	$ -	$ 811,282	$ 607,379	$ 6,642,119	$ -	$ 3,000	$ 8,063,780
Insulation & Air Sealing	$ -	$ 49,726	$ -	$ 714,917	$ -	$ 375	$ 765,018
Multifamily Buildings	$ -	$ 328,048	$ 1,204	$ 781,798	$ -	$ -	$ 1,111,049
Refrigerator & Freezer Recycling	$ -	$ 672,169	$ 19,154	$ 303,130	$ -	$ 3,000	$ 997,453
Residential Heating & Cooling	$ -	$ 1,951,669	$ 264,309	$ 4,626,063	$ -	$ 51,714	$ 6,893,755
School Education Kits	$ -	$ 825,783	$ 1,544	$ 1,568,172	$ -	$ -	$ 2,395,499
Whole Home Efficiency	$ -	$ 70,184	$ -	$ 604	$ -	$ -	$ 70,788
General Advertising-Res	$ -	$ 468,401	$ 864,978	$ -	$ -	$ -	$ 1,333,379
Residential Program Total	**$ -**	**$ 7,259,278**	**$ 1,811,045**	**$ 15,721,804**	**$ 344,414**	**$ 237,212**	**$ 25,373,752**
Income Qualified Program							
Energy Savings Kit	$ -	$ 111,055	$ -	$ 85,976	$ -	$ -	$ 197,031
Multifamily Weatherization	$ -	$ 161,442	$ 30,000	$ 913,066	$ -	$ 49,649	$ 1,154,158
Non-Profit	$ -	$ 226,314	$ 30,000	$ 946,778	$ -	$ 28,201	$ 1,231,293
Single-Family Weatherization	$ -	$ 3,578	$ 165,388	$ 1,572,220	$ -	$ 101,190	$ 1,842,375
Income Qualified Program Total	**$ -**	**$ 502,389**	**$ 225,388**	**$ 3,518,040**	**$ -**	**$ 179,040**	**$ 4,424,856**

Table 8b: (Cont.)

2022	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Indirect Products & Services							
Education/Market Transformation							
Business Education	$ -	$ 29,502	$ 79,177	$ -	$ -	$ -	$ 108,679
Business Energy Analysis	$ -	$ 80,037	$ -	$ 403,447	$ -	$ -	$ 483,484
Consumer Education	$ -	$ 170,510	$ 909,782	$ -	$ -	$ -	$ 1,080,292
Energy Benchmarking	$ -	$ 139,420	$ -	$ -	$ -	$ -	$ 139,420
Energy Efficiency Financing	$ -	$ 21,166	$ -	$ -	$ -	$ -	$ 21,166
Home Energy Audit	$ -	$ 194,217	$ -	$ 226,726	$ -	$ 39,705	$ 460,647
Partners in Energy	$ -	$ 976,648	$ 6,346	$ -	$ -	$ -	$ 982,995
Education/Market Transformation Total	**$ -**	**$ 1,611,500**	**$ 995,305**	**$ 630,173**	**$ -**	**$ 39,705**	**$ 3,276,683**
Planning and Research							
EE Market Research	$ -	$ 544,336	$ -	$ -	$ -	$ -	$ 544,336
EE Evaluation, Measurement & Verification	$ -	$ 32,737	$ -	$ -	$ -	$ 782,847	$ 815,584
EE Planning & Administration	$ -	$ 589,690	$ -	$ -	$ -	$ -	$ 589,690
EE Product Development	$ -	$ 1,763,073	$ -	$ -	$ -	$ -	$ 1,763,073
Geo-targeting Pilot - EE	$ -	$ 154	$ -	$ -	$ -	$ -	$ 154
EE Product Development Total	**$ -**	**$ 1,763,228**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 1,763,228**
EE Planning and Research Total	**$ -**	**$ 2,929,991**	**$ -**	**$ -**	**$ -**	**$ 782,847**	**$ 3,712,838**
EE Indirect Products & Services Total	**$ -**	**$ 4,541,490**	**$ 995,305**	**$ 630,173**	**$ -**	**$ 822,552**	**$ 6,989,521**
EE PORTFOLIO TOTAL	**$ -**	**$ 26,378,563**	**$ 3,886,541**	**$ 52,102,857**	**$ 344,414**	**$ 2,418,968**	**$ 85,131,343**
Demand Response Program							
Critical Peak Pricing	$ -	$ 188,036	$ -	$ -	$ -	$ -	$ 188,036
Electric Vehicle Critical Peak Pricing	$ -	$ 34,760	$ 13,469	$ -	$ -	$ -	$ 48,229
Electric Vehicle Optimization	$ -	$ 454,597	$ 52,800	$ 76,600	$ -	$ 181,959	$ 765,956
Peak Day Partners	$ -	$ 17,245	$ -	$ 62,746	$ -	$ -	$ 79,991
Peak Partner Rewards	$ -	$ 246,176	$ 107,750	$ 291,841	$ -	$ -	$ 645,766
Residential Battery Demand Response	$ -	$ 88,716	$ -	$ 43,750	$ -	$ 27,903	$ 160,369
Residential Demand Response	$ -	$ 4,177,440	$ 367,473	$ 8,738,148	$ -	$ 45,827	$ 13,328,888
Small Commercial Building Controls	$ -	$ 216,018	$ 6,632	$ -	$ -	$ 10,553	$ 233,204
DR Program Total	**$ -**	**$ 5,422,988**	**$ 548,124**	**$ 9,213,084**	**$ -**	**$ 266,241**	**$ 15,450,438**
Planning and Research							
DR Planning & Administration	$ -	$ 14,427	$ -	$ -	$ -	$ -	$ 14,427
DR Program Evaluations	$ -	$ 6,415	$ -	$ -	$ -	$ 186,315	$ 192,730
DR Product Development	$ -	$ 1,140,314	$ -	$ -	$ -	$ -	$ 1,140,314
Geo-targeting Pilot - DR	$ -	$ 154	$ -	$ -	$ -	$ -	$ 154
DR Planning and Research Total	**$ -**	**$ 1,161,311**	**$ -**	**$ -**	**$ -**	**$ 186,315**	**$ 1,347,625**
DR PORTFOLIO TOTAL	**$ -**	**$ 6,584,299**	**$ 548,124**	**$ 9,213,084**	**$ -**	**$ 452,556**	**$ 16,798,063**
PORTFOLIO TOTAL	**$ -**	**$ 32,962,862**	**$ 4,434,665**	**$ 61,315,941**	**$ 344,414**	**$ 2,871,524**	**$ 101,929,406**

Table 9a: 2022 Gas Program Costs by Category (Budget)

2022	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Business Program							
Business Energy Assessments	$ -	$ 8,578	$ -	$ 4,970	$ -	$ -	$ 13,548
Business HVAC+R Systems	$ -	$ 182,435	$ -	$ 84,104	$ -	$ -	$ 266,540
Custom Efficiency	$ -	$ 34,089	$ 50	$ 30,466	$ -	$ 400	$ 65,005
Energy Management Systems	$ -	$ 12,825	$ 500	$ 11,511	$ -	$ 500	$ 25,336
New Construction	$ -	$ 127,935	$ -	$ 360,317	$ -	$ 97,873	$ 586,125
Small Business Solutions	$ -	$ 37,000	$ 25,000	$ 119,717	$ -	$ 5,000	$ 186,717
General Advertising-Bus	$ -	$ 2,282	$ 79,700	$ -	$ -	$ -	$ 81,982
Business Program Total	**$ -**	**$ 405,144**	**$ 105,250**	**$ 611,085**	**$ -**	**$ 103,773**	**$ 1,225,252**
Residential Program							
Energy Efficient Showerhead	$ -	$ 229,297	$ 676	$ 109,422	$ -	$ -	$ 339,395
Energy Star New Homes	$ -	$ 613,837	$ 240,000	$ 1,770,053	$ -	$ 429,615	$ 3,053,505
Home Energy Insights	$ -	$ 692,365	$ -	$ -	$ -	$ -	$ 692,365
Home Energy Squad	$ -	$ 125,258	$ 140,000	$ 72,477	$ 156,412	$ 2,500	$ 496,647
Insulation & Air Sealing	$ -	$ 72,360	$ -	$ 92,029	$ -	$ 30,000	$ 194,389
Multifamily Buildings	$ -	$ 342,774	$ -	$ 528,167	$ -	$ -	$ 870,941
Residential Heating & Cooling	$ -	$ -	$ -	$ -	$ -	$ -	$ -
School Education Kits	$ -	$ 706,741	$ 297,040	$ 1,838,670	$ -	$ 20,000	$ 2,862,451
Whole Home Efficiency	$ -	$ 639,485	$ 2,500	$ 216,176	$ -	$ -	$ 858,161
General Advertising-Res	$ -	$ 9,540	$ 176,000	$ -	$ -	$ -	$ 185,540
Residential Program Total	**$ -**	**$ 3,457,369**	**$ 859,216**	**$ 4,981,937**	**$ 156,412**	**$ 492,123**	**$ 9,947,057**
Income Qualified Program							
Energy Savings Kit	$ -	$ 86,611	$ 44,000	$ 32,391	$ -	$ -	$ 163,002
Multifamily Weatherization	$ -	$ 98,465	$ 28,000	$ 516,949	$ -	$ 14,000	$ 657,414
Non-Profit	$ -	$ 66,976	$ 20,000	$ 332,259	$ -	$ 20,000	$ 439,235
Single-Family Weatherization	$ -	$ 180,924	$ 60,000	$ 4,102,072	$ -	$ 115,600	$ 4,458,596
Income Qualified Program Total	**$ -**	**$ 432,976**	**$ 152,000**	**$ 4,983,671**	**$ -**	**$ 149,600**	**$ 5,718,247**
Indirect Products & Services							
Education/Market Transformation							
Business Education	$ -	$ 10,000	$ 9,600	$ -	$ -	$ -	$ 19,600
Business Energy Analysis	$ -	$ 20,698	$ 17,000	$ 185,000	$ -	$ -	$ 222,698
Consumer Education	$ -	$ 23,000	$ 38,000	$ -	$ -	$ -	$ 61,000
Energy Benchmarking	$ -	$ 31,869	$ -	$ -	$ -	$ -	$ 31,869
Energy Efficiency Financing	$ -	$ 10,957	$ 15,000	$ 75,000	$ -	$ -	$ 100,957
Home Energy Audit	$ -	$ 251,170	$ 26,281	$ 262,807	$ -	$ 45,991	$ 586,249
Partners in Energy	$ -	$ 98,039	$ 2,650	$ -	$ -	$ -	$ 100,689
Education/Market Transformation Total	**$ -**	**$ 445,732**	**$ 108,531**	**$ 522,807**	**$ -**	**$ 45,991**	**$ 1,123,061**
Planning and Research							
EE Market Research	$ -	$ 178,429	$ -	$ -	$ -	$ -	$ 178,429
EE Evaluation, Measurement & Verification	$ -	$ 12,033	$ -	$ -	$ -	$ 129,487	$ 141,520
EE Planning & Administration	$ -	$ 12,404	$ -	$ -	$ -	$ -	$ 12,404
EE Product Development	$ -	$ 152,585	$ -	$ -	$ -	$ -	$ 152,585
EE Product Development Total	**$ -**	**$ 152,585**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 152,585**
EE Planning and Research Total	**$ -**	**$ 355,451**	**$ -**	**$ -**	**$ -**	**$ 129,487**	**$ 484,938**
EE Indirect Products & Services Total	**$ -**	**$ 801,183**	**$ 108,531**	**$ 522,807**	**$ -**	**$ 175,478**	**$ 1,607,999**
EE PORTFOLIO TOTAL	**$ -**	**$ 5,096,672**	**$ 1,224,997**	**$ 11,099,500**	**$ 156,412**	**$ 920,974**	**$ 18,498,555**

Table 9b: 2022 Gas Program Costs by Category (Actual Expenditures)

2022	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Business Program							
Business Energy Assessments	$ -	$ 58,626	$ -	$ 51,672	$ -	$ -	$ 110,297
Business HVAC+R Systems	$ -	$ 201,378	$ -	$ 281,197	$ -	$ 3,910	$ 486,484
Custom Efficiency	$ -	$ 30,808	$ -	$ 15,839	$ -	$ -	$ 46,647
Energy Management Systems	$ -	$ 7,769	$ -	$ 1,701	$ -	$ -	$ 9,470
New Construction	$ -	$ 386,557	$ -	$ 604,816	$ -	$ 69,437	$ 1,060,810
Small Business Solutions	$ -	$ 35,107	$ -	$ 3,987	$ -	$ 1,500	$ 40,594
General Advertising-Bus	$ -	$ 38,087	$ 40,507	$ -	$ -	$ -	$ 78,594
Business Program Total	**$ -**	**$ 758,331**	**$ 40,507**	**$ 959,212**	**$ -**	**$ 74,847**	**$ 1,832,897**
Residential Program							
Energy Efficient Showerhead	$ -	$ 155,570	$ 786	$ 19,855	$ -	$ -	$ 176,210
Energy Star New Homes	$ -	$ 499,504	$ 2,885	$ 1,823,320	$ -	$ 417,953	$ 2,743,662
Home Energy Insights	$ -	$ 88,860	$ -	$ -	$ -	$ -	$ 88,860
Home Energy Squad	$ -	$ 127,231	$ 49,007	$ 46,455	$ 115,402	$ -	$ 338,096
Insulation & Air Sealing	$ -	$ 34,745	$ -	$ 1,181,320	$ -	$ 2,625	$ 1,218,690
Multifamily Buildings	$ -	$ 29,048	$ -	$ 218,245	$ -	$ -	$ 247,293
Residential Heating & Cooling	$ -	$ 347,425	$ 48,996	$ 3,071,340	$ -	$ 11,500	$ 3,479,261
School Education Kits	$ -	$ 509,727	$ 824	$ 221,031	$ -	$ -	$ 731,582
Whole Home Efficiency	$ -	$ 48,907	$ -	$ 1,632	$ -	$ -	$ 50,539
General Advertising-Res	$ -	$ 134,389	$ 183,621	$ -	$ -	$ -	$ 318,010
Residential Program Total	**$ -**	**$ 1,975,405**	**$ 286,118**	**$ 6,583,198**	**$ 115,402**	**$ 432,078**	**$ 9,392,200**
Income Qualified Program							
Energy Savings Kit	$ -	$ 36,855	$ -	$ -	$ -	$ -	$ 36,855
Multifamily Weatherization	$ -	$ 83,766	$ 20,000	$ 1,144,141	$ -	$ 64,517	$ 1,312,423
Non-Profit	$ -	$ 129,630	$ 20,000	$ 237,783	$ -	$ 26,913	$ 414,326
Single-Family Weatherization	$ -	$ 276,464	$ -	$ 3,518,384	$ -	$ 194,594	$ 3,989,442
Income Qualified Program Total	**$ -**	**$ 526,715**	**$ 40,000**	**$ 4,900,307**	**$ -**	**$ 286,025**	**$ 5,753,047**
Indirect Products & Services							
Education/Market Transformation							
Business Education	$ -	$ 5,624	$ 8,797	$ -	$ -	$ -	$ 14,422
Business Energy Analysis	$ -	$ 4,629	$ -	$ 44,828	$ -	$ -	$ 49,457
Consumer Education	$ -	$ 57,877	$ 73,128	$ -	$ -	$ -	$ 131,005
Energy Benchmarking	$ -	$ 43,398	$ -	$ -	$ -	$ -	$ 43,398
Energy Efficiency Financing	$ -	$ 12,570	$ -	$ -	$ -	$ -	$ 12,570
Home Energy Audit	$ -	$ 181,561	$ -	$ 323,499	$ -	$ 39,705	$ 544,764
Partners in Energy	$ -	$ 107,937	$ 50	$ -	$ -	$ -	$ 107,987
Education/Market Transformation Total	**$ -**	**$ 413,596**	**$ 81,975**	**$ 368,327**	**$ -**	**$ 39,705**	**$ 903,602**
Planning and Research							
EE Market Research	$ -	$ 158,249	$ -	$ -	$ -	$ -	$ 158,249
EE Evaluation, Measurement & Verification	$ -	$ 11,149	$ -	$ -	$ -	$ 236,247	$ 247,396
EE Planning & Administration	$ -	$ 168,336	$ -	$ -	$ -	$ -	$ 168,336
EE Product Development	$ -	$ 160,359	$ -	$ 17,270	$ -	$ -	$ 177,629
EE Product Development Total	**$ -**	**$ 160,359**	**$ -**	**$ 17,270**	**$ -**	**$ -**	**$ 177,629**
EE Planning and Research Total	**$ -**	**$ 498,093**	**$ -**	**$ 17,270**	**$ -**	**$ 236,247**	**$ 751,610**
EE Indirect Products & Services Total	**$ -**	**$ 911,689**	**$ 81,975**	**$ 385,597**	**$ -**	**$ 275,952**	**$ 1,655,213**
EE PORTFOLIO TOTAL	**$ -**	**$ 4,172,140**	**$ 448,600**	**$ 12,828,314**	**$ 115,402**	**$ 1,068,901**	**$ 18,633,357**

Participation Analysis

Decision No. C14-0731 within the 2013 DSM Strategic Issues Proceeding[7] 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."[8] 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."[9]

2022 Participation

Participant counts have been reported at the customer level (rather than at the premise level as had been forecasted in the 2014 DSM Plan) for each electric DSM product and by customer class, as well as the portfolio total counts for the 2022 calendar year. These values are shown in Tables 10a, 10b, 10c and 10d.

Historical Participation Analysis

The Company believes a thorough analysis of participants and non-participants must go beyond a counting of participation each year. It must also consider the amount of cumulative consumption savings realized by individual customers each year, due to the participation in electric DSM programs over several program years. To this end, the Company has identified the estimated percentages of business and residential customers by their range of consumption savings attributable to DSM participation since the expansion of the DSM programs in 2009. The extent of individual participation is further compared to the cumulative rate impacts of the DSM program since 2009. The combination of these factors results in identification of the level and distribution of bill savings among business and residential customers. This data is shown in Table 10e, 10f, and 10g.

[7] Proceeding No. 13A-0686EG.
[8] *See* Decision No. C14-0731 at ¶115.
[9] *See* Decision No. C14-0997 at ¶24.

Table 10a: 2022 Electric Participation, Percentage of Total by Customer Class

	Total Unique DSM Participants (Estimate)[10]		Total PSCo Customers[11]		PSCo Customers Participating in DSM		PSCo Customers Not Participating in DSM	
Electric	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
2022 Total	1,331,310		1,453,670		1,331,310	91.58%	122,360	8.42%
Bus	13,720	1.03%	104,491	7.19%	13,720	13.13%	90,771	86.87%
Res	1,317,590	98.97%	1,349,179	92.81%	1,317,590	97.66%	31,589	2.34%

Table 10b: 2022 Gas Participation, Percentage of Total by Customer Class

	Total Unique DSM Participants (Estimate)[12]		Total DSM-Eligible PSCo Customers		PSCo Customers Participating in DSM		PSCo Customers Not Participating in DSM	
Gas	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
2022 Total	511,606		1,465,912		511,606	34.90%	954,306	65.10%
Bus	877	0.17%	102,648	7.00%	877	0.85%	101,771	99.15%
Res	510,729	99.83%	1,363,264	93.00%	510,729	37.46%	852,535	62.54%

[10] Participation by DSM product is shown in Table 10c below. Total estimated participation is the sum of DSM product participation estimates less the number of duplicates (participation in multiple products).
[11] Customer count as of 12/31/2022.
[12] Participation by DSM product is shown in Table 10c below. Total estimated participation is the sum of DSM product participation estimates less the number of duplicates (participation in multiple products).

Table 10c: 2022 Electric Participation, Average Rebate and Savings

Product	2022 Participants	Average Rebate per Customer	Average kWh Savings per Customer
Business Program			
Business Energy Assessments	204	$15,219.83	128,749
Business HVAC+R Systems	1,931	$1,210.65	5,798
Compressed Air Efficiency	43	$3,884.07	33,183
Custom Efficiency	33	$2,141.73	23,959
Data Center Efficiency	1	$288,028.00	5,009,810
Energy Management Systems	4	$27,634.00	231,906
Lighting Efficiency	1,920	$3,960.61	41,397
New Construction	151	$56,708.15	411,673
Self Direct	2	$60,541.50	847,563
Small Business Solutions	6,908	$531.81	4,998
Strategic Energy Management	66	$93,816.04	1,062,979
Residential Program			
Energy Efficient Showerhead	2,010	$3.18	211
Home Energy Insights	485,518	$0.00	41
ENERGY STAR New Homes	3,244	$281.21	1,100
Home Energy Squad	2,401	$69.30	807
Home Lighting & Recycling	277,847	$23.91	344
Insulation & Air Sealing	2,069	$345.54	270
Multifamily Buildings	207	$3,776.80	27,082
Refrigerator & Freezer Recycling	5,075	$59.73	613
Residential Heating & Cooling	25,411	$182.05	221
School Education Kits	57,347	$27.35	264
Whole Home Efficiency	2	$302.08	370
Income Qualified Program			
Energy Savings Kit	832	$103.34	348
Multifamily Weatherization	27	$33,817.27	53,325
Non-Profit	42	$22,542.33	40,647
Single-Family Weatherization	1,261	$1,246.80	21,046
Indirect Products & Services			
Business Education	1,839	$0.00	0
Business Energy Analysis	178	$0.00	0
Consumer Education	28,330	$0.00	0
Energy Efficiency Financing	9	$0.00	0
Home Energy Audit	1,951	$0.00	0
Demand Response Program			
Residential Demand Response	14,405	N/A	4
Small Commercial Building Controls	225	$0.00	34

Table 10d: 2022 Natural Gas Participation

Product	2022 Participants	Average Rebate Per Customer	Average Dth Savings Per Customer
Business Program			
Business Energy Assessments	145	$356.36	12.5
Business HVAC+R Systems	82	$3,429.23	198.7
Custom Efficiency	3	$5,279.67	236.7
Energy Management Systems	1	$1,701.00	382.7
New Construction	57	$10,610.81	2303.4
Small Business Solutions	589	$6.77	2.6
Residential Program			
Energy Efficient Showerhead	11,453	$1.73	2.3
ENERGY STAR New Homes	6,033	$302.22	16.6
Home Energy Insights	423,697	$0.00	0.2
Home Energy Squad	2,043	$22.74	4.0
Insulation & Air Sealing	2,294	$514.96	25.1
Multifamily Buildings	120	$1,818.71	18.8
Residential Heating & Cooling	12,053	$254.82	14.7
School Education Kits	49,986	$4.42	1.4
Whole Home Efficiency	3	$544.01	55.9
Income Qualified Program			
Energy Savings Kit	982	$0.00	1.9
Multifamily Weatherization	16	$71,508.80	427.6
Non-Profit	17	$13,987.21	96.6
Single-Family Weatherization	2,032	$1,731.49	70.4
Indirect Products & Services			
Business Education	281	$0.00	0.0
Business Energy Analysis	142	$315.69	0.0
Consumer Education	8,905	$0.00	0.0
Energy Efficiency Financing	11	$0.00	0.0
Home Energy Audit	2,450	$132.04	0.0

Table 10e: Estimated Customer Consumption Savings Range, 2009-2022

Year	Total Non-Participants		DSM Participants Saving 1-2% of Annual Electric Consumption		DSM Participants Savings 3-5% of Annual Electric Consumption		DSM Participants Saving 6-10% of Annual Electric Consumption		DSM Participants Saving 11-25% of Annual Electric Consumption		DSM Participants Saving More than 25% of Annual Electric Consumption	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
2009												
BUS	95,264	98.22%	583	0.60%	325	0.34%	225	0.23%	418	0.43%	175	0.18%
RES	1,002,895	83.78%	46,664	3.90%	49,289	4.12%	64,964	5.43%	29,559	2.47%	3,660	0.31%
2010												
BUS	93,700	96.61%	1,063	1.10%	574	0.59%	501	0.52%	627	0.65%	524	0.54%
RES	841,077	70.26%	75,558	6.31%	67,823	5.67%	121,557	10.15%	80,156	6.70%	10,859	0.91%
2011												
BUS	90,922	93.74%	1,703	1.76%	1,117	1.15%	996	1.03%	1,374	1.42%	878	0.91%
RES	521,924	43.60%	68,964	5.76%	116,415	9.73%	237,175	19.81%	214,875	17.95%	37,678	3.15%
2012												
BUS	86,193	88.87%	2,319	2.39%	1,749	1.80%	1,689	1.74%	2,861	2.95%	2,179	2.25%
RES	481,788	40.25%	78,694	6.57%	133,753	11.17%	245,966	20.55%	217,324	18.16%	39,507	3.30%
2013												
BUS	83,530	86.12%	2,570	2.65%	2.177	2.24%	2,295	2.37%	3,612	3.72%	2,805	2.89%
RES	352,847	29.48%	73,693	6.16%	153,450	12.82%	276,372	23.09%	282,966	23.64%	57,704	4.82%
2014												
BUS	80,168	82.66%	3,008	3.10%	2,755	2.84%	2,828	2.92%	4,510	4.65%	3,721	3.84%
RES	237,454	19.84%	57,010	4.76%	178,786	14.94%	303,588	25.36%	343,422	28.69%	76,770	6.41%
2015												
BUS	71,425	73.28%	8,894	9.13%	4,010	4.11%	3,559	3.65%	5,479	5.62%	4,098	4.20%
RES	108,652	8.96%	100,007	8.24%	200,298	16.51%	322,245	26.57%	389,218	32.09%	92,540	7.63%
2016												
BUS	70,516	65.57%	13,556	12.61%	5,818	5.41%	4,935	4.59%	6,724	6.25%	5,991	5.57%
RES	89,486	7.27%	86,136	7.00%	181,845	14.78%	319,593	25.98%	437,535	33.56%	115,671	9.40%
2017												
BUS	59,747	59.86%	17,726	17.76%	7,036	7.05%	5,041	5.05%	5,964	5.98%	4,291	4.30%
RES	57,396	4.60%	67,535	5.42%	165,542	13.28%	314,079	25.19%	490,044	39.31%	152,172	12.21%
2018												
BUS	77,235	76.76%	4,486	4.46%	3,239	3.22%	3,553	3.53%	6,176	6.14%	5,927	5.89%
RES	93,872	7.42%	48,752	3.85%	48,413	3.82%	130,464	10.31%	556,567	43.97%	387,717	30.63%
2019												
BUS	74,360	74.04%	4,692	4.67%	3,411	3.40%	3,943	3.93%	6,931	6.90%	7,093	7.06%
RES	231,177	17.96%	94,684	7.36%	197,276	15.33%	285,957	22.22%	377,736	29.35%	100,055	7.77%
2020												
BUS	82,501	74.44%	4,567	4.12%	3,511	3.17%	4,096	3.70%	7,403	6.68%	8,751	7.90%
RES	121,513	9.04%	79,136	5.89%	160,040	11.91%	308,804	22.98%	495,187	36.85%	179,039	13.32%
2021												
BUS	74,719	71.76%	4,702	4.52%	3,510	3.37%	4,226	4.06%	7,926	7.61%	9,043	8.69%
RES	112,967	8.57%	168,578	12.79%	225,368	17.10%	302,518	22.95%	395,428	30.00%	113,292	8.59%
2022												
BUS	71,034	67.98%	5,079	4.86%	3,888	3.72%	4,543	4.35%	8,853	8.47%	11,094	10.62%
RES	48,022	3.56%	70,318	5.21%	176,838	13.11%	367,874	27.27%	528,555	39.18%	157,571	11.68%

Table 10f: Estimated Cumulative Rate Impact, 2009-2022

Year	Cumulative Electric Rate Impact						
	DSM Cost Recovery	System Benefits	Lost Revenue	Rate Imbalance (Increase)	Rate Impact (Increase)	Total Revenue	% Rate Increase
2009	$31.8M	$16.7M	$10.4M	-$6.2M	$25.5M	$2,216M	1.151%
2010	$42.2M	$32.3M	$22.4M	-$9.9M	$32.4M	$2,614M	1.238%
2011	$51.7M	$48.0M	$36.0M	-$12.0M	$39.7M	$2,673M	1.486%
2012	$67.1M	$71.2M	$62.7M	-$8.4M	$58.7M	$2,604M	2.255%
2013	$63.5M	$92.7M	$87.7M	-$4.9M	$58.6M	$2,793M	2.097%
2014	$65.1M	$108.8M	$109.2M	$0.3M	$65.5M	$2,865M	2.285%
2015	$74.7M	$131.2M	$141.5M	$10.4M	$85.1M	$2,767M	3.075%
2016	$72.2M	$147.9M	$179.6M	$31.7M	$104.0M	$2,737M	3.798%
2017	$88.3M	$166.9M	$219.8M	$52.9M	$141.2M	$2,735M	5.161%
2018	$92.0M	$171.3M	$241.6M	$70.2M	$162.2M	$2,674M	6.066%
2019	$94.7M	$176.8M	$265.3M	$88.4M	$183.1M	$3,033M	6.037%
2020	$89.9M	$181.7M	$276.3M	$89.9M	$184.6M	$2,803M	6.586%
2021	$92.2M	$193.9M	$292.2M	$98.3M	$190.5M	$3,049M	6.247%
2022	$101.8M	$204.6M	$325.3M	$120.7M	$222.6M	$3,364M	6.615%

Table 10g: Estimated Customer Bill Savings Range, 2009-2022

Year	Customers >1% Bill Increase		Customers 0-1% Bill Increase		Customers 0-2% Bill Savings		Customers 3-5% Bill Savings		Customers 6-15% Bill Savings		Customers more than 15% Bill Savings	
	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
2009												
BUS	95,395	98.36%	318	0.33%	257	0.26%	261	0.27%	471	0.49%	288	0.30%
RES	1,003,343	83.82%	39,099	3.27%	21,072	1.76%	54,960	4.57%	67,954	5.68%	10,858	0.91%
2010												
BUS	93,931	96.85%	598	0.62%	489	0.50%	461	0.48%	726	0.75%	783	0.81%
RES	845,554	70.64%	61,787	5.16%	29,019	2.42%	82,581	6.90%	143,759	12.01%	34,322	2.87%
2011												
BUS	91,583	94.43%	792	0.82%	858	0.88%	870	0.90%	1,438	1.48%	1,449	1.49%
RES	703,376	58.76%	40,082	3.35%	38,547	3.22%	117,868	9.85%	228,185	19.06%	68,950	5.76%
2012												
BUS	87,971	90.70%	717	0.74%	1,257	1.30%	1,179	1.22%	2,521	2.60%	3,344	3.45%
RES	547,524	45.74%	17,512	1.46%	80,617	6.73%	167,317	13.98%	282,157	23.57%	101,883	8.51%
2013												
BUS	85,209	87.85%	933	0.96%	1,493	1.54%	1,686	1.74%	3,306	3.41%	4,364	4.50%
RES	403,710	33.73%	24,509	2.05%	91,003	7.60%	181,822	15.19%	348,137	29.08%	147,819	12.35%
2014												
BUS	82,680	85.25%	1,075	1.11%	1,808	1.86%	1,857	1.91%	4,006	4.13%	5,562	5.73%
RES	277,559	23.19%	25,085	2.10%	112,873	9.43%	201,714	16.85%	390,844	32.65%	188,918	15.78%
2015												
BUS	80,969	83.08%	1,521	1.56%	2,172	2.23%	2,283	2.34%	4,415	4.53%	6,103	6.26%
RES	207,475	17.10%	58,120	4.79%	137,772	11.36%	202,860	16.72%	400,288	33.00%	206,445	17.02%
2016												
BUS	86,851	80.74%	1,851	1.72%	2,571	2.39%	2,797	2.60%	5,475	5.09%	8,030	7.46%
RES	186,063	15.12%	57,925	4.71%	153,439	12.47%	190,010	15.44%	407,093	33.09%	235,735	19.16%
2017												
BUS	84,195	84.36%	1,376	1.38%	2,297	2.30%	2,198	2.20%	4,105	4.11%	5,634	5.65%
RES	218,438	17.52%	57,038	4.57%	121,930	9.78%	172,829	13.86%	397,034	31.85%	279,499	22.42%
2018												
BUS	86,655	86.12%	723	0.72%	1,344	1.34%	1,584	1.57%	3,869	3.85%	6,442	6.40%
RES	187,648	14.82%	15,873	1.25%	42,291	3.34%	91,058	7.19%	372,458	29.43%	556,459	43.96%
2019												
BUS	84,822	84.46%	894	0.89%	1,520	1.51%	1,820	1.81%	4,272	4.25%	7,102	7.07%
RES	507,233	39.42%	59,108	4.59%	113,103	8.79%	149,236	11.60%	289,604	22.50%	168,602	13.10%
2020												
BUS	93,253	84.14%	846	0.76%	1,534	1.38%	2,060	1.86%	4,500	4.06%	8,637	7.79%
RES	374,899	27.90%	56,518	4.21%	118,131	8.79%	170,277	12.67%	360,397	26.82%	263,497	19.61%
2021												
BUS	86,452	83.03%	884	0.85%	1,534	1.47%	2,010	1.93%	4,835	4.64%	8,409	8.08%
RES	502,826	38.15%	62,317	4.73%	118,757	9.01%	154,764	11.74%	297,346	22.56%	182,142	13.82%
2022												
BUS	84,453	80.82%	926	0.89%	1,719	1.65%	2,230	2.13%	5,247	5.02%	9,916	9.49%
RES	314,612	23.32%	70,640	5.24%	142,944	10.59%	191,988	14.23%	384,064	28.47%	244,931	18.15%

Compliance

Table 11a: 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, 2023.
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 - 7 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 2022.	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 1/1/2021-12/31/2022, unless amended via 60-Day Notice during 2022.

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. 20-0287EG were used to calculate prescriptive product achievements for 1/1/2021-12/31/2022, unless amended via 60-Day Notice during 2022.
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	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: • 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, 2023.
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	The Company extended the Heat Savers Mode Pilot that was discussed during the DSM Roundtable on 2/9/2022. No other new pilots were proposed in 60-Day Notices in 2022.
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, 2023.
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 $93.6million 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 $85.1million on its Energy Efficiency Program in 2022.
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 477 GWh of savings in 2022 representing 1.7% 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 $4.4 million on its Low-Income electric energy efficiency program in 2022.
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 2022.
27	The Settling Parties agree that the Company will offer the following core services as part of its 2019-2023 DSM plans: • 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 2022.

28	The Company will periodically evaluate opportunities to increase IQ budgets with EOC during the 2021-2022 DSM Plan cycle in response to changing market conditions.	Proceeding No. 20A-0287EG, Settlement Agreement, Item II, page 3.	---	The Company continued to evaluate opportunities to increase IQ budgets with EOC in 2022. The IQ Beneficial Electrification Pilot discussed in Item 33 below resulted in a total IQ budget increase of approximately $883,000 in 2022. The pilot has been proposed to continue in 2023 with an estimated budget of $1.2 million.
29	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.	In 2022, 70 customers who had been in arrears at least once during the year participated in the Single-Family Weatherization product.
30	The Company shall implement an IQ Beneficial Electrification Pilot through a 60-Day Notice in 2021.	Proceeding No. 20A-0287EG, Settlement Agreement, Item II, page 4.	See Income Qualified Program section.	The Company issued a 60-Day Notice on November 30, 2021 for a new Income-Qualified Beneficial Electrification Pilot. The pilot was implemented January 17, 2022.
31	The Company shall allow commercial Beneficial Electrification projects through the Custom Efficiency product.	Proceeding No. 20A-0287EG, Settlement Agreement, Item III, page 5.	---	Ongoing.

32	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 2022.
33	The Settling Parties agree that equipment that provides gas savings through Beneficial Electrification may also provide additional electric savings over baseline-efficiency electric equipment. The Settling Parties further agree that any dekatherm or kilowatt-hour savings may be counted towards the Company's savings achievements used to calculate its performance incentive. The Settling Parties agree that any net economic benefits or costs associated with fuel switching will be excluded from the performance incentive calculation for the period of this DSM Plan in order to provide time for the Company and parties to evaluate the net benefits corresponding to these new measures.	Proceeding No. 20A-0287EG, Settlement Agreement, Item III, page 6.	See Financial Incentive Calculations	The Company claimed kilowatt-hour savings resulting from its Beneficial Electrification offerings towards its energy savings in 2022; however, net economic costs were excluded from the Company's performance incentive calculation.
34	The Company shall solicit engagement from interested stakeholders and implement a DR working group in 2021 that will discuss various topics, including but not limited to: (1) challenges to broader adoption of DR offerings; and (2) opportunities to enhance DR offerings to achieve greater peak load reduction for all customer classes, including integrated EE-DR product concepts raised in this Proceeding, focusing on the residential class. The objective of the DR working group will be to examine the effectiveness of current products and determine the feasibility and benefits of launching one or more residential DR pilots in 2022.	Proceeding No. 20A-0287EG, Settlement Agreement, Item IV, page 6.	---	The Company's Product Development group continued evaluation of several suggestions during 2022, but none were ready to move to a pilot stage.

35	The Settling Parties agree that a near-term opportunity to enhance DR offerings to achieve greater peak load reduction for all customer classes is to increase the maximum annual Measured Demands for customers eligible to take service under the Company's Critical Peak Pricing ("CPP") service option pilot tariff from 30 MW to 65 MW. To accomplish this, the Settling Parties agree to include in the Motion to Approve Settlement Agreement a motion for variance from Public Service's CPP Pilot tariff pages, which the Settling Parties agree to either support or not oppose. Further, the Settling Parties agree that it is reasonable for the Company to file a stand-alone Advice Letter in 2021 with testimony and analysis supporting its request to expand and make the CPP offering a permanent offering. The Settling Parties reserve their right to take any position in that Advice Letter filing.	Proceeding No. 20A-0287EG, Settlement Agreement, Item IV, page 6.	See Critical Peak Pricing Write Up included in the Demand Response Program section	The Company issued Advice Letter 21AL-0091E which went into effect by operation of law on April 30, 2021.
36	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.	Proceeding No. 20A-0287EG, Settlement Agreement, Item VI.	See Strategic Energy Management Write Up included in the Business Program section	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.

37	The Company shall promote the Electric Vehicle-CPP ("EV-CPP") product to eligible entities serving IQ customers.	Proceeding No. 20A-0287EG, Settlement Agreement, Item VII, page 9.	See Electric Vehicle Critical Peak Pricing Write Up included in the Demand Response Program section	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.
38	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.	Proceeding No. 20A-0287EG, Settlement Agreement, Item VIII.	---	The Company selected Guidehouse to evaluate its Codes & Standards support offering. The evaluation findings are being finalized and will be included in a 60-day notice and/or the upcoming DSM plan.

39	The Company shall evaluate a duct sealing rebate for potential addition to the DSM Plan through a 60-Day Notice and discuss findings through the quarterly DSM Roundtable beginning in 2021.	Proceeding No. 20A-0287EG, Settlement Agreement, Item IX.	---	The Company presented preliminary findings from its evaluation of an AeroSeal® offering during the DSM Roundtable on August 11, 2021. The Company is waiting on additional performance data from the vendor to continue its evaluation. The Company is currently working with representatives from AeroSeal to review cost and savings estimates to determine the viability of an advanced duct sealing rebate. The Company will report on its progress at a future roundtable in 2023.
40	The Company shall work with smart thermostats manufacturers to identify additional products compatible with the DR portfolio and eligible for inclusion in DSM offerings.	Proceeding No. 20A-0287EG, Settlement Agreement, Item IX.	See Residential Demand Response Write Up included in the Demand Response Program section	In 2022, 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.

41	The Company shall evaluate the potential for a targeted heat pump installation demonstration project within an all-electric neighborhood in 2021.	Proceeding No. 20A-0287EG, Settlement Agreement, Item IX.	See Energy Star New Homes Write Up included in the Residential Program section	During 2022, some builders did ask for analyses to compare the relative cost of all-electric building versus conventionally fueled building, but those builders did not follow up with the Company even after persistent outreach.
42	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.	See Residential Heating & Cooling Write Up included in the Residential Program section	The Company reported on Quality Installation guidelines for heat pump installations during the DSM Roundtable on 8/11/2021, 11/10/2021, and 2/9/2022. The Company is working with its vendor for Quality Installation inspections, and currently intends to inspect heat pumps as part of its QI inspections in 2023. Additional data points will be collected in 2023 for heat pump QI, but currently this is just for information gathering. The Company will review the results of this analysis and consider incorporating additional components for QI savings for heat pumps in the 2024-2025 biennial filing.

43	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 2022.
44	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 2022.
45	The Company shall evaluate a Commercial Battery DR offering and update Stakeholders through the quarterly DSM Roundtable beginning in 2021.	Proceeding No. 20A-0287EG, Settlement Agreement, Item XI.	---	The Company reported on commercial Solar + Storage opportunities in the DSM Roundtable on May 12, 2021. The Company anticipates launching a battery DR product in 2023 which will be open to residential and small business customers. The Company will monitor the success of that product and continue to provide updates regarding battery DR offerings through its Roundtables.

46	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 improved response times for customer inquiries and corrected any data discrepancies in a timely manner for Company customers.
47	The Company shall include data reporting concerning: (1) DSM program participation as agreed to in the 2017 DSM Strategic Issues Settlement Agreement approved in Proceeding No. 17A-0462EG (to the extent there are no conflicts with the Commission's data privacy rules), which will include EV Optimization and EV-CPP participation and more granular DR participation by product; and (2) TOU usage data for Residential and Small Commercial customers when technologically available, to the extent there are no conflicts with the Commission's data privacy rules.	Proceeding No. 20A-0287EG, Settlement Agreement, Item XIII.	---	The Company will include all data identified in requirement (1) in its 2022 Community Energy Reports. Data identified in requirement (2) is dependent on full Advanced Metering Infrastructure roll-out and is unavailable at this time.
48	The Company shall market DSM opportunities bi-annually as agreed to in Proceeding No. 18A-0606EG. The Company shall offer to conduct audits for customers in its service territory beginning in 2021.	Proceeding No. 20A-0287EG, Settlement Agreement, Item XIV.	---	2022 activities described in footnote.[13]
49	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 evaluated streamlined weatherization upgrades and pay-per-performance incentive levels in 2021 and discussed findings with stakeholders during the DSM Roundtable on 8/11/2021, 11/10/2021, and 2/9/2022. The Company filed the pay-per-performance model as an option in the Whole Home Efficiency program in the 2023 DSM plan filing.

50	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 stakeholder discussions in 2021 and filed an informational notice summarizing the outcome of those discussions on March 7, 2022. The Company's 2022 Strategic Issues Filing (22A-0309EG) included policy recommendations that would support development of an on-bill program. The Commission's determination in that proceeding is expected to shape a future proposal of an on-bill financing offering.
51	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 Quarter 2 and were discussed in each of the 2022 DSM Roundtables.

[13] The product team, comprising the Agricultural Energy Efficiency (AgEE) program manager, the Company's product manager, and marketing consultant and the AgEE's audit vendor continued to meet monthly to discuss program updates and marketing opportunities in 2022. Additional outreach support efforts included conducting audits for eligible customers by working through the CEO's audit vendor in 2022. A June 2022 marketing campaign planning effort was underway to coincide with the program year's launch when the Colorado Energy Office (CEO) indicated that the AgEE program was no longer operational.

Table 11b: Reporting Requirements and Compliance Natural Gas

Item #	Compliance Point – Description	Statute / Rule / Proceeding Reference	Status Report Reference	Comments
	NATURAL GAS			
1	Beginning April 1, 2010 and each April 1st thereafter, each utility shall submit its annual DSM report, application for bonus and DSMCA filing.	Rule 4752(b); Rule 4754(f); Rule 4760	---	Report filed April 1, 2023.
2	The utility's annual expenditure target for DSM programs shall be, at a minimum, two percent of a natural gas utility's base rate revenues, (exclusive of commodity costs), from its sales customers in the 12-month calendar period prior to setting the targets, or one-half of one percent of total revenues from its sales customers in the 12-month calendar period prior to setting the targets, whichever is greater.	Rule 4753(h)(I)	---	PSCo spent a total of $18.6 million on its natural gas DSM programs. This surpassed the statutory expenditure targets – $8.5 million (2% of gas base rate revenues), and $5.8 million (0.5% of total gas revenues).
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, participation levels and cost-effectiveness.	Rule 4754(a)	See 2022 Status Report	---
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	---
5	For each DSM program, the utility shall compare the program's proposed and actual expenditures, savings, participation rate, 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)	See 2022 Status Report	---

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	---
8	The utility may file an application for bonus, pursuant to rule 4760. The application for bonus shall include the utility's calculation of estimated bonus applying the methodology set forth in this rule to the utility's actual performance.	Rule 4754(f)	See Financial Incentive Calculations	Included within Report filed April 1, 2023.
9	Acknowledgment of Lost Revenues (ALR) - Separate from any bonus determined by the Commission, the Commission may authorize a utility to recover a calculated amount of revenue that acknowledges that an effective DSM program reduced the utility's revenue. The amount shall be calculated as set forth in Rule 4754(g)(I)(A)-(E)	Rule 4754(g)	See Financial Incentive Calculations	Included within Report filed April 1, 2023.
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 $5.7 million on its Low-Income gas energy efficiency program in 2022.

11	The budget for the natural gas DSM programs in Decision No. C18-0417 in Proceeding No. 17A-0462EG was $12 million annually. The Company forecasts to spend $14.8 million in 2019 and $14.9 million in 2020. The Settling parties agree to these budgets in excess of $12 million because the proposed budgets are consistent with Commission Rule 4753(k), which states "a utility may spend more than the annual expenditure target established by the Commission up to twenty-five percent over the target, without being required to submit a proposed DSM plan amendment."	Proceeding No. 18A-0606EG, Settlement Agreement, Para. III(C)	---	See Item 12 below.
12	As noted above, the Settlement Agreement proposes budgets for the gas DSM programs of $18,499,094 in 2021, and $18,498,555 in 2022. In the preceding Strategic Issues Proceeding, the Commission approved a budget of $12 million for natural gas DSM. Rule 4753(k) permits PSCo to spend up to 25 percent over that amount without being required to submit a proposed DSM plan amendment, for a total of $15 million. Because the budgets for gas DSM agreed to the Settlement Agreement exceeds $15 million, PSCo requested a variance from Rule 4753(k). Decision No. R21-0081 approved the Settlement Agreement and all variances without modification. The Company commits to adhering to an annual natural gas budget limit of $18.5 million for the duration of the 2021-2022 DSM Plan.	Proceeding No. 20A-0287EG Decision No. R21-0081, Para. 47-49 Proceeding No. 20A-0287EG, Settlement Agreement, Item I.	See Table 6b in Executive Summary	Natural gas DSM expenditures in 2022 totaled $18.6 million. Expenditures in 2021 were $17.6 million, resulting in total expenditures of $36.1 million, or an annual average of $18.05 million over the two years.

13	The Settling Parties agree that equipment that provides gas savings through Beneficial Electrification may also provide additional electric savings over baseline-efficiency electric equipment. The Settling Parties further agree that any dekatherm or kilowatt-hour savings may be counted towards the Company's savings achievements used to calculate its performance incentive. The Settling Parties agree that any net economic benefits or costs associated with fuel switching will be excluded from the performance incentive calculation for the period of this DSM Plan in order to provide time for the Company and parties to evaluate the net benefits corresponding to these new measures.	Proceeding No. 20A-0287EG, Settlement Agreement, Item III, page 6.	See Financial Incentive Calculations	The Company claimed dekatherm savings resulting from its Beneficial Electrification offerings towards its energy savings in 2022; however, net economic costs were excluded from the Company's performance incentive calculation.

Financial Incentive Calculations

Electric Financial Incentive: Summary

Table 12 below summarizes the Company's Financial Incentive for electric energy efficiency based upon the Company's achievement of 477 GWh and net benefits of $101,292,512 in 2022. The performance goal and incentive structure for 2022 were established in Proceeding No. 17A-0462EG.

Table 12: Summary of 2022 Electric Incentive

	Amount
Disincentive Offset	$1,500,000
Performance Incentive	$16,500,000
Total	**$18,000,000**

Disincentive Offset

A Disincentive Offset of $1.5 million is awarded because the Company achieved over 80 percent 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 2022 Plan year is 40 percent of net economic benefits[14] 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 2022 performance year. The full calculation of the Company's financial incentive for electric DSM is shown in Table 13 below.

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

Table 13: Public Service 2022 Electric DSM Incentive

Disincentive Offset (Grossed-up for Income Taxes)	**$1,500,000**
Performance Incentive Calculation	
Approved 2022 kWh Goal	500,000,000
kWh from YE Achievements	476,676,207
Net Economic Benefits from YE Achievements (Excluding NEB Adder + SCC)	**$101,272,512**
Net Economic Benefits Adjustments	
Total Low-Income Allowance	$832,090
Total Market Transformation Allowance from YE Achieve.	$3,276,683
Total Beneficial Electrification Allowance	$1,110,836
FINAL Net Benefits from YE Achievements	**$106,512,120**
% of Net Benefits Eligible for Incentive (Achievement over 280 GWh)	41.3%
% of Eligible Net Benefits Awarded	40%
Performance Incentive	**$17,578,725**
Total Incentive: Disincentive Offset Total + Performance Incentive	$19,078,725
Incentive Cap (Hard Cap of $18,000,000)	$18,000,000
Total 2022 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 723-4-4754 ("Rule 4754"). 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 the same twelve-month period as set forth in Rule 4752(d). (See Rule 4754(g)(I)(D)).

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 percent of expenditure, or 20 percent of net benefits, whichever is less. In 2022, net benefits from gas DSM achievements exceeded $41 million, resulting in the operative incentive cap being the 25 percent of expenditures. However, actual natural gas DSM spending exceeded the authorized budget by $134,802. The Company has thus calculated the incentive using 25 percent of the budget rather than actual expenditure to establish the cap, in order to ensure that it is not rewarded for exceeding the budget. On this basis, the natural gas incentive is calculated to be $4,624,639 which is equal to the 25 percent of the approved budget of $18,498,555. In addition, the Company is filing for an acknowledgement of lost revenues associated with natural gas DSM programs of $1,747,041 for a total award of $6,371,680. The full calculation of Public Service's 2022 Natural Gas Incentive is detailed in Table 14 below.

Table 14: Public Service 2022 Natural Gas Bonus and Acknowledgement of Lost Revenue

Approved Energy Target (Goal)[15]	799,708	Dekatherm per year		
Energy Target Achieved - YE Forecast	841,127	Dekatherm per year		
Percent of Energy Target Achieved	105.2%			
			Dth	**Spend**
Approved Savings Target	43,231	Dekatherm per $1M	799,708	$18,498,555
Savings Target Achieved - Portfolio Total	45,216	Dekatherm per $1M	841,127	$18,633,357
Savings Target Achieved - Low-Income Program Adjustments				
Energy Savings Kit			1,847	$36,855
Multi-Family Weatherization			6,842	$1,312,423
Non-Profit Energy Efficiency			1,643	$414,326
Single-Family Weatherization			142,970	$3,989,442
Total Savings Target Achieved - Low-Income Program Adjustments	26,791	Dekatherm per $1M	153,301	$5,722,047
Savings Target Achieved - Adjusted*	53,401	Dekatherm per $1M	687,825	$12,880,310
Total DSM Expenditures	$18,498,555			
Energy Factor	12.5%			
Savings Factor	1.235260035			
Percent of Net Benefits Awarded	15.4%	= Energy Factor * Savings Factor		
Net Economic Benefits Achieved	$38,635,427			
Net Economic Benefits Adjustments				
Energy Savings Kit	$-			
Multi-Family Weatherization	$503,432			
Non-Profit Energy Efficiency	$197,970			
Single-Family Weatherization	$-			
Low-Income Allowance from Plan	$701,402			
Beneficial Electrification Allowance	$1,682,764			
FINAL Net Economic Benefits Achieved	$41,019,593			
Incentive Cap	$4,624,639	= less of 20% of net economic benefits or 25% of expenditures		
Total 2022 Proposed Gas Financial Incentive Pre-Tax	**$4,624,639**			
Business/Residential Allocation				
Business Actual Savings (Dth)	152,019	18%		
Residential & Low-Income Actual Savings (Dth)	689,107	82%		
Total Savings	**841,127**	100%		
Allocated Bonus				
Business	$835,823			
Residential & Low Income	$3,788,815			
Total	**$4,62,639**			
Acknowledgement of Lost Revenue [ALR] Calculation:				
Dollar Value Per Therm				
Business (Non-residential)	$0.16333			
Residential	$0.21749			
12-Month Therm Reduction Impact From 2022 Programs				
Business (Non-residential)	1,520,190			
Residential	6,891,075			
ALR Totals				
Business (Non-residential)	$248,290			
Residential	$1,498,752			
Total ALR	**$1,747,041**			
Total Gas Bonus and ALR	**$6,371,680**			

[15] The 2022 Natural Gas savings goal set in Proceeding No. 20A-0287EG pursuant to Decision No. R12-1204-1 in Proceeding No. 13A-0773EG.

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 2022, the electric products in the Company's Business Program achieved 85 percent 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 15a below.

Table 15a: Business Program – Electric DSM Products (Target to Actual)

	Budgets / Targets					Expenditures / Achievements				
Business Program - 2022	**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	$ 881,670	808	6,561,660	1.26	1.68	$ 4,785,043	4,075	26,264,829	1.51	1.92
Business HVAC+R Systems	$ 7,948,011	10,402	31,602,611	1.94	2.29	$ 4,761,726	3,269	11,196,422	1.20	1.41
Compressed Air Efficiency	$ 1,054,137	920	5,550,053	1.40	1.77	$ 358,609	245	1,426,863	1.45	1.82
Custom Efficiency	$ 791,855	818	4,600,068	1.21	1.29	$ 390,673	121	790,646	0.90	1.09
Data Center Efficiency	$ 1,487,425	1,904	13,259,748	1.73	2.24	$ 451,914	597	5,009,810	1.29	1.63
Energy Management Systems	$ 533,915	168	6,525,155	1.11	1.53	$ 302,556	124	927,624	1.06	1.36
LED Street Lighting	$ -	-	1,320,510	1.60	2.52	$ -	-	1,525,437	1.28	2.03
Lighting Efficiency	$ 12,116,819	15,717	100,137,739	1.38	1.78	$ 10,303,160	13,642	79,482,937	1.89	2.35
New Construction	$ 6,778,211	11,626	45,987,879	1.53	1.87	$ 12,804,790	15,076	62,162,594	1.47	1.78
Self Direct	$ 774,687	996	4,452,063	1.13	1.38	$ 187,885	175	1,695,126	1.75	2.34
Small Business Solutions	$ 6,081,333	7,149	45,965,672	1.41	1.83	$ 4,965,443	6,451	34,519,317	1.49	1.89
Strategic Energy Management	$ 8,973,831	10,810	81,224,704	1.83	2.37	$ 8,198,603	13,588	70,160,395	1.89	2.42
General Advertising-Bus	$ 801,690	-	-	-	-	$ 832,813	-	-	-	-
Business Program Total	**$ 48,223,585**	**61,320**	**347,187,862**	**1.52**	1.91	**$ 48,343,214**	**57,363**	**295,162,001**	**1.60**	1.99

Natural Gas

In 2022, the natural gas products in the Company's Business Program achieved 136% 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 15b below.

Table 15b: Business Program – Natural Gas DSM Products (Target to Actual)

	Budgets / Targets					Expenditures / Achievements				
Business Program - 2022	**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	$13,548	3,784	279,297	$72,042	3.14	$110,297	1,814	16,442	-$175,592	0.46
Business HVAC+R Systems	$266,540	8,809	33,048	$26,429	1.05	$486,484	16,292	33,488	-$90,596	0.92
Custom Efficiency	$65,005	6,626	101,935	$14,644	1.04	$46,647	710	15,225	-$26,069	0.64
Energy Management Systems	$25,336	2,590	102,224	$23,952	1.17	$9,470	383	40,411	-$4,467	0.83
New Construction	$586,125	72,887	124,354	$6,807,758	3.13	$1,060,810	131,291	123,765	$18,308,848	5.38
Small Business Solutions	$186,717	17,475	93,593	$432,776	1.82	$40,594	1,530	37,682	$14,917	1.26
General Advertising-Bus	$81,982	-	-	-	-	$78,594	-	-	$0	-
Business Program Total	**$1,225,252**	**112,171**	**91,549**	**$7,295,619**	**2.51**	**$1,832,897**	**152,019**	**82,939**	**$17,948,448**	**4.06**

Business Products

The following provides a brief summary of the performance of each DSM business product in 2022.

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 install. 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.

2022 Product Achievement

The Business Energy Assessments product launched initially in 2021, but the full suite of offerings was not available until mid-2022, which played a role in its limited success delivering natural gas savings. The product achieved its electric energy savings goals in 2022 with the help of Commercial Streamlined Assessments and Indoor Agriculture but fell short of gas savings goals. The Business Energy Assessments product launched a bonus incentive for implementations started in September and ending in December that encouraged customers to quickly implement findings from their assessments. The bonus was a large success specifically with Commercial Streamlined Assessment customers and Indoor Agriculture Assessments customers. The bonus also played a role in the program's spending exceeding budgets for both electricity and natural gas.

Changes in 2022

The product officially launched and began conducting customer assessments and implementations.

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, and Commercial Refrigeration 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 potential. 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 and lower maintenance costs, as well as 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 a majority of 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.

2022 Product Achievement

The product did not achieve its electric target but surpassed its gas target. The COVID-19 pandemic continued to limit both customer and trade ability to source equipment due to manufacturing delays, shipping delays, staffing shortages and turnover, though the Company is seeing improvements. Program analysis has shown that additional electric and gas savings are being claimed by holistic programs such as Business Energy Assessment and Strategic Energy Management, both of which have shown positive increases in their participation. The gas targets were surpassed this year with help from increased use of high performing rebates through trade partner relationships. A rebate bonus has been created that will go through 2023 and we anticipate increased participation soon on equipment with longer procurement lead times.

Changes in 2022
The product added Switched Reluctance Motors and nominal HP ECMs to the product offering with a 60-day notice that was filed in June of 2022. The product is currently being analyzed for performance improvements from the creation of new measures or removal of poorly performing measures.

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.

2022 Product Achievement
The product did not achieve its 2022 electric savings target. This is due to several factors including: reduced capital implementation due to customer financial restraints; the need for more trade education and updates surrounding the product due to industry turnover; and customers delaying projects into future years. Supply chain issues continue to restrict customers' ability to order and install new equipment recommended from studies in a timely manner. Supply chain constraints also created higher prices for

customers which influenced their decision to delay ordering equipment and implementing the company's suggestions from the studies.

Increasing connections with market players was a priority in 2022. This effort included in-person meetings with industry trade to improve 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 in 2022.

Changes in 2022
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.

2022 Product Achievement
The Custom Efficiency product did not meet its electric savings, natural gas savings, electric participation, or gas participation targets in 2022. Overall, neither the electric product nor the gas product was cost effective. Increased equipment and labor costs presented challenges with projects passing the MTRC test, contributing to lower cost effectiveness on the projects that were claimed, and fewer projects approved overall. Administrative cost to evaluate projects also significantly affected the overall product cost effectiveness. The product underspent its forecasted electric and gas budgets commensurate with the lower project volume and savings achievement. . The company worked across internal groups to educate multiple teams on best practices regarding custom projects and to encourage earlier involvement of technical resources to improve project analysis rates. This included work to equip internal teams with tools and knowledge to better identify and submit successful custom projects likely to pass the MTRC test. Additionally, the growth of the Business Energy Assessments and Strategic Energy Management programs has reallocated savings that may have otherwise been claimed by Custom Efficiency.

Changes in 2022
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.

2022 Product Achievement
The Data Center Efficiency product did not achieve its electric savings target in 2022, but electric spending was in line with savings achieved. Industry turnover has affected the sector, and education continues to

be a focus for the product. The product team hosted an education session for trade partners in early 2022 to connect with industry players and discuss current events.

Electric achievement was realized from two main project types: prescriptive projects focused on Variable Frequency Drives ("VFD") installed throughout data centers and projects participating in the Data Center new construction offering. The Company continued a strong partnership with customers moving through the new construction offering and was able to close the second phase of a large, multi-phase project in 2022 with future phases anticipated to close in 2023 and into future years.

Changes in 2022
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.

2022 Product Achievement
The product fell short of its electric and gas savings targets in 2022 achieving approximately 14 percent of its electric savings target and 15 percent of its gas savings target. Electric spending was 57 percent of filed budget, while gas spend was 37percent of filed budget. The product faced many of the same challenges as it has in previous years with the pandemic and now inflation affecting commerce. In addition, vacancy rates are trending higher. For example, Denver office vacancy rates rose from 19.3% in 2021 to 21.8% in 2022. A large portion of EMS retrofits are not cost-effective because traditional systems seldom yield demand savings and are expensive relative to energy savings. In response to these challenges, the Company surveyed and interviewed trade partners and identified several modifications which may help boost participation. In tandem, the EMS product was evaluated by TRC, Inc. this year and all of their findings are in agreement with improvements the Company wants to make. Also, through product development the Company is evaluating additional technologies and control strategies meant to yield additional on-peak savings, such as sequences for pre-heating and cooling, battery storage, distributed generation, thermal storage, automated demand response (ADR), and reverse demand response. Prescriptive measures will be added, and ease of application will also contribute to a more customer friendly product in 2023. Post pandemic opportunities in 2023 may address items such as controls for indoor air quality ventilation and sporadic office occupancy.

Changes in 2022
There were no changes to this product.

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.

2022 Product Achievement

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

Changes in 2022
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.

2022 Product Achievement
The Lighting product did not meet filed energy savings targets despite robust marketing and advertising efforts. The product is still experiencing some lingering impacts from the pandemic in terms of cost increases and supply chain constraints making customers hesitant to implement projects. The product implemented bonus rebates on April 15 to bring down upfront equipment costs. Bonus rebates were made available for prescriptive interior fixtures and LED tubes through the midstream LED Instant rebate channels. The product also launched a new rebate and bonus for LED grow lighting equipment on July 1. Grow lighting projects were previously submitted through the custom pathway which took more time and information to submit and required pre-approval. Moving grow lighting equipment to the prescriptive channel made the rebate process simpler for customers and trade partners and provided a consist rebate amount across projects. Bonus rebates were marketed to customers through a variety of channels including direct mail, email, social media, paid search, radio and video advertising, trade/industry events and presentations. The product did see a boost in participation at the end of the year particularly within the prescriptive LED grow lighting segment which brought in a notable amount of savings by the end of the year. The product is encouraged by the amount of participation in the prescriptive grow lighting segment within just a few months after launch and will continue to expand marketing and outreach within this segment. In addition, the prescriptive and custom lighting rebate offerings completed a process and impact evaluation in 2022.

Changes in 2022
In April 2022, the Company posted a 60-day Notice to add LED grow lighting equipment and high-end trim controls as new prescriptive measures, differentiate the measure lifetime between standalone and luminaire level lighting controls, reduce incremental capital costs of all existing controls rebates, expand the network lighting controls measure to include non-DLC systems, and allow E26 base lamps through the midstream mogul base category in the LED Instant Rebate offering.

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 2022. 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.

2022 Product Achievement

The product exceeded its saving targets for both electric and gas. The product was very cost effective due to continuous efforts to work with our partners to receive accurate information. The EDA offering remained the primary offering in terms of share of overall achievement. However, the EEB offering far exceeded its target, primarily due to a very large electric project and another very large gas project. The product has seen extended project timelines due to supply chain and budget constraints, however with a large pipeline of projects, product achievement remained consistent.

The Company continued to help promote the Flexible Compliance Options of the City of Denver's Green Roof Ordinance to assist customers with buildings over 25,000 square feet to comply with the ordinance. EDA accepted several new projects that fall under the Green Roof Ordinance.

The Codes and Standards component of the product continued with its success from the prior year and continued to focus on providing support to jurisdictions that were interested in adopting a newer local energy code. Efforts were focused on building relationships with the building community and city officials to drive awareness within the community of our assistance in code support. The product collaborated with several other parties involved with code support and continued to spread out the needed support by properly distributing resources. The offering helped eight communities in Company service territory advance their energy codes throughout the year.

Changes in 2022

The Company canceled its planned Request for Qualifications ("RFQ") for potential third-party implementers of EDA due to a settlement commitment related to the 2023 Colorado DSM Plan. The settlement includes the following language:

> Public Service agrees to publish reasonable criteria to be met by third-party providers who want to participate as a third-party implementer for the New Construction – Energy Design

> Assistance product. The Company will develop an application and approval process for providers that want to participate in the product and will make the list of approved providers available on its website and to its Account Managers no later than 60 days after a final Commission decision approving the Plan. Any provider that is approved as a qualified third-party provider for the New Construction – Energy Design Assistance product for purposes of this 2023 DSM & BE Plan will be eligible to receive the standard provider incentives for the product.[16]

The commitment to transition EDA to an "open" program model in 2023 obviated the need for an RFQ. Consistent with the settlement, the Company offering will develop an application and approval process for third party providers to participate in EDA in lieu of an RFQ.

Self-Direct

The Self-Direct product provides large commercial and industrial electric customers in Colorado the opportunity to control all stages of their energy saving projects' rebate application process. The product allows the customer to perform all the required activities and incur all the costs for the identification, study, design, engineering, Measurement & Verification ("M&V"), and reporting work associated with energy savings projects. These steps are comparable to the Company's Custom Efficiency product but because the customer is responsible for most of the administrative and engineering activities, the customer is eligible to receive a higher rebate than is offered through the Custom Efficiency product. The Company's role in this process is one of support through the project stages including 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.

The product 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.

2022 Product Achievement

The product did not reach its electric savings target in 2022. Fortunately, a few projects that were impacted by the COVID-19 pandemic came to fruition after several years of delay. The Company continued to meet with engineering firms throughout the year to identify prospective projects to help customers better manage their energy and demand use.

Changes in 2022

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.

[16] Settlement Agreement filed December 2, 2022 in Proceeding 22A-0315EG, paragraph 33.1.

2022 Product Achievement
The product did not achieve its electric savings target and came in under budget in 2022. Most of the achievement came from the Business LED Instant Rebate program. The main drivers of lower achievement are supply chain and labor market issues that include increased material costs, delayed shipping, and increased lead times from trade partners. These issues have persisted since the beginning of the COVID-19 pandemic and have continued through 2022.

The product's achievement in the downstream prescriptive and custom pathways which is representative of participation by solely small business customers was significantly lower than previous years due to impacts from the COVID-19 pandemic. Given growing economic uncertainty, many small business customers were hesitant to move forward with large lighting projects and have opted to delay projects, install less equipment, and limit investment in energy efficiency. The product leveraged various marketing strategies to engage customers in the offering including emails blasts, mailed communications, relevant event sponsorship and attendance, and even grassroots canvassing efforts. The direct install tube offering has continued to provide customers under 100 kW peak demand free LED tubes and installation. Most LED tube installations have taken place in and around the Denver metro area, and strategies are being developed to expand the product's reach within our electric service territory.

The product engaged trade partners throughout the year with newsletters communicating program changes, updates, and industry related news as well as provided continual training and support where needed. The product implementer has continued to leverage relationships with industry organizations such as the Independent Electrical Contractors Rocky Mountain association and Certifiably Green Denver in efforts to continue to grow, support, and communicate with the trade partner network. The product implementer has also developed relationships with specific customer segment organizations such as the Colorado Restaurant Foundation to broaden the product's reach into different customer segments.

Changes in 2022
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 result

2022 Product Achievement

The product completed its fourth consecutive year of double-digit growth in energy savings. Although it did not quite meet it energy savings target, it exceeded expectations for peak coincident demand savings. Spending was within budget and commensurate with the energy savings achievement.

A wide range of industrial and institutional customers completed projects. Manufacturers, including food processors contributed a quarter of the achievement. Indoor Agriculture was the second biggest contributor, followed by offices, hospitals, and wastewater treatment plants. The combination of school districts, universities, and government buildings contributed more than one tenth of the total.

The product enrolled seventeen 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.

Within the year, the product completed two SEM Cohorts it had begun in the prior year, for indoor agriculture and for wastewater treatment plants. It also began a third SEM Cohort, for a group of public-school districts. Each Cohort engages a group of customers, who participate jointly to leverage shared learning, friendly competitions, and peer-to-peer encouragement. The Company will continue to assess the Cohorts' overall performance.

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").

Nearly one quarter of the product's achievement was from Systemic Operational projects. Systemic Operational savings result from specific actions that need programming or verified policy changes and

that would need specific effort to reverse. The measures have a 3-year lifetime. Their savings were calculated using regression models to compare baseline interval data to normalized treatment-period data. Modeled savings were reduced by the savings of any prescriptive or custom projects implemented. Each model was developed by the SEMCs and reviewed by Xcel Energy Engineering. The models' parameters met or exceeded standards set in the Bonneville Power Administration's *Commercial & Industrial SEM M&V Reference Guide* [17]. Table 16 below describes the primary actions that resulted in energy savings for each project.

[17] https://www.bpa.gov/energy-and-services/efficiency/measurement-and-verification

Table 16: SEM Systemic Operational Savings

Projects	Segment	Energy Savings (kWh)	Primary Actions
Project 1	Office (campus with embedded data center)	6,597,004	Programmed economizer; Reset SAT and static discharge pressure; Reduced run time for AHUs to match post-Covid schedule;
Project 2	School District	1,697,608	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	1,554,598	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	1,511,007	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;

Project 5	Higher Education	1,057,031	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;
Project 6	Government Facilities	986,235	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.
Project 7	Wastewater Treatment	884,931	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);
Project 8	School District	806,597	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;
Project 9	Hospital	650,750	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	494,748	Optimized Ammonia-Based-Aeration System controls; Adjusted aeration profiles for basin zones; Optimized plant grit Pumps;
Project 11	School District	465,909	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	432,636	Reset HW differential pressure (2 campuses); Reset Duct Static Pressure (4 campuses);
Project 13	Offices	324,825	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	241,359	Scheduled RTUs; Adjusted SAT; Changed morning warmup schedules; Upgraded select BAS controllers;
Project 15	Hospital	161,977	Reset CHW differential pressure; Performed air balancing;
Project 16	Government Facilities	143,483	Reset static pressure (2 facilities); Scheduled Trim (2 facilities);
Project 17	Food Processor	143,137	Reduced minimum condensing pressure;
Project 18	Manufacturing	141,958	Reduced Compressed Air pressure; Repaired air leaks.
Project 19	University	98,028	Installed new AHU controller and programed it in BAS for economizing/reduced OA;
Project 20	Indoor Ag	89,471	Setback lighting to align with grow cycles;
Project 21	Food Distribution/ Warehouse	81,632	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 2022

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.

2022 Product Achievement

In 2022, advertising became vital to build awareness and motivate business customers, many of whom were still facing even greater challenges related to the COVID-19 pandemic. In addition, inflation gripped the economy making investments in energy efficient opportunities challenging. 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.

No realized savings are tied to this budget. The electric and gas budget was overspent by 5% because bonus and additional advertising was implemented to combat pandemic shortfalls in energy savings.

Changes in 2022

There were no changes to this product except the company has increased 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 2022, the Residential Program exceeded its targeted electric energy savings. Electric expenditures were below the targeted budget and the program was, overall, cost effective. Home Lighting 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. Residential Heating & Cooling, Energy Efficiency Showerheads, Refrigerator & Freezer Recycling, and School Education Kits and Multifamily Buildings also cost-effectively contributed significant electric energy savings in 2022. A summary of the Company's Residential Program achievements for electric DSM products is shown in Table 17a below.

Table 17a: Residential Program – Electric DSM Products (Budget to Actual)

	Budgets / Targets					Expenditures / Achievements				
Residential Program - 2022	**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	$ 30,162	42	519,308	11.03	12.92	$ 48,647	35	423,406	6.22	7.28
Energy Star New Homes	$ 2,807,953	2,716	10,361,702	0.98	1.19	$ 1,342,624	712	3,566,922	0.78	0.95
Home Energy Insights	$ 3,915,440	5,759	29,918,260	1.00	1.45	$ 1,639,935	2,719	19,858,992	0.55	0.85
Home Energy Squad	$ 1,323,902	1,007	4,613,935	1.57	1.99	$ 711,824	426	1,936,997	1.12	1.40
Home Lighting & Recycling	$ 4,197,145	8,928	62,405,952	2.54	3.44	$ 8,063,780	13,300	95,615,379	3.30	4.37
Insulation & Air Sealing	$ 238,807	368	465,099	0.74	0.82	$ 765,018	875	558,047	0.68	0.72
Multifamily Buildings	$ 2,505,013	1,987	10,982,228	1.49	1.87	$ 1,111,049	689	5,605,897	1.40	1.80
Refrigerator & Freezer Recycling	$ 1,147,206	509	3,569,530	1.19	1.60	$ 997,453	377	3,109,456	1.15	1.57
Residential Heating & Cooling	$ 9,135,054	11,614	14,050,068	1.90	2.04	$ 6,893,755	9,366	5,700,792	4.03	4.18
School Education Kits	$ 2,335,622	1,967	10,360,093	2.14	2.66	$ 2,395,499	2,114	15,098,513	2.52	3.22
Whole Home Efficiency	$ 262,869	291	696,826	1.00	1.16	$ 70,788	1	740	0.03	0.04
General Advertising-Res	$ 838,934	-	-	-	-	$ 1,333,379	-	-	-	-
Residential Program Total	**$ 28,738,108**	**35,187**	**147,943,002**	**1.67**	**2.03**	**$ 25,373,752**	**30,614**	**151,475,141**	**2.40**	**2.96**

Natural Gas

The Residential Program did not meet its natural gas savings target. Expenditures were below the targeted budget and the program was, overall, cost effective. 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 2022.

A summary of the Company's Residential Program achievements for natural gas DSM products is shown in Table 17b below.

Table 17b: Residential Program – Natural Gas DSM Products (Budget to Actual)

	Budgets / Targets					Expenditures / Achievements				
Residential Program - 2022	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	$ 339,395	32,205	94,888	$4,756,713	11.17	$ 176,210	26,793	152,051	$3,962,852	15.21
Energy Star New Homes	$ 3,053,505	154,836	50,708	$126,760	1.01	$ 2,743,662	100,109	36,488	-$1,604,020	0.81
Home Energy Insights	$ 692,365	91,772	132,549	$24,903	1.04	$ 88,860	83,799	943,048	$169,295	2.91
Home Energy Squad	$ 496,647	23,753	47,827	828,112	2.25	$ 338,096	8,102	23,962	165,497	1.40
Insulation & Air Sealing	$ 393,661	23,199	58,932	-$470,991	0.74	$ 1,218,690	57,571	47,240	-$1,873,550	0.66
Multifamily Buildings	$ 870,941	34,522	39,638	4,276,998	3.99	$ 247,293	2,262	9,145	284,271	2.04
Residential Heating & Cooling	$ 2,862,451	170,237	59,472	$63,519	1.01	$ 3,479,261	192,207	55,244	-$2,779,611	0.79
School Education Kits	$ 858,161	65,000	75,743	7,486,315	8.02	$ 731,582	64,797	88,571	8,542,875	9.97
Whole Home Efficiency	$ 194,389	9,098	46,805	-$259,640	0.66	$ 50,539	168	3,316	-$59,625	0.11
General Advertising-Res	$ 185,540	-	-	-	-	$ 318,010	-	-	-	-
Residential Program Total	**$ 9,947,057**	**604,623**	**60,784**	**$16,647,148**	**1.65**	**$ 9,392,200**	**535,806**	**57,048**	**$6,489,974**	**1.22**

Residential Products

The following provides a brief summary of the performance of each residential DSM product in 2022.

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. These residential customers receive a direct mail or email offer for a 1.5 gallon per minute ("GPM") showerhead, a 1.5 GPM kitchen aerator, and a 1.0 GPM bathroom aerator. 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. Participants are later surveyed to determine the installation rates of each unit.

2022 Product Achievement

The product did not achieve its electric and gas savings targets for 2022. The product's electric spending exceeded budget while the gas spending was under budget. The Company used bill onserts, email, and direct mail to promote the product. Direct mail proved to be the most effective outreach method and drove increased participation in the last half of the program year but also accounted for increased electric spending.

Changes in 2022

There were no changes to this product.

ENERGY STAR® New Homes

The ENERGY STAR® New Homes ("ESNH") 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 percent 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.

2022 Product Achievement
As a result of significant increases in targeted savings in 2022 relative to the 2019/20 DSM plan, the product failed to achieve its target. While housing starts throughout the Company's service territory remained strong, participation declined from 2021. This is attributable to numerous market effects. Due to labor shortages, craftsmanship has declined as less skilled tradespeople install energy efficiency measures in houses. The program saw an increased quantity of townhouses which are harder to get over the program participation threshold. Finally, supply chain issues with mechanicals led to shortages for high efficiency devices, which affected modeled energy efficiency.

The product saw declines in participation by percentage in IECC 2009 and 2006 baselined homes, which was offset by increased participation in IECC 2015 & 2018 baseline jurisdictions. This is a trend that has continued for several years and will influence the measure mix in future DSM filings.

As in 2021, the Company engaged several builders in 2022 to pursue a heat pump demonstration project; however, market interest did not materialize. Some builders did ask for analyses to compare the relative cost of all-electric building versus conventionally fueled building, but those builders did not follow up with the Company even after persistent outreach.

In 2022, the Codes & Standards product built on its initial success. The Company assisted 13 jurisdictions with code adoption. It met with more than 50 jurisdictions to discuss the support available to them if they choose to adopt updated energy codes. The Company offered trainings to builders, code officials, architects, and other groups in the building trades on ACCA manuals, ASHRAE standards, plan reviews, and other code compliance and enforcement topics. Thanks to the Company's contributions, eight communities implemented updated energy codes in 2022.

While the Company received more than 90 registrations for Marshall Fire replacement homes, none were completed during 2022. Nevertheless, the registrations indicate the rebate paradigm has had the intended effect. A plurality of the registrations pursues all-electric or zero energy ready paths. The Company hopes Marshall Fire rebuilders take the skills they acquire building these homes and offer them elsewhere in areas the Company serves.

Changes in 2022
The Program applied the findings from the 2021 Program Evaluation, adjusting the NTG as recommended by the evaluation.

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.

2022 Product Achievement
HEI did not achieve its electric and gas targets in 2022. The product was under filed budget for both commodities. Attrition and retirement of several recipient groups led to lower participation. In addition, customers affected, or potentially affected (based on location), by the Marshall Fire were removed from receiving reports in 2022. The Company is working with the vendor to increase population for future program years. Outreach campaigns to participating customers further promoted the web portal and demonstrated higher savings rates through multiple program touchpoints.

Changes in 2022
There were no changes to this 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.

2022 Product Achievement
The Home Energy Squad product did not achieve its energy savings targets for 2022. The product remained under its electric and natural gas budgets and spending was commensurate with achieved savings. The shortfall in savings and spend are primarily due to staffing and supply chain issues. Increasing technical staff was a priority for the program but the tight labor market slowed progress. Staffing goals were not met until the fall.

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 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 in order to identify opportunities to save energy in their home. Customers also had the opportunity to receive a customized kit of small energy-saving measures, such as LED bulbs, following their virtual visit.

The product utilized a multi-channel marketing campaign to promote the product, including digital advertising, social media, radio, bill onserts, and targeted emails throughout 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, through which communities could subsidize the cost of a Squad visit for their residents, continued in 2022 and contributed significant participation and awareness for the product.

The Home Energy Squad staff also became a resource for customers regarding Time of Use rate structure. Squad employees were trained to help customers understand rate structures and behavior changes that could reduce their energy bills.

Changes in 2022
There were no changes to this product.

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 onserts, community events, and point-of-purchase displays.

2022 Product Achievement
The product exceeded its electric energy savings target and exceeded the budget target, which was in line with the extra savings achieved. Sales continued to remain steady throughout the year. Promotion plans focused on low-cost ways to save energy and money while at home by using LEDs.

The Company continued having a presence at community events throughout the year as well. 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 continued to offer a deep discount promotion on A-line and BR30 multi-packs in select stores during the year, which was well received by customers.

The product ran advertising campaigns at the beginning and end of the year to increase awareness of the product. The ad campaign also used rich media mobile tactics to help customers locate the nearest store offering Company discounts. Specifically, embedded ads told customers their distance to the closest participating retailer that offered product discounts to encourage customers to stop and shop at that specific store. Customers can also find participating stores and bulb discounts by visiting xcelenergy.com/residential/home lighting.

Changes in 2022
There were no changes to this product.

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.

2022 Product Achievement

The Insulation & Air Sealing product exceeded both its electric and natural gas savings targets. High achievement also led to spending in excess of budget for both fuels. The overachievement is largely due to the Company's response to the Marshall Fire that occurred at the end of 2021. With a natural disaster affecting so many customers, the Company offered a temporary bonus for those homes that were affected within a geotargeted area based on zip codes. The Company will continue to educate and engage trade partners through messaging and trainings to boost participation in the product.

Changes in 2022
A temporary rebate bonus of 100% was enacted to support the victims of the Marshall Fire within a geotargeted area.

Multifamily Buildings
The Multifamily Buildings product is designed to engage multifamily building owners in deploying DSM measures that will lower customers' 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 the metered bill payer 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.)

2022 Product Achievement
The number of 2022 multifamily building assessments and residential units treated with direct installation measures remained consistent with 2021 numbers. There was a decrease in associated electric and gas savings from 2021. The product's 2022 participation and savings fell short of targets as deeper Stage 3 energy efficiency projects were challenging to complete. Expenditures were in line with achievements and under budget.

Changes in 2022
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 onserts, and online/social media efforts.

2022 Product Achievement

The product fell short of its participation target in 2022 and did not meet its electric savings targets due largely to customers recycling newer units than were forecasted resulting in lower-than-expected per-unit savings. Product spending was under budget primarily due to efficient use of the marketing budget and lower administrative and rebate spending commensurate with participation. Implementation costs increased in 2022 due to inflation and the rapid rise of fuel costs. The product continued to offer contact-free pickup for customers who wished to maintain social distancing. To increase product awareness in a cost-effective manner, the Company cross-promoted the product with Home Energy Squad and Home Energy Reports. The product also had a very successful email campaign that boosted our participation and energy savings a considerable amount.

Changes in 2022

There were no changes to this product.

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 new, holistic approach to residential customers' heating and cooling needs is designed to improve the experience for customers and trade partners in order to improve participation, energy savings, and customer satisfaction.

2022 Product Achievement

The product met its targets on the gas side but fell short on the electric side. The company spent under the filed budget on the electric side, but overspent on the gas side, commensurate with savings.

With the exception of mini-split heat pumps, which performed relatively consistent with the forecast, heat pump participation fell substantially short of the filed goals, particularly for heat pumps replacing electric resistance heating. Participation in traditional heating and cooling technologies such as air conditioning and furnaces was generally consistent with the forecast and with historical averages. Overall, heat pumps represented approximately 16 percent of the air conditioning/heat pump rebates. While further

improvement is still needed, this is a dramatic increase over 2021 participation, with participation tripling since 2021.

The Company is continuing to learn about the best ways to market heat pumps to customers and how to overcome real and perceived barriers to participation. In addition to standard air conditioner QI practices, the Company continues to evaluation additional QI guidelines for heat pump installations, such as:

- Confirming the selected system's balance point vs. Manual J load calculation,
- Verifying the balance point is appropriately followed in the controls for dual fuel cutover,
- Verifying refrigerant charge is appropriate for both hot weather and cold weather operation,
- Verifying that heating airflow is adequate, and
- Ensuring the home is sufficiently weatherized and insulated to reduce the size of the heat pump needed

Changes in 2022
The Company filed a 60-day Notice in April to lower Energy Efficiency Ratio (EER) and Heating Seasonal Performance Factor (HSPF) requirements for certain heat pump measures. The Company added significant bonus rebates for heat pump measures in July.

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.

2022 Product Achievement
The product exceeded its electric savings target and achieved99.7 percent of its 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 during 2022. This effort allowed the product to reach additional customers and deliver cost-effective gas savings. 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 2022 due to the educational messaging, popularity of LED bulbs, and accounting for customers planning to install measures in the near future.

Changes in 2022
The company filed a 60-day Notice in April adding a measure to claim savings for LED nightlights included in School Education Kits.

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.

2022 Product Achievement

The product did not achieve its energy savings targets for 2022, and spending was under budget, commensurate with savings. The Company held trade partner trainings to increase the number of registered trade partners within the product and expanded advising services and auditor knowledge of program guidelines to increase customer awareness and participation. Despite these measures there remains difficulty converting customers who have participated in the audit program into enrolling in the product.

Changes in 2022

In support of the Insulation and Air Sealing program bonus for Marshall Fire affected customers, the WHE program also offered the bonus to geotargeted applicants.

General Advertising - Residential

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

2022 Product Achievement

In 2022, 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 through the Little Things campaign. 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 2022

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 2022, the Income Qualified Program greatly exceeded its electric savings target. This was due in part to a continued effort to find new innovative outlets to distribute LEDs to hard-to-reach customers at food banks and community centers across the electric service territory. The Non-Profit product and Single-Family Weatherization met their electric energy savings targets while Multifamily Weatherization and the Energy Savings Kit fell short of achieving their electric target.

A summary of the Company's Income Qualified Program achievements for electric DSM products is shown in Table 18a below.

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

	Budgets / Targets					Expenditures / Achievements				
Income Qualified Program - 2022	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 Savings Kit	$ 384,036	169	1,019,143	1.96	2.36	$ 197,031	32	289,316	1.48	1.74
Multifamily Weatherization	$ 1,150,104	255	2,051,058	1.01	1.17	$ 1,154,158	187	1,439,762	0.94	1.08
Non-Profit	$ 1,120,472	383	1,701,175	1.02	1.16	$ 1,231,293	404	1,707,158	1.05	1.19
Single-Family Weatherization	$ 2,448,633	3,184	22,887,193	4.59	5.71	$ 1,842,375	3,463	26,539,477	7.03	8.88
Income Qualified Program Total	**$ 5,103,245**	**3,991**	**27,658,569**	**2.68**	**3.28**	**$ 4,424,856**	**4,085**	**29,975,713**	**3.42**	**4.25**

Natural Gas

In 2022, the Income Qualified Program greatly exceeded the natural gas savings targets due to strong achievement in Single-Family Weatherization. The Energy Savings Kit, Multifamily Weatherization, and Non-Profit products fell short of achieving their goals. A summary of the Company's Low-Income Program achievements for natural gas DSM products is shown in Table 18b below.

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

	Budgets / Targets					Expenditures / Achievements				
Income Qualified Program - 2022	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 Savings Kit	$ 163,002	10,593	64,986	$1,589,954	9.14	$ 36,855	1,847	50,121	$260,373	6.95
Multifamily Weatherization	$ 657,414	8,554	13,012	-$238,819	0.81	$ 1,312,423	6,842	5,213	-$503,432	0.76
Non-Profit	$ 439,235	4,005	9,118	-$179,463	0.79	$ 414,326	1,643	3,965	-$197,970	0.63
Single-Family Weatherization	$ 4,458,596	59,762	13,404	-$847,155	0.90	$ 3,989,442	142,970	35,837	$15,907,650	3.26
Income Qualified Program Total	**$ 5,718,247**	**82,914**	**14,500**	**$324,516**	**1.03**	**$ 5,753,047**	**153,301**	**26,647**	**$15,466,621**	**2.59**

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.

The following provides a brief summary of the performance of each income qualified product in 2022.

Energy Savings Kit

The Energy Savings Kit product provides income-qualified customers with a free package of energy- and money-saving measures like 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.

2022 Product Achievement

The product came in short on both the natural gas and electric savings targets and was under budget. Customer engagement continued to be the largest challenge to the product. The traditional marketing channel, email, resulted in lower-than-expected participation despite campaigns running throughout the year.

Changes in 2022

For Colorado Energy Savings Kits, the Company filed a 60-day notice to be able to claim the savings associated with LED night lights. The 60-day notice was filed on April 28, 2022.

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, prescriptive rebates are offered for retrofit measures when the equipment would otherwise be ineligible for inclusion in the custom project bundle.

2022 Product Achievement

The product fell short of its electric energy and natural gas savings targets but exceeded budgets. Supply chain constraints that limit product availability and increase equipment costs continue to influence project savings and expenditures.

Changes in 2022

There were no changes to this product.

Non-Profit

The Non-Profit product provides funding for a wide variety of energy-efficient equipment upgrades and process improvements for qualified Section 501(c)(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.

2022 Product Achievement

The product achieved its electric target but fell short of the natural gas target. EOC continued to focus on outreach efforts to organizations who had previously participated to identify additional opportunities for efficiency upgrades. The Company also partnered with EOC to distribute kits with energy savings measures through several non-profits to their clients. The kits were distributed during the fourth quarter as an innovative avenue to offer customers additional energy savings opportunities during a period of higher natural gas prices. Savings were not able to be validated and recorded prior to year-end. Those savings will be recorded in 2023.

Changes in 2022

Distribution of energy saving kits through non-profit channels was added to the product.

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 percent of Area Median Income ("AMI"), which is important in the state of Colorado due to the rising cost of living.

2022 Product Achievement
The product greatly exceeded both its natural gas savings targets and electric savings targets. The Company continued its partnership with food banks across the Xcel Energy electric territory to distribute LEDs to qualifying customers, which proved to be an extremely successful way to get LEDs to hard-to-reach customers and to drive savings on their electricity bills. The offering will continue into 2023, with efforts to expand the partnership to new food banks within Xcel Energy electric territory. Product performance to deliver natural gas savings greatly improved by implementing a large showerhead food bank distribution initiative mirroring the successful LED model

In 2022, 70 customers who participated in the product were identified as in arrears at least once during the year. On average, these customers saved 381 kWh and 10 Dth through participation in the product. Total first year savings associated with the measures installed came to 53,298 kWh and 13,798 Dth.

Changes in 2022
Distribution of showerheads through food banks was added to this product.

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 2022, 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 2022 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. In 2022, the Geo-targeting Pilot was the only pilot offered by the Company that included an energy efficiency component.

Electric

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

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

	Budgets / Targets					Expenditures / Achievements				
Indirect Products & Services - 2022	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	-	-	-	-	$108,679	-	-	-	-
Business Energy Analysis	$1,208,863	-	-	-	-	$483,484	-	-	-	-
Consumer Education	$971,000	-	-	-	-	$1,080,292	-	-	-	-
Energy Benchmarking	$125,111	-	-	-	-	$139,420	-	-	-	-
Energy Efficiency Financing	$246,833	-	-	-	-	$21,166	-	-	-	-
Home Energy Audit	$435,126	-	-	-	-	460,647	-	-	-	-
Partners in Energy	$936,517	-	-	-	-	$982,995	-	-	-	-
Education/Market Transformation Total	**$4,099,450**	-	-	-	-	**$3,276,683**	-	-	-	-
Planning and Research										
EE Market Research	$428,091	-	-	-	-	$544,336	-	-	-	-
EE Evaluation, Measurement & Verification	$769,435	-	-	-	-	$815,584	-	-	-	-
EE Planning & Administration	$553,962	-	-	-	-	$589,690	-	-	-	-
EE Product Development	$2,020,193	-	-	-	-	$1,763,073	-	-	-	-
Geo-targeting Pilot - EE	$24,073	-	-	-	-	$154	-	-	-	-
EE Product Development Total	**$2,044,266**	-	-	-	-	**$1,763,228**	-	-	-	-
EE Planning and Research Total	**$3,795,754**	-	-	-	-	**$3,712,838**	-	-	-	-
EE Indirect Products & Services Total	**$7,895,204**	-	-	-	-	**$6,989,521**	-	-	-	-

Natural Gas

A summary of the Company's Indirect Program achievements for natural gas DSM products and services is shown in Table 19b below.

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

	Budgets / Targets					Expenditures / Achievements				
Indirect Products & Services - 2022	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	-	-	-	-	$14,422	-	-	-	-
Business Energy Analysis	$222,698	-	-	-	-	$49,457	-	-	-	-
Consumer Education	$61,000	-	-	-	-	$131,005	-	-	-	-
Energy Benchmarking	$31,869	-	-	-	-	$43,398	-	-	-	-
Energy Efficiency Financing	$100,957	-	-	-	-	$12,570	-	-	-	-
Home Energy Audit	$586,249	-	-	-	-	544,764	-	-	-	-
Partners in Energy	$100,689	-	-	-	-	$107,987	-	-	-	-
Education/Market Transformation Total	**$1,123,061**	**-**	**-**	**-**	**-**	**$903,602**	**-**	**-**	**-**	**-**
Planning and Research										
EE Market Research	$178,429	-	-	-	-	$158,249	-	-	-	-
EE Evaluation, Measurement & Verification	$141,520	-	-	-	-	$247,396	-	-	-	-
EE Planning & Administration	$12,404	-	-	-	-	$168,336	-	-	-	-
EE Product Development	$152,585	-	-	-	-	$177,629	-	-	-	-
EE Product Development Total	$152,585	**-**	**-**	**-**	**-**	**$177,629**	**-**	**-**	**-**	**-**
EE Planning and Research Total	$484,938	**-**	**-**	**-**	**-**	**$751,610**	**-**	**-**	**-**	**-**
EE Indirect Products & Services Total	$1,607,999	**-**	**-**	**-**	**-**	**$1,655,213**	**-**	**-**	**-**	**-**

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 2022.

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.

2022 Product Achievement

Through the fourth quarter of 2022, the Business Education product overachieved to the year-end target. With in-person events returning in 2022, the Company was able to return to its primary form of engagement and participation at local events. With the support of internal business education partners, such as CLEAResult, the Company was able to activate key events targeting business customers. These opportunities allowed for greater business and relationship development. The Company also explored new tactics to educate businesses about our energy and money-saving offerings through print and digital opportunities with the Denver Post. For the third year, the Company participated in the Broncos Business Boost promotion as a sponsor, highlighting Xcel Energy's commitment to educating and supporting small and medium-sized local businesses. 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 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.

2022 Product Achievement
The product did not meet its expected goal for assessments. In the last quarter the product incorporated a bonus for customers to implement energy conservation opportunities based on their assessments. The bonus proved to be effective and pushed a large amount of savings in Q4 for the Business Energy Assessments product.

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.

2022 Product Achievement
2022 was a busy year for the Consumer Education program. With events back to normal in 2022, post-pandemic, the Company saw a significant increase in events and participation with customers. The Program sponsored over 60 key community events targeting large numbers of customers via key partnerships with, for example: Denver Botanic Gardens, the Denver Broncos, home shows, diversity and inclusion organizations, Downtown Denver Partnership, and more. Through the fourth quarter of 2022, Consumer Education overachieved the year-end participation target. The Program was over budget due to the Company's intention to increase face-to-face customer interactions combined with events coming back in full force post-pandemic.

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 finished its first round of reporting in December 2022.

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.

2022 Product Achievement
Participation in the program increased significantly due to expanded city ordinances and the implementation of a statewide building benchmarking reporting requirement for buildings larger than 50,000 square feet. Due to the higher-than-expected participation, the extension of reporting deadlines for municipal and state ordinances, and staff turnover on the benchmarking team, increased labor costs were incurred resulting in spending over budget. 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. The Community Energy Reporting team has also made investments in its business systems that allows for a more streamlined process in putting together the annual Community Energy Reports.

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. The Company partnered with the National Energy Improvement Fund (NEIF) who manages the financing proposal process via an on-line portal that is accessed via the Xcel Energy website. NEIF matches customer projects to the best lenders for their situation which includes at least one proposal which is cash flow positive resulting in the monthly loan payment being less than the monthly energy savings. NEIF works with trade partners and customers on all aspects of closing the loans and disbursing funds. The company met with the Colorado Clean Energy Fund to determine if we can also work with them to expand our financing options in 2023.

2022 Product Achievement
The Commercial Energy Efficiency Financing product has its own section on the Xcel Energy website and other DSM products link to the financing portal for trade partners and/or customers to access the no cost-no obligation financing proposal.

The Company continued to strategically promote the financing product through its trade partner network in 2022 by presenting financing updates through DSM workshops, on-site trade partner trainings, business marketing communications, sponsorships, and trade events. The Company has incorporated financing proposals in some of the various audits and studies that Xcel Energy offers to customers to ensure energy efficiency financing is part of the conversation early in the process.

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 and the blower door test.

2022 Product Achievement
The Home Energy Audit product underachieved in forecasted participation targets for the year as tight labor markets created staffing challenges. The Company continued to offer audits in combination with a Home Energy Squad visit in an effort to increase participation and lead customers to take additional action. 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.

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. 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 conservation. Communities within that region may develop specific plans to leverage the momentum of the larger initiative 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, 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, online tools, and resources.

2022 Product Achievement
The product supported development of conservation related energy action plans with eight Colorado communities in 2022 and provided direct plan implementation support to promote energy-efficiency to

twenty-one additional communities who had completed plans in early in 2022 and in prior years. Planning workshops for many communities returned to in-person in 2022 but the ability to meet virtually continues to be leveraged for project management services and to enable broader community engagement.

The Partners in Energy portal provided tools and resources to save energy to all forty-five communities who have participated in Partners in Energy to date.

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 2022, comprehensive evaluations were conducted for three products: Energy Management Systems, Lighting Efficiency, and Whole Home Efficiency. A process-only evaluation was conducted for Home Energy Insights and Income Qualified Energy Savings Kits. In addition, a separate evaluation of the building code support offerings within the Business New Construction and ENERGY STAR New Homes concluded in 2022.

High-level outcomes from these evaluations include:

- *Energy Management Systems (Business)*: The evaluation provided an updated net-to-gross analysis for this product as well as a number of process recommendations. An important finding regarding EMS was that customers and trade partners whose projects were rejected did not understand the reasons for rejection and desired an opportunity to make modifications to gain eligibility. The evaluation team recommended that the Company explore adjusting the incremental project costs to better reflect the energy-specific components of energy management system.
- *Home Energy Insights (Residential)*: Key findings in this evaluation state that customers who did not read their Home Energy Report found the results to be inaccurate or not useful. Customers were generally confused by the "neighbor" comparisons and requested more tailored information listed on the report. Recommendations include working to update report tips, explaining what information is used and how it is calculated to generate the report, and defining what "neighbors" are being used for comparison.
- *Income Qualified Energy Savings Kits (Income Qualified)*: The evaluation provided evidence that two thirds of participants had concerns about the product to include: the compatibility of the items, the effect those items may have on water pressure, and that the product was a scam. Participants were most satisfied with the quality of the items included and least satisfied with their energy/bill realization. Recommendations include providing the option to customize kits and to re-evaluate the communication of expected bill savings.

- *Lighting Efficiency (Business)*: The NTG analysis recommended that the updated retrospective NTG be used prospectively as well due to an increase in equipment costs and continued importance of rebates for combating market uncertainty. Both trade partners and customers would like to see a greater variety of equipment options and trade partners requested more communication from Xcel. Recommendations include rebate offerings consistent with increases in equipment cost and a broader array of eligible products. It is also recommended that trade partners are offered more comprehensive training and communication related to the product.
- *Whole Home Efficiency (Residential)*: The updated net-to-gross analysis found that updated rebates and marketing/outreach are very important to establishing the Company's influence. A lack of collaboration between trades and low awareness of the product process and bonus rebates were identified as areas for improvement. Recommendations include increasing rebates to drive participation, and engaging implementers to better facilitate connections between trade partners.

Evaluation reports are found on the Company's website, here:
https://www.xcelenergy.com/company/rates_and_regulations/filings/colorado_demand-side_management

2022 Product Achievement

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 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: 2022 Results".

The Evaluation, Measurement, and Verification indirect product budgets are combined and exceeded both the electric and natural gas budgets due to the increased cost of third-party evaluation services since the budget was estimated in 2020. In addition, some evaluation activities for 2021 were delayed until early 2022 (e.g. the 2021 residential cooling evaluation final reporting) in order to better capture the effects of the 2021 plan that was implemented part of the way through that year. This caused overlap that increased overall 2022 evaluation costs.

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 2022, 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;
- Finalization of the DSM potential study;
- Conduct a Home Use Study; and,
- 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.

2022 Product Achievement
The Market Research expenditures exceeded budget for electric but remained under budget for natural gas. The electric cost was primarily higher due to the electric-focused research (e.g. DR measure potential estimation) in the DSM Potential Study that was not anticipated at the time that the plan was filed in 2020.

Planning & Research Products

The following provides a brief summary of the performance of each Energy Efficiency planning and research product in 2022.

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.

2022 Product Achievement
In 2022, 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 DSM & BE Strategic Issues application and the 2023 DSM & BE Plan, both filed on July 1, 2022.

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 2022, 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 2022. A summary of these activities in 2022 follows:

- A new gas boiler measure motivated in part to address gas distribution constraints in Summit County;
- Dual-fuel commercial heat pumps
- Cold climate heat pumps
- Integrated lighting and HVAC controls
- Redesigning Energy Management Systems

2022 Product Achievement
EE Product Development expenditures were under budget due to lower-than-anticipated costs for research and consulting services.

Geo-targeting Pilot - EE
The objective of the Company's Geo-Targeting pilot is 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 will show how its traditional EE and DR resources can be adapted to address localized system constraints through achievement of high levels of local adoption, coordination and dispatching of demand response and validation of cost effectiveness.

2022 Product Achievement
The pilot continued engagement with the Company's distribution operations team to demonstrate how DSM products can be utilized to manage grid operations and residential new construction builders and developers. 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. Additionally, the team is confident in its ability to call targeted feeder-specific events based on historic results.

Changes in 2022
There were no changes to this pilot.

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 2022: (1) Direct Load Control, (2) Interruptible DR, and (3) Non-Dispatchable DR.[18] 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 2022 are shown in Table 20 below.

There were no new DR offerings launched in 2022. Instead, the Company focused on overall portfolio growth through the existing products and evaluating performance from the newer product offerings such as Electric Vehicle Optimization and Residential Battery Demand Response.,

Table 20: 2022 DR Results (MW)

	Goal[19]	**Actual**
Demand Response (DR)	503	515
Demand Reduction from Energy Efficiency (EE-DR)	75	74
Total	**578**	**589**

Ordering Paragraph 86 of Decision No. C18-0417 directed the Company to achieve total demand reduction goals of 578 MW in 2022. The Company's Demand Response program overachieved its forecasts and goals in 2022. The large growth realized in 2020 has maintained portfolio performance above goal through 2022. The portfolio was largely stable in 2022, with incremental growth slightly outpacing program attrition. The Company expects the DR portfolio to grow and increase available load in the future.

Table 21: Demand Response Program – Electric DSM products (Budget to Actual)

	Budgets / Targets					**Expenditures / Achievements**				
Demand Response Program - 2022	**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	$235,816	10,630	62,175	-	-	$188,036	24,196	520,128	-	-
Electric Vehicle Critical Peak Pricing	$394,975	1,094	-	-	-	$48,229	226	-	-	-
Electric Vehicle Optimization	$1,054,805	7,621	-	1.46	1.58	$765,956	1,291	-	0.36	0.40
Peak Day Partners	$490,000	13,544	303,693	-	-	$79,991	22,213	96,548	-	-
Peak Partner Rewards	$1,892,323	47,963	280,547	-	-	$645,766	12,389	-	-	-
Residential Battery Demand Response	$0	-	-	-	-	$160,369	392	(11,527)	2.54	2.53
Residential Demand Response	$16,708,730	32,092	113,371	2.09	2.09	$13,328,888	17,275	63,352	1.70	1.70
Small Commercial Building Controls	$530,093	3,153	50,057	2.27	2.27	$233,204	477	7,647	1.60	1.61
DR Program Total	**$21,306,742**	**116,098**	**809,843**	**2.23**	**2.24**	**$15,450,438**	**78,458**	**676,147**	**1.99**	**1.99**
Planning and Research										
DR Planning & Administration	$61,551	-	-	-	-	$14,427	-	-	-	-
DR Program Evaluations	$335,227	-	-	-	-	$192,730	-	-	-	-
DR Product Development	$1,811,103	-	-	-	-	$1,140,314	-	-	-	-
Geo-targeting Pilot - DR	$305,552	-	-	-	-	$154	-	-	-	-
DR Planning and Research Total	**$2,513,433**	-	-	-	-	**$1,347,625**	-	-	-	-
DR PORTFOLIO TOTAL	**$23,820,175**	**116,098**	**809,843**	**2.08**	**2.09**	**$16,798,063**	**78,458**	**676,147**	**1.83**	**1.84**

[18] 2015/16 DSM Plan at 312. (Proceeding No. 14A-1057EG).

[19] *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).

Demand Response Products

The following provides a brief summary of the performance of each Demand Response product in 2022.

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.

2022 Product Achievement

The 2022 control season was again an active year for the product, and the Company dispatched 11 total CPP events. The events occurred during the typical summer months (June through September) as well as two events in February and one in November.

Preliminary results suggest demand reductions varied from event to event, which is typical performance for a critical peak product, but on average demand reductions of 24,196 kW were realized for dispatched events. This exceeds the Company's 20% load reduction planning estimate of approximately 11,450 kW for all CPP participants enrolled during the 2022 control season.

The product added two new participants while unenrolling two participants in 2022, ending the year with a total of 35 total participants. Using the 20% load reduction planning estimate for new participants, these two new CPP participants represent 113 kW of new capacity for the product. The two participants that left the CPP product in 2022 were two schools within the same school district. The school district analyzed all participating schools and they unenrolled two due to the frequency of events yielding higher costs while on CPP.

Changes in 2022

There were no changes made to this product.

Electric Vehicle Critical Peak Pricing Pilot

The Electric Vehicle Critical Peak Pricing ("EV-CPP") Pilot 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.

2022 Product Achievement
In August of 2022, the Company launched a new S-EV rate that does not include a CPP component. This new rate is marketed towards public charging station customers. With this launch, the pilot lost 14 customers to the new rate and did not meet 2022 goals. The S-EV-CPP rate will continue being offered to customers with EV fleets. The Company enrolled approximately 3 new customers in 2022 and successfully dispatched 11 total events.

Changes in 2022
There were no changes to this pilot.

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.

Dynamic Optimization (also known as "Charging Perks")
Dynamic Optimization or Charging Perks is a pilot for eligible electric vehicle owners that manages the charging demand of EVs through a more novel approach by working with various automakers 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 in the sense that the charging period changes every day to the most conducive times. Since Dynamic Optimization manages charging in novel ways, it is being implemented through a small-scale pilot.

2022 Product Achievement
In 2022, the Company expanded the Optimize Your Charge offering through partnering with WeaveGrid to increase their data collection services across both EV Optimization offerings. WeaveGrid can collect Hyundai, Kia, Tesla, Toyota, and Lexus data from various models within Static Charging (Optimize Your Charge). Approximately 2,200 new Optimize Your Charge customers were enrolled in 2022.

The Company launched the Charging Perks pilot for Tesla electric vehicle owners in July of 2021 and in late September of 2021 for the remaining automakers (Ford, GM, BMW, and Honda) - but in 2022, the Company primarily focused marketing efforts for Tesla owners via targeted Social Media campaigns and relied on promotional efforts of the other OEMs for recruitment. At the end of 2022, the Charging Perks

pilot had successfully enrolled another 458 electric vehicles, surpassing our pilot target capacity of 600 vehicles. The Charging Perks pilot is being extended through the end of 2023.

Changes in 2022
There were no changes to the product in 2022.

Interruptible Service Option Credit
The Interruptible Service Option Credit ("ISOC") product offers savings opportunities for business customers on the ISOC Tariff[20] 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.

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 are required to provide load relief to Public Service's system in less than 10 minutes of being called upon. 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 percent 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 percent of the reserve, the Company will need to carry more than 50 percent 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 to meet this standard as it is a source of reserve capability that is 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.

[20] Advice Letter No. 1524 (Second Amended); Electric Tariff Sheet No. 90.

2022 Product Achievement
The product's administrative spending was slightly under the filed budget with spending used to support advanced technology resources, personnel to implement the product, and ongoing field equipment maintenance. The product's participation stayed consistent in 2022, maintaining enrollments of 68 legacy customers under part B and 1 customer under part C of the ISOC tariff. The product team has hosted several informational meetings with the account management team and potential new customers, but there were no new customers in 2022. Customer credits align with the tariff determined incentive levels. Total costs for the product were $26,584,038, which includes customer credits and administrative costs. Confidential Appendix C shows the allocation for each spending category. The ISOC product was cost-effective under the RIM test with a ratio of 1.32 and produced net benefits of $8,683,639.61. Confidential Appendix C summarizes both the costs and benefits of the ISOC program in terms of capacity and energy.

The Company called one ISOC interruption during 2022 for a Capacity event. The Company did not call any economic or contingency interruptions during 2022.

Changes in 2022
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 manually meeting this accepted demand reduction during the specified hours. This is a voluntarily participation product and there is no penalty for non-participation.

2022 Product Achievement
The PDP product finished 2022 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 anticipated. Larger-than-anticipated load enrollment from participating customers, combined with customers being willing to control load at lower price points than anticipated, contributed to the product's strong cost-effectiveness on a dollar-per-kW basis. In 2022 there were four successful control events.

Changes in 2022
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 2 P.M. and 6 P.M. by a minimum of 25 kilowatts ("kW").

2022 Product Achievement

In 2022, the Peak Partner Rewards product underachieved its incremental capacity target and underspent its forecasted budget. The product added two new participants in 2022, ending the year with 31 total participants enrolled in the product. During the 2022 control season, the Company dispatched four total PPR events (two in February and two in September).

Changes in 2022
The Company filed for tariff changes in November 2022 to extend the Load Reduction Obligation Period (LROP) to the hours of 12 P.M. through 8 P.M. The PUC approved this change, and it is effective as of January 1, 2023. Customers were notified of the update and all PPR materials reflect the change on the product page website.

Residential Battery Demand Response
The Residential Battery Demand Response pilot is focused on testing the ability of a customer's home battery to provide several types of demand response services, including peak load reduction, solar time shifting, and controlled charging. Participants receive an upfront enrollment incentive in exchange for allowing the Company to use 80 percent of their battery's available capacity for up to 100 events per year. The pilot is one of several pilots and programs around the country that allow the customer to utilize their own battery to participate in a utility-managed demand response program.

2022 Product Achievement
The Company enrolled 38 new customers in the pilot in 2022 and successfully dispatched 65 events, meeting all pilot objectives. The Company has also been working with Resource Innovations (formerly Nexant) to conduct customer surveys and provide evaluation analysis of all pilot events. The Company began planning the transition of the pilot to a formal program at the end of 2022.

Changes in 2022
There were no changes to this product.

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.

2022 Product Achievement
The Saver's Switch® product has been in existence since 2000 and has approximately 191,000 active participants. The Company projects the current participants account for a little over 40-50 percent of the eligible (single family homes with central AC) population. In 2022 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 2022 were previously participants in, and removed from, the Saver's Switch offering. AC Rewards participation continued to show healthy growth through Bring Your Own Thermostat enrollments. The AC Rewards Direct Install channel resumed in full in 2022 post-COVID-19 and began to see a steady stream of signups through this offering. The Company continued marketing AC Rewards and added additional device manufacturers to the qualified product list. In 2021, the Company added a pre-enrollment feature for AC Rewards to allow customers who purchase thermostats on the Xcel Energy Storefront to pre-enroll their eligible device into the offering upon installation. This added channel saw promising engagement in 2022. The AC Rewards product had over 26,000 participants by the end of 2022. The Company dispatched seven AC Rewards demand response events in 2022 including one mandatory event for the first time in the product's history. The mandatory event resulted in less than 2% attrition and enrollments continued throughout the year after the event had passed.

The Company's Smart Water Heater product launched in 2021 but has started slow. 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 2022. The Company is hopeful shipments will arrive in the spring of 2023.

Changes in 2022
There were no changes to this product.

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.

2022 Product Achievement
The product continued to see slow growth in 2022 due to a challenging recruiting and enrollment environment for new participants. 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. The Company is continuously testing and learning from various marketing and advertising strategies since this product is still new utilizing innovative smart technology.

Changes in 2022
There were no changes to this product.

Planning & Research Products

The following provides a brief summary of the performance of each Demand Response planning and research product in 2022.

DR Planning & Administration

DSM Planning & Administration is an indirect product with internal staff that manages all demand response-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 Colorado PUC.

2022 Product Achievement

In 2022, the Company's DR Planning & Administration expenditures were under budget. Activity included supporting consideration of DR in the Company's Strategic Issues and 2023 DSM Plan proceedings, among other proceedings.

DR 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 2022 the Company launched an effort to create a portfolio level evaluation framework to integrate research findings from customers, peer utilities, data analysis, and other information streams into ongoing program operations and support the growth of the DR program.

2022 Product Achievement

Demand Response Program Evaluations ended the year under budget.

DR 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 load management products, services, and measures for the Company. This work enables the Company to identify and promote promising new products, measures, delivery mechanisms, and other opportunities for its customers.

In 2022, the Company managed ongoing pilots and worked to develop new products that may be introduced via a 60-Day notice in 2023. A summary of these activities in 2022 follows:

- Behavioral Demand Response
- Excess Supply Partners
- Heat Saver's Mode

- 2-Way communicating switches for Saver Switch
- Electric Vehicle Critical Peak Pricing pilot
- Residential Battery Demand Response pilot
- Electric Vehicle Optimization

2022 Product Achievement
DR Product Development expenditures were under budget in 2022 largely due to lower-than-anticipated costs for consulting services.

Geo-targeting Pilot - DR
The objective of the Company's Geo-Targeting pilot is 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 will show how its traditional DSM and DR resources can be adapted to address localized system constraints through achievement of high levels of local adoption, coordination and dispatching of demand response and validation of cost effectiveness.

2022 Product Achievement
The pilot continued to engage the Company's distribution operations team to demonstrate how DSM products can be utilized to manage grid operations and residential new construction builders and developers. 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. Additionally, the team is confident in its ability to call targeted feeder-specific events based on historic results.

Changes in 2022
There were no changes to this pilot.

Evaluation, Measurement, and Verification: 2022 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, in order 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 2022, measurement and verification for the majority of direct-impact prescriptive products was conducted by a verification contractor, Resource Innovations (formerly Nexant). For other products, such as ENERGY STAR® New Homes, Whole Home Efficiency, and Business New Construction, the third-party product implementer verified all of 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 section of the 2021/22 DSM 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 ± 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 2022 results and will continue to be used going forward.

For the 2022 product year, the 2021/22 DSM Plan technical assumptions, and subsequent 60-Day Notice changes, were applied to calculate net savings. All savings achieved in 2022 have the realization and installation rates applied to them resulting from M&V conducted for the 2022 M&V assessment period.

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. In order 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 22: Resource Innovations Realization Rate Results

Products Sampled	Confidence / Precision / Cv	Sample Size	kW RR	kWh RR	Therm RR
Business End-Uses					
Compressed Air Efficiency	90 / 20 / 0.40	13	100.000%	100.000%	
Cooling Efficiency	90 / 10 / 0.40	43	100.000%	100.000%	
Heating Efficiency	90 / 10 / 0.40	10	100.000%	100.000%	100.000%
Lighting Efficiency	90 / 10 / 0.40	44	100.000%	100.000%	
Motor Efficiency	90 / 10 / 0.40	41	100.000%	100.000%	
Refrigeration	90 / 20 / 0.40	16	100.000%	100.000%	100.000%
Small Business Lighting	90 / 10 / 0.40	44	100.252%	100.282%	
Residential End-Uses					
Evaporative Cooling	90 / 20 / 0.40	11	100.000%	100.000%	
Home Lighting & Recycling	90 / 10 / 0.40	44	100.000%	100.000%	
Insulation/Air Sealing	90 / 10 / 0.40	43	100.000%	100.000%	100.000%
Refrigerator Recycling	90 / 10 / 0.40	11	100.000%	100.000%	
Residential Heating Systems	90 / 10 / 0.40	43	100.000%	100.000%	100.000%
Smart Thermostats	90 / 10 / 0.40	44	100.000%	100.000%	100.000%
Water Heaters	90 / 20 / 0.40	11			100.000%

2022 M&V Results

Portfolio Results

With its best efforts, Public Service achieved energy efficiency portfolio realization rates of 100.0% for electric demand, 100.0% for electric energy, and 100.0% for natural gas energy in 2022. Applying the results to the portfolio's gross savings, the Company achieved energy efficiency savings of 92,062 net generator kW, 476,612,855 net generator kWh, and 841,127 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 2022. All M&V activities followed the processes described above and outlined in the M&V Plan filed with the 2021/22 DSM 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 2022, 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 13 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 2022 were all related to new construction. As a result, Resource Innovations did not perform site verifications to determine prescriptive realization rates for the 2022. 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 2022, 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 2021/22 DSM Biennial Plan.

Residential Segment

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, RSR 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 2022, 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 2022, M&V of this product was performed by Resource Innovations, following the prescriptive protocols described above. Of these projects, Resource Innovations performed 43 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 2022, 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 2022, 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%.

Income Qualified Segment

Energy Savings Kits

The Energy Savings Kits product provides energy efficiency kits to income qualified 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 eligible income qualified 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 income qualified 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 2022 performance year were completed in late 2021 through 2022 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 2022

Public Service contracted for evaluators to perform evaluations on the following energy efficiency products in 2022: Energy Management Systems, Energy Savings Kits, Lighting Efficiency, and Whole House Efficiency[21].. 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.

Energy Management Systems

An evaluation team led by TRC conducted a process and impact evaluation of Xcel Energy's Colorado Energy Management Systems product. The evaluation was conducted through interviews with: Xcel Energy staff, participating and non-participating trade partners, peer IOUs, participating and non/near-participating customers. The evaluation's key findings are paraphrased below:

- Key Finding 1: Nonparticipating trade partners are not well-informed around peak coincident demand management (PCDM) and are not successfully communicating it to their customers. Peer utilities highlighted the importance of training in their plans to increase incorporation of PCDM.
    - Recommendation 1: Increase training for trade partners to help them explain the importance of PCDM and sell PCDM elements to customers.
- Key Finding 2: Customers and trade partners whose applications were rejected often did not understand the reasons for their rejections, but they would have been interested in adjusting if they had more information earlier.
    - Recommendation 2: Increase communication around reasons for rejections, providing trade partners time to adjust projects and make them cost effective. Consider working with account managers to identify and connect with customers beginning an EMS project.
- Key Finding 3: High incremental costs contribute to low project cost effectiveness and rejections. A peer utility cut proposed project costs in half to account for costs not related to energy savings.
    - Recommendation 3: To more accurately portray the costs related directly to energy savings when assessing project cost effectiveness, consider applying a flat reduction of 50% of EMS project costs to account for incremental costs not related to energy savings like comfort and security.
- Key Finding 4: Customers and trade partners are interested in a more predictable or straightforward rebate. Participants also expressed some desire for the rebate to be bigger and thus more influential.
    - Recommendation 4: Move forward with plans to make some elements of the EMS product more prescriptive.
- Key Finding 5: Product participation is currently low, but upcoming product development updates are likely to capture more product influence.
    - Recommendation 5: Apply prospective of 0.84 when product design updates are implemented. Once participation increases, conduct research to assess whether product changes increased the product's influence in the market compared to the product's level of influence presented in this report.

[21] The Whole House Efficiency evaluation was not finalized in time for this filing. The Company will publish 60-Day Notices for any proposed changes coming from the evaluation.

- Key Finding 6: It can be difficult to collect enough data directly from customers to track customers and understand customer experience, particularly for products with low participation.
    - Recommendation 6: Ensure best practice documentation policies are widely disseminated and become standard practice.

All of 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.

Energy Savings Kits

An evaluation team led by TRC conducted a process evaluation of Xcel Energy's Colorado Energy Savings Kits product. The evaluation was conducted through interviews with: Xcel Energy staff, participating customers, and peer utilities. Participating customers were also surveyed. The evaluation's key findings are paraphrased below:

- Key Finding 1: Respondents were least satisfied with energy and/or bill savings realized following installation of Energy Savings Kits items.
    - Recommendation 1: Re-evaluate the communication of expected bill savings on participants' energy bills that could result from product participation.
- Key Finding 2: Almost a fifth (18.4%) of respondents were worried that the product was a scam prior to participation.
    - Recommendation 2: Provide additional opportunities for customers to request Energy Savings Kits.
- Key Finding 3: Most survey respondents (90.8%) are very interested in choosing energy-efficient items themselves through custom kits.
    - Recommendation 3: Analyze the feasibility of providing customizable kit options and implement if it is feasible.
- Key Finding 4: Most survey respondents (89.2%) would like to receive an advanced power strip as part of the Energy Savings Kits.
    - Recommendation 4: Analyze the impacts of adding additional measures to the Energy Savings Kits Product.
- Key Finding 5: As part of participation in the Energy Savings Kits Product, survey respondents would most prefer to receive information regarding other assistance or products they may be eligible for.
    - Recommendation 5: Reframe information provided on other assistance programs to highlight the advisory role of partner organizations such as Energy Outreach Colorado.

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.

Lighting Efficiency

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

- Key Finding 1: The Product is influential in encouraging customers to adopt LED technologies.

    - Recommendation 1: The evaluation team recommends a prospective NTGR equal to the retrospective value of 0.81 if several conditions (further detailed in the report) are met.
- Key Finding 2: Nearly half of peer utilities do not calculate a NTGR and those that did used data several years old or included non-lighting measures.
    - Recommendation 2: Discuss the value of continuing to calculate and apply NTGR to savings estimates in future strategic issues conversations with stakeholders.
- Key Finding 3: Trade partners would like more communication and training from Xcel Energy.
    - Recommendation 3: Provide additional trade partner training and regular opportunities for engaging with Xcel Energy staff.
- Key Finding 4: Both customers and trade partners expressed a desire for a broader array of eligible products.
    - Recommendation 4a: Assess the feasibility of measures suggested by trade partners for inclusion in prescriptive rebates.
    - Recommendation 4b: Communicate and promote any new additions or changes to customers and trade partners.
- Key Finding 5: Both customers and trade partners expressed concern about the complexity of applications (particularly custom).
    - Recommendation 5: Look for ways to simplify the application process for
    - customers and trade partners.
- Key Finding 6: High-level program design among peer utilities is similar to the Xcel Energy program design, however, a wider variation in specifics occurs.
    - Recommendation 6: Assess the pros and cons of the program design specifics that differ from the Xcel Energy design to determine whether changes could be beneficial to the Product.
- Key Finding 7: Networked lighting controls (NLCs) have experienced slow uptake due knowledge gaps for both customers and trade partners.
    - Recommendation 7: Increase marketing emphasis on NLCs.
- Key Finding 8: Market actors all noted significant impacts on projects, their business, and the program, respectively from the Covid-19 pandemic.

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 24a-b and Tables 25a-b, which describe the installation rates and realization rates used to calculate net, verified savings by program component. The column headings of these tables are defined in Table 23:

Table 23: Defined Terms

Column Heading	Definition
2022 Product	The DSM product offered by Public Service in 2022.
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 24a: Business Segment Installation Rates, Realization Rates, and Final Net, Verified Savings by Program Component

2022 Products	Customer kWh	Peak Coincident Customer kW	Gross Dth	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 Energy Assessments	24,864,388	3,761	1,814	4,075	26,264,829	4,075	26,264,829	1,814	4,075	26,264,829	1,814
Business HVAC+R Systems	12,426,111	3,470	17,494	3,760	13,125,989	3,760	13,125,989	17,494	3,269	11,196,422	16,292
Compressed Air Efficiency	1,505,161	252	0	273	1,589,936	273	1,589,936	0	245	1,426,863	0
Custom Efficiency	860,332	129	816	139	908,789	139	908,789	816	121	790,646	710
Data Center Efficiency	4,742,687	551	0	597	5,009,810	597	5,009,810	0	597	5,009,810	0
Energy Management Systems	1,009,383	131	425	142	1,066,235	142	1,066,235	425	124	927,624	383
LED Street Lighting	1,604,556	0	0	0	1,694,930	0	1,694,930	0	0	1,525,437	0
Lighting Efficiency	96,206,058	16,032	0	17,372	101,624,686	17,372	101,624,686	0	13,642	79,482,937	0
New Construction	66,102,931	15,848	151,283	17,172	69,826,056	17,172	69,826,056	151,283	15,076	62,162,594	131,291
Self Direct	1,763,453	178	0	193	1,862,776	193	1,862,776	0	175	1,695,126	0
Small Business Solutions	40,178,639	7,278	1,627	7,886	42,441,627	7,847	42,233,572	1,627	6,451	34,519,317	1,530
Strategic Energy Management	66,419,443	12,541	0	13,588	70,160,395	13,588	70,160,395	0	13,588	70,160,395	0
Business Program EE Total	**317,683,142**	**60,170**	**173,459**	**65,197**	**335,576,057**	**65,159**	**335,368,002**	**173,459**	**57,363**	**295,162,001**	**152,019**

Table 24b: Business Segment Installation Rates, Realization Rates, and Final Net, Verified Savings by Program Component

2022 Products	End-Use/Measure Type	Customer kWh	Peak Coincident Customer kW	Gross Dth	Demand Line Loss	Energy Line Loss	Elec Demand NTG	Elec Energy NTG	Gas NTG	Installation Rate	Demand (kW) Realization Rate	Energy (kWh) Realization Rate	Energy (Dth) 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 Energy Assessments		24,864,388	3,761	1,814	7.711%	5.332%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	4,075	26,264,829	4,075	26,264,829	1,814	4,075	26,264,829	1,814
Business HVAC+R Systems	Cooling Efficiency	19,296	28	0	7.711%	5.332%	71.0%	71.0%	N/A	100.0%	100.0%	100.0%	N/A	30	20,383	30	20,383	N/A	21	14,472	0
	Motors & VFDs	5,854,458	864	0	7.711%	5.332%	81.0%	81.0%	N/A	100.0%	100.0%	100.0%	N/A	936	6,184,200	936	6,184,200	N/A	758	5,009,202	N/A
	Heating Efficiency	0	0	8,220	7.711%	5.332%	86.0%	86.0%	86.0%	100.0%	100.0%	100.0%	100.0%	0	0	0	0	8,220	0	0	7,069
	Custom	953,906	91	400	7.711%	5.332%	87.0%	87.0%	87.0%	100.0%	100.0%	100.0%	100.0%	99	1,007,633	99	1,007,633	400	86	876,641	348
	Mini-Splits & DX Units	5,315,738	2,452	0	7.711%	5.332%	89.0%	89.0%	N/A	100.0%	100.0%	100.0%	N/A	2,657	5,615,137	2,657	5,615,137	N/A	2,364	4,997,472	0
	Food Service, Boiler Controls	282,713	36	8,875	7.711%	5.332%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	39	298,636	39	298,636	8,875	39	298,636	8,875
Compressed Air Efficiency		386,195	51	0	7.711%	5.332%	89.0%	89.0%	100.0%	100.0%	100.0%	100.0%	N/A	55	407,947	55	407,947	N/A	49	363,073	0
		1,118,966	201	0	7.711%	5.332%	90.0%	90.0%	100.0%	100.0%	100.0%	100.0%	N/A	218	1,181,990	218	1,181,990	N/A	196	1,063,791	0
Custom Efficiency	Custom	860,332	129	816	7.711%	5.332%	87.0%	87.0%	87.0%	100.0%	100.0%	100.0%	100.0%	139	908,789	139	908,789	816	121	790,646	710
Data Center Efficiency	New Construction	4,742,687	551	0	7.711%	5.332%	100.0%	100.0%	N/A	100.0%	100.0%	100.0%	N/A	597	5,009,810	597	5,009,810	N/A	597	5,009,810	0
Energy Management Systems	EMS	1,009,383	131	425	7.711%	5.332%	87.0%	87.0%	90.0%	100.0%	100.0%	100.0%	100.0%	142	1,066,235	142	1,066,235	425	124	927,624	383
LED Street Lighting		1,604,556	0	0	7.711%	5.332%	90.0%	90.0%	N/A	100.0%	100.0%	100.0%	N/A	0	1,694,930	0	1,694,930	N/A	0	1,525,437	0
Lighting Efficiency	Custom, Retrofit, Controls	55,947,320	8,976	0	7.711%	5.332%	73.0%	73.0%	N/A	100.0%	100.0%	100.0%	N/A	9,726	59,098,449	9,726	59,098,449	N/A	7,100	43,141,868	0
	Midstream	19,763,685	3,443	0	7.711%	5.332%	78.0%	78.0%	N/A	100.0%	100.0%	100.0%	N/A	3,731	20,876,838	3,731	20,876,838	N/A	2,910	16,283,933	0
	Indoor Agricultural Lighting	18,842,045	3,259	0	7.711%	5.332%	92.0%	92.0%	N/A	100.0%	100.0%	100.0%	N/A	3,531	19,903,288	3,531	19,903,288	N/A	3,249	18,311,025	0
	Network Lighting Controls	1,653,008	353	0	7.711%	5.332%	100.0%	100.0%	N/A	100.0%	100.0%	100.0%	N/A	383	1,746,111	383	1,746,111	N/A	383	1,746,111	0
New Construction		43,885,557	12,692	142,141	7.711%	5.332%	86.0%	86.0%	86.0%	100.0%	100.0%	100.0%	100.0%	13,753	46,357,330	13,753	46,357,330	142,141	11,827	39,867,304	122,241
		22,217,374	3,156	9,142	7.711%	5.332%	95.0%	95.0%	99.0%	100.0%	100.0%	100.0%	100.0%	3,419	23,468,726	3,419	23,468,726	9,142	3,248	22,295,290	9,050
Self Direct	Custom	1,763,453	178	0	7.711%	5.332%	91.0%	91.0%	N/A	100.0%	100.0%	100.0%	N/A	193	1,862,776	193	1,862,776	N/A	175	1,695,126	0
Small Business Solutions	Midstream Lighting	30,872,879	5,379	0	7.711%	5.332%	78.0%	78.0%	78.0%	99.0%	100.3%	100.3%	100.0%	5,828.10	32,611,737	5,784	32,376,504	N/A	4,512	25,253,673	0
	Refrigeration & Lighting Controls	165,585	8	1,627	7.711%	5.332%	94.0%	94.0%	94.0%	100.0%	100.0%	100.0%	100.0%	9	174,911	9	174,911	1,627	9	164,417	1,530
	Retrofit Lighting	9,140,175	1,890	0	7.711%	5.332%	94.0%	94.0%	94.0%	100.0%	100.0%	100.3%	100.0%	2,048	9,654,978	2,054	9,682,157	N/A	1,930	9,101,228	0
Strategic Energy Management	All Measures	66,419,443	12,541	0	7.711%	5.332%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	13,588	70,160,395	13,588	70,160,395	0	13,588	70,160,395	0
Business Program Total		**317,683,142**	**60,170**	**173,459**	**7.711%**	**5.332%**	**88.0%**	**88.0%**	**87.6%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**65,197**	**335,576,057**	**65,159**	**335,368,002**	**173,459**	**57,363**	**295,162,001**	**152,019**

Table 25a: Residential Segment and Income Qualified Segment Installation Rates, Realization Rates, and Final Net, Verified Savings by Program Component

2022 Products	Customer kWh	Peak Coincident Customer kW	Gross Dth	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
Residential Program											
Energy Efficient Showerhead	652,170	56	44,558	62	696,614	37	450,432	28,503	35	423,406	26,793
ENERGY STAR New Homes	5,249,987	1,440	139,027	1,585	5,607,762	1,585	5,607,762	139,027	712	3,566,922	100,109
Home Energy Insights	18,591,988	2,470	83,799	2,719	19,858,992	2,719	19,858,992	83,799	2,719	19,858,992	83,799
Home Energy Squad	1,813,417	387	8,102	426	1,936,997	426	1,936,997	8,102	426	1,936,997	8,102
Home Lighting & Recycling	188,284,416	25,366	0	27,785	200,527,579	27,507	198,522,303	0	13,300	95,615,379	0
Insulation & Air Sealing	587,015	893	64,686	983	627,019	983	627,019	64,686	875	558,047	57,571
Mutifamily Buildings	5,286,279	632	2,262	689	5,605,897	689	5,605,897	2,262	689	5,605,897	2,262
Refrigerator & Freezer Recycling	3,987,771	470	0	517	4,259,529	517	4,259,529	0	377	3,109,456	0
Residential Heating & Cooling	6,907,574	10,876	216,510	11,968	7,378,310	11,968	7,378,310	216,510	9,366	5,700,792	192,207
School Education Kits	25,186,616	9,905	312,329	10,900	26,903,029	2,114	15,098,513	64,797	2,114	15,098,513	64,797
Whole Home Efficiency	597	1	147	1	638	1	638	147	1	740	168
Residential Program EE Total	**256,547,830**	**52,496**	**871,418**	**57,634**	**273,402,366**	**48,545**	**259,346,392**	**607,832**	**30,614**	**151,475,141**	**535,806**
Income Qualified											
Energy Savings Kits	350,763	38	2,471	42	374,667	32	289,316	1,847	32	289,316	1,847
Multifamily Weatherization	1,347,905	170	6,842	187	1,439,762	187	1,439,762	6,842	187	1,439,762	6,842
Non-Profit	1,616,132	373	1,643	404	1,707,158	404	1,707,158	1,643	404	1,707,158	1,643
Single Family Weatherization	25,088,899	3,177	142,970	3,497	26,798,653	3,463	26,539,477	142,970	3,463	26,539,477	142,970
Income Qualified Program Total	**28,403,699**	**3,758**	**153,925**	**4,129**	**30,320,239**	**4,085**	**29,975,713**	**153,301**	**4,085**	**29,975,713**	**153,301**

Table 25b: Residential Segment and Income Qualified Segment Installation Rates, Realization Rates, and Final Net, Verified Savings by Program Component

2022 Products	End-Use/Measure Type	Customer kWh	Peak Coincident Customer kW	Gross Dth	Demand Line Loss	Energy Line Loss	Elec Demand NTG	Elec Energy NTG	Gas NTG	Installation Rate	Demand (kW) Realization Rate	Energy (kWh) Realization Rate	Energy (Dth) 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
Residential Program																					
Energy Efficient Showerhead	Primary Showerhead	540,447	39	36,126	9.13%	6.38%	94.0%	94.0%	94.0%	71.5%	100.0%	100.0%	100.0%	43	577,277	31	412,753	25,830	29	387,988	24,280
	Kitchen Aerator	42,443	6	3,099	9.13%	6.38%	94.0%	94.0%	94.0%	25.0%	100.0%	100.0%	100.0%	7	45,335	2	11,334	775	2	10,654	728
	Bath Aerator	69,280	11	5,334	9.13%	6.38%	94.0%	94.0%	94.0%	35.6%	100.0%	100.0%	100.0%	12	74,001	4	26,344	1,899	4	24,764	1,785
ENERGY STAR New Homes	All Measures	4,420,127	760	136,704	9.13%	6.38%	73.0%	73.0%	73.0%	100.0%	100.0%	100.0%	100.0%	836	4,721,349	836	4,721,349	136,704	610	3,446,585	99,794
	Codes & Standards	829,860	680	2,323	9.13%	6.38%	13.6%	13.6%	13.6%	100.0%	100.0%	100.0%	100.0%	749	886,413	749	886,413	2,323	102	120,338	315
Home Energy Insights		18,591,988	2,470	83,799	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	2,719	19,858,992	2,719	19,858,992	83,799	2,719	19,858,992	83,799
Home Energy Squad		1,813,417	387	8,102	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	426	1,936,997	426	1,936,997	8,102	426	1,936,997	8,102
Home Lighting & Recycling	Res LED Bulb Reflectors	24,624,927	3,149	0	9.13%	6.38%	22.2%	22.2%	N/A	99.0%	100.0%	100.0%	N/A	3,466	26,303,063	3,431	26,040,032	N/A	762	5,780,887	0
	Bus LED Bulb Reflectors	7,806,831	1,200	0	7.71%	5.33%	22.2%	22.2%	N/A	99.0%	100.0%	100.0%	N/A	1,301	8,246,537	1,288	8,164,071	N/A	286	1,812,424	0
	Res LED Globe Bulbs	97,816,265	12,509	0	9.13%	6.38%	47.9%	47.9%	N/A	99.0%	100.0%	100.0%	N/A	13,766	104,482,231	13,628	103,437,409	N/A	6,528	49,546,519	0
	Bus LED Globe Bulbs	28,444,491	4,374	0	7.71%	5.33%	47.9%	47.9%	N/A	99.0%	100.0%	100.0%	N/A	4,739	30,046,574	4,692	29,746,109	N/A	2,247	14,248,386	0
	Res LED 3-Way Bulbs	672,218	86	0	9.13%	6.38%	71.8%	71.8%	N/A	99.0%	100.0%	100.0%	N/A	95	718,028	94	710,847	N/A	67	510,388	0
	Bus LED 3-Way Bulbs	213,101	33	0	7.71%	5.33%	71.8%	71.8%	N/A	99.0%	100.0%	100.0%	N/A	36	225,104	35	222,853	N/A	25	160,008	0
	Res LED Tubes	15,443,499	1,975	0	9.13%	6.38%	78.0%	78.0%	N/A	99.0%	100.0%	100.0%	N/A	2,173	16,495,940	2,152	16,330,981	N/A	1,678	12,738,165	0
	Bus LED Tubes	13,263,083	2,039	0	7.71%	5.33%	78.0%	78.0%	N/A	99.0%	100.0%	100.0%	N/A	2,210	14,010,102	2,188	13,870,001	N/A	1,706	10,818,601	0
Insulation & Air Sealing		587,015	893	64,686	9.13%	6.38%	89.0%	89.0%	89.0%	100.0%	100.0%	100.0%	100.0%	983	627,019	983	627,019	64,686	875	558,047	57,571
Mutifamily Buildings	Business Measures	3,436,049	396	183	7.71%	5.33%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	429	3,629,578	429	3,629,578	183	429	3,629,578	183
	Residential Measures	1,850,230	237	2,079	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	260	1,976,319	260	1,976,319	2,079	260	1,976,319	2,079
Refrigerator & Freezer Recycling		3,987,771	470	0	9.13%	6.38%	73.0%	73.0%	N/A	100.0%	100.0%	100.0%	N/A	517	4,259,529	517	4,259,529	N/A	377	3,109,456	0
Residential Heating & Cooling	Mini-Splits	575,356	107	0	9.13%	6.38%	57.0%	57.0%	57.0%	100.0%	100.0%	100.0%	100.0%	118	614,565	118	614,565	0	67	350,302	0
	Evaporative Coolers	1,832,328	3,433	0	9.13%	6.38%	70.0%	70.0%	70.0%	100.0%	100.0%	100.0%	100.0%	3,778	1,957,197	3,778	1,957,197	0	2,644	1,370,038	0
	Quality Installation ACs	2,510,104	4,261	35,961	9.13%	6.38%	73.0%	73.0%	73.0%	100.0%	100.0%	100.0%	100.0%	4,689	2,681,162	4,689	2,681,162	35,961	3,423	1,957,248	26,252
	Premium Evaporative Coolers	642,032	928	0	9.13%	6.38%	85.1%	85.1%	85.1%	100.0%	100.0%	100.0%	100.0%	1,021	685,785	1,021	685,785	0	869	583,603	0
	Furnace	0	0	101,609	9.13%	6.38%	86.0%	86.0%	86.0%	100.0%	100.0%	100.0%	100.0%	0	0	0	0	101,609	0	0	87,384
	Water Heaters	0	0	3,683	9.13%	6.38%	90.0%	90.0%	90.0%	100.0%	100.0%	100.0%	100.0%	0	0	0	0	3,683	0	0	3,315
	Heat Pumps	1,347,754	2,147	75,257	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	2,363	1,439,601	2,363	1,439,601	75,257	2,363	1,439,601	75,257
School Education Kits	LED: 4 x 9W	6,140,794	785	N/A	9.13%	6.38%	100.0%	100.0%	N/A	90.1%	100.0%	100.0%	N/A	864	6,559,276	778	5,909,907	N/A	778.08	5,909,907	0.00
	LED: 2 x 11 W	3,065,072	392	N/A	9.13%	6.38%	100.0%	100.0%	N/A	89.3%	100.0%	100.0%	N/A	431	3,273,950	385	2,923,637	N/A	384.92	2,923,637	0.00
	LED: 2 x 15W	1,462,750	187	N/A	9.13%	6.38%	100.0%	100.0%	N/A	87.3%	100.0%	100.0%	N/A	206	1,562,433	180	1,364,004	N/A	179.58	1,364,004	0.00
	4W-8W LEDs	2,095,670	268	N/A	9.13%	6.38%	100.0%	100.0%	N/A	90.0%	100.0%	100.0%	N/A	295	2,238,485	265	2,014,637	N/A	265.25	2,014,637	0.00
	Nightlight	1,065,375	0	N/A	9.13%	6.38%	100.0%	100.0%	N/A	89.1%	100.0%	100.0%	N/A	0	1,137,978	0	1,013,938	N/A	0.00	1,013,938	0.00
	Showerhead	1,601,951	116	94,169	9.13%	6.38%	100.0%	100.0%	100.0%	48.2%	100.0%	100.0%	100.0%	128	1,711,120	62	824,760	45,389	61.69	824,760	45,389.46
	Kitchen Aerator	169,590	23.93	10,030	9.13%	6.38%	100.0%	100.0%	100.0%	43.0%	100.0%	100.0%	100.0%	26	181,147	11	77,893	4,313	11.32	77,893	4,312.86
	Bathroom Aerator 0.5gpm	276,471	39	16,234	9.13%	6.38%	100.0%	100.0%	100.0%	45.7%	100.0%	100.0%	100.0%	43	295,312	20	134,958	7,419	19.62	134,958	7,418.71
	Advanced Powerstrip	471,384	60	N/A	9.13%	6.38%	100.0%	100.0%	N/A	90.8%	100.0%	100.0%	100.0%	66	503,508	60	457,185	N/A	59.53	457,185	0.00
	Programmable Thermostat	8,837,559	8,035	191,896	9.13%	6.38%	100.0%	100.0%	100.0%	4.0%	100.0%	100.0%	100.0%	8,842	9,439,819	354	377,593	7,676	353.68	377,593	7,675.85
Whole Home Efficiency	Gas Only Smart Thermostat	0	0	16	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0	0	0	0	16	0	0	16
	All Other Measures	597	1	131	9.13%	6.38%	116.0%	116.0%	116.0%	100.0%	100.0%	100.0%	100.0%	1	638	1	638	131	1	740	151
Residential Program Total		**256,547,830**	**52,496**	**871,418**	**9.13%**	**6.38%**	**63.1%**	**58.4%**	**88.2%**	**84.2%**	**100.0%**	**100.0%**	**100.0%**	**57,634**	**273,402,366**	**48,545**	**259,346,392**	**607,832**	**30,614**	**151,475,141**	**535,806**
Income Qualified																					
Energy Savings Kits	LED	239,320	28	0	9.13%	6.38%	100.0%	100.0%	N/A	78.3%	100.0%	100.0%	N/A	31	255,629	24	200,158	N/A	24	200,158	N/A
	Showerhead	89,041	6	1,943	9.13%	6.38%	100.0%	100.0%	100.0%	77.3%	100.0%	100.0%	100.0%	7	95,109	5	73,519	1,502	5	73,519	1,502
	Kitchen Aerator	11,033	2	264	9.13%	6.38%	100.0%	100.0%	100.0%	64.8%	100.0%	100.0%	100.0%	2	11,785	1	7,637	171	1	7,637	171
	Bathroom Aerator 1.0gpm	11,369	2	264	9.13%	6.38%	100.0%	100.0%	100.0%	65.9%	100.0%	100.0%	100.0%	2	12,144	1	8,003	174	1	8,003	174
Multifamily Weatherization		1,347,905	170	6,842	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	187	1,439,762	187	1,439,762	6,842	187	1,439,762	6,842
Non-Profit		1,616,132	373	1,643	7.71%	5.33%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	404	1,707,158	404	1,707,158	1,643	404	1,707,158	1,643
Single Family Weatherization	Home Lighting Self-Install	24,264,019	3,101	0	9.13%	6.38%	100.0%	100.0%	100.0%	99.0%	100.0%	100.0%	100.0%	3,412	25,917,559	3,378	25,658,384	0	3,378	25,658,384	0
	All Other Measures	824,880	77	142,970	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	84	881,094	84	881,094	142,970	84.42	881,094	142,970
Income Qualified Program Total		**28,403,699**	**3,758**	**153,925**	**8.99%**	**6.32%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**4,129**	**30,320,239**	**4,085**	**29,975,713**	**153,301**	**4,085**	**29,975,713**	**153,301**

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 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 first determined at the measure level; individual measures are then combined 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 26 and 27 below.

The Company is reporting 2022 electric and natural gas portfolio MTRC test ratio results of 2.19 and 1.82, respectively. These results are shown in Table 26 and Table 27. The portfolio results are based upon electric net economic benefits of $230.1 million (including social cost of carbon emissions benefits of $75.7 million) and natural gas net economic benefits $38.6 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:[22]

- Business Program: Tables 15a (electric) and 15b (gas)
- Residential Program: Tables 17a (electric) and 17b (gas)
- Low-Income Program: Tables 18a (electric) and 18b (gas)
- Indirect Program: Tables 19a (electric) and 19b (gas)
- Demand Response Program: Table 21 (electric)

[22] 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: 2022 Electric DSM Portfolio Cost-Benefit Analysis (CBA)

PORTFOLIO TOTAL					2022 ELECTRIC		ACTUALS
2022 Net Present Cost Benefit Summary Analysis For All Participants					Input Summary and Totals		
			Rate	Modified Total	Program "Inputs" per Customer kW and per Participant		
	Participant Test ($Total)	Utility Test ($Total)	Impact Test ($Total)	Resource Test ($Total)	Lifetime (Weighted on Generator kWh)	A	13.8 years
					T & D Loss Factor (Energy)	B	5.73%
					T & D Loss Factor (Demand)	C	8.12%
Benefits					Net-to-Gross (Energy)	D	76.74%
					Net-to-Gross (Demand)	E	87.44%
Avoided Revenue Requirements					**Installation Rate (Energy)**	F	**97.73%**
Generation Capacity	N/A	$110,306,671	$110,306,671	$110,306,671	**Installation Rate (Demand)**	G	**95.03%**
Trans. & Dist. Capacity	N/A	$11,564,114	$11,564,114	$11,564,114	Net coincident kW Saved at Generator	H	0.03 kW
Marginal Energy	N/A	$104,443,571	$104,443,571	$104,443,571	Gross Annual kWh Saved at Customer	I	110.17 kWh
Avoided Emissions (CO2)	N/A	N/A	N/A	$75,690,397	Net Annual kWh Saved at Generator	J	87.16 kWh
Subtotal				$302,004,752			
Non-Energy Benefits Adder (22.0%)				$49,728,096			
Subtotal	N/A	$226,314,355	$226,314,355	$351,732,849	Program Summary All Participants		
					Total Budget	K	**$101,929,406**
Participant Benefits					**Net coincident kW Saved at Generator**	L	**170,520 kW**
Bill Reduction - Electric	$467,864,731	N/A	N/A	N/A	Gross Annual kWh Saved at Customer	M	603,274,223 kWh
Participant Rebates and Incentives	$61,315,941	N/A	N/A	$61,315,941	**Net Annual kWh Saved at Generator**	N	**477,289,002 kWh**
Incremental Capital Savings	$9,602,877	N/A	N/A	$6,723,430	**Total MTRC Net Benefits with Adder**	O	**$230,068,032**
Incremental O&M Savings	$3,289,174	N/A	N/A	$3,129,509	**Total MTRC Net Benefits without Adder**	P	**$180,339,936**
Subtotal	$542,072,724	N/A	N/A	$71,168,880			
Total Benefits	$542,072,724	$226,314,355	$226,314,355	$422,901,729	**Utility Program Cost per kWh Lifetime**	K/(A x N)	**$0.0155**
Costs					**Utility Program Cost per kW at Gen**	K/ L	**$598**
Utility Project Costs					**Avoided Lifetime CO2 Emissions, Total Program (tons CO2)**		**1,866,687**
Program Planning & Design	N/A	$0	$0	$0			
Administration & Program Delivery	N/A	$32,962,862	$32,962,862	$32,962,862			
Advertising/Promotion/Customer Ed	N/A	$4,434,665	$4,434,665	$4,434,665			
Participant Rebates and Incentives	N/A	$61,315,941	$61,315,941	$61,315,941			
Equipment & Installation	N/A	$344,414	$344,414	$344,414			
Measurement and Verification	N/A	$2,871,524	$2,871,524	$2,871,524			
Subtotal	N/A	$101,929,406	$101,929,406	$101,929,406			
Utility Revenue Reduction							
Revenue Reduction - Electric	N/A	N/A	$467,864,731	N/A			
Subtotal	N/A	N/A	$467,864,731	N/A			
Participant Costs							
Incremental Capital Costs	$104,341,287	N/A	N/A	$89,424,806			
Incremental O&M Costs	$1,774,717	N/A	N/A	$1,479,485			
Subtotal	$106,116,003	N/A	N/A	$90,904,291			
Total Costs	$106,116,003	$101,929,406	$569,794,137	$192,833,697			
Net Benefit (Cost)	$435,956,720	$124,384,949	($343,479,782)	**$230,068,032**			
Benefit/Cost Ratio	5.11	2.22	0.40	**2.19**			

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

Table 27: 2022 Natural Gas DSM Portfolio Cost-Benefit Analysis (CBA)

PORTFOLIO TOTAL					2022 GAS		ACTUALS
2022 Net Present Cost Benefit Summary Analysis For All Participants					Input Summary and Totals		
			Rate	Modified	Program "Inputs" per Dth		
	Participant Test ($Total)	Utility Test ($Total)	Impact Test ($Total)	Total Resource Test ($Total)	Lifetime (Weighted on Dth)	A	13.6 years
					Net-to-Gross (Weighted on Dth)	B	92.12%
					Install Rate (Weighted on Dth)	C	77.96%
Benefits							
					Program Summary per Participant		
Avoided Revenue Requirements					Gross Annual Dth Saved	D	5.6
Commodity Cost Reduction	N/A	$23,982,490	$23,982,490	$23,982,490	Net Annual Dth Saved	E	4.0
Variable O&M Savings	N/A	$384,555	$384,555	$384,555			
Demand Savings	N/A	$2,688,911	$2,688,911	$2,688,911			
Subtotal				$27,055,957	Program Summary All Participants		
Non-Energy Benefits Adder (19.1%)				$5,179,950	**Total Budget**	F	**$18,633,357**
Subtotal	N/A	$27,055,957	$27,055,957	$32,235,907	Gross Annual Dth Saved	G	**1,198,803 Dth**
					Net Annual Dth Saved	H	**841,127 Dth**
Participant Benefits					**Total MTRC Net Benefits with Adder**	I	**$38,635,427**
Bill Reduction - Gas	$43,389,021	N/A	N/A	N/A	**Total MTRC Net Benefits without Adder**	J	**$33,455,477**
Participant Rebates and Incentives	$12,828,314	N/A	N/A	$12,828,314			
Incremental Capital Savings	$0	N/A	N/A	$0	**Utility Program Cost per Dth Lifetime**	F /(A x H)	**$1.6345**
Incremental O&M Savings	$43,210,791	N/A	N/A	$40,527,771			
Subtotal	$99,428,126	N/A	N/A	$53,356,085			
Total Benefits	$99,428,126	$27,055,957	$27,055,957	$85,591,992			
Costs							
Utility Project Costs							
Program Planning & Design	N/A	$0	$0	$0			
Administration & Program Delivery	N/A	$4,172,140	$4,172,140	$4,172,140			
Advertising/Promotion/Customer Ed	N/A	$448,600	$448,600	$448,600			
Participant Rebates and Incentives	N/A	$12,828,314	$12,828,314	$12,828,314			
Equipment & Installation	N/A	$115,402	$115,402	$115,402			
Measurement and Verification	N/A	$1,068,901	$1,068,901	$1,068,901			
Subtotal	N/A	$18,633,357	$18,633,357	$18,633,357			
Utility Revenue Reduction							
Revenue Reduction - Gas	N/A	N/A	$43,389,021	N/A			
Subtotal	N/A	N/A	$43,389,021	N/A			
Participant Costs							
Incremental Capital Costs	$32,494,544	N/A	N/A	$28,323,208			
Incremental O&M Costs	$0	N/A	N/A	$0			
Subtotal	$32,494,544	N/A	N/A	$28,323,208			
Total Costs	$32,494,544	$18,633,357	$62,022,378	$46,956,565			
Net Benefit (Cost)	$66,933,582	$8,422,599	($34,966,422)	**$38,635,427**			
Benefit/Cost Ratio	3.06	1.45	0.44	**1.82**			

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 2022 calendar year achievements.

A. 2022 Electric Programs

In order to determine the cost-effectiveness of its electric energy efficiency and load management programs from January 1, 2022 through December 31, 2022, 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 Agreement[23] within Proceeding No. 17A-0462EG.

	CT		CT
Year	**Gen Capacity $/kw-yr**	**Year**	**Gen Capacity $/kW-yr**
2022	$93.89	**2032**	$114.44
2023	$95.76	**2033**	$116.73
2024	$97.68	**2034**	$119.07
2025	$99.63	**2035**	$121.45
2026	$101.62	**2036**	$123.88
2027	$103.66	**2037**	$126.36
2028	$105.73	**2038**	$128.88
2029	$107.85	**2039**	$131.46
2030	$110.00	**2040**	$134.10
2031	$112.20	**2041**	$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."[24] 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

[23] Approved by Decision No. C18-0417 at ¶104.
[24] *See* Decision No. C14-0731 at ¶97.

Shawn M. White in Proceeding No. 16A-0512EG and affirmed in Proceeding No. 17A-0462EG.[25] 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**
2022	$9.24	$2.51	$11.76	**2032**	$11.27	$3.07	$14.33
2023	$9.43	$2.57	$11.99	**2033**	$11.49	$3.13	$14.62
2024	$9.62	$2.62	$12.23	**2034**	$11.72	$3.19	$14.91
2025	$9.81	$2.67	$12.48	**2035**	$11.96	$3.25	$15.21
2026	$10.01	$2.72	$12.73	**2036**	$12.20	$3.32	$15.51
2027	$10.21	$2.78	$12.98	**2037**	$12.44	$3.38	$15.82
2028	$10.41	$2.83	$13.24	**2038**	$12.69	$3.45	$16.14
2029	$10.62	$2.89	$13.51	**2039**	$12.94	$3.52	$16.46
2030	$10.83	$2.95	$13.78	**2040**	$13.20	$3.59	$16.79
2031	$11.05	$3.01	$14.05	**2041**	$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**
2022	$17.46	**2032**	$24.85
2023	$18.01	**2033**	$26.08
2024	$18.90	**2034**	$27.40
2025	$20.78	**2035**	$27.28
2026	$23.47	**2036**	$28.45
2027	$24.50	**2037**	$29.67
2028	$24.26	**2038**	$30.95
2029	$23.17	**2039**	$32.28
2030	$23.79	**2040**	$33.67
2031	$25.19	**2041**	$35.11

[25] *See* Decision No. C18-0417 at Ordering ¶104.

4. **Estimated Annual Avoided Emissions Costs (includes CO_2) (*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
2022	$50.19	**2032**	$73.98
2023	$52.38	**2033**	$76.91
2024	$54.64	**2034**	$79.93
2025	$56.97	**2035**	$83.04
2026	$59.38	**2036**	$86.24
2027	$61.85	**2037**	$89.53
2028	$64.40	**2038**	$92.93
2029	$65.69	**2039**	$96.42
2030	$68.37	**2040**	$100.01
2031	$71.13	**2041**	$103.71

B. 2021 Natural Gas Programs

In order to determine the cost-effectiveness of its gas programs from January 1, 2022 through December 31, 2022, 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.

	$/Dth			$/Dth	
Year	**Residential**	**Business**	**Year**	**Residential**	**Business**
2022	$2.17	$2.14	**2032**	$3.74	$3.71
2023	$2.32	$2.31	**2033**	$3.87	$3.84
2024	$2.38	$2.36	**2034**	$4.01	$3.98
2025	$2.57	$2.55	**2035**	$4.22	$4.19
2026	$2.76	$2.73	**2036**	$4.35	$4.32
2027	$2.95	$2.93	**2037**	$4.55	$4.52
2028	$3.10	$3.07	**2038**	$4.73	$4.70
2029	$3.26	$3.24	**2039**	$4.91	$4.89
2030	$3.44	$3.41	**2040**	$5.07	$5.04
2031	$3.60	$3.57	**2041**	$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
2022-2041	$0.05

3. **Estimated Annual Avoided Reservation Costs (used to estimate capacity savings – Peak Day Dth savings estimated as 1 percent 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
2022-2041	$35.02

Appendix B: Cost-Benefit Analyses

The following section provides the cost-effectiveness analyses for all products and programs included in the Company's 2022 DSM Plan.

PORTFOLIO TOTAL

2022 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	$110,306,671	$110,306,671	$110,306,671
Trans. & Dist. Capacity	N/A	$11,564,114	$11,564,114	$11,564,114
Marginal Energy	N/A	$104,443,571	$104,443,571	$104,443,571
Avoided Emissions (CO2)	N/A	N/A	N/A	$75,690,397
Subtotal				$302,004,752
Non-Energy Benefits Adder (22.0%)				$49,728,096
Subtotal	N/A	$226,314,355	$226,314,355	$351,732,849
Participant Benefits				
Bill Reduction - Electric	$467,864,731	N/A	N/A	N/A
Participant Rebates and Incentives	$61,315,941	N/A	N/A	$61,315,941
Incremental Capital Savings	$9,602,877	N/A	N/A	$6,723,430
Incremental O&M Savings	$3,289,174	N/A	N/A	$3,129,509
Subtotal	$542,072,724	N/A	N/A	$71,168,880
Total Benefits	$542,072,724	$226,314,355	$226,314,355	$422,901,729
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$32,962,862	$32,962,862	$32,962,862
Advertising/Promotion/Customer Ed	N/A	$4,434,665	$4,434,665	$4,434,665
Participant Rebates and Incentives	N/A	$61,315,941	$61,315,941	$61,315,941
Equipment & Installation	N/A	$344,414	$344,414	$344,414
Measurement and Verification	N/A	$2,871,524	$2,871,524	$2,871,524
Subtotal	N/A	$101,929,406	$101,929,406	$101,929,406
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$467,864,731	N/A
Subtotal	N/A	N/A	$467,864,731	N/A
Participant Costs				
Incremental Capital Costs	$104,341,287	N/A	N/A	$89,424,806
Incremental O&M Costs	$1,774,717	N/A	N/A	$1,479,485
Subtotal	$106,116,003	N/A	N/A	$90,904,291
Total Costs	$106,116,003	$101,929,406	$569,794,137	$192,833,697
Net Benefit (Cost)	$435,956,720	$124,384,949	($343,479,782)	**$230,068,032**
Benefit/Cost Ratio	5.11	2.22	0.40	**2.19**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	13.8 years
T & D Loss Factor (Energy)	B	5.73%
T & D Loss Factor (Demand)	C	8.12%
Net-to-Gross (Energy)	D	76.74%
Net-to-Gross (Demand)	E	87.44%
Installation Rate (Energy)	F	**97.73%**
Installation Rate (Demand)	G	**95.03%**
Net coincident kW Saved at Generator	H	0.03 kW
Gross Annual kWh Saved at Customer	I	110.17 kWh
Net Annual kWh Saved at Generator	J	87.16 kWh

Program Summary All Participants		
Total Budget	K	**$101,929,406**
Net coincident kW Saved at Generator	L	**170,520 kW**
Gross Annual kWh Saved at Customer	M	603,274,223 kWh
Net Annual kWh Saved at Generator	N	**477,289,002 kWh**
Total MTRC Net Benefits with Adder	O	**$230,068,032**
Total MTRC Net Benefits without Adder	P	**$180,339,936**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0155**
Utility Program Cost per kW at Gen	K/ L	**$598**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**1,866,687**

EE PORTFOLIO TOTAL

2022 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	$92,337,592	$92,337,592	$92,337,592
Trans. & Dist. Capacity	N/A	$11,564,114	$11,564,114	$11,564,114
Marginal Energy	N/A	$104,373,664	$104,373,664	$104,373,664
Avoided Emissions (CO2)	N/A	N/A	N/A	$75,640,140
Subtotal				$283,915,509
Non-Energy Benefits Adder (22.1%)				$46,120,299
Subtotal	N/A	$208,275,370	$208,275,370	$330,035,808
Participant Benefits				
Bill Reduction - Electric	$467,718,932	N/A	N/A	N/A
Participant Rebates and Incentives	$52,102,857	N/A	N/A	$52,102,857
Incremental Capital Savings	$9,602,877	N/A	N/A	$6,723,430
Incremental O&M Savings	$3,289,174	N/A	N/A	$3,129,509
Subtotal	$532,713,841	N/A	N/A	$61,955,796
Total Benefits	$532,713,841	$208,275,370	$208,275,370	$391,991,605
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$26,378,563	$26,378,563	$26,378,563
Advertising/Promotion/Customer Ed	N/A	$3,886,541	$3,886,541	$3,886,541
Participant Rebates and Incentives	N/A	$52,102,857	$52,102,857	$52,102,857
Equipment & Installation	N/A	$344,414	$344,414	$344,414
Measurement and Verification	N/A	$2,418,968	$2,418,968	$2,418,968
Subtotal	N/A	$85,131,343	$85,131,343	$85,131,343
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$467,718,932	N/A
Subtotal	N/A	N/A	$467,718,932	N/A
Participant Costs				
Incremental Capital Costs	$104,295,583	N/A	N/A	$89,379,103
Incremental O&M Costs	$1,774,717	N/A	N/A	$1,479,485
Subtotal	$106,070,300	N/A	N/A	$90,858,587
Total Costs	$106,070,300	$85,131,343	$552,850,276	$175,989,930
Net Benefit (Cost)	$426,643,541	$123,144,027	($344,574,906)	**$216,001,674**
Benefit/Cost Ratio	5.02	2.45	0.38	**2.23**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	13.8 years
T & D Loss Factor (Energy)	B	5.74%
T & D Loss Factor (Demand)	C	8.17%
Net-to-Gross (Energy)	D	76.71%
Net-to-Gross (Demand)	E	79.66%
Installation Rate (Energy)	F	**97.73%**
Installation Rate (Demand)	G	**91.16%**
Net coincident kW Saved at Generator	H	0.02 kW
Gross Annual kWh Saved at Customer	I	110.28 kWh
Net Annual kWh Saved at Generator	J	87.22 kWh

Program Summary All Participants		
Total Budget	K	**$85,131,343**
Net coincident kW Saved at Generator	L	**92,062 kW**
Gross Annual kWh Saved at Customer	M	602,634,671 kWh
Net Annual kWh Saved at Generator	N	**476,612,855 kWh**
Total MTRC Net Benefits with Adder	O	**$216,001,674**
Total MTRC Net Benefits without Adder	P	**$169,881,375**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0130**
Utility Program Cost per kW at Gen	K/ L	**$925**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**1,865,658**

BUSINESS PROGRAM EE TOTAL

2022 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	$60,554,718	$60,554,718	$60,554,718
Trans. & Dist. Capacity	N/A	$7,583,710	$7,583,710	$7,583,710
Marginal Energy	N/A	$66,360,661	$66,360,661	$66,360,661
Avoided Emissions (CO2)	N/A	N/A	N/A	$47,724,415
Subtotal				$182,223,504
Non-Energy Benefits Adder (20.0%)				$26,899,818
Subtotal	N/A	$134,499,089	$134,499,089	$209,123,322
Participant Benefits				
Bill Reduction - Electric	$265,905,238	N/A	N/A	N/A
Participant Rebates and Incentives	$32,232,840	N/A	N/A	$32,232,840
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$2,447,112	N/A	N/A	$2,306,163
Subtotal	$300,585,190	N/A	N/A	$34,539,003
Total Benefits	$300,585,190	$134,499,089	$134,499,089	$243,662,324
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$14,075,406	$14,075,406	$14,075,406
Advertising/Promotion/Customer Ed	N/A	$854,803	$854,803	$854,803
Participant Rebates and Incentives	N/A	$32,232,840	$32,232,840	$32,232,840
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$1,180,165	$1,180,165	$1,180,165
Subtotal	N/A	$48,343,214	$48,343,214	$48,343,214
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$265,905,238	N/A
Subtotal	N/A	N/A	$265,905,238	N/A
Participant Costs				
Incremental Capital Costs	$83,992,747	N/A	N/A	$73,033,739
Incremental O&M Costs	$1,167,090	N/A	N/A	$1,002,740
Subtotal	$85,159,836	N/A	N/A	$74,036,480
Total Costs	$85,159,836	$48,343,214	$314,248,452	$122,379,693
Net Benefit (Cost)	$215,425,354	$86,155,875	($179,749,363)	**$121,282,631**
Benefit/Cost Ratio	3.53	2.78	0.43	**1.99**

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

2022 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	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	88.00%
Net-to-Gross (Demand)	E	88.03%
Installation Rate (Energy)	F	**99.94%**
Installation Rate (Demand)	G	**99.95%**
Net coincident kW Saved at Generator	H	0.07 kW
Gross Annual kWh Saved at Customer	I	391.95 kWh
Net Annual kWh Saved at Generator	J	364.16 kWh

Program Summary All Participants		
Total Budget	K	**$48,343,214**
Net coincident kW Saved at Generator	L	**57,363 kW**
Gross Annual kWh Saved at Customer	M	317,683,142 kWh
Net Annual kWh Saved at Generator	N	**295,162,001 kWh**
Total MTRC Net Benefits with Adder	O	**$121,282,631**
Total MTRC Net Benefits without Adder	P	**$94,382,813**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0108**
Utility Program Cost per kW at Gen	K/ L	**$843**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**1,170,340**

RESIDENTIAL PROGRAM EE TOTAL

2022 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	$26,600,463	$26,600,463	$26,600,463
Trans. & Dist. Capacity	N/A	$3,331,373	$3,331,373	$3,331,373
Marginal Energy	N/A	$28,960,361	$28,960,361	$28,960,361
Avoided Emissions (CO2)	N/A	N/A	N/A	$21,671,144
Subtotal				$80,563,341
Non-Energy Benefits Adder (20.0%)				$11,778,439
Subtotal	N/A	$58,892,197	$58,892,197	$92,341,780
Participant Benefits				
Bill Reduction - Electric	$153,726,706	N/A	N/A	N/A
Participant Rebates and Incentives	$15,721,804	N/A	N/A	$15,721,804
Incremental Capital Savings	$9,598,156	N/A	N/A	$6,718,710
Incremental O&M Savings	$790,844	N/A	N/A	$772,128
Subtotal	$179,837,511	N/A	N/A	$23,212,642
Total Benefits	$179,837,511	$58,892,197	$58,892,197	$115,554,422
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$7,259,278	$7,259,278	$7,259,278
Advertising/Promotion/Customer Ed	N/A	$1,811,045	$1,811,045	$1,811,045
Participant Rebates and Incentives	N/A	$15,721,804	$15,721,804	$15,721,804
Equipment & Installation	N/A	$344,414	$344,414	$344,414
Measurement and Verification	N/A	$237,212	$237,212	$237,212
Subtotal	N/A	$25,373,752	$25,373,752	$25,373,752
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$153,726,706	N/A
Subtotal	N/A	N/A	$153,726,706	N/A
Participant Costs				
Incremental Capital Costs	$17,223,374	N/A	N/A	$13,265,901
Incremental O&M Costs	$547,354	N/A	N/A	$416,471
Subtotal	$17,770,728	N/A	N/A	$13,682,372
Total Costs	$17,770,728	$25,373,752	$179,100,459	$39,056,124
Net Benefit (Cost)	$162,066,784	$33,518,445	($120,208,262)	**$76,498,298**
Benefit/Cost Ratio	10.12	2.32	0.33	**2.96**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	11.5 years
T & D Loss Factor (Energy)	B	6.16%
T & D Loss Factor (Demand)	C	8.91%
Net-to-Gross (Energy)	D	60.15%
Net-to-Gross (Demand)	E	68.60%
Installation Rate (Energy)	F	**94.87%**
Installation Rate (Demand)	G	**77.43%**
Net coincident kW Saved at Generator	H	0.01 kW
Gross Annual kWh Saved at Customer	I	55.17 kWh
Net Annual kWh Saved at Generator	J	32.58 kWh

Program Summary All Participants		
Total Budget	K	**$25,373,752**
Net coincident kW Saved at Generator	L	**30,614 kW**
Gross Annual kWh Saved at Customer	M	256,547,830 kWh
Net Annual kWh Saved at Generator	N	**151,475,141 kWh**
Total MTRC Net Benefits with Adder	O	**$76,498,298**
Total MTRC Net Benefits without Adder	P	**$64,719,858**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0146**
Utility Program Cost per kW at Gen	K/ L	**$829**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**534,580**

INCOME QUALIFIED PROGRAM TOTAL

2022 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	$5,182,411	$5,182,411	$5,182,411
Trans. & Dist. Capacity	N/A	$649,032	$649,032	$649,032
Marginal Energy	N/A	$9,052,642	$9,052,642	$9,052,642
Avoided Emissions (CO2)	N/A	N/A	N/A	$6,244,581
Subtotal				$21,128,664
Non-Energy Benefits Adder (50.0%)				$7,442,042
Subtotal	N/A	$14,884,084	$14,884,084	$28,570,706
Participant Benefits				
Bill Reduction - Electric	$48,086,988	N/A	N/A	N/A
Participant Rebates and Incentives	$3,518,040	N/A	N/A	$3,518,040
Incremental Capital Savings	$4,720	N/A	N/A	$4,720
Incremental O&M Savings	$51,218	N/A	N/A	$51,218
Subtotal	$51,660,966	N/A	N/A	$3,573,978
Total Benefits	$51,660,966	$14,884,084	$14,884,084	$32,144,684
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$502,389	$502,389	$502,389
Advertising/Promotion/Customer Ed	N/A	$225,388	$225,388	$225,388
Participant Rebates and Incentives	N/A	$3,518,040	$3,518,040	$3,518,040
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$179,040	$179,040	$179,040
Subtotal	N/A	$4,424,856	$4,424,856	$4,424,856
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$48,086,988	N/A
Subtotal	N/A	N/A	$48,086,988	N/A
Participant Costs				
Incremental Capital Costs	$3,079,462	N/A	N/A	$3,079,462
Incremental O&M Costs	$60,274	N/A	N/A	$60,274
Subtotal	$3,139,736	N/A	N/A	$3,139,736
Total Costs	$3,139,736	$4,424,856	$52,511,844	$7,564,592
Net Benefit (Cost)	$48,521,230	$10,459,228	($37,627,760)	**$24,580,093**
Benefit/Cost Ratio	16.45	3.36	0.28	**4.25**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	19.7 years
T & D Loss Factor (Energy)	B	6.32%
T & D Loss Factor (Demand)	C	8.99%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	**98.86%**
Installation Rate (Demand)	G	**98.94%**
Net coincident kW Saved at Generator	H	0.93 kW
Gross Annual kWh Saved at Customer	I	6,495.94 kWh
Net Annual kWh Saved at Generator	J	6,855.46 kWh

Program Summary All Participants		
Total Budget	K	**$4,424,856**
Net coincident kW Saved at Generator	L	**4,085 kW**
Gross Annual kWh Saved at Customer	M	28,403,699 kWh
Net Annual kWh Saved at Generator	N	**29,975,713 kWh**
Total MTRC Net Benefits with Adder	O	**$24,580,093**
Total MTRC Net Benefits without Adder	P	**$17,138,051**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0075**
Utility Program Cost per kW at Gen	K/ L	**$1,083**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**160,739**

DR PORTFOLIO TOTAL

2022 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	$17,969,079	$17,969,079	$17,969,079
Trans. & Dist. Capacity	N/A	$0	$0	$0
Marginal Energy	N/A	$69,907	$69,907	$69,907
Avoided Emissions (CO2)	N/A	N/A	N/A	$50,258
Subtotal				$18,089,243
Non-Energy Benefits Adder (20.0%)				$3,607,797
Subtotal	N/A	$18,038,986	$18,038,986	$21,697,040
Participant Benefits				
Bill Reduction - Electric	$145,799	N/A	N/A	N/A
Participant Rebates and Incentives	$9,213,084	N/A	N/A	$9,213,084
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$9,358,883	N/A	N/A	$9,213,084
Total Benefits	$9,358,883	$18,038,986	$18,038,986	$30,910,124
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$6,584,299	$6,584,299	$6,584,299
Advertising/Promotion/Customer Ed	N/A	$548,124	$548,124	$548,124
Participant Rebates and Incentives	N/A	$9,213,084	$9,213,084	$9,213,084
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$452,556	$452,556	$452,556
Subtotal	N/A	$16,798,063	$16,798,063	$16,798,063
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$145,799	N/A
Subtotal	N/A	N/A	$145,799	N/A
Participant Costs				
Incremental Capital Costs	$45,704	N/A	N/A	$45,704
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$45,704	N/A	N/A	$45,704
Total Costs	$45,704	$16,798,063	$16,943,862	$16,843,767
Net Benefit (Cost)	$9,313,179	$1,240,923	$1,095,124	**$14,066,357**
Benefit/Cost Ratio	204.77	1.07	1.06	**1.84**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	1.7 years
T & D Loss Factor (Energy)	B	5.41%
T & D Loss Factor (Demand)	C	8.05%
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	7.07 kW
Gross Annual kWh Saved at Customer	I	57.67 kWh
Net Annual kWh Saved at Generator	J	60.97 kWh

Program Summary All Participants		
Total Budget	K	**$16,798,063**
Net coincident kW Saved at Generator	L	**78,458 kW**
Gross Annual kWh Saved at Customer	M	639,552 kWh
Net Annual kWh Saved at Generator	N	**676,147 kWh**
Total MTRC Net Benefits with Adder	O	**$14,066,357**
Total MTRC Net Benefits without Adder	P	**$10,458,560**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$14.3217**
Utility Program Cost per kW at Gen	K/ L	**$214**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**1,029**

DR PROGRAM TOTAL

2022 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	$17,969,079	$17,969,079	$17,969,079
Trans. & Dist. Capacity	N/A	$0	$0	$0
Marginal Energy	N/A	$69,907	$69,907	$69,907
Avoided Emissions (CO2)	N/A	N/A	N/A	$50,258
Subtotal				$18,089,243
Non-Energy Benefits Adder (20.0%)				$3,607,797
Subtotal	N/A	$18,038,986	$18,038,986	$21,697,040
Participant Benefits				
Bill Reduction - Electric	$145,799	N/A	N/A	N/A
Participant Rebates and Incentives	$9,213,084	N/A	N/A	$9,213,084
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$9,358,883	N/A	N/A	$9,213,084
Total Benefits	$9,358,883	$18,038,986	$18,038,986	$30,910,124
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$5,422,988	$5,422,988	$5,422,988
Advertising/Promotion/Customer Ed	N/A	$548,124	$548,124	$548,124
Participant Rebates and Incentives	N/A	$9,213,084	$9,213,084	$9,213,084
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$266,241	$266,241	$266,241
Subtotal	N/A	$15,450,438	$15,450,438	$15,450,438
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$145,799	N/A
Subtotal	N/A	N/A	$145,799	N/A
Participant Costs				
Incremental Capital Costs	$45,704	N/A	N/A	$45,704
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$45,704	N/A	N/A	$45,704
Total Costs	$45,704	$15,450,438	$15,596,237	$15,496,142
Net Benefit (Cost)	$9,313,179	$2,588,548	$2,442,749	**$15,413,983**
Benefit/Cost Ratio	204.77	1.17	1.16	**1.99**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	1.7 years
T & D Loss Factor (Energy)	B	5.41%
T & D Loss Factor (Demand)	C	8.05%
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	7.07 kW
Gross Annual kWh Saved at Customer	I	57.67 kWh
Net Annual kWh Saved at Generator	J	60.97 kWh

Program Summary All Participants		
Total Budget	K	**$15,450,438**
Net coincident kW Saved at Generator	L	**78,458 kW**
Gross Annual kWh Saved at Customer	M	639,552 kWh
Net Annual kWh Saved at Generator	N	**676,147 kWh**
Total MTRC Net Benefits with Adder	O	**$15,413,983**
Total MTRC Net Benefits without Adder	P	**$11,806,185**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$13.1727**
Utility Program Cost per kW at Gen	K/ L	**$197**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**1,029**

BUSINESS ENERGY ASSESSMENTS

2022 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	$4,501,608	$4,501,608	$4,501,608
Trans. & Dist. Capacity	N/A	$563,770	$563,770	$563,770
Marginal Energy	N/A	$5,977,753	$5,977,753	$5,977,753
Avoided Emissions (CO2)	N/A	N/A	N/A	$4,435,318
Subtotal				$15,478,449
Non-Energy Benefits Adder (20.0%)				$2,208,626
Subtotal	N/A	$11,043,131	$11,043,131	$17,687,076
Participant Benefits				
Bill Reduction - Electric	$23,984,155	N/A	N/A	N/A
Participant Rebates and Incentives	$3,104,845	N/A	N/A	$3,104,845
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$13,447	N/A	N/A	$13,447
Subtotal	$27,102,447	N/A	N/A	$3,118,292
Total Benefits	$27,102,447	$11,043,131	$11,043,131	$20,805,368
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$1,678,967	$1,678,967	$1,678,967
Advertising/Promotion/Customer Ed	N/A	$1,231	$1,231	$1,231
Participant Rebates and Incentives	N/A	$3,104,845	$3,104,845	$3,104,845
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$4,785,043	$4,785,043	$4,785,043
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$23,984,155	N/A
Subtotal	N/A	N/A	$23,984,155	N/A
Participant Costs				
Incremental Capital Costs	$6,011,950	N/A	N/A	$6,011,950
Incremental O&M Costs	$44,652	N/A	N/A	$44,652
Subtotal	$6,056,601	N/A	N/A	$6,056,601
Total Costs	$6,056,601	$4,785,043	$28,769,198	$10,841,644
Net Benefit (Cost)	$21,045,846	$6,258,089	($17,726,067)	**$9,963,724**
Benefit/Cost Ratio	4.47	2.31	0.38	**1.92**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	15.6 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	0.16 kW
Gross Annual kWh Saved at Customer	I	975.04 kWh
Net Annual kWh Saved at Generator	J	1,029.95 kWh

Program Summary All Participants		
Total Budget	K	**$4,785,043**
Net coincident kW Saved at Generator	L	**4,075 kW**
Gross Annual kWh Saved at Customer	M	24,864,388 kWh
Net Annual kWh Saved at Generator	N	**26,264,829 kWh**
Total MTRC Net Benefits with Adder	O	**$9,963,724**
Total MTRC Net Benefits without Adder	P	**$7,755,097**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0117**
Utility Program Cost per kW at Gen	K/ L	**$1,174**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**108,360**

BUSINESS HVAC+R SYSTEMS

2022 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	$3,946,968	$3,946,968	$3,946,968
Trans. & Dist. Capacity	N/A	$494,308	$494,308	$494,308
Marginal Energy	N/A	$2,670,063	$2,670,063	$2,670,063
Avoided Emissions (CO2)	N/A	N/A	N/A	$1,907,508
Subtotal				$9,018,847
Non-Energy Benefits Adder (20.0%)				$1,422,268
Subtotal	N/A	$7,111,339	$7,111,339	$10,441,115
Participant Benefits				
Bill Reduction - Electric	$15,069,893	N/A	N/A	N/A
Participant Rebates and Incentives	$2,337,767	N/A	N/A	$2,337,767
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$15,579	N/A	N/A	$15,579
Subtotal	$17,423,239	N/A	N/A	$2,353,346
Total Benefits	$17,423,239	$7,111,339	$7,111,339	$12,794,461
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$2,353,061	$2,353,061	$2,353,061
Advertising/Promotion/Customer Ed	N/A	$2,239	$2,239	$2,239
Participant Rebates and Incentives	N/A	$2,337,767	$2,337,767	$2,337,767
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$68,659	$68,659	$68,659
Subtotal	N/A	$4,761,726	$4,761,726	$4,761,726
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$15,069,893	N/A
Subtotal	N/A	N/A	$15,069,893	N/A
Participant Costs				
Incremental Capital Costs	$5,012,907	N/A	N/A	$4,344,026
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$5,012,907	N/A	N/A	$4,344,026
Total Costs	$5,012,907	$4,761,726	$19,831,619	$9,105,752
Net Benefit (Cost)	$12,410,333	$2,349,613	($12,720,280)	**$3,688,709**
Benefit/Cost Ratio	3.48	1.49	0.36	**1.41**

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

2022 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	85.30%
Net-to-Gross (Demand)	E	86.93%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	6.97 kW
Gross Annual kWh Saved at Customer	I	26,516.39 kWh
Net Annual kWh Saved at Generator	J	23,892.33 kWh

Program Summary All Participants		
Total Budget	K	**$4,761,726**
Net coincident kW Saved at Generator	L	**3,269 kW**
Gross Annual kWh Saved at Customer	M	12,426,111 kWh
Net Annual kWh Saved at Generator	N	**11,196,422 kWh**
Total MTRC Net Benefits with Adder	O	**$3,688,709**
Total MTRC Net Benefits without Adder	P	**$2,266,441**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0251**
Utility Program Cost per kW at Gen	K/ L	**$1,457**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**46,713**

COMPRESSED AIR EFFICIENCY

2022 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	$288,381	$288,381	$288,381
Trans. & Dist. Capacity	N/A	$36,116	$36,116	$36,116
Marginal Energy	N/A	$324,504	$324,504	$324,504
Avoided Emissions (CO2)	N/A	N/A	N/A	$237,260
Subtotal				$886,260
Non-Energy Benefits Adder (20.0%)				$129,800
Subtotal	N/A	$649,001	$649,001	$1,016,061
Participant Benefits				
Bill Reduction - Electric	$1,144,580	N/A	N/A	N/A
Participant Rebates and Incentives	$167,015	N/A	N/A	$167,015
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$1,311,595	N/A	N/A	$167,015
Total Benefits	$1,311,595	$649,001	$649,001	$1,183,076
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$187,294	$187,294	$187,294
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$167,015	$167,015	$167,015
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$4,300	$4,300	$4,300
Subtotal	N/A	$358,609	$358,609	$358,609
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,144,580	N/A
Subtotal	N/A	N/A	$1,144,580	N/A
Participant Costs				
Incremental Capital Costs	$325,727	N/A	N/A	$292,499
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$325,727	N/A	N/A	$292,499
Total Costs	$325,727	$358,609	$1,503,189	$651,108
Net Benefit (Cost)	$985,868	$290,392	($854,188)	**$531,968**
Benefit/Cost Ratio	4.03	1.81	0.43	**1.82**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	15.6 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	89.74%
Net-to-Gross (Demand)	E	89.80%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	6.80 kW
Gross Annual kWh Saved at Customer	I	41,810.03 kWh
Net Annual kWh Saved at Generator	J	39,635.09 kWh

Program Summary All Participants		
Total Budget	K	**$358,609**
Net coincident kW Saved at Generator	L	**245 kW**
Gross Annual kWh Saved at Customer	M	1,505,161 kWh
Net Annual kWh Saved at Generator	N	**1,426,863 kWh**
Total MTRC Net Benefits with Adder	O	**$531,968**
Total MTRC Net Benefits without Adder	P	**$402,168**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0161**
Utility Program Cost per kW at Gen	K/ L	**$1,465**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**5,899**

CUSTOM EFFICIENCY

2022 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	$178,577	$178,577	$178,577
Trans. & Dist. Capacity	N/A	$22,365	$22,365	$22,365
Marginal Energy	N/A	$219,430	$219,430	$219,430
Avoided Emissions (CO2)	N/A	N/A	N/A	$141,058
Subtotal				$561,429
Non-Energy Benefits Adder (20.0%)				$84,074
Subtotal	N/A	$420,371	$420,371	$645,504
Participant Benefits				
Bill Reduction - Electric	$823,588	N/A	N/A	N/A
Participant Rebates and Incentives	$70,677	N/A	N/A	$70,677
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$82,927	N/A	N/A	$72,147
Subtotal	$977,192	N/A	N/A	$142,824
Total Benefits	$977,192	$420,371	$420,371	$788,327
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$319,287	$319,287	$319,287
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$70,677	$70,677	$70,677
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$709	$709	$709
Subtotal	N/A	$390,673	$390,673	$390,673
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$823,588	N/A
Subtotal	N/A	N/A	$823,588	N/A
Participant Costs				
Incremental Capital Costs	$379,592	N/A	N/A	$330,245
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$379,592	N/A	N/A	$330,245
Total Costs	$379,592	$390,673	$1,214,261	$720,918
Net Benefit (Cost)	$597,600	$29,698	($793,890)	**$67,409**
Benefit/Cost Ratio	2.57	1.08	0.35	**1.09**

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

2022 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	87.00%
Net-to-Gross (Demand)	E	87.00%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	15.15 kW
Gross Annual kWh Saved at Customer	I	107,541.50 kWh
Net Annual kWh Saved at Generator	J	98,830.76 kWh

Program Summary All Participants		
Total Budget	K	**$390,673**
Net coincident kW Saved at Generator	L	**121 kW**
Gross Annual kWh Saved at Customer	M	860,332 kWh
Net Annual kWh Saved at Generator	N	**790,646 kWh**
Total MTRC Net Benefits with Adder	O	**$67,409**
Total MTRC Net Benefits without Adder	P	**($16,665)**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0275**
Utility Program Cost per kW at Gen	K/ L	**$3,224**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**3,509**

DATA CENTER EFFICIENCY

2022 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	$765,297	$765,297	$765,297
Trans. & Dist. Capacity	N/A	$95,844	$95,844	$95,844
Marginal Energy	N/A	$1,358,818	$1,358,818	$1,358,818
Avoided Emissions (CO2)	N/A	N/A	N/A	$987,516
Subtotal				$3,207,475
Non-Energy Benefits Adder (20.0%)				$443,992
Subtotal	N/A	$2,219,959	$2,219,959	$3,651,467
Participant Benefits				
Bill Reduction - Electric	$4,829,403	N/A	N/A	N/A
Participant Rebates and Incentives	$288,028	N/A	N/A	$288,028
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$845,977	N/A	N/A	$845,977
Subtotal	$5,963,408	N/A	N/A	$1,134,005
Total Benefits	$5,963,408	$2,219,959	$2,219,959	$4,785,472
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$163,177	$163,177	$163,177
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$288,028	$288,028	$288,028
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$709	$709	$709
Subtotal	N/A	$451,914	$451,914	$451,914
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$4,829,403	N/A
Subtotal	N/A	N/A	$4,829,403	N/A
Participant Costs				
Incremental Capital Costs	$2,492,780	N/A	N/A	$2,492,780
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$2,492,780	N/A	N/A	$2,492,780
Total Costs	$2,492,780	$451,914	$5,281,316	$2,944,694
Net Benefit (Cost)	$3,470,628	$1,768,045	($3,061,357)	**$1,840,778**
Benefit/Cost Ratio	2.39	4.91	0.42	**1.63**

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

2022 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	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	596.94 kW
Gross Annual kWh Saved at Customer	I	4,742,687.00 kWh
Net Annual kWh Saved at Generator	J	5,009,810.07 kWh

Program Summary All Participants		
Total Budget	K	**$451,914**
Net coincident kW Saved at Generator	L	**597 kW**
Gross Annual kWh Saved at Customer	M	4,742,687 kWh
Net Annual kWh Saved at Generator	N	**5,009,810 kWh**
Total MTRC Net Benefits with Adder	O	**$1,840,778**
Total MTRC Net Benefits without Adder	P	**$1,396,786**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0045**
Utility Program Cost per kW at Gen	K/ L	**$757**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**25,241**

ENERGY MANAGEMENT SYSTEMS

2022 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	$148,072	$148,072	$148,072
Trans. & Dist. Capacity	N/A	$18,544	$18,544	$18,544
Marginal Energy	N/A	$225,149	$225,149	$225,149
Avoided Emissions (CO2)	N/A	N/A	N/A	$180,893
Subtotal				$572,659
Non-Energy Benefits Adder (20.0%)				$78,353
Subtotal	N/A	$391,766	$391,766	$651,012
Participant Benefits				
Bill Reduction - Electric	$520,938	N/A	N/A	N/A
Participant Rebates and Incentives	$110,536	N/A	N/A	$110,536
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$68,167	N/A	N/A	$59,305
Subtotal	$699,641	N/A	N/A	$169,841
Total Benefits	$699,641	$391,766	$391,766	$820,853
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$191,504	$191,504	$191,504
Advertising/Promotion/Customer Ed	N/A	$10	$10	$10
Participant Rebates and Incentives	N/A	$110,536	$110,536	$110,536
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$506	$506	$506
Subtotal	N/A	$302,556	$302,556	$302,556
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$520,938	N/A
Subtotal	N/A	N/A	$520,938	N/A
Participant Costs				
Incremental Capital Costs	$344,374	N/A	N/A	$299,605
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$344,374	N/A	N/A	$299,605
Total Costs	$344,374	$302,556	$823,494	$602,162
Net Benefit (Cost)	$355,267	$89,210	($431,728)	**$218,691**
Benefit/Cost Ratio	2.03	1.29	0.48	**1.36**

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

2022 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	87.00%
Net-to-Gross (Demand)	E	87.00%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	30.89 kW
Gross Annual kWh Saved at Customer	I	252,345.75 kWh
Net Annual kWh Saved at Generator	J	231,906.03 kWh

Program Summary All Participants		
Total Budget	K	**$302,556**
Net coincident kW Saved at Generator	L	**124 kW**
Gross Annual kWh Saved at Customer	M	1,009,383 kWh
Net Annual kWh Saved at Generator	N	**927,624 kWh**
Total MTRC Net Benefits with Adder	O	**$218,691**
Total MTRC Net Benefits without Adder	P	**$140,338**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0217**
Utility Program Cost per kW at Gen	K/ L	**$2,449**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**4,480**

LED STREET LIGHTING — 2022 ELECTRIC — ACTUALS

2022 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	$482,855	$482,855	$482,855
Avoided Emissions (CO2)	N/A	N/A	N/A	$334,940
Subtotal				$817,795
Non-Energy Benefits Adder (20.0%)				$96,571
Subtotal	N/A	$482,855	$482,855	$914,366
Participant Benefits				
Bill Reduction - Electric	$1,462,165	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	$1,462,165	N/A	N/A	$0
Total Benefits	$1,462,165	$482,855	$482,855	$914,366
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	$1,462,165	N/A
Subtotal	N/A	N/A	$1,462,165	N/A
Participant Costs				
Incremental Capital Costs	$501,027	N/A	N/A	$450,924
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$501,027	N/A	N/A	$450,924
Total Costs	$501,027	$0	$1,462,165	$450,924
Net Benefit (Cost)	$961,139	$482,855	($979,311)	**$463,442**
Benefit/Cost Ratio	2.92	INF	0.33	**2.03**

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

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	1,604,556.00 kWh
Net Annual kWh Saved at Generator	J	1,525,436.68 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	1,604,556 kWh
Net Annual kWh Saved at Generator	N	**1,525,437 kWh**
Total MTRC Net Benefits with Adder	O	**$463,442**
Total MTRC Net Benefits without Adder	P	**$366,871**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0000**
Utility Program Cost per kW at Gen	K/ L	**N/A**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**8,706**

LIGHTING EFFICIENCY

2022 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	$17,179,417	$17,179,417	$17,179,417
Trans. & Dist. Capacity	N/A	$2,151,504	$2,151,504	$2,151,504
Marginal Energy	N/A	$20,945,896	$20,945,896	$20,945,896
Avoided Emissions (CO2)	N/A	N/A	N/A	$13,529,699
Subtotal				$53,806,516
Non-Energy Benefits Adder (20.0%)				$8,055,363
Subtotal	N/A	$40,276,817	$40,276,817	$61,861,880
Participant Benefits				
Bill Reduction - Electric	$76,313,409	N/A	N/A	N/A
Participant Rebates and Incentives	$7,604,363	N/A	N/A	$7,604,363
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$83,917,772	N/A	N/A	$7,604,363
Total Benefits	$83,917,772	$40,276,817	$40,276,817	$69,466,242
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$2,289,707	$2,289,707	$2,289,707
Advertising/Promotion/Customer Ed	N/A	$381,182	$381,182	$381,182
Participant Rebates and Incentives	N/A	$7,604,363	$7,604,363	$7,604,363
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$27,908	$27,908	$27,908
Subtotal	N/A	$10,303,160	$10,303,160	$10,303,160
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$76,313,409	N/A
Subtotal	N/A	N/A	$76,313,409	N/A
Participant Costs				
Incremental Capital Costs	$24,892,785	N/A	N/A	$18,899,328
Incremental O&M Costs	$495,754	N/A	N/A	$364,951
Subtotal	$25,388,539	N/A	N/A	$19,264,279
Total Costs	$25,388,539	$10,303,160	$86,616,569	$29,567,439
Net Benefit (Cost)	$58,529,233	$29,973,657	($46,339,751)	**$39,898,803**
Benefit/Cost Ratio	3.31	3.91	0.47	**2.35**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	16.6 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	78.21%
Net-to-Gross (Demand)	E	78.53%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	0.05 kW
Gross Annual kWh Saved at Customer	I	327.46 kWh
Net Annual kWh Saved at Generator	J	270.54 kWh

Program Summary All Participants		
Total Budget	K	**$10,303,160**
Net coincident kW Saved at Generator	L	**13,642 kW**
Gross Annual kWh Saved at Customer	M	96,206,058 kWh
Net Annual kWh Saved at Generator	N	**79,482,937 kWh**
Total MTRC Net Benefits with Adder	O	**$39,898,803**
Total MTRC Net Benefits without Adder	P	**$31,843,440**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0078**
Utility Program Cost per kW at Gen	K/ L	**$755**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**334,887**

NEW CONSTRUCTION

2022 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	$18,435,768	$18,435,768	$18,435,768
Trans. & Dist. Capacity	N/A	$2,308,848	$2,308,848	$2,308,848
Marginal Energy	N/A	$15,906,167	$15,906,167	$15,906,167
Avoided Emissions (CO2)	N/A	N/A	N/A	$11,283,755
Subtotal				$47,934,538
Non-Energy Benefits Adder (20.0%)				$7,330,157
Subtotal	N/A	$36,650,783	$36,650,783	$55,264,695
Participant Benefits				
Bill Reduction - Electric	$64,813,121	N/A	N/A	N/A
Participant Rebates and Incentives	$8,562,931	N/A	N/A	$8,562,931
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$863,837	N/A	N/A	$742,900
Subtotal	$74,239,889	N/A	N/A	$9,305,831
Total Benefits	$74,239,889	$36,650,783	$36,650,783	$64,570,526
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$3,757,547	$3,757,547	$3,757,547
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$8,562,931	$8,562,931	$8,562,931
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$484,312	$484,312	$484,312
Subtotal	N/A	$12,804,790	$12,804,790	$12,804,790
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$64,813,121	N/A
Subtotal	N/A	N/A	$64,813,121	N/A
Participant Costs				
Incremental Capital Costs	$26,298,581	N/A	N/A	$23,262,884
Incremental O&M Costs	$229,978	N/A	N/A	$218,478
Subtotal	$26,528,560	N/A	N/A	$23,481,362
Total Costs	$26,528,560	$12,804,790	$77,617,910	$36,286,152
Net Benefit (Cost)	$47,711,329	$23,845,993	($40,967,127)	**$28,284,373**
Benefit/Cost Ratio	2.80	2.86	0.47	**1.78**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	18.1 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	89.02%
Net-to-Gross (Demand)	E	87.79%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	12.49 kW
Gross Annual kWh Saved at Customer	I	54,762.68 kWh
Net Annual kWh Saved at Generator	J	51,498.32 kWh

Program Summary All Participants		
Total Budget	K	**$12,804,790**
Net coincident kW Saved at Generator	L	**15,076 kW**
Gross Annual kWh Saved at Customer	M	66,102,931 kWh
Net Annual kWh Saved at Generator	N	**62,162,594 kWh**
Total MTRC Net Benefits with Adder	O	**$28,284,373**
Total MTRC Net Benefits without Adder	P	**$20,954,217**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0114**
Utility Program Cost per kW at Gen	K/ L	**$849**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**281,674**

SELF DIRECT

2022 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	$202,276	$202,276	$202,276
Trans. & Dist. Capacity	N/A	$25,333	$25,333	$25,333
Marginal Energy	N/A	$409,395	$409,395	$409,395
Avoided Emissions (CO2)	N/A	N/A	N/A	$296,787
Subtotal				$933,791
Non-Energy Benefits Adder (20.0%)				$127,401
Subtotal	N/A	$637,004	$637,004	$1,061,192
Participant Benefits				
Bill Reduction - Electric	$1,691,618	N/A	N/A	N/A
Participant Rebates and Incentives	$121,083	N/A	N/A	$121,083
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$1,812,701	N/A	N/A	$121,083
Total Benefits	$1,812,701	$637,004	$637,004	$1,182,275
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$66,802	$66,802	$66,802
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$121,083	$121,083	$121,083
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$187,885	$187,885	$187,885
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,691,618	N/A
Subtotal	N/A	N/A	$1,691,618	N/A
Participant Costs				
Incremental Capital Costs	$349,168	N/A	N/A	$317,743
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$349,168	N/A	N/A	$317,743
Total Costs	$349,168	$187,885	$1,879,503	$505,628
Net Benefit (Cost)	$1,463,533	$449,119	($1,242,499)	**$676,647**
Benefit/Cost Ratio	5.19	3.39	0.34	**2.34**

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

2022 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	87.71 kW
Gross Annual kWh Saved at Customer	I	881,726.50 kWh
Net Annual kWh Saved at Generator	J	847,563.18 kWh

Program Summary All Participants		
Total Budget	K	**$187,885**
Net coincident kW Saved at Generator	L	**175 kW**
Gross Annual kWh Saved at Customer	M	1,763,453 kWh
Net Annual kWh Saved at Generator	N	**1,695,126 kWh**
Total MTRC Net Benefits with Adder	O	**$676,647**
Total MTRC Net Benefits without Adder	P	**$549,246**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0065**
Utility Program Cost per kW at Gen	K/ L	**$1,071**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**7,325**

SMALL BUSINESS SOLUTIONS — 2022 ELECTRIC — ACTUALS

2022 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	$4,827,557	$4,827,557	$4,827,557
Trans. & Dist. Capacity	N/A	$604,590	$604,590	$604,590
Marginal Energy	N/A	$5,431,242	$5,431,242	$5,431,242
Avoided Emissions (CO2)	N/A	N/A	N/A	$4,491,091
Subtotal				$15,354,479
Non-Energy Benefits Adder (20.0%)				$2,172,678
Subtotal	N/A	$10,863,388	$10,863,388	$17,527,157
Participant Benefits				
Bill Reduction - Electric	$23,420,125	N/A	N/A	N/A
Participant Rebates and Incentives	$3,673,737	N/A	N/A	$3,673,737
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$6,165	N/A	N/A	$5,795
Subtotal	$27,100,027	N/A	N/A	$3,679,532
Total Benefits	$27,100,027	$10,863,388	$10,863,388	$21,206,689
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$1,261,628	$1,261,628	$1,261,628
Advertising/Promotion/Customer Ed	N/A	$4,354	$4,354	$4,354
Participant Rebates and Incentives	N/A	$3,673,737	$3,673,737	$3,673,737
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$25,725	$25,725	$25,725
Subtotal	N/A	$4,965,443	$4,965,443	$4,965,443
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$23,420,125	N/A
Subtotal	N/A	N/A	$23,420,125	N/A
Participant Costs				
Incremental Capital Costs	$7,105,143	N/A	N/A	$6,053,041
Incremental O&M Costs	$223,231	N/A	N/A	$201,185
Subtotal	$7,328,374	N/A	N/A	$6,254,226
Total Costs	$7,328,374	$4,965,443	$28,385,568	$11,219,669
Net Benefit (Cost)	$19,771,653	$5,897,945	($17,522,180)	**$9,987,020**
Benefit/Cost Ratio	3.70	2.19	0.38	**1.89**

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

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	9.7 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	81.71%
Net-to-Gross (Demand)	E	82.17%
Installation Rate (Energy)	F	**99.51%**
Installation Rate (Demand)	G	**99.55%**
Net coincident kW Saved at Generator	H	0.02 kW
Gross Annual kWh Saved at Customer	I	104.64 kWh
Net Annual kWh Saved at Generator	J	89.90 kWh

Program Summary All Participants		
Total Budget	K	**$4,965,443**
Net coincident kW Saved at Generator	L	**6,451 kW**
Gross Annual kWh Saved at Customer	M	40,178,639 kWh
Net Annual kWh Saved at Generator	N	**34,519,317 kWh**
Total MTRC Net Benefits with Adder	O	**$9,987,020**
Total MTRC Net Benefits without Adder	P	**$7,814,342**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0148**
Utility Program Cost per kW at Gen	K/ L	**$770**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**105,112**

STRATEGIC ENERGY MANAGEMENT

2022 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	$10,080,797	$10,080,797	$10,080,797
Trans. & Dist. Capacity	N/A	$1,262,489	$1,262,489	$1,262,489
Marginal Energy	N/A	$12,409,387	$12,409,387	$12,409,387
Avoided Emissions (CO2)	N/A	N/A	N/A	$9,898,591
Subtotal				$33,651,265
Non-Energy Benefits Adder (20.0%)				$4,750,535
Subtotal	N/A	$23,752,674	$23,752,674	$38,401,800
Participant Benefits				
Bill Reduction - Electric	$51,832,242	N/A	N/A	N/A
Participant Rebates and Incentives	$6,191,859	N/A	N/A	$6,191,859
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$551,012	N/A	N/A	$551,012
Subtotal	$58,575,113	N/A	N/A	$6,742,871
Total Benefits	$58,575,113	$23,752,674	$23,752,674	$45,144,670
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$1,439,388	$1,439,388	$1,439,388
Advertising/Promotion/Customer Ed	N/A	$20	$20	$20
Participant Rebates and Incentives	N/A	$6,191,859	$6,191,859	$6,191,859
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$567,337	$567,337	$567,337
Subtotal	N/A	$8,198,603	$8,198,603	$8,198,603
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$51,832,242	N/A
Subtotal	N/A	N/A	$51,832,242	N/A
Participant Costs				
Incremental Capital Costs	$10,278,714	N/A	N/A	$10,278,714
Incremental O&M Costs	$173,475	N/A	N/A	$173,475
Subtotal	$10,452,188	N/A	N/A	$10,452,188
Total Costs	$10,452,188	$8,198,603	$60,030,845	$18,650,791
Net Benefit (Cost)	$48,122,925	$15,554,071	($36,278,172)	**$26,493,879**
Benefit/Cost Ratio	5.60	2.90	0.40	**2.42**

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

2022 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	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	0.13 kW
Gross Annual kWh Saved at Customer	I	629.47 kWh
Net Annual kWh Saved at Generator	J	664.93 kWh

Program Summary All Participants		
Total Budget	K	**$8,198,603**
Net coincident kW Saved at Generator	L	**13,588 kW**
Gross Annual kWh Saved at Customer	M	66,419,443 kWh
Net Annual kWh Saved at Generator	N	**70,160,395 kWh**
Total MTRC Net Benefits with Adder	O	**$26,493,879**
Total MTRC Net Benefits without Adder	P	**$21,743,344**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0095**
Utility Program Cost per kW at Gen	K/ L	**$603**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**238,434**

ENERGY EFFICIENT SHOWERHEAD

2022 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	$26,859	$26,859	$26,859
Trans. & Dist. Capacity	N/A	$3,364	$3,364	$3,364
Marginal Energy	N/A	$69,621	$69,621	$69,621
Avoided Emissions (CO2)	N/A	N/A	N/A	$58,833
Subtotal				$158,677
Non-Energy Benefits Adder (20.0%)				$19,969
Subtotal	N/A	$99,844	$99,844	$178,646
Participant Benefits				
Bill Reduction - Electric	$412,982	N/A	N/A	N/A
Participant Rebates and Incentives	$6,382	N/A	N/A	$6,382
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$232,313	N/A	N/A	$218,374
Subtotal	$651,677	N/A	N/A	$224,756
Total Benefits	$651,677	$99,844	$99,844	$403,402
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$41,480	$41,480	$41,480
Advertising/Promotion/Customer Ed	N/A	$786	$786	$786
Participant Rebates and Incentives	N/A	$6,382	$6,382	$6,382
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$48,647	$48,647	$48,647
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$412,982	N/A
Subtotal	N/A	N/A	$412,982	N/A
Participant Costs				
Incremental Capital Costs	$7,228	N/A	N/A	$6,794
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$7,228	N/A	N/A	$6,794
Total Costs	$7,228	$48,647	$461,629	$55,441
Net Benefit (Cost)	$644,449	$51,197	($361,785)	**$347,961**
Benefit/Cost Ratio	90.17	2.05	0.22	**7.28**

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

2022 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	**64.66%**
Installation Rate (Demand)	G	**59.38%**
Net coincident kW Saved at Generator	H	0.01 kW
Gross Annual kWh Saved at Customer	I	207.89 kWh
Net Annual kWh Saved at Generator	J	134.97 kWh

Program Summary All Participants		
Total Budget	K	**$48,647**
Net coincident kW Saved at Generator	L	**35 kW**
Gross Annual kWh Saved at Customer	M	652,170 kWh
Net Annual kWh Saved at Generator	N	**423,406 kWh**
Total MTRC Net Benefits with Adder	O	**$347,961**
Total MTRC Net Benefits without Adder	P	**$327,992**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0115**
Utility Program Cost per kW at Gen	K/ L	**$1,409**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**1,366**

ENERGY STAR NEW HOMES

2022 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	$848,599	$848,599	$848,599
Trans. & Dist. Capacity	N/A	$106,276	$106,276	$106,276
Marginal Energy	N/A	$1,070,415	$1,070,415	$1,070,415
Avoided Emissions (CO2)	N/A	N/A	N/A	$735,870
Subtotal				$2,761,161
Non-Energy Benefits Adder (20.0%)				$405,058
Subtotal	N/A	$2,025,291	$2,025,291	$3,166,219
Participant Benefits				
Bill Reduction - Electric	$5,780,487	N/A	N/A	N/A
Participant Rebates and Incentives	$912,230	N/A	N/A	$912,230
Incremental Capital Savings	$4	N/A	N/A	$3
Incremental O&M Savings	$17,694	N/A	N/A	$12,917
Subtotal	$6,710,414	N/A	N/A	$925,149
Total Benefits	$6,710,414	$2,025,291	$2,025,291	$4,091,368
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$250,035	$250,035	$250,035
Advertising/Promotion/Customer Ed	N/A	$1,236	$1,236	$1,236
Participant Rebates and Incentives	N/A	$912,230	$912,230	$912,230
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$179,123	$179,123	$179,123
Subtotal	N/A	$1,342,624	$1,342,624	$1,342,624
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$5,780,487	N/A
Subtotal	N/A	N/A	$5,780,487	N/A
Participant Costs				
Incremental Capital Costs	$4,060,187	N/A	N/A	$2,963,937
Incremental O&M Costs	$217	N/A	N/A	$159
Subtotal	$4,060,404	N/A	N/A	$2,964,095
Total Costs	$4,060,404	$1,342,624	$7,123,111	$4,306,719
Net Benefit (Cost)	$2,650,010	$682,667	($5,097,820)	**($215,351)**
Benefit/Cost Ratio	1.65	1.51	0.28	**0.95**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	19.7 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	63.61%
Net-to-Gross (Demand)	E	44.92%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	0.29 kW
Gross Annual kWh Saved at Customer	I	2,108.40 kWh
Net Annual kWh Saved at Generator	J	1,432.48 kWh

Program Summary All Participants		
Total Budget	K	**$1,342,624**
Net coincident kW Saved at Generator	L	**712 kW**
Gross Annual kWh Saved at Customer	M	5,249,987 kWh
Net Annual kWh Saved at Generator	N	**3,566,922 kWh**
Total MTRC Net Benefits with Adder	O	**($215,351)**
Total MTRC Net Benefits without Adder	P	**($620,409)**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0191**
Utility Program Cost per kW at Gen	K/ L	**$1,886**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**18,906**

HOME ENERGY INSIGHTS

2022 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	$255,240	$255,240	$255,240
Trans. & Dist. Capacity	N/A	$31,965	$31,965	$31,965
Marginal Energy	N/A	$466,030	$466,030	$466,030
Avoided Emissions (CO2)	N/A	N/A	N/A	$487,094
Subtotal				$1,240,328
Non-Energy Benefits Adder (20.0%)				$150,647
Subtotal	N/A	$753,234	$753,234	$1,390,975
Participant Benefits				
Bill Reduction - Electric	$2,881,780	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	$2,881,780	N/A	N/A	$0
Total Benefits	$2,881,780	$753,234	$753,234	$1,390,975
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$1,638,191	$1,638,191	$1,638,191
Advertising/Promotion/Customer Ed	N/A	$1,744	$1,744	$1,744
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	$1,639,935	$1,639,935	$1,639,935
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$2,881,780	N/A
Subtotal	N/A	N/A	$2,881,780	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	$1,639,935	$4,521,715	$1,639,935
Net Benefit (Cost)	$2,881,780	($886,700)	($3,768,481)	**($248,960)**
Benefit/Cost Ratio	INF	0.46	0.17	**0.85**

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

2022 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	0.01 kW
Gross Annual kWh Saved at Customer	I	64.67 kWh
Net Annual kWh Saved at Generator	J	69.08 kWh

Program Summary All Participants		
Total Budget	K	**$1,639,935**
Net coincident kW Saved at Generator	L	**2,719 kW**
Gross Annual kWh Saved at Customer	M	18,591,988 kWh
Net Annual kWh Saved at Generator	N	**19,858,992 kWh**
Total MTRC Net Benefits with Adder	O	**($248,960)**
Total MTRC Net Benefits without Adder	P	**($399,607)**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0826**
Utility Program Cost per kW at Gen	K/ L	**$603**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**9,706**

HOME ENERGY SQUAD

2022 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	$325,280	$325,280	$325,280
Trans. & Dist. Capacity	N/A	$40,737	$40,737	$40,737
Marginal Energy	N/A	$344,435	$344,435	$344,435
Avoided Emissions (CO2)	N/A	N/A	N/A	$258,300
Subtotal				$968,752
Non-Energy Benefits Adder (20.0%)				$142,090
Subtotal	N/A	$710,452	$710,452	$1,110,843
Participant Benefits				
Bill Reduction - Electric	$1,905,179	N/A	N/A	N/A
Participant Rebates and Incentives	$166,389	N/A	N/A	$166,389
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$8,699	N/A	N/A	$8,699
Subtotal	$2,080,266	N/A	N/A	$175,088
Total Benefits	$2,080,266	$710,452	$710,452	$1,285,930
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$152,310	$152,310	$152,310
Advertising/Promotion/Customer Ed	N/A	$48,711	$48,711	$48,711
Participant Rebates and Incentives	N/A	$166,389	$166,389	$166,389
Equipment & Installation	N/A	$344,414	$344,414	$344,414
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$711,824	$711,824	$711,824
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,905,179	N/A
Subtotal	N/A	N/A	$1,905,179	N/A
Participant Costs				
Incremental Capital Costs	$208,933	N/A	N/A	$208,933
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$208,933	N/A	N/A	$208,933
Total Costs	$208,933	$711,824	$2,617,003	$920,757
Net Benefit (Cost)	$1,871,334	($1,372)	($1,906,551)	**$365,174**
Benefit/Cost Ratio	9.96	1.00	0.27	**1.40**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	11.1 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	0.84 kW
Gross Annual kWh Saved at Customer	I	3,563.27 kWh
Net Annual kWh Saved at Generator	J	3,806.09 kWh

Program Summary All Participants		
Total Budget	K	**$711,824**
Net coincident kW Saved at Generator	L	**426 kW**
Gross Annual kWh Saved at Customer	M	1,813,417 kWh
Net Annual kWh Saved at Generator	N	**1,936,997 kWh**
Total MTRC Net Benefits with Adder	O	**$365,174**
Total MTRC Net Benefits without Adder	P	**$223,083**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0332**
Utility Program Cost per kW at Gen	K/ L	**$1,671**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**6,383**

HOME LIGHTING & RECYCLING

2022 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	$11,729,401	$11,729,401	$11,729,401
Trans. & Dist. Capacity	N/A	$1,468,959	$1,468,959	$1,468,959
Marginal Energy	N/A	$20,029,855	$20,029,855	$20,029,855
Avoided Emissions (CO2)	N/A	N/A	N/A	$15,029,130
Subtotal				$48,257,346
Non-Energy Benefits Adder (20.0%)				$6,645,643
Subtotal	N/A	$33,228,216	$33,228,216	$54,902,989
Participant Benefits				
Bill Reduction - Electric	$105,215,994	N/A	N/A	N/A
Participant Rebates and Incentives	$6,642,119	N/A	N/A	$6,642,119
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$111,858,114	N/A	N/A	$6,642,119
Total Benefits	$111,858,114	$33,228,216	$33,228,216	$61,545,109
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$811,282	$811,282	$811,282
Advertising/Promotion/Customer Ed	N/A	$607,379	$607,379	$607,379
Participant Rebates and Incentives	N/A	$6,642,119	$6,642,119	$6,642,119
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$3,000	$3,000	$3,000
Subtotal	N/A	$8,063,780	$8,063,780	$8,063,780
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$105,215,994	N/A
Subtotal	N/A	N/A	$105,215,994	N/A
Participant Costs				
Incremental Capital Costs	$10,242,203	N/A	N/A	$6,015,675
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$10,242,203	N/A	N/A	$6,015,675
Total Costs	$10,242,203	$8,063,780	$113,279,775	$14,079,455
Net Benefit (Cost)	$101,615,910	$25,164,436	($80,051,559)	**$47,465,654**
Benefit/Cost Ratio	10.92	4.12	0.29	**4.37**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	11.8 years
T & D Loss Factor (Energy)	B	6.11%
T & D Loss Factor (Demand)	C	8.67%
Net-to-Gross (Energy)	D	48.17%
Net-to-Gross (Demand)	E	48.37%
Installation Rate (Energy)	F	**99.00%**
Installation Rate (Demand)	G	**99.00%**
Net coincident kW Saved at Generator	H	0.00 kW
Gross Annual kWh Saved at Customer	I	45.97 kWh
Net Annual kWh Saved at Generator	J	23.35 kWh

Program Summary All Participants		
Total Budget	K	**$8,063,780**
Net coincident kW Saved at Generator	L	**13,300 kW**
Gross Annual kWh Saved at Customer	M	188,284,416 kWh
Net Annual kWh Saved at Generator	N	**95,615,379 kWh**
Total MTRC Net Benefits with Adder	O	**$47,465,654**
Total MTRC Net Benefits without Adder	P	**$40,820,011**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0071**
Utility Program Cost per kW at Gen	K/ L	**$606**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**371,215**

INSULATION & AIR SEALING

2022 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	$960,357	$960,357	$960,357
Trans. & Dist. Capacity	N/A	$120,273	$120,273	$120,273
Marginal Energy	N/A	$162,115	$162,115	$162,115
Avoided Emissions (CO2)	N/A	N/A	N/A	$110,579
Subtotal				$1,353,323
Non-Energy Benefits Adder (20.0%)				$248,549
Subtotal	N/A	$1,242,745	$1,242,745	$1,601,872
Participant Benefits				
Bill Reduction - Electric	$948,569	N/A	N/A	N/A
Participant Rebates and Incentives	$714,917	N/A	N/A	$714,917
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$1,663,485	N/A	N/A	$714,917
Total Benefits	$1,663,485	$1,242,745	$1,242,745	$2,316,789
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$49,726	$49,726	$49,726
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$714,917	$714,917	$714,917
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$375	$375	$375
Subtotal	N/A	$765,018	$765,018	$765,018
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$948,569	N/A
Subtotal	N/A	N/A	$948,569	N/A
Participant Costs				
Incremental Capital Costs	$2,775,252	N/A	N/A	$2,469,974
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$2,775,252	N/A	N/A	$2,469,974
Total Costs	$2,775,252	$765,018	$1,713,587	$3,234,993
Net Benefit (Cost)	($1,111,766)	$477,726	($470,842)	**($918,203)**
Benefit/Cost Ratio	0.60	1.62	0.73	**0.72**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	16.2 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	0.52 kW
Gross Annual kWh Saved at Customer	I	348.38 kWh
Net Annual kWh Saved at Generator	J	331.19 kWh

Program Summary All Participants		
Total Budget	K	**$765,018**
Net coincident kW Saved at Generator	L	**875 kW**
Gross Annual kWh Saved at Customer	M	587,015 kWh
Net Annual kWh Saved at Generator	N	**558,047 kWh**
Total MTRC Net Benefits with Adder	O	**($918,203)**
Total MTRC Net Benefits without Adder	P	**($1,166,752)**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0848**
Utility Program Cost per kW at Gen	K/ L	**$874**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**2,763**

MULTIFAMILY BUILDINGS

2022 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	$619,501	$619,501	$619,501
Trans. & Dist. Capacity	N/A	$77,584	$77,584	$77,584
Marginal Energy	N/A	$1,261,395	$1,261,395	$1,261,395
Avoided Emissions (CO2)	N/A	N/A	N/A	$913,650
Subtotal				$2,872,130
Non-Energy Benefits Adder (20.0%)				$391,696
Subtotal	N/A	$1,958,480	$1,958,480	$3,263,826
Participant Benefits				
Bill Reduction - Electric	$5,363,064	N/A	N/A	N/A
Participant Rebates and Incentives	$781,798	N/A	N/A	$781,798
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$6,144,862	N/A	N/A	$781,798
Total Benefits	$6,144,862	$1,958,480	$1,958,480	$4,045,624
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$328,048	$328,048	$328,048
Advertising/Promotion/Customer Ed	N/A	$1,204	$1,204	$1,204
Participant Rebates and Incentives	N/A	$781,798	$781,798	$781,798
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$1,111,049	$1,111,049	$1,111,049
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$5,363,064	N/A
Subtotal	N/A	N/A	$5,363,064	N/A
Participant Costs				
Incremental Capital Costs	$1,096,123	N/A	N/A	$1,096,123
Incremental O&M Costs	$34,882	N/A	N/A	$34,882
Subtotal	$1,131,006	N/A	N/A	$1,131,006
Total Costs	$1,131,006	$1,111,049	$6,474,113	$2,242,055
Net Benefit (Cost)	$5,013,856	$847,431	($4,515,633)	**$1,803,569**
Benefit/Cost Ratio	5.43	1.76	0.30	**1.80**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	14.9 years
T & D Loss Factor (Energy)	B	5.70%
T & D Loss Factor (Demand)	C	8.25%
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	0.04 kW
Gross Annual kWh Saved at Customer	I	288.30 kWh
Net Annual kWh Saved at Generator	J	305.73 kWh

Program Summary All Participants		
Total Budget	K	**$1,111,049**
Net coincident kW Saved at Generator	L	**689 kW**
Gross Annual kWh Saved at Customer	M	5,286,279 kWh
Net Annual kWh Saved at Generator	N	**5,605,897 kWh**
Total MTRC Net Benefits with Adder	O	**$1,803,569**
Total MTRC Net Benefits without Adder	P	**$1,411,873**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0133**
Utility Program Cost per kW at Gen	K/ L	**$1,612**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**22,926**

REFRIGERATOR & FREEZER RECYCLING

2022 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	$246,306	$246,306	$246,306
Trans. & Dist. Capacity	N/A	$30,847	$30,847	$30,847
Marginal Energy	N/A	$429,754	$429,754	$429,754
Avoided Emissions (CO2)	N/A	N/A	N/A	$413,120
Subtotal				$1,120,026
Non-Energy Benefits Adder (20.0%)				$141,381
Subtotal	N/A	$706,906	$706,906	$1,261,407
Participant Benefits				
Bill Reduction - Electric	$2,577,775	N/A	N/A	N/A
Participant Rebates and Incentives	$303,130	N/A	N/A	$303,130
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$2,880,905	N/A	N/A	$303,130
Total Benefits	$2,880,905	$706,906	$706,906	$1,564,538
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$672,169	$672,169	$672,169
Advertising/Promotion/Customer Ed	N/A	$19,154	$19,154	$19,154
Participant Rebates and Incentives	N/A	$303,130	$303,130	$303,130
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$3,000	$3,000	$3,000
Subtotal	N/A	$997,453	$997,453	$997,453
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$2,577,775	N/A
Subtotal	N/A	N/A	$2,577,775	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	$997,453	$3,575,228	$997,453
Net Benefit (Cost)	$2,880,905	($290,547)	($2,868,322)	**$567,084**
Benefit/Cost Ratio	INF	0.71	0.20	**1.57**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	8.2 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	0.07 kW
Gross Annual kWh Saved at Customer	I	744.68 kWh
Net Annual kWh Saved at Generator	J	580.66 kWh

Program Summary All Participants		
Total Budget	K	**$997,453**
Net coincident kW Saved at Generator	L	**377 kW**
Gross Annual kWh Saved at Customer	M	3,987,771 kWh
Net Annual kWh Saved at Generator	N	**3,109,456 kWh**
Total MTRC Net Benefits with Adder	O	**$567,084**
Total MTRC Net Benefits without Adder	P	**$425,703**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0392**
Utility Program Cost per kW at Gen	K/ L	**$2,644**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**9,476**

RESIDENTIAL HEATING & COOLING

2022 ELECTRIC **ACTUALS**

2022 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	$9,370,318	$9,370,318	$9,370,318
Trans. & Dist. Capacity	N/A	$1,173,516	$1,173,516	$1,173,516
Marginal Energy	N/A	$1,457,265	$1,457,265	$1,457,265
Avoided Emissions (CO2)	N/A	N/A	N/A	$1,010,953
Subtotal				$13,012,052
Non-Energy Benefits Adder (20.0%)				$2,400,220
Subtotal	N/A	$12,001,099	$12,001,099	$15,412,272
Participant Benefits				
Bill Reduction - Electric	$8,586,574	N/A	N/A	N/A
Participant Rebates and Incentives	$4,626,063	N/A	N/A	$4,626,063
Incremental Capital Savings	$9,598,152	N/A	N/A	$6,718,707
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$22,810,790	N/A	N/A	$11,344,770
Total Benefits	$22,810,790	$12,001,099	$12,001,099	$26,757,042
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$1,951,669	$1,951,669	$1,951,669
Advertising/Promotion/Customer Ed	N/A	$264,309	$264,309	$264,309
Participant Rebates and Incentives	N/A	$4,626,063	$4,626,063	$4,626,063
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$51,714	$51,714	$51,714
Subtotal	N/A	$6,893,755	$6,893,755	$6,893,755
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$8,586,574	N/A
Subtotal	N/A	N/A	$8,586,574	N/A
Participant Costs				
Incremental Capital Costs	($2,549,402)	N/A	N/A	($878,983)
Incremental O&M Costs	$512,254	N/A	N/A	$381,430
Subtotal	($2,037,148)	N/A	N/A	($497,554)
Total Costs	($2,037,148)	$6,893,755	$15,480,329	$6,396,202
Net Benefit (Cost)	$24,847,938	$5,107,343	($3,479,230)	**$20,360,840**
Benefit/Cost Ratio	(11.20)	1.74	0.78	**4.18**

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

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	15.1 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	77.26%
Net-to-Gross (Demand)	E	78.26%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	0.98 kW
Gross Annual kWh Saved at Customer	I	720.17 kWh
Net Annual kWh Saved at Generator	J	594.35 kWh

Program Summary All Participants		
Total Budget	K	**$6,893,755**
Net coincident kW Saved at Generator	L	**9,366 kW**
Gross Annual kWh Saved at Customer	M	6,907,574 kWh
Net Annual kWh Saved at Generator	N	**5,700,792 kWh**
Total MTRC Net Benefits with Adder	O	**$20,360,840**
Total MTRC Net Benefits without Adder	P	**$17,960,620**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0802**
Utility Program Cost per kW at Gen	K/ L	**$736**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**24,970**

SCHOOL EDUCATION KITS

2022 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	$2,217,338	$2,217,338	$2,217,338
Trans. & Dist. Capacity	N/A	$277,693	$277,693	$277,693
Marginal Energy	N/A	$3,669,282	$3,669,282	$3,669,282
Avoided Emissions (CO2)	N/A	N/A	N/A	$2,653,476
Subtotal				$8,817,789
Non-Energy Benefits Adder (20.0%)				$1,232,863
Subtotal	N/A	$6,164,313	$6,164,313	$10,050,652
Participant Benefits				
Bill Reduction - Electric	$20,053,149	N/A	N/A	N/A
Participant Rebates and Incentives	$1,568,172	N/A	N/A	$1,568,172
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$532,139	N/A	N/A	$532,139
Subtotal	$22,153,459	N/A	N/A	$2,100,310
Total Benefits	$22,153,459	$6,164,313	$6,164,313	$12,150,962
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$825,783	$825,783	$825,783
Advertising/Promotion/Customer Ed	N/A	$1,544	$1,544	$1,544
Participant Rebates and Incentives	N/A	$1,568,172	$1,568,172	$1,568,172
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$2,395,499	$2,395,499	$2,395,499
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$20,053,149	N/A
Subtotal	N/A	N/A	$20,053,149	N/A
Participant Costs				
Incremental Capital Costs	$1,379,104	N/A	N/A	$1,379,104
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$1,379,104	N/A	N/A	$1,379,104
Total Costs	$1,379,104	$2,395,499	$22,448,647	$3,774,603
Net Benefit (Cost)	$20,774,355	$3,768,815	($16,284,334)	**$8,376,359**
Benefit/Cost Ratio	16.06	2.57	0.27	**3.22**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	13.4 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	**56.12%**
Installation Rate (Demand)	G	**19.39%**
Net coincident kW Saved at Generator	H	0.01 kW
Gross Annual kWh Saved at Customer	I	111.56 kWh
Net Annual kWh Saved at Generator	J	66.88 kWh

Program Summary All Participants		
Total Budget	K	**$2,395,499**
Net coincident kW Saved at Generator	L	**2,114 kW**
Gross Annual kWh Saved at Customer	M	25,186,616 kWh
Net Annual kWh Saved at Generator	N	**15,098,513 kWh**
Total MTRC Net Benefits with Adder	O	**$8,376,359**
Total MTRC Net Benefits without Adder	P	**$7,143,497**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0118**
Utility Program Cost per kW at Gen	K/ L	**$1,133**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**66,864**

WHOLE HOME EFFICIENCY

2022 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	$1,265	$1,265	$1,265
Trans. & Dist. Capacity	N/A	$158	$158	$158
Marginal Energy	N/A	$194	$194	$194
Avoided Emissions (CO2)	N/A	N/A	N/A	$138
Subtotal				$1,756
Non-Energy Benefits Adder (20.0%)				$324
Subtotal	N/A	$1,618	$1,618	$2,079
Participant Benefits				
Bill Reduction - Electric	$1,154	N/A	N/A	N/A
Participant Rebates and Incentives	$604	N/A	N/A	$604
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$1,758	N/A	N/A	$604
Total Benefits	$1,758	$1,618	$1,618	$2,683
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$70,184	$70,184	$70,184
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$604	$604	$604
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$70,788	$70,788	$70,788
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,154	N/A
Subtotal	N/A	N/A	$1,154	N/A
Participant Costs				
Incremental Capital Costs	$3,746	N/A	N/A	$4,345
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$3,746	N/A	N/A	$4,345
Total Costs	$3,746	$70,788	$71,942	$75,134
Net Benefit (Cost)	($1,988)	($69,170)	($70,324)	**($72,450)**
Benefit/Cost Ratio	0.47	0.02	0.02	**0.04**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	14.0 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	116.00%
Net-to-Gross (Demand)	E	116.00%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	0.53 kW
Gross Annual kWh Saved at Customer	I	244.67 kWh
Net Annual kWh Saved at Generator	J	303.16 kWh

Program Summary All Participants		
Total Budget	K	**$70,788**
Net coincident kW Saved at Generator	L	**1 kW**
Gross Annual kWh Saved at Customer	M	597 kWh
Net Annual kWh Saved at Generator	N	**740 kWh**
Total MTRC Net Benefits with Adder	O	**($72,450)**
Total MTRC Net Benefits without Adder	P	**($72,774)**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$6.8420**
Utility Program Cost per kW at Gen	K/ L	**$54,795**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**3**

ENERGY SAVINGS KIT

2022 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	$37,536	$37,536	$37,536
Trans. & Dist. Capacity	N/A	$4,701	$4,701	$4,701
Marginal Energy	N/A	$72,845	$72,845	$72,845
Avoided Emissions (CO2)	N/A	N/A	N/A	$52,493
Subtotal				$167,575
Non-Energy Benefits Adder (50.0%)				$57,541
Subtotal	N/A	$115,082	$115,082	$225,116
Participant Benefits				
Bill Reduction - Electric	$400,736	N/A	N/A	N/A
Participant Rebates and Incentives	$85,976	N/A	N/A	$85,976
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$45,735	N/A	N/A	$45,735
Subtotal	$532,447	N/A	N/A	$131,711
Total Benefits	$532,447	$115,082	$115,082	$356,828
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$111,055	$111,055	$111,055
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$85,976	$85,976	$85,976
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$197,031	$197,031	$197,031
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$400,736	N/A
Subtotal	N/A	N/A	$400,736	N/A
Participant Costs				
Incremental Capital Costs	$8,269	N/A	N/A	$8,269
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$8,269	N/A	N/A	$8,269
Total Costs	$8,269	$197,031	$597,767	$205,299
Net Benefit (Cost)	$524,179	($81,948)	($482,684)	**$151,528**
Benefit/Cost Ratio	64.39	0.58	0.19	**1.74**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	16.0 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	**77.22%**
Installation Rate (Demand)	G	**76.98%**
Net coincident kW Saved at Generator	H	0.02 kW
Gross Annual kWh Saved at Customer	I	166.15 kWh
Net Annual kWh Saved at Generator	J	137.05 kWh

Program Summary All Participants		
Total Budget	K	**$197,031**
Net coincident kW Saved at Generator	L	**32 kW**
Gross Annual kWh Saved at Customer	M	350,763 kWh
Net Annual kWh Saved at Generator	N	**289,316 kWh**
Total MTRC Net Benefits with Adder	O	**$151,528**
Total MTRC Net Benefits without Adder	P	**$93,987**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0425**
Utility Program Cost per kW at Gen	K/ L	**$6,082**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**1,320**

MULTIFAMILY WEATHERIZATION

2022 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	$231,544	$231,544	$231,544
Trans. & Dist. Capacity	N/A	$28,998	$28,998	$28,998
Marginal Energy	N/A	$391,086	$391,086	$391,086
Avoided Emissions (CO2)	N/A	N/A	N/A	$278,601
Subtotal				$930,229
Non-Energy Benefits Adder (50.0%)				$325,814
Subtotal	N/A	$651,629	$651,629	$1,256,043
Participant Benefits				
Bill Reduction - Electric	$2,318,575	N/A	N/A	N/A
Participant Rebates and Incentives	$913,066	N/A	N/A	$913,066
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$3,231,642	N/A	N/A	$913,066
Total Benefits	$3,231,642	$651,629	$651,629	$2,169,110
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$161,442	$161,442	$161,442
Advertising/Promotion/Customer Ed	N/A	$30,000	$30,000	$30,000
Participant Rebates and Incentives	N/A	$913,066	$913,066	$913,066
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$49,649	$49,649	$49,649
Subtotal	N/A	$1,154,158	$1,154,158	$1,154,158
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$2,318,575	N/A
Subtotal	N/A	N/A	$2,318,575	N/A
Participant Costs				
Incremental Capital Costs	$851,317	N/A	N/A	$851,317
Incremental O&M Costs	$11,815	N/A	N/A	$11,815
Subtotal	$863,132	N/A	N/A	$863,132
Total Costs	$863,132	$1,154,158	$3,472,733	$2,017,290
Net Benefit (Cost)	$2,368,509	($502,529)	($2,821,105)	**$151,820**
Benefit/Cost Ratio	3.74	0.56	0.19	**1.08**

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

2022 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	4.66 kW
Gross Annual kWh Saved at Customer	I	33,697.63 kWh
Net Annual kWh Saved at Generator	J	35,994.05 kWh

Program Summary All Participants		
Total Budget	K	**$1,154,158**
Net coincident kW Saved at Generator	L	**187 kW**
Gross Annual kWh Saved at Customer	M	1,347,905 kWh
Net Annual kWh Saved at Generator	N	**1,439,762 kWh**
Total MTRC Net Benefits with Adder	O	**$151,820**
Total MTRC Net Benefits without Adder	P	**($173,995)**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0422**
Utility Program Cost per kW at Gen	K/ L	**$6,185**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**7,060**

NON-PROFIT

2022 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	$483,935	$483,935	$483,935
Trans. & Dist. Capacity	N/A	$60,607	$60,607	$60,607
Marginal Energy	N/A	$445,313	$445,313	$445,313
Avoided Emissions (CO2)	N/A	N/A	N/A	$323,726
Subtotal				$1,313,581
Non-Energy Benefits Adder (50.0%)				$494,928
Subtotal	N/A	$989,855	$989,855	$1,808,509
Participant Benefits				
Bill Reduction - Electric	$1,522,288	N/A	N/A	N/A
Participant Rebates and Incentives	$946,778	N/A	N/A	$946,778
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$2,469,066	N/A	N/A	$946,778
Total Benefits	$2,469,066	$989,855	$989,855	$2,755,287
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$226,314	$226,314	$226,314
Advertising/Promotion/Customer Ed	N/A	$30,000	$30,000	$30,000
Participant Rebates and Incentives	N/A	$946,778	$946,778	$946,778
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$28,201	$28,201	$28,201
Subtotal	N/A	$1,231,293	$1,231,293	$1,231,293
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,522,288	N/A
Subtotal	N/A	N/A	$1,522,288	N/A
Participant Costs				
Incremental Capital Costs	$1,036,557	N/A	N/A	$1,036,557
Incremental O&M Costs	$48,277	N/A	N/A	$48,277
Subtotal	$1,084,834	N/A	N/A	$1,084,834
Total Costs	$1,084,834	$1,231,293	$2,753,581	$2,316,127
Net Benefit (Cost)	$1,384,232	($241,438)	($1,763,726)	**$439,159**
Benefit/Cost Ratio	2.28	0.80	0.36	**1.19**

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

2022 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	7.09 kW
Gross Annual kWh Saved at Customer	I	28,353.19 kWh
Net Annual kWh Saved at Generator	J	29,950.13 kWh

Program Summary All Participants		
Total Budget	K	**$1,231,293**
Net coincident kW Saved at Generator	L	**404 kW**
Gross Annual kWh Saved at Customer	M	1,616,132 kWh
Net Annual kWh Saved at Generator	N	**1,707,158 kWh**
Total MTRC Net Benefits with Adder	O	**$439,159**
Total MTRC Net Benefits without Adder	P	**($55,768)**
Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0401**
Utility Program Cost per kW at Gen	K/ L	**$3,048**
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		**8,133**

SINGLE-FAMILY WEATHERIZATION

2022 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	$4,429,395	$4,429,395	$4,429,395
Trans. & Dist. Capacity	N/A	$554,726	$554,726	$554,726
Marginal Energy	N/A	$8,143,397	$8,143,397	$8,143,397
Avoided Emissions (CO2)	N/A	N/A	N/A	$5,589,761
Subtotal				$18,717,279
Non-Energy Benefits Adder (50.0%)				$6,563,759
Subtotal	N/A	$13,127,518	$13,127,518	$25,281,038
Participant Benefits				
Bill Reduction - Electric	$43,845,388	N/A	N/A	N/A
Participant Rebates and Incentives	$1,572,220	N/A	N/A	$1,572,220
Incremental Capital Savings	$4,720	N/A	N/A	$4,720
Incremental O&M Savings	$5,483	N/A	N/A	$5,483
Subtotal	$45,427,811	N/A	N/A	$1,582,423
Total Benefits	$45,427,811	$13,127,518	$13,127,518	$26,863,460
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$3,578	$3,578	$3,578
Advertising/Promotion/Customer Ed	N/A	$165,388	$165,388	$165,388
Participant Rebates and Incentives	N/A	$1,572,220	$1,572,220	$1,572,220
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$101,190	$101,190	$101,190
Subtotal	N/A	$1,842,375	$1,842,375	$1,842,375
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$43,845,388	N/A
Subtotal	N/A	N/A	$43,845,388	N/A
Participant Costs				
Incremental Capital Costs	$1,183,319	N/A	N/A	$1,183,319
Incremental O&M Costs	$181	N/A	N/A	$181
Subtotal	$1,183,500	N/A	N/A	$1,183,500
Total Costs	$1,183,500	$1,842,375	$45,687,763	$3,025,875
Net Benefit (Cost)	$44,244,311	$11,285,143	($32,560,245)	**$23,837,586**
Benefit/Cost Ratio	38.38	7.13	0.29	**8.88**

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

2022 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	19.9 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	**99.03%**
Installation Rate (Demand)	G	**99.02%**
Net coincident kW Saved at Generator	H	1.60 kW
Gross Annual kWh Saved at Customer	I	11,591.46 kWh
Net Annual kWh Saved at Generator	J	12,261.65 kWh

Program Summary All Participants		
Total Budget	K	**$1,842,375**
Net coincident kW Saved at Generator	L	**3,463 kW**
Gross Annual kWh Saved at Customer	M	25,088,899 kWh
Net Annual kWh Saved at Generator	N	**26,539,477 kWh**
Total MTRC Net Benefits with Adder	O	**$23,837,586**
Total MTRC Net Benefits without Adder	P	**$17,273,827**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0035**
Utility Program Cost per kW at Gen	K/ L	**$532**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**144,225**

ELECTRIC VEHICLE OPTIMIZATION

2022 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	$121,166	$121,166	$121,166
Trans. & Dist. Capacity	N/A	$0	$0	$0
Marginal Energy	N/A	$46,074	$46,074	$46,074
Avoided Emissions (CO2)	N/A	N/A	N/A	$27,730
Subtotal				$194,971
Non-Energy Benefits Adder (20.0%)				$33,448
Subtotal	N/A	$167,240	$167,240	$228,419
Participant Benefits				
Bill Reduction - Electric	$0	N/A	N/A	N/A
Participant Rebates and Incentives	$76,600	N/A	N/A	$76,600
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$76,600	N/A	N/A	$76,600
Total Benefits	$76,600	$167,240	$167,240	$305,019
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$454,597	$454,597	$454,597
Advertising/Promotion/Customer Ed	N/A	$52,800	$52,800	$52,800
Participant Rebates and Incentives	N/A	$76,600	$76,600	$76,600
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$181,959	$181,959	$181,959
Subtotal	N/A	$765,956	$765,956	$765,956
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	$765,956	$765,956	$765,956
Net Benefit (Cost)	$76,600	($598,716)	($598,716)	**($460,937)**
Benefit/Cost Ratio	INF	0.22	0.22	**0.40**

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

2022 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	0.54 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	**$765,956**
Net coincident kW Saved at Generator	L	**1,291 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	**($460,937)**
Total MTRC Net Benefits without Adder	P	**($494,385)**

Utility Program Cost per kWh Lifetime	K/(A x N)	**N/A**
Utility Program Cost per kW at Gen	K/ L	**$594**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**553**

RESIDENTIAL BATTERY DEMAND RESPONSE

2022 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	$305,096	$305,096	$305,096
Trans. & Dist. Capacity	N/A	$0	$0	$0
Marginal Energy	N/A	($2,190)	($2,190)	($2,190)
Avoided Emissions (CO2)	N/A	N/A	N/A	($1,894)
Subtotal				$301,011
Non-Energy Benefits Adder (20.0%)				$60,581
Subtotal	N/A	$302,905	$302,905	$361,592
Participant Benefits				
Bill Reduction - Electric	($14,189)	N/A	N/A	N/A
Participant Rebates and Incentives	$43,750	N/A	N/A	$43,750
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$29,561	N/A	N/A	$43,750
Total Benefits	$29,561	$302,905	$302,905	$405,342
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$88,716	$88,716	$88,716
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$43,750	$43,750	$43,750
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$27,903	$27,903	$27,903
Subtotal	N/A	$160,369	$160,369	$160,369
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	($14,189)	N/A
Subtotal	N/A	N/A	($14,189)	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	$160,369	$146,180	$160,369
Net Benefit (Cost)	$29,561	$142,536	$156,725	**$244,973**
Benefit/Cost Ratio	INF	1.89	2.07	**2.53**

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

2022 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	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	2.58 kW
Gross Annual kWh Saved at Customer	I	-71.00kWh
Net Annual kWh Saved at Generator	J	-75.84kWh

Program Summary All Participants		
Total Budget	K	**$160,369**
Net coincident kW Saved at Generator	L	**392 kW**
Gross Annual kWh Saved at Customer	M	-10792kWh
Net Annual kWh Saved at Generator	N	**-11527kWh**
Total MTRC Net Benefits with Adder	O	**$244,973**
Total MTRC Net Benefits without Adder	P	**$184,392**

Utility Program Cost per kWh Lifetime	K/(A x N)	**($1.3912)**
Utility Program Cost per kW at Gen	K/ L	**$409**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**(44)**

RESIDENTIAL DEMAND RESPONSE

2022 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	$11,630,143	$11,630,143	$11,630,143
Trans. & Dist. Capacity	N/A	$0	$0	$0
Marginal Energy	N/A	$12,023	$12,023	$12,023
Avoided Emissions (CO2)	N/A	N/A	N/A	$8,851
Subtotal				$11,651,017
Non-Energy Benefits Adder (20.0%)				$2,328,433
Subtotal	N/A	$11,642,166	$11,642,166	$13,979,451
Participant Benefits				
Bill Reduction - Electric	$69,565	N/A	N/A	N/A
Participant Rebates and Incentives	$8,738,148	N/A	N/A	$8,738,148
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$8,807,712	N/A	N/A	$8,738,148
Total Benefits	$8,807,712	$11,642,166	$11,642,166	$22,717,598
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$4,177,440	$4,177,440	$4,177,440
Advertising/Promotion/Customer Ed	N/A	$367,473	$367,473	$367,473
Participant Rebates and Incentives	N/A	$8,738,148	$8,738,148	$8,738,148
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$45,827	$45,827	$45,827
Subtotal	N/A	$13,328,888	$13,328,888	$13,328,888
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$69,565	N/A
Subtotal	N/A	N/A	$69,565	N/A
Participant Costs				
Incremental Capital Costs	$150	N/A	N/A	$150
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$150	N/A	N/A	$150
Total Costs	$150	$13,328,888	$13,398,452	$13,329,038
Net Benefit (Cost)	$8,807,562	($1,686,721)	($1,756,286)	**$9,388,561**
Benefit/Cost Ratio	58,718.08	0.87	0.87	**1.70**

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

2022 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	2.09 kW
Gross Annual kWh Saved at Customer	I	7.17 kWh
Net Annual kWh Saved at Generator	J	7.66 kWh

Program Summary All Participants		
Total Budget	K	**$13,328,888**
Net coincident kW Saved at Generator	L	**17,275 kW**
Gross Annual kWh Saved at Customer	M	59,310 kWh
Net Annual kWh Saved at Generator	N	**63,352 kWh**
Total MTRC Net Benefits with Adder	O	**$9,388,561**
Total MTRC Net Benefits without Adder	P	**$7,060,127**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$22.3999**
Utility Program Cost per kW at Gen	K/ L	**$772**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**207**

SMALL COMMERCIAL BUILDING CONTROLS

2022 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	$371,050	$371,050	$371,050
Trans. & Dist. Capacity	N/A	$0	$0	$0
Marginal Energy	N/A	$1,286	$1,286	$1,286
Avoided Emissions (CO2)	N/A	N/A	N/A	$1,119
Subtotal				$373,455
Non-Energy Benefits Adder (20.0%)				$74,467
Subtotal	N/A	$372,336	$372,336	$447,922
Participant Benefits				
Bill Reduction - Electric	$5,857	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	$5,857	N/A	N/A	$0
Total Benefits	$5,857	$372,336	$372,336	$447,922
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$216,018	$216,018	$216,018
Advertising/Promotion/Customer Ed	N/A	$6,632	$6,632	$6,632
Participant Rebates and Incentives	N/A	$0	$0	$0
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$10,553	$10,553	$10,553
Subtotal	N/A	$233,204	$233,204	$233,204
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$5,857	N/A
Subtotal	N/A	N/A	$5,857	N/A
Participant Costs				
Incremental Capital Costs	$45,554	N/A	N/A	$45,554
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$45,554	N/A	N/A	$45,554
Total Costs	$45,554	$233,204	$239,061	$278,758
Net Benefit (Cost)	($39,696)	$139,132	$133,275	**$169,164**
Benefit/Cost Ratio	0.13	1.60	1.56	**1.61**

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

2022 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	2.12 kW
Gross Annual kWh Saved at Customer	I	32.17 kWh
Net Annual kWh Saved at Generator	J	33.99 kWh

Program Summary All Participants		
Total Budget	K	**$233,204**
Net coincident kW Saved at Generator	L	**477 kW**
Gross Annual kWh Saved at Customer	M	7,239 kWh
Net Annual kWh Saved at Generator	N	**7,647 kWh**
Total MTRC Net Benefits with Adder	O	**$169,164**
Total MTRC Net Benefits without Adder	P	**$94,697**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$3.0497**
Utility Program Cost per kW at Gen	K/ L	**$489**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**26**

GEO-TARGETING PILOT - DR

2022 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	$154	$154	$154
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	$154	$154	$154
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	$154	$154	$154
Net Benefit (Cost)	$0	($154)	($154)	**($154)**
Benefit/Cost Ratio	INF	-	-	**-**

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

2022 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	**$154**
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	**($154)**
Total MTRC Net Benefits without Adder	P	**($154)**

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**

GEO-TARGETING PILOT - EE

2022 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	$154	$154	$154
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	$154	$154	$154
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	$154	$154	$154
Net Benefit (Cost)	$0	($154)	($154)	**($154)**
Benefit/Cost Ratio	INF	-	-	**-**

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

2022 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	**$154**
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	**($154)**
Total MTRC Net Benefits without Adder	P	**($154)**
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**

PORTFOLIO TOTAL

2022 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	$23,982,490	$23,982,490	$23,982,490
Variable O&M Savings	N/A	$384,555	$384,555	$384,555
Demand Savings	N/A	$2,688,911	$2,688,911	$2,688,911
Subtotal				$27,055,957
Non-Energy Benefits Adder (19.1%)				$5,179,950
Subtotal	N/A	$27,055,957	$27,055,957	$32,235,907
Participant Benefits				
Bill Reduction - Gas	$43,389,021	N/A	N/A	N/A
Participant Rebates and Incentives	$12,828,314	N/A	N/A	$12,828,314
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$43,210,791	N/A	N/A	$40,527,771
Subtotal	$99,428,126	N/A	N/A	$53,356,085
Total Benefits	$99,428,126	$27,055,957	$27,055,957	$85,591,992
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$4,172,140	$4,172,140	$4,172,140
Advertising/Promotion/Customer Ed	N/A	$448,600	$448,600	$448,600
Participant Rebates and Incentives	N/A	$12,828,314	$12,828,314	$12,828,314
Equipment & Installation	N/A	$115,402	$115,402	$115,402
Measurement and Verification	N/A	$1,068,901	$1,068,901	$1,068,901
Subtotal	N/A	$18,633,357	$18,633,357	$18,633,357
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$43,389,021	N/A
Subtotal	N/A	N/A	$43,389,021	N/A
Participant Costs				
Incremental Capital Costs	$32,494,544	N/A	N/A	$28,323,208
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$32,494,544	N/A	N/A	$28,323,208
Total Costs	$32,494,544	$18,633,357	$62,022,378	$46,956,565
Net Benefit (Cost)	$66,933,582	$8,422,599	($34,966,422)	**$38,635,427**
Benefit/Cost Ratio	3.06	1.45	0.44	**1.82**

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

2022 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	13.6 years
Net-to-Gross (Weighted on Dth)	B	92.12%
Install Rate (Weighted on Dth)	C	77.96%
Program Summary per Participant		
Gross Annual Dth Saved	D	5.6
Net Annual Dth Saved	E	4.0
Program Summary All Participants		
Total Budget	F	**$18,633,357**
Gross Annual Dth Saved	G	**1,198,803 Dth**
Net Annual Dth Saved	H	**841,127 Dth**
Total MTRC Net Benefits with Adder	I	**$38,635,427**
Total MTRC Net Benefits without Adder	J	**$33,455,477**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.6345**

EE PORTFOLIO TOTAL

2022 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	$23,982,490	$23,982,490	$23,982,490
Variable O&M Savings	N/A	$384,555	$384,555	$384,555
Demand Savings	N/A	$2,688,911	$2,688,911	$2,688,911
Subtotal				$27,055,957
Non-Energy Benefits Adder (19.1%)				$5,179,950
Subtotal	N/A	$27,055,957	$27,055,957	$32,235,907
Participant Benefits				
Bill Reduction - Gas	$43,389,021	N/A	N/A	N/A
Participant Rebates and Incentives	$12,828,314	N/A	N/A	$12,828,314
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$43,210,791	N/A	N/A	$40,527,771
Subtotal	$99,428,126	N/A	N/A	$53,356,085
Total Benefits	$99,428,126	$27,055,957	$27,055,957	$85,591,992
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$4,172,140	$4,172,140	$4,172,140
Advertising/Promotion/Customer Ed	N/A	$448,600	$448,600	$448,600
Participant Rebates and Incentives	N/A	$12,828,314	$12,828,314	$12,828,314
Equipment & Installation	N/A	$115,402	$115,402	$115,402
Measurement and Verification	N/A	$1,068,901	$1,068,901	$1,068,901
Subtotal	N/A	$18,633,357	$18,633,357	$18,633,357
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$43,389,021	N/A
Subtotal	N/A	N/A	$43,389,021	N/A
Participant Costs				
Incremental Capital Costs	$32,494,544	N/A	N/A	$28,323,208
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$32,494,544	N/A	N/A	$28,323,208
Total Costs	$32,494,544	$18,633,357	$62,022,378	$46,956,565
Net Benefit (Cost)	$66,933,582	$8,422,599	($34,966,422)	**$38,635,427**
Benefit/Cost Ratio	3.06	1.45	0.44	**1.82**

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

2022 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	13.6 years
Net-to-Gross (Weighted on Dth)	B	92.12%
Install Rate (Weighted on Dth)	C	77.96%
Program Summary per Participant		
Gross Annual Dth Saved	D	5.6
Net Annual Dth Saved	E	4.0
Program Summary All Participants		
Total Budget	F	**$18,633,357**
Gross Annual Dth Saved	G	**1,198,803 Dth**
Net Annual Dth Saved	H	**841,127 Dth**
Total MTRC Net Benefits with Adder	I	**$38,635,427**
Total MTRC Net Benefits without Adder	J	**$33,455,477**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.6345**

BUSINESS PROGRAM EE TOTAL

2022 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	$5,714,585	$5,714,585	$5,714,585
Variable O&M Savings	N/A	$87,475	$87,475	$87,475
Demand Savings	N/A	$608,043	$608,043	$608,043
Subtotal				$6,410,103
Non-Energy Benefits Adder (20.0%)				$1,282,021
Subtotal	N/A	$6,410,103	$6,410,103	$7,692,124
Participant Benefits				
Bill Reduction - Gas	$10,820,848	N/A	N/A	N/A
Participant Rebates and Incentives	$959,212	N/A	N/A	$959,212
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$17,622,398	N/A	N/A	$15,158,924
Subtotal	$29,402,458	N/A	N/A	$16,118,136
Total Benefits	$29,402,458	$6,410,103	$6,410,103	$23,810,260
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$758,331	$758,331	$758,331
Advertising/Promotion/Customer Ed	N/A	$40,507	$40,507	$40,507
Participant Rebates and Incentives	N/A	$959,212	$959,212	$959,212
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$74,847	$74,847	$74,847
Subtotal	N/A	$1,832,897	$1,832,897	$1,832,897
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$10,820,848	N/A
Subtotal	N/A	N/A	$10,820,848	N/A
Participant Costs				
Incremental Capital Costs	$4,571,141	N/A	N/A	$4,028,915
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$4,571,141	N/A	N/A	$4,028,915
Total Costs	$4,571,141	$1,832,897	$12,653,745	$5,861,812
Net Benefit (Cost)	$24,831,317	$4,577,206	($6,243,642)	**$17,948,448**
Benefit/Cost Ratio	6.43	3.50	0.51	**4.06**

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

2022 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	19.1 years
Net-to-Gross (Weighted on Dth)	B	87.64%
Install Rate (Weighted on Dth)	C	100.00%
Program Summary per Participant		
Gross Annual Dth Saved	D	193.6
Net Annual Dth Saved	E	169.7
Program Summary All Participants		
Total Budget	F	**$1,832,897**
Gross Annual Dth Saved	G	**173,459 Dth**
Net Annual Dth Saved	H	**152,019 Dth**
Total MTRC Net Benefits with Adder	I	**$17,948,448**
Total MTRC Net Benefits without Adder	J	**$16,666,428**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$0.6297**

RESIDENTIAL PROGRAM EE TOTAL

2022 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	$14,575,582	$14,575,582	$14,575,582
Variable O&M Savings	N/A	$233,246	$233,246	$233,246
Demand Savings	N/A	$1,633,751	$1,633,751	$1,633,751
Subtotal				$16,442,580
Non-Energy Benefits Adder (10.9%)				$1,796,293
Subtotal	N/A	$16,442,580	$16,442,580	$18,238,873
Participant Benefits				
Bill Reduction - Gas	$25,980,927	N/A	N/A	N/A
Participant Rebates and Incentives	$6,583,198	N/A	N/A	$6,583,198
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$11,598,951	N/A	N/A	$11,379,405
Subtotal	$44,163,076	N/A	N/A	$17,962,603
Total Benefits	$44,163,076	$16,442,580	$16,442,580	$36,201,476
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$1,975,405	$1,975,405	$1,975,405
Advertising/Promotion/Customer Ed	N/A	$286,118	$286,118	$286,118
Participant Rebates and Incentives	N/A	$6,583,198	$6,583,198	$6,583,198
Equipment & Installation	N/A	$115,402	$115,402	$115,402
Measurement and Verification	N/A	$432,078	$432,078	$432,078
Subtotal	N/A	$9,392,200	$9,392,200	$9,392,200
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$25,980,927	N/A
Subtotal	N/A	N/A	$25,980,927	N/A
Participant Costs				
Incremental Capital Costs	$23,948,411	N/A	N/A	$20,319,302
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$23,948,411	N/A	N/A	$20,319,302
Total Costs	$23,948,411	$9,392,200	$35,373,127	$29,711,502
Net Benefit (Cost)	$20,214,664	$7,050,380	($18,930,547)	**$6,489,974**
Benefit/Cost Ratio	1.84	1.75	0.46	**1.22**

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

2022 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	12.8 years
Net-to-Gross (Weighted on Dth)	B	91.62%
Install Rate (Weighted on Dth)	C	69.75%
Program Summary per Participant		
Gross Annual Dth Saved	D	4.3
Net Annual Dth Saved	E	2.6
Program Summary All Participants		
Total Budget	F	**$9,392,200**
Gross Annual Dth Saved	G	**871,418 Dth**
Net Annual Dth Saved	H	**535,806 Dth**
Total MTRC Net Benefits with Adder	I	**$6,489,974**
Total MTRC Net Benefits without Adder	J	**$4,693,681**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.3696**

INCOME QUALIFIED PROGRAM TOTAL

2022 GAS **ACTUALS**

2022 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	$3,692,323	$3,692,323	$3,692,323
Variable O&M Savings	N/A	$63,834	$63,834	$63,834
Demand Savings	N/A	$447,117	$447,117	$447,117
Subtotal				$4,203,273
Non-Energy Benefits Adder (50.0%)				$2,101,637
Subtotal	N/A	$4,203,273	$4,203,273	$6,304,910
Participant Benefits				
Bill Reduction - Gas	$6,587,247	N/A	N/A	N/A
Participant Rebates and Incentives	$4,900,307	N/A	N/A	$4,900,307
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$13,989,442	N/A	N/A	$13,989,442
Subtotal	$25,476,996	N/A	N/A	$18,889,749
Total Benefits	$25,476,996	$4,203,273	$4,203,273	$25,194,659
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$526,715	$526,715	$526,715
Advertising/Promotion/Customer Ed	N/A	$40,000	$40,000	$40,000
Participant Rebates and Incentives	N/A	$4,900,307	$4,900,307	$4,900,307
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$286,025	$286,025	$286,025
Subtotal	N/A	$5,753,047	$5,753,047	$5,753,047
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$6,587,247	N/A
Subtotal	N/A	N/A	$6,587,247	N/A
Participant Costs				
Incremental Capital Costs	$3,974,991	N/A	N/A	$3,974,991
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$3,974,991	N/A	N/A	$3,974,991
Total Costs	$3,974,991	$5,753,047	$12,340,294	$9,728,038
Net Benefit (Cost)	$21,502,005	($1,549,774)	($8,137,020)	**$15,466,621**
Benefit/Cost Ratio	6.41	0.73	0.34	**2.59**

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

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	11.5 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	99.59%
Program Summary per Participant		
Gross Annual Dth Saved	D	16.9
Net Annual Dth Saved	E	16.8
Program Summary All Participants		
Total Budget	F	**$5,753,047**
Gross Annual Dth Saved	G	**153,925 Dth**
Net Annual Dth Saved	H	**153,301 Dth**
Total MTRC Net Benefits with Adder	I	**$15,466,621**
Total MTRC Net Benefits without Adder	J	**$13,364,984**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$3.2576**

BUSINESS ENERGY ASSESSMENTS

2022 GAS **ACTUALS**

2022 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	$62,711	$62,711	$62,711
Variable O&M Savings	N/A	$979	$979	$979
Demand Savings	N/A	$6,859	$6,859	$6,859
Subtotal				$70,549
Non-Energy Benefits Adder (20.0%)				$14,110
Subtotal	N/A	$70,549	$70,549	$84,658
Participant Benefits				
Bill Reduction - Gas	$118,696	N/A	N/A	N/A
Participant Rebates and Incentives	$51,672	N/A	N/A	$51,672
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$13,728	N/A	N/A	$13,728
Subtotal	$184,095	N/A	N/A	$65,399
Total Benefits	$184,095	$70,549	$70,549	$150,057
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$58,626	$58,626	$58,626
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$51,672	$51,672	$51,672
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$110,297	$110,297	$110,297
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$118,696	N/A
Subtotal	N/A	N/A	$118,696	N/A
Participant Costs				
Incremental Capital Costs	$215,352	N/A	N/A	$215,352
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$215,352	N/A	N/A	$215,352
Total Costs	$215,352	$110,297	$228,993	$325,649
Net Benefit (Cost)	($31,257)	($39,749)	($158,445)	**($175,592)**
Benefit/Cost Ratio	0.85	0.64	0.31	**0.46**

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

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	17.5 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	39.4
Net Annual Dth Saved	E	39.4
Program Summary All Participants		
Total Budget	F	**$110,297**
Gross Annual Dth Saved	G	**1,814 Dth**
Net Annual Dth Saved	H	**1,814 Dth**
Total MTRC Net Benefits with Adder	I	**($175,592)**
Total MTRC Net Benefits without Adder	J	**($189,701)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$3.4843**

BUSINESS HVAC+R SYSTEMS

2022 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	$556,263	$556,263	$556,263
Variable O&M Savings	N/A	$8,818	$8,818	$8,818
Demand Savings	N/A	$60,723	$60,723	$60,723
Subtotal				$625,804
Non-Energy Benefits Adder (20.0%)				$125,161
Subtotal	N/A	$625,804	$625,804	$750,965
Participant Benefits				
Bill Reduction - Gas	$1,060,236	N/A	N/A	N/A
Participant Rebates and Incentives	$281,197	N/A	N/A	$281,197
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$17	N/A	N/A	$17
Subtotal	$1,341,449	N/A	N/A	$281,214
Total Benefits	$1,341,449	$625,804	$625,804	$1,032,178
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$201,378	$201,378	$201,378
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$281,197	$281,197	$281,197
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$3,910	$3,910	$3,910
Subtotal	N/A	$486,484	$486,484	$486,484
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$1,060,236	N/A
Subtotal	N/A	N/A	$1,060,236	N/A
Participant Costs				
Incremental Capital Costs	$664,070	N/A	N/A	$636,289
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$664,070	N/A	N/A	$636,289
Total Costs	$664,070	$486,484	$1,546,720	$1,122,774
Net Benefit (Cost)	$677,379	$139,320	($920,916)	**($90,596)**
Benefit/Cost Ratio	2.02	1.29	0.40	**0.92**

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

2022 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	17.4 years
Net-to-Gross (Weighted on Dth)	B	93.13%
Install Rate (Weighted on Dth)	C	100.00%
Program Summary per Participant		
Gross Annual Dth Saved	D	62.0
Net Annual Dth Saved	E	57.7
Program Summary All Participants		
Total Budget	F	**$486,484**
Gross Annual Dth Saved	G	**17,494 Dth**
Net Annual Dth Saved	H	**16,292 Dth**
Total MTRC Net Benefits with Adder	I	**($90,596)**
Total MTRC Net Benefits without Adder	J	**($215,756)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.7210**

CUSTOM EFFICIENCY

2022 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	$24,626	$24,626	$24,626
Variable O&M Savings	N/A	$384	$384	$384
Demand Savings	N/A	$250	$250	$250
Subtotal				$25,261
Non-Energy Benefits Adder (20.0%)				$5,052
Subtotal	N/A	$25,261	$25,261	$30,313
Participant Benefits				
Bill Reduction - Gas	$45,876	N/A	N/A	N/A
Participant Rebates and Incentives	$15,839	N/A	N/A	$15,839
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$61,715	N/A	N/A	$15,839
Total Benefits	$61,715	$25,261	$25,261	$46,152
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$30,808	$30,808	$30,808
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$15,839	$15,839	$15,839
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$46,647	$46,647	$46,647
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$45,876	N/A
Subtotal	N/A	N/A	$45,876	N/A
Participant Costs				
Incremental Capital Costs	$29,396	N/A	N/A	$25,575
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$29,396	N/A	N/A	$25,575
Total Costs	$29,396	$46,647	$92,523	$72,221
Net Benefit (Cost)	$32,319	($21,386)	($67,262)	**($26,069)**
Benefit/Cost Ratio	2.10	0.54	0.27	**0.64**

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

2022 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	87.00%
Install Rate (Weighted on Dth)	C	100.00%
Program Summary per Participant		
Gross Annual Dth Saved	D	272.1
Net Annual Dth Saved	E	236.7
Program Summary All Participants		
Total Budget	F	**$46,647**
Gross Annual Dth Saved	G	**816 Dth**
Net Annual Dth Saved	H	**710 Dth**
Total MTRC Net Benefits with Adder	I	**($26,069)**
Total MTRC Net Benefits without Adder	J	**($31,121)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$3.8637**

ENERGY MANAGEMENT SYSTEMS

2022 GAS **ACTUALS**

2022 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	$12,320	$12,320	$12,320
Variable O&M Savings	N/A	$193	$193	$193
Demand Savings	N/A	$162	$162	$162
Subtotal				$12,675
Non-Energy Benefits Adder (20.0%)				$2,535
Subtotal	N/A	$12,675	$12,675	$15,210
Participant Benefits				
Bill Reduction - Gas	$22,175	N/A	N/A	N/A
Participant Rebates and Incentives	$1,701	N/A	N/A	$1,701
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$5,271	N/A	N/A	$4,744
Subtotal	$29,147	N/A	N/A	$6,445
Total Benefits	$29,147	$12,675	$12,675	$21,655
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$7,769	$7,769	$7,769
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$1,701	$1,701	$1,701
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$9,470	$9,470	$9,470
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$22,175	N/A
Subtotal	N/A	N/A	$22,175	N/A
Participant Costs				
Incremental Capital Costs	$18,502	N/A	N/A	$16,652
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$18,502	N/A	N/A	$16,652
Total Costs	$18,502	$9,470	$31,645	$26,122
Net Benefit (Cost)	$10,645	$3,205	($18,970)	**($4,467)**
Benefit/Cost Ratio	1.58	1.34	0.40	**0.83**

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

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	15.0 years
Net-to-Gross (Weighted on Dth)	B	90.00%
Install Rate (Weighted on Dth)	C	100.00%
Program Summary per Participant		
Gross Annual Dth Saved	D	425.2
Net Annual Dth Saved	E	382.7
Program Summary All Participants		
Total Budget	F	**$9,470**
Gross Annual Dth Saved	G	**425 Dth**
Net Annual Dth Saved	H	**383 Dth**
Total MTRC Net Benefits with Adder	I	**($4,467)**
Total MTRC Net Benefits without Adder	J	**($7,002)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.6497**

NEW CONSTRUCTION

2022 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	$5,022,435	$5,022,435	$5,022,435
Variable O&M Savings	N/A	$76,467	$76,467	$76,467
Demand Savings	N/A	$535,604	$535,604	$535,604
Subtotal				$5,634,506
Non-Energy Benefits Adder (20.0%)				$1,126,901
Subtotal	N/A	$5,634,506	$5,634,506	$6,761,407
Participant Benefits				
Bill Reduction - Gas	$9,505,256	N/A	N/A	N/A
Participant Rebates and Incentives	$604,816	N/A	N/A	$604,816
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$17,584,296	N/A	N/A	$15,122,494
Subtotal	$27,694,369	N/A	N/A	$15,727,311
Total Benefits	$27,694,369	$5,634,506	$5,634,506	$22,488,718
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$386,557	$386,557	$386,557
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$604,816	$604,816	$604,816
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$69,437	$69,437	$69,437
Subtotal	N/A	$1,060,810	$1,060,810	$1,060,810
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$9,505,256	N/A
Subtotal	N/A	N/A	$9,505,256	N/A
Participant Costs				
Incremental Capital Costs	$3,626,813	N/A	N/A	$3,119,059
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$3,626,813	N/A	N/A	$3,119,059
Total Costs	$3,626,813	$1,060,810	$10,566,067	$4,179,870
Net Benefit (Cost)	$24,067,555	$4,573,696	($4,931,561)	**$18,308,848**
Benefit/Cost Ratio	7.64	5.31	0.53	**5.38**

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

2022 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	19.5 years
Net-to-Gross (Weighted on Dth)	B	86.79%
Install Rate (Weighted on Dth)	C	100.00%
Program Summary per Participant		
Gross Annual Dth Saved	D	409.5
Net Annual Dth Saved	E	355.4
Program Summary All Participants		
Total Budget	F	**$1,060,810**
Gross Annual Dth Saved	G	**151,283 Dth**
Net Annual Dth Saved	H	**131,291 Dth**
Total MTRC Net Benefits with Adder	I	**$18,308,848**
Total MTRC Net Benefits without Adder	J	**$17,181,947**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$0.4148**

SMALL BUSINESS SOLUTIONS — 2022 GAS — ACTUALS

2022 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	$36,230	$36,230	$36,230
Variable O&M Savings	N/A	$635	$635	$635
Demand Savings	N/A	$4,445	$4,445	$4,445
Subtotal				$41,309
Non-Energy Benefits Adder (20.0%)				$8,262
Subtotal	N/A	$41,309	$41,309	$49,571
Participant Benefits				
Bill Reduction - Gas	$68,610	N/A	N/A	N/A
Participant Rebates and Incentives	$3,987	N/A	N/A	$3,987
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$19,087	N/A	N/A	$17,942
Subtotal	$91,683	N/A	N/A	$21,929
Total Benefits	$91,683	$41,309	$41,309	$71,499
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$35,107	$35,107	$35,107
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$3,987	$3,987	$3,987
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$1,500	$1,500	$1,500
Subtotal	N/A	$40,594	$40,594	$40,594
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$68,610	N/A
Subtotal	N/A	N/A	$68,610	N/A
Participant Costs				
Incremental Capital Costs	$17,009	N/A	N/A	$15,988
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$17,009	N/A	N/A	$15,988
Total Costs	$17,009	$40,594	$109,204	$56,582
Net Benefit (Cost)	$74,675	$715	($67,895)	**$14,917**
Benefit/Cost Ratio	5.39	1.02	0.38	**1.26**

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

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	11.4 years
Net-to-Gross (Weighted on Dth)	B	94.00%
Install Rate (Weighted on Dth)	C	100.00%
Program Summary per Participant		
Gross Annual Dth Saved	D	8.4
Net Annual Dth Saved	E	7.9
Program Summary All Participants		
Total Budget	F	**$40,594**
Gross Annual Dth Saved	G	**1,627 Dth**
Net Annual Dth Saved	H	**1,530 Dth**
Total MTRC Net Benefits with Adder	I	**$14,917**
Total MTRC Net Benefits without Adder	J	**$6,655**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$2.3280**

ENERGY EFFICIENT SHOWERHEAD

2022 GAS **ACTUALS**

2022 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	$570,498	$570,498	$570,498
Variable O&M Savings	N/A	$10,291	$10,291	$10,291
Demand Savings	N/A	$72,083	$72,083	$72,083
Subtotal				$652,872
Non-Energy Benefits Adder (20.0%)				$130,574
Subtotal	N/A	$652,872	$652,872	$783,446
Participant Benefits				
Bill Reduction - Gas	$1,016,879	N/A	N/A	N/A
Participant Rebates and Incentives	$19,855	N/A	N/A	$19,855
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$3,657,973	N/A	N/A	$3,438,494
Subtotal	$4,694,707	N/A	N/A	$3,458,349
Total Benefits	$4,694,707	$652,872	$652,872	$4,241,795
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$155,570	$155,570	$155,570
Advertising/Promotion/Customer Ed	N/A	$786	$786	$786
Participant Rebates and Incentives	N/A	$19,855	$19,855	$19,855
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$176,210	$176,210	$176,210
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$1,016,879	N/A
Subtotal	N/A	N/A	$1,016,879	N/A
Participant Costs				
Incremental Capital Costs	$109,290	N/A	N/A	$102,733
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$109,290	N/A	N/A	$102,733
Total Costs	$109,290	$176,210	$1,193,089	$278,943
Net Benefit (Cost)	$4,585,416	$476,662	($540,218)	**$3,962,852**
Benefit/Cost Ratio	42.96	3.71	0.55	**15.21**

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

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	10.0 years
Net-to-Gross (Weighted on Dth)	B	94.00%
Install Rate (Weighted on Dth)	C	63.97%
Program Summary per Participant		
Gross Annual Dth Saved	D	0.9
Net Annual Dth Saved	E	0.6
Program Summary All Participants		
Total Budget	F	**$176,210**
Gross Annual Dth Saved	G	**44,558 Dth**
Net Annual Dth Saved	H	**26,793 Dth**
Total MTRC Net Benefits with Adder	I	**$3,962,852**
Total MTRC Net Benefits without Adder	J	**$3,832,278**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$0.6577**

ENERGY STAR NEW HOMES

2022 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	$3,795,687	$3,795,687	$3,795,687
Variable O&M Savings	N/A	$57,418	$57,418	$57,418
Demand Savings	N/A	$402,178	$402,178	$402,178
Subtotal				$4,255,283
Non-Energy Benefits Adder (20.0%)				$851,057
Subtotal	N/A	$4,255,283	$4,255,283	$5,106,339
Participant Benefits				
Bill Reduction - Gas	$6,765,595	N/A	N/A	N/A
Participant Rebates and Incentives	$1,823,320	N/A	N/A	$1,823,320
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$250	N/A	N/A	$182
Subtotal	$8,589,165	N/A	N/A	$1,823,502
Total Benefits	$8,589,165	$4,255,283	$4,255,283	$6,929,841
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$499,504	$499,504	$499,504
Advertising/Promotion/Customer Ed	N/A	$2,885	$2,885	$2,885
Participant Rebates and Incentives	N/A	$1,823,320	$1,823,320	$1,823,320
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$417,953	$417,953	$417,953
Subtotal	N/A	$2,743,662	$2,743,662	$2,743,662
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$6,765,595	N/A
Subtotal	N/A	N/A	$6,765,595	N/A
Participant Costs				
Incremental Capital Costs	$7,931,780	N/A	N/A	$5,790,200
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$7,931,780	N/A	N/A	$5,790,200
Total Costs	$7,931,780	$2,743,662	$9,509,257	$8,533,861
Net Benefit (Cost)	$657,385	$1,511,621	($5,253,974)	**($1,604,020)**
Benefit/Cost Ratio	1.08	1.55	0.45	**0.81**

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

2022 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	72.01%
Install Rate (Weighted on Dth)	C	100.00%
Program Summary per Participant		
Gross Annual Dth Saved	D	22.6
Net Annual Dth Saved	E	16.2
Program Summary All Participants		
Total Budget	F	**$2,743,662**
Gross Annual Dth Saved	G	**139,027 Dth**
Net Annual Dth Saved	H	**100,109 Dth**
Total MTRC Net Benefits with Adder	I	**($1,604,020)**
Total MTRC Net Benefits without Adder	J	**($2,455,076)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.4280**

HOME ENERGY INSIGHTS

2022 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	$181,591	$181,591	$181,591
Variable O&M Savings	N/A	$4,190	$4,190	$4,190
Demand Savings	N/A	$29,348	$29,348	$29,348
Subtotal				$215,129
Non-Energy Benefits Adder (20.0%)				$43,026
Subtotal	N/A	$215,129	$215,129	$258,154
Participant Benefits				
Bill Reduction - Gas	$323,675	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	$323,675	N/A	N/A	$0
Total Benefits	$323,675	$215,129	$215,129	$258,154
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$88,860	$88,860	$88,860
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	$88,860	$88,860	$88,860
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$323,675	N/A
Subtotal	N/A	N/A	$323,675	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	$88,860	$412,535	$88,860
Net Benefit (Cost)	$323,675	$126,269	($197,406)	**$169,295**
Benefit/Cost Ratio	INF	2.42	0.52	**2.91**

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

2022 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	83,798.9
Net Annual Dth Saved	E	83,798.9
Program Summary All Participants		
Total Budget	F	**$88,860**
Gross Annual Dth Saved	G	**83,799 Dth**
Net Annual Dth Saved	H	**83,799 Dth**
Total MTRC Net Benefits with Adder	I	**$169,295**
Total MTRC Net Benefits without Adder	J	**$126,269**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.0604**

HOME ENERGY SQUAD

2022 GAS ACTUALS

2022 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	$172,370	$172,370	$172,370
Variable O&M Savings	N/A	$3,110	$3,110	$3,110
Demand Savings	N/A	$21,783	$21,783	$21,783
Subtotal				$197,262
Non-Energy Benefits Adder (20.0%)				$39,452
Subtotal	N/A	$197,262	$197,262	$236,715
Participant Benefits				
Bill Reduction - Gas	$307,239	N/A	N/A	N/A
Participant Rebates and Incentives	$46,455	N/A	N/A	$46,455
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$292,456	N/A	N/A	$292,456
Subtotal	$646,151	N/A	N/A	$338,911
Total Benefits	$646,151	$197,262	$197,262	$575,626
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$127,231	$127,231	$127,231
Advertising/Promotion/Customer Ed	N/A	$49,007	$49,007	$49,007
Participant Rebates and Incentives	N/A	$46,455	$46,455	$46,455
Equipment & Installation	N/A	$115,402	$115,402	$115,402
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$338,096	$338,096	$338,096
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$307,239	N/A
Subtotal	N/A	N/A	$307,239	N/A
Participant Costs				
Incremental Capital Costs	$72,034	N/A	N/A	$72,034
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$72,034	N/A	N/A	$72,034
Total Costs	$72,034	$338,096	$645,335	$410,129
Net Benefit (Cost)	$574,117	($140,833)	($448,072)	**$165,497**
Benefit/Cost Ratio	8.97	0.58	0.31	**1.40**

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

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	6.7
Net Annual Dth Saved	E	6.7
Program Summary All Participants		
Total Budget	F	**$338,096**
Gross Annual Dth Saved	G	**8,102 Dth**
Net Annual Dth Saved	H	**8,102 Dth**
Total MTRC Net Benefits with Adder	I	**$165,497**
Total MTRC Net Benefits without Adder	J	**$126,044**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$4.1766**

INSULATION & AIR SEALING

2022 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	$1,790,028	$1,790,028	$1,790,028
Variable O&M Savings	N/A	$28,544	$28,544	$28,544
Demand Savings	N/A	$199,932	$199,932	$199,932
Subtotal				$2,018,504
Non-Energy Benefits Adder (20.0%)				$403,701
Subtotal	N/A	$2,018,504	$2,018,504	$2,422,205
Participant Benefits				
Bill Reduction - Gas	$3,190,623	N/A	N/A	N/A
Participant Rebates and Incentives	$1,181,320	N/A	N/A	$1,181,320
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$4,371,943	N/A	N/A	$1,181,320
Total Benefits	$4,371,943	$2,018,504	$2,018,504	$3,603,525
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$34,745	$34,745	$34,745
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$1,181,320	$1,181,320	$1,181,320
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$2,625	$2,625	$2,625
Subtotal	N/A	$1,218,690	$1,218,690	$1,218,690
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$3,190,623	N/A
Subtotal	N/A	N/A	$3,190,623	N/A
Participant Costs				
Incremental Capital Costs	$4,784,703	N/A	N/A	$4,258,385
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$4,784,703	N/A	N/A	$4,258,385
Total Costs	$4,784,703	$1,218,690	$4,409,313	$5,477,075
Net Benefit (Cost)	($412,759)	$799,814	($2,390,809)	**($1,873,550)**
Benefit/Cost Ratio	0.91	1.66	0.46	**0.66**

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

2022 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	15.4 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	23.4
Net Annual Dth Saved	E	20.9
Program Summary All Participants		
Total Budget	F	**$1,218,690**
Gross Annual Dth Saved	G	**64,686 Dth**
Net Annual Dth Saved	H	**57,571 Dth**
Total MTRC Net Benefits with Adder	I	**($1,873,550)**
Total MTRC Net Benefits without Adder	J	**($2,277,251)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.3735**

MULTIFAMILY BUILDINGS

2022 GAS **ACTUALS**

2022 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	$51,404	$51,404	$51,404
Variable O&M Savings	N/A	$906	$906	$906
Demand Savings	N/A	$6,348	$6,348	$6,348
Subtotal				$58,659
Non-Energy Benefits Adder (20.0%)				$11,732
Subtotal	N/A	$58,659	$58,659	$70,391
Participant Benefits				
Bill Reduction - Gas	$92,411	N/A	N/A	N/A
Participant Rebates and Incentives	$218,245	N/A	N/A	$218,245
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$268,751	N/A	N/A	$268,751
Subtotal	$579,406	N/A	N/A	$486,996
Total Benefits	$579,406	$58,659	$58,659	$557,386
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$29,048	$29,048	$29,048
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$218,245	$218,245	$218,245
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$247,293	$247,293	$247,293
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$92,411	N/A
Subtotal	N/A	N/A	$92,411	N/A
Participant Costs				
Incremental Capital Costs	$25,823	N/A	N/A	$25,823
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$25,823	N/A	N/A	$25,823
Total Costs	$25,823	$247,293	$339,703	$273,116
Net Benefit (Cost)	$553,583	($188,634)	($281,044)	**$284,271**
Benefit/Cost Ratio	22.44	0.24	0.17	**2.04**

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

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	10.8 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	1.1
Net Annual Dth Saved	E	1.1
Program Summary All Participants		
Total Budget	F	**$247,293**
Gross Annual Dth Saved	G	**2,262 Dth**
Net Annual Dth Saved	H	**2,262 Dth**
Total MTRC Net Benefits with Adder	I	**$284,271**
Total MTRC Net Benefits without Adder	J	**$272,539**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$10.1179**

RESIDENTIAL HEATING & COOLING

2022 GAS

ACTUALS

2022 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	$6,630,042	$6,630,042	$6,630,042
Variable O&M Savings	N/A	$103,827	$103,827	$103,827
Demand Savings	N/A	$727,246	$727,246	$727,246
Subtotal				$7,461,115
Non-Energy Benefits Adder (0.0%)				$0
Subtotal	N/A	$7,461,115	$7,461,115	$7,461,115
Participant Benefits				
Bill Reduction - Gas	$11,817,670	N/A	N/A	N/A
Participant Rebates and Incentives	$3,071,340	N/A	N/A	$3,071,340
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$14,889,011	N/A	N/A	$3,071,340
Total Benefits	$14,889,011	$7,461,115	$7,461,115	$10,532,455
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$347,425	$347,425	$347,425
Advertising/Promotion/Customer Ed	N/A	$48,996	$48,996	$48,996
Participant Rebates and Incentives	N/A	$3,071,340	$3,071,340	$3,071,340
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$11,500	$11,500	$11,500
Subtotal	N/A	$3,479,261	$3,479,261	$3,479,261
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$11,817,670	N/A
Subtotal	N/A	N/A	$11,817,670	N/A
Participant Costs				
Incremental Capital Costs	$10,789,678	N/A	N/A	$9,832,805
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$10,789,678	N/A	N/A	$9,832,805
Total Costs	$10,789,678	$3,479,261	$15,296,932	$13,312,066
Net Benefit (Cost)	$4,099,333	$3,981,854	($7,835,816)	**($2,779,611)**
Benefit/Cost Ratio	1.38	2.14	0.49	**0.79**

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

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	17.2 years
Net-to-Gross (Weighted on Dth)	B	88.78%
Install Rate (Weighted on Dth)	C	100.00%
Program Summary per Participant		
Gross Annual Dth Saved	D	25.1
Net Annual Dth Saved	E	22.3
Program Summary All Participants		
Total Budget	F	**$3,479,261**
Gross Annual Dth Saved	G	**216,510 Dth**
Net Annual Dth Saved	H	**192,207 Dth**
Total MTRC Net Benefits with Adder	I	**($2,779,611)**
Total MTRC Net Benefits without Adder	J	**($2,779,611)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.0512**

SCHOOL EDUCATION KITS

2022 GAS ACTUALS

2022 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	$1,379,707	$1,379,707	$1,379,707
Variable O&M Savings	N/A	$24,888	$24,888	$24,888
Demand Savings	N/A	$174,328	$174,328	$174,328
Subtotal				$1,578,923
Non-Energy Benefits Adder (20.0%)				$315,785
Subtotal	N/A	$1,578,923	$1,578,923	$1,894,708
Participant Benefits				
Bill Reduction - Gas	$2,459,249	N/A	N/A	N/A
Participant Rebates and Incentives	$221,031	N/A	N/A	$221,031
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$7,379,522	N/A	N/A	$7,379,522
Subtotal	$10,059,802	N/A	N/A	$7,600,553
Total Benefits	$10,059,802	$1,578,923	$1,578,923	$9,495,261
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$509,727	$509,727	$509,727
Advertising/Promotion/Customer Ed	N/A	$824	$824	$824
Participant Rebates and Incentives	N/A	$221,031	$221,031	$221,031
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$731,582	$731,582	$731,582
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$2,459,249	N/A
Subtotal	N/A	N/A	$2,459,249	N/A
Participant Costs				
Incremental Capital Costs	$220,804	N/A	N/A	$220,804
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$220,804	N/A	N/A	$220,804
Total Costs	$220,804	$731,582	$3,190,831	$952,386
Net Benefit (Cost)	$9,838,998	$847,342	($1,611,907)	**$8,542,875**
Benefit/Cost Ratio	45.56	2.16	0.49	**9.97**

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

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	20.75%
Program Summary per Participant		
Gross Annual Dth Saved	D	2.3
Net Annual Dth Saved	E	0.5
Program Summary All Participants		
Total Budget	F	**$731,582**
Gross Annual Dth Saved	G	**312,329 Dth**
Net Annual Dth Saved	H	**64,797 Dth**
Total MTRC Net Benefits with Adder	I	**$8,542,875**
Total MTRC Net Benefits without Adder	J	**$8,227,090**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.1290**

WHOLE HOME EFFICIENCY

2022 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	$4,255	$4,255	$4,255
Variable O&M Savings	N/A	$72	$72	$72
Demand Savings	N/A	$506	$506	$506
Subtotal				$4,833
Non-Energy Benefits Adder (20.0%)				$967
Subtotal	N/A	$4,833	$4,833	$5,799
Participant Benefits				
Bill Reduction - Gas	$7,584	N/A	N/A	N/A
Participant Rebates and Incentives	$1,632	N/A	N/A	$1,632
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$9,216	N/A	N/A	$1,632
Total Benefits	$9,216	$4,833	$4,833	$7,432
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$48,907	$48,907	$48,907
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$1,632	$1,632	$1,632
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$50,539	$50,539	$50,539
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$7,584	N/A
Subtotal	N/A	N/A	$7,584	N/A
Participant Costs				
Incremental Capital Costs	$14,299	N/A	N/A	$16,518
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$14,299	N/A	N/A	$16,518
Total Costs	$14,299	$50,539	$58,123	$67,057
Net Benefit (Cost)	($5,082)	($45,706)	($53,290)	**($59,625)**
Benefit/Cost Ratio	0.64	0.10	0.08	**0.11**

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

2022 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	12.2 years
Net-to-Gross (Weighted on Dth)	B	114.23%
Install Rate (Weighted on Dth)	C	100.00%
Program Summary per Participant		
Gross Annual Dth Saved	D	19.4
Net Annual Dth Saved	E	22.2
Program Summary All Participants		
Total Budget	F	**$50,539**
Gross Annual Dth Saved	G	**147 Dth**
Net Annual Dth Saved	H	**168 Dth**
Total MTRC Net Benefits with Adder	I	**($59,625)**
Total MTRC Net Benefits without Adder	J	**($60,592)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$24.6610**

ENERGY SAVINGS KIT

2022 GAS ACTUALS

2022 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	$39,332	$39,332	$39,332
Variable O&M Savings	N/A	$710	$710	$710
Demand Savings	N/A	$4,970	$4,970	$4,970
Subtotal				$45,012
Non-Energy Benefits Adder (50.0%)				$22,506
Subtotal	N/A	$45,012	$45,012	$67,518
Participant Benefits				
Bill Reduction - Gas	$70,108	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	$236,632	N/A	N/A	$236,632
Subtotal	$306,740	N/A	N/A	$236,632
Total Benefits	$306,740	$45,012	$45,012	$304,150
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$36,855	$36,855	$36,855
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	$36,855	$36,855	$36,855
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$70,108	N/A
Subtotal	N/A	N/A	$70,108	N/A
Participant Costs				
Incremental Capital Costs	$6,921	N/A	N/A	$6,921
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$6,921	N/A	N/A	$6,921
Total Costs	$6,921	$36,855	$106,963	$43,776
Net Benefit (Cost)	$299,819	$8,156	($61,952)	**$260,373**
Benefit/Cost Ratio	44.32	1.22	0.42	**6.95**

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

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	74.75%
Program Summary per Participant		
Gross Annual Dth Saved	D	0.8
Net Annual Dth Saved	E	0.6
Program Summary All Participants		
Total Budget	F	**$36,855**
Gross Annual Dth Saved	G	**2,471 Dth**
Net Annual Dth Saved	H	**1,847 Dth**
Total MTRC Net Benefits with Adder	I	**$260,373**
Total MTRC Net Benefits without Adder	J	**$237,867**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.9952**

MULTIFAMILY WEATHERIZATION

2022 GAS **ACTUALS**

2022 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	$198,656	$198,656	$198,656
Variable O&M Savings	N/A	$3,299	$3,299	$3,299
Demand Savings	N/A	$23,108	$23,108	$23,108
Subtotal				$225,063
Non-Energy Benefits Adder (50.0%)				$112,532
Subtotal	N/A	$225,063	$225,063	$337,595
Participant Benefits				
Bill Reduction - Gas	$354,092	N/A	N/A	N/A
Participant Rebates and Incentives	$1,144,141	N/A	N/A	$1,144,141
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$127,851	N/A	N/A	$127,851
Subtotal	$1,626,084	N/A	N/A	$1,271,992
Total Benefits	$1,626,084	$225,063	$225,063	$1,609,586
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$83,766	$83,766	$83,766
Advertising/Promotion/Customer Ed	N/A	$20,000	$20,000	$20,000
Participant Rebates and Incentives	N/A	$1,144,141	$1,144,141	$1,144,141
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$64,517	$64,517	$64,517
Subtotal	N/A	$1,312,423	$1,312,423	$1,312,423
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$354,092	N/A
Subtotal	N/A	N/A	$354,092	N/A
Participant Costs				
Incremental Capital Costs	$800,595	N/A	N/A	$800,595
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$800,595	N/A	N/A	$800,595
Total Costs	$800,595	$1,312,423	$1,666,516	$2,113,018
Net Benefit (Cost)	$825,489	($1,087,360)	($1,441,452)	**($503,432)**
Benefit/Cost Ratio	2.03	0.17	0.14	**0.76**

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

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	325.8
Net Annual Dth Saved	E	325.8
Program Summary All Participants		
Total Budget	F	**$1,312,423**
Gross Annual Dth Saved	G	**6,842 Dth**
Net Annual Dth Saved	H	**6,842 Dth**
Total MTRC Net Benefits with Adder	I	**($503,432)**
Total MTRC Net Benefits without Adder	J	**($615,963)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$13.7023**

NON-PROFIT

2022 GAS

ACTUALS

2022 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	$53,195	$53,195	$53,195
Variable O&M Savings	N/A	$859	$859	$859
Demand Savings	N/A	$6,016	$6,016	$6,016
Subtotal				$60,069
Non-Energy Benefits Adder (50.0%)				$30,035
Subtotal	N/A	$60,069	$60,069	$90,104
Participant Benefits				
Bill Reduction - Gas	$100,709	N/A	N/A	N/A
Participant Rebates and Incentives	$237,783	N/A	N/A	$237,783
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$12,703	N/A	N/A	$12,703
Subtotal	$351,195	N/A	N/A	$250,486
Total Benefits	$351,195	$60,069	$60,069	$340,590
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$129,630	$129,630	$129,630
Advertising/Promotion/Customer Ed	N/A	$20,000	$20,000	$20,000
Participant Rebates and Incentives	N/A	$237,783	$237,783	$237,783
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$26,913	$26,913	$26,913
Subtotal	N/A	$414,326	$414,326	$414,326
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$100,709	N/A
Subtotal	N/A	N/A	$100,709	N/A
Participant Costs				
Incremental Capital Costs	$124,234	N/A	N/A	$124,234
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$124,234	N/A	N/A	$124,234
Total Costs	$124,234	$414,326	$515,036	$538,560
Net Benefit (Cost)	$226,961	($354,257)	($454,966)	**($197,970)**
Benefit/Cost Ratio	2.83	0.14	0.12	**0.63**

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

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	71.4
Net Annual Dth Saved	E	71.4
Program Summary All Participants		
Total Budget	F	**$414,326**
Gross Annual Dth Saved	G	**1,643 Dth**
Net Annual Dth Saved	H	**1,643 Dth**
Total MTRC Net Benefits with Adder	I	**($197,970)**
Total MTRC Net Benefits without Adder	J	**($228,005)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$15.7649**

SINGLE-FAMILY WEATHERIZATION

2022 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	$3,401,140	$3,401,140	$3,401,140
Variable O&M Savings	N/A	$58,966	$58,966	$58,966
Demand Savings	N/A	$413,023	$413,023	$413,023
Subtotal				$3,873,129
Non-Energy Benefits Adder (50.0%)				$1,936,565
Subtotal	N/A	$3,873,129	$3,873,129	$5,809,694
Participant Benefits				
Bill Reduction - Gas	$6,062,337	N/A	N/A	N/A
Participant Rebates and Incentives	$3,518,384	N/A	N/A	$3,518,384
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$13,612,255	N/A	N/A	$13,612,255
Subtotal	$23,192,977	N/A	N/A	$17,130,639
Total Benefits	$23,192,977	$3,873,129	$3,873,129	$22,940,333
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$276,464	$276,464	$276,464
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$3,518,384	$3,518,384	$3,518,384
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$194,594	$194,594	$194,594
Subtotal	N/A	$3,989,442	$3,989,442	$3,989,442
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$6,062,337	N/A
Subtotal	N/A	N/A	$6,062,337	N/A
Participant Costs				
Incremental Capital Costs	$3,043,241	N/A	N/A	$3,043,241
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$3,043,241	N/A	N/A	$3,043,241
Total Costs	$3,043,241	$3,989,442	$10,051,779	$7,032,684
Net Benefit (Cost)	$20,149,735	($116,313)	($6,178,650)	**$15,907,650**
Benefit/Cost Ratio	7.62	0.97	0.39	**3.26**

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

2022 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	100.00%
Install Rate (Weighted on Dth)	C	100.00%
Program Summary per Participant		
Gross Annual Dth Saved	D	23.3
Net Annual Dth Saved	E	23.3
Program Summary All Participants		
Total Budget	F	**$3,989,442**
Gross Annual Dth Saved	G	**142,970 Dth**
Net Annual Dth Saved	H	**142,970 Dth**
Total MTRC Net Benefits with Adder	I	**$15,907,650**
Total MTRC Net Benefits without Adder	J	**$13,971,085**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$2.4529**

Confidential Appendix C: ISOC Product Cost and Benefit Summary

The following section summarizes both the cost and benefits of the ISOC product for 2022 in terms of capacity and energy.

Appendix C: 2022 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 - Grandfathered	[redacted]	$191.64	[redacted]
Contract Interruptible: Within 10-minute Notice Capacity - New		$135.24	
Total Avoided Capacity Benefit			$34,963,614.96

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		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 304,063.08	$ -	$ -	$ -	$ 304,063.08
Total Energy Savings	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 304,063.08	$ -	$ -	$ -	$ 304,063.08

Total ISOC Benefits	$35,267,678.04
Total ISOC Costs	$ (26,584,038.43)
Total Admin Costs	[redacted]
Total Customer Credits	
Total Program Net Benefit	$8,683,639.61

CERTIFICATE OF SERVICE

I hereby certify that on March 31st, 2023 the foregoing document was filed with the Commission via e-file and served on those parties shown on the Commission's Certificate of Service accompanying such filing.

By: /s/ Melanie Castro