2021 DEMAND-SIDE MANAGEMENT ANNUAL STATUS REPORT

Electric and Natural Gas
Public Service Company of Colorado

April 1, 2022 / Proceeding No. 20A-0287EG

Xcel Energy®

2021 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 2021 DSM Annual Status Report summarizes the natural gas and electric energy efficiency achievements made in 2021. This report also explores the challenges and lessons learned from a diverse and varied portfolio of programs, products, and pilots designed to provide customers control of their energy use.

Report Highlights:

- **The DSM portfolio continued to adapt to pandemic-related challenges in 2021**. As the impacts of the COVID-19 pandemic lingered through-out its service territory, Public Service continued efforts from 2020 to adapt its DSM portfolio to find new and creative ways to deliver value to our customers. Despite these challenges, the Company's electric energy efficiency portfolio achieved energy savings of over 487 GWh, second only to 2019's record-setting achievement and exceeding the prior 5-year average savings by 8 percent while accounting for 97 percent of the energy efficiency goal of 500 GWh. The natural gas portfolio realized even greater success, achieving energy savings in excess of 107 percent of the target at 95 percent of budget.
- **All programs were cost-effective for both Electric and Natural Gas offerings.** For the second 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 Business and Residential Programs. The Income Qualified Program continued strong performance from 2020 as demonstrated by an MTRC ratio of 4.54 for Electric and 1.96 for Natural Gas, representing year-over-year improvements of 45 percent and 73 percent, respectively.
- **A total of 306,009 tons of carbon dioxide ("CO_2") were avoided in 2021 through the natural gas and electric DSM achievements.** Additionally, approximately 3.1 million tons of CO_2 emissions will be avoided over the lifetime of the installed measures. In terms of emissions avoided, the greatest contributors were New Construction, Home Lighting & Recycling, and Lighting Efficiency. The electric portfolio also avoided 146,548 tons of sulfur oxide ("SOx") emissions in 2020, with expected lifetime emissions reduction of just under 1.3 million tons.
- **Lighting offerings continued to contribute to the majority of the electric energy savings**. Lighting offerings across all products and programs contributed approximately 52 percent of the energy savings realized in 2021, down slightly from 53 percent in 2020 and 54 percent in 2019 and more significantly from 66 percent in 2018.
- **New products and pilots expanded customer choice.** The Company launched new offerings including Optimize Your Charge and Charging Perks to offer customers two opportunities to participate in Company's managed electrical vehicle charging product. The Company also launched research efforts to evaluate the potential for behavioral demand response and heating-season focused demand response offerings.

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.

2021 Demand-Side Management Annual Status Report

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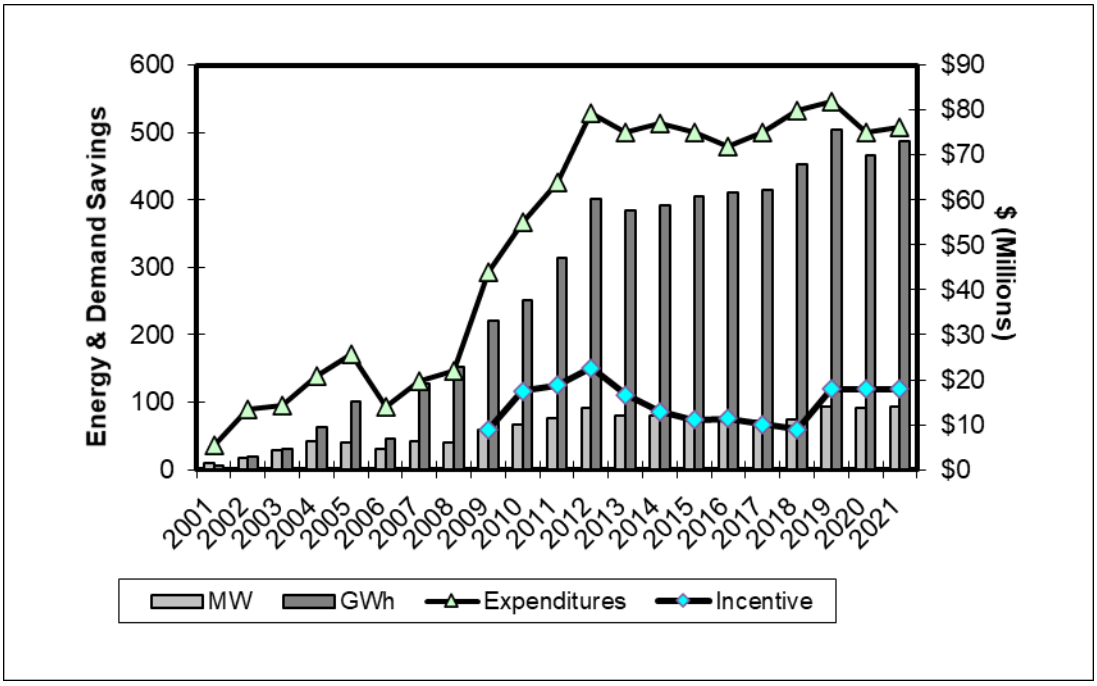
Executive Summary

Public Service respectfully submits this combined electric and natural gas 2021 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, 2021 through December 31, 2021.

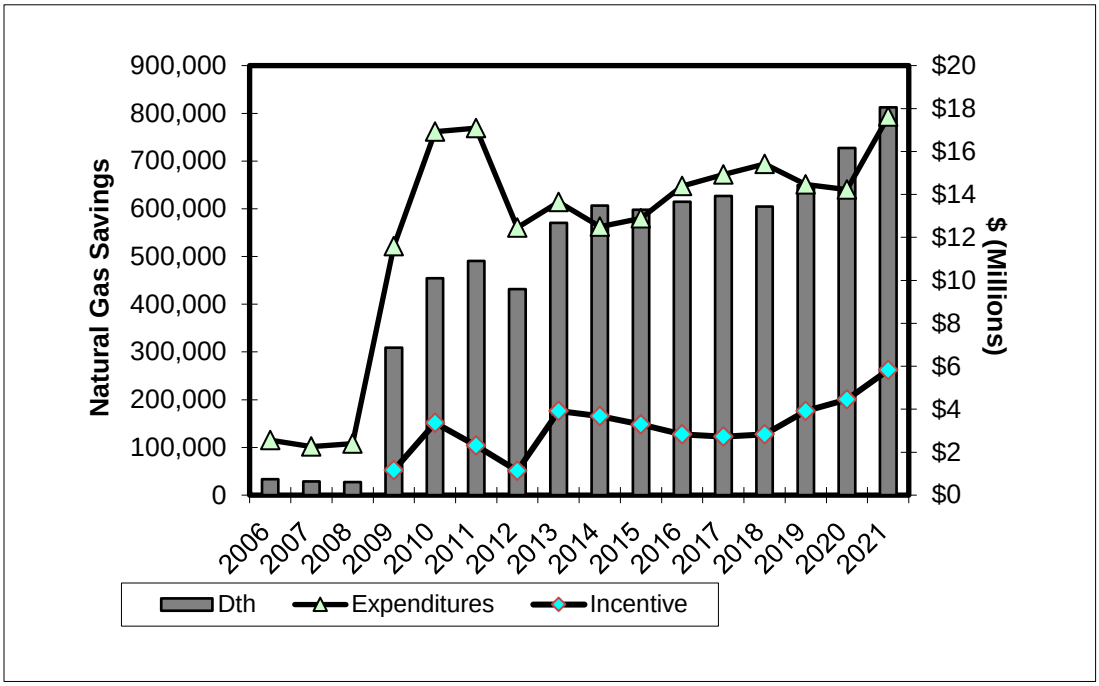
The electric energy efficiency savings of 487 GWh are a significant accomplishment given lingering economy-wide impacts of the COVID-19 pandemic in 2021. Second only to 2019 achievement, 2021 electric savings exceed the prior 5-year average savings by 8 percent and account for 97 percent of the goal of 500 GWh. Natural gas savings of 812,605 Dth was 107 percent of the goal of 755,934 Dth. To achieve these savings, the Company spent a total of $92,169,335 million ($76.2 million electric energy efficiency, $16.0 million demand response) on its electric programs and $17.6 million on its natural gas energy efficiency programs. The electric energy efficiency spending was less than the approved electric energy efficiency budget cap 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] and less than the budget cap 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-three 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 2021, Public Service's electric energy efficiency and demand response portfolio achieved demand savings of 175,856 net generator kW (90 percent of filed target) and energy savings of 488,491,674 net generator kWh (91 percent of filed target) at a cost of $92,169,335 (81 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.

Table 2a: High-Level Electric Targets and Achievements for 2021

2021 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	$ 48,199,310	$42,968,148	61,107	52,941	347,068,998	274,137,620	1.49	1.50	1.89	1.87
Residential	$ 28,277,381	$23,087,925	36,563	35,159	162,898,692	170,431,745	1.72	2.67	2.12	3.34
Low-Income	$ 5,099,185	$4,293,738	3,992	5,762	27,671,381	42,486,601	2.61	4.54	3.23	5.66
Indirect	$ 8,378,924	$5,843,583	0	0	0	0	-	-	-	-
Demand Response	$ 23,384,188	$15,975,940	94,410	81,994	589,782	1,435,708	1.95	2.02	1.95	2.03
2021 TOTAL	**$113,338,987**	**$92,169,335**	**196,073**	**175,856**	**538,228,853**	**488,491,674**	1.58	1.85	1.94	2.27

The natural gas portfolio achieved savings of 812,605 Dth (107 percent of filed target) at a cost of $17,621,430 (slightly over 100 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 2021

2021 Programs	Natural Gas Budget	Natural Gas Expenditures (Actual)	Dth Target	Net. Realized Dth	MTRC Target	MTRC (Actual)
Business	$1,259,455	$1,908,568	107,277	182,626	2.31	3.21
Residential	$9,253,709	$9,290,271	568,280	508,878	1.63	1.39
Low-Income	$5,354,027	$4,838,371	80,377	121,100	1.02	1.96
Indirect	$1,722,124	$1,584,220	0	0	-	-
2021 TOTAL	**$17,589,314**	$17,621,430	**755,934**	**812,605**	**1.50**	**1.76**

These achievements shown in Tables 2a and 2b have provided electric net benefits of approximately $168.9 million and natural gas net benefits of $33.1 million. Based on these achievements and net benefits, the Company has calculated an associated financial incentive of $18 million for its electric portfolio and $5.8 million for its natural gas portfolio. This includes $4,405,357 for the incentive and an acknowledgement of lost revenues ("ALR") associated with gas DSM programs of $1,418,885. 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	$370,411,334	$76,780,064
MTRC Costs	$199,732,787	$43,727,277
MTRC Ratio	1.85	1.76
MTRC Benefits w/Adder	$370,411,334	$76,780,064
Incentive	$18,000,000	$4,405,357
Acknowledgement of Lost Revenue (ALR)	n/a	$1,418,885
MTRC Costs w/Incentive & ALR	$217,732,787	$49,551,519
MTRC Ratio w/Incentive & ALR	1.70	1.55

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 $83.4 million of electric net benefits and $28.2 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	$453,820,514	$104,979,678
MTRC Costs	$199,732,787	$43,727,277
MTRC Ratio	2.27	2.40
MTRC Benefits w/Adder + SCC	$453,820,514	$104,979,678
Incentive	$18,000,000	$4,405,357
Acknowledgement of Lost Revenue (ALR)	n/a	$1,418,885
MTRC Costs w/Incentive & ALR	$217,732,787	$49,551,519
MTRC Ratio w/Incentive & ALR	2.08	2.12

Some of the products that are part of the Company's portfolio did not pass the MTRC Test in 2021. While each product listed below is discussed in more detail in the 2021 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 2022.

Business Program

- *Business Energy Assessments – Natural Gas (0.68 MTRC)*
    - The product was not able to launch all new components included in the 2021-22 DSM Plan in 2021 impacting the cost-effectiveness of the product. The product was limited to projects in the Commercial Streamlined Assessment and Recommissioning pathways.

  Efforts to improve for 2022: In 2022, the product will add more vendors to provide a full suite of different assessment levels for customers in the Company's territory with implementation assistance available, which is anticipated to identify more gas saving opportunities.

- *Custom Efficiency – Electric (0.81 MTRC)*
    - Increased administration costs and extended project timelines impacted the cost effectiveness of the product. Many projects expected to close in 2021 extended beyond year end.

  Efforts to improve for 2022: The product is instituting processes to analyze projects at earlier stages of development to identify the most cost-effective opportunities and is also evaluating increasing trade incentives to increase participation in the product.

- *Data Center Efficiency – Electric (0.81 MTRC)*
    - The product faced higher incremental capital costs that were not in line with energy savings due to customer processes and equipment utilization. This under-utilization prevented the product from achieving the full potential energy savings.

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

Efforts to improve for 2022: The Company will work with customers to ensure their utilization of the equipment matches the incremental capital costs incurred with the higher efficiency options. This will allow the Company to claim the full potential savings and coinciding incremental capital costs.

Residential Program

- *Energy Star New Homes – Natural Gas (0.94 MTRC)*
    - A combination of lower avoided costs and lower per capita savings for projects led to failing cost-effectiveness for gas products.

  Efforts to improve for 2022: The Company will continue to offer training opportunities on measures to improve energy performance. Moreover, growth of the Codes & Standards Support offering is anticipated to lead to increased savings in the future.

- *Home Energy Insights – Electric (0.96 MTRC)*
    - The product underachieved on savings targets which negatively impacted product cost-effectiveness. Customer engagement was lower than expected in 2021, and pandemic-related changes in home energy use patterns coupled with a warmer-than-normal summers also negatively impacted product performance.

  Efforts to improve for 2022: The product retired six underperforming groups of customers at the beginning of the 2022 program year to increase savings achievement and reduce vendor administrative costs. In late March, the product expects to launch a new report allowing greater connectivity to the web portal and cross-promotion of other programs.

- *Home Energy Squad – Natural Gas (0.61 MTRC)*
    - The product continued to be directly impacted by the COVID-19 pandemic throughout 2021 as concerns over in-person visits hindered participation in the beginning of the year. When demand for visits increased in the second half of the year, staffing issues limited participation. The product also experienced lower than expected installation of gas saving measures such as showerheads and aerators.

  Efforts to improve for 2022: Additional staff has been added to meet the expected demand in 2022. The product team is also evaluating why gas measures were not installed at expected rates in order to identify opportunities to improve the installation rates and gas savings in 2022.

- *Insulation and Air Sealing – Electric (0.68 MTRC) and Natural Gas (0.66 MTRC)*
    - Higher than expected incremental capital costs impacted the cost effectiveness of the product.

  Efforts to improve for 2022: Trade partner outreach and education will continue to improve understanding of new product measures. The product is also considering introducing a training class for trade partners the will measures understanding of product requirements.

- *Residential Heating & Cooling – Natural Gas (0.87 MTRC)*
    - The low price of gas combined with the high incremental cost between a standard 80% AFUE furnace and a high efficiency 95% AFUE furnace continues to be the primary driver of failing cost-effectiveness.

  Efforts to improve for 2022: The product will continue to focus on more cost-effective gas saving measures, which include QI for an AC w/furnace, smart thermostats, and heat pumps.

- *Whole Home Efficiency – Electric (0.15 MTRC) and Natural Gas (0.35 MTRC)*
    - The product underachieved due to low participation and high incremental costs. Restrictions associated with the COVID-19 pandemic reduced the adoption of expanded "whole home" improvement offerings.

  Efforts to improve for 2022: Renewed efforts to increase HVAC contractor participation to promote "whole home" improvements are underway. Trade Partner incentives and continued outreach will help promote more engagements with customers.

Income-Qualified Program

- *Multifamily Weatherization – Natural Gas (0.69 MTRC)*
    - The product realized increased participation in measures with high incremental costs such as natural gas water heaters negatively impacting cost-effectiveness. Additionally, the product approved rebates for projects which did not pass cost-effectiveness screening, but which provided long-term benefit to buildings where the need was high.

  Efforts to improve for 2022: The Company will continue to pursue cost-effective opportunities while ensuring the product is providing the necessary assistance.

- *Single Family Weatherization – Natural Gas (0.81 MTRC)*
    - The product realized increased participation in measures with high incremental costs such as replacement furnaces negatively impacting cost-effectiveness. The Company continues to provide funding for marketing and outreach efforts to help expand the Colorado Affordable Residential Energy ("CARE") program and educational services. This funding greatly benefits the income-qualified customer segment but adds administrative cost to the product, negatively impacting cost-effectiveness.

  Efforts to improve for 2022: Energy Outreach Colorado is focused on strengthening and growing the agency network in 2022. Increasing capacity in the agency network will help support participation within the product.

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 2021, ten of which impacted calendar year 2021 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:

http://www.xcelenergy.com/Company/Rates_&_Regulations/Filings/Colorado_Demand-Side_Management.

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

Table 3: 60/90-Day Notices Impacting 2021[6]

Product, Pilot, or Measure	Notice Date	Notice Type	
Business Program			
Lighting Efficiency	5/14/2021	60-Day	Comprehensive Evaluation update
Small Business Solutions	5/14/2021	60-Day	Comprehensive Evaluation update
Lighting Efficiency (2)	9/3/2021	60-Day	Technical Assumptions, measure offerings, and rebate update
Lighting Efficiency (3)[7]	11/30/2021	60-Day	Measure offerings and rebate update
Residential Program			
Energy Efficient Showerheads	5/14/2021	60-Day	Comprehensive Evaluation update
Refrigerator & Freezer Recycling	5/14/2021	60-Day	Comprehensive Evaluation update
Multifamily Buildings	9/3/2021	60-Day	Technical Assumptions update
Whole Home Efficiency (HPwES)	9/3/2021	60-Day	Technical Assumptions, measure offerings, and rebate update
Energy Star New Homes	9/3/2021	60-Day	Technical Assumptions, measure offerings, and rebate update
Residential Heating & Cooling	9/3/2021	60-Day	Technical Assumptions, measure offerings, and rebate update
Low-Income Program			
Single-Family Weatherization	9/3/2021	60-Day	Technical Assumptions, measure offerings, and rebate update
Income Qualified Beneficial Electrification Pilot[8]	11/30/2021	60-Day	Technical Assumptions, measure offerings, and rebate update

Additional detail on the impact of these changes can be found in the 2021 Status Report section of this report, within each DSM product summary.

[6] Table 3 includes two 60-Day Notices issued in 2021 which were not implemented until 2022 and excludes two Errata 60-Day Notices issued during 2021 that corrected typos and other non-material errors in the 2021-22 DSM Plan.
[7] 60-Day Notice issued in 2021 but not implemented until 2022.
[8] 60-Day Notice issued in 2021 but Pilot not implemented until 2022.

RFP Administrative Costs for Third-Party Implementation

As required by Decision No. C11-0442 (Proceeding No. 10A-554EG),[9] 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 2021

Product	2021 Expenditures
Partners in Energy	$4,930
Consumer Education	$5,000
Business Education	$5,000
Demand Management Field Services	$7,500
Demand Management M&V Field Services	$5,000
Codes & Standards	$2,500
TOTAL	**$29,930**

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 2021 DSM Plan in Proceeding No. 20A-0287EG. Table 5a presents the 2021 electric targets and budgets as approved in Proceeding No. 20A-0287EG. The Company's electric energy savings targets and budgets do not require a pro-ration because the Commission established the goals and budget structures for 2019-2023 in Decisions No. C18-0417 and C18-0743 in Proceeding No. 17A-0462EG. The Commission referred the natural gas savings targets and budgets to the Biennial Planning process in Proceeding 17A-0462EG. Decision No. R21-0081 in Proceeding No. 20A-0287EG did not become final until March 12, 2021; therefore, Table 6a presents the 2021 natural gas savings targets and budgets as a pro-ration of the energy savings targets and budgets approved for 2020 in Proceeding No. 18A-0606EG and those approved for 2021 in Proceeding No. 20A-0287EG accounting for an April 1, 2021 implementation date for the 2021 DSM Plan. This follows the methodology first approved in Proceeding No. 13A-0773EG[10] for calculating goals and budgets against which the Company's performance shall be measured for purposed of calculating any incentives earned when a new DSM Plan is implemented on a date later than January 1 of the given year. See the Financial Incentive Calculations section for more details. Tables 5b and 6b provide the Company's 2021 achievements, actual expenditures, and cost-effectiveness results by product.

[9] "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.

[10] *See* Decision No. R12-1204-1.

Table 5a: 2021 Electric Program Targets and Budgets

2021	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	$838,818	808	6,561,660	1.24	26,813	$1,072,144	1.68
Business HVAC+R Systems	$8,063,297	10,402	31,602,611	1.89	146,767	$5,739,008	2.26
Compressed Air Efficiency	$943,477	831	5,038,012	1.38	21,173	$824,603	1.76
Custom Efficiency	$783,574	818	4,600,068	1.21	22,180	$857,216	1.29
Data Center Efficiency	$1,481,245	1,904	13,259,748	1.69	67,810	$2,590,843	2.22
Energy Management Systems	$558,815	172	7,235,485	1.09	36,383	$1,414,138	1.51
LED Street Lighting	$0	0	1,320,510	1.53	7,926	$293,751	2.46
Lighting Efficiency	$12,221,449	15,718	100,138,280	1.35	415,306	$16,332,085	1.77
New Construction	$6,850,531	11,597	45,738,879	1.49	233,681	$8,910,368	1.84
Self Direct	$770,268	996	4,452,063	1.11	20,919	$814,543	1.38
Small Business Solutions	$5,948,016	7,236	46,062,218	1.36	181,330	$7,151,254	1.80
Strategic Energy Management	$8,948,115	10,626	81,059,465	1.80	337,659	$13,410,407	2.36
General Advertising-Bus	$791,704	0	0				
Business Program Total	**$48,199,310**	**61,107**	**347,068,998**	**1.49**	**1,517,949**	**$59,410,360**	**1.89**
Residential Program							
Energy Efficient Showerhead	$29,303	42	519,308	11.21	1,851	$76,371	13.26
Energy Star New Homes	$2,848,638	2,876	9,912,052	0.93	55,593	$2,084,675	1.12
Home Energy Insights	$3,914,898	5,763	30,166,777	1.03	38,627	$1,856,286	1.51
Home Energy Squad	$998,000	728	3,617,771	1.51	15,364	$590,783	1.94
Home Lighting & Recycling	$4,297,361	10,825	77,025,177	3.03	271,304	$10,949,527	4.20
Insulation & Air Sealing	$242,649	368	465,099	0.72	2,383	$91,667	0.80
Multifamily Buildings	$2,858,997	2,109	13,048,472	1.45	56,472	$2,213,111	1.86
Refrigerator & Freezer Recycling	$1,121,268	479	3,503,273	1.16	11,428	$478,264	1.59
Residential Heating & Cooling	$8,988,318	11,353	14,057,658	1.84	69,372	$2,690,990	1.99
School Education Kits	$2,004,557	1,817	10,101,674	2.27	50,701	$1,930,888	2.86
Whole Home Efficiency (HPwES)	$200,358	202	481,429	0.89	2,216	$86,946	1.05
General Advertising-Res	$773,033	0	0				
Residential Program Total	**$28,277,381**	**36,563**	**162,898,692**	**1.72**	**575,310**	**$23,049,507**	**2.12**
Income Qualified Program							
Energy Savings Kit	$383,260	169	1,024,253	1.92	5,515	$208,176	2.34
Multifamily Weatherization	$1,148,963	255	2,051,058	1.00	10,780	$409,293	1.16
Non-Profit	$1,119,286	383	1,701,175	1.00	8,694	$332,859	1.15
Single-Family Weatherization	$2,447,676	3,185	22,894,895	4.46	131,615	$4,913,339	5.60
Income Qualified Program Total	**$5,099,185**	**3,992**	**27,671,381**	**2.61**	**156,604**	**$5,863,667**	**3.23**
Indirect Products & Services							
Education/Market Transformation							
Business Education	$176,000	0	0		0	$0	
Business Energy Analysis	$1,195,109	0	0		0	$0	
Consumer Education	$971,000	0	0		0	$0	
Energy Benchmarking	$112,643	0	0		0	$0	
Energy Efficiency Financing	$211,489	0	0		0	$0	
Home Energy Audit	$405,019	0	0		0	$0	
Partners in Energy	$920,196	0	0		0	$0	
Education/Market Transformation Total	**$3,991,456**	**0**	**0**		**0**	**$0**	
Planning and Research							
EE Market Research	$618,493	0	0		0	$0	
EE Evaluation, Measurement & Verification	$1,201,559	0	0		0	$0	
EE Planning & Administration	$537,827	0	0		0	$0	
EE Product Development	$2,000,498	0	0		0	$0	
Geo-targeting Pilot - EE	$29,092	0	0		0	$0	
EE Product Development Total	**$2,029,590**	**0**	**0**		**0**	**$0**	
EE Planning and Research Total	**$4,387,468**	**0**	**0**		**0**	**$0**	
EE Indirect Products & Services Total	**$8,378,924**	**0**	**0**		**0**	**$0**	
EE PORTFOLIO TOTAL	**$89,954,799**	**101,663**	**537,639,070**	**1.54**	**2,249,864**	**$88,323,534**	**1.94**
Demand Response Program							
Critical Peak Pricing	$255,331	8,740	51,122		26	$1,262	
Electric Vehicle Critical Peak Pricing	$305,900	489	0		0	$0	
Electric Vehicle Optimization	$1,022,335	3,487	0	0.71	1,080	$51,925	0.76
Peak Day Partners	$326,500	8,127	182,216		94	$4,497	
Peak Partner Rewards	$1,660,092	38,371	224,438		115	$5,539	
Residential Battery Demand Response	$521,240	630	-17,533	1.70	-72	-$2,957	1.69
Residential Demand Response	$16,614,750	32,090	110,210	2.07	378	$15,542	2.07
Small Commercial Building Controls	$426,945	2,478	39,330	2.20	91	$3,947	2.20
DR Program Total	**$21,133,093**	**94,410**	**589,782**	**2.10**	**1,712**	**$79,755**	**2.11**
Planning and Research							
DR Planning & Administration	$59,759	0	0		0	$0	
DR Program Evaluations	$210,991	0	0		0	$0	
DR Product Development	$1,805,187	0	0		0	$0	
Geo-targeting Pilot - DR	$175,158	0	0		0	$0	
DR Planning and Research Total	**$2,251,095**	**0**	**0**		**0**	**$0**	
DR PORTFOLIO TOTAL	**$23,384,188**	**94,410**	**589,782**	**1.95**	**1,712**	**$79,755**	**1.95**
PORTFOLIO TOTAL	**$113,338,987**	**196,073**	**538,228,853**	**1.58**	**2,251,576**	**$88,403,288**	**1.94**

Table 5b: 2021 Electric Program Achievements and Expenditures

2021	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	$229,427	143	1,100,886	1.00	4,129	$163,320	1.35
Business HVAC+R Systems	$5,932,580	4,665	21,747,901	1.31	99,558	$3,862,538	1.61
Compressed Air Efficiency	$341,118	191	1,076,904	1.20	4,651	$178,217	1.50
Custom Efficiency	$408,514	49	204,503	0.74	988	$38,131	0.81
Data Center Efficiency	$1,144,936	1,354	11,583,082	0.64	61,601	$2,327,839	0.81
Energy Management Systems	$482,128	140	3,201,633	1.96	16,722	$624,817	2.50
LED Street Lighting	$0	0	1,597,625	1.51	9,590	$355,396	2.43
Lighting Efficiency	$10,285,256	11,636	70,367,385	1.66	327,662	$12,394,968	2.06
New Construction	$12,854,255	18,230	69,014,079	1.64	356,691	$13,361,368	1.98
Self Direct	$157,377	90	1,114,235	1.46	5,828	$209,483	1.93
Small Business Solutions	$3,873,185	6,088	34,381,141	1.58	121,026	$4,804,450	2.04
Strategic Energy Management	$6,580,050	10,356	58,748,246	1.72	241,985	$9,427,643	2.20
General Advertising-Bus	$679,322	0	0			$0	
Business Program Total	**$42,968,148**	**52,941**	**274,137,620**	**1.50**	**1,250,431**	**$47,748,169**	**1.87**
Residential Program							
Energy Efficient Showerhead	$59,734	72	886,289	9.42	3,315	$132,380	11.25
Energy Star New Homes	$1,191,909	1,014	5,535,501	0.94	32,587	$1,192,010	1.19
Home Energy Insights	$2,114,439	3,482	9,524,317	0.61	15,715	$750,608	0.96
Home Energy Squad	$525,840	198	1,055,515	1.04	4,577	$171,365	1.32
Home Lighting & Recycling	$7,368,340	17,470	125,257,347	4.69	502,754	$19,502,955	6.34
Insulation & Air Sealing	$320,157	392	329,892	0.64	1,678	$63,918	0.68
Multifamily Buildings	$1,181,721	888	6,473,881	1.59	27,061	$1,035,958	2.04
Refrigerator & Freezer Recycling	$942,528	425	3,521,383	1.26	11,511	$478,377	1.77
Residential Heating & Cooling	$6,866,315	9,499	6,643,021	2.54	31,964	$1,232,099	2.64
School Education Kits	$1,724,804	1,713	11,201,802	2.64	57,199	$2,131,500	3.40
Whole Home Efficiency	$68,092	5	2,798	0.15	16	$579	0.15
General Advertising-Res	$724,047	0	0			$0	
Residential Program Total	**$23,087,925**	**35,159**	**170,431,745**	**2.67**	**688,377**	**$26,691,747**	**3.34**
Income Qualified Program							
Energy Savings Kit	$136,698	169	1,869,008	6.79	8,155	$313,072	8.20
Multifamily Weatherization	$1,090,890	257	1,851,937	1.12	9,734	$369,558	1.30
Non-Profit	$1,205,586	487	2,468,875	1.19	12,854	$484,373	1.39
Single-Family Weatherization	$1,860,565	4,848	36,296,781	8.92	213,265	$7,757,552	11.28
Income Qualified Program Total	**$4,293,738**	**5,762**	**42,486,601**	**4.54**	**244,008**	**$8,924,555**	**5.66**
Indirect Products & Services							
Education/Market Transformation							
Business Education	$66,686	0	0		0	$0	
Business Energy Analysis	$444,351	0	0		0	$0	
Consumer Education	$729,088	0	0		0	$0	
Energy Benchmarking	$68,833	0	0		0	$0	
Energy Efficiency Financing	$48,037	0	0		0	$0	
Home Energy Audit	$432,256	0	0		0	$0	
Partners in Energy	$888,857	0	0		0	$0	
Education/Market Transformation Total	**$2,678,109**	**0**	**0**		**0**	**$0**	
Planning and Research							
EE Market Research	$493,383	0	0		0	$0	
EE Evaluation, Measurement & Verification	$792,626	0	0		0	$0	
EE Planning & Administration	$316,906	0	0		0	$0	
EE Product Development	$1,552,798	0	0		0	$0	
Geo-targeting Pilot - EE	$9,762	0	0		0	$0	
EE Product Development Total	**$1,562,560**	**0**	**0**		**0**	**$0**	
EE Planning and Research Total	**$3,165,474**	**0**	**0**		**0**	**$0**	
EE Indirect Products & Services Total	**$5,843,583**	**0**	**0**		**0**	**$0**	
EE PORTFOLIO TOTAL	**$76,193,395**	**93,862**	**487,055,966**	**1.84**	**2,182,816**	**$83,364,472**	**2.29**
Demand Response Program							
Critical Peak Pricing	$187,972	27,874	1,114,960		573	$27,518	
Electric Vehicle Critical Peak Pricing	$71,882	382	0		0	$0	
Electric Vehicle Optimization	$304,764	218	0	0.11	0	$0	0.11
Peak Day Partners	$163,083	19,504	187,515		96	$4,628	
Peak Partner Rewards	$443,985	12,387	49,549		25	$1,223	
Residential Battery Demand Response	$311,875	930	0	3.24	0	$0	3.24
Residential Demand Response	$13,373,996	20,004	72,557	1.80	249	$10,225	1.80
Small Commercial Building Controls	$156,336	695	11,126	1.45	26	$1,114	1.45
DR Program Total	**$15,013,892**	**81,994**	**1,435,708**	**2.15**	**970**	**$44,708**	**2.16**
Planning and Research							
DR Planning & Administration	$36,555	0	0		0	$0	
DR Program Evaluations	$28,664	0	0		0	$0	
DR Product Development	$887,067	0	0		0	$0	
Geo-targeting Pilot - DR	$9,762	0	0		0	$0	
DR Planning and Research Total	**$962,048**	**0**	**0**		**0**	**$0**	
DR PORTFOLIO TOTAL	**$15,975,940**	**81,994**	**1,435,708**	**2.02**	**636**	**$28,685**	**2.03**
PORTFOLIO TOTAL	**$92,169,335**	**175,856**	**488,491,674**	**1.85**	**2,183,452**	**$83,393,157**	**2.27**

Table 6a: 2021 Natural Gas Program Targets and Budgets

2021	Gas Budget	Net Annual Dth Savings	Annual Dth/$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Program					
Business Energy Assessments	$17,221	3,586	208,244	$53,590	2.57
Business HVAC+R Systems	$384,191	15,232	39,647	$146,057	1.12
Custom Efficiency	$56,872	6,133	107,841	$35,920	1.17
Energy Management Systems	$34,260	3,780	110,337	$49,431	1.23
New Construction	$562,272	67,796	120,576	$5,113,757	2.60
Small Business Solutions	$133,059	10,750	80,789	$348,066	5.32
General Advertising-Bus	$71,580	0			
Business Program Total	**$1,259,455**	**107,277**	**85,178**	**$5,694,815**	**2.31**
Residential Program					
Energy Efficient Showerhead	$362,175	37,645	103,942	$5,300,784	11.25
Energy Star New Homes	$2,840,724	119,395	42,030	-$208,564	1.27
Home Energy Insights	$625,854	98,938	158,085	$119,464	1.23
Home Energy Squad	$402,925	19,874	49,324	$772,936	2.48
Insulation & Air Sealing	$387,595	22,608	58,329	-$391,061	0.78
Multifamily Buildings	$950,096	39,190	41,248	$4,359,819	3.75
Residential Heating & Cooling	$2,676,871	166,088	62,045	-$479,022	1.04
School Education Kits	$658,775	54,500	82,729	$6,549,376	8.71
Whole Home Efficiency (HPwES)	$195,621	10,042	51,334	-$211,653	0.69
General Advertising-Res	$153,073	0			
Residential Program Total	**$9,253,709**	**568,280**	**61,411**	**$15,694,133**	**1.63**
Income Qualified Program					
Energy Savings Kit	$159,471	10,559	66,210	$1,529,916	8.97
Multifamily Weatherization	$685,870	9,089	13,252	-$267,810	0.80
Non-Profit	$437,005	4,004	9,162	-$192,267	0.77
Single-Family Weatherization	$4,071,682	56,725	13,932	-$874,741	0.89
Income Qualified Program Total	**$5,354,027**	**80,377**	**15,012**	**$195,097**	**1.02**
Indirect Products & Services					
Education/Market Transformation					
Business Education	$19,609	0	0		
Business Energy Analysis	$182,496	0	0		
Consumer Education	$79,081	0	0		
Energy Benchmarking	$30,432	0	0		
Energy Efficiency Financing	$79,228	0	0		
Home Energy Audit	$548,435	0	0		
Partners in Energy	$97,425	0	0		
Education/Market Transformation Total	**$1,036,707**	**0**	**0**		
Planning and Research					
EE Market Research	$198,046	0	0		
EE Evaluation, Measurement & Verification	$204,844	0	0		
EE Planning & Administration	$119,551	0	0		
EE Product Development	$162,977	0	0		
EE Product Development Total	**$162,977**	**0**	**0**		
EE Planning and Research Total	**$685,417**	**0**	**0**		
EE Indirect Products & Services Total	**$1,722,124**	**0**	**0**		
EE PORTFOLIO TOTAL	**$17,589,314**	**755,934**	**42,977**	**$20,233,395**	**1.50**

Table 6b: 2021 Natural Gas Program Achievements and Expenditures

2021	Gas Budget	Net Annual Dth Savings	Annual Dth/$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Program					
Business Energy Assessments	$10,059	141	14,007	-$3,585	0.68
Business HVAC+R Systems	$395,612	10,552	26,674	$58,445	1.09
Custom Efficiency	$14,922	570	38,222	$7,094	1.22
Energy Management Systems	$22,601	2,158	95,467	$35,702	1.33
New Construction	$1,351,633	167,543	123,956	$15,325,325	3.54
Small Business Solutions	$37,211	1,662	44,660	$63,308	2.33
General Advertising-Bus	$76,530	0	0		
Business Program Total	**$1,908,568**	**182,626**	**95,688**	**$15,409,760**	**3.21**
Residential Program					
Energy Efficient Showerhead	$649,169	44,085	67,909	$5,959,262	8.42
Energy Star New Homes	$3,154,645	129,178	40,949	-$621,423	0.94
Home Energy Insights	$132,775	77,905	586,740	$673,306	6.07
Home Energy Squad	$304,705	3,156	10,357	-$127,087	0.61
Insulation & Air Sealing	$537,527	29,418	54,728	-$879,777	0.66
Multifamily Buildings	$361,269	3,164	8,759	$413,700	2.06
Residential Heating & Cooling	$2,733,101	166,459	60,905	-$1,362,642	0.87
School Education Kits	$979,535	55,146	56,298	$6,672,106	6.73
Whole Home Efficiency	$41,283	368	8,921	-$41,986	0.35
General Advertising-Res	$396,262	0	0		
Residential Program Total	**$9,290,271**	**508,878**	**54,775**	**$10,289,197**	**1.39**
Income Qualified Program					
Energy Savings Kit	$335,408	70,070	208,909	$10,006,542	20.82
Multifamily Weatherization	$973,945	9,536	9,792	-$653,247	0.69
Non-Profit	$371,133	7,635	20,572	$239,825	1.35
Single-Family Weatherization	$3,157,885	33,859	10,722	-$1,077,029	0.81
Income Qualified Program Total	**$4,838,371**	**121,100**	**25,029**	**$8,516,091**	**1.96**
Indirect Products & Services					
Education/Market Transformation					
Business Education	$8,875	0	0		
Business Energy Analysis	$123,926	0	0		
Consumer Education	$98,674	0	0		
Energy Benchmarking	$32,820	0	0		
Energy Efficiency Financing	$24,906	0	0		
Home Energy Audit	$526,048	0	0		
Partners in Energy	$107,817	0	0		
Education/Market Transformation Total	**$923,067**	**0**	**0**		
Planning and Research					
EE Market Research	$153,648	0	0		
EE Evaluation, Measurement & Verification	$238,086	0	0		
EE Planning & Administration	$98,581	0	0		
EE Product Development	$170,838	0	0		
EE Product Development Total	**$170,838**	**0**	**0**		
EE Planning and Research Total	**$661,153**	**0**	**0**		
EE Indirect Products & Services Total	**$1,584,220**	**0**	**0**		
EE PORTFOLIO TOTAL	**$17,621,430**	**812,605**	**46,115**	**$33,052,788**	**1.76**

Table 7 below provides the CO_2 and SO_X emissions avoided for 2021 as well as cumulatively over the lifetime for each product.

Table 7: 2021 Avoided Emission

	Annual				Cumulative over Lifetime				Social Cost of Carbon	
	Tons CO_2			lbs SOx	Tons CO_2			lbs SOx	NPV of Avoided Emissions	
2021	**Electric**	**Gas**	**Total**	**Electric**	**Electric**	**Gas**	**Total**	**Electric**	**Electric**	**Gas**
Business Program										
Business Energy Assessments	560	8	568	330	4,129	45	4,174	2,066	$163,320	$3,662
Business HVAC+R Systems	11,123	617	11,740	6,524	99,558	12,305	111,862	59,807	$3,862,538	$377,320
Compressed Air Efficiency	541	0	541	323	4,651	0	4,651	2,897	$178,217	$0
Custom Efficiency	102	33	136	61	988	707	1,695	657	$38,131	$23,033
Data Center Efficiency	5,708	0	5,708	3,475	61,601	0	61,601	39,708	$2,327,839	$0
Energy Management Systems	1,565	126	1,691	960	16,722	2,101	18,823	8,607	$624,817	$75,530
LED Street Lighting	776	0	776	479	9,590	0	9,590	5,475	$355,396	$0
Lighting Efficiency	36,059	0	36,059	21,110	327,662	0	327,662	200,019	$12,394,968	$0
New Construction	35,175	9,788	44,963	20,704	356,691	196,044	552,735	229,932	$13,361,368	$7,043,090
Self Direct	593	0	593	334	5,828	0	5,828	3,571	$209,483	$0
Small Business Solutions	17,675	97	17,772	10,314	121,026	1,006	122,032	64,947	$4,804,450	$43,304
Strategic Energy Management	29,442	0	29,442	17,624	241,985	0	241,985	154,586	$9,427,643	$0
General Advertising-Bus	0	0	0	0	0	0	0	0	$0	$0
Business Program EE Total	**139,318**	**10,669**	**149,988**	**82,241**	**1,250,431**	**212,207**	**1,462,638**	**772,272**	**$47,748,169**	**$7,565,939**
Residential Program										
Energy Efficient Showerhead	458	2,576	3,034	266	3,315	42,408	45,723	1,560	$132,380	$1,102,555
Energy Star New Homes	2,880	7,547	10,427	1,661	32,587	160,529	193,116	19,181	$1,192,010	$5,591,768
Home Energy Insights	15,715	4,551	20,266	2,857	15,715	13,654	29,369	6,632	$750,608	$640,501
Home Energy Squad	528	184	713	317	4,577	1,842	6,419	2,685	$171,365	$103,110
Home Lighting & Recycling	63,373	0	63,373	37,577	502,754	0	502,754	279,001	$19,502,955	$0
Insulation & Air Sealing	174	1,719	1,893	99	1,678	29,203	30,881	901	$63,918	$1,028,574
Multifamily Buildings	3,241	185	3,426	1,942	27,061	1,932	28,993	16,268	$1,035,958	$102,374
Refrigerator & Freezer Recycling	1,748	0	1,748	1,056	11,511	0	11,511	5,196	$478,377	$0
Residential Heating & Cooling	3,512	9,725	13,237	1,993	31,964	179,091	211,055	17,909	$1,232,099	$5,956,812
School Education Kits	5,639	3,222	8,861	3,361	57,199	156,363	213,562	34,079	$2,131,500	$1,794,600
Whole Home Efficiency	2	22	23	1	16	296	311	8	$579	$13,903
General Advertising-Res	0	0	0	0	0	0	0	0	$0	$0
Residential Program EE Total	**97,270**	**29,730**	**127,000**	**51,130**	**688,377**	**585,317**	**1,273,694**	**383,418**	**$26,691,747**	**$16,334,198**
Income Qualified Program										
Energy Savings Kit	973	4,094	5,067	561	8,155	53,093	61,248	4,305	$313,072	$2,115,355
Multifamily Weatherization	911	557	1,468	556	9,734	7,800	17,534	6,163	$369,558	$400,564
Non-Profit	1,228	446	1,674	741	12,854	7,137	19,991	7,993	$484,373	$310,280
Single-Family Weatherization	18,184	1,978	20,162	10,889	213,265	29,506	242,771	126,712	$7,757,552	$1,473,278
Income Qualified Program Total	**21,296**	**7,075**	**28,371**	**12,746**	**244,008**	**97,536**	**341,544**	**145,173**	**$8,924,555**	**$4,299,476**
EE PORTFOLIO TOTAL	**257,885**	**47,474**	**305,359**	**146,117**	**2,182,816**	**895,060**	**3,077,876**	**1,300,863**	**$83,364,472**	**$28,199,613**
Demand Response Program										
Critical Peak Pricing	573	0	573	334	573	0	573	334	$27,518	$0
Electric Vehicle Critical Peak Pricing	0	0	0	0	0	0	0	0	$0	$0
Electric Vehicle Optimization	0	0	0	0	0	0	0	0	$0	$0
Peak Day Partners	96	0	96	56	96	0	96	56	$4,628	$0
Peak Partner Rewards	25	0	25	15	25	0	25	15	$1,223	$0
Residential Battery Demand Response	0	0	0	0	0	0	0	0	$0	$0
Residential Demand Response	40	0	40	22	249	0	249	120	$10,225	$0
Small Commercial Building Controls	6	0	6	3	26	0	26	11	$1,114	$0
DR PORTFOLIO TOTAL	**740**	**0**	**740**	**431**	**970**	**0**	**970**	**536**	**$44,708**	**$0**
PORTFOLIO TOTAL	**258,625**	**47,474**	**306,099**	**146,548**	**2,183,786**	**895,060**	**3,078,846**	**1,301,399**	**$83,409,179**	**$28,199,613**

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: 2021 Electric Program Costs by Category (Budget)

2021	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Business Program							
Business Energy Assessments	$ -	$ 384,659	$ -	$ 454,158	$ -	$ -	$ 838,818
Business HVAC+R Systems	$ -	$ 3,841,057	$ -	$ 4,186,910	$ -	$ 35,330	$ 8,063,297
Compressed Air Efficiency	$ -	$ 214,138	$ 54,000	$ 648,339	$ -	$ 27,000	$ 943,477
Custom Efficiency	$ -	$ 475,789	$ 500	$ 303,285	$ -	$ 4,000	$ 783,574
Data Center Efficiency	$ -	$ 274,975	$ 35,000	$ 1,156,271	$ -	$ 15,000	$ 1,481,245
Energy Management Systems	$ -	$ 208,679	$ 2,100	$ 331,736	$ -	$ 16,300	$ 558,815
LED Street Lighting	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lighting Efficiency	$ -	$ 2,792,144	$ 1,200,000	$ 8,174,306	$ -	$ 55,000	$ 12,221,449
New Construction	$ -	$ 2,259,774	$ 3,000	$ 4,053,108	$ -	$ 534,649	$ 6,850,531
Self Direct	$ -	$ 149,291	$ -	$ 620,977	$ -	$ -	$ 770,268
Small Business Solutions	$ -	$ 2,654,681	$ 300,000	$ 2,958,335	$ -	$ 35,000	$ 5,948,016
Strategic Energy Management	$ -	$ 1,924,917	$ 104,146	$ 6,762,052	$ -	$ 157,000	$ 8,948,115
General Advertising-Bus	$ -	$ 16,204	$ 775,500	$ -	$ -	$ -	$ 791,704
Business Program Total	**$ -**	**$ 15,196,308**	**$2,474,246**	**$29,649,477**	**$ -**	**$ 879,279**	**$ 48,199,310**
Residential Program							
Energy Efficient Showerhead	$ -	$ 22,396	$ 50	$ 6,857	$ -	$ -	$ 29,303
Energy Star New Homes	$ -	$ 341,769	$ 60,000	$ 2,291,619	$ -	$ 155,250	$ 2,848,638
Home Energy Insights	$ -	$ 3,914,898	$ -	$ -	$ -	$ -	$ 3,914,898
Home Energy Squad	$ -	$ 115,572	$ 125,000	$ 300,907	$ 454,022	$ 2,500	$ 998,000
Home Lighting & Recycling	$ -	$ 749,094	$ 625,000	$ 2,918,267	$ -	$ 5,000	$ 4,297,361
Insulation & Air Sealing	$ -	$ 33,484	$ 2,500	$ 191,483	$ -	$ 15,182	$ 242,649
Multifamily Buildings	$ -	$ 1,046,977	$ -	$ 1,812,020	$ -	$ -	$ 2,858,997
Refrigerator & Freezer Recycling	$ -	$ 651,268	$ 110,000	$ 350,000	$ -	$ 10,000	$ 1,121,268
Residential Heating & Cooling	$ -	$ 1,495,162	$ 1,280,780	$ 6,162,376	$ -	$ 50,000	$ 8,988,318
School Education Kits	$ -	$ 656,846	$ 5,000	$ 1,342,711	$ -	$ -	$ 2,004,557
Whole Home Efficiency (HPwES)	$ -	$ 93,112	$ -	$ 87,246	$ -	$ 20,000	$ 200,358
General Advertising-Res	$ -	$ 30,033	$ 743,000	$ -	$ -	$ -	$ 773,033
Residential Program Total	**$ -**	**$ 9,150,611**	**$ 2,951,330**	**$ 15,463,486**	**$454,022**	**$ 257,932**	**$ 28,277,381**
Income Qualified Program							
Energy Savings Kit	$ -	$ 166,141	$ 100,000	$ 117,119	$ -	$ -	$ 383,260
Multifamily Weatherization	$ -	$ 131,537	$ 40,000	$ 961,426	$ -	$ 16,000	$ 1,148,963
Non-Profit	$ -	$ 171,940	$ 31,000	$ 876,346	$ -	$ 40,000	$ 1,119,286
Single-Family Weatherization	$ -	$ 127,499	$ 190,000	$ 2,043,177	$ -	$ 87,000	$ 2,447,676
Income Qualified Program Total	**$ -**	**$ 597,117**	**$ 361,000**	**$ 3,998,068**	**$ -**	**$ 143,000**	**$ 5,099,185**

Table 8a: (Cont.)

2021	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	$ -	$ 175,109	$ 255,000	$ 765,000	$ -	$ -	$ 1,195,109
Consumer Education	$ -	$ 326,000	$ 645,000	$ -	$ -	$ -	$ 971,000
Energy Benchmarking	$ -	$ 112,643	$ -	$ -	$ -	$ -	$ 112,643
Energy Efficiency Financing	$ -	$ 11,489	$ 60,000	$ 140,000	$ -	$ -	$ 211,489
Home Energy Audit	$ -	$ 192,867	$ 16,639	$ 166,394	$ -	$ 29,119	$ 405,019
Partners in Energy	$ -	$ 907,696	$ 12,500	$ -	$ -	$ -	$ 920,196
Education/Market Transformation Total	**$ -**	**$ 1,801,804**	**$ 1,089,139**	**$ 1,071,394**	**$ -**	**$ 29,119**	**$ 3,991,456**
Planning and Research							
EE Market Research	$ -	$ 618,493	$ -	$ -	$ -	$ -	$ 618,493
EE Evaluation, Measurement & Verification	$ -	$ 32,973	$ -	$ -	$ -	$ 1,168,585	$ 1,201,559
EE Planning & Administration	$ -	$ 537,827	$ -	$ -	$ -	$ -	$ 537,827
EE Product Development	$ -	$ 2,000,498	$ -	$ -	$ -	$ -	$ 2,000,498
Geo-targeting Pilot - EE	$ -	$ 7,237	$ 7,237	$ 11,000	$ -	$ 3,618	$ 29,092
EE Product Development Total	**$ -**	**$ 2,007,735**	**$ 7,237**	**$ 11,000**	**$ -**	**$ 3,618**	**$ 2,029,590**
EE Planning and Research Total	**$ -**	**$ 3,197,027**	**$ 7,237**	**$ 11,000**	**$ -**	**$ 1,172,204**	**$ 4,387,468**
EE Indirect Products & Services Total	**$ -**	**$ 4,998,831**	**$ 1,096,376**	**$ 1,082,394**	**$ -**	**$ 1,201,323**	**$ 8,378,924**
EE PORTFOLIO TOTAL	**$ -**	**$29,942,867**	**$6,882,952**	**$ 50,193,425**	**$454,022**	**$ 2,481,534**	**$ 89,954,799**
Demand Response Program							
Critical Peak Pricing	$ -	$ 205,331	$ 25,000	$ -	$ -	$ 25,000	$ 255,331
Electric Vehicle Critical Peak Pricing	$ -	$ 177,425	$ 5,000	$ -	$98,475	$ 25,000	$ 305,900
Electric Vehicle Optimization	$ -	$ 496,937	$ 97,845	$ 230,000	$ -	$ 197,553	$ 1,022,335
Peak Day Partners	$ -	$ 35,000	$ 25,000	$ 241,500	$25,000	$ -	$ 326,500
Peak Partner Rewards	$ -	$ 393,374	$ 105,000	$1,136,718	$ -	$ 25,000	$ 1,660,092
Residential Battery Demand Response	$ -	$ 90,500	$ 5,000	$ 312,500	$ -	$ 113,240	$ 521,240
Residential Demand Response	$ -	$5,972,250	$ 987,500	$9,525,000	$ -	$ 130,000	$ 16,614,750
Small Commercial Building Controls	$ -	$ 121,300	$ 20,000	$ 270,645	$ -	$ 15,000	$ 426,945
DR Program Total	**$ -**	**$ 7,492,117**	**$ 1,270,345**	**$ 11,716,363**	**$ 123,475**	**$ 530,793**	**$ 21,133,093**
Planning and Research							
DR Planning & Administration	$ -	$ 59,759	$ -	$ -	$ -	$ -	$ 59,759
DR Program Evaluations	$ -	$ 10,991	$ -	$ -	$ -	$ 200,000	$ 210,991
DR Product Development	$ -	$ 1,805,187	$ -	$ -	$ -	$ -	$ 1,805,187
Geo-targeting Pilot - DR	$ -	$ 42,763	$ 42,763	$ 68,250	$ -	$ 21,382	$ 175,158
DR Planning and Research Total	**$ -**	**$ 1,918,700**	**$ 42,763**	**$ 68,250**	**$ -**	**$ 221,382**	**$ 2,251,095**
DR PORTFOLIO TOTAL	**$ -**	**$ 9,410,817**	**$ 1,313,108**	**$ 11,784,613**	**$ 123,475**	**$ 752,175**	**$ 23,384,188**
PORTFOLIO TOTAL	**$ -**	**$39,353,684**	**$ 8,196,060**	**$ 61,978,038**	**$577,497**	**$3,233,709**	**$ 113,338,987**

Table 8b: 2021 Electric Program Costs by Category (Actual Expenditures)

2021	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Business Program							
Business Energy Assessments	$ -	$ 146,413	$ -	$ 83,014	$ -	$ -	$ 229,427
Business HVAC+R Systems	$ -	$ 2,281,817	$ 491	$ 3,617,497	$ -	$ 32,775	$ 5,932,580
Compressed Air Efficiency	$ -	$ 181,030	$ -	$ 156,735	$ -	$ 3,352	$ 341,118
Custom Efficiency	$ -	$ 363,860	$ -	$ 43,732	$ -	$ 922	$ 408,514
Data Center Efficiency	$ -	$ 131,239	$ -	$ 1,013,696	$ -	$ -	$ 1,144,936
Energy Management Systems	$ -	$ 261,019	$ -	$ 221,109	$ -	$ -	$ 482,128
LED Street Lighting	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Lighting Efficiency	$ -	$ 2,354,278	$ 371,203	$ 7,519,776	$ -	$ 39,999	$ 10,285,256
New Construction	$ -	$ 2,756,305	$ -	$ 9,622,083	$ -	$ 475,868	$ 12,854,255
Self Direct	$ -	$ 86,744	$ -	$ 70,633	$ -	$ -	$ 157,377
Small Business Solutions	$ -	$ 855,380	$ 9,913	$ 2,977,146	$ -	$ 30,746	$ 3,873,185
Strategic Energy Management	$ -	$ 1,530,314	$ -	$ 4,656,468	$ -	$ 393,268	$ 6,580,050
General Advertising-Bus	$ -	$ 362,400	$ 316,922	$ -	$ -	$ -	$ 679,322
Business Program Total	**$ -**	**$ 11,310,800**	**$ 698,529**	**$ 29,981,889**	**$ -**	**$ 976,930**	**$ 42,968,148**
Residential Program							
Energy Efficient Showerhead	$ -	$ 43,285	$ -	$ 16,449	$ -	$ -	$ 59,734
Energy Star New Homes	$ -	$ 277,915	$ 618	$ 727,098	$ -	$ 186,278	$ 1,191,909
Home Energy Insights	$ -	$ 2,114,289	$ 150	$ -	$ -	$ -	$ 2,114,439
Home Energy Squad	$ -	$ 128,535	$ 66,397	$ 122,961	$ 207,946	$ -	$ 525,840
Home Lighting & Recycling	$ -	$ 725,839	$ 997,824	$ 5,641,677	$ -	$ 3,000	$ 7,368,340
Insulation & Air Sealing	$ -	$ 36,240	$ -	$ 282,667	$ -	$ 1,250	$ 320,157
Multifamily Buildings	$ -	$ 155,656	$ -	$ 1,026,065	$ -	$ -	$ 1,181,721
Refrigerator & Freezer Recycling	$ -	$ 580,584	$ 96,044	$ 262,900	$ -	$ 3,000	$ 942,528
Residential Heating & Cooling	$ -	$ 1,588,865	$ 351,619	$ 4,871,796	$ -	$ 54,035	$ 6,866,315
School Education Kits	$ -	$ 728,072	$ 3,199	$ 993,533	$ -	$ -	$ 1,724,804
Whole Home Efficiency (HPwES)	$ -	$ 63,645	$ -	$ 3,325	$ -	$ 1,122	$ 68,092
General Advertising-Res	$ -	$ 339,020	$ 385,027	$ -	$ -	$ -	$ 724,047
Residential Program Total	**$ -**	**$ 6,781,946**	**$ 1,900,878**	**$ 13,948,471**	**$207,946**	**$ 248,684**	**$ 23,087,925**
Income Qualified Program							
Energy Savings Kit	$ -	$ 79,574	$ -	$ 57,124	$ -	$ -	$ 136,698
Multifamily Weatherization	$ -	$ 151,177	$ 29,167	$ 894,134	$ -	$ 16,412	$ 1,090,890
Non-Profit	$ -	$ 207,485	$ 29,167	$ 945,141	$ -	$ 23,793	$ 1,205,586
Single-Family Weatherization	$ -	$ 137,161	$ 162,500	$ 1,500,070	$ -	$ 60,834	$ 1,860,565
Income Qualified Program Total	**$ -**	**$ 575,396**	**$ 220,833**	**$ 3,396,469**	**$ -**	**$ 101,039**	**$ 4,293,738**

Table 8b: (Cont.)

2021	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	$ -	$ 26,368	$ 40,318	$ -	$ -	$ -	$ 66,686
Business Energy Analysis	$ -	$ 88,827	$ -	$ 355,524	$ -	$ -	$ 444,351
Consumer Education	$ -	$ 144,793	$ 584,296	$ -	$ -	$ -	$ 729,088
Energy Benchmarking	$ -	$ 68,833	$ -	$ -	$ -	$ -	$ 68,833
Energy Efficiency Financing	$ -	$ 48,037	$ -	$ -	$ -	$ -	$ 48,037
Home Energy Audit	$ -	$ 198,205	$ -	$ 201,154	$ -	$ 32,897	$ 432,256
Partners in Energy	$ -	$ 888,857	$ -	$ -	$ -	$ -	$ 888,857
Education/Market Transformation Total	**$ -**	**$ 1,463,921**	**$ 624,613**	**$ 556,678**	**$ -**	**$ 32,897**	**$ 2,678,109**
Planning and Research							
EE Market Research	$ -	$ 493,383	$ -	$ -	$ -	$ -	$ 493,383
EE Evaluation, Measurement & Verification	$ -	$ 40,680	$ -	$ -	$ -	$ 751,946	$ 792,626
EE Planning & Administration	$ -	$ 316,906	$ -	$ -	$ -	$ -	$ 316,906
EE Product Development	$ -	$ 1,552,798	$ -	$ -	$ -	$ -	$ 1,552,798
Geo-targeting Pilot - EE	$ -	$ 8,837	$ -	$ 925	$ -	$ -	$ 9,762
EE Product Development Total	**$ -**	**$ 1,561,635**	**$ -**	**$ 925**	**$ -**	**$ -**	**$ 1,562,560**
EE Planning and Research Total	**$ -**	**$ 2,412,603**	**$ -**	**$ 925**	**$ -**	**$ 751,946**	**$ 3,165,474**
EE Indirect Products & Services Total	**$ -**	**$ 3,876,524**	**$ 624,613**	**$ 557,603**	**$ -**	**$ 784,843**	**$ 5,843,583**
EE PORTFOLIO TOTAL	**$ -**	**$22,544,666**	**$3,444,854**	**$47,884,433**	**$207,946**	**$ 2,111,496**	**$ 76,193,395**
Demand Response Program							
Critical Peak Pricing	$ -	$ 187,972	$ -	$ -	$ -	$ -	$ 187,972
Electric Vehicle Critical Peak Pricing	$ -	$ 64,739	$ 7,143	$ -	$ -	$ -	$ 71,882
Electric Vehicle Optimization	$ -	$ 252,484	$ 35,700	$ 9,800	$ -	$ 6,780	$ 304,764
Peak Day Partners	$ -	$ 92,608	$ -	$ 70,474	$ -	$ -	$ 163,083
Peak Partner Rewards	$ -	$ 143,612	$ 57,143	$ 243,230	$ -	$ -	$ 443,985
Residential Battery Demand Response	$ -	$ 123,535	$ -	$ 158,750	$ -	$ 29,590	$ 311,875
Residential Demand Response	$ -	$4,099,570	$ 381,346	$8,856,080	$ -	$ 37,000	$ 13,373,996
Small Commercial Building Controls	$ -	$ 152,385	$ 3,571	$ -	$ 380	$ -	$ 156,336
DR Program Total	**$ -**	**$ 5,116,905**	**$ 484,903**	**$ 9,338,334**	**$ 380**	**$ 73,370**	**$ 15,013,892**
Planning and Research							
DR Planning & Administration	$ -	$ 36,555	$ -	$ -	$ -	$ -	$ 36,555
DR Program Evaluations	$ -	$ 1,233	$ -	$ -	$ -	$ 27,431	$ 28,664
DR Product Development	$ -	$ 887,067	$ -	$ -	$ -	$ -	$ 887,067
Geo-targeting Pilot - DR	$ -	$ -	$ 8,837	$ -	$ 925	$ -	$ 9,762
DR Planning and Research Total	**$ -**	**$ 924,855**	**$ 8,837**	**$ -**	**$ 925**	**$ 27,431**	**$ 962,048**
DR PORTFOLIO TOTAL	**$ -**	**$ 6,041,760**	**$ 493,740**	**$ 9,338,334**	**$ 1,305**	**$ 100,801**	**$ 15,975,940**
PORTFOLIO TOTAL	**$ -**	**$28,586,426**	**$3,938,593**	**$57,222,768**	**$ 209,251**	**$2,212,297**	**$ 92,169,335**

Table 9a: 2021 Gas Program Costs by Category (Budget)

2021	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Business Program							
Business Energy Assessments	$ -	$ 8,796	$ 63	$ 8,363	$ -	$ -	$ 17,221
Business HVAC+R Systems	$ -	$ 199,071	$ -	$ 180,995	$ -	$ 4,125	$ 384,191
Custom Efficiency	$ -	$ 27,529	$ 38	$ 29,006	$ -	$ 300	$ 56,872
Energy Management Systems	$ -	$ 15,334	$ 500	$ 18,051	$ -	$ 375	$ 34,260
New Construction	$ -	$ 145,186	$ 827	$ 335,462	$ -	$ 80,798	$ 562,272
Small Business Solutions	$ -	$ 35,899	$ 18,750	$ 74,660	$ -	$ 3,750	$ 133,059
General Advertising-Bus	$ -	$ 1,661	$ 69,918	$ -	$ -	$ -	$ 71,580
Business Program Total	**$ -**	**$ 433,477**	**$ 90,095**	**$ 646,535**	**$ -**	**$ 89,348**	**$ 1,259,455**
Residential Program							
Energy Efficient Showerhead	$ -	$ 218,834	$ 18,712	$ 124,629	$ -	$ -	$ 362,175
Energy Star New Homes	$ -	$ 571,855	$ 197,708	$ 1,667,358	$ -	$ 403,803	$ 2,840,724
Home Energy Insights	$ -	$ 625,854	$ -	$ -	$ -	$ -	$ 625,854
Home Energy Squad	$ -	$ 102,649	$ 106,618	$ 53,541	$ 137,618	$ 2,500	$ 402,925
Insulation & Air Sealing	$ -	$ 28,363	$ 2,751	$ 346,473	$ -	$ 10,008	$ 387,595
Multifamily Buildings	$ -	$ 317,711	$ -	$ 632,385	$ -	$ -	$ 950,096
Residential Heating & Cooling	$ -	$ 606,686	$ 235,515	$ 1,811,389	$ -	$ 23,280	$ 2,676,871
School Education Kits	$ -	$ 459,181	$ 2,688	$ 196,906	$ -	$ -	$ 658,775
Whole Home Efficiency (HPwES)	$ -	$ 69,690	$ 1,200	$ 102,231	$ -	$ 22,500	$ 195,621
General Advertising-Res	$ -	$ 6,947	$ 146,126	$ -	$ -	$ -	$ 153,073
Residential Program Total	**$ -**	**$3,007,769**	**$ 711,319**	**$ 4,934,912**	**$137,618**	**$ 462,091**	**$ 9,253,709**
Income Qualified Program							
Energy Savings Kit	$ -	$ 83,002	$ 43,000	$ 32,344	$ -	$ 1,125	$ 159,471
Multifamily Weatherization	$ -	$ 101,587	$ 21,258	$ 549,258	$ -	$ 13,766	$ 685,870
Non-Profit	$ -	$ 70,185	$ 15,297	$ 332,259	$ -	$ 19,265	$ 437,005
Single-Family Weatherization	$ -	$ 187,461	$ 52,500	$ 3,716,463	$ -	$ 115,258	$ 4,071,682
Income Qualified Program Total	**$ -**	**$ 442,234**	**$ 132,055**	**$ 4,630,324**	**$ -**	**$ 149,414**	**$ 5,354,027**
Indirect Products & Services							
Education/Market Transformation							
Business Education	$ -	$ 8,550	$ 11,059	$ -	$ -	$ -	$ 19,609
Business Energy Analysis	$ -	$ 16,746	$ 15,750	$ 150,000	$ -	$ -	$ 182,496
Consumer Education	$ -	$ 29,048	$ 50,033	$ -	$ -	$ -	$ 79,081
Energy Benchmarking	$ -	$ 30,432	$ -	$ -	$ -	$ -	$ 30,432
Energy Efficiency Financing	$ -	$ 18,728	$ 15,500	$ 45,000	$ -	$ -	$ 79,228
Home Energy Audit	$ -	$ 244,115	$ 31,584	$ 232,955	$ -	$ 39,781	$ 548,435
Partners in Energy	$ -	$ 93,245	$ 2,125	$ -	$ -	$ 2,055	$ 97,425
Education/Market Transformation Total	**$ -**	**$ 440,865**	**$ 126,052**	**$ 427,955**	**$ -**	**$ 41,836**	**$ 1,036,707**
Planning and Research							
EE Market Research	$ -	$ 198,046	$ -	$ -	$ -	$ -	$ 198,046
EE Evaluation, Measurement & Verification	$ -	$ 13,340	$ -	$ -	$ -	$ 191,504	$ 204,844
EE Planning & Administration	$ -	$ 119,551	$ -	$ -	$ -	$ -	$ 119,551
EE Product Development	$ -	$ 162,977	$ -	$ -	$ -	$ -	$ 162,977
EE Product Development Total	**$ -**	**$ 162,977**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 162,977**
EE Planning and Research Total	**$ -**	**$ 493,913**	**$ -**	**$ -**	**$ -**	**$ 191,504**	**$ 685,417**
EE Indirect Products & Services Total	**$ -**	**$ 934,778**	**$ 126,052**	**$ 427,955**	**$ -**	**$ 233,340**	**$ 1,722,124**
EE PORTFOLIO TOTAL	**$ -**	**$ 4,818,258**	**$1,059,520**	**$ 10,639,725**	**$137,618**	**$ 934,193**	**$ 17,589,314**

Table 9b: 2021 Gas Program Costs by Category (Actual Expenditures)

2021	Program Planning & Design	Administration & Program Delivery	Advertising & Promotion	Participant Rebates and Incentives	Equipment & Installation	Measurement & Verification	Total
Business Program							
Business Energy Assessments	$ -	$ 6,517	$ -	$ 3,542	$ -	$ -	$ 10,059
Business HVAC+R Systems	$ -	$ 235,053	$ 1,247	$ 154,398	$ -	$ 4,915	$ 395,612
Custom Efficiency	$ -	$ 12,300	$ -	$ 2,622	$ -	$ -	$ 14,922
Energy Management Systems	$ -	$ 13,011	$ -	$ 9,590	$ -	$ -	$ 22,601
New Construction	$ -	$ 476,066	$ -	$ 813,565	$ -	$ 62,002	$ 1,351,633
Small Business Solutions	$ -	$ 30,509	$ -	$ 6,702	$ -	$ -	$ 37,211
General Advertising-Bus	$ -	$ 32,362	$ 44,168	$ -	$ -	$ -	$ 76,530
Business Program Total	**$ -**	**$ 805,819**	**$ 45,415**	**$ 990,418**	**$ -**	**$ 66,916**	**$ 1,908,568**
Residential Program							
Energy Efficient Showerhead	$ -	$ 266,492	$ 5,102	$ 377,576	$ -	$ -	$ 649,169
Energy Star New Homes	$ -	$ 465,084	$ 1,442	$ 2,253,472	$ -	$ 434,648	$ 3,154,645
Home Energy Insights	$ -	$ 132,775	$ -	$ -	$ -	$ -	$ 132,775
Home Energy Squad	$ -	$ 140,818	$ 64,249	$ 49,581	$ 50,057	$ -	$ 304,705
Insulation & Air Sealing	$ -	$ 41,197	$ -	$ 494,580	$ -	$ 1,750	$ 537,527
Multifamily Buildings	$ -	$ 26,069	$ -	$ 335,200	$ -	$ -	$ 361,269
Residential Heating & Cooling	$ -	$ 297,901	$ 6,571	$ 2,411,779	$ -	$ 16,850	$ 2,733,101
School Education Kits	$ -	$ 468,791	$ 2,620	$ 508,124	$ -	$ -	$ 979,535
Whole Home Efficiency	$ -	$ 35,482	$ -	$ 4,679	$ -	$ 1,122	$ 41,283
General Advertising-Res	$ -	$ 110,408	$ 285,855	$ -	$ -	$ -	$ 396,262
Residential Program Total	**$ -**	**$ 1,985,017**	**$365,839**	**$ 6,434,989**	**$50,057**	**$ 454,370**	**$ 9,290,271**
Income Qualified Program							
Energy Savings Kit	$ -	$ 127,167	$ 400	$ 207,841	$ -	$ -	$ 335,408
Multifamily Weatherization	$ -	$ 103,724	$ 20,833	$ 838,973	$ -	$ 10,415	$ 973,945
Non-Profit	$ -	$ 85,410	$ 20,833	$ 255,497	$ -	$ 9,392	$ 371,133
Single-Family Weatherization	$ -	$ 251,342	$ 87,500	$ 2,613,554	$ -	$ 205,489	$ 3,157,885
Income Qualified Program Total	**$ -**	**$ 567,642**	**$ 129,567**	**$ 3,915,865**	**$ -**	**$ 225,297**	**$ 4,838,371**
Indirect Products & Services							
Education/Market Transformation							
Business Education	$ -	$ 4,440	$ 4,435	$ -	$ -	$ -	$ 8,875
Business Energy Analysis	$ -	$ 14,078	$ -	$ 109,848	$ -	$ -	$ 123,926
Consumer Education	$ -	$ 4,607	$ 94,067	$ -	$ -	$ -	$ 98,674
Energy Benchmarking	$ -	$ 32,820	$ -	$ -	$ -	$ -	$ 32,820
Energy Efficiency Financing	$ -	$ 24,906	$ -	$ -	$ -	$ -	$ 24,906
Home Energy Audit	$ -	$ 181,550	$ -	$ 311,602	$ -	$ 32,897	$ 526,048
Partners in Energy	$ -	$ 107,817	$ -	$ -	$ -	$ -	$ 107,817
Education/Market Transformation Total	**$ -**	**$ 370,219**	**$ 98,502**	**$ 421,450**	**$ -**	**$ 32,897**	**$ 923,067**
Planning and Research							
EE Market Research	$ -	$ 153,648	$ -	$ -	$ -	$ -	$ 153,648
EE Evaluation, Measurement & Verification	$ -	$ 9,357	$ -	$ -	$ -	$ 228,728	$ 238,086
EE Planning & Administration	$ -	$ 98,581	$ -	$ -	$ -	$ -	$ 98,581
EE Product Development	$ -	$ 148,744	$ 59	$ 510	$ -	$ 21,525	$ 170,838
EE Product Development Total	**$ -**	**$ 148,744**	**$ 59**	**$ 510**	**$ -**	**$ 21,525**	**$ 170,838**
EE Planning and Research Total	**$ -**	**$ 410,330**	**$ 59**	**$ 510**	**$ -**	**$ 250,253**	**$ 661,153**
EE Indirect Products & Services Total	**$ -**	**$ 780,549**	**$ 98,561**	**$ 421,960**	**$ -**	**$ 283,150**	**$ 1,584,220**
EE PORTFOLIO TOTAL	**$ -**	**$4,139,027**	**$ 639,381**	**$ 11,763,232**	**$50,057**	**$1,029,732**	**$17,621,430**

Participation Analysis

Decision No. C14-0731 within the 2013 DSM Strategic Issues Proceeding[11] 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."[12] 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."[13]

2021 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 2021 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.

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

Table 10a: 2021 Electric Participation, Percentage of Total by Customer Class

	Total Unique DSM Participants (Estimate)[14]		Total PSCo Customers[15]		PSCo Customers Participating in DSM		PSCo Customers Not Participating in DSM	
Electric	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
2021 Total	1,234,527		1,422,277		1,234,527	86.80%	187,750	13.20%
Bus	10,389	0.84%	104,125	7.32%	10,389	9.98%	93,736	90.02%
Res	1,224,138	99.16%	1,318,152	92.68%	1,224,138	92.87%	94,014	7.13%

Table 10b: 2021 Gas Participation, Percentage of Total by Customer Class

	Total Unique DSM Participants (Estimate)[16]		Total DSM-Eligible PSCo Customers		PSCo Customers Participating in DSM		PSCo Customers Not Participating in DSM	
Gas	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
2021 Total	404,417		1,449,666		404,417	27.90%	1,045,249	72.10%
Bus	576	0.14%	102,093	7.04%	576	0.56%	101,517	99.44%
Res	403,841	99.86%	1,347,573	92.96%	403,841	29.97%	943,732	70.03%

[14] 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).
[15] Customer count as of 12/31/2021.
[16] 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: 2021 Electric Participation, Average Rebate and Savings

Product	2021 Participants	Average Rebate per Customer	Average kWh Savings per Customer
Business Program			
Business Energy Assessments	85	$976.64	12,952
Business HVAC+R Systems	1,055	$3,428.91	20,614
Compressed Air Efficiency	36	$4,353.76	29,914
Custom Efficiency	27	$1,619.70	7,574
Data Center Efficiency	5	$202,739.24	2,316,616
Energy Management Systems	9	$24,567.67	355,737
Lighting Efficiency	1,539	$4,886.14	45,723
New Construction	216	$44,546.68	319,510
Self Direct	2	$35,316.50	557,118
Small Business Solutions	6,467	$460.36	5,316
Strategic Energy Management	66	$70,552.54	890,125
Residential Program			
Energy Efficient Showerhead	296	$55.57	2,994
Home Energy Insights	456,351	$1.59	12
ENERGY STAR New Homes	3,069	$0.00	3,103
Home Energy Squad	1,032	$119.15	1,023
Home Lighting & Recycling	277,847	$20.30	451
Insulation & Air Sealing	1,106	$255.58	298
Multifamily Buildings	286	$3,587.64	22,636
Refrigerator & Freezer Recycling	5,256	$50.02	670
Residential Heating & Cooling	18,328	$265.81	362
School Education Kits	51,426	$19.32	218
Whole Home Efficiency	7	$474.97	400
Income Qualified Program			
Energy Savings Kit	2,074	$27.54	901
Multifamily Weatherization	34	$26,298.07	54,469
Non-Profit	37	$25,544.36	66,726
Single-Family Weatherization	1,408	$1,065.39	25,779
Indirect Products & Services			
Business Education	1,200	$0.00	0
Business Energy Analysis	262	$0.00	0
Consumer Education	40,007	$0.00	0
Energy Efficiency Financing	21	$0.00	0
Home Energy Audit	1,722	$0.00	0
Demand Response Program			
Residential Demand Response	16,047	N/A	5
Small Commercial Building Controls	354	$0.00	31

Table 10d: 2021 Natural Gas Participation

Product	2020 Participants	Average Rebate Per Customer	Average Dth Savings Per Customer
Business Program			
Business Energy Assessments	60	$59.03	2.3
Business HVAC+R Systems	60	$2,573.29	175.9
Custom Efficiency	2	$1,311.00	285.2
Energy Management Systems	3	$3,196.67	719.2
New Construction	67	$12,142.76	2500.6
Small Business Solutions	384	$17.45	4.3
Residential Program			
Energy Efficient Showerhead	395	$955.89	111.6
ENERGY STAR New Homes	6,286	$358.49	20.6
Home Energy Insights	332,334	$0.00	0.2
Home Energy Squad	823	$60.24	3.8
Insulation & Air Sealing	1,364	$362.60	21.6
Multifamily Buildings	189	$1,773.54	16.7
Residential Heating & Cooling	17,949	$134.37	9.3
School Education Kits	40,072	$12.68	1.4
Whole Home Efficiency	9	$519.85	40.9
Income Qualified Program			
Energy Savings Kit	2,491	$83.44	28.1
Multifamily Weatherization	15	$55,931.51	635.8
Non-Profit	35	$7,299.93	218.1
Single-Family Weatherization	1,879	$1,390.93	18.0
Indirect Products & Services			
Business Education	53	$0.00	0.0
Business Energy Analysis	179	$188.70	0.0
Consumer Education	7,570	$0.00	0.0
Energy Efficiency Financing	23	$0.00	0.0
Home Energy Audit	2,252	$91.58	0.0

Table 10e: Estimated Customer Consumption Savings Range, 2009-2021

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%

Table 10f: Estimated Cumulative Rate Impact, 2009-2021

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%

Table 10g: Estimated Customer Bill Savings Range, 2009-2021

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%

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, 2022.
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 2021.	Proceeding No. 14A-1057EG, Stipulation & Settlement Agreement, p.17, ¶8	---	Technical assumptions approved in Proceeding No. 18A-0606EG were used to calculate prescriptive product achievements for 1/1/2021–3/31/2021, unless amended via 60-Day Notice during 2019 or 2020. Technical assumptions approved in Proceeding No. 20-0287EG were used to calculate prescriptive product achievements for 4/1/2021-12/31/2021, unless amended via 60-Day Notice during 2021.

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 2021.	Proceeding No. 14A-1057EG, Stipulation & Settlement Agreement, p.17, ¶8	See Cost-Effectiveness and Financial Incentive Calculations sections	Technical assumptions approved in Proceeding No. 18A-0606EG were used to calculate prescriptive product achievements for 1/1/2021–3/31/2021, unless amended via 60-Day Notice during 2019 or 2020. Technical assumptions approved in Proceeding No. 20-0287EG were used to calculate prescriptive product achievements for 4/1/2021-12/31/2021, unless amended via 60-Day Notice during 2021.
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, 2022.
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 issued a 60-Day Notice on November 30, 2021 for a new Income-Qualified Beneficial Electrification Pilot in accordance with Item 33 below. The pilot design and scope were discussed with stakeholders during the DSM Roundtable on 5/11/2021, 8/11/2021, and 11/10/2021. The pilot was implemented 1/17/2022.
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, 2021.
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 $76.2 million on its Energy Efficiency Program in 2021.
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 488 GWh of savings in 2021 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 $4.3 million on its Low-Income electric energy efficiency program in 2021.
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	The Company claimed behavioral savings for fifteen projects under the Strategic Energy Management product in 2021.
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 2021.
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 2021.
29	Regarding Strategic Energy Management: The Company agrees to expand the 2019 cohort pilot offering described in the 2019/2020 DSM Plan, as modified by this Settlement Agreement, to a full offering in 2019 and 2020.	Proceeding No. 18A-0606EG Settlement Agreement, Para. III(D)(xi)	See Strategic Energy Management Write Up included in the Business Program section	The Company launched two SEM Cohorts in 2021.

30	The Company agrees to conduct comprehensive product evaluations for the Home Lighting & Recycling, Lighting Efficiency, and Lighting – Small Business products in 2020.	Proceeding No. 18A-0606EG, Settlement Agreement, Para. III(E)(xi)	See EE Product Evaluations Write Up included in the Indirect Program section	The Home Lighting & Recycling evaluation was delayed until 2021 due to ambiguity related to the DOE ruling on EISA and Colorado HB 19-1231 enforcement. This decision was communicated to stakeholders during the February 12, 2020 DSM Roundtable. All other evaluations were conducted in 2020.
31	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 evaluated opportunities to increase IQ budgets with EOC throughout 2021. The IQ Beneficial Electrification Pilot discussed in Item 33 below resulted in a total IQ budget increase of approximately $883,000.
32	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 2021, 1,215 customers who had been in arrears at least once during the year participation in the Single-Family Weatherization product.

33	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.
34	The Company shall allow commercial Beneficial Electrification projects through the Custom Efficiency product.	Proceeding No. 20A-0287EG, Settlement Agreement, Item III, page 5.	---	Ongoing.
35	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 2021.

36	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 2021; however, net economic costs were excluded from the Company's performance incentive calculation.
37	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 hosted five meetings of the Demand Response Working Group on 6/16/2021, 7/21/2021, 8/21/2021, 9/22/2021, and 11/18/2021. The Company receive four pilot idea submissions from stakeholders which are currently under review by Product Development.

38	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.
39	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 began helping multiple customers to identify savings opportunities in 2021.

40	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.
41	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 and discussed the evaluation scope and process, including evaluation of Green/Stretch Codes, during the November 10, 2021 DSM Roundtable. The Company will report on evaluation findings during the DSM Roundtable in 2022 as well as the 2022 DSM Status Report.

42	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.
43	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 2021, the Company continued working with additional device manufacturers to add eligible thermostats to the lineup. Evaluation of devices from two additional manufacturers is continuing into 2022.
44	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	The Company engaged several builders in 2021 to pursue a heat pump demonstration project; however, market interest did not materialize.
45	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.

46	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 2021.
47	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 2021.
48	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 is still evaluating possible Commercial Battery DR offerings and will continue reporting in DSM Roundtables in 2022.
49	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.

50	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 2021 Community Energy Reports. Data identified in requirement (2) is dependent on full Advanced Metering Infrastructure roll-out and is unavailable at this time.
51	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.	---	2021 activities described in footnote.[17]
52	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 is still evaluating the potential for a viable offering design.

[17] Restrictions associated with the COVID-19 pandemic continued to adversely impact outreach efforts; however, the Company, in collaboration with the Colorado Energy Office ("CEO"), expanded marketing efforts through two separate direct mail campaigns supported by email campaigns in Q2 and again in Q4 to all eligible agricultural customers in the Company's service territory notifying them of the CEO's free energy assessment and listing the Company's available custom and prescriptive rebate programs applicable to the segment. Additional outreach support efforts included conducting audits for eligible customers by working through the CEO's audit vendor and including the program at the vendor partner virtual booth showcase during the Energy Efficiency Expo held in Q2. The Company continues to hold regular status update meetings with the CEO's project team and through this collaboration, identifies additional marketing tactics and channels.

53	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 hosted three meetings of the On-Bill Financing Working Group on 7/9/2021, 8/19/2021, and 1/12/2022. The Company filed an informational notice summarizing the outcome of the working group on March 7, 2022 under Proceeding No. 20A-0287EG.
54	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 once per quarter in Quarter 2, Quarter 3, and Quarter 4 of 2021 and reported on budgetary impacts of all 60-Day Notices during the 2021 DSM Roundtables.

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, 2022.
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 $17.6 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 2021 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 2021 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, 2021.
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, 2021.
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 $4.8 million on its Low-Income gas energy efficiency program in 2021.

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)67 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 proposed in the Settlement Agreement exceeds $15 million, PSCo requests a variance from Rule 4753(k). None of the parties oppose the request. The ALJ agrees and further concludes that PSCo has established good cause for the requested variance. Accordingly, the Petition for Variances from Rules 4753(k) will be granted. 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 2021 totaled $17.6 million.

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 2021; 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 487 GWh and net benefits of $111,809,152 in 2021. The performance goal and incentive structure for 2021 were established in Proceeding No. 17A-0462EG.

Table 12: Summary of 2020 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 2021 Plan year is 40 percent of net economic benefits[18] 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 2021 performance year. The full calculation of the Company's financial incentive for electric DSM is shown in Table 13 below.

[18] 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 2021 Electric DSM Incentive

Disincentive Offset (Grossed-up for Income Taxes)	**$1,500,000**
Performance Incentive Calculation	
Approved 2021 kWh Goal	500,000,000
kWh from YE Achievements	487,128,524
Net Economic Benefits from YE Achievements (Excluding NEB Adder + SCC)	**$111,809,152**
Net Economic Benefits Adjustments	
Total Low-Income Allowance	$376,781
Total Market Transformation Allowance from YE Achieve.	$2,678,109
Total Beneficial Electrification Allowance	$532,789
FINAL Net Benefits from YE Achievements	**$115,396,830**
% of Net Benefits Eligible for Incentive (Achievement over 280 GWh)	42.5%
% of Eligible Net Benefits Awarded	40%
Performance Incentive	**$19,626,833**
Total Incentive: Disincentive Offset Total + Performance Incentive	$21,126,833
Incentive Cap (Hard Cap of $18,000,000)	$18,000,000
Total 2019 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. For 2021, the natural gas incentive is calculated to be $4,405,357 which is equal to the 25 percent of expenditure cap. In addition, the Company is filing for an acknowledgement of lost revenues associated with natural gas DSM programs of $1,418,885 for a total award of $5,824,243. The full calculation of Public Service's 2021 Natural Gas Incentive is detailed in Table 14 below.

Table 14: Public Service 2021 Natural Gas Bonus and Acknowledgement of Lost Revenue

Approved Energy Target (Goal)[19]	755,934	Dekatherm per year		
Energy Target Achieved - YE Forecast	812,605	Dekatherm per year		
Percent of Energy Target Achieved	107.5%			
			Dth	**Spend**
Approved Savings Target	40,863	Dekatherm per $1M	755,934	$18,499,094
Savings Target Achieved - Portfolio Total	46,115	Dekatherm per $1M	812,605	$17,621,430
Savings Target Achieved - Low-Income Program Adjustments				
Energy Savings Kit			70,070	$335,408
Multi-Family Weatherization			9,536	$973,945
Non-Profit Energy Efficiency			7,635	$371,133
Single-Family Weatherization			33,859	$3,157,885
Total Savings Target Achieved - Low-Income Program Adjustments	25,029	Dekatherm per $1M	121,100	$4,838,371
Savings Target Achieved - Adjusted*	54,095	Dekatherm per $1M	691,505	$12,783,059
Total DSM Expenditures	$17,621,430			
Energy Factor	13.5%			
Savings Factor	1.32381411			
Percent of Net Benefits Awarded	17.9%	= Energy Factor * Savings Factor		
Net Economic Benefits Achieved	$33,052,788			
Net Economic Benefits Adjustments				
Energy Savings Kit	$-			
Multi-Family Weatherization	$653,247			
Non-Profit Energy Efficiency	$-			
Single-Family Weatherization	$1,077,029			
Low-Income Allowance from Plan	$1,730,276			
Beneficial Electrification Allowance	$732,831			
FINAL Net Economic Benefits Achieved	$35,515,895			
Incentive Cap	$4,405,357	= less of 20% of net economic benefits or 25% of expenditures		
Total 2021 Proposed Gas Financial Incentive Pre-Tax	**$4,405,357**			
Business/Residential Allocation				
Business Actual Savings (Dth)	182,626	22%		
Residential & Low-Income Actual Savings (Dth)	629,978	78%		
Total Savings	812,605	100%		
Allocated Bonus				
Business	$990,068			
Residential & Low Income	$3,415,290			
Total	$4,405,357			
Acknowledgement of Lost Revenue [ALR] Calculation:				
Dollar Value Per Therm				
Business (Non-residential)	$0.16076			
Residential	$0.17863			
12-Month Therm Reduction Impact From 2020 Programs				
Business (Non-residential)	1,826,262			
Residential	6,299,785			
ALR Totals				
Business (Non-residential)	$293,586			
Residential	$1,125,299			
Total ALR	**$1,418,885**			
Total Gas Bonus and ALR	**$5,824,243**			

[19] Natural Gas savings set as a pro-ration of the 2020 goal set in Proceeding No. 18A-0606EG and the 2021 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 2021, the electric products in the Company's Business Program achieved 79 percent of the net generator kWh target with spend coming in below budget and commensurate with achievement. Multiple products underachieved compared to their forecast savings targets while LED Street Lighting and New Construction outperformed their forecast savings targets. 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 - 2021	**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	$ 838,818	808	6,561,660	1.24	1.68	$ 229,427	143	1,100,886	1.00	1.35
Business HVAC+R Systems	$ 8,063,297	10,402	31,602,611	1.89	2.26	$ 5,932,580	4,665	21,747,901	1.31	1.61
Compressed Air Efficiency	$ 943,477	831	5,038,012	1.38	1.76	$ 341,118	191	1,076,904	1.20	1.50
Custom Efficiency	$ 783,574	818	4,600,068	1.21	1.29	$ 408,514	49	204,503	0.74	0.81
Data Center Efficiency	$ 1,481,245	1,904	13,259,748	1.69	2.22	$ 1,144,936	1,354	11,583,082	0.64	0.81
Energy Management Systems	$ 558,815	172	7,235,485	1.09	1.51	$ 482,128	140	3,201,633	1.96	2.50
LED Street Lighting	$ -	-	1,320,510	1.53	2.46	$ -	-	1,597,625	1.51	2.43
Lighting Efficiency	$12,221,449	15,718	100,138,280	1.35	1.77	$ 10,285,256	11,636	70,367,385	1.66	2.06
New Construction	$ 6,850,531	11,597	45,738,879	1.49	1.84	$ 12,854,255	18,230	69,014,079	1.64	1.98
Self Direct	$ 770,268	996	4,452,063	1.11	1.38	$ 157,377	90	1,114,235	1.46	1.93
Small Business Solutions	$ 5,948,016	7,236	46,062,218	1.36	1.80	$ 3,873,185	6,088	34,381,141	1.58	2.04
Strategic Energy Management	$ 8,948,115	10,626	81,059,465	1.80	2.36	$ 6,580,050	10,356	58,748,246	1.72	2.20
General Advertising-Bus	$ 791,704	-	-	-	-	$ 679,322	-	-	-	-
Business Program Total	**$ 48,199,310**	**61,107**	**347,068,998**	**1.49**	1.89	**$ 42,968,148**	**52,941**	**274,137,620**	**1.50**	1.87

Natural Gas

In 2021, the natural gas products in the Company's Business Program exceeded the Dth savings target by approximately 70%. Strong performance by Business HVAC+R Systems and New Construction were the main drivers of this performance. 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 - 2021	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	$ 17,221	3,586	208,244	$53,590	2.57	$ 10,059	141	14,007	-$3,585	0.68
Business HVAC+R Systems	$ 384,191	15,232	39,647	146,057	1.12	$ 395,612	10,552	26,674	58,445	1.09
Custom Efficiency	$ 56,872	6,133	107,841	$35,920	1.17	$ 14,922	570	38,222	$7,094	1.22
Energy Management Systems	$ 34,260	3,780	110,337	$49,431	1.23	$ 22,601	2,158	95,467	$35,702	1.33
New Construction	$ 562,272	67,796	120,576	5,113,757	2.60	$ 1,351,633	167,543	123,956	15,325,325	3.54
Small Business Solutions	$ 133,059	10,750	80,789	348,066	5.32	$ 37,211	1,662	44,660	63,308	2.33
General Advertising-Bus	$ 71,580	-	-	-	-	$ 76,530	-	-	-	-
Business Program Total	**$ 1,259,455**	**107,277**	**85,178**	**$5,694,815**	**2.31**	**$ 1,908,568**	**182,626**	**95,688**	**$15,409,760**	**3.21**

Business Products

The following provides a brief summary of the performance of each DSM business product in 2020.

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. Business Energy Assessments includes two steps: (1) study or assessment by an energy efficiency expert (2) implementation of energy conservation opportunities found.

2021 Product Achievement

The retired Recommissioning product was replaced with Business Energy Assessments in April 2021 following implementation of the 2021-22 DSM Plan. Many studies that were approved under the old Recommissioning product were closed in 2021 while Business Energy Assessments was still in the launch phase. Since launching, the product has been building a team of third-party implementors, with the bulk of product achievement coming from project identified by the Business Energy Analysis – Commercial Streamlined Assessments offering.

Changes in 2021

There were no changes to this product.

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 opportunities. Such projects are evaluated under the Custom Efficiency analysis and must follow the rules of the Custom Efficiency program.

Prescriptive participants receive rebates to help buy down the initial capital cost and shorten the payback period for new equipment. New equipment provides better reliability 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 the 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.

2021 Product Achievement

The product did not achieve its electric nor gas energy savings targets. The COVID-19 pandemic continued to impact both customer and trade ability to make upgrades due to limited facility access, manufacturing delays, shipping delays, and staffing shortages and turnover. The product team worked to promote product rebates through direct communications with customers and trade allies.

Changes in 2021
There were no changes to this product.

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.

2021 Product Achievement
The product did not achieve its 2021 electric savings target. This is due to several factors including: reduced capital implementation due to COVID-19 pandemic-related financial restraints, the need for a larger trade base to expand outreach and engage with customers; the need for more trade education and updates surrounding the product; and customers delaying projects into future years. Supply chain issues restricted customers' ability to order and install new equipment recommended from studies in a timely manner with delivery times estimated to take several months or longer whereas in prior years it would only take a few weeks. 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.

Changes in 2021

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 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.

2021 Product Achievement

The Custom Efficiency product did not meet its natural gas savings target and did not achieve its electric savings target in 2021. However, most electric projects that were submitted had smaller electric savings than a typical project. Both the electric and natural gas products nearly met participation targets in 2021. Larger projects with more significant electric savings potential planned for completion in 2021 were delayed or cancelled due to the COVID-19 pandemic similar to what occurred in the previous year. The product underspent its forecasted electric and gas budgets to support energy savings achievements. The Company continues to work across key channels, including trade, to engage customers and identify potential solutions. These efforts increased the Company's engagement earlier in the process, which provides valuable support and insight while customers are organizing their energy efficiency improvements.

Changes in 2021

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.

2021 Product Achievement

The Data Center Efficiency product did not achieve its electric savings target in 2021, but electric spend was in line with savings achieved. 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 one of the customers moving through the new construction offering and was able to close the first phase of a large, multi-phase project in 2021 with future phases anticipated to close in 2022 and 2023.

Changes in 2021

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.

2021 Product Achievement
The product fell short of its electric and gas savings targets in 2021 achieving approximately 44 percent of its electric savings target and 75 percent of its gas savings target. Electric spend was 66 percent of filed budget, while gas spend was 84 percent of filed budget. The product faced many of the same challenges as it has in previous years. Commercial building occupancy remains low around 45 percent due to pandemic work-at-home strategies reducing the need for controls systems. Several trade partners have shifted their focus from system implementation to ongoing performance contracting. Performance contractors are often reluctant to participate in products that require separate, custom analysis. 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 trade partners and identified proposal and invoicing modifications which may help boost participation. The product has also been evaluating additional technologies and control strategies meant to yield additional on-peak savings, such as the implementation of demand control ventilation systems, dynamic control scheduling, and advanced rooftop controls.

Changes in 2021
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.

2021 Product Achievement
The product had a strong year exceeding file targets with savings driven by light conversions in in unincorporated areas in Jefferson County.

Changes in 2021
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 and advanced lighting control rebates are also available for energy-saving lighting solutions not currently available as prescriptive rebate measures.

2021 Product Achievement
The Lighting product did not meet filed energy savings targets despite robust marketing and advertising efforts. The COVID-19 pandemic continued to have big impacts on customer and trade partner's ability to make facility upgrades due to limited facility access, manufacturing delays, shipping delays, and staffing shortages and turnover. The product team worked to launch special promotions and a bonus rebate to bring down upfront equipment costs and support customers adversely impacted by the pandemic. Bonus

rebates launched September 1 through December 31. The bonus rebates were made available to prescriptive midstream Business LED Instant rebates and advertised through paid media, trade partner network, and customer emails. The product also launched a new effort to capture manufacturer direct customer sales of midstream eligible lamps.

The product also struggled to meet filed energy savings targets as result of reduced net to gross ratios ("NTGR") for the prescriptive, custom, and midstream offerings. These lighting offerings underwent process and impact evaluations in 2019 and 2020 and the reduced NTGRs impacted the product's ability to maintain high savings rates. This will continue to be a challenge for the product in future years as reduced NTGR and increased baseline efficiency impact the products savings and cost-effectiveness.

Changes in 2021
In May 2021, the Company posted a 60-day Notice to make changes to the midstream Business LED Instant Rebate offering in response to the 2020 Impact Evaluation resulting in an updated NTGR of 78 percent. In September 2021, the Company posted a 60-Day Notice to add direct linear ambient retrofit kits as a new prescriptive measure offering as well as to extend the rebate submission deadline from 12 months to 24 months. In November the Company posted a 60-day notice to exclude three-way A-line lamps impacted by 3-year phase out prescribed in House Bill 19-1231 from the midstream 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 2021. 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 measure 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 IECC baseline, using ComCheck documentation to identify allowed wattage versus proposed wattage based on Lighting Power Density ("LPD").

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.

2021 Product Achievement
The product exceeded its saving targets for both electric and gas. The product was very cost effective due to continuous efforts with working with our partners on receiving accurate information. The product also allocated spend more accurately between electric and gas components based on actual project achievement for each fuel. The EDA offering remained the primary offering in terms of share overall achievement. The second year of the COVID-19 pandemic did not have a material impact on the Business New Construction products. Construction remained essential and the pipeline consisted of projects that mainly were under construction before the pandemic. The use of remote Measurement and Verification, implemented during 2020, kept the pipeline moving and projects were able to be completed through this method.

The EDA offering began planning a Request for Qualifications ("RFQ") release to allow additional Energy Modeling Consultants to apply to be an approved provider. The Company anticipates issuing the RFQ in 2022 and will release the details of the RFQ prior to the official opening. The RFQ will involve testing the potential candidates on DSM knowledge and their expertise in energy modeling.

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. The Energy Design Assistance product accepted several new projects that fall under the Green Roof Ordinance.

The Codes and Standards component of the product ramped up its efforts with an implementation contractor that was contracted in August. Efforts were focused on building relationships with the building community and city officials to educate the community of our assistance in code support. The offering helped three communities in Company service territory advance their energy codes in the first year of the program.

Changes in 2021
There were no changes to this product.

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.

2021 Product Achievement
The product did not reach its electric savings target in 2021. The COVID-19 pandemic continued to delay existing projects from proceeding. The Company continued to meet with engineering firms throughout the year to identify prospective projects in order to help customers better manage their energy and demand use.

Changes in 2021
There were no changes to this product.

Small Business Solutions
With implementation of the 2021-22 DSM Plan in April 2021, the Company launched the Small Business Solutions ("SBS") product. This holistic 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-efficient project. Customers with a peak demand under 100kW are eligible to receive free direct installation of lighting and non-lighting measures. The product is available to businesses with peak demand of up to 400 kW and seeks to overcome barriers that often prevent small businesses from investing in energy-efficient lighting, including limited financial resources and time, low awareness of energy efficiency equipment, and lack of access to quality contractors.

2021 Product Achievement
The product did not achieve its electric savings target and came in under budget with approximately 74 percent of achievement coming from the Business LED Instant Rebate program. Achievement in the Business LED Instant Rebate program is allocated to the Lighting Efficiency and Small Business Solutions products based on a percentage determined from historical customer participation. Thus, the achievement captured from the Business LED Instant Rebate offering in the SBS product came from large, medium, and small business customers. The main driver of lower achievement in 2021 is due to supply chain issues. including increased material costs, delayed shipping, less lead times from trade partners and labor shortages.

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 economic uncertainty many small business customers were hesitant to move forward with large lighting projects and opted to delay their projects all together, install less equipment than they had planned or look for less expensive opportunities. The product utilized various marketing tactics to engage customers in the bonus offering including emails blasts, and follow-up campaigns with customers that had previously received an energy audit.

The direct install tube offering from 2020 was expanded in 2021, providing customers under 100 kW peak demand free LED tubes and installation. Around 35,000 Direct Install LED tubes have been installed for qualifying customers. The majority of LED tube installations have taken place in and around the Denver metro area, and the product is looking for ways to expand into additional areas 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 also joined the Independent Electrical Contractors Rocky Mountain association in efforts to continue to grow, support, and communicate with the trade partner network. The product implementer also works with Certifiably Green Denver and other local groups to synergize efforts where possible and continue to grow the product pipeline.

Changes in 2021
In May 2021, the Company posted a 60-day Notice to make changes to the product in response to the 2020 Impact Evaluation for Lighting – Small Business resulting in an updated NTGR of 94 percent.

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

2021 Product Achievement
The product did not meet its full-year target. However, its energy savings were more than 50 percent greater than what was achieved in 2020. The product did meet its 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. Indoor Agriculture and Food Processing/Distribution segments combined for nearly half of the achievement. Manufacturers, government buildings, hospitals, schools, and water treatment were the next highest contributors.

The product enrolled more than thirty 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.

In accordance with the 2019/2020 DSM Plan Settlement Agreement, the Company launched two SEM Cohorts in 2021. The launch of these cohorts had been planned for 2020 but was delayed due to the COVID-19 pandemic. Each Cohort engages a group of customers, who participate jointly to leverage shared learning, friendly competitions, and peer-to-peer encouragement. The two Cohorts will continue into 2022, when the Company will 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.

The SEM product added a more flexible pathway designed to meet the needs of Oil & Gas customers. An SEM implementer has provided an Oil & Gas consultant and identified target measures that are relevant to the segment. The product has also begun outreach to oilfield services companies to encourage participation.

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 fifth of the product's achievement was from fifteen 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 reviewed by Xcel Energy Engineering and developed by the SEMCs. Each model met or exceeded standards set in the Bonneville Power Administration's *MT&R for Guidelines Monitoring, Targeting and Reporting (MT&R) Reference Guide*[20]. Table 16 below describes the primary actions that resulting in energy savings for each project.

[20] https://www.bpa.gov/EE/Policy/IManual/Documents/MTR-Reference-Guide-Rev7.pdf

Table 16: SEM Behavioral Savings

Project	Segment	Energy Savings (kWh)	Primary Actions
Project 1	Higher Education	418,136	Pool heat using WWHP; Scheduled/programed heat pumps, AHU3, and ERUs; Scheduled/programed water-to-air heat pumps; Scheduled/programed ERVs; Repaired enthalpy wheel; Scheduled/programed RTUs; Enabled RTU economizers; Scheduled/programed event room heat pumps;
Project 2	Food Processing	4,381,694	Reduced Engine room heater thermostat; Adjusted/locked purge timer and cooler defrost settings; Corrected Motor amp settings (to match electrical upgrade); Scheduled compressor controls to optimize which compressors only run as trim; Scheduled/programed defrost times; Optimized freezer defrost pressures; Re-installed suction valves to proper orientation; Implemented controls for evaporator fan cycling; Repaired compressor control panel; Tightened evaporative fan belts and implemented belt maintenance; Repaired valves at shell and tube condensers; Implement Class A inspection and maintenance schedules for ammonia compressors; Reconfigured/re-routed spray chill process to control pressure and use less water to be pumped;
Project 3	Cattle Feedlot	166,580	Modified operation to allow for removal of a shredder; Installed controls to cycle drinking water pumps; Implemented process to adjust tank heater thermostat; Scheduled corn unloading and flaking during off-peak periods; Optimized well pump VFDs, and set max speed on all VFDs;
Project 4	Food Processing	1,888,205	Calibrated condensing pressure transducer, suction, discharge, and slide valves; Adjusted CT factors;

Project 5	School District	126,505	Programmed increased economizer operational hours; De-lamping; Set policies with ongoing reporting for reducing lighting hours and adjusting t-stats when unoccupied;
Project 6	Manufacturing	49,100	Power down and lock out of unused equipment;
Project 7	Offices	96,009	Optimized start sequence: Reduced program temperature calc gradient to promote less aggressive response from electric heat; Optimized chiller plant staging; Replaced modulines with VAVs, to allow airflow control;
Project 8	Food Processing	39,262	Reduced condensing head pressure;
Project 9	Municipal Govt	815,584	Automated unoccupied scheduling; Improved hydronic heating loop pump efficiency; Eliminated system/equipment overrides (to reduce simultaneous cooling and electric re-heat; Instituted regular status meetings and communiques on the importance of not re-programming;
Project 10	School District	408,429	Installed CHW differential pressure sensor to improve pump operation; Scheduled airside AHU/RTU with reduction of occupied hours; Reduced optimal start times; Updated CHW coil pump programming; Added schedules to VAV circulation pumps; Added staggered starts to in-scope buildings to mitigate morning demand spikes;
Project 11	Higher Education	455,587	Locked out preheat coil to eliminate simultaneous heating/cooling; Adjusted reheat coil lockout temperature to prevent over-cooling; Significantly reduced supply fan speed; Improved and tuned equipment/building scheduling to match occupancy;

Project 12	Research Facility	303,428	Relocated data center equipment to dedicated space; Improved data center hot/cold aisle separation; Improved CRAC unit airflow for better temperature distribution; Consolidated equipment/rack spaces to mitigate air bleed; Scheduled RTUs to better serve respective spaces and repaired their morning warm-up sequence; Reduced static pressure; Implemented real-time energy reporting with rapid repair response policy and monitoring of staff response performance;
Project 13	Food Processing	411,059	Adjusted defrost settings; Implemented compressor auto start/stop Implemented compressor sequencing to optimize high stage compressors; Tuned freezer hot gas settings; Repaired freezer suction valves; Set up evaporator fan cycling; Cleaned receiving/loading dock evaporators and cooer box; Repaired shell and tube condensers;
Project 14	School District	155,953	Updating morning cooldown sequence for better economizing hours; Upgraded BAS to allow for rapid response to breakdowns and to simultaneous heating and cooling;
Project 15	Hospital	1,082,056	CHWST, DAT, and static pressure resets; Optimized cooling tower fan control sequence; Added SAT resets with broader ranges; Eliminated system overrides for VAVs, resets, set points, zone parameters and damper positions; Calibrated air stations to ensure proper airflow; Conducted trainings on customer's EIS, with ongoing usage/demand benchmarking;

Term Definitions:

BAS: Building Automation System
CHWST: Chilled Water Supply Temperature
CRAC: Computer Room Air Conditioner
CT: Current Transformer
DAT: Discharge Air Temperature
ERU: Energy Recovery Unit
ERV: Energy Recovery Ventilator
RTU: Roof Top Unit
SAT: Supply Air Temperature
VAV: Variable Air Volume
VFD: Variable Frequency Drive
WWHP: Water-to-water heat pump

Changes in 2021
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.

2021 Product Achievement
In 2021, advertising played an important part in building awareness and motivating business customers, many of whom were still facing challenges relates to the COVID-19 pandemic, to pursue energy efficient opportunities. Strategies used to connect with customers focused on 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. These strategies enabled the Company to reach a myriad of business customers, build awareness, inform and influence customers to choose energy efficiency products.

No realized savings are tied to this budget. The electric budget was underspent because of the lack of in-person promotions and events. The gas budget was a little overspent as advertising costs were slightly higher than expected.

Changes in 2021
There were no changes to this product.

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 2021, 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 Recycling continued to be the primary contributor to the program by delivering the majority of the program's electric energy savings and exceeding its target. Energy Efficiency Showerheads, Refrigerator & Freezer Recycling, and School Education Kits also cost-effectively exceeded their product specific forecasts in 2021. 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 - 2021	**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	$ 29,303	42	519,308	11.21	13.26	$ 59,734	72	886,289	9.42	11.25
Energy Star New Homes	$ 2,848,638	2,876	9,912,052	0.93	1.12	$ 1,191,909	1,014	5,535,501	0.94	1.19
Home Energy Insights	$ 3,914,898	5,763	30,166,777	1.03	1.51	$ 2,114,439	3,482	9,524,317	0.61	0.96
Home Energy Squad	$ 998,000	728	3,617,771	1.51	1.94	$ 525,840	198	1,055,515	1.04	1.32
Home Lighting & Recycling	$ 4,297,361	10,825	77,025,177	3.03	4.20	$ 7,368,340	17,470	125,257,347	4.69	6.34
Insulation & Air Sealing	$ 242,649	368	465,099	0.72	0.80	$ 320,157	392	329,892	0.64	0.68
Multifamily Buildings	$ 2,858,997	2,109	13,048,472	1.45	1.86	$ 1,181,721	888	6,473,881	1.59	2.04
Refrigerator & Freezer Recycling	$ 1,121,268	479	3,503,273	1.16	1.59	$ 942,528	425	3,521,383	1.26	1.77
Residential Heating & Cooling	$ 8,988,318	11,353	14,057,658	1.84	1.99	$ 6,866,315	9,499	6,643,021	2.54	2.64
School Education Kits	$ 2,004,557	1,817	10,101,674	2.27	2.86	$ 1,724,804	1,713	11,201,802	2.64	3.40
Whole Home Efficiency	$ 200,358	202	481,429	0.89	1.05	$ 68,092	5	2,798	0.15	0.15
General Advertising-Res	$ 773,033	-	-	-	-	$ 724,047	-	-	-	-
Residential Program Total	**$28,277,381**	**36,563**	**162,898,692**	**1.72**	**2.12**	**$ 23,087,925**	**35,159**	**170,431,745**	**2.67**	**3.34**

Natural Gas

The Residential Program did not meet its natural gas savings target despite strong results in several of the products, including Energy Efficiency Showerheads, ENERGY STAR® New Homes, Insulation and Air Sealing, Residential Heating & Cooling, and School Education Kits. This overachievement partially offset but could not overcome underachievement by other products that were negatively impacted by the COVID-19 pandemic. The program exceeded its forecasted budget but remained cost effective.

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 - 2021	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	$ 362,175	37,645	103,942	$5,300,784	11.25	$ 649,169	44,085	67,909	$5,959,262	8.42
Energy Star New Homes	$ 2,840,724	119,395	42,030	-$208,564	1.27	$ 3,154,645	129,178	40,949	-$621,423	0.94
Home Energy Insights	$ 625,854	98,938	158,085	$119,464	1.23	$ 132,775	77,905	586,740	$673,306	6.07
Home Energy Squad	$ 402,925	19,874	49,324	772,936	2.48	$ 304,705	3,156	10,357	(127,087)	0.61
Insulation & Air Sealing	$ 387,595	22,608	58,329	-$391,061	0.78	$ 537,527	29,418	54,728	-$879,777	0.66
Multifamily Buildings	$ 950,096	39,190	41,248	4,359,819	3.75	$ 361,269	3,164	8,759	413,700	2.06
Residential Heating & Cooling	$ 2,676,871	166,088	62,045	-$479,022	1.04	$ 2,733,101	166,459	60,905	-$1,362,642	0.87
School Education Kits	$ 658,775	54,500	82,729	6,549,376	8.71	$ 979,535	55,146	56,298	6,672,106	6.73
Whole Home Efficiency	$ 195,621	10,042	51,334	-$211,653	0.69	$ 41,283	368	8,921	-$41,986	0.35
General Advertising-Res	$ 153,073	-	-	-	-	$ 396,262	-	-	-	-
Residential Program Total	**$ 9,253,709**	**568,280**	**61,411**	**$15,694,133**	**1.63**	**$ 9,290,271**	**508,878**	**54,775**	**$10,289,197**	**1.39**

Residential Products

The following provides a brief summary of the performance of each residential DSM product in 2021.

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 one- or two- bathroom kit to retrofit their current configuration, which also includes a kitchen faucet aerator. 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.

2021Product Achievement

The product significantly exceeding its electric and gas savings targets for 2021 and spend exceeded budget but was commensurate with increased savings. A fall promotion for free showerhead kits drove 2021 achievement. The Company used both email and postcard direct mail offerings for standardized kits for one or two bathrooms with aerators. Emails sent in the 2021 promotion included a new feature utilizing personalized URLs which allowed a customer to order a kit with several quick clicks, increasing participation and providing about one-third of the orders.

Changes in 2021

In May 2021, the Company posted a 60-day Notice to make changes to the product in response to the 2020 Impact Evaluation resulting in an updated NTGR of 94 percent.

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.

2021 Product Achievement
As a result of significant increases in targeted savings in 2021 relative to 2020, the product failed to achieve that target, despite record energy savings. Sustained demand for housing in the greater Denver metro area led to participation and achievement exceeding prior years' success, despite the ongoing pandemic. While the Company saw four new customers take advantage of the updated all-electric path in 2021, its market capitalization remains small.

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. IECC codes 2012-2018 will continue to represent a significant majority of participating homes.

The Company engaged several builders in 2021 to pursue a heat pump demonstration project; however, market interest did not materialize. The Company will continue to work with builders to try to identify an opportunity for a targeted heat pump installation demonstration project within an all-electric neighborhood in 2022.

The Company unveiled its Codes & Standards Compliance Support offering in 2021 with strong initial success. The offering helped three communities in Company service territory advance their energy codes in the first year of the program. The Company and its agents spoke with dozens of communities and code officials on the pathway to advancing its building code and helping city staff ensure code compliance. The Company anticipates that as the Codes & Standards Compliance Support offering influences the market, the jurisdictions that remain on pre-2012 codes will be moved onto more updated baseline codes.

Changes in 2021
The company filed one 60-Day Notice in 2021 to update the energy savings assumptions for tankless water heaters, update forecasted participation in water-saving measures, and correct savings assumptions for clothes washer measures. The product underwent an Impact Evaluation in 2021, and the Company will implement the recommended improvements in 2022.

Home Energy Insights
The Home Energy Insights ("HEI") (f/k/a Energy Feedback Residential) product is fundamentally 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.

2021 Product Achievement
HEI failed to achieve its electric and gas targets in 2021. The product added four new waves of customers in March of 2021; however, the product struggled to achieve savings in the Colorado market. Changes to home energy use patterns related to the COVID-19 pandemic hindered achievement in 2021. The product vendor also cited unusually hot weather in Colorado leading to volatile usage patterns and higher than expected attrition rates as contributing factors to poor product performance. Additionally, solar adoption appears to have impacted achievement due to reduced net energy use for some participants. The Company worked with the product vendor in 2021 to identify an initial set of report format upgrades to make the reports more user friendly. Additional changes were identified to reduce friction for customers to adopt more digital interactions which include more interactive savings suggestions and demonstrated higher savings rates. The product was under filed budget for both commodities.

Changes in 2021
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.

2021 Product Achievement
The Home Energy Squad product did not achieve its energy savings targets for 2021. The product remained under its electric and natural gas budgets and spend was commensurate with achieved savings. The shortfall in savings and spend are primarily due to disruptions caused by the COVID-19 pandemic continued to create concern for in-person visits with related staffing and supply chain issues also contributing to the shortfall.

The virtual visit, which was implemented in 2020 as a response to the pandemic, continued to be offered as an option for customers not comfortable with in-home visits, but as restrictions eased the number of virtual visits decreased. 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 2021 and contributed significant participation for the product. In addition, the program played a strategic role as an implementation channel for the Company's geotargeting efforts for the Kendrick electric pilot in Lakewood, CO, and Gas Demand Response study fin Summit County. CO.

Changes in 2021

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.

2021 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, which is similar to 2020 performance during the start of the COVID-19 pandemic. Strong, steady sales are likely attributable to the fact that customers continued to stay home, and thus were using their lights more. Promotion plans focused on low-cost ways to save energy and money while at home by using LEDs.

The Company returned to having a presence at community events for part of 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 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 through My Account – online account access.

Changes in 2021
There were no changes to this product.

Insulation & Air Sealing
The Insulation & Air Sealing product offers prescriptive rebates in order to increase the energy efficiency in 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 electrically powered baseboard heat. 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.

2021 Product Achievement
The Insulation & Air Sealing product exceeded its natural gas targets; and spend was in alignment with the overachievement. The product did not meet its electric savings targets; and spend was in alignment with achievement. The electric savings shortfall was partially due to higher-than-expected participation by customers with no mechanical cooling system. The product implemented a new rebate structure and online rebate application to make participation easier for customer and launched a dedicated cellular shades webpage in 2021 to increase customer awareness of that product offering. The Company will continue to educate and engage trade partners through messaging and trainings to boost participation in this segment of the product.

Changes in 2021
There were no changes to this product.

Multifamily Buildings
The Multifamily Buildings product is designed to engage multifamily building owners in deploying DSM measures that will lower 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 and 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.)

2021 Product Achievement
The number of 2021 multifamily building assessments, residential units treated with direct installation measures and the associated electric and gas savings significantly increased over the previous year when field operations were put on hold and customers opted to delay projects due to the COVID-19 pandemic. Nevertheless, the product's 2021 participation and savings fell short of targets as some multifamily building owners and property managers decided to delay what they viewed as non-essential work Expenditures were in line with achievements. In-person audits late in 2021 are expected to drive continued direct installation momentum in 2022.

Changes in 2021
In September 2021, the Company posted a 60-Day Notice updating deemed savings technical assumptions for clothes washers and smart thermostat measures. The changes were implemented in October of 2021.

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.

2021 Product Achievement

The product fell short of its participation target in 2021 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. In addition, there were national shortages in refrigerators due to the COVID-19 pandemic which prohibited customers from purchasing new units and recycling old units. In response to customer concerns associated with person-to-person proximity due to the COVID-19 pandemic, we worked with our product implementer to create a contact-free customer experience. The customer signed a release form for the unit to be removed from their garage or driveway. Customers were very satisfied with the modified pickup process. Product spending was under-budget primarily due to efficient use of the marketing budget and lower administrative and rebate spend commensurate with participation. To increase participation, the Company promoted the product through a Facebook campaign. The Company also used email as a low-cost marketing channel.

Changes in 2021

In May 2021, the Company posted a 60-day Notice to make changes to the product in response to the 2020 Impact Evaluation resulting in an updated NTGR of 80 percent.

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 addresses 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.

2021 Product Achievement

The product did not meet its participation or energy savings targets, and spend was under budget, commensurate with savings. Some of the measures which fell short have significant energy savings but low cost-effectiveness due to high incremental costs (for example, heat pumps), which accounts for this variation in achievement. Supply chain issues also continued to cause challenges for customers and contractors, so there were less AHRI-certified "matched" AC systems available to install. The Company continued to offer an AHRI waiver for the lower rebate tier

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. 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 less than seven percent of the air conditioning/heat pump rebates.

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 2021
The Company filed a 60-Day Notice in September to introduce a fourth climate zone for deemed savings calculations and to introduce measures for high-efficiency boilers, including boilers with side-arm water heaters.

School Education Kits
The School Education Kits program offers a multi-component kit that combines classroom activities and in-home projects primarily to fifth or sixth grade students and their parents to teach energy and water conservation. The program offers additional conservation education to high school students and through community outreach. The kits include energy saving and water conservation measures that students implement at home with their families, including LED bulbs, a high-efficiency showerhead, and faucet aerators. The program offers gas and electric savings, supports state education standards, and educates the next generation of energy consumers on how to be energy efficient. Additional low-cost incentives are offered to encourage students to return their Home Energy Worksheets, which help ensure installation of the provided measures and help determine installation rates. Marketing and outreach communications are implemented by the program vendor and consist of email and direct mail to teachers at eligible schools.

2021 Product Achievement
The product underachieved its electric and gas savings targets. A joint effort with Fort Collins Utilities produced strong participation for students in the Company's natural gas-only service territory during 2021. 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 2021 due to the popularity of LED bulbs and accounting for customers planning to install measures in the near future.

While the COVID-19 pandemic continued to present challenges both for participating teachers as well as students and families, the product was able to maintain high participation despite the uncertainty of remote or in-school classes during the peak fall season.

Changes in 2021
There were no changes to this product.

Whole Home Efficiency

The Whole Home Efficiency ("WHE") product (f/k/a 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, email campaigns, and Company bill onserts.

2021 Product Achievement

The product did not achieve its energy savings targets for 2021, and spend was under budget, commensurate with savings. The Company held trade partner trainings to increase the number of registered trade partners within the product. In addition, the Company expanded advising services and marketing campaigns to increase customer awareness and participation. The COVID-19 pandemic impacted the product participation as customers delayed investments in efficiency upgrades, resulting in lower than anticipated savings.

Changes in 2021

In September, the Company posted a 60-Day Notice to change the product name from Home Performance with ENERGY STAR® to Whole Home Efficiency in order to remove ENERGY STAR® product affiliation due to mandatory ENERGY STAR® program changes which would have increased administrative costs and decreased participation in the product. The Notice also added measures for cold-climate heat pumps to align the product with Residential Heating & Cooling offerings.

General Advertising - Residential

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

2021 Product Achievement

In 2021, the Company increased residential promotional efforts in response to the increase in customer gas 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 Anthem 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. The electric advertising spend came in under forecast while gas advertising spend exceeded forecasted spend levels. The additional gas spend 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 2021

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. These products analyze natural gas and electric consumption for income qualified customers to assist in lowering their energy bills and provide other non-energy related benefits like health, safety, and comfort.

Electric

In 2021, the Income Qualified Program greatly exceeded its electric savings target due, in part, to a continued effort to distribute LEDs for hard-to-reach customers at food banks and community centers across the electric service territory. The Non-Profit product met the electric energy savings targets while Multifamily Weatherization fell short of achieving the 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 - 2021	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	$ 383,260	169	1,024,253	1.92	2.34	$ 136,698	169	1,869,008	6.79	8.20
Multifamily Weatherization	$1,148,963	255	2,051,058	1.00	1.16	$ 1,090,890	257	1,851,937	1.12	1.30
Non-Profit	$1,119,286	383	1,701,175	1.00	1.15	$ 1,205,586	487	2,468,875	1.19	1.39
Single-Family Weatherization	$2,447,676	3,185	22,894,895	4.46	5.60	$ 1,860,565	4,848	36,296,781	8.92	11.28
Income Qualified Program Total	**$5,099,185**	**3,992**	**27,671,381**	**2.61**	**3.23**	**$ 4,293,738**	**5,762**	**42,486,601**	**4.54**	**5.66**

Natural Gas

In 2021, the Income Qualified Program exceeded the natural gas savings targets due to strong achievement within the Energy Savings Kit, Multifamily Weatherization, and Non-Profit products. Single-Family Weatherization underachieved but the shortfall was made up within the other products. 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 - 2021	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	$ 159,471	10,559	66,210	$1,529,916	8.97	$ 335,408	70,070	208,909	$10,006,542	20.82
Multifamily Weatherization	$ 685,870	9,089	13,252	-$267,810	0.80	$ 973,945	9,536	9,792	-$653,247	0.69
Non-Profit	$ 437,005	4,004	9,162	-$192,267	0.77	$ 371,133	7,635	20,572	$239,825	1.35
Single-Family Weatherization	$ 4,071,682	56,725	13,932	-$874,741	0.89	$ 3,157,885	33,859	10,722	-$1,077,029	0.81
Income Qualified Program Total	**$ 5,354,027**	**80,377**	**15,012**	**$195,097**	**1.02**	**$ 4,838,371**	**121,100**	**25,029**	**$8,516,091**	**1.96**

Income Qualified Products

In partnership with Energy Outreach Colorado ("EOC"), the Company introduced an 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 pilot effort was introduced at the end of 2021, and the Company and EOC will identify opportunities for heat pump installations for implementation starting in 2022.

The following provides a brief summary of the performance of each income qualified product in 2021.

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 sent an offer through the 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.

2021 Product Achievement

The product met natural gas and electric savings targets and came in 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. The Company sent out a direct mail campaign in the fourth quarter which resulted in a higher response rate and enabled the product to achieve targets.

Changes in 2021

There were no changes to this project.

Multifamily Weatherization

The Multifamily Weatherization product provides funding for a wide variety of natural gas and electric equipment retrofits, process improvements, facility audits, studies, and behavioral change efforts for income qualified multifamily buildings. These buildings 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 in order to offer great flexibility, prescriptive rebates are offered for retrofit measures when the equipment would otherwise be ineligible for inclusion in the custom project bundle.

2021 Product Achievement

The product fell short of its electric energy savings targets but achieved its natural gas savings targets due to several priority HVAC projects which closed late in the year.

Changes in 2021

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 – shelters, safe houses, and residential treatment centers, for example.

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

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. The plan provides non-profit organization staff with a bill analysis and education on how to further reduce energy usage and save money by making easy changes and encourages continued engagement. While no behavioral savings are presently captured, customer understanding, informed equipment use, and customers 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, thus increasing the impact and participation in the product.

2021Product Achievement

The product exceeded its electric and natural gas targets. EOC focused on outreach efforts to organizations who had previously participated to identify additional opportunities for upgrades. The Company also partnered with EOC to distribute kits with energy savings measures through several non-profits. The kits were distributed during the fourth quarter to offer customers additional energy savings opportunities during a period of higher gas prices.

Changes in 2021

There were no changes to this 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 ways to reduce energy use in the home.

The product is implemented in partnership with EOC, it helps to supplement both the federally funded Weatherization Assistance Program ("WAP"), aligning with State qualification guidelines, and the Colorado Residential Affordable Energy ("CARE") program. CARE 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.

2021 Product Achievement
The product did not achieve its natural gas savings targets but greatly exceeded its 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 save on their energy bills. The offering will continue into 2022, with efforts to expand the partnership to new food banks who fall within Xcel Energy electric territory. Product performance towards natural gas savings target was impacted by agency capacity constraints and supply chain constraints related to the COVID-19 pandemic which impacted core gas-saving measures like insulation and air sealing. Effects of nationwide hiring difficulties were felt by contractors and further exacerbated by the in-home nature of work and higher exposure rates compared to remote work options. The pandemic impacted staff availability throughout the state as the workforce frequently had to take time away from the field due to exposure or recovery. The product also experienced delays or cancellations from participants who were hesitant of bringing contractors into their homes as the threat from the pandemic fluctuated. Further, equipment was harder to source due to the strained supply chain, drawing out project timelines. The product saw an improvement in the uptake and natural gas savings from the installation and programming of set-back and smart thermostats in 2021.

In 2021, 1,215 customers who participated in the product were identified as in arrears at least once during the year. On average, these customers saved 428 kWh and 15 Dth through participation in the product. Total first year savings associated with the measures installed came to 519,959 kWh and 18,154 Dth.

Changes in 2021
The Company issued a 60-Day Notice in September to add tankless water heaters to the product to align the product's offerings with other products in the Residential portfolio. The 60-DN also corrected the technical assumptions associated with smart thermostats and updated the deemed savings associated with refrigerator replacement.

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 2021, 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 2021 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 2021, 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 - 2021	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	-	-	-	-	$66,686	-	-	-	-
Business Energy Analysis	$1,195,109	-	-	-	-	$444,351	-	-	-	-
Consumer Education	$971,000	-	-	-	-	$729,088	-	-	-	-
Energy Benchmarking	$112,643	-	-	-	-	$68,833	-	-	-	-
Energy Efficiency Financing	$211,489	-	-	-	-	$48,037	-	-	-	-
Home Energy Audit	$405,019	-	-	-	-	432,256.05	-	-	-	-
Partners in Energy	$920,196	-	-	-	-	$888,857	-	-	-	-
Education/Market Transformation Total	**$3,991,456**	**-**	**-**	**-**	**-**	**$2,678,109**	**-**	**-**	**-**	**-**
Planning and Research										
EE Market Research	$618,493	-	-	-	-	$493,383	-	-	-	-
EE Evaluation, Measurement & Verification	$1,201,559	-	-	-	-	$792,626	-	-	-	-
EE Planning & Administration	$537,827	-	-	-	-	$316,906	-	-	-	-
EE Product Development	$2,000,498	-	-	-	-	$1,552,798	-	-	-	-
Geo-targeting Pilot - EE	$29,092	-	-	-	-	$9,762	-	-	-	-
EE Product Development Total	**$2,029,590**	**-**	**-**	**-**	**-**	**$1,562,560**	**-**	**-**	**-**	**-**
EE Planning and Research Total	**$4,387,468**	**-**	**-**	**-**	**-**	**$3,165,474**	**-**	**-**	**-**	**-**
EE Indirect Products & Services Total	**$8,378,924**	**-**	**-**	**-**	**-**	**$5,843,583**	**-**	**-**	**-**	**-**

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 - 2021	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	$19,609	-	-	-	-	$8,875	-	-	-	-
Business Energy Analysis	$182,496	-	-	-	-	$123,926	-	-	-	-
Consumer Education	$79,081	-	-	-	-	$98,674	-	-	-	-
Energy Benchmarking	$30,432	-	-	-	-	$32,820	-	-	-	-
Energy Efficiency Financing	$79,228	-	-	-	-	$24,906	-	-	-	-
Home Energy Audit	$548,435	-	-	-	-	526,048.31	-	-	-	-
Partners in Energy	$97,425	-	-	-	-	$107,817	-	-	-	-
Education/Market Transformation Total	**$1,036,707**	**-**	**-**	**-**	**-**	**$923,067**	**-**	**-**	**-**	**-**
Planning and Research										
EE Market Research	$198,046	-	-	-	-	$153,648	-	-	-	-
EE Evaluation, Measurement & Verification	$204,844	-	-	-	-	$238,086	-	-	-	-
EE Planning & Administration	$119,551	-	-	-	-	$98,581	-	-	-	-
EE Product Development	$162,977	-	-	-	-	$170,838	-	-	-	-
EE Product Development Total	$162,977	**-**	**-**	**-**	**-**	**$170,838**	**-**	**-**	**-**	**-**
EE Planning and Research Total	$685,417	**-**	**-**	**-**	**-**	**$661,153**	**-**	**-**	**-**	**-**
EE Indirect Products & Services Total	$1,722,124	**-**	**-**	**-**	**-**	**$1,584,220**	**-**	**-**	**-**	**-**

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 2021.

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 engage in energy efficiency through offering product information at event sponsorships and other onsite outreach, digital outreach, and social media. The Company also uses traditional outreach channels like seasonal print and bill inserts as an integral part of the overall education and outreach strategy.

2021 Product Achievement

Due to the effects of the COVID-19 pandemic, the Company did not reach the electric and natural gas participation targets for this product. Still, it stayed within the approved budgets achieving approximately half of its year-end participation target. Continued long-term partnerships with community-based organizations and properties facilitated engagement opportunities such as the Broncos Business Boost. This offering, introduced in 2020, was created to support local businesses struggling through the pandemic. Through the Company's sponsorship with the Broncos, Xcel Energy was able to assist businesses in finding energy-saving solutions and develop tools to improve their energy efficiency through participation in our programs. The product team continued to investigate and evaluate creative ways to meet goal and drive energy-saving messaging to business customers throughout the year and into the next. The number of events targeting business customers will increase in 2022, and the Company will continue to develop creative solutions to drive education and engagement to the company's business energy-saving resources.

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 paybacks, which support the business case for the customer to make energy-efficiency upgrades.

2021 Product Achievement

The product did not meet its participation target, primarily due to restrictions related to the COVID-19 pandemic. Auditors were unable to enter customer facilities, which spurred the launch of a virtual audit option to accommodate customer safety needs during the continued pandemic year. While the virtual audit offered flexibility, most customers did not prioritize virtual audits and were still interested in having an expert onsite and were willing to wait until they could safely have external parties in their facilities. The Company worked with the vendor to develop more creative and effective strategies to increase participation and savings.

Despite not meeting the participation goal, the offering identified over 5 GWh of energy conservation opportunities in 2021. Marketing efforts included e-mail campaigns and outreach from the Business Solutions Center which have helped develop 7.5 GWh of energy conservation opportunities in the 2022 pipeline. Electric and natural gas expenditures were less than the filed budget.

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 events, sponsorships digital engagement opportunities, and social media such as Facebook and Twitter with the goal empowering customers to take action and participate in programs to help them save energy and money.

2021 Product Achievement

2021 was an odd year. The first two quarters saw little to no in-person events, which are key drivers for the Company's Consumer Education product; however, the product ended up exceeding expectations, and stayed within budget, by achieving 112% of its participation targets as the third and fourth quarter ushered in an increase in events and partnerships. The Company was able to engage and drive education to the Company's energy-saving resources via its traditional methods of in-person engagements. While the product team saw increased event participation during the second half of the year, they continued evaluating and exploring other mediums such as print and digital outreach. The need to find creative ways to drive education and engagement to the Company's energy-saving resources remains relevant. The pandemic forced the team to be nimble and find creative solutions at the benefit of the customer when and where possible. Digital education outreach on top of in-person events will continue to be a great mix of channels, with the intention of engaging and educating our customers by meeting them where they are -- on their digital devices and local events.

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.

2021 Product Achievement
Participation in the program increased significantly due to expanded city ordinances and budgets were maintained as expected. Due to the higher-than-expected participation, the Company's benchmarking software was upgraded to accommodate the influx in aggregated whole-building data requests. Upgrades made enhanced data processing and accuracy when uploading data into Energy Star Portfolio Manager. The benchmarking team improved response times for customer inquiries and corrected any data discrepancies in a timely manner for Company customers. With the anticipated rollout of a state-wide benchmarking bill , the Company is vetting multiple options to continually enhance its benchmarking software to accommodate significantly more participation while prioritizing a seamless customer experience.

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 has established formal alliances 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.

2021 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 product typically offers financing trainings at in person DSM workshops, but due to the COVID-19 pandemic 2021 activities focused mainly on financing webinars to the trade. In 2021, the product offered 6 webinars with attendance varying from 5 – 15 attendees. These efforts helped to increase awareness of the product and improve trade partner participation in generating proposals.

The Company continued to strategically promote the financing product through its trade partner network in 2021. In person events were limited in 2021 due to COVID restrictions, but there were a few opportunities to present Financing updates through workshops, on-site trade partner trainings, business marketing communications, sponsorships, and events. The Company has incorporated financing proposals in some of the various audits and studies Xcel Energy offers to customers, so 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.

2021 Product Achievement

The Home Energy Audit product achieved its forecasted participation targets for the year. Disruptions caused by the COVID-19 pandemic continued to create challenges for the program, as customers were still concerned about in-home interactions. 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 is designed to support 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 outreach and education to increase participation in energy efficiency. Originally designed as approximately a 24-month participation cycle the program 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 periodically working to partner with a community that already has a defined goal and just needs support to be successful in implementation.

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

Partners in Energy staff work with community teams to develop workplans identify target markets, incorporate local resources and communication channels in delivering messaging and support to drive energy efficiency. We are continuing to explore new ways to engage communities to drive energy savings. We are expanding support to help communities inventory and track carbon reduction goals and identify the impacts necessary from energy-efficiency. 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.

2021 Product Achievement

The product supported development of conservation related energy action plans with seven Colorado communities in 2021 and provided direct plan implementation support to twenty-three additional communities who had completed plans in early in 2021 and in prior years. A majority of the planning

workshops were delivered virtually in 2021. The inability to hold public gatherings continued to be a barrier for communities to deliver materials to their residents but social media outreach and online resources were leveraged where possible.

The Partners in Energy portal provided tools and resources to save energy to all thirty-three 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 2021, comprehensive evaluations were conducted for five products: Business New Construction, Compressed Air Efficiency, ENERGY STAR New Homes, Home Lighting & Recycling, and the high-efficiency air conditioning component of Residential Heating & Cooling. In addition, a separate evaluation of the building code support offerings within the Business New Construction and ENERGY STAR New Homes products commenced in 2021 and will continue in 2022.

High-level outcomes from these evaluations include:

- *Business New Construction (Business)*: The evaluation provided an updated net-to-gross analysis for this product as well as a number of process recommendations. A key issue discussed with both trade partners and peer utilities was the current program requirement to use EDAPT/Open Studio as default modeling tools and the ability to accept models from multiple software packages.
- *Compressed Air Efficiency (Business)*: Updated net-to-gross analysis for this product identified low free-ridership in both the equipment and supply-side study participation channels. Trade partners identified opportunities for improved communication with the product and noted a perception that rebates are insufficient.
- *ENERGY STAR New Homes (Residential)*: The updated net-to-gross analysis indicated that the product's influence can be increased by engaging more builders and restructuring some incentives to encourage market actors to pursue building practices that go farther above minimum program requirements. Customers value energy efficiency through a collection of factors and structuring communications around these factors could help the Company improve the relationship with customers who have recently moved into a program-certified home.
- *Home Lighting & Recycling (Residential)*: The 2021 evaluation of the Home Lighting and Recycling product found that the product has experienced a decline in the influence of some specialty lamps while the A-Line lamps have also seen continued naturally occurring adoption but at a pace that is not accelerating as rapidly. Despite this, the program is still resulting in substantial lift in the market. In 2020 this lift was equal to just over 16 percent, meaning that nearly 2 million lamps were attributed to program activities in just that year. Other findings were related to the accessibility and availability of discounted lamps through the retail and online store channels.
- *Residential Heating & Cooling (high efficiency air conditioning measures) (Residential)*: The updated net-to-gross analysis found that the rigorous quality installation process and the accompanying trade partner resources are very important to establishing the Company's influence. Other findings and recommendations were related to customer and trade partner barriers to heat pump adoption and support for the streamlined delivery of heating and cooling measures that was implemented in 2021.

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

http://www.xcelenergy.com/Company/Rates_&_Regulations/Filings/Colorado_Demand-Side_Management

2021 Product Achievement
Program Evaluations was under the electric budget in 2021 but over budget for natural gas due to the complexity of the Business New Construction and ENERGY STAR New Homes evaluations as well as the incremental costs for the code support evaluation.

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: 2021 Results".

DSM Market Research
The Company conducts surveys and studies throughout the year to gauge energy awareness and customer interest around DSM. Internal market research functions are needed to provide overall support for clarifying DSM issues and thoroughly understanding current and potential DSM customers. In 2021, the Company conducted the following general research and analytical services:

- Contributed to purchase of business and residential customer segmentation data via 3rd party data/segmentation firms.
- Contributed to larger project developing Xcel Energy-specific residential segmentation model.
- Supported a Product Experience Survey that monitors customer satisfaction by surveying most participants after a rebate has been processed or program participation has completed.
- Purchased E Source Consultative Services and research.
- Continued Residential Campaign Effectiveness Tracking research.
- Continued work on an Energy Efficiency Potential Study.

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.

2021 Product Achievement
The Market Research expenditures were under budget for electric and natural gas.

Planning & Research Products

The following provides a brief summary of the performance of each Energy Efficiency planning and research product in 2021.

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.

2021 Product Achievement

In 2021, the Company's EE Planning & Administration expenditures for electric and gas were both under budget for the year. Product spend was down from 2020 levels without a DSM Plan filing; however, the regulatory team had a full year supporting the Company's Government Affairs team during a busy 2021 legislative season and beginning development of the Company's upcoming 2022 DSM Strategic Issues filings.

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 2021, 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 2021. A summary of these activities in 2021 follows:

- Income Qualified Beneficial Electrification
- Income Qualified Weatherization
- Natural Gas Boiler Eligibility Requirements
- Tankless gas water heaters
- Indoor Agriculture Assessment
- Launch activities related to the 2021-22 DSM Plan
    - Business Energy Assessments
    - Codes and Standards Support

2021 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 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.

2021 Product Achievement

The pilot continued engagement with the Company's distribution operations team to introduce how DSM products can be utilized to manage grid operations and residential new construction builders and developers. The pilot's efforts focused on two targeted marketing campaigns. The first one launched late in 2020 for Safe-At-Home kits, in partnership with Home Energy Squad. All resulting achievement occurred in early 2021. The second campaign, a partnership with our AC Rewards program, was executed in mid-2021.

Changes in 2021

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 2021: (1) Direct Load Control, (2) Interruptible DR, and (3) Non-Dispatchable DR.[21] 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 2021 are shown in Table 20 below.

In 2021, the Company continued operating the Geo-targeting DR pilot while launching five additional DR offerings including Charging Perks, Optimize Your Charge, and Residential Battery Demand Response offerings as well as, Behavioral Demand Response and Heat Saver's Mode research projects. The Company also filed changes to the Critical Peak Pricing Product to transition the Product from a pilot, more accurately align the Product with forecasted capacity prices, revise eligibility criteria and update the Product's availability.

Table 20: 2021 DR Results (MW)

	Goal[22]	**Actual**
Demand Response (DR)	489	493
Demand Reduction from Energy Efficiency (EE-DR)	75	94
Total	**564**	**587**

Ordering Paragraph 86 of Decision No. C18-0417 directed the Company to achieve total demand reduction goals of 564 MW in 2021. The Company's Demand Response program overachieved its forecasts and goals in 2021. The overperformance was mostly due to the large growth realized in 2020. The portfolio growth stabilized in 2021, with incremental growth and program attrition balancing each other out. The Company expects the DR portfolio to grow and increase available load in the future.

[21] 2015/16 DSM Plan at 312. (Proceeding No. 14A-1057EG).

[22] *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).

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

	Budgets / Targets					Expenditures / Achievements				
Demand Response Program - 2021	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	$255,331	8,740	51,122	-	-	$187,972	27,874	1,114,960	-	-
Electric Vehide Critical Peak Pricing	$305,900	489	-	-	-	$71,882	382	-	-	-
Electric Vehide Optimization	$1,022,335	3,487	-	0.71	0.76	$304,764	218	-	0.11	0.11
Peak Day Partners	$326,500	8,127	182,216	-	-	$163,083	19,504	187,515	-	-
Peak Partner Rewards	$1,660,092	38,371	224,438	-	-	$443,985	12,387	49,549	-	-
Residential Battery Demand Response	$521,240	630	(17,533)	1.70	1.69	$311,875	930	-	3.24	3.24
Residential Demand Response	$16,614,750	32,090	110,210	2.07	2.07	$13,373,996	20,004	72,557	1.80	1.80
Small Commercial Building Controls	$426,945	2,478	39,330	2.20	2.20	$156,336	695	11,126	1.45	1.45
DR Program Total	**$21,133,093**	**94,410**	**589,782**	**2.10**	**2.11**	**$15,013,892**	**81,994**	**1,435,708**	**2.15**	**2.16**
Planning and Research										
DR Planning & Administration	$59,759	-	-	-	-	$36,555	-	-	-	-
DR Program Evaluations	$210,991	-	-	-	-	$28,664	-	-	-	-
DR Product Development	$1,805,187	-	-	-	-	$887,067	-	-	-	-
Geo-targeting Pilot - DR	$175,158	-	-	-	-	$9,762	-	-	-	-
DR Planning and Research Total	**$2,251,095**	-	-	-	-	**$962,048**	-	-	-	-
DR PORTFOLIO TOTAL	**$23,384,188**	**94,410**	**589,782**	**1.95**	**1.95**	**$15,975,940**	**81,994**	**1,435,708**	**2.02**	**2.03**

Demand Response Products

The following provides a brief summary of the performance of each Demand Response product in 2021.

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.

2021 Product Achievement

The 2021 control season was another active year for the product, and the Company dispatched 10 CPP events during the months of June, July, August, and September. 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 27,870 kW were realized for dispatched events. This exceeds the Company's 20% load reduction planning estimate of approximately 11,700 kW for all CPP participants enrolled during the 2021 control season.

The product added four new participants while unenrolling three participants in 2021, ending the year with net increase of one participant and 38 total participants. Using the 20% load reduction planning estimate for new participants, these four new CPP participants represent 320 kW of new capacity for the product. Of the three participants that left the CPP product in 2021, two unenrolled because of the high number of events (14) in 2020 and the other customer chose to participate in the Company's Peak Partner Rewards product instead.

The Company ended its partnership with Franklin Energy to actively market the product and engage with prospective customers. The Company will continue to evaluate the Product's results to understand customers' behavior and performance, participant experience, and how to better forecast the product's performance for future critical peak periods.

Changes in 2021
In compliance with the 2021-22 DSM Plan Settlement Agreement, the Company filed changes to the CPP tariff rates (TG-CPP, PG-CPP and SG-CPP) in 2021 to update the CPP energy fees to more accurately align with forecasted capacity prices during critical peak periods. The tariff changes also updated customer eligibility criteria for and availability of the Product's capacity during critical peak periods.

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") through Advice Letter No. 1798 to the Public Utilities Commission on May 24, 2019. The Company developed the S-EV 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.

2021 Product Achievement
In 2021, 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. The Company enrolled approximately 26 customers in 2021 and successfully dispatched 12 summer events.

Changes in 2021
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 schedule that ensures charging occurs outside the Company's system peak.

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 and state-of-charge preferences, and renewable energy production. Since Dynamic Optimization manages charging in novel ways, it is being implemented through a small-scale pilot.

2021 Product Achievement
The Company launched the Optimize Your Charge offering in 2021 and has enrolled 244 participants. Current customers with existing EVs were sent an email marketing campaign in the third quarter. Print brochures were also created to be distributed at our partner dealerships. In the fourth quarter of 2021, the Company began discussions with WeaveGrid to expand their data collection services across both EV Optimization offerings.

The Company launched the Charging Perks pilot for Tesla electric vehicle owners in July of 2021 and in late September for the remaining automakers (Ford, GM, BMW, and Honda). 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 2021, the Charging Perks pilot successfully enrolled just over 200 electric vehicles towards our pilot target capacity of 600 vehicles.

Changes in 2021
There were no changes to the product in 2021.

Interruptible Service Option Credit
The Interruptible Service Option Credit ("ISOC") product offers savings opportunities for business customers on the ISOC Tariff[23] 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

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

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.

2021 Product Achievement
The product's administrative spend was slightly higher than the filed budget with increased spend utilized to support the advanced technology resources and personnel to implement the product. The products 68 grandfathered customers under part B of the tariff enrollment in the program stayed consistent, with one additional customer joining the program under part C of the tariff. Customer credits align with the tariff determined incentive levels. Total costs for the product were $25,480,855, 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 $8,138,625. 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 2021 for a Capacity event. The Company did not call any economic or contingency interruptions during 2021.

Changes in 2021
There were no changes to this product.

Peak Day Partners
Peak Day Partners ("PDP") provides the Company with an additional power purchase resource to more efficiently manage system requirements during periods of high demand, as well as provide 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.

2021 Product Achievement
The PDP product finished 2021 with three enrolled participants, down one from 2020. 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. In 2021 there were seven successful control events.

Changes in 2021
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 during the summer months, June through September, between the hours of 2 P.M. and 6 P.M. by a minimum of 25 kilowatts ("kW").

2021 Product Achievement
In 2021, the Peak Partner Rewards product underachieved its incremental capacity target and underspent its forecasted budget. The product added four new participants in 2021, ending the year with 22 total participants enrolled in the product. During the 2021 control season, the Company dispatched one PPR event in July.

The Company ended its partnership with Franklin Energy to actively market the product and engage with prospective customers. The Company will continue to evaluate the PPR product's results to understand customer interest and participant experience, and how to better forecast the product's future growth.

Changes in 2021
There were no changes to this product.

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.

2021 Product Achievement
The Company launched the pilot on February 16, 2021. The Company partnered with Tesla and SolarEdge to deliver this pilot and enrolled 125 customers in the pilot in 2021. These vendors have enabled the Company to monitor and control residential batteries based on the Company's demand response commands. In addition, the Company has been working with Resource Innovations (formerly Nexant) to conduct a customer survey and provide evaluation analysis of the events dispatched in 2021.

Changes in 2021
There were no changes to this product.

Residential Demand Response
The Company has three residential demand response offerings:

- 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.

2021 Product Achievement
The Saver's Switch® offering has been in existence since 2000 and has approximately 191,000 active participants. The Company projects the current participants account for approximately 50 percent of the eligible (single family homes with central AC) population. In 2021 the Company initiated a maintenance replacement effort for Saver's Switch® deceives 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 2021 were previously participants in, and removed from, the Saver's Switch offering. AC Rewards participation also showed healthy growth through Bring Your Own Thermostat enrollments. Due to the COVID-19 pandemic, the AC Rewards Direct Install channel was on hiatus for part of 2021, but when in-home visits were permitted in the second half of the year, the Company implemented enhanced safety protocols and the direct install channel did see some participation. In 2021, the Company continued marketing AC Rewards and working with additional device manufacturers to add eligible thermostats to the lineup. To make it easier for customers to participate in the offering, the Company also added a pre-enrollment feature for AC Rewards to allow customer who purchase thermostats on the Xcel Energy Storefront to pre-enroll their eligible device into the offering upon installation.

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 their own supply chain issues and was only able to supply a small number of modules in 2021.The company is hopeful shipments will arrive in the spring of 2022.

Changes in 2021
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.

2021 Product Achievement

The product did not meet its goals in 2021 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 developed new marketing and recruitment material and more streamlined back-end enrollment processes to utilize in 2022 when engaging with customers and anticipates increased participation in 2022. 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 2021

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 2021.

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.

2021 Product Achievement

In 2021, the Company's DR Planning & Administration expenditures for electric and gas were both under budget for the year. Product spend was down from 2020 levels without a DSM Plan filing; however, the regulatory team had a full year supporting the Company's Government Affairs team during a busy 2021 legislative season and beginning development of the Company's upcoming 2022 DSM Strategic Issues filings.

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 2021 the Company finalized the effort to evaluate the effectiveness of Demand Response products that commenced in the 2019/2020 DSM Plan. This is in addition to the energy efficiency product evaluations that were described in the Indirect Program section of this report. DR evaluation activities tend to be completed slightly later in each year due to the need to conduct research at the close of the cooling season. As a result, the Company was unable to report on the 2020 evaluation of AC Rewards in the 2020 Status Report. Below is a summary of the findings for that evaluation.

- *AC Rewards (Residential)*: The evaluation of AC Rewards in 2020 found that more engagement and education at customer touchpoints could improve customers' AC Rewards experience. Xcel Energy has an opportunity to strengthen the program by addressing the needs of different customer types in marketing efforts, leveraging EE channels for recruitment, and enacting strategic adjustments to maximize program impact and participant satisfaction.

Completed evaluation reports are found on the Company's website, here:
http://www.xcelenergy.com/Company/Rates_&_Regulations/Filings/Colorado_Demand-Side_Management

2021 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 2021, the Company introduced new DR products or pilots via 60-Day Notices, managed ongoing pilots, and worked to develop new products that may be introduced via a 60-Day notice in 2022. A summary of these activities in 2021 follows:

- Behavioral Demand Response
- Excess Supply Partners
- Heat Saver's Mode
- 2-Way communicating switches for Saver Switch

2021 Product Achievement

DR Product Development expenditures were under budget in 2021 largely due to lower-than-anticipated costs for research and 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.

2021 Product Achievement
The pilot continued engaged the Company's distribution operations team to introduce 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 the team is confident in its ability to call targeted feeder-specific events based on 2019 results.

Changes in 2021
There were no changes to this pilot.

Evaluation, Measurement, and Verification: 2021 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 2021, 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 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 2019/20 and 2021/22 DSM Plans). 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 2021 results and will continue to be used going forward.

For 2021, the product year is split into two distinct segments, with different technical assumptions applied to each time period. For the achievements realized between January 1 and March 31, 2021, the 2019/20 DSM Plan technical assumptions, and subsequent 60-Day Notice changes, were applied to calculate net savings. For the achievements realized between April 1 and December 31, 2021, the 2021/22 DSM Plan technical assumptions, and subsequent 60-Day Notice changes, were applied to calculate net savings. All savings achieved in 2021 have the same realization and installation rates applied to them, resulting from M&V conducted for the 2021 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	8	100.000%	100.000%	
Cooling Efficiency	90 / 10 / 0.40	43	100.387%	101.011%	
Heating Efficiency	90 / 10 / 0.40	11	100.000%	100.000%	100.000%
Lighting Efficiency	90 / 10 / 0.40	43	100.000%	100.000%	
Motor Efficiency	90 / 10 / 0.40	42	100.000%	100.000%	
Refrigeration	90 / 20 / 0.40	31	100.000%	100.000%	100.000%
Small Business Lighting	90 / 10 / 0.40	43	100.190%	100.197%	
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	44	100.000%	100.000%	
Residential Heating Systems	90 / 10 / 0.40	44	100.000%	100.000%	100.000%
Smart Thermostats	90 / 10 / 0.40	44	95.350%	95.347%	95.455%
Water Heaters	90 / 20 / 0.40	11			100.000%

2021 M&V Results

Portfolio Results

With its best efforts, Public Service achieved energy efficiency portfolio realization rates of 99.7% for electric demand, 100.0% for electric energy, and 99.9% for natural gas energy in 2021. Applying the results to the portfolio's gross savings, the Company achieved energy efficiency savings of 93,862 net generator kW, 487,055,966 net generator kWh, and 812,605 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 2021. All M&V activities followed the processes described above and outlined in the M&V Plan filed with the 2019/20 and 2021/22 DSM Plans, 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 2021, savings came from Recommissioning studies, Building Operator Certifications, and Lighting Retrofits. 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 8 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 2021 included new construction and study-identified custom projects. As a result, Nexant did not perform site verifications to determine prescriptive realization rates for the 2021. 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 2021, M&V of the prescriptive component of the product were performed by Resource Innovations, following the prescriptive protocols described above. Resource Innovations performed 43 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 2019/20 and 2021/22 DSM Biennial Plans.

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 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 2021, 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 2021, M&V of this product was performed by Resource Innovations, following the prescriptive protocols described above. Of these projects, Nexant 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 2021, M&V of this product was performed by Resource Innovations, following the prescriptive protocols described above. To verify these results, Nexant performed phone of 44 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 2021, 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 low-income customers. This product was implemented by a third-party provider who identified income-qualified customers to receive kits. Phone surveys were conducted to determine those customers who received a kit and the associated installation rates.

Multifamily Weatherization

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

Non-Profit

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

Single-Family Weatherization

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

Post-Program Year Activities

All measurement and verification activities for the 2021 performance year were completed in late 2020 through 2021 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 2021

Public Service contracted for evaluators to perform evaluations on the following energy efficiency products in 2021: Compressed Air Efficiency, ENERGY STAR New Homes, Home Lighting, New Construction, and Residential Heating & Cooling. 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.

Compressed Air Efficiency

An evaluation team led by TRC conducted a process and impact evaluation of Xcel Energy's Colorado Compressed Air Efficiency product. The evaluation was conducted through interviews with: Xcel Energy staff, trade partners, peer IOUs, and near-participating customers. Participating customers were also surveyed. The evaluation's key findings are paraphrased below:

- Key Finding 1: Trade partners felt that increased communications from Xcel Energy would motivate additional trade partner participation and also increase trade partner satisfaction with their experience participating in the product.
    - Recommendation 1a: Increase the frequency of communications with trade partners regarding product changes and other product updates.
    - Recommendation 1b: Provide trade partners with an update (phone, in-person, or via email) including the status of open projects and estimated review time of their projects, so they can communicate that information to their customers.
    - Recommendation 1c: Use updates suggested in recommendations 1a and 1b to remind trade partners of who contact at Xcel Energy when they have questions or concerns.
- Key Finding 2: Trade partners valued continuity and experienced challenges due to product staffing changes.
    - Recommendation 2a: Ensure processes for working with trade partners are well documented in internal material.
    - Recommendation 2b: When possible, host trainings, lunches, and other in-person meetings to maintain high-touch relationships with trade partners.
- Key Finding 3: Trade partners provide primary communication to customers about the Compressed Air Product.
    - Recommendation 3a: Consider direct marketing to end-users of compressed air equipment to drive customers to qualified trade partners.
    - Recommendation 3b: Provide trade partners with updated customer-facing marketing materials that highlight the cost and energy savings they could achieve with high-efficiency equipment.
- Key Finding 4: Participating customers and trade partners both reported high satisfaction with rebate levels.
    - Recommendation 4a: Monitor incremental prescriptive rebate amounts for Colorado to determine whether there may be opportunity to increase prescriptive rebate amounts.
- Key Finding 5: Near-participants had low awareness of the Compressed Air product and many customers who had formerly participated in a study did not know they were eligible to complete an updated Efficiency Study.
    - Recommendation 5a: Encourage account representatives to work closely with trade partners or product staff to engage with customers who are eligible for an updated study.

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 STAR New Homes

An evaluation team led by TRC conducted a process and impact evaluation of Xcel Energy's Colorado ENERGY STAR New Homes product. The evaluation was conducted through interviews with: Xcel Energy staff, HERS Raters, peer IOUs, and non-participating builders. Participating builders, lapsed small-volume builders, and participating homeowners were also surveyed. The evaluation's key findings are paraphrased below:

- Key Finding 1: The ENERGY STAR New Homes Product showed some influence in the market, with a retrospective NTGR of 0.63. The evaluation team recommends using a prospective NTGR of 0.73 if the product team incorporates evaluation recommendations 1a, 1b, and 2a.
    - Recommendation 1a: Provide targeted trainings and outreach to large-volume builders.
    - Recommendation 1b: Dilute free-ridership by targeting non-participating builders, including non-ENERGY STAR builders and builders outside of front range communities.
- Key Finding 2: HERS raters struggled with product administrative requirements.
    - Recommendation 2a: Scale HERS rater incentives with savings to encourage participation from higher savings projects.
    - Recommendation 2b: Collaborate with the product implementer to explore pain points in administrative requirements, including clarifying HouseRater documentation as applicable.
- Key Finding 3: Comfort is the most important factor to homeowners when purchasing their home, higher than both the price and location of the home.
    - Recommendation 3: Develop targeted marketing materials for homeowners.
- Key Finding 4: Achieving an ENERGY STAR certification was a key motivator for participating builders to build above code, more so than the Xcel Energy product.
    - Recommendation 4: Consider creating an alternative offering based on high-performance building certifications to improve product influence among participating builders.
- Key Finding 5: Participating builders and HERS raters indicated that costs remain a barrier to energy-efficient building practices, specifically to including electrification technologies in the new home. Both participating builders and HERS raters recommended including more prescriptive measures.
    - Recommendation 5: Consider expanding prescriptive new construction rebate offerings, including incentivizing technologies and practices for all-electric homes to support jurisdictions in achieving their electrification goals.

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.

Home Lighting

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

- interviews with Xcel Energy staff and peer IOUs;
- a virtual ethnography and survey with Xcel Energy Colorado customers using the dscout mobile application;
- a usability study of the Bulb Finder website with Xcel Energy Colorado customers; a usability study of the digital marketplace with Xcel Energy Colorado customers; and
- geographic information system opportunity mapping to understand where participating retailers (i.e., retailers who sell light bulbs at a discount through Xcel Energy) exist in Xcel Energy territory, and if there are opportunities for new engagements.

The evaluation's key findings are paraphrased below:

- Key Finding 1: The Home Lighting Product remains influential in encouraging customers to adopt LED technologies; however, the level of influence varies significantly by bulb type.
    - Recommendation 1a: The evaluation team recommends using a prospective NTGR (adjusted for the Colorado Appliance Bill) that varies by year and bulb type.
    - Recommendation 1b: The evaluation team also recommends that Xcel Energy phase out reflector bulbs no later than the schedule established by the Colorado Appliance Bill.
- Key Finding 2: Both finding and using the Bulb Finder website presented barriers for customers.
    - Recommendation 2: Consider making the following updates on the Bulb Finder website when the next update occurs.
- Key Finding 3: The density of participating retailers roughly aligns with the density of the population; areas with larger populations have more participating retailers.
    - Recommendation 3: Continue searching for potential retailers, who carry or can be encouraged to carry LEDs, in the identified zip codes without participating retailers.
- Key Finding 4: Store clerks were mostly helpful in terms of purchasing light bulbs in store.
    - Recommendation 4: When possible, increase awareness and training among participating retailers.
- Key Finding 5: Both finding and using the digital marketplace to purchase light bulbs presented barriers to customers.
    - Recommendation 5: Consider the feasibility of the following changes on the digital marketplace website when the next update occurs.
- Key Finding 6: No peer utilities have plans for a full replacement of home lighting program savings if standards are enacted.
    - Recommendation 6: Look to multiple types of products technologies to compensate for expected declines in residential lighting savings for the future.

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.

<u>New Construction</u>

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

- Key Finding 1: The New Construction Product remains influential in encouraging customers to include energy-efficient equipment and systems in new construction projects in Colorado.
    - Recommendation 1: The evaluation team recommends using a prospective NTGR of 0.86 if program design and implementation remains the same.
- Key Finding 2: Participants and participating trade partners were largely satisfied with the product and found product participation easy.
    - Recommendation 2a: Strengthen relationships between product staff and strategic account representatives.
    - Recommendation 2b: Work more closely with EEB implementors to understand barriers to selecting energy-efficient equipment and provide clarifications as needed.
- Key Finding 3: Modelers reported that there were challenges with the EDAPT portal and the OpenStudio software.
    - Recommendation 3a: Consider opportunities that allow energy modelers to use multiple energy modeling software.
    - Recommendation 3b: Offer training on OpenStudio to participating energy modelers.
- Key Finding 4: Surveyed participants have a favorable opinion of electrification and interest in electrification technologies.
    - Recommendation 4a: Coordinate among product staff, account representatives, sales teams, and other relevant Xcel Energy staff to define opportunities to educate customers about electrification building practices and opportunities.
    - Recommendation 4b: Offer training on electrification technologies and practices for design teams.
- Key Finding 5: Nonparticipating trade partners were largely unaware of the New Construction Product.
    - Recommendation 5: Explore additional channels to identify and engage with customers and trade partners.

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.

<u>Residential Heating & Cooling</u>

An evaluation team led by TRC conducted a process and impact evaluation of Xcel Energy's Colorado High Efficiency Air Conditioning product. The evaluation was conducted through interviews with: Xcel Energy staff, participating trade partners, non-participating trade partners, and peer IOUs. Participating and non-participating customers were also surveyed. The evaluation's key findings are paraphrased below:

- Key Finding 1: The Comprehensive HVAC Product remains influential in encouraging residential customers to adopt energy-efficient cooling measures and conduct QI. The evaluation team found a retrospective NTGR of 0.71, across all measures, with supporting qualitative data that the product helped to overcome barriers for pursuing energy efficiency projects. At the measure level, the retrospective NTGR for air conditioners was 0.73 and mini-split heat pumps was 0.57. The evaluation team did not estimate a NTGR specific to air source heat pumps because that population was too small in 2021 to calculate a representative value.
    - Recommendation 1a: The evaluation team recommends using a prospective NTGR of 0.73 for air conditioning equipment (both SEER 13-14 and SEER 15+) and recommends that Xcel Energy re-evaluate this prospective NTGR once it sees higher installation rates of this measure through the product.

    - Recommendation 1b: The evaluation team recommends using a prospective NTGR of 0.57 NTGR for mini-split heat pumps, noting Xcel Energy's influence on this measure type will likely be unique, given its ability to support beneficial electrification opportunities.
- Key Finding 2: The current rebate levels for air conditioners and heat pumps are insufficient to overcome cost barriers for participation in the Comprehensive HVAC Product.
    - Recommendation 2: Adjust rebate structure to better align air conditioning and heat pump rebate levels with equipment costs to increase product participation.
- Key Finding 3: Few customers installed heat pumps in 2021 as heat pumps were often price-restrictive for customers, even with product rebates.
    - Recommendation 3a: Market heat pump measures to customers who have installed solar at their homes.
    - Recommendation 3b: Align heat pump offering with utility-wide discussions around carbon-free goals to make the operating cost of electric heating more feasible to customers.
- Key Finding 4: Trade partners expressed interest in additional opportunities to learn about heat pump efficacy and installation.
    - Recommendation 4: Continue providing heat pump education to trade partners.
- Key Finding 5: Nonparticipating trade partners reported various challenges to participating in the product, including complex project processes and a desire to drop NATE certification to align with rebated heating equipment.
    - Recommendation 5a: Continue to assess opportunities to streamline the application process while maintaining influence on QI of equipment.
    - Recommendation 5b: Engage trade partners who are not interested in following QI procedures to encourage them to sell mini-split heat pumps, since they do not require QI.
    - Recommendation 5c: Consider the impacts of dropping the NATE certification to align closer with the Xcel Energy heating offering.
- Key Finding 6: Overall, participating trade partners did not think midstream mini-split heat pump rebates would affect their sales of mini split heat pumps.
    - Recommendation 6: Hold off developing a midstream mini-split heat pump offering.
- Key Finding 7: Trade partners provided positive feedback on the comprehensive approach to providing residential HVAC services within one product.
    - Recommendation 7a: Continue providing a comprehensive approach to HVAC offerings.
    - Recommendation 7b: Consider additional ways to provide comprehensive services to customers, such as communicating heat pump offerings to solar applicants.

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-c and Tables 25a-c, 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
2021 Product	The DSM product offered by Public Service in 2021.
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 (Full Year)

2021 Portfolio	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	1,101,776	136	141	147	1,163,831	147	1,163,831	141	143	1,100,886	141
Business HVAC+R Systems	24,014,615	5,064	11,477	5,487	25,367,194	5,495	25,407,190	11,477	4,665	21,747,901	10,552
Compressed Air Efficiency	1,233,663	215	0	233	1,303,147	233	1,303,147	0	191	1,076,904	N/A
Custom Efficiency	222,528	51	656	56	235,061	56	235,061	656	49	204,503	570
Data Center Efficiency	11,157,704	1,270	0	1,376	11,786,141	1,376	11,786,141	0	1,354	11,583,082	N/A
Energy Management Systems	3,483,818	149	2,397	161	3,680,038	161	3,680,038	2,397	140	3,201,633	2,158
LED Street Lights	1,680,488	0	0	0	1,775,138	0	1,775,138	N/A	0	1,597,625	N/A
Lighting Efficiency	89,502,610	14,410	0	15,614	94,543,679	15,606	94,495,476	0	11,636	70,367,385	N/A
New Construction	68,772,893	17,710	170,168	19,190	72,646,399	19,190	72,646,399	170,168	18,230	69,014,079	167,543
Self Direct	1,164,265	92	0	100	1,229,840	100	1,229,840	N/A	90	1,114,235	N/A
Small Business Solutions	38,704,214	6,688	1,768	7,247	40,884,157	7,205	40,648,665	1,768	6,088	34,381,141	1,662
Strategic Energy Management	55,966,084	9,618	0	10,421	59,118,270	10,421	59,118,270	0	10,356	58,748,246	N/A
Business Program EE Total	**297,004,658**	**55,403**	**186,607**	**60,032**	**313,732,896**	**59,989**	**313,489,196**	**186,607**	**52,941**	**274,137,620**	**182,626**

Table 24b: Business Segment Installation Rates, Realization Rates, and Final Net, Verified Savings by Program Component (January – March 2021)

2021 Products January 1 - March 31, 2021	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	Study	595,895	42.28	0	7.71%	5.33%	90.0%	90.0%	90.0%	100.0%	100.0%	100.0%	100.0%	46	629,458	46	629,458	0	41	566,512	0
Business HVAC+R Systems	Cooling Efficiency	309,564	86.70	0	7.71%	5.33%	71.0%	71.0%	N/A	100.0%	100.4%	101.0%	N/A	94	327,000	94	330,306	N/A	67	234,517	N/A
	Motors & VFDs	3,485,343	571.87	0	7.71%	5.33%	81.0%	81.0%	N/A	100.0%	100.0%	100.0%	N/A	620	3,681,648	620	3,681,648	N/A	502	2,982,135	N/A
	Heating Efficiency	4,405	0.00	2,300	7.71%	5.33%	86.0%	86.0%	86.0%	100.0%	100.0%	100.0%	100.0%	0	4,653	0	4,653	2,300	0	4,002	1,978
	Midstream & General	84,187	73.32	0	7.71%	5.33%	89.0%	89.0%	100.0%	100.0%	100.0%	100.0%	N/A	79	88,929	79	88,929	N/A	71	79,147	N/A
		631,004	374.75	0	7.71%	5.33%	89.0%	89.0%	100.0%	100.0%	100.4%	101.0%	N/A	406	666,544	408	673,284	N/A	363	599,222	N/A
	Refrigeration	1,008,168	111.79	2,379	7.71%	5.33%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	121	1,064,951	121	1,064,951	2,379	121	1,064,951	2,379
Compressed Air Efficiency	Prescriptive	77,884	14.54	0	7.71%	5.33%	73.0%	73.0%	N/A	100.0%	100.0%	100.0%	N/A	16	82,271	16	82,271	N/A	12	60,058	N/A
	Studies & Custom	272,030	59.41	0	7.71%	5.33%	87.0%	87.0%	N/A	100.0%	100.0%	100.0%	N/A	64	287,352	64	287,352	N/A	56	249,996	N/A
Custom Efficiency	Custom	3,317	0.38	320	7.71%	5.33%	87.0%	87.0%	87.0%	100.0%	100.0%	100.0%	100.0%	0	3,504	0	3,504	320	0	3,048	278
Data Center Efficiency	Customer-Identified	0	0.00	0	7.71%	5.33%	45.0%	45.0%	N/A	100.0%	100.0%	100.0%	N/A	0	0	0	0	N/A	0	0	N/A
	Site-Visit-Identified	0	0.00	0	7.71%	5.33%	80.0%	80.0%	N/A	100.0%	100.0%	100.0%	N/A	0	0	0	0	N/A	0	0	N/A
	Study-Identified	0	0.00	0	7.71%	5.33%	100.0%	100.0%	N/A	100.0%	100.0%	100.0%	N/A	0	0	0	0	N/A	0	0	N/A
Energy Management Systems	EMS	1,852,743	47.77	1,619	7.71%	5.33%	87.0%	87.0%	90.0%	100.0%	100.0%	100.0%	100.0%	52	1,957,095	52	1,957,095	1,619	45	1,702,673	1,457
LED Street Lighting		0	0.00	0	7.71%	5.33%	90.0%	90.0%	N/A	100.0%	100.0%	100.0%	N/A	0	0	0	0	N/A	0	0	N/A
Lighting Efficiency	Prescriptive	30,258,545	4,681.41	0	7.71%	5.33%	73.0%	73.0%	N/A	100.0%	100.0%	100.0%	N/A	5,073	31,962,802	5,073	31,962,802	N/A	3,703	23,332,845	N/A
		4,563,322	749.62	0	7.71%	5.33%	78.0%	78.0%	N/A	99.0%	100.0%	100.0%	N/A	812	4,820,343	804	4,772,139	N/A	627	3,722,269	N/A
	Network Lighting Controls	302,449	42.06	0	7.71%	5.33%	100.0%	100.0%	N/A	100.0%	100.0%	100.0%	N/A	46	319,484	46	319,484	N/A	46	319,484	N/A
Business New Construction	Energy Efficient Buildings	642,584	284.41	578	7.71%	5.33%	95.0%	95.0%	97.0%	100.0%	100.0%	100.0%	100.0%	308	678,776	308	678,776	578	293	644,838	561
	Energy Design Assistance	14,330,542	4,373.08	44,546	7.71%	5.33%	95.0%	95.0%	99.0%	100.0%	100.0%	100.0%	100.0%	4,738	15,137,683	4,738	15,137,683	44,546	4,502	14,380,799	44,100
	End-Use Measures	2,940,597	493.00	97	7.71%	5.33%	95.0%	95.0%	97.0%	100.0%	100.0%	100.0%	100.0%	534	3,106,221	534	3,106,221	97	507	2,950,910	94
Self Direct	Custom	1,164,265	92.08	0	7.71%	5.33%	90.6%	90.6%	N/A	100.0%	100.0%	100.0%	N/A	100	1,229,840	100	1,229,840	N/A	90	1,114,235	N/A
Small Business Solutions	LED Lighting	3,280,818	477.41	774.40	7.71%	5.33%	94.0%	94.0%	94.0%	100.0%	100.1904%	100.1970%	100.0%	517	3,465,604	518	3,472,430	774	487	3,264,084	728
	LED Tubes & Midstream Lighting	6,877,486	1,130.35	0.00	7.71%	5.33%	94.0%	94.0%	94.0%	99.0%	100.1904%	100.1970%	100.0%	1,225	7,264,848	1,215	7,206,365	0	1,142	6,773,983	0.000
	Custom Lighting	108,649	30.44	0.00	7.71%	5.33%	94.0%	94.0%	94.0%	100.0%	100.0%	100.0%	100.0%	33	114,768	33	114,768	0	31	107,882	0.000
Strategic Energy Management	SEM	5,004,203	858.16	0	7.71%	5.33%	93.0%	93.0%	N/A	100.0%	100.0%	100.0%	100.0%	930	5,286,055	930	5,286,055	0	865	4,916,032	N/A
Business Program Total		**77,798,000**	**14,594.80**	**52,613**	**7.71%**	**5.33%**	**85.9%**	**84.1%**	**98.0%**	**99.9%**	**100.0%**	**100.0%**	**100.0%**	**15,814**	**82,179,828**	**15,799**	**82,090,014**	**52,613**	**13,570**	**69,073,621**	**51,575**

Table 24c: Business Segment Installation Rates, Realization Rates, and Final Net, Verified Savings by Program Component (April – December 2021)

2021 Products April 1 - December 31, 2021	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		505,881	94	141	7.71%	5.33%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	101	534,374	101	534,374	141	101	534,374	141
Business HVAC+R Systems	Cooling Efficiency	784,687	337	0	7.71%	5.33%	71.0%	71.0%	N/A	100.0%	100.4%	101.0%	N/A	365	828,883	367	837,264	N/A	260	594,457	N/A
	Motors	10,926,085	1,897	0	7.71%	5.33%	81.0%	81.0%	N/A	100.0%	100.0%	100.0%	N/A	2,056	11,541,477	2,056	11,541,477	N/A	1,665	9,348,596	N/A
	VFDs	390,513	-35	0	7.71%	5.33%	81.0%	81.0%	N/A	100.0%	100.4%	101.0%	N/A	-38	412,508	-38	416,679	N/A	-31	337,510	N/A
	Heating Efficiency	0	0	4,086	7.71%	5.33%	86.0%	86.0%	86.0%	100.0%	100.0%	100.0%	100.0%	0	0	0	0	4,086	0	0	3,514
	Custom	505,035	107	234	7.71%	5.33%	87.0%	87.0%	87.0%	100.0%	100.0%	100.0%	100.0%	116	533,480	116	533,480	234	101	464,128	204
	Mini-Splits	35,158	27	0	7.71%	5.33%	89.0%	89.0%	N/A	100.0%	100.0%	100.0%	N/A	29	37,138	29	37,138	N/A	26	33,053	N/A
	DX Units	1,629,018	1,032	0	7.71%	5.33%	89.0%	89.0%	N/A	100.0%	100.4%	101.0%	N/A	1,118	1,720,769	1,122	1,738,168	N/A	999	1,546,970	N/A
	Food Service, Boiler Controls	4,221,448	481	2,478	7.71%	5.33%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	521	4,459,213	521	4,459,213	2,478	521	4,459,213	2,478
Compressed Air Efficiency	Prescriptive	306,428	62	0	7.71%	5.33%	73.0%	73.0%	N/A	100.0%	100.0%	100.0%	N/A	67	323,687	67	323,687	N/A	49	236,292	N/A
	Studies & Custom	577,321	79	0	7.71%	5.33%	87.0%	87.0%	N/A	100.0%	100.0%	100.0%	N/A	86	609,838	86	609,838	N/A	74	530,559	N/A
Custom Efficiency	Custom	219,211	51	336	7.71%	5.33%	87.0%	87.0%	87.0%	100.0%	100.0%	100.0%	100.0%	55	231,558	55	231,558	336	48	201,455	292
Data Center Efficiency	Site-Visit-Identified	961,158	101	0	7.71%	5.33%	80.0%	80.0%	N/A	100.0%	100.0%	100.0%	N/A	110	1,015,293	110	1,015,293	N/A	88	812,235	N/A
	Study-Identified	10,196,546	1,168	0	7.71%	5.33%	100.0%	100.0%	N/A	100.0%	100.0%	100.0%	N/A	1,266	10,770,848	1,266	10,770,848	N/A	1,266	10,770,848	N/A
Energy Management Systems	EMS	1,631,075	101	778	7.71%	5.33%	87.0%	87.0%	90.0%	100.0%	100.0%	100.0%	100.0%	110	1,722,942	110	1,722,942	778	95	1,498,960	700
LED Street Lights		1,680,488	0	0	7.71%	5.33%	90.0%	90.0%	N/A	100.0%	100.0%	100.0%	N/A	0	1,775,138	0	1,775,138	N/A	0	1,597,625	N/A
Lighting Efficiency	Prescriptive	35,908,495	5,713	0	7.71%	5.33%	73.0%	73.0%	N/A	100.0%	100.0%	100.0%	N/A	6,190	37,930,975	6,190	37,930,975	N/A	4,519	27,689,611	N/A
	Older Measures	18,102,676	3,158	0	7.71%	5.33%	78.0%	78.0%	N/A	100.0%	100.0%	100.0%	N/A	3,422	19,122,276	3,422	19,122,276	N/A	2,669	14,915,375	N/A
	Network Lighting Controls	367,123	66	0	7.71%	5.33%	100.0%	100.0%	N/A	100.0%	100.0%	100.0%	N/A	72	387,801	72	387,801	N/A	72	387,801	N/A
New Construction	Energy Efficient Buildings	11,517,831	2,551	45,516	7.71%	5.33%	95.0%	95.0%	97.0%	100.0%	100.0%	100.0%	100.0%	2,764	12,166,552	2,764	12,166,552	45,516	2,626	11,558,224	44,151
	Energy Design Assistance	39,341,339	10,009	79,432	7.71%	5.33%	95.0%	95.0%	99.0%	100.0%	100.0%	100.0%	100.0%	10,845	41,557,168	10,845	41,557,168	79,432	10,303	39,479,309	78,637
Self Direct	Custom	0	0	0	7.71%	5.33%	90.6%	90.6%	N/A	100.0%	100.0%	100.0%	N/A	0	0	0	0	N/A	0	0	N/A
Small Business Solutions	Refrigeration	22,836,727	3,982	0	7.71%	5.33%	78.0%	78.0%	78.0%	99.0%	100.2%	100.2%	100.0%	4,315.08	24,122,963	4,280	23,928,772	N/A	3,338	18,664,442	N/A
	LED Tubes & Midstream Lighting	623,634	74	993	7.71%	5.33%	94.0%	94.0%	94.0%	100.0%	100.0%	100.0%	100.0%	81	658,759	81	658,759	993	76	619,233	934
	Custom Lighting	4,976,900	993	0	7.71%	5.33%	94.0%	94.0%	94.0%	100.0%	100.2%	100.2%	100.0%	1,076	5,257,215	1,078	5,267,570	N/A	1,014	4,951,515	N/A
Strategic Energy Management		50,961,881	8,759	0	7.71%	5.33%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	9,491	53,832,215	9,491	53,832,215	0	9,491	53,832,215	N/A
Business Program Total		**219,206,658**	**40,808**	**133,994**	**7.71%**	**5.33%**	**89.1%**	**88.6%**	**97.8%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**44,217**	**231,553,068**	**44,190**	**231,399,182**	**133,994**	**39,370**	**205,063,999**	**131,051**

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

2021 Portfolio	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	1,371,182	117	72,589	129	1,464,625	77	942,860	46,898	72	886,289	44,085
ENERGY STAR New Homes	5,896,538	1,218	141,149	1,340	6,298,374	1,340	6,298,374	141,149	1,014	5,535,501	129,178
Home Energy Insights	8,916,666	3,164	77,905	3,482	9,524,317	3,482	9,524,317	77,905	3,482	9,524,317	77,905
Home Energy Squad	988,173	180	3,156	198	1,055,515	198	1,055,515	3,156	198	1,055,515	3,156
Home Lighting	189,907,730	25,667	0	28,124	202,309,002	27,842	200,285,912	0	17,470	125,257,347	0
Insulation Rebates	347,017	400	33,413	440	370,665	440	370,665	33,413	392	329,892	29,418
Mutifamily Buildings	6,103,243	815	3,164	888	6,473,881	888	6,473,881	3,164	888	6,473,881	3,164
Refrigerator & Freezer Recycling	4,120,898	483	0	532	4,401,728	532	4,401,728	N/A	425	3,521,383	N/A
Residential Heating & Cooling	8,367,297	11,954	196,357	13,155	8,937,510	12,800	8,661,723	194,917	9,499	6,643,021	166,459
School Education Kits	19,959,384	8,758	267,641	9,638	21,319,573	1,713	11,201,802	55,146	1,713	11,201,802	55,146
Whole Home Efficiency	2,258	4	318	5	2,412	5	2,412	318	5	2,798	368
Residential Program EE Total	**245,980,386**	**52,761**	**795,691**	**57,930**	**262,157,603**	**49,317**	**249,219,191**	**556,065**	**35,159**	**170,431,745**	**508,878**
Income Qualified											
Energy Savings Kits	2,263,397	199	90,877	219	2,417,643	169	1,869,008	70,070	169	1,869,008	70,070
Multifamily Weatherization	1,733,783	234	9,536	257	1,851,937	257	1,851,937	9,536	257	1,851,937	9,536
Non-Profit Energy Efficiency	2,337,235	449	7,635	487	2,468,875	487	2,468,875	7,635	487	2,468,875	7,635
Single Family Weatherization	34,320,328	4,449	33,859	4,896	36,659,184	4,848	36,296,781	33,859	4,848	36,296,781	33,859
Income Qualified Program EE Total	**40,654,743**	**5,331**	**141,908**	**5,859**	**43,397,639**	**5,762**	**42,486,601**	**121,100**	**5,762**	**42,486,601**	**121,100**

Table 25b: Residential Segment and Income Qualified Segment Installation Rates, Realization Rates, and Final Net, Verified Savings by Program Component (January – March 2021)

2021 Products January 1 - March 31, 2021	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	Showerhead	332,902	24	19,688	9.13%	6.38%	94.0%	94.0%	94.0%	71.5%	100.0%	100.0%	100.0%	27	355,589	19	254,246	14,077	17.99	238,991	13,233
	Second Showerhead	214,853	16	13,633	9.13%	6.38%	94.0%	94.0%	94.0%	71.5%	100.0%	100.0%	100.0%	17	229,495	12	164,089	9,748	11.61	154,243	9,163
	Kitchen Aerator	41,202	6	2,437	9.13%	6.38%	94.0%	94.0%	94.0%	25.0%	100.0%	100.0%	100.0%	6	44,010	2	11,002	609	1.51	10,342	573
	Bath Aerator	42,610	6	2,520	9.13%	6.38%	94.0%	94.0%	94.0%	35.6%	100.0%	100.0%	100.0%	7	45,514	2	16,203	897	2.22	15,231	843
	Second Bath Aerator	33,545	5	2,129	9.13%	6.38%	94.0%	94.0%	94.0%	35.6%	100.0%	100.0%	100.0%	5	35,831	2	12,756	758	1.75	11,990	712
ENERGY STAR New Homes		1,684,551	265	35,121	9.13%	6.38%	92.0%	92.0%	92.0%	100.0%	100.0%	100.0%	100.0%	292	1,799,349	292	1,799,349	35,121	268.58	1,655,402	32,311
Home Energy Insights		2,607,999	812	46,524	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	893	2,785,729	893	2,785,729	46,524	893.34	2,785,729	46,524
Home Energy Squad		258,573	39	512	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	42	276,194	42	276,194	512	42.38	276,194	512
Home Lighting	Residential LEDs	51,449,223	6,580	0	9.13%	6.38%	61.0%	61.0%	N/A	99.0%	100.0%	100.0%	N/A	7,241	54,955,376	7,168	54,405,822	N/A	4,372.60	33,187,551	N/A
	Residential CFLs	24,279	3	0	9.13%	6.38%	100.0%	100.0%	N/A	99.0%	100.0%	100.0%	N/A	3	25,934	3	25,675	N/A	3.38	25,675	N/A
	Sm Business LEDs	9,747,238	1,690	0	7.71%	5.33%	61.0%	61.0%	N/A	99.0%	100.0%	100.0%	N/A	1,831	10,296,233	1,813	10,193,271	N/A	1,105.80	6,217,895	N/A
	Sm Business CFLs	331,556	57	0	7.71%	5.33%	100.0%	100.0%	N/A	99.0%	100.0%	100.0%	N/A	62	350,230	62	346,728	N/A	61.66	346,728	N/A
Insulation Rebates		91,223	104	7,990	9.13%	6.38%	89.0%	89.0%	85.0%	100.0%	100.0%	100.0%	100.0%	115	97,440	115	97,440	7,990	102.16	86,721	6,792
Mutifamily Buildings	Business Measures	1,090,380	150	761	7.71%	5.33%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	163	1,151,794	163	1,151,794	761	162.68	1,151,794	761
Refrigerator & Freezer Recycling		588,205	69	0	9.13%	6.38%	80.0%	80.0%	N/A	100.0%	100.0%	100.0%	N/A	76	628,290	76	628,290	N/A	61.17	502,632	N/A
Residential Heating & Cooling	Air Conditioners and Furnaces	291,404	228	3,769	9.13%	6.38%	67.6%	67.6%	67.6%	100.0%	93.3%	93.3%	100.0%	251	311,263	234	290,315	3,769	158.52	196,253	2,548
	Evaporative Coolers	141,884	178	0	9.13%	6.38%	70.0%	70.0%	70.0%	100.0%	100.0%	100.0%	100.0%	196	151,553	196	151,553	0	137	106,087	0
	Multi-Ducted Evaporative Coolers	24,035	30	0	9.13%	6.38%	85.1%	85.1%	85.1%	100.0%	100.0%	100.0%	100.0%	34	25,673	34	25,673	0	29	21,848	0
	Furnaces	0	0	28,666	9.13%	6.38%	86.0%	86.0%	86.0%	100.0%	100.0%	100.0%	100.0%	0	0	0	0	28,666	0	0	24,653
	Water Heaters	87,185	111	2,350	9.13%	6.38%	90.0%	90.0%	90.0%	100.0%	100.0%	100.0%	100.0%	122	93,126	122	93,126	2,350	110	83,814	2,115
		318,569	355	11,461	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	95.3%	95.3%	95.5%	390	340,279	372	324,456	10,940	372	324,456	10,940
	Mini-Splits, Heat Pumps. Thermostats	211,951	122	0	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	134	226,395	134	226,395	0	134	226,395	0
School Education Kits	11 Watt LED	671,805	86	0	9.13%	6.38%	100.0%	100.0%	N/A	90.9%	100.0%	100.0%	N/A	94	717,587	86	652,287	N/A	86	652,287	N/A
	9 Watt LED	1,427,586	182	0	9.13%	6.38%	100.0%	100.0%	N/A	92.2%	100.0%	100.0%	N/A	201	1,524,873	185	1,405,933	N/A	185	1,405,933	N/A
	Globe, Reflector, 3-Way LED	1,401,201	179	N/A	9.13%	6.38%	100.0%	100.0%	N/A	90.0%	100.0%	100.0%	N/A	197	1,496,690	177	1,347,021	N/A	177	1,347,021	N/A
	Showerhead	399,041	29	22,611	9.13%	6.38%	100.0%	100.0%	100.0%	50.0%	100.0%	100.0%	100.0%	32	426,235	16	213,117	11,306	16	213,117	11,306
	Kitchen Aerator	0	0	0	9.13%	6.38%	100.0%	100.0%	100.0%	42.9%	100.0%	100.0%	100.0%	0	0	0	0	0	0	0	0
	Bathroom Aerator	116,271	16	6,588	9.13%	6.38%	100.0%	100.0%	100.0%	47.4%	100.0%	100.0%	100.0%	18	124,195	9	58,881	3,124	9	58,881	3,124
	Advanced Powerstrip	91,720	12	0	9.13%	6.38%	100.0%	100.0%	N/A	83.0%	100.0%	100.0%	100.0%	13	97,971	11	81,316	N/A	11	81,316	N/A
	Programmable Thermostat	0	0	0	9.13%	6.38%	100.0%	100.0%	100.0%	4.0%	100.0%	100.0%	100.0%	0	0	0	0	0	0	0	0
Whole Home Efficiency		1,395	3	209	9.13%	6.38%	116.0%	116.0%	116.0%	100.0%	100.0%	100.0%	100.0%	3	1,490	3	1,490	209	3	1,728.48	242
Residential Program Total		**73,722,386**	**11,357**	**206,970**	**9.13%**	**6.38%**	**69.7%**	**66.7%**	**93.8%**	**98.5%**	**99.7%**	**100.0%**	**99.7%**	**12,466**	**78,614,335**	**12,243**	**77,040,148**	**177,360**	**8,536**	**51,386,253**	**166,351**
Income Qualified																					
Energy Savings Kits	Showerhead	1,493,230	109	84,612	9.13%	6.38%	100.0%	100.0%	100.0%	77.3%	100.0%	100.0%	100.0%	120	1,594,990	93	1,232,493	65,382	93	1,232,493	65,382
Multifamily Weatherization		0	0	0	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	0	0	0	0	0	0	0	0
Non-Profit Energy Efficiency		429,609	83	0	7.71%	5.33%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	90	453,806	90	453,806	0	90	453,806	0
Single Family Weatherization		11,395,344	1,456	1,710	9.13%	6.38%	100.0%	100.0%	100.0%	99.0%	100.0%	100.0%	100.0%	1,602	12,171,912	1,586	12,050,236	1,710	1,586.43	12,050,236	1,710
Income Qualified Program Total		**13,318,183**	**1,649**	**86,322**	**9.06%**	**6.35%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**1,813**	**14,220,708**	**1,769**	**13,736,535**	**67,092**	**1,769**	**13,736,535**	**67,092**

Table 25c: Residential Segment and Income Qualified Segment Installation Rates, Realization Rates, and Final Net, Verified Savings by Program Component (April - December 2021)

2021 Products April 1 - December 31, 2021	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	578,527	42	26,625	9.13%	6.38%	94.0%	94.0%	94.0%	71.5%	100.0%	100.0%	100.0%	46	617,952	33	441,836	19,037	31	415,326	17,895
	Kitchen Aerator	50,971	7	1,943	9.13%	6.38%	94.0%	94.0%	94.0%	25.0%	100.0%	100.0%	100.0%	8	54,445	2	13,611	486	2	12,794	457
	Bath Aerator	76,572	11	3,614	9.13%	6.38%	94.0%	94.0%	94.0%	35.6%	100.0%	100.0%	100.0%	12	81,790	4	29,117	1,287	4	27,370	1,209
ENERGY STAR New Homes		3,904,273	700	105,167	9.13%	6.38%	92.0%	92.0%	92.0%	100.0%	100.0%	100.0%	100.0%	771	4,170,341	771	4,170,341	105,167	709	3,836,713	96,753
	Codes & Standards	307,714	252	861	9.13%	6.38%	13.2%	13.2%	13.2%	100.0%	100.0%	100.0%	100.0%	278	328,684	278	328,684	861	37	43,386	114
Home Energy Insights		6,308,667	2,352	31,380	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	2,589	6,738,589	2,589	6,738,589	31,380	2,589	6,738,589	31,380
Home Energy Squad		729,600	141	2,644	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	156	779,321	156	779,321	2,644	156	779,321	2,644
Home Lighting	Residential LEDs	92,474,331	11,826	0	9.13%	6.38%	61.0%	61.0%	N/A	99.0%	100.0%	100.0%	N/A	13,014	98,776,256	12,884	97,788,494	N/A	7,859	59,650,981	N/A
	Residential LED Tubes	248,021	32	0	9.13%	6.38%	100.0%	100.0%	N/A	99.0%	100.0%	100.0%	N/A	35	264,923	35	262,273	N/A	35	262,273	N/A
	Sm Business LEDs	28,117,010	4,323	0	7.71%	5.33%	61.0%	61.0%	N/A	99.0%	100.0%	100.0%	N/A	4,685	29,700,649	4,638	29,403,642	N/A	2,829	17,936,222	N/A
	Sm Business Speciality LED	1,090,886	168	0	7.71%	5.33%	79.8%	79.8%	N/A	99.0%	100.0%	100.0%	N/A	182	1,152,329	180	1,140,805	N/A	144	910,819	N/A
	Sm Business LED Tubes	6,425,186	988	0	7.71%	5.33%	100.0%	100.0%	N/A	99.0%	100.0%	100.0%	N/A	1,071	6,787,073	1,060	6,719,202	N/A	1,060	6,719,202	N/A
Insulation Rebates		255,794	296	25,423	9.13%	6.38%	89.0%	89.0%	89.0%	100.0%	100.0%	100.0%	100.0%	326	273,226	326	273,226	25,423	290	243,171	22,626
Mutifamily Buildings	Business Measures	2,739,310	375	46	7.71%	5.33%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	406	2,893,597	406	2,893,597	46	406	2,893,597	46
	Residential Measures	2,273,553	291	2,357	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	320	2,428,491	320	2,428,491	2,357	320	2,428,491	2,357
Refrigerator & Freezer Recycling		3,532,693	414	0	9.13%	6.38%	80.0%	80.0%	N/A	100.0%	100.0%	100.0%	N/A	455	3,773,438	455	3,773,438	N/A	364	3,018,751	N/A
Residential Heating & Cooling	Air Conditioners	3,014,086	4,020	39,365	9.13%	6.38%	68.0%	68.0%	68.0%	100.0%	93.3%	93.3%	100.0%	4,424	3,219,489	4,129	3,002,818	39,365	2,808	2,041,916	26,768
	Evaporative Coolers	2,482,410	5,037	0	9.13%	6.38%	70.0%	70.0%	70.0%	100.0%	100.0%	100.0%	100.0%	5,543	2,651,581	5,543	2,651,581	0	3,880	1,856,107	N/A
	Multi-Ducted Evaporative Coolers	689,026	1,003	0	9.13%	6.38%	85.1%	85.1%	85.1%	100.0%	100.0%	100.0%	100.0%	1,104	735,982	1,104	735,982	0	940	626,320	N/A
	High Efficiency Furnace	0	0	72,058	9.13%	6.38%	86.0%	86.0%	86.0%	100.0%	100.0%	100.0%	100.0%	0	0	0	0	72,058	0	0	61,970
	Water Heaters	0	0	3,038	9.13%	6.38%	90.0%	90.0%	90.0%	100.0%	100.0%	100.0%	100.0%	0	0	0	0	3,038	0	0	2,734
		90,966	17	1,473	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	93.3%	93.3%	100.0%	19	97,165	17	90,626	1,473	17	90,626	1,473
		318,198	481	20,214	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	95.3%	95.3%	95.5%	529	339,883	505	324,078	19,295	505	324,078	19,295
	Heat Pumps	697,583	371	13,964	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	409	745,122	409	745,122	13,964	409	745,122	13,964
School Education Kits	11 Watt LED	1,276,242	163	N/A	9.13%	6.38%	100.0%	100.0%	N/A	90.0%	100.0%	100.0%	N/A	179	1,363,215	162	1,226,894	N/A	162	1,226,894	N/A
	Replace Incandescent	1,680,017	215	N/A	9.13%	6.38%	100.0%	100.0%	N/A	90.9%	100.0%	100.0%	N/A	236	1,794,507	215	1,631,206	N/A	215	1,631,206	N/A
	9W	3,603,561	460	N/A	9.13%	6.38%	100.0%	100.0%	N/A	92.2%	100.0%	100.0%	N/A	507	3,849,136	467	3,548,903	N/A	467	3,548,903	N/A
	Showerhead	930,044	68	55,105	9.13%	6.38%	100.0%	100.0%	100.0%	50.0%	100.0%	100.0%	100.0%	74	993,424	37	496,712	27,553	37	496,712	27,553
	Kitchen Aerator	109,553	15	6,505	9.13%	6.38%	100.0%	100.0%	100.0%	42.9%	100.0%	100.0%	100.0%	17	117,019	7	50,236	2,793	7	50,236	2,793
	Bathroom Aerator 0.5gpm	128,652	18	7,598	9.13%	6.38%	100.0%	100.0%	100.0%	47.4%	100.0%	100.0%	100.0%	20	137,419	9	65,151	3,602	9	65,151	3,602
	Advanced Powerstrip	91,314	12	N/A	9.13%	6.38%	100.0%	100.0%	N/A	83.0%	100.0%	100.0%	100.0%	13	97,537	11	80,956	N/A	11	80,956	N/A
	Programmable Thermostat	8,032,377	7,303	169,234	9.13%	6.38%	100.0%	100.0%	100.0%	4.0%	100.0%	100.0%	100.0%	8,036	8,579,766	321	343,191	6,769	321	343,191	6,769
Whole Home Efficiency		863	2	109	9.13%	6.38%	116.0%	116.0%	116.0%	100.0%	100.0%	100.0%	100.0%	2	922	2	922	109	2	1,069.30	126
Residential Program Total		**172,258,000**	**41,403**	**588,722**	**9.13%**	**6.38%**	**71.8%**	**69.1%**	**90.4%**	**82.2%**	**99.3%**	**99.9%**	**99.8%**	**45,464**	**183,543,268**	**37,074**	**172,179,043**	**378,705**	**26,623**	**119,045,492**	**342,527**
Income Qualified																					
Energy Savings Kits	LED	566,820	72	0	9.13%	6.38%	100.0%	100.0%	N/A	78.3%	100.0%	100.0%	N/A	79	605,448	62	473,866	N/A	62	473,866	N/A
	Showerhead	162,597	12	4,976	9.13%	6.38%	100.0%	100.0%	100.0%	77.3%	100.0%	100.0%	100.0%	13	173,678	10	134,205	3,845	10	134,205	3,845
	Kitchen Aerator	20,100	3	644	9.13%	6.38%	100.0%	100.0%	100.0%	64.8%	100.0%	100.0%	100.0%	3	21,470	2	13,907	417	2	13,907	417
	Bathroom Aerator 1.0gpm	20,650	3	645	9.13%	6.38%	100.0%	100.0%	100.0%	65.9%	100.0%	100.0%	100.0%	4	22,057	2	14,538	425	2	14,538	425
Multifamily Weatherization		1,733,783	234	9,536	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	257	1,851,937	257	1,851,937	9,536	257	1,851,937	9,536
Non-Profit Energy Efficiency		1,907,626	366	7,635	7.71%	5.33%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	397	2,015,070	397	2,015,070	7,635	397	2,015,070	7,635
Single Family Weatherization	Home Lighting DI	22,536,900	2,880	0	9.13%	6.38%	100.0%	100.0%	100.0%	99.0%	100.0%	100.0%	100.0%	3,169	24,072,741	3,138	23,832,013	0	3,138	23,832,013	0
		388,084	113	32,149	9.13%	6.38%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	124	414,531	124	414,531	32,149	123.80	414,531	32,149
Income Qualified Program Total		**27,336,560**	**3,683**	**55,586**	**8.99%**	**6.31%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**4,046**	**29,176,930**	**3,992**	**28,750,066**	**54,008**	**3,992**	**28,750,066**	**54,008**

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 2021 electric and natural gas portfolio MTRC test ratio results of 2.27 and 1.76, respectively. These results are shown in Table 26 and Table 27. The portfolio results are based upon electric net economic benefits of $254.1 million (including social cost of carbon emissions benefits of $83.4 million) and natural gas net economic benefits $33.1 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:[24]

- 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)

[24] 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: 2021 Electric DSM Portfolio Cost-Benefit Analysis (CBA)

PORTFOLIO TOTAL						2021 ELECTRIC		ACTUALS
2021 Net Present Cost Benefit Summary Analysis For All Participants						Input Summary and Totals		
			Rate	Modified Total		Program "Inputs" per Customer kW and per Unit		
	Participant Test	Utility Test	Impact Test	Resource Test		Lifetime (Weighted on Generator kWh)	A	14.5 years
	($Total)	($Total)	($Total)	($Total)		T & D Loss Factor (Energy)	B	5.76%
						T & D Loss Factor (Demand)	C	8.95%
Benefits						Net-to-Gross (Energy)	D	80.85%
						Net-to-Gross (Demand)	E	89.54%
Avoided Revenue Requirements						**Installation Rate (Energy)**	F	**97.74%**
Generation Capacity	N/A	$112,315,890	$112,315,890	$112,315,890		**Installation Rate (Demand)**	G	**95.38%**
Trans. & Dist. Capacity	N/A	$11,652,782	$11,652,782	$11,652,782		Net coincident kW Saved at Generator	H	0.04 kW
Marginal Energy	N/A	$116,789,911	$116,789,911	$116,789,911		Gross Annual kWh Saved at Customer	I	120.2 kW
Avoided Emissions (CO2)	N/A	N/A	N/A	$83,409,179		Net Annual kWh Saved at Generator	J	100.3 kW
Subtotal				$324,167,763				
Non-Energy Benefits Adder (22.6%)				$54,487,255				
Subtotal	N/A	$240,758,584	$240,758,584	$378,655,019		Program Summary All Participants		
						Total Budget	K	**$92,169,335**
Participant Benefits						**Net coincident kW Saved at Generator**	L	**175,856 kW**
Bill Reduction - Electric	$481,809,784	N/A	N/A	N/A		Gross Annual kWh Saved at Customer	M	584,998,183 kWh
Participant Rebates and Incentives	$57,222,768	N/A	N/A	$57,222,768		**Net Annual kWh Saved at Generator**	N	**488,491,674 kWh**
Incremental Capital Savings	$15,214,667	N/A	N/A	$10,744,851		**Total MTRC Net Benefits with Adder**	O	**$254,087,726**
Incremental O&M Savings	$7,419,920	N/A	N/A	$7,197,876		**Total MTRC Net Benefits without Adder**	P	**$199,600,471**
Subtotal	$561,667,139	N/A	N/A	$75,165,495				
Total Benefits	$561,667,139	$240,758,584	$240,758,584	$453,820,514		**Utility Program Cost per kWh Lifetime**	K/(A x N)	**$0.0130**
Costs						**Utility Program Cost per kW at Gen**	K/ L	**$524**
Utility Project Costs						**Avoided Lifetime CO2 Emissions, Total Program (tons CO2)**		**2,183,786**
Program Planning & Design	N/A	$0	$0	$0				
Administration & Program Delivery	N/A	$28,586,426	$28,586,426	$28,586,426				
Advertising/Promotion/Customer Ed	N/A	$3,938,593	$3,938,593	$3,938,593				
Participant Rebates and Incentives	N/A	$57,222,768	$57,222,768	$57,222,768				
Equipment & Installation	N/A	$209,251	$209,251	$209,251				
Measurement and Verification	N/A	$2,212,297	$2,212,297	$2,212,297				
Subtotal	N/A	$92,169,335	$92,169,335	$92,169,335				
Utility Revenue Reduction								
Revenue Reduction - Electric	N/A	N/A	$481,809,784	N/A				
Subtotal	N/A	N/A	$481,809,784	N/A				
Participant Costs								
Incremental Capital Costs	$120,670,548	N/A	N/A	$105,956,351				
Incremental O&M Costs	$1,985,304	N/A	N/A	$1,607,101				
Subtotal	$122,655,852	N/A	N/A	$107,563,452				
Total Costs	$122,655,852	$92,169,335	$573,979,119	$199,732,787				
Net Benefit (Cost)	$439,011,287	$148,589,249	($333,220,535)	**$254,087,726**				
Benefit/Cost Ratio	4.58	2.61	0.42	**2.27**				

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

Table 27: 2021 Natural Gas DSM Portfolio Cost-Benefit Analysis (CBA)

PORTFOLIO TOTAL					2021 GAS		ACTUALS
2021 Net Present Cost Benefit Summary Analysis For All Participants					Input Summary and Totals		
			Rate	Modified	Program "Inputs" per Dth		
	Participant	Utility	Impact	Total Resource	Lifetime (Weighted on Dth)	A	13.6 years
	Test	Test	Test	Test	Net-to-Gross (Weighted on Dth)	B	95.31%
	($Total)	($Total)	($Total)	($Total)	Install Rate (Weighted on Dth)	C	76.96%
Benefits							
					Program Summary per Participant		
Avoided Revenue Requirements					Gross Annual Dth Saved	D	4.3
Commodity Cost Reduction	N/A	$24,598,211	$24,598,211	$24,598,211	Net Annual Dth Saved	E	3.1
Variable O&M Savings	N/A	$380,096	$380,096	$380,096			
Demand Savings	N/A	$2,662,345	$2,662,345	$2,662,345			
Subtotal				$27,640,653	Program Summary All Participants		
Non-Energy Benefits Adder (24.0%)				$6,637,629	**Total Budget**	F	**$17,621,430**
Subtotal	N/A	$27,640,653	$27,640,653	$34,278,282	Gross Annual Dth Saved	G	**1,124,206 Dth**
					Net Annual Dth Saved	H	**812,605 Dth**
Participant Benefits					**Total MTRC Net Benefits with Adder**	I	**$33,052,788**
Bill Reduction - Gas	$44,551,704	N/A	N/A	N/A	**Total MTRC Net Benefits without Adder**	J	**$26,415,158**
Participant Rebates and Incentives	$11,763,232	N/A	N/A	$11,763,232			
Incremental Capital Savings	$0	N/A	N/A	$0	**Utility Program Cost per Dth Lifetime**	F /(A x H)	**$1.5912**
Incremental O&M Savings	$31,185,265	N/A	N/A	$30,738,550			
Subtotal	$87,500,201	N/A	N/A	$42,501,782			
Total Benefits	$87,500,201	$27,640,653	$27,640,653	$76,780,064			
Costs							
Utility Project Costs							
Program Planning & Design	N/A	$0	$0	$0			
Administration & Program Delivery	N/A	$4,139,027	$4,139,027	$4,139,027			
Advertising/Promotion/Customer Ed	N/A	$639,381	$639,381	$639,381			
Participant Rebates and Incentives	N/A	$11,763,232	$11,763,232	$11,763,232			
Equipment & Installation	N/A	$50,057	$50,057	$50,057			
Measurement and Verification	N/A	$1,029,732	$1,029,732	$1,029,732			
Subtotal	N/A	$17,621,430	$17,621,430	$17,621,430			
Utility Revenue Reduction							
Revenue Reduction - Gas	N/A	N/A	$44,551,704	N/A			
Subtotal	N/A	N/A	$44,551,704	N/A			
Participant Costs							
Incremental Capital Costs	$28,278,957	N/A	N/A	$26,105,847			
Incremental O&M Costs	$0	N/A	N/A	$0			
Subtotal	$28,278,957	N/A	N/A	$26,105,847			
Total Costs	$28,278,957	$17,621,430	$62,173,134	$43,727,277			
Net Benefit (Cost)	$59,221,243	$10,019,223	($34,532,481)	**$33,052,788**			
Benefit/Cost Ratio	3.09	1.57	0.44	**1.76**			

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 2021 calendar year achievements.

A. 2021 Electric Programs (January 1, 2021 through March 31, 2021)

In order to determine the cost-effectiveness of its electric energy efficiency and load management programs from January 1, 2021 through March 31, 2021, 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 plan.

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[25] within Proceeding No. 17A-0462EG.

	CT		CT
Year	Gen Capacity $/kw-yr	Year	Gen Capacity $/kW-yr
2021	$90.24	**2031**	$110.00
2022	$92.05	**2032**	$112.20
2023	$93.89	**2033**	$114.44
2024	$95.76	**2034**	$116.73
2025	$97.68	**2035**	$119.07
2026	$99.63	**2036**	$121.45
2027	$101.62	**2037**	$123.88
2028	$103.66	**2038**	$126.36
2029	$105.73	**2039**	$128.88
2030	$107.85	**2040**	$131.46

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."[26] 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

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

Shawn M. White in Proceeding No. 16A-0512EG and affirmed in Proceeding No. 17A-0462EG.[27] 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**
2021	$8.88	$2.42	$11.30	**2031**	$10.83	$2.95	$13.78
2022	$9.06	$2.47	$11.53	**2032**	$11.05	$3.01	$14.05
2023	$9.24	$2.51	$11.76	**2033**	$11.27	$3.07	$14.33
2024	$9.43	$2.57	$11.99	**2034**	$11.49	$3.13	$14.62
2025	$9.62	$2.62	$12.23	**2035**	$11.72	$3.19	$14.91
2026	$9.81	$2.67	$12.48	**2036**	$11.96	$3.25	$15.21
2027	$10.01	$2.72	$12.73	**2037**	$12.20	$3.32	$15.51
2028	$10.21	$2.78	$12.98	**2038**	$12.44	$3.38	$15.82
2029	$10.41	$2.83	$13.24	**2039**	$12.69	$3.45	$16.14
2030	$10.62	$2.89	$13.51	**2040**	$12.94	$3.52	$16.46

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. 18A-0606EG.

Simple-Average Hourly DSM Avoided Energy			
Year	**$/MWh**	**Year**	**$/MWh**
2021	$17.91	**2031**	$36.22
2022	$17.93	**2032**	$39.18
2023	$19.56	**2033**	$41.84
2024	$21.53	**2034**	$45.09
2025	$24.96	**2035**	$48.49
2026	$25.92	**2036**	$52.34
2027	$29.17	**2037**	$56.55
2028	$30.81	**2038**	$61.25
2029	$32.45	**2039**	$66.47
2030	$34.49	**2040**	$72.29

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

4. **Estimated Annual Avoided Emissions Costs (includes CO_2) (*Source:* Public Service Resource Planning)**
   In Public Services 2016 Electric Resource Plan within Proceeding No. 16A-0396E, the base-case assumed zero cost for CO2 emissions. This value is set to $0 for all years.

B. <u>2021 Electric Programs (April 1, 2021 through December 31, 2021)</u>

In order to determine the cost-effectiveness of its electric energy efficiency and load management programs from April 1, 2021 through December 31, 2021, 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 plan.

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[28] within Proceeding No. 17A-0462EG.

	CT		CT
Year	**Gen Capacity $/kw-yr**	**Year**	**Gen Capacity $/kW-yr**
2021	$92.05	**2031**	$112.20
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

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."[29] Consistent with the Commission's decision in C15-0735, the Company undertook a study, specific to its own territory, utilizing the system planning approach to estimate T&D costs. The study is included as Attachment SMW-6 to the Direct Testimony of Shawn M. White in Proceeding No. 16A-0512EG and affirmed in Proceeding No. 17A-0462EG.[30] The table below documents the annual values of avoided T&D costs from this study:

[28] Approved by Decision No. C18-0417 at ¶104.
[29] *See* Decision No. C14-0731 at ¶97.
[30] *See* Decision No. C18-0417 at Ordering ¶104.

	Avoided Capacity $/kW-yr				Avoided Capacity $/kW-yr		
Year	**Transmission**	**Distribution**	**T&D**	**Year**	**Transmission**	**Distribution**	**T&D**
2021	$9.06	$2.47	$11.53	**2031**	$11.05	$3.01	$14.05
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

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**
2021	$17.69	**2031**	$25.19
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

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
2021	$48.06	2031	$71.13
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

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

In order to determine the cost-effectiveness of its gas programs from January 1, 2021 through March 31, 2021, 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. 18A-0606EG.

	$/Dth			$/Dth	
Year	**Residential**	**Business**	**Year**	**Residential**	**Business**
2021	$2.57	$2.56	**2031**	$4.44	$4.43
2022	$2.79	$2.77	**2032**	$4.58	$4.57
2023	$2.99	$2.98	**2033**	$4.79	$4.78
2024	$3.21	$3.20	**2034**	$4.96	$4.95
2025	$3.45	$3.44	**2035**	$5.10	$5.09
2026	$3.59	$3.58	**2036**	$5.28	$5.26
2027	$3.73	$3.72	**2037**	$5.48	$5.46
2028	$3.89	$3.88	**2038**	$5.58	$5.56
2029	$4.10	$4.09	**2039**	$5.75	$5.73
2030	$4.28	$4.26	**2040**	$5.86	$5.84

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. 18A-0606EG.

Year	$/Dth
20201-2040	$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. 18A-0606EG.

Year	$/Dth
2021-2040	$35.02

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

In order to determine the cost-effectiveness of its gas programs from April 1, 2021 through December 31, 2021, 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**
2021	$2.33	$2.30	**2031**	$3.60	$3.57
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

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
20201-2040	$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
2021-2040	$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 2021 DSM Plan.

PORTFOLIO TOTAL

2021 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	$112,315,890	$112,315,890	$112,315,890
Trans. & Dist. Capacity	N/A	$11,652,782	$11,652,782	$11,652,782
Marginal Energy	N/A	$116,789,911	$116,789,911	$116,789,911
Avoided Emissions (CO2)	N/A	N/A	N/A	$83,409,179
Subtotal				$324,167,763
Non-Energy Benefits Adder (22.6%)				$54,487,255
Subtotal	N/A	$240,758,584	$240,758,584	$378,655,019
Participant Benefits				
Bill Reduction - Electric	$481,809,784	N/A	N/A	N/A
Participant Rebates and Incentives	$57,222,768	N/A	N/A	$57,222,768
Incremental Capital Savings	$15,214,667	N/A	N/A	$10,744,851
Incremental O&M Savings	$7,419,920	N/A	N/A	$7,197,876
Subtotal	$561,667,139	N/A	N/A	$75,165,495
Total Benefits	$561,667,139	$240,758,584	$240,758,584	$453,820,514
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$28,586,426	$28,586,426	$28,586,426
Advertising/Promotion/Customer Ed	N/A	$3,938,593	$3,938,593	$3,938,593
Participant Rebates and Incentives	N/A	$57,222,768	$57,222,768	$57,222,768
Equipment & Installation	N/A	$209,251	$209,251	$209,251
Measurement and Verification	N/A	$2,212,297	$2,212,297	$2,212,297
Subtotal	N/A	$92,169,335	$92,169,335	$92,169,335
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$481,809,784	N/A
Subtotal	N/A	N/A	$481,809,784	N/A
Participant Costs				
Incremental Capital Costs	$120,670,548	N/A	N/A	$105,956,351
Incremental O&M Costs	$1,985,304	N/A	N/A	$1,607,101
Subtotal	$122,655,852	N/A	N/A	$107,563,452
Total Costs	$122,655,852	$92,169,335	$573,979,119	$199,732,787
Net Benefit (Cost)	$439,011,287	$148,589,249	($333,220,535)	**$254,087,726**
Benefit/Cost Ratio	4.58	2.61	0.42	**2.27**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	14.5 years
T & D Loss Factor (Energy)	B	5.76%
T & D Loss Factor (Demand)	C	8.95%
Net-to-Gross (Energy)	D	80.85%
Net-to-Gross (Demand)	E	89.54%
Installation Rate (Energy)	F	**97.74%**
Installation Rate (Demand)	G	**95.38%**
Net coincident kW Saved at Generator	H	0.04 kW
Gross Annual kWh Saved at Customer	I	120.2 kW
Net Annual kWh Saved at Generator	J	100.3 kW

Program Summary All Participants		
Total Budget	K	**$92,169,335**
Net coincident kW Saved at Generator	L	**175,856 kW**
Gross Annual kWh Saved at Customer	M	584,998,183 kWh
Net Annual kWh Saved at Generator	N	**488,491,674 kWh**
Total MTRC Net Benefits with Adder	O	**$254,087,726**
Total MTRC Net Benefits without Adder	P	**$199,600,471**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0130**
Utility Program Cost per kW at Gen	K/ L	**$524**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**2,183,786**

EE PORTFOLIO TOTAL

2021 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	$93,046,253	$93,046,253	$93,046,253
Trans. & Dist. Capacity	N/A	$11,652,782	$11,652,782	$11,652,782
Marginal Energy	N/A	$116,746,161	$116,746,161	$116,746,161
Avoided Emissions (CO2)	N/A	N/A	N/A	$83,364,472
Subtotal				$304,809,668
Non-Energy Benefits Adder (22.9%)				$50,624,578
Subtotal	N/A	$221,445,196	$221,445,196	$355,434,246
Participant Benefits				
Bill Reduction - Electric	$481,548,740	N/A	N/A	N/A
Participant Rebates and Incentives	$47,884,433	N/A	N/A	$47,884,433
Incremental Capital Savings	$15,214,667	N/A	N/A	$10,744,851
Incremental O&M Savings	$7,419,920	N/A	N/A	$7,197,876
Subtotal	$552,067,760	N/A	N/A	$65,827,160
Total Benefits	$552,067,760	$221,445,196	$221,445,196	$421,261,406
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$22,544,666	$22,544,666	$22,544,666
Advertising/Promotion/Customer Ed	N/A	$3,444,854	$3,444,854	$3,444,854
Participant Rebates and Incentives	N/A	$47,884,433	$47,884,433	$47,884,433
Equipment & Installation	N/A	$207,946	$207,946	$207,946
Measurement and Verification	N/A	$2,111,496	$2,111,496	$2,111,496
Subtotal	N/A	$76,193,395	$76,193,395	$76,193,395
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$481,548,740	N/A
Subtotal	N/A	N/A	$481,548,740	N/A
Participant Costs				
Incremental Capital Costs	$120,578,934	N/A	N/A	$105,864,737
Incremental O&M Costs	$1,985,304	N/A	N/A	$1,607,101
Subtotal	$122,564,238	N/A	N/A	$107,471,838
Total Costs	$122,564,238	$76,193,395	$557,742,134	$183,665,233
Net Benefit (Cost)	$429,503,522	$145,251,801	($336,296,938)	**$237,596,173**
Benefit/Cost Ratio	4.50	2.91	0.40	**2.29**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	14.5 years
T & D Loss Factor (Energy)	B	5.76%
T & D Loss Factor (Demand)	C	8.24%
Net-to-Gross (Energy)	D	80.80%
Net-to-Gross (Demand)	E	82.73%
Installation Rate (Energy)	F	**97.74%**
Installation Rate (Demand)	G	**91.74%**
Net coincident kW Saved at Generator	H	0.02 kW
Gross Annual kWh Saved at Customer	I	119.9 kW
Net Annual kWh Saved at Generator	J	100.0 kW

Program Summary All Participants		
Total Budget	K	**$76,193,395**
Net coincident kW Saved at Generator	L	**93,862 kW**
Gross Annual kWh Saved at Customer	M	583,639,788 kWh
Net Annual kWh Saved at Generator	N	**487,055,966 kWh**
Total MTRC Net Benefits with Adder	O	**$237,596,173**
Total MTRC Net Benefits without Adder	P	**$186,971,595**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0108**
Utility Program Cost per kW at Gen	K/ L	**$812**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**2,182,816**

BUSINESS PROGRAM EE TOTAL

2021 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	$57,179,676	$57,179,676	$57,179,676
Trans. & Dist. Capacity	N/A	$7,160,985	$7,160,985	$7,160,985
Marginal Energy	N/A	$68,641,935	$68,641,935	$68,641,935
Avoided Emissions (CO2)	N/A	N/A	N/A	$47,748,169
Subtotal				$180,730,765
Non-Energy Benefits Adder (20.0%)				$26,596,519
Subtotal	N/A	$132,982,596	$132,982,596	$207,327,284
Participant Benefits				
Bill Reduction - Electric	$241,873,277	N/A	N/A	N/A
Participant Rebates and Incentives	$29,981,889	N/A	N/A	$29,981,889
Incremental Capital Savings	$2,032	N/A	N/A	$1,579
Incremental O&M Savings	$5,929,178	N/A	N/A	$5,733,030
Subtotal	$277,786,377	N/A	N/A	$35,716,498
Total Benefits	$277,786,377	$132,982,596	$132,982,596	$243,043,782
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$11,310,800	$11,310,800	$11,310,800
Advertising/Promotion/Customer Ed	N/A	$698,529	$698,529	$698,529
Participant Rebates and Incentives	N/A	$29,981,889	$29,981,889	$29,981,889
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$976,930	$976,930	$976,930
Subtotal	N/A	$42,968,148	$42,968,148	$42,968,148
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$241,873,277	N/A
Subtotal	N/A	N/A	$241,873,277	N/A
Participant Costs				
Incremental Capital Costs	$96,982,413	N/A	N/A	$86,178,980
Incremental O&M Costs	$1,253,025	N/A	N/A	$1,048,907
Subtotal	$98,235,439	N/A	N/A	$87,227,887
Total Costs	$98,235,439	$42,968,148	$284,841,426	$130,196,036
Net Benefit (Cost)	$179,550,938	$90,014,447	($151,858,830)	**$112,847,747**
Benefit/Cost Ratio	2.83	3.09	0.47	**1.87**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	15.8 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	87.44%
Net-to-Gross (Demand)	E	88.24%
Installation Rate (Energy)	F	**99.92%**
Installation Rate (Demand)	G	**99.94%**
Net coincident kW Saved at Generator	H	0.08 kW
Gross Annual kWh Saved at Customer	I	441.9 kW
Net Annual kWh Saved at Generator	J	407.9 kW

Program Summary All Participants		
Total Budget	K	**$42,968,148**
Net coincident kW Saved at Generator	L	**52,941 kW**
Gross Annual kWh Saved at Customer	M	297,004,658 kWh
Net Annual kWh Saved at Generator	N	**274,137,620 kWh**
Total MTRC Net Benefits with Adder	O	**$112,847,747**
Total MTRC Net Benefits without Adder	P	**$86,251,228**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0099**
Utility Program Cost per kW at Gen	K/ L	**$812**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**1,250,431**

RESIDENTIAL PROGRAM EE TOTAL

2021 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified Total Resource Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$28,798,817	$28,798,817	$28,798,817
Trans. & Dist. Capacity	N/A	$3,606,655	$3,606,655	$3,606,655
Marginal Energy	N/A	$34,938,667	$34,938,667	$34,938,667
Avoided Emissions (CO2)	N/A	N/A	N/A	$26,691,747
Subtotal				$94,035,886
Non-Energy Benefits Adder (20.0%)				$13,468,828
Subtotal	N/A	$67,344,138	$67,344,138	$107,504,714
Participant Benefits				
Bill Reduction - Electric	$175,516,516	N/A	N/A	N/A
Participant Rebates and Incentives	$13,948,471	N/A	N/A	$13,948,471
Incremental Capital Savings	$14,903,763	N/A	N/A	$10,434,400
Incremental O&M Savings	$845,214	N/A	N/A	$819,319
Subtotal	$205,213,965	N/A	N/A	$25,202,190
Total Benefits	$205,213,965	$67,344,138	$67,344,138	$132,706,904
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$6,781,946	$6,781,946	$6,781,946
Advertising/Promotion/Customer Ed	N/A	$1,900,878	$1,900,878	$1,900,878
Participant Rebates and Incentives	N/A	$13,948,471	$13,948,471	$13,948,471
Equipment & Installation	N/A	$207,946	$207,946	$207,946
Measurement and Verification	N/A	$248,684	$248,684	$248,684
Subtotal	N/A	$23,087,925	$23,087,925	$23,087,925
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$175,516,516	N/A
Subtotal	N/A	N/A	$175,516,516	N/A
Participant Costs				
Incremental Capital Costs	$20,003,661	N/A	N/A	$16,092,898
Incremental O&M Costs	$682,488	N/A	N/A	$508,404
Subtotal	$20,686,149	N/A	N/A	$16,601,302
Total Costs	$20,686,149	$23,087,925	$198,604,441	$39,689,227
Net Benefit (Cost)	$184,527,816	$44,256,213	($131,260,303)	**$93,017,677**
Benefit/Cost Ratio	9.92	2.92	0.34	**3.34**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	12.2 years
T & D Loss Factor (Energy)	B	6.17%
T & D Loss Factor (Demand)	C	8.90%
Net-to-Gross (Energy)	D	69.62%
Net-to-Gross (Demand)	E	75.19%
Installation Rate (Energy)	F	**95.07%**
Installation Rate (Demand)	G	**80.74%**
Net coincident kW Saved at Generator	H	0.01 kW
Gross Annual kWh Saved at Customer	I	58.8 kW
Net Annual kWh Saved at Generator	J	40.7 kW

Program Summary All Participants		
Total Budget	K	**$23,087,925**
Net coincident kW Saved at Generator	L	**35,159 kW**
Gross Annual kWh Saved at Customer	M	245,980,386 kWh
Net Annual kWh Saved at Generator	N	**170,431,745 kWh**
Total MTRC Net Benefits with Adder	O	**$93,017,677**
Total MTRC Net Benefits without Adder	P	**$79,548,849**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0111**
Utility Program Cost per kW at Gen	K/ L	**$657**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**688,377**

INCOME QUALIFIED PROGRAM TOTAL

2021 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified Total Resource Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$7,067,760	$7,067,760	$7,067,760
Trans. & Dist. Capacity	N/A	$885,143	$885,143	$885,143
Marginal Energy	N/A	$13,165,559	$13,165,559	$13,165,559
Avoided Emissions (CO2)	N/A	N/A	N/A	$8,924,555
Subtotal				$30,043,017
Non-Energy Benefits Adder (50.0%)				$10,559,231
Subtotal	N/A	$21,118,462	$21,118,462	$40,602,248
Participant Benefits				
Bill Reduction - Electric	$64,158,946	N/A	N/A	N/A
Participant Rebates and Incentives	$3,396,469	N/A	N/A	$3,396,469
Incremental Capital Savings	$308,872	N/A	N/A	$308,872
Incremental O&M Savings	$645,527	N/A	N/A	$645,527
Subtotal	$68,509,815	N/A	N/A	$4,350,869
Total Benefits	$68,509,815	$21,118,462	$21,118,462	$44,953,117
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$575,396	$575,396	$575,396
Advertising/Promotion/Customer Ed	N/A	$220,833	$220,833	$220,833
Participant Rebates and Incentives	N/A	$3,396,469	$3,396,469	$3,396,469
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$101,039	$101,039	$101,039
Subtotal	N/A	$4,293,738	$4,293,738	$4,293,738
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$64,158,946	N/A
Subtotal	N/A	N/A	$64,158,946	N/A
Participant Costs				
Incremental Capital Costs	$3,592,859	N/A	N/A	$3,592,859
Incremental O&M Costs	$49,790	N/A	N/A	$49,790
Subtotal	$3,642,649	N/A	N/A	$3,642,649
Total Costs	$3,642,649	$4,293,738	$68,452,684	$7,936,387
Net Benefit (Cost)	$64,867,165	$16,824,724	($47,334,222)	**$37,016,729**
Benefit/Cost Ratio	18.81	4.92	0.31	**5.66**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	19.4 years
T & D Loss Factor (Energy)	B	6.32%
T & D Loss Factor (Demand)	C	9.01%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	**97.90%**
Installation Rate (Demand)	G	**98.34%**
Net coincident kW Saved at Generator	H	0.59 kW
Gross Annual kWh Saved at Customer	I	4,149.2 kW
Net Annual kWh Saved at Generator	J	4,336.2 kW

Program Summary All Participants		
Total Budget	K	**$4,293,738**
Net coincident kW Saved at Generator	L	**5,762 kW**
Gross Annual kWh Saved at Customer	M	40,654,743 kWh
Net Annual kWh Saved at Generator	N	**42,486,601 kWh**
Total MTRC Net Benefits with Adder	O	**$37,016,729**
Total MTRC Net Benefits without Adder	P	**$26,457,498**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0052**
Utility Program Cost per kW at Gen	K/ L	**$745**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**244,008**

DR PORTFOLIO TOTAL

2021 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	$19,269,638	$19,269,638	$19,269,638
Trans. & Dist. Capacity	N/A	$0	$0	$0
Marginal Energy	N/A	$43,750	$43,750	$43,750
Avoided Emissions (CO2)	N/A	N/A	N/A	$44,708
Subtotal				$19,358,096
Non-Energy Benefits Adder (20.0%)				$3,862,678
Subtotal	N/A	$19,313,388	$19,313,388	$23,220,773
Participant Benefits				
Bill Reduction - Electric	$261,044	N/A	N/A	N/A
Participant Rebates and Incentives	$9,338,334	N/A	N/A	$9,338,334
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$9,599,379	N/A	N/A	$9,338,334
Total Benefits	$9,599,379	$19,313,388	$19,313,388	$32,559,108
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$6,041,760	$6,041,760	$6,041,760
Advertising/Promotion/Customer Ed	N/A	$493,740	$493,740	$493,740
Participant Rebates and Incentives	N/A	$9,338,334	$9,338,334	$9,338,334
Equipment & Installation	N/A	$1,305	$1,305	$1,305
Measurement and Verification	N/A	$100,801	$100,801	$100,801
Subtotal	N/A	$15,975,940	$15,975,940	$15,975,940
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$261,044	N/A
Subtotal	N/A	N/A	$261,044	N/A
Participant Costs				
Incremental Capital Costs	$91,614	N/A	N/A	$91,614
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$91,614	N/A	N/A	$91,614
Total Costs	$91,614	$15,975,940	$16,236,985	$16,067,554
Net Benefit (Cost)	$9,507,765	$3,337,448	$3,076,403	**$16,491,553**
Benefit/Cost Ratio	104.78	1.21	1.19	**2.03**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	1.4 years
T & D Loss Factor (Energy)	B	5.38%
T & D Loss Factor (Demand)	C	9.78%
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	203.97 kW
Gross Annual kWh Saved at Customer	I	3,379.1 kW
Net Annual kWh Saved at Generator	J	3,571.4 kW

Program Summary All Participants		
Total Budget	K	**$15,975,940**
Net coincident kW Saved at Generator	L	**81,994 kW**
Gross Annual kWh Saved at Customer	M	1,358,395 kWh
Net Annual kWh Saved at Generator	N	**1,435,708 kWh**
Total MTRC Net Benefits with Adder	O	**$16,491,553**
Total MTRC Net Benefits without Adder	P	**$12,628,876**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$7.7529**
Utility Program Cost per kW at Gen	K/ L	**$195**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**970**

DR PROGRAM TOTAL

2021 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	$19,269,638	$19,269,638	$19,269,638
Trans. & Dist. Capacity	N/A	$0	$0	$0
Marginal Energy	N/A	$43,750	$43,750	$43,750
Avoided Emissions (CO2)	N/A	N/A	N/A	$44,708
Subtotal				$19,358,096
Non-Energy Benefits Adder (20.0%)				$3,862,678
Subtotal	N/A	$19,313,388	$19,313,388	$23,220,773
Participant Benefits				
Bill Reduction - Electric	$261,044	N/A	N/A	N/A
Participant Rebates and Incentives	$9,338,334	N/A	N/A	$9,338,334
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$9,599,379	N/A	N/A	$9,338,334
Total Benefits	$9,599,379	$19,313,388	$19,313,388	$32,559,108
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$5,116,905	$5,116,905	$5,116,905
Advertising/Promotion/Customer Ed	N/A	$484,903	$484,903	$484,903
Participant Rebates and Incentives	N/A	$9,338,334	$9,338,334	$9,338,334
Equipment & Installation	N/A	$380	$380	$380
Measurement and Verification	N/A	$73,370	$73,370	$73,370
Subtotal	N/A	$15,013,892	$15,013,892	$15,013,892
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$261,044	N/A
Subtotal	N/A	N/A	$261,044	N/A
Participant Costs				
Incremental Capital Costs	$91,614	N/A	N/A	$91,614
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$91,614	N/A	N/A	$91,614
Total Costs	$91,614	$15,013,892	$15,274,937	$15,105,506
Net Benefit (Cost)	$9,507,765	$4,299,496	$4,038,451	**$17,453,601**
Benefit/Cost Ratio	104.78	1.29	1.26	**2.16**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	1.4 years
T & D Loss Factor (Energy)	B	5.38%
T & D Loss Factor (Demand)	C	9.78%
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	203.97 kW
Gross Annual kWh Saved at Customer	I	3,379.1 kW
Net Annual kWh Saved at Generator	J	3,571.4 kW

Program Summary All Participants		
Total Budget	K	**$15,013,892**
Net coincident kW Saved at Generator	L	**81,994 kW**
Gross Annual kWh Saved at Customer	M	1,358,395 kWh
Net Annual kWh Saved at Generator	N	**1,435,708 kWh**
Total MTRC Net Benefits with Adder	O	**$17,453,601**
Total MTRC Net Benefits without Adder	P	**$13,590,924**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$7.2860**
Utility Program Cost per kW at Gen	K/ L	**$183**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**970**

BUSINESS ENERGY ASSESSMENTS

2021 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	$119,246	$119,246	$119,246
Trans. & Dist. Capacity	N/A	$14,934	$14,934	$14,934
Marginal Energy	N/A	$185,341	$185,341	$185,341
Avoided Emissions (CO2)	N/A	N/A	N/A	$163,320
Subtotal				$482,840
Non-Energy Benefits Adder (20.0%)				$63,904
Subtotal	N/A	$319,520	$319,520	$546,744
Participant Benefits				
Bill Reduction - Electric	$672,721	N/A	N/A	N/A
Participant Rebates and Incentives	$83,014	N/A	N/A	$83,014
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$755,735	N/A	N/A	$83,014
Total Benefits	$755,735	$319,520	$319,520	$629,758
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$146,413	$146,413	$146,413
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$83,014	$83,014	$83,014
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$229,427	$229,427	$229,427
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$672,721	N/A
Subtotal	N/A	N/A	$672,721	N/A
Participant Costs				
Incremental Capital Costs	$237,094	N/A	N/A	$230,312
Incremental O&M Costs	$8,116	N/A	N/A	$8,116
Subtotal	$245,210	N/A	N/A	$238,428
Total Costs	$245,210	$229,427	$902,148	$467,855
Net Benefit (Cost)	$510,525	$90,093	($582,628)	**$161,903**
Benefit/Cost Ratio	3.08	1.39	0.35	**1.35**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	10.5 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	94.59%
Net-to-Gross (Demand)	E	96.89%
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	337.6 kW
Net Annual kWh Saved at Generator	J	337.3 kW

Program Summary All Participants		
Total Budget	K	**$229,427**
Net coincident kW Saved at Generator	L	**143 kW**
Gross Annual kWh Saved at Customer	M	1,101,776 kWh
Net Annual kWh Saved at Generator	N	**1,100,886 kWh**
Total MTRC Net Benefits with Adder	O	**$161,903**
Total MTRC Net Benefits without Adder	P	**$97,999**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0199**
Utility Program Cost per kW at Gen	K/ L	**$1,609**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**4,129**

BUSINESS HVAC+R SYSTEMS

2021 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	$5,138,396	$5,138,396	$5,138,396
Trans. & Dist. Capacity	N/A	$643,515	$643,515	$643,515
Marginal Energy	N/A	$5,130,317	$5,130,317	$5,130,317
Avoided Emissions (CO2)	N/A	N/A	N/A	$3,862,538
Subtotal				$14,774,766
Non-Energy Benefits Adder (20.0%)				$2,182,446
Subtotal	N/A	$10,912,228	$10,912,228	$16,957,212
Participant Benefits				
Bill Reduction - Electric	$21,191,556	N/A	N/A	N/A
Participant Rebates and Incentives	$3,617,497	N/A	N/A	$3,617,497
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$3,987	N/A	N/A	$3,987
Subtotal	$24,813,040	N/A	N/A	$3,621,485
Total Benefits	$24,813,040	$10,912,228	$10,912,228	$20,578,696
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$2,281,817	$2,281,817	$2,281,817
Advertising/Promotion/Customer Ed	N/A	$491	$491	$491
Participant Rebates and Incentives	N/A	$3,617,497	$3,617,497	$3,617,497
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$32,775	$32,775	$32,775
Subtotal	N/A	$5,932,580	$5,932,580	$5,932,580
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$21,191,556	N/A
Subtotal	N/A	N/A	$21,191,556	N/A
Participant Costs				
Incremental Capital Costs	$7,853,566	N/A	N/A	$6,835,696
Incremental O&M Costs	$2,451	N/A	N/A	$1,740
Subtotal	$7,856,017	N/A	N/A	$6,837,436
Total Costs	$7,856,017	$5,932,580	$27,124,136	$12,770,016
Net Benefit (Cost)	$16,957,023	$4,979,648	($16,211,907)	**$7,808,680**
Benefit/Cost Ratio	3.16	1.84	0.40	**1.61**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	15.4 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	85.60%
Net-to-Gross (Demand)	E	84.89%
Installation Rate (Energy)	F	**100.16%**
Installation Rate (Demand)	G	**100.14%**
Net coincident kW Saved at Generator	H	2.31 kW
Gross Annual kWh Saved at Customer	I	11,870.8 kW
Net Annual kWh Saved at Generator	J	10,750.3 kW

Program Summary All Participants		
Total Budget	K	**$5,932,580**
Net coincident kW Saved at Generator	L	**4,665 kW**
Gross Annual kWh Saved at Customer	M	24,014,615 kWh
Net Annual kWh Saved at Generator	N	**21,747,901 kWh**
Total MTRC Net Benefits with Adder	O	**$7,808,680**
Total MTRC Net Benefits without Adder	P	**$5,626,235**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0177**
Utility Program Cost per kW at Gen	K/ L	**$1,272**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**99,558**

COMPRESSED AIR EFFICIENCY

2021 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	$198,114	$198,114	$198,114
Trans. & Dist. Capacity	N/A	$24,811	$24,811	$24,811
Marginal Energy	N/A	$247,943	$247,943	$247,943
Avoided Emissions (CO2)	N/A	N/A	N/A	$178,217
Subtotal				$649,085
Non-Energy Benefits Adder (20.0%)				$94,174
Subtotal	N/A	$470,868	$470,868	$743,259
Participant Benefits				
Bill Reduction - Electric	$790,667	N/A	N/A	N/A
Participant Rebates and Incentives	$156,735	N/A	N/A	$156,735
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$608	N/A	N/A	$444
Subtotal	$948,010	N/A	N/A	$157,179
Total Benefits	$948,010	$470,868	$470,868	$900,438
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$181,030	$181,030	$181,030
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$156,735	$156,735	$156,735
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$3,352	$3,352	$3,352
Subtotal	N/A	$341,118	$341,118	$341,118
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$790,667	N/A
Subtotal	N/A	N/A	$790,667	N/A
Participant Costs				
Incremental Capital Costs	$315,290	N/A	N/A	$259,799
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$315,290	N/A	N/A	$259,799
Total Costs	$315,290	$341,118	$1,131,785	$600,917
Net Benefit (Cost)	$632,720	$129,751	($660,916)	**$299,521**
Benefit/Cost Ratio	3.01	1.38	0.42	**1.50**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
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	82.64%
Net-to-Gross (Demand)	E	82.03%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	3.97 kW
Gross Annual kWh Saved at Customer	I	25,701.3 kW
Net Annual kWh Saved at Generator	J	22,435.5 kW

Program Summary All Participants		
Total Budget	K	**$341,118**
Net coincident kW Saved at Generator	L	**191 kW**
Gross Annual kWh Saved at Customer	M	1,233,663 kWh
Net Annual kWh Saved at Generator	N	**1,076,904 kWh**
Total MTRC Net Benefits with Adder	O	**$299,521**
Total MTRC Net Benefits without Adder	P	**$205,348**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0212**
Utility Program Cost per kW at Gen	K/ L	**$1,788**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**4,651**

CUSTOM EFFICIENCY

2021 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	$60,579	$60,579	$60,579
Trans. & Dist. Capacity	N/A	$7,587	$7,587	$7,587
Marginal Energy	N/A	$55,232	$55,232	$55,232
Avoided Emissions (CO2)	N/A	N/A	N/A	$38,131
Subtotal				$161,528
Non-Energy Benefits Adder (20.0%)				$24,679
Subtotal	N/A	$123,397	$123,397	$186,208
Participant Benefits				
Bill Reduction - Electric	$207,271	N/A	N/A	N/A
Participant Rebates and Incentives	$43,732	N/A	N/A	$43,732
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$249,864	N/A	N/A	$217,381
Subtotal	$500,866	N/A	N/A	$261,113
Total Benefits	$500,866	$123,397	$123,397	$447,321
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$363,860	$363,860	$363,860
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$43,732	$43,732	$43,732
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$922	$922	$922
Subtotal	N/A	$408,514	$408,514	$408,514
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$207,271	N/A
Subtotal	N/A	N/A	$207,271	N/A
Participant Costs				
Incremental Capital Costs	$165,504	N/A	N/A	$143,988
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$165,504	N/A	N/A	$143,988
Total Costs	$165,504	$408,514	$615,784	$552,502
Net Benefit (Cost)	$335,362	($285,116)	($492,387)	**($105,181)**
Benefit/Cost Ratio	3.03	0.30	0.20	**0.81**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
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	9.70 kW
Gross Annual kWh Saved at Customer	I	44,505.6 kW
Net Annual kWh Saved at Generator	J	40,900.7 kW

Program Summary All Participants		
Total Budget	K	**$408,514**
Net coincident kW Saved at Generator	L	**49 kW**
Gross Annual kWh Saved at Customer	M	222,528 kWh
Net Annual kWh Saved at Generator	N	**204,503 kWh**
Total MTRC Net Benefits with Adder	O	**($105,181)**
Total MTRC Net Benefits without Adder	P	**($129,861)**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.1108**
Utility Program Cost per kW at Gen	K/ L	**$8,420**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**988**

DATA CENTER EFFICIENCY

2021 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	$1,549,185	$1,549,185	$1,549,185
Trans. & Dist. Capacity	N/A	$194,015	$194,015	$194,015
Marginal Energy	N/A	$2,937,302	$2,937,302	$2,937,302
Avoided Emissions (CO2)	N/A	N/A	N/A	$2,327,839
Subtotal				$7,008,341
Non-Energy Benefits Adder (20.0%)				$936,100
Subtotal	N/A	$4,680,502	$4,680,502	$7,944,441
Participant Benefits				
Bill Reduction - Electric	$10,813,847	N/A	N/A	N/A
Participant Rebates and Incentives	$1,013,696	N/A	N/A	$1,013,696
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$1,965,438	N/A	N/A	$1,965,438
Subtotal	$13,792,981	N/A	N/A	$2,979,134
Total Benefits	$13,792,981	$4,680,502	$4,680,502	$10,923,575
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$131,239	$131,239	$131,239
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$1,013,696	$1,013,696	$1,013,696
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$1,144,936	$1,144,936	$1,144,936
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$10,813,847	N/A
Subtotal	N/A	N/A	$10,813,847	N/A
Participant Costs				
Incremental Capital Costs	$12,374,936	N/A	N/A	$12,345,141
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$12,374,936	N/A	N/A	$12,345,141
Total Costs	$12,374,936	$1,144,936	$11,958,783	$13,490,076
Net Benefit (Cost)	$1,418,045	$3,535,566	($7,278,281)	**($2,566,501)**
Benefit/Cost Ratio	1.11	4.09	0.39	**0.81**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	19.5 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	98.28%
Net-to-Gross (Demand)	E	98.40%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	54.15 kW
Gross Annual kWh Saved at Customer	I	446,308.2 kW
Net Annual kWh Saved at Generator	J	463,323.3 kW

Program Summary All Participants		
Total Budget	K	**$1,144,936**
Net coincident kW Saved at Generator	L	**1,354 kW**
Gross Annual kWh Saved at Customer	M	11,157,704 kWh
Net Annual kWh Saved at Generator	N	**11,583,082 kWh**
Total MTRC Net Benefits with Adder	O	**($2,566,501)**
Total MTRC Net Benefits without Adder	P	**($3,502,602)**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0051**
Utility Program Cost per kW at Gen	K/ L	**$846**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**61,601**

ENERGY MANAGEMENT SYSTEMS

2021 ELECTRIC ACTUALS

2021 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	$153,316	$153,316	$153,316
Trans. & Dist. Capacity	N/A	$19,201	$19,201	$19,201
Marginal Energy	N/A	$832,872	$832,872	$832,872
Avoided Emissions (CO2)	N/A	N/A	N/A	$624,817
Subtotal				$1,630,206
Non-Energy Benefits Adder (20.0%)				$201,078
Subtotal	N/A	$1,005,389	$1,005,389	$1,831,284
Participant Benefits				
Bill Reduction - Electric	$1,673,984	N/A	N/A	N/A
Participant Rebates and Incentives	$221,109	N/A	N/A	$221,109
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$980,145	N/A	N/A	$852,726
Subtotal	$2,875,239	N/A	N/A	$1,073,835
Total Benefits	$2,875,239	$1,005,389	$1,005,389	$2,905,119
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$261,019	$261,019	$261,019
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$221,109	$221,109	$221,109
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$482,128	$482,128	$482,128
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,673,984	N/A
Subtotal	N/A	N/A	$1,673,984	N/A
Participant Costs				
Incremental Capital Costs	$781,083	N/A	N/A	$679,542
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$781,083	N/A	N/A	$679,542
Total Costs	$781,083	$482,128	$2,156,112	$1,161,670
Net Benefit (Cost)	$2,094,156	$523,261	($1,150,723)	**$1,743,449**
Benefit/Cost Ratio	3.68	2.09	0.47	**2.50**

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 Unit		
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	17.54 kW
Gross Annual kWh Saved at Customer	I	435,477.3 kW
Net Annual kWh Saved at Generator	J	400,204.1 kW

Program Summary All Participants		
Total Budget	K	**$482,128**
Net coincident kW Saved at Generator	L	**140 kW**
Gross Annual kWh Saved at Customer	M	3,483,818 kWh
Net Annual kWh Saved at Generator	N	**3,201,633 kWh**
Total MTRC Net Benefits with Adder	O	**$1,743,449**
Total MTRC Net Benefits without Adder	P	**$1,542,371**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0100**
Utility Program Cost per kW at Gen	K/ L	**$3,436**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**16,722**

LED STREET LIGHTING

2021 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	$483,050	$483,050	$483,050
Avoided Emissions (CO2)	N/A	N/A	N/A	$355,396
Subtotal				$838,446
Non-Energy Benefits Adder (20.0%)				$96,610
Subtotal	N/A	$483,050	$483,050	$935,056
Participant Benefits				
Bill Reduction - Electric	$1,488,731	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	$1,488,731	N/A	N/A	$0
Total Benefits	$1,488,731	$483,050	$483,050	$935,056
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	$1,488,731	N/A
Subtotal	N/A	N/A	$1,488,731	N/A
Participant Costs				
Incremental Capital Costs	$426,762	N/A	N/A	$384,086
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$426,762	N/A	N/A	$384,086
Total Costs	$426,762	$0	$1,488,731	$384,086
Net Benefit (Cost)	$1,061,969	$483,050	($1,005,681)	**$550,970**
Benefit/Cost Ratio	3.49	INF	0.32	**2.43**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
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	1,680,488.0 kW
Net Annual kWh Saved at Generator	J	1,597,624.5 kW

Program Summary All Participants		
Total Budget	K	**$0**
Net coincident kW Saved at Generator	L	**0 kW**
Gross Annual kWh Saved at Customer	M	1,680,488 kWh
Net Annual kWh Saved at Generator	N	**1,597,625 kWh**
Total MTRC Net Benefits with Adder	O	**$550,970**
Total MTRC Net Benefits without Adder	P	**$454,360**

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)	**9,590**

LIGHTING EFFICIENCY

2021 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	$13,987,308	$13,987,308	$13,987,308
Trans. & Dist. Capacity	N/A	$1,751,721	$1,751,721	$1,751,721
Marginal Energy	N/A	$21,231,018	$21,231,018	$21,231,018
Avoided Emissions (CO2)	N/A	N/A	N/A	$12,394,968
Subtotal				$49,365,014
Non-Energy Benefits Adder (20.0%)				$7,394,009
Subtotal	N/A	$36,970,047	$36,970,047	$56,759,024
Participant Benefits				
Bill Reduction - Electric	$61,073,662	N/A	N/A	N/A
Participant Rebates and Incentives	$7,519,776	N/A	N/A	$7,519,776
Incremental Capital Savings	$2,032	N/A	N/A	$1,579
Incremental O&M Savings	$13	N/A	N/A	$10
Subtotal	$68,595,483	N/A	N/A	$7,521,365
Total Benefits	$68,595,483	$36,970,047	$36,970,047	$64,280,389
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$2,354,278	$2,354,278	$2,354,278
Advertising/Promotion/Customer Ed	N/A	$371,203	$371,203	$371,203
Participant Rebates and Incentives	N/A	$7,519,776	$7,519,776	$7,519,776
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$39,999	$39,999	$39,999
Subtotal	N/A	$10,285,256	$10,285,256	$10,285,256
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$61,073,662	N/A
Subtotal	N/A	N/A	$61,073,662	N/A
Participant Costs				
Incremental Capital Costs	$27,746,235	N/A	N/A	$20,523,629
Incremental O&M Costs	$634,889	N/A	N/A	$466,289
Subtotal	$28,381,124	N/A	N/A	$20,989,917
Total Costs	$28,381,124	$10,285,256	$71,358,918	$31,275,173
Net Benefit (Cost)	$40,214,359	$26,684,790	($34,388,872)	**$33,005,215**
Benefit/Cost Ratio	2.42	3.59	0.52	**2.06**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	16.0 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	74.47%
Net-to-Gross (Demand)	E	74.56%
Installation Rate (Energy)	F	**99.95%**
Installation Rate (Demand)	G	**99.95%**
Net coincident kW Saved at Generator	H	0.04 kW
Gross Annual kWh Saved at Customer	I	295.7 kW
Net Annual kWh Saved at Generator	J	232.5 kW

Program Summary All Participants		
Total Budget	K	**$10,285,256**
Net coincident kW Saved at Generator	L	**11,636 kW**
Gross Annual kWh Saved at Customer	M	89,502,610 kWh
Net Annual kWh Saved at Generator	N	**70,367,385 kWh**
Total MTRC Net Benefits with Adder	O	**$33,005,215**
Total MTRC Net Benefits without Adder	P	**$25,611,206**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0092**
Utility Program Cost per kW at Gen	K/ L	**$884**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**327,662**

NEW CONSTRUCTION

2021 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	$22,219,324	$22,219,324	$22,219,324
Trans. & Dist. Capacity	N/A	$2,782,675	$2,782,675	$2,782,675
Marginal Energy	N/A	$19,531,344	$19,531,344	$19,531,344
Avoided Emissions (CO2)	N/A	N/A	N/A	$13,361,368
Subtotal				$57,894,711
Non-Energy Benefits Adder (20.0%)				$8,906,669
Subtotal	N/A	$44,533,344	$44,533,344	$66,801,380
Participant Benefits				
Bill Reduction - Electric	$71,559,111	N/A	N/A	N/A
Participant Rebates and Incentives	$9,622,083	N/A	N/A	$9,622,083
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$81,181,194	N/A	N/A	$9,622,083
Total Benefits	$81,181,194	$44,533,344	$44,533,344	$76,423,463
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$2,756,305	$2,756,305	$2,756,305
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$9,622,083	$9,622,083	$9,622,083
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$475,868	$475,868	$475,868
Subtotal	N/A	$12,854,255	$12,854,255	$12,854,255
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$71,559,111	N/A
Subtotal	N/A	N/A	$71,559,111	N/A
Participant Costs				
Incremental Capital Costs	$26,723,999	N/A	N/A	$25,387,799
Incremental O&M Costs	$277,315	N/A	N/A	$263,449
Subtotal	$27,001,313	N/A	N/A	$25,651,248
Total Costs	$27,001,313	$12,854,255	$84,413,366	$38,505,503
Net Benefit (Cost)	$54,179,880	$31,679,089	($39,880,022)	**$37,917,960**
Benefit/Cost Ratio	3.01	3.46	0.53	**1.98**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	19.0 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	95.00%
Net-to-Gross (Demand)	E	95.00%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	15.38 kW
Gross Annual kWh Saved at Customer	I	58,022.5 kW
Net Annual kWh Saved at Generator	J	58,226.0 kW

Program Summary All Participants		
Total Budget	K	**$12,854,255**
Net coincident kW Saved at Generator	L	**18,230 kW**
Gross Annual kWh Saved at Customer	M	68,772,893 kWh
Net Annual kWh Saved at Generator	N	**69,014,079 kWh**
Total MTRC Net Benefits with Adder	O	**$37,917,960**
Total MTRC Net Benefits without Adder	P	**$29,011,291**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0098**
Utility Program Cost per kW at Gen	K/ L	**$705**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**356,691**

SELF DIRECT

2021 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	$104,082	$104,082	$104,082
Trans. & Dist. Capacity	N/A	$13,035	$13,035	$13,035
Marginal Energy	N/A	$366,708	$366,708	$366,708
Avoided Emissions (CO2)	N/A	N/A	N/A	$209,483
Subtotal				$693,308
Non-Energy Benefits Adder (20.0%)				$96,765
Subtotal	N/A	$483,825	$483,825	$790,073
Participant Benefits				
Bill Reduction - Electric	$1,048,980	N/A	N/A	N/A
Participant Rebates and Incentives	$70,633	N/A	N/A	$70,633
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$1,119,613	N/A	N/A	$70,633
Total Benefits	$1,119,613	$483,825	$483,825	$860,706
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$86,744	$86,744	$86,744
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$70,633	$70,633	$70,633
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$157,377	$157,377	$157,377
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,048,980	N/A
Subtotal	N/A	N/A	$1,048,980	N/A
Participant Costs				
Incremental Capital Costs	$317,814	N/A	N/A	$287,939
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$317,814	N/A	N/A	$287,939
Total Costs	$317,814	$157,377	$1,206,358	$445,317
Net Benefit (Cost)	$801,799	$326,447	($722,533)	**$415,389**
Benefit/Cost Ratio	3.52	3.07	0.40	**1.93**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
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	90.60%
Net-to-Gross (Demand)	E	90.60%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	90.39 kW
Gross Annual kWh Saved at Customer	I	1,164,265.0 kW
Net Annual kWh Saved at Generator	J	1,114,235.1 kW

Program Summary All Participants		
Total Budget	K	**$157,377**
Net coincident kW Saved at Generator	L	**90 kW**
Gross Annual kWh Saved at Customer	M	1,164,265 kWh
Net Annual kWh Saved at Generator	N	**1,114,235 kWh**
Total MTRC Net Benefits with Adder	O	**$415,389**
Total MTRC Net Benefits without Adder	P	**$318,624**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0078**
Utility Program Cost per kW at Gen	K/ L	**$1,741**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**5,828**

SMALL BUSINESS SOLUTIONS

2021 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	$4,609,564	$4,609,564	$4,609,564
Trans. & Dist. Capacity	N/A	$577,283	$577,283	$577,283
Marginal Energy	N/A	$6,046,067	$6,046,067	$6,046,067
Avoided Emissions (CO2)	N/A	N/A	N/A	$4,804,450
Subtotal				$16,037,364
Non-Energy Benefits Adder (20.0%)				$2,246,583
Subtotal	N/A	$11,232,914	$11,232,914	$18,283,947
Participant Benefits				
Bill Reduction - Electric	$22,863,827	N/A	N/A	N/A
Participant Rebates and Incentives	$2,977,146	N/A	N/A	$2,977,146
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$18,690	N/A	N/A	$17,568
Subtotal	$25,859,662	N/A	N/A	$2,994,714
Total Benefits	$25,859,662	$11,232,914	$11,232,914	$21,278,661
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$855,380	$855,380	$855,380
Advertising/Promotion/Customer Ed	N/A	$9,913	$9,913	$9,913
Participant Rebates and Incentives	N/A	$2,977,146	$2,977,146	$2,977,146
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$30,746	$30,746	$30,746
Subtotal	N/A	$3,873,185	$3,873,185	$3,873,185
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$22,863,827	N/A
Subtotal	N/A	N/A	$22,863,827	N/A
Participant Costs				
Incremental Capital Costs	$7,198,381	N/A	N/A	$6,355,442
Incremental O&M Costs	$198,531	N/A	N/A	$180,387
Subtotal	$7,396,912	N/A	N/A	$6,535,829
Total Costs	$7,396,912	$3,873,185	$26,737,012	$10,409,014
Net Benefit (Cost)	$18,462,750	$7,359,729	($15,504,098)	**$10,869,647**
Benefit/Cost Ratio	3.50	2.90	0.42	**2.04**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	10.5 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	84.56%
Net-to-Gross (Demand)	E	84.47%
Installation Rate (Energy)	F	**99.42%**
Installation Rate (Demand)	G	**99.45%**
Net coincident kW Saved at Generator	H	0.02 kW
Gross Annual kWh Saved at Customer	I	115.7 kW
Net Annual kWh Saved at Generator	J	102.7 kW

Program Summary All Participants		
Total Budget	K	**$3,873,185**
Net coincident kW Saved at Generator	L	**6,088 kW**
Gross Annual kWh Saved at Customer	M	38,704,214 kWh
Net Annual kWh Saved at Generator	N	**34,381,141 kWh**
Total MTRC Net Benefits with Adder	O	**$10,869,647**
Total MTRC Net Benefits without Adder	P	**$8,623,064**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0107**
Utility Program Cost per kW at Gen	K/ L	**$636**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**121,026**

STRATEGIC ENERGY MANAGEMENT

2021 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	$9,040,562	$9,040,562	$9,040,562
Trans. & Dist. Capacity	N/A	$1,132,208	$1,132,208	$1,132,208
Marginal Energy	N/A	$11,594,742	$11,594,742	$11,594,742
Avoided Emissions (CO2)	N/A	N/A	N/A	$9,427,643
Subtotal				$31,195,155
Non-Energy Benefits Adder (20.0%)				$4,353,502
Subtotal	N/A	$21,767,512	$21,767,512	$35,548,658
Participant Benefits				
Bill Reduction - Electric	$48,488,921	N/A	N/A	N/A
Participant Rebates and Incentives	$4,656,468	N/A	N/A	$4,656,468
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$2,710,434	N/A	N/A	$2,675,475
Subtotal	$55,855,822	N/A	N/A	$7,331,943
Total Benefits	$55,855,822	$21,767,512	$21,767,512	$42,880,601
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$1,530,314	$1,530,314	$1,530,314
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$4,656,468	$4,656,468	$4,656,468
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$393,268	$393,268	$393,268
Subtotal	N/A	$6,580,050	$6,580,050	$6,580,050
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$48,488,921	N/A
Subtotal	N/A	N/A	$48,488,921	N/A
Participant Costs				
Incremental Capital Costs	$12,841,751	N/A	N/A	$12,745,607
Incremental O&M Costs	$131,723	N/A	N/A	$128,927
Subtotal	$12,973,474	N/A	N/A	$12,874,534
Total Costs	$12,973,474	$6,580,050	$55,068,972	$19,454,584
Net Benefit (Cost)	$42,882,348	$15,187,462	($33,301,460)	**$23,426,016**
Benefit/Cost Ratio	4.31	3.31	0.40	**2.20**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	14.5 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	99.37%
Net-to-Gross (Demand)	E	99.38%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	0.37 kW
Gross Annual kWh Saved at Customer	I	1,984.8 kW
Net Annual kWh Saved at Generator	J	2,083.5 kW

Program Summary All Participants		
Total Budget	K	**$6,580,050**
Net coincident kW Saved at Generator	L	**10,356 kW**
Gross Annual kWh Saved at Customer	M	55,966,084 kWh
Net Annual kWh Saved at Generator	N	**58,748,246 kWh**
Total MTRC Net Benefits with Adder	O	**$23,426,016**
Total MTRC Net Benefits without Adder	P	**$19,072,514**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0077**
Utility Program Cost per kW at Gen	K/ L	**$635**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**241,985**

ENERGY EFFICIENT SHOWERHEAD

2021 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	$54,529	$54,529	$54,529
Trans. & Dist. Capacity	N/A	$6,829	$6,829	$6,829
Marginal Energy	N/A	$156,341	$156,341	$156,341
Avoided Emissions (CO2)	N/A	N/A	N/A	$132,380
Subtotal				$350,079
Non-Energy Benefits Adder (20.0%)				$43,540
Subtotal	N/A	$217,699	$217,699	$393,619
Participant Benefits				
Bill Reduction - Electric	$830,926	N/A	N/A	N/A
Participant Rebates and Incentives	$16,449	N/A	N/A	$16,449
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$429,551	N/A	N/A	$403,778
Subtotal	$1,276,926	N/A	N/A	$420,227
Total Benefits	$1,276,926	$217,699	$217,699	$813,846
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$43,285	$43,285	$43,285
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$16,449	$16,449	$16,449
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$59,734	$59,734	$59,734
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$830,926	N/A
Subtotal	N/A	N/A	$830,926	N/A
Participant Costs				
Incremental Capital Costs	$13,422	N/A	N/A	$12,617
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$13,422	N/A	N/A	$12,617
Total Costs	$13,422	$59,734	$890,660	$72,351
Net Benefit (Cost)	$1,263,504	$157,965	($672,961)	**$741,495**
Benefit/Cost Ratio	95.14	3.64	0.24	**11.25**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
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	**64.38%**
Installation Rate (Demand)	G	**59.67%**
Net coincident kW Saved at Generator	H	0.01 kW
Gross Annual kWh Saved at Customer	I	206.0 kW
Net Annual kWh Saved at Generator	J	133.1 kW

Program Summary All Participants		
Total Budget	K	**$59,734**
Net coincident kW Saved at Generator	L	**72 kW**
Gross Annual kWh Saved at Customer	M	1,371,182 kWh
Net Annual kWh Saved at Generator	N	**886,289 kWh**
Total MTRC Net Benefits with Adder	O	**$741,495**
Total MTRC Net Benefits without Adder	P	**$697,955**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0067**
Utility Program Cost per kW at Gen	K/ L	**$828**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**3,315**

ENERGY STAR NEW HOMES

2021 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	$1,191,321	$1,191,321	$1,191,321
Trans. & Dist. Capacity	N/A	$149,197	$149,197	$149,197
Marginal Energy	N/A	$1,827,567	$1,827,567	$1,827,567
Avoided Emissions (CO2)	N/A	N/A	N/A	$1,192,010
Subtotal				$4,360,095
Non-Energy Benefits Adder (20.0%)				$633,617
Subtotal	N/A	$3,168,085	$3,168,085	$4,993,712
Participant Benefits				
Bill Reduction - Electric	$9,206,156	N/A	N/A	N/A
Participant Rebates and Incentives	$727,098	N/A	N/A	$727,098
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$1,533	N/A	N/A	$1,410
Subtotal	$9,934,787	N/A	N/A	$728,509
Total Benefits	$9,934,787	$3,168,085	$3,168,085	$5,722,221
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$277,915	$277,915	$277,915
Advertising/Promotion/Customer Ed	N/A	$618	$618	$618
Participant Rebates and Incentives	N/A	$727,098	$727,098	$727,098
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$186,278	$186,278	$186,278
Subtotal	N/A	$1,191,909	$1,191,909	$1,191,909
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$9,206,156	N/A
Subtotal	N/A	N/A	$9,206,156	N/A
Participant Costs				
Incremental Capital Costs	$3,923,684	N/A	N/A	$3,609,789
Incremental O&M Costs	$855	N/A	N/A	$786
Subtotal	$3,924,538	N/A	N/A	$3,610,575
Total Costs	$3,924,538	$1,191,909	$10,398,065	$4,802,484
Net Benefit (Cost)	$6,010,249	$1,976,176	($7,229,980)	**$919,736**
Benefit/Cost Ratio	2.53	2.66	0.30	**1.19**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	19.8 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	87.89%
Net-to-Gross (Demand)	E	75.68%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	0.43 kW
Gross Annual kWh Saved at Customer	I	2,525.5 kW
Net Annual kWh Saved at Generator	J	2,370.9 kW

Program Summary All Participants		
Total Budget	K	**$1,191,909**
Net coincident kW Saved at Generator	L	**1,014 kW**
Gross Annual kWh Saved at Customer	M	5,896,538 kWh
Net Annual kWh Saved at Generator	N	**5,535,501 kWh**
Total MTRC Net Benefits with Adder	O	**$919,736**
Total MTRC Net Benefits without Adder	P	**$286,119**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0109**
Utility Program Cost per kW at Gen	K/ L	**$1,175**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**32,587**

HOME ENERGY INSIGHTS

2021 ELECTRIC ACTUALS

2021 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	$318,905	$318,905	$318,905
Trans. & Dist. Capacity	N/A	$39,936	$39,936	$39,936
Marginal Energy	N/A	$713,325	$713,325	$713,325
Avoided Emissions (CO2)	N/A	N/A	N/A	$750,608
Subtotal				$1,822,774
Non-Energy Benefits Adder (20.0%)				$214,433
Subtotal	N/A	$1,072,166	$1,072,166	$2,037,207
Participant Benefits				
Bill Reduction - Electric	$4,062,690	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	$4,062,690	N/A	N/A	$0
Total Benefits	$4,062,690	$1,072,166	$1,072,166	$2,037,207
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$2,114,289	$2,114,289	$2,114,289
Advertising/Promotion/Customer Ed	N/A	$150	$150	$150
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	$2,114,439	$2,114,439	$2,114,439
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$4,062,690	N/A
Subtotal	N/A	N/A	$4,062,690	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	$2,114,439	$6,177,129	$2,114,439
Net Benefit (Cost)	$4,062,690	($1,042,273)	($5,104,963)	**($77,231)**
Benefit/Cost Ratio	INF	0.51	0.17	**0.96**

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 Unit		
Lifetime (Weighted on Generator kWh)	A	3.0 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	3,482.15 kW
Gross Annual kWh Saved at Customer	I	8,916,666.0 kW
Net Annual kWh Saved at Generator	J	9,524,317.5 kW

Program Summary All Participants		
Total Budget	K	**$2,114,439**
Net coincident kW Saved at Generator	L	**3,482 kW**
Gross Annual kWh Saved at Customer	M	8,916,666 kWh
Net Annual kWh Saved at Generator	N	**9,524,317 kWh**
Total MTRC Net Benefits with Adder	O	**($77,231)**
Total MTRC Net Benefits without Adder	P	**($291,665)**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0740**
Utility Program Cost per kW at Gen	K/ L	**$607**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**15,715**

HOME ENERGY SQUAD

2021 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	$169,718	$169,718	$169,718
Trans. & Dist. Capacity	N/A	$21,255	$21,255	$21,255
Marginal Energy	N/A	$241,752	$241,752	$241,752
Avoided Emissions (CO2)	N/A	N/A	N/A	$171,365
Subtotal				$604,089
Non-Energy Benefits Adder (20.0%)				$86,545
Subtotal	N/A	$432,724	$432,724	$690,634
Participant Benefits				
Bill Reduction - Electric	$1,198,530	N/A	N/A	N/A
Participant Rebates and Incentives	$122,961	N/A	N/A	$122,961
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$3,632	N/A	N/A	$3,632
Subtotal	$1,325,124	N/A	N/A	$126,594
Total Benefits	$1,325,124	$432,724	$432,724	$817,228
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$128,535	$128,535	$128,535
Advertising/Promotion/Customer Ed	N/A	$66,397	$66,397	$66,397
Participant Rebates and Incentives	N/A	$122,961	$122,961	$122,961
Equipment & Installation	N/A	$207,946	$207,946	$207,946
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$525,840	$525,840	$525,840
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,198,530	N/A
Subtotal	N/A	N/A	$1,198,530	N/A
Participant Costs				
Incremental Capital Costs	$94,633	N/A	N/A	$94,633
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$94,633	N/A	N/A	$94,633
Total Costs	$94,633	$525,840	$1,724,370	$620,472
Net Benefit (Cost)	$1,230,491	($93,115)	($1,291,646)	**$196,756**
Benefit/Cost Ratio	14.00	0.82	0.25	**1.32**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	13.8 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	3.45 kW
Gross Annual kWh Saved at Customer	I	17,239.6 kW
Net Annual kWh Saved at Generator	J	18,414.4 kW

Program Summary All Participants		
Total Budget	K	**$525,840**
Net coincident kW Saved at Generator	L	**198 kW**
Gross Annual kWh Saved at Customer	M	988,173 kWh
Net Annual kWh Saved at Generator	N	**1,055,515 kWh**
Total MTRC Net Benefits with Adder	O	**$196,756**
Total MTRC Net Benefits without Adder	P	**$110,211**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0362**
Utility Program Cost per kW at Gen	K/ L	**$2,656**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**4,577**

HOME LIGHTING & RECYCLING

2021 ELECTRIC ACTUALS

2021 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	$14,261,540	$14,261,540	$14,261,540
Trans. & Dist. Capacity	N/A	$1,786,058	$1,786,058	$1,786,058
Marginal Energy	N/A	$25,371,360	$25,371,360	$25,371,360
Avoided Emissions (CO2)	N/A	N/A	N/A	$19,502,955
Subtotal				$60,921,912
Non-Energy Benefits Adder (20.0%)				$8,283,791
Subtotal	N/A	$41,418,957	$41,418,957	$69,205,703
Participant Benefits				
Bill Reduction - Electric	$126,376,883	N/A	N/A	N/A
Participant Rebates and Incentives	$5,641,677	N/A	N/A	$5,641,677
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$132,018,559	N/A	N/A	$5,641,677
Total Benefits	$132,018,559	$41,418,957	$41,418,957	$74,847,380
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$725,839	$725,839	$725,839
Advertising/Promotion/Customer Ed	N/A	$997,824	$997,824	$997,824
Participant Rebates and Incentives	N/A	$5,641,677	$5,641,677	$5,641,677
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$3,000	$3,000	$3,000
Subtotal	N/A	$7,368,340	$7,368,340	$7,368,340
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$126,376,883	N/A
Subtotal	N/A	N/A	$126,376,883	N/A
Participant Costs				
Incremental Capital Costs	$6,741,123	N/A	N/A	$4,435,281
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$6,741,123	N/A	N/A	$4,435,281
Total Costs	$6,741,123	$7,368,340	$133,745,223	$11,803,621
Net Benefit (Cost)	$125,277,437	$34,050,617	($92,326,265)	**$63,043,759**
Benefit/Cost Ratio	19.58	5.62	0.31	**6.34**

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 Unit		
Lifetime (Weighted on Generator kWh)	A	12.2 years
T & D Loss Factor (Energy)	B	6.13%
T & D Loss Factor (Demand)	C	8.71%
Net-to-Gross (Energy)	D	62.55%
Net-to-Gross (Demand)	E	62.76%
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	47.2 kW
Net Annual kWh Saved at Generator	J	31.2 kW

Program Summary All Participants		
Total Budget	K	**$7,368,340**
Net coincident kW Saved at Generator	L	**17,470 kW**
Gross Annual kWh Saved at Customer	M	189,907,730 kWh
Net Annual kWh Saved at Generator	N	**125,257,347 kWh**
Total MTRC Net Benefits with Adder	O	**$63,043,759**
Total MTRC Net Benefits without Adder	P	**$54,759,968**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0048**
Utility Program Cost per kW at Gen	K/ L	**$422**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**502,754**

INSULATION & AIR SEALING

2021 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	$410,215	$410,215	$410,215
Trans. & Dist. Capacity	N/A	$51,374	$51,374	$51,374
Marginal Energy	N/A	$89,497	$89,497	$89,497
Avoided Emissions (CO2)	N/A	N/A	N/A	$63,918
Subtotal				$615,003
Non-Energy Benefits Adder (20.0%)				$110,217
Subtotal	N/A	$551,086	$551,086	$725,220
Participant Benefits				
Bill Reduction - Electric	$473,623	N/A	N/A	N/A
Participant Rebates and Incentives	$282,667	N/A	N/A	$282,667
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$756,290	N/A	N/A	$282,667
Total Benefits	$756,290	$551,086	$551,086	$1,007,888
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$36,240	$36,240	$36,240
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$282,667	$282,667	$282,667
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$1,250	$1,250	$1,250
Subtotal	N/A	$320,157	$320,157	$320,157
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$473,623	N/A
Subtotal	N/A	N/A	$473,623	N/A
Participant Costs				
Incremental Capital Costs	$1,297,787	N/A	N/A	$1,155,030
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$1,297,787	N/A	N/A	$1,155,030
Total Costs	$1,297,787	$320,157	$793,780	$1,475,188
Net Benefit (Cost)	($541,497)	$230,928	($242,695)	**($467,300)**
Benefit/Cost Ratio	0.58	1.72	0.69	**0.68**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	15.0 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	0.40 kW
Gross Annual kWh Saved at Customer	I	357.7 kW
Net Annual kWh Saved at Generator	J	340.0 kW

Program Summary All Participants		
Total Budget	K	**$320,157**
Net coincident kW Saved at Generator	L	**392 kW**
Gross Annual kWh Saved at Customer	M	347,017 kWh
Net Annual kWh Saved at Generator	N	**329,892 kWh**
Total MTRC Net Benefits with Adder	O	**($467,300)**
Total MTRC Net Benefits without Adder	P	**($577,517)**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0648**
Utility Program Cost per kW at Gen	K/ L	**$817**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**1,678**

MULTIFAMILY BUILDINGS

2021 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	$742,954	$742,954	$742,954
Trans. & Dist. Capacity	N/A	$93,045	$93,045	$93,045
Marginal Energy	N/A	$1,359,242	$1,359,242	$1,359,242
Avoided Emissions (CO2)	N/A	N/A	N/A	$1,035,958
Subtotal				$3,231,198
Non-Energy Benefits Adder (20.0%)				$439,048
Subtotal	N/A	$2,195,240	$2,195,240	$3,670,246
Participant Benefits				
Bill Reduction - Electric	$5,715,765	N/A	N/A	N/A
Participant Rebates and Incentives	$1,026,065	N/A	N/A	$1,026,065
Incremental Capital Savings	$5,887	N/A	N/A	$5,887
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$6,747,716	N/A	N/A	$1,031,951
Total Benefits	$6,747,716	$2,195,240	$2,195,240	$4,702,198
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$155,656	$155,656	$155,656
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$1,026,065	$1,026,065	$1,026,065
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$1,181,721	$1,181,721	$1,181,721
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$5,715,765	N/A
Subtotal	N/A	N/A	$5,715,765	N/A
Participant Costs				
Incremental Capital Costs	$1,107,913	N/A	N/A	$1,107,913
Incremental O&M Costs	$19,613	N/A	N/A	$19,613
Subtotal	$1,127,525	N/A	N/A	$1,127,525
Total Costs	$1,127,525	$1,181,721	$6,897,486	$2,309,246
Net Benefit (Cost)	$5,620,191	$1,013,519	($4,702,246)	**$2,392,951**
Benefit/Cost Ratio	5.98	1.86	0.32	**2.04**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	13.6 years
T & D Loss Factor (Energy)	B	5.73%
T & D Loss Factor (Demand)	C	8.22%
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	250.9 kW
Net Annual kWh Saved at Generator	J	266.2 kW

Program Summary All Participants		
Total Budget	K	**$1,181,721**
Net coincident kW Saved at Generator	L	**888 kW**
Gross Annual kWh Saved at Customer	M	6,103,243 kWh
Net Annual kWh Saved at Generator	N	**6,473,881 kWh**
Total MTRC Net Benefits with Adder	O	**$2,392,951**
Total MTRC Net Benefits without Adder	P	**$1,953,903**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0134**
Utility Program Cost per kW at Gen	K/ L	**$1,330**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**27,061**

REFRIGERATOR & FREEZER RECYCLING — 2021 ELECTRIC — ACTUALS

2021 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	$268,102	$268,102	$268,102
Trans. & Dist. Capacity	N/A	$33,576	$33,576	$33,576
Marginal Energy	N/A	$468,337	$468,337	$468,337
Avoided Emissions (CO2)	N/A	N/A	N/A	$478,377
Subtotal				$1,248,392
Non-Energy Benefits Adder (20.0%)				$154,003
Subtotal	N/A	$770,015	$770,015	$1,402,395
Participant Benefits				
Bill Reduction - Electric	$2,813,237	N/A	N/A	N/A
Participant Rebates and Incentives	$262,900	N/A	N/A	$262,900
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$3,076,137	N/A	N/A	$262,900
Total Benefits	$3,076,137	$770,015	$770,015	$1,665,295
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$580,584	$580,584	$580,584
Advertising/Promotion/Customer Ed	N/A	$96,044	$96,044	$96,044
Participant Rebates and Incentives	N/A	$262,900	$262,900	$262,900
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$3,000	$3,000	$3,000
Subtotal	N/A	$942,528	$942,528	$942,528
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$2,813,237	N/A
Subtotal	N/A	N/A	$2,813,237	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	$942,528	$3,755,765	$942,528
Net Benefit (Cost)	$3,076,137	($172,513)	($2,985,750)	**$722,767**
Benefit/Cost Ratio	INF	0.82	0.21	**1.77**

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 Unit		
Lifetime (Weighted on Generator kWh)	A	8.0 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	80.00%
Net-to-Gross (Demand)	E	80.00%
Installation Rate (Energy)	F	**100.00%**
Installation Rate (Demand)	G	**100.00%**
Net coincident kW Saved at Generator	H	0.08 kW
Gross Annual kWh Saved at Customer	I	780.3 kW
Net Annual kWh Saved at Generator	J	666.8 kW

Program Summary All Participants		
Total Budget	K	**$942,528**
Net coincident kW Saved at Generator	L	**425 kW**
Gross Annual kWh Saved at Customer	M	4,120,898 kWh
Net Annual kWh Saved at Generator	N	**3,521,383 kWh**
Total MTRC Net Benefits with Adder	O	**$722,767**
Total MTRC Net Benefits without Adder	P	**$568,764**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0333**
Utility Program Cost per kW at Gen	K/ L	**$2,216**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**11,511**

RESIDENTIAL HEATING & COOLING

2021 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	$9,623,547	$9,623,547	$9,623,547
Trans. & Dist. Capacity	N/A	$1,205,222	$1,205,222	$1,205,222
Marginal Energy	N/A	$1,717,152	$1,717,152	$1,717,152
Avoided Emissions (CO2)	N/A	N/A	N/A	$1,232,099
Subtotal				$13,778,020
Non-Energy Benefits Adder (20.0%)				$2,509,184
Subtotal	N/A	$12,545,921	$12,545,921	$16,287,204
Participant Benefits				
Bill Reduction - Electric	$9,702,406	N/A	N/A	N/A
Participant Rebates and Incentives	$4,871,796	N/A	N/A	$4,871,796
Incremental Capital Savings	$14,897,877	N/A	N/A	$10,428,514
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$29,472,079	N/A	N/A	$15,300,310
Total Benefits	$29,472,079	$12,545,921	$12,545,921	$31,587,514
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$1,588,865	$1,588,865	$1,588,865
Advertising/Promotion/Customer Ed	N/A	$351,619	$351,619	$351,619
Participant Rebates and Incentives	N/A	$4,871,796	$4,871,796	$4,871,796
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$54,035	$54,035	$54,035
Subtotal	N/A	$6,866,315	$6,866,315	$6,866,315
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$9,702,406	N/A
Subtotal	N/A	N/A	$9,702,406	N/A
Participant Costs				
Incremental Capital Costs	$5,747,964	N/A	N/A	$4,598,640
Incremental O&M Costs	$662,021	N/A	N/A	$488,005
Subtotal	$6,409,985	N/A	N/A	$5,086,645
Total Costs	$6,409,985	$6,866,315	$16,568,721	$11,952,960
Net Benefit (Cost)	$23,062,094	$5,679,606	($4,022,800)	**$19,634,554**
Benefit/Cost Ratio	4.60	1.83	0.76	**2.64**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	15.4 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	76.56%
Net-to-Gross (Demand)	E	74.15%
Installation Rate (Energy)	F	**96.91%**
Installation Rate (Demand)	G	**97.38%**
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	**$6,866,315**
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	**$19,634,554**
Total MTRC Net Benefits without Adder	P	**$17,125,370**

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)	**31,964**

SCHOOL EDUCATION KITS

2021 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	$1,752,357	$1,752,357	$1,752,357
Trans. & Dist. Capacity	N/A	$219,459	$219,459	$219,459
Marginal Energy	N/A	$2,993,158	$2,993,158	$2,993,158
Avoided Emissions (CO2)	N/A	N/A	N/A	$2,131,500
Subtotal				$7,096,473
Non-Energy Benefits Adder (20.0%)				$992,995
Subtotal	N/A	$4,964,973	$4,964,973	$8,089,468
Participant Benefits				
Bill Reduction - Electric	$15,131,647	N/A	N/A	N/A
Participant Rebates and Incentives	$993,533	N/A	N/A	$993,533
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$410,498	N/A	N/A	$410,498
Subtotal	$16,535,678	N/A	N/A	$1,404,031
Total Benefits	$16,535,678	$4,964,973	$4,964,973	$9,493,499
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$728,072	$728,072	$728,072
Advertising/Promotion/Customer Ed	N/A	$3,199	$3,199	$3,199
Participant Rebates and Incentives	N/A	$993,533	$993,533	$993,533
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$1,724,804	$1,724,804	$1,724,804
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$15,131,647	N/A
Subtotal	N/A	N/A	$15,131,647	N/A
Participant Costs				
Incremental Capital Costs	$1,065,515	N/A	N/A	$1,065,515
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$1,065,515	N/A	N/A	$1,065,515
Total Costs	$1,065,515	$1,724,804	$16,856,450	$2,790,319
Net Benefit (Cost)	$15,470,163	$3,240,170	($11,891,477)	**$6,703,180**
Benefit/Cost Ratio	15.52	2.88	0.29	**3.40**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	13.7 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	**52.54%**
Installation Rate (Demand)	G	**17.77%**
Net coincident kW Saved at Generator	H	0.01 kW
Gross Annual kWh Saved at Customer	I	158.3 kW
Net Annual kWh Saved at Generator	J	88.8 kW

Program Summary All Participants		
Total Budget	K	**$1,724,804**
Net coincident kW Saved at Generator	L	**1,713 kW**
Gross Annual kWh Saved at Customer	M	19,959,384 kWh
Net Annual kWh Saved at Generator	N	**11,201,802 kWh**
Total MTRC Net Benefits with Adder	O	**$6,703,180**
Total MTRC Net Benefits without Adder	P	**$5,710,186**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0112**
Utility Program Cost per kW at Gen	K/ L	**$1,007**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**57,199**

WHOLE HOME EFFICIENCY

2021 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	$5,631	$5,631	$5,631
Trans. & Dist. Capacity	N/A	$705	$705	$705
Marginal Energy	N/A	$935	$935	$935
Avoided Emissions (CO2)	N/A	N/A	N/A	$579
Subtotal				$7,849
Non-Energy Benefits Adder (20.0%)				$1,454
Subtotal	N/A	$7,271	$7,271	$9,303
Participant Benefits				
Bill Reduction - Electric	$4,653	N/A	N/A	N/A
Participant Rebates and Incentives	$3,325	N/A	N/A	$3,325
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$7,977	N/A	N/A	$3,325
Total Benefits	$7,977	$7,271	$7,271	$12,628
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$63,645	$63,645	$63,645
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$3,325	$3,325	$3,325
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$1,122	$1,122	$1,122
Subtotal	N/A	$68,092	$68,092	$68,092
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$4,653	N/A
Subtotal	N/A	N/A	$4,653	N/A
Participant Costs				
Incremental Capital Costs	$11,621	N/A	N/A	$13,481
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$11,621	N/A	N/A	$13,481
Total Costs	$11,621	$68,092	$72,744	$81,572
Net Benefit (Cost)	($3,644)	($60,821)	($65,474)	**($68,944)**
Benefit/Cost Ratio	0.69	0.11	0.10	**0.15**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	16.5 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	0.49 kW
Gross Annual kWh Saved at Customer	I	211.0 kW
Net Annual kWh Saved at Generator	J	261.5 kW

Program Summary All Participants		
Total Budget	K	**$68,092**
Net coincident kW Saved at Generator	L	**5 kW**
Gross Annual kWh Saved at Customer	M	2,258 kWh
Net Annual kWh Saved at Generator	N	**2,798 kWh**
Total MTRC Net Benefits with Adder	O	**($68,944)**
Total MTRC Net Benefits without Adder	P	**($70,398)**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$1.4737**
Utility Program Cost per kW at Gen	K/ L	**$12,956**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**16**

ENERGY SAVINGS KIT

2021 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	$158,361	$158,361	$158,361
Trans. & Dist. Capacity	N/A	$19,832	$19,832	$19,832
Marginal Energy	N/A	$403,221	$403,221	$403,221
Avoided Emissions (CO2)	N/A	N/A	N/A	$313,072
Subtotal				$894,486
Non-Energy Benefits Adder (50.0%)				$290,707
Subtotal	N/A	$581,415	$581,415	$1,185,194
Participant Benefits				
Bill Reduction - Electric	$2,053,946	N/A	N/A	N/A
Participant Rebates and Incentives	$57,124	N/A	N/A	$57,124
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$582,536	N/A	N/A	$582,536
Subtotal	$2,693,606	N/A	N/A	$639,660
Total Benefits	$2,693,606	$581,415	$581,415	$1,824,854
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$79,574	$79,574	$79,574
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$57,124	$57,124	$57,124
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$136,698	$136,698	$136,698
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$2,053,946	N/A
Subtotal	N/A	N/A	$2,053,946	N/A
Participant Costs				
Incremental Capital Costs	$85,955	N/A	N/A	$85,955
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$85,955	N/A	N/A	$85,955
Total Costs	$85,955	$136,698	$2,190,643	$222,653
Net Benefit (Cost)	$2,607,650	$444,717	($1,609,229)	**$1,602,201**
Benefit/Cost Ratio	31.34	4.25	0.27	**8.20**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	12.5 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	100.00%
Net-to-Gross (Demand)	E	100.00%
Installation Rate (Energy)	F	**77.31%**
Installation Rate (Demand)	G	**77.24%**
Net coincident kW Saved at Generator	H	0.03 kW
Gross Annual kWh Saved at Customer	I	334.3 kW
Net Annual kWh Saved at Generator	J	276.0 kW

Program Summary All Participants		
Total Budget	K	**$136,698**
Net coincident kW Saved at Generator	L	**169 kW**
Gross Annual kWh Saved at Customer	M	2,263,397 kWh
Net Annual kWh Saved at Generator	N	**1,869,008 kWh**
Total MTRC Net Benefits with Adder	O	**$1,602,201**
Total MTRC Net Benefits without Adder	P	**$1,311,493**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0058**
Utility Program Cost per kW at Gen	K/ L	**$807**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**8,155**

MULTIFAMILY WEATHERIZATION

2021 ELECTRIC

ACTUALS

2021 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	$313,104	$313,104	$313,104
Trans. & Dist. Capacity	N/A	$39,212	$39,212	$39,212
Marginal Energy	N/A	$486,220	$486,220	$486,220
Avoided Emissions (CO2)	N/A	N/A	N/A	$369,558
Subtotal				$1,208,094
Non-Energy Benefits Adder (50.0%)				$419,268
Subtotal	N/A	$838,536	$838,536	$1,627,362
Participant Benefits				
Bill Reduction - Electric	$2,900,640	N/A	N/A	N/A
Participant Rebates and Incentives	$894,134	N/A	N/A	$894,134
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$58,066	N/A	N/A	$58,066
Subtotal	$3,852,840	N/A	N/A	$952,200
Total Benefits	$3,852,840	$838,536	$838,536	$2,579,562
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$151,177	$151,177	$151,177
Advertising/Promotion/Customer Ed	N/A	$29,167	$29,167	$29,167
Participant Rebates and Incentives	N/A	$894,134	$894,134	$894,134
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$16,412	$16,412	$16,412
Subtotal	N/A	$1,090,890	$1,090,890	$1,090,890
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$2,900,640	N/A
Subtotal	N/A	N/A	$2,900,640	N/A
Participant Costs				
Incremental Capital Costs	$891,051	N/A	N/A	$891,051
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$891,051	N/A	N/A	$891,051
Total Costs	$891,051	$1,090,890	$3,991,530	$1,981,941
Net Benefit (Cost)	$2,961,789	($252,354)	($3,152,994)	**$597,621**
Benefit/Cost Ratio	4.32	0.77	0.21	**1.30**

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 Unit		
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	5.15 kW
Gross Annual kWh Saved at Customer	I	34,675.7 kW
Net Annual kWh Saved at Generator	J	37,038.7 kW

Program Summary All Participants		
Total Budget	K	**$1,090,890**
Net coincident kW Saved at Generator	L	**257 kW**
Gross Annual kWh Saved at Customer	M	1,733,783 kWh
Net Annual kWh Saved at Generator	N	**1,851,937 kWh**
Total MTRC Net Benefits with Adder	O	**$597,621**
Total MTRC Net Benefits without Adder	P	**$178,353**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0310**
Utility Program Cost per kW at Gen	K/ L	**$4,239**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**9,734**

NON-PROFIT

2021 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	$573,657	$573,657	$573,657
Trans. & Dist. Capacity	N/A	$71,843	$71,843	$71,843
Marginal Energy	N/A	$661,016	$661,016	$661,016
Avoided Emissions (CO2)	N/A	N/A	N/A	$484,373
Subtotal				$1,790,890
Non-Energy Benefits Adder (50.0%)				$653,258
Subtotal	N/A	$1,306,517	$1,306,517	$2,444,148
Participant Benefits				
Bill Reduction - Electric	$2,124,796	N/A	N/A	N/A
Participant Rebates and Incentives	$945,141	N/A	N/A	$945,141
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$3,069,937	N/A	N/A	$945,141
Total Benefits	$3,069,937	$1,306,517	$1,306,517	$3,389,290
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$207,485	$207,485	$207,485
Advertising/Promotion/Customer Ed	N/A	$29,167	$29,167	$29,167
Participant Rebates and Incentives	N/A	$945,141	$945,141	$945,141
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$23,793	$23,793	$23,793
Subtotal	N/A	$1,205,586	$1,205,586	$1,205,586
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$2,124,796	N/A
Subtotal	N/A	N/A	$2,124,796	N/A
Participant Costs				
Incremental Capital Costs	$1,190,056	N/A	N/A	$1,190,056
Incremental O&M Costs	$41,591	N/A	N/A	$41,591
Subtotal	$1,231,648	N/A	N/A	$1,231,648
Total Costs	$1,231,648	$1,205,586	$3,330,382	$2,437,233
Net Benefit (Cost)	$1,838,290	$100,931	($2,023,865)	**$952,056**
Benefit/Cost Ratio	2.49	1.08	0.39	**1.39**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	18.2 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	10.53 kW
Gross Annual kWh Saved at Customer	I	50,545.7 kW
Net Annual kWh Saved at Generator	J	53,392.6 kW

Program Summary All Participants		
Total Budget	K	**$1,205,586**
Net coincident kW Saved at Generator	L	**487 kW**
Gross Annual kWh Saved at Customer	M	2,337,235 kWh
Net Annual kWh Saved at Generator	N	**2,468,875 kWh**
Total MTRC Net Benefits with Adder	O	**$952,056**
Total MTRC Net Benefits without Adder	P	**$298,798**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0269**
Utility Program Cost per kW at Gen	K/ L	**$2,475**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**12,854**

SINGLE-FAMILY WEATHERIZATION

2021 ELECTRIC ACTUALS

2021 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified Total Resource Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$6,022,637	$6,022,637	$6,022,637
Trans. & Dist. Capacity	N/A	$754,255	$754,255	$754,255
Marginal Energy	N/A	$11,615,102	$11,615,102	$11,615,102
Avoided Emissions (CO2)	N/A	N/A	N/A	$7,757,552
Subtotal				$26,149,546
Non-Energy Benefits Adder (50.0%)				$9,195,997
Subtotal	N/A	$18,391,994	$18,391,994	$35,345,544
Participant Benefits				
Bill Reduction - Electric	$57,079,565	N/A	N/A	N/A
Participant Rebates and Incentives	$1,500,070	N/A	N/A	$1,500,070
Incremental Capital Savings	$308,872	N/A	N/A	$308,872
Incremental O&M Savings	$4,925	N/A	N/A	$4,925
Subtotal	$58,893,432	N/A	N/A	$1,813,867
Total Benefits	$58,893,432	$18,391,994	$18,391,994	$37,159,411
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$137,161	$137,161	$137,161
Advertising/Promotion/Customer Ed	N/A	$162,500	$162,500	$162,500
Participant Rebates and Incentives	N/A	$1,500,070	$1,500,070	$1,500,070
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$60,834	$60,834	$60,834
Subtotal	N/A	$1,860,565	$1,860,565	$1,860,565
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$57,079,565	N/A
Subtotal	N/A	N/A	$57,079,565	N/A
Participant Costs				
Incremental Capital Costs	$1,425,796	N/A	N/A	$1,425,796
Incremental O&M Costs	$8,199	N/A	N/A	$8,199
Subtotal	$1,433,995	N/A	N/A	$1,433,995
Total Costs	$1,433,995	$1,860,565	$58,940,129	$3,294,560
Net Benefit (Cost)	$57,459,437	$16,531,430	($40,548,135)	**$33,864,851**
Benefit/Cost Ratio	41.07	9.89	0.31	**11.28**

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 Unit		
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	**99.01%**
Installation Rate (Demand)	G	**99.03%**
Net coincident kW Saved at Generator	H	1.65 kW
Gross Annual kWh Saved at Customer	I	11,711.7 kW
Net Annual kWh Saved at Generator	J	12,386.2 kW

Program Summary All Participants		
Total Budget	K	**$1,860,565**
Net coincident kW Saved at Generator	L	**4,848 kW**
Gross Annual kWh Saved at Customer	M	34,320,328 kWh
Net Annual kWh Saved at Generator	N	**36,296,781 kWh**
Total MTRC Net Benefits with Adder	O	**$33,864,851**
Total MTRC Net Benefits without Adder	P	**$24,668,854**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$0.0026**
Utility Program Cost per kW at Gen	K/ L	**$384**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**213,265**

ELECTRIC VEHICLE OPTIMIZATION

2021 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified Total Resource Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$20,066	$20,066	$20,066
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				$20,066
Non-Energy Benefits Adder (20.0%)				$4,013
Subtotal	N/A	$20,066	$20,066	$24,079
Participant Benefits				
Bill Reduction - Electric	$0	N/A	N/A	N/A
Participant Rebates and Incentives	$9,800	N/A	N/A	$9,800
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$9,800	N/A	N/A	$9,800
Total Benefits	$9,800	$20,066	$20,066	$33,879
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$252,484	$252,484	$252,484
Advertising/Promotion/Customer Ed	N/A	$35,700	$35,700	$35,700
Participant Rebates and Incentives	N/A	$9,800	$9,800	$9,800
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$6,780	$6,780	$6,780
Subtotal	N/A	$304,764	$304,764	$304,764
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	$304,764	$304,764	$304,764
Net Benefit (Cost)	$9,800	($284,698)	($284,698)	**($270,885)**
Benefit/Cost Ratio	INF	0.07	0.07	**0.11**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	N/A
T & D Loss Factor (Energy)	B	N/A
T & D Loss Factor (Demand)	C	99.54%
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	0.89 kW
Gross Annual kWh Saved at Customer	I	0.0 kW
Net Annual kWh Saved at Generator	J	0.0 kW

Program Summary All Participants		
Total Budget	K	**$304,764**
Net coincident kW Saved at Generator	L	**218 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	**($270,885)**
Total MTRC Net Benefits without Adder	P	**($274,898)**

Utility Program Cost per kWh Lifetime	K/(A x N)	**N/A**
Utility Program Cost per kW at Gen	K/ L	**$1,398**

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

RESIDENTIAL BATTERY DEMAND RESPONSE

2021 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	$709,478	$709,478	$709,478
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				$709,478
Non-Energy Benefits Adder (20.0%)				$141,896
Subtotal	N/A	$709,478	$709,478	$851,374
Participant Benefits				
Bill Reduction - Electric	$0	N/A	N/A	N/A
Participant Rebates and Incentives	$158,750	N/A	N/A	$158,750
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$158,750	N/A	N/A	$158,750
Total Benefits	$158,750	$709,478	$709,478	$1,010,124
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$123,535	$123,535	$123,535
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$158,750	$158,750	$158,750
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$29,590	$29,590	$29,590
Subtotal	N/A	$311,875	$311,875	$311,875
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	$311,875	$311,875	$311,875
Net Benefit (Cost)	$158,750	$397,603	$397,603	**$698,249**
Benefit/Cost Ratio	INF	2.27	2.27	**3.24**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	N/A
T & D Loss Factor (Energy)	B	N/A
T & D Loss Factor (Demand)	C	100.00%
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	7.44 kW
Gross Annual kWh Saved at Customer	I	0.0 kW
Net Annual kWh Saved at Generator	J	0.0 kW

Program Summary All Participants		
Total Budget	K	**$311,875**
Net coincident kW Saved at Generator	L	**930 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	**$698,249**
Total MTRC Net Benefits without Adder	P	**$556,353**

Utility Program Cost per kWh Lifetime	K/(A x N)	**N/A**
Utility Program Cost per kW at Gen	K/ L	**$335**

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

RESIDENTIAL DEMAND RESPONSE

2021 ELECTRIC

ACTUALS

2021 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified Total Resource Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$12,713,325	$12,713,325	$12,713,325
Trans. & Dist. Capacity	N/A	$0	$0	$0
Marginal Energy	N/A	$13,291	$13,291	$13,291
Avoided Emissions (CO2)	N/A	N/A	N/A	$10,225
Subtotal				$12,736,840
Non-Energy Benefits Adder (20.0%)				$2,545,323
Subtotal	N/A	$12,726,616	$12,726,616	$15,282,163
Participant Benefits				
Bill Reduction - Electric	$74,575	N/A	N/A	N/A
Participant Rebates and Incentives	$8,856,080	N/A	N/A	$8,856,080
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$8,930,655	N/A	N/A	$8,856,080
Total Benefits	$8,930,655	$12,726,616	$12,726,616	$24,138,243
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$4,099,570	$4,099,570	$4,099,570
Advertising/Promotion/Customer Ed	N/A	$381,346	$381,346	$381,346
Participant Rebates and Incentives	N/A	$8,856,080	$8,856,080	$8,856,080
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$37,000	$37,000	$37,000
Subtotal	N/A	$13,373,996	$13,373,996	$13,373,996
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$74,575	N/A
Subtotal	N/A	N/A	$74,575	N/A
Participant Costs				
Incremental Capital Costs	$6,671	N/A	N/A	$6,671
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$6,671	N/A	N/A	$6,671
Total Costs	$6,671	$13,373,996	$13,448,571	$13,380,667
Net Benefit (Cost)	$8,923,984	($647,380)	($721,956)	**$10,757,576**
Benefit/Cost Ratio	1,338.70	0.95	0.95	**1.80**

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 Unit		
Lifetime (Weighted on Generator kWh)	A	9.0 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	10,002.05 kW
Gross Annual kWh Saved at Customer	I	33,964.0 kW
Net Annual kWh Saved at Generator	J	36,278.6 kW

Program Summary All Participants		
Total Budget	K	**$13,373,996**
Net coincident kW Saved at Generator	L	**20,004 kW**
Gross Annual kWh Saved at Customer	M	67,928 kWh
Net Annual kWh Saved at Generator	N	**72,557 kWh**
Total MTRC Net Benefits with Adder	O	**$10,757,576**
Total MTRC Net Benefits without Adder	P	**$8,212,253**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$20.4815**
Utility Program Cost per kW at Gen	K/ L	**$669**

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	**249**

SMALL COMMERCIAL BUILDING CONTROLS

2021 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	$290,434	$290,434	$290,434
Trans. & Dist. Capacity	N/A	$0	$0	$0
Marginal Energy	N/A	$1,135	$1,135	$1,135
Avoided Emissions (CO2)	N/A	N/A	N/A	$1,114
Subtotal				$292,682
Non-Energy Benefits Adder (20.0%)				$58,314
Subtotal	N/A	$291,569	$291,569	$350,996
Participant Benefits				
Bill Reduction - Electric	$5,287	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	$5,287	N/A	N/A	$0
Total Benefits	$5,287	$291,569	$291,569	$350,996
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$152,385	$152,385	$152,385
Advertising/Promotion/Customer Ed	N/A	$3,571	$3,571	$3,571
Participant Rebates and Incentives	N/A	$0	$0	$0
Equipment & Installation	N/A	$380	$380	$380
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$156,336	$156,336	$156,336
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$5,287	N/A
Subtotal	N/A	N/A	$5,287	N/A
Participant Costs				
Incremental Capital Costs	$84,943	N/A	N/A	$84,943
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$84,943	N/A	N/A	$84,943
Total Costs	$84,943	$156,336	$161,623	$241,279
Net Benefit (Cost)	($79,656)	$135,233	$129,945	**$109,717**
Benefit/Cost Ratio	0.06	1.87	1.80	**1.45**

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

2021 ELECTRIC ACTUALS

Input Summary and Totals

Program "Inputs" per Customer kW and per Unit		
Lifetime (Weighted on Generator kWh)	A	5.0 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	347.48 kW
Gross Annual kWh Saved at Customer	I	5,266.5 kW
Net Annual kWh Saved at Generator	J	5,563.1 kW

Program Summary All Participants		
Total Budget	K	**$156,336**
Net coincident kW Saved at Generator	L	**695 kW**
Gross Annual kWh Saved at Customer	M	10,533 kWh
Net Annual kWh Saved at Generator	N	**11,126 kWh**
Total MTRC Net Benefits with Adder	O	**$109,717**
Total MTRC Net Benefits without Adder	P	**$51,403**

Utility Program Cost per kWh Lifetime	K/(A x N)	**$2.8102**
Utility Program Cost per kW at Gen	K/ L	**$225**

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

PORTFOLIO TOTAL

2021 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	$24,598,211	$24,598,211	$24,598,211
Variable O&M Savings	N/A	$380,096	$380,096	$380,096
Demand Savings	N/A	$2,662,345	$2,662,345	$2,662,345
Subtotal				$27,640,653
Non-Energy Benefits Adder (24.0%)				$6,637,629
Subtotal	N/A	$27,640,653	$27,640,653	$34,278,282
Participant Benefits				
Bill Reduction - Gas	$44,551,704	N/A	N/A	N/A
Participant Rebates and Incentives	$11,763,232	N/A	N/A	$11,763,232
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$31,185,265	N/A	N/A	$30,738,550
Subtotal	$87,500,201	N/A	N/A	$42,501,782
Total Benefits	$87,500,201	$27,640,653	$27,640,653	$76,780,064
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$4,139,027	$4,139,027	$4,139,027
Advertising/Promotion/Customer Ed	N/A	$639,381	$639,381	$639,381
Participant Rebates and Incentives	N/A	$11,763,232	$11,763,232	$11,763,232
Equipment & Installation	N/A	$50,057	$50,057	$50,057
Measurement and Verification	N/A	$1,029,732	$1,029,732	$1,029,732
Subtotal	N/A	$17,621,430	$17,621,430	$17,621,430
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$44,551,704	N/A
Subtotal	N/A	N/A	$44,551,704	N/A
Participant Costs				
Incremental Capital Costs	$28,278,957	N/A	N/A	$26,105,847
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$28,278,957	N/A	N/A	$26,105,847
Total Costs	$28,278,957	$17,621,430	$62,173,134	$43,727,277
Net Benefit (Cost)	$59,221,243	$10,019,223	($34,532,481)	**$33,052,788**
Benefit/Cost Ratio	3.09	1.57	0.44	**1.76**

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

2021 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	95.31%
Install Rate (Weighted on Dth)	C	76.96%

Program Summary per Participant		
Gross Annual Dth Saved	D	4.3
Net Annual Dth Saved	E	3.1

Program Summary All Participants		
Total Budget	F	**$17,621,430**
Gross Annual Dth Saved	G	**1,124,206 Dth**
Net Annual Dth Saved	H	**812,605 Dth**
Total MTRC Net Benefits with Adder	I	**$33,052,788**
Total MTRC Net Benefits without Adder	J	**$26,415,158**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.5912**

BUSINESS PROGRAM EE TOTAL

2021 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	$7,183,303	$7,183,303	$7,183,303
Variable O&M Savings	N/A	$106,414	$106,414	$106,414
Demand Savings	N/A	$745,368	$745,368	$745,368
Subtotal				$8,035,085
Non-Energy Benefits Adder (20.0%)				$1,607,017
Subtotal	N/A	$8,035,085	$8,035,085	$9,642,102
Participant Benefits				
Bill Reduction - Gas	$13,548,605	N/A	N/A	N/A
Participant Rebates and Incentives	$990,418	N/A	N/A	$990,418
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$11,867,649	N/A	N/A	$11,739,397
Subtotal	$26,406,671	N/A	N/A	$12,729,814
Total Benefits	$26,406,671	$8,035,085	$8,035,085	$22,371,916
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$805,819	$805,819	$805,819
Advertising/Promotion/Customer Ed	N/A	$45,415	$45,415	$45,415
Participant Rebates and Incentives	N/A	$990,418	$990,418	$990,418
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$66,916	$66,916	$66,916
Subtotal	N/A	$1,908,568	$1,908,568	$1,908,568
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$13,548,605	N/A
Subtotal	N/A	N/A	$13,548,605	N/A
Participant Costs				
Incremental Capital Costs	$5,163,188	N/A	N/A	$5,053,588
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$5,163,188	N/A	N/A	$5,053,588
Total Costs	$5,163,188	$1,908,568	$15,457,173	$6,962,156
Net Benefit (Cost)	$21,243,483	$6,126,517	($7,422,088)	**$15,409,760**
Benefit/Cost Ratio	5.11	4.21	0.52	**3.21**

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

2021 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	97.87%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant		
Gross Annual Dth Saved	D	153.0
Net Annual Dth Saved	E	149.8

Program Summary All Participants		
Total Budget	F	**$1,908,568**
Gross Annual Dth Saved	G	**186,607 Dth**
Net Annual Dth Saved	H	**182,626 Dth**
Total MTRC Net Benefits with Adder	I	**$15,409,760**
Total MTRC Net Benefits without Adder	J	**$13,802,743**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$0.5369**

RESIDENTIAL PROGRAM EE TOTAL

2021 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	$14,132,155	$14,132,155	$14,132,155
Variable O&M Savings	N/A	$221,764	$221,764	$221,764
Demand Savings	N/A	$1,553,321	$1,553,321	$1,553,321
Subtotal				$15,907,240
Non-Energy Benefits Adder (20.0%)				$3,181,448
Subtotal	N/A	$15,907,240	$15,907,240	$19,088,688
Participant Benefits				
Bill Reduction - Gas	$25,125,415	N/A	N/A	N/A
Participant Rebates and Incentives	$6,434,989	N/A	N/A	$6,434,989
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$11,417,649	N/A	N/A	$11,099,186
Subtotal	$42,978,053	N/A	N/A	$17,534,176
Total Benefits	$42,978,053	$15,907,240	$15,907,240	$36,622,863
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$1,985,017	$1,985,017	$1,985,017
Advertising/Promotion/Customer Ed	N/A	$365,839	$365,839	$365,839
Participant Rebates and Incentives	N/A	$6,434,989	$6,434,989	$6,434,989
Equipment & Installation	N/A	$50,057	$50,057	$50,057
Measurement and Verification	N/A	$454,370	$454,370	$454,370
Subtotal	N/A	$9,290,271	$9,290,271	$9,290,271
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$25,125,415	N/A
Subtotal	N/A	N/A	$25,125,415	N/A
Participant Costs				
Incremental Capital Costs	$19,106,906	N/A	N/A	$17,043,395
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$19,106,906	N/A	N/A	$17,043,395
Total Costs	$19,106,906	$9,290,271	$34,415,686	$26,333,666
Net Benefit (Cost)	$23,871,147	$6,616,968	($18,508,447)	**$10,289,197**
Benefit/Cost Ratio	2.25	1.71	0.46	**1.39**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	12.6 years
Net-to-Gross (Weighted on Dth)	B	93.88%
Install Rate (Weighted on Dth)	C	70.07%

Program Summary per Participant		
Gross Annual Dth Saved	D	3.9
Net Annual Dth Saved	E	2.5

Program Summary All Participants		
Total Budget	F	**$9,290,271**
Gross Annual Dth Saved	G	**795,691 Dth**
Net Annual Dth Saved	H	**508,878 Dth**
Total MTRC Net Benefits with Adder	I	**$10,289,197**
Total MTRC Net Benefits without Adder	J	**$7,107,749**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.4499**

INCOME QUALIFIED PROGRAM TOTAL

2021 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	$3,282,754	$3,282,754	$3,282,754
Variable O&M Savings	N/A	$51,918	$51,918	$51,918
Demand Savings	N/A	$363,656	$363,656	$363,656
Subtotal				$3,698,329
Non-Energy Benefits Adder (50.0%)				$1,849,164
Subtotal	N/A	$3,698,329	$3,698,329	$5,547,493
Participant Benefits				
Bill Reduction - Gas	$5,877,685	N/A	N/A	N/A
Participant Rebates and Incentives	$3,915,865	N/A	N/A	$3,915,865
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$7,899,967	N/A	N/A	$7,899,967
Subtotal	$17,693,517	N/A	N/A	$11,815,833
Total Benefits	$17,693,517	$3,698,329	$3,698,329	$17,363,326
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$567,642	$567,642	$567,642
Advertising/Promotion/Customer Ed	N/A	$129,567	$129,567	$129,567
Participant Rebates and Incentives	N/A	$3,915,865	$3,915,865	$3,915,865
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$225,297	$225,297	$225,297
Subtotal	N/A	$4,838,371	$4,838,371	$4,838,371
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$5,877,685	N/A
Subtotal	N/A	N/A	$5,877,685	N/A
Participant Costs				
Incremental Capital Costs	$4,008,864	N/A	N/A	$4,008,864
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$4,008,864	N/A	N/A	$4,008,864
Total Costs	$4,008,864	$4,838,371	$10,716,055	$8,847,235
Net Benefit (Cost)	$13,684,653	($1,140,042)	($7,017,727)	**$8,516,091**
Benefit/Cost Ratio	4.41	0.76	0.35	**1.96**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	11.8 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	85.34%

Program Summary per Participant		
Gross Annual Dth Saved	D	2.6
Net Annual Dth Saved	E	2.2

Program Summary All Participants		
Total Budget	F	**$4,838,371**
Gross Annual Dth Saved	G	**141,908 Dth**
Net Annual Dth Saved	H	**121,100 Dth**
Total MTRC Net Benefits with Adder	I	**$8,516,091**
Total MTRC Net Benefits without Adder	J	**$6,666,927**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$3.3961**

BUSINESS ENERGY ASSESSMENTS

2021 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	$1,571	$1,571	$1,571
Variable O&M Savings	N/A	$33	$33	$33
Demand Savings	N/A	$233	$233	$233
Subtotal				$1,837
Non-Energy Benefits Adder (20.0%)				$367
Subtotal	N/A	$1,837	$1,837	$2,205
Participant Benefits				
Bill Reduction - Gas	$2,978	N/A	N/A	N/A
Participant Rebates and Incentives	$3,542	N/A	N/A	$3,542
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$1,846	N/A	N/A	$1,846
Subtotal	$8,366	N/A	N/A	$5,388
Total Benefits	$8,366	$1,837	$1,837	$7,593
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$6,517	$6,517	$6,517
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$3,542	$3,542	$3,542
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$10,059	$10,059	$10,059
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$2,978	N/A
Subtotal	N/A	N/A	$2,978	N/A
Participant Costs				
Incremental Capital Costs	$1,119	N/A	N/A	$1,119
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$1,119	N/A	N/A	$1,119
Total Costs	$1,119	$10,059	$13,037	$11,178
Net Benefit (Cost)	$7,247	($8,222)	($11,200)	**($3,585)**
Benefit/Cost Ratio	7.48	0.18	0.14	**0.68**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	5.4 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	6.4
Net Annual Dth Saved	E	6.4

Program Summary All Participants		
Total Budget	F	**$10,059**
Gross Annual Dth Saved	G	**141 Dth**
Net Annual Dth Saved	H	**141 Dth**
Total MTRC Net Benefits with Adder	I	**($3,585)**
Total MTRC Net Benefits without Adder	J	**($3,953)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$13.1508**

BUSINESS HVAC+R SYSTEMS

2021 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	$408,715	$408,715	$408,715
Variable O&M Savings	N/A	$5,971	$5,971	$5,971
Demand Savings	N/A	$41,823	$41,823	$41,823
Subtotal				$456,509
Non-Energy Benefits Adder (20.0%)				$91,302
Subtotal	N/A	$456,509	$456,509	$547,811
Participant Benefits				
Bill Reduction - Gas	$768,110	N/A	N/A	N/A
Participant Rebates and Incentives	$154,398	N/A	N/A	$154,398
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$1,781	N/A	N/A	$1,781
Subtotal	$924,289	N/A	N/A	$156,178
Total Benefits	$924,289	$456,509	$456,509	$703,989
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$235,053	$235,053	$235,053
Advertising/Promotion/Customer Ed	N/A	$1,247	$1,247	$1,247
Participant Rebates and Incentives	N/A	$154,398	$154,398	$154,398
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$4,915	$4,915	$4,915
Subtotal	N/A	$395,612	$395,612	$395,612
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$768,110	N/A
Subtotal	N/A	N/A	$768,110	N/A
Participant Costs				
Incremental Capital Costs	$271,215	N/A	N/A	$249,932
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$271,215	N/A	N/A	$249,932
Total Costs	$271,215	$395,612	$1,163,722	$645,544
Net Benefit (Cost)	$653,074	$60,897	($707,214)	**$58,445**
Benefit/Cost Ratio	3.41	1.15	0.39	**1.09**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	18.4 years
Net-to-Gross (Weighted on Dth)	B	91.94%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant		
Gross Annual Dth Saved	D	47.2
Net Annual Dth Saved	E	43.4

Program Summary All Participants		
Total Budget	F	**$395,612**
Gross Annual Dth Saved	G	**11,477 Dth**
Net Annual Dth Saved	H	**10,552 Dth**
Total MTRC Net Benefits with Adder	I	**$58,445**
Total MTRC Net Benefits without Adder	J	**($32,857)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$2.0429**

CUSTOM EFFICIENCY

2021 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	$27,549	$27,549	$27,549
Variable O&M Savings	N/A	$387	$387	$387
Demand Savings	N/A	$2,711	$2,711	$2,711
Subtotal				$30,647
Non-Energy Benefits Adder (20.0%)				$6,129
Subtotal	N/A	$30,647	$30,647	$36,777
Participant Benefits				
Bill Reduction - Gas	$42,623	N/A	N/A	N/A
Participant Rebates and Incentives	$2,622	N/A	N/A	$2,622
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$45,245	N/A	N/A	$2,622
Total Benefits	$45,245	$30,647	$30,647	$39,399
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$12,300	$12,300	$12,300
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$2,622	$2,622	$2,622
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$14,922	$14,922	$14,922
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$42,623	N/A
Subtotal	N/A	N/A	$42,623	N/A
Participant Costs				
Incremental Capital Costs	$19,980	N/A	N/A	$17,383
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$19,980	N/A	N/A	$17,383
Total Costs	$19,980	$14,922	$57,545	$32,305
Net Benefit (Cost)	$25,265	$15,725	($26,898)	**$7,094**
Benefit/Cost Ratio	2.26	2.05	0.53	**1.22**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	18.5 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	218.5
Net Annual Dth Saved	E	190.1

Program Summary All Participants		
Total Budget	F	**$14,922**
Gross Annual Dth Saved	G	**656 Dth**
Net Annual Dth Saved	H	**570 Dth**
Total MTRC Net Benefits with Adder	I	**$7,094**
Total MTRC Net Benefits without Adder	J	**$964**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.4169**

ENERGY MANAGEMENT SYSTEMS

2021 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	$82,841	$82,841	$82,841
Variable O&M Savings	N/A	$1,206	$1,206	$1,206
Demand Savings	N/A	$8,449	$8,449	$8,449
Subtotal				$92,497
Non-Energy Benefits Adder (20.0%)				$18,499
Subtotal	N/A	$92,497	$92,497	$110,996
Participant Benefits				
Bill Reduction - Gas	$140,690	N/A	N/A	N/A
Participant Rebates and Incentives	$9,590	N/A	N/A	$9,590
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$26,942	N/A	N/A	$24,248
Subtotal	$177,222	N/A	N/A	$33,838
Total Benefits	$177,222	$92,497	$92,497	$144,834
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$13,011	$13,011	$13,011
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$9,590	$9,590	$9,590
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$22,601	$22,601	$22,601
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$140,690	N/A
Subtotal	N/A	N/A	$140,690	N/A
Participant Costs				
Incremental Capital Costs	$96,145	N/A	N/A	$86,531
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$96,145	N/A	N/A	$86,531
Total Costs	$96,145	$22,601	$163,291	$109,132
Net Benefit (Cost)	$81,077	$69,895	($70,794)	**$35,702**
Benefit/Cost Ratio	1.84	4.09	0.57	**1.33**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	15.0 years
Net-to-Gross (Weighted on Dth)	B	90.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant		
Gross Annual Dth Saved	D	299.7
Net Annual Dth Saved	E	269.7

Program Summary All Participants		
Total Budget	F	**$22,601**
Gross Annual Dth Saved	G	**2,397 Dth**
Net Annual Dth Saved	H	**2,158 Dth**
Total MTRC Net Benefits with Adder	I	**$35,702**
Total MTRC Net Benefits without Adder	J	**$17,203**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$0.6983**

NEW CONSTRUCTION

2021 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	$6,625,832	$6,625,832	$6,625,832
Variable O&M Savings	N/A	$98,191	$98,191	$98,191
Demand Savings	N/A	$687,766	$687,766	$687,766
Subtotal				$7,411,789
Non-Energy Benefits Adder (20.0%)				$1,482,358
Subtotal	N/A	$7,411,789	$7,411,789	$8,894,147
Participant Benefits				
Bill Reduction - Gas	$12,524,675	N/A	N/A	N/A
Participant Rebates and Incentives	$813,565	N/A	N/A	$813,565
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$11,779,718	N/A	N/A	$11,657,601
Subtotal	$25,117,957	N/A	N/A	$12,471,166
Total Benefits	$25,117,957	$7,411,789	$7,411,789	$21,365,313
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$476,066	$476,066	$476,066
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$813,565	$813,565	$813,565
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$62,002	$62,002	$62,002
Subtotal	N/A	$1,351,633	$1,351,633	$1,351,633
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$12,524,675	N/A
Subtotal	N/A	N/A	$12,524,675	N/A
Participant Costs				
Incremental Capital Costs	$4,763,804	N/A	N/A	$4,688,354
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$4,763,804	N/A	N/A	$4,688,354
Total Costs	$4,763,804	$1,351,633	$13,876,308	$6,039,987
Net Benefit (Cost)	$20,354,153	$6,060,156	($6,464,519)	**$15,325,325**
Benefit/Cost Ratio	5.27	5.48	0.53	**3.54**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	19.7 years
Net-to-Gross (Weighted on Dth)	B	98.46%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant		
Gross Annual Dth Saved	D	334.5
Net Annual Dth Saved	E	329.3

Program Summary All Participants		
Total Budget	F	**$1,351,633**
Gross Annual Dth Saved	G	**170,168 Dth**
Net Annual Dth Saved	H	**167,543 Dth**
Total MTRC Net Benefits with Adder	I	**$15,325,325**
Total MTRC Net Benefits without Adder	J	**$13,842,968**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$0.4091**

SMALL BUSINESS SOLUTIONS

2021 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	$36,795	$36,795	$36,795
Variable O&M Savings	N/A	$626	$626	$626
Demand Savings	N/A	$4,385	$4,385	$4,385
Subtotal				$41,806
Non-Energy Benefits Adder (20.0%)				$8,361
Subtotal	N/A	$41,806	$41,806	$50,167
Participant Benefits				
Bill Reduction - Gas	$69,529	N/A	N/A	N/A
Participant Rebates and Incentives	$6,702	N/A	N/A	$6,702
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$57,361	N/A	N/A	$53,920
Subtotal	$133,592	N/A	N/A	$60,621
Total Benefits	$133,592	$41,806	$41,806	$110,788
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$30,509	$30,509	$30,509
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$6,702	$6,702	$6,702
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$37,211	$37,211	$37,211
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$69,529	N/A
Subtotal	N/A	N/A	$69,529	N/A
Participant Costs				
Incremental Capital Costs	$10,925	N/A	N/A	$10,270
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$10,925	N/A	N/A	$10,270
Total Costs	$10,925	$37,211	$106,739	$47,480
Net Benefit (Cost)	$122,667	$4,595	($64,934)	**$63,308**
Benefit/Cost Ratio	12.23	1.12	0.39	**2.33**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	9.7 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	5.4
Net Annual Dth Saved	E	5.1

Program Summary All Participants		
Total Budget	F	**$37,211**
Gross Annual Dth Saved	G	**1,768 Dth**
Net Annual Dth Saved	H	**1,662 Dth**
Total MTRC Net Benefits with Adder	I	**$63,308**
Total MTRC Net Benefits without Adder	J	**$54,947**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$2.2987**

ENERGY EFFICIENT SHOWERHEAD

2021 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	$1,033,059	$1,033,059	$1,033,059
Variable O&M Savings	N/A	$16,933	$16,933	$16,933
Demand Savings	N/A	$118,604	$118,604	$118,604
Subtotal				$1,168,595
Non-Energy Benefits Adder (20.0%)				$233,719
Subtotal	N/A	$1,168,595	$1,168,595	$1,402,315
Participant Benefits				
Bill Reduction - Gas	$1,841,368	N/A	N/A	N/A
Participant Rebates and Incentives	$377,576	N/A	N/A	$377,576
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$5,301,068	N/A	N/A	$4,983,004
Subtotal	$7,520,011	N/A	N/A	$5,360,579
Total Benefits	$7,520,011	$1,168,595	$1,168,595	$6,762,894
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$266,492	$266,492	$266,492
Advertising/Promotion/Customer Ed	N/A	$5,102	$5,102	$5,102
Participant Rebates and Incentives	N/A	$377,576	$377,576	$377,576
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$649,169	$649,169	$649,169
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$1,841,368	N/A
Subtotal	N/A	N/A	$1,841,368	N/A
Participant Costs				
Incremental Capital Costs	$164,322	N/A	N/A	$154,463
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$164,322	N/A	N/A	$154,463
Total Costs	$164,322	$649,169	$2,490,537	$803,632
Net Benefit (Cost)	$7,355,689	$519,426	($1,321,942)	**$5,959,262**
Benefit/Cost Ratio	45.76	1.80	0.47	**8.42**

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

2021 GAS **ACTUALS**

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	10.0 years
Net-to-Gross (Weighted on Dth)	B	94.00%
Install Rate (Weighted on Dth)	C	64.61%

Program Summary per Participant		
Gross Annual Dth Saved	D	0.9
Net Annual Dth Saved	E	0.5

Program Summary All Participants		
Total Budget	F	**$649,169**
Gross Annual Dth Saved	G	**72,589 Dth**
Net Annual Dth Saved	H	**44,085 Dth**
Total MTRC Net Benefits with Adder	I	**$5,959,262**
Total MTRC Net Benefits without Adder	J	**$5,725,543**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.4726**

ENERGY STAR NEW HOMES

2021 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	$5,056,963	$5,056,963	$5,056,963
Variable O&M Savings	N/A	$74,845	$74,845	$74,845
Demand Savings	N/A	$524,247	$524,247	$524,247
Subtotal				$5,656,056
Non-Energy Benefits Adder (20.0%)				$1,131,211
Subtotal	N/A	$5,656,056	$5,656,056	$6,787,267
Participant Benefits				
Bill Reduction - Gas	$9,013,747	N/A	N/A	N/A
Participant Rebates and Incentives	$2,253,472	N/A	N/A	$2,253,472
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$4,977	N/A	N/A	$4,579
Subtotal	$11,272,196	N/A	N/A	$2,258,051
Total Benefits	$11,272,196	$5,656,056	$5,656,056	$9,045,317
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$465,084	$465,084	$465,084
Advertising/Promotion/Customer Ed	N/A	$1,442	$1,442	$1,442
Participant Rebates and Incentives	N/A	$2,253,472	$2,253,472	$2,253,472
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$434,648	$434,648	$434,648
Subtotal	N/A	$3,154,645	$3,154,645	$3,154,645
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$9,013,747	N/A
Subtotal	N/A	N/A	$9,013,747	N/A
Participant Costs				
Incremental Capital Costs	$7,078,365	N/A	N/A	$6,512,095
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$7,078,365	N/A	N/A	$6,512,095
Total Costs	$7,078,365	$3,154,645	$12,168,392	$9,666,740
Net Benefit (Cost)	$4,193,831	$2,501,410	($6,512,336)	**($621,423)**
Benefit/Cost Ratio	1.59	1.79	0.46	**0.94**

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

2021 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	91.52%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant		
Gross Annual Dth Saved	D	21.2
Net Annual Dth Saved	E	19.4

Program Summary All Participants		
Total Budget	F	**$3,154,645**
Gross Annual Dth Saved	G	**141,149 Dth**
Net Annual Dth Saved	H	**129,178 Dth**
Total MTRC Net Benefits with Adder	I	**($621,423)**
Total MTRC Net Benefits without Adder	J	**($1,752,634)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.2545**

HOME ENERGY INSIGHTS

2021 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	$578,198	$578,198	$578,198
Variable O&M Savings	N/A	$11,686	$11,686	$11,686
Demand Savings	N/A	$81,851	$81,851	$81,851
Subtotal				$671,735
Non-Energy Benefits Adder (20.0%)				$134,347
Subtotal	N/A	$671,735	$671,735	$806,082
Participant Benefits				
Bill Reduction - Gas	$1,030,605	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	$1,030,605	N/A	N/A	$0
Total Benefits	$1,030,605	$671,735	$671,735	$806,082
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$132,775	$132,775	$132,775
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	$132,775	$132,775	$132,775
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$1,030,605	N/A
Subtotal	N/A	N/A	$1,030,605	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	$132,775	$1,163,380	$132,775
Net Benefit (Cost)	$1,030,605	$538,959	($491,645)	**$673,306**
Benefit/Cost Ratio	INF	5.06	0.58	**6.07**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	3.0 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant		
Gross Annual Dth Saved	D	3,709.7
Net Annual Dth Saved	E	3,709.7

Program Summary All Participants		
Total Budget	F	**$132,775**
Gross Annual Dth Saved	G	**77,905 Dth**
Net Annual Dth Saved	H	**77,905 Dth**
Total MTRC Net Benefits with Adder	I	**$673,306**
Total MTRC Net Benefits without Adder	J	**$538,959**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$0.5681**

HOME ENERGY SQUAD

2021 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	$67,108	$67,108	$67,108
Variable O&M Savings	N/A	$1,211	$1,211	$1,211
Demand Savings	N/A	$8,484	$8,484	$8,484
Subtotal				$76,803
Non-Energy Benefits Adder (20.0%)				$15,361
Subtotal	N/A	$76,803	$76,803	$92,164
Participant Benefits				
Bill Reduction - Gas	$119,617	N/A	N/A	N/A
Participant Rebates and Incentives	$49,581	N/A	N/A	$49,581
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$58,231	N/A	N/A	$58,231
Subtotal	$227,429	N/A	N/A	$107,812
Total Benefits	$227,429	$76,803	$76,803	$199,976
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$140,818	$140,818	$140,818
Advertising/Promotion/Customer Ed	N/A	$64,249	$64,249	$64,249
Participant Rebates and Incentives	N/A	$49,581	$49,581	$49,581
Equipment & Installation	N/A	$50,057	$50,057	$50,057
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$304,705	$304,705	$304,705
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$119,617	N/A
Subtotal	N/A	N/A	$119,617	N/A
Participant Costs				
Incremental Capital Costs	$22,358	N/A	N/A	$22,358
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$22,358	N/A	N/A	$22,358
Total Costs	$22,358	$304,705	$424,321	$327,062
Net Benefit (Cost)	$205,071	($227,902)	($347,518)	**($127,087)**
Benefit/Cost Ratio	10.17	0.25	0.18	**0.61**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	10.0 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant		
Gross Annual Dth Saved	D	18.8
Net Annual Dth Saved	E	18.8

Program Summary All Participants		
Total Budget	F	**$304,705**
Gross Annual Dth Saved	G	**3,156 Dth**
Net Annual Dth Saved	H	**3,156 Dth**
Total MTRC Net Benefits with Adder	I	**($127,087)**
Total MTRC Net Benefits without Adder	J	**($142,447)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$9.6652**

INSULATION & AIR SEALING

2021 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	$904,571	$904,571	$904,571
Variable O&M Savings	N/A	$14,308	$14,308	$14,308
Demand Savings	N/A	$100,217	$100,217	$100,217
Subtotal				$1,019,095
Non-Energy Benefits Adder (20.0%)				$203,819
Subtotal	N/A	$1,019,095	$1,019,095	$1,222,914
Participant Benefits				
Bill Reduction - Gas	$1,612,345	N/A	N/A	N/A
Participant Rebates and Incentives	$494,580	N/A	N/A	$494,580
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$2,106,926	N/A	N/A	$494,580
Total Benefits	$2,106,926	$1,019,095	$1,019,095	$1,717,494
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$41,197	$41,197	$41,197
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$494,580	$494,580	$494,580
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$1,750	$1,750	$1,750
Subtotal	N/A	$537,527	$537,527	$537,527
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$1,612,345	N/A
Subtotal	N/A	N/A	$1,612,345	N/A
Participant Costs				
Incremental Capital Costs	$2,334,190	N/A	N/A	$2,059,744
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$2,334,190	N/A	N/A	$2,059,744
Total Costs	$2,334,190	$537,527	$2,149,872	$2,597,271
Net Benefit (Cost)	($227,264)	$481,568	($1,130,777)	**($879,777)**
Benefit/Cost Ratio	0.90	1.90	0.47	**0.66**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	15.0 years
Net-to-Gross (Weighted on Dth)	B	88.04%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant		
Gross Annual Dth Saved	D	19.2
Net Annual Dth Saved	E	16.9

Program Summary All Participants		
Total Budget	F	**$537,527**
Gross Annual Dth Saved	G	**33,413 Dth**
Net Annual Dth Saved	H	**29,418 Dth**
Total MTRC Net Benefits with Adder	I	**($879,777)**
Total MTRC Net Benefits without Adder	J	**($1,083,596)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.2214**

MULTIFAMILY BUILDINGS

2021 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	$71,452	$71,452	$71,452
Variable O&M Savings	N/A	$1,245	$1,245	$1,245
Demand Savings	N/A	$8,720	$8,720	$8,720
Subtotal				$81,417
Non-Energy Benefits Adder (20.0%)				$16,283
Subtotal	N/A	$81,417	$81,417	$97,700
Participant Benefits				
Bill Reduction - Gas	$129,766	N/A	N/A	N/A
Participant Rebates and Incentives	$335,200	N/A	N/A	$335,200
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$372,069	N/A	N/A	$372,069
Subtotal	$837,035	N/A	N/A	$707,269
Total Benefits	$837,035	$81,417	$81,417	$804,969
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$26,069	$26,069	$26,069
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$335,200	$335,200	$335,200
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$361,269	$361,269	$361,269
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$129,766	N/A
Subtotal	N/A	N/A	$129,766	N/A
Participant Costs				
Incremental Capital Costs	$30,000	N/A	N/A	$30,000
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$30,000	N/A	N/A	$30,000
Total Costs	$30,000	$361,269	$491,036	$391,269
Net Benefit (Cost)	$807,035	($279,852)	($409,619)	**$413,700**
Benefit/Cost Ratio	27.90	0.23	0.17	**2.06**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	10.5 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	1.3
Net Annual Dth Saved	E	1.3

Program Summary All Participants		
Total Budget	F	**$361,269**
Gross Annual Dth Saved	G	**3,164 Dth**
Net Annual Dth Saved	H	**3,164 Dth**
Total MTRC Net Benefits with Adder	I	**$413,700**
Total MTRC Net Benefits without Adder	J	**$397,416**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$10.9237**

RESIDENTIAL HEATING & COOLING

2021 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	$5,203,940	$5,203,940	$5,203,940
Variable O&M Savings	N/A	$80,168	$80,168	$80,168
Demand Savings	N/A	$561,529	$561,529	$561,529
Subtotal				$5,845,637
Non-Energy Benefits Adder (20.0%)				$1,169,127
Subtotal	N/A	$5,845,637	$5,845,637	$7,014,764
Participant Benefits				
Bill Reduction - Gas	$9,208,976	N/A	N/A	N/A
Participant Rebates and Incentives	$2,411,779	N/A	N/A	$2,411,779
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$11,620,755	N/A	N/A	$2,411,779
Total Benefits	$11,620,755	$5,845,637	$5,845,637	$9,426,543
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$297,901	$297,901	$297,901
Advertising/Promotion/Customer Ed	N/A	$6,571	$6,571	$6,571
Participant Rebates and Incentives	N/A	$2,411,779	$2,411,779	$2,411,779
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$16,850	$16,850	$16,850
Subtotal	N/A	$2,733,101	$2,733,101	$2,733,101
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$9,208,976	N/A
Subtotal	N/A	N/A	$9,208,976	N/A
Participant Costs				
Incremental Capital Costs	$9,272,189	N/A	N/A	$8,056,084
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$9,272,189	N/A	N/A	$8,056,084
Total Costs	$9,272,189	$2,733,101	$11,942,077	$10,789,185
Net Benefit (Cost)	$2,348,566	$3,112,536	($6,096,440)	**($1,362,642)**
Benefit/Cost Ratio	1.25	2.14	0.49	**0.87**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	15.6 years
Net-to-Gross (Weighted on Dth)	B	85.51%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant		
Gross Annual Dth Saved	D	2,805.1
Net Annual Dth Saved	E	2,378.0

Program Summary All Participants		
Total Budget	F	**$2,733,101**
Gross Annual Dth Saved	G	**196,357 Dth**
Net Annual Dth Saved	H	**166,459 Dth**
Total MTRC Net Benefits with Adder	I	**($1,362,642)**
Total MTRC Net Benefits without Adder	J	**($2,531,770)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.0517**

SCHOOL EDUCATION KITS

2021 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	$1,203,702	$1,203,702	$1,203,702
Variable O&M Savings	N/A	$21,181	$21,181	$21,181
Demand Savings	N/A	$148,363	$148,363	$148,363
Subtotal				$1,373,247
Non-Energy Benefits Adder (20.0%)				$274,649
Subtotal	N/A	$1,373,247	$1,373,247	$1,647,896
Participant Benefits				
Bill Reduction - Gas	$2,145,530	N/A	N/A	N/A
Participant Rebates and Incentives	$508,124	N/A	N/A	$508,124
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$5,681,303	N/A	N/A	$5,681,303
Subtotal	$8,334,957	N/A	N/A	$6,189,427
Total Benefits	$8,334,957	$1,373,247	$1,373,247	$7,837,323
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$468,791	$468,791	$468,791
Advertising/Promotion/Customer Ed	N/A	$2,620	$2,620	$2,620
Participant Rebates and Incentives	N/A	$508,124	$508,124	$508,124
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$979,535	$979,535	$979,535
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$2,145,530	N/A
Subtotal	N/A	N/A	$2,145,530	N/A
Participant Costs				
Incremental Capital Costs	$185,682	N/A	N/A	$185,682
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$185,682	N/A	N/A	$185,682
Total Costs	$185,682	$979,535	$3,125,065	$1,165,217
Net Benefit (Cost)	$8,149,275	$393,712	($1,751,818)	**$6,672,106**
Benefit/Cost Ratio	44.89	1.40	0.44	**6.73**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	10.0 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	20.60%

Program Summary per Participant		
Gross Annual Dth Saved	D	2.4
Net Annual Dth Saved	E	0.5

Program Summary All Participants		
Total Budget	F	**$979,535**
Gross Annual Dth Saved	G	**267,641 Dth**
Net Annual Dth Saved	H	**55,146 Dth**
Total MTRC Net Benefits with Adder	I	**$6,672,106**
Total MTRC Net Benefits without Adder	J	**$6,397,456**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$1.7763**

WHOLE HOME EFFICIENCY

2021 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	$13,162	$13,162	$13,162
Variable O&M Savings	N/A	$187	$187	$187
Demand Savings	N/A	$1,307	$1,307	$1,307
Subtotal				$14,655
Non-Energy Benefits Adder (20.0%)				$2,931
Subtotal	N/A	$14,655	$14,655	$17,586
Participant Benefits				
Bill Reduction - Gas	$23,461	N/A	N/A	N/A
Participant Rebates and Incentives	$4,679	N/A	N/A	$4,679
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$28,139	N/A	N/A	$4,679
Total Benefits	$28,139	$14,655	$14,655	$22,265
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$35,482	$35,482	$35,482
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$4,679	$4,679	$4,679
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$1,122	$1,122	$1,122
Subtotal	N/A	$41,283	$41,283	$41,283
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$23,461	N/A
Subtotal	N/A	N/A	$23,461	N/A
Participant Costs				
Incremental Capital Costs	$19,800	N/A	N/A	$22,968
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$19,800	N/A	N/A	$22,968
Total Costs	$19,800	$41,283	$64,743	$64,251
Net Benefit (Cost)	$8,339	($26,628)	($50,088)	**($41,986)**
Benefit/Cost Ratio	1.42	0.35	0.23	**0.35**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	15.9 years
Net-to-Gross (Weighted on Dth)	B	116.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant		
Gross Annual Dth Saved	D	4.2
Net Annual Dth Saved	E	4.9

Program Summary All Participants		
Total Budget	F	**$41,283**
Gross Annual Dth Saved	G	**318 Dth**
Net Annual Dth Saved	H	**368 Dth**
Total MTRC Net Benefits with Adder	I	**($41,986)**
Total MTRC Net Benefits without Adder	J	**($44,917)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$7.0347**

ENERGY SAVINGS KIT

2021 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	$1,785,898	$1,785,898	$1,785,898
Variable O&M Savings	N/A	$26,914	$26,914	$26,914
Demand Savings	N/A	$188,514	$188,514	$188,514
Subtotal				$2,001,325
Non-Energy Benefits Adder (50.0%)				$1,000,663
Subtotal	N/A	$2,001,325	$2,001,325	$3,001,988
Participant Benefits				
Bill Reduction - Gas	$3,183,261	N/A	N/A	N/A
Participant Rebates and Incentives	$207,841	N/A	N/A	$207,841
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$7,301,498	N/A	N/A	$7,301,498
Subtotal	$10,692,600	N/A	N/A	$7,509,339
Total Benefits	$10,692,600	$2,001,325	$2,001,325	$10,511,327
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$127,167	$127,167	$127,167
Advertising/Promotion/Customer Ed	N/A	$400	$400	$400
Participant Rebates and Incentives	N/A	$207,841	$207,841	$207,841
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$335,408	$335,408	$335,408
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$3,183,261	N/A
Subtotal	N/A	N/A	$3,183,261	N/A
Participant Costs				
Incremental Capital Costs	$169,377	N/A	N/A	$169,377
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$169,377	N/A	N/A	$169,377
Total Costs	$169,377	$335,408	$3,518,668	$504,785
Net Benefit (Cost)	$10,523,223	$1,665,917	($1,517,343)	**$10,006,542**
Benefit/Cost Ratio	63.13	5.97	0.57	**20.82**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	10.0 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	77.10%

Program Summary per Participant		
Gross Annual Dth Saved	D	1.8
Net Annual Dth Saved	E	1.4

Program Summary All Participants		
Total Budget	F	**$335,408**
Gross Annual Dth Saved	G	**90,877 Dth**
Net Annual Dth Saved	H	**70,070 Dth**
Total MTRC Net Benefits with Adder	I	**$10,006,542**
Total MTRC Net Benefits without Adder	J	**$9,005,879**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$0.4787**

MULTIFAMILY WEATHERIZATION

2021 GAS **ACTUALS**

2021 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	$265,547	$265,547	$265,547
Variable O&M Savings	N/A	$4,599	$4,599	$4,599
Demand Savings	N/A	$32,211	$32,211	$32,211
Subtotal				$302,356
Non-Energy Benefits Adder (50.0%)				$151,178
Subtotal	N/A	$302,356	$302,356	$453,534
Participant Benefits				
Bill Reduction - Gas	$473,322	N/A	N/A	N/A
Participant Rebates and Incentives	$838,973	N/A	N/A	$838,973
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$130,346	N/A	N/A	$130,346
Subtotal	$1,442,640	N/A	N/A	$969,318
Total Benefits	$1,442,640	$302,356	$302,356	$1,422,853
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$103,724	$103,724	$103,724
Advertising/Promotion/Customer Ed	N/A	$20,833	$20,833	$20,833
Participant Rebates and Incentives	N/A	$838,973	$838,973	$838,973
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$10,415	$10,415	$10,415
Subtotal	N/A	$973,945	$973,945	$973,945
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$473,322	N/A
Subtotal	N/A	N/A	$473,322	N/A
Participant Costs				
Incremental Capital Costs	$1,102,155	N/A	N/A	$1,102,155
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$1,102,155	N/A	N/A	$1,102,155
Total Costs	$1,102,155	$973,945	$1,447,266	$2,076,099
Net Benefit (Cost)	$340,485	($671,589)	($1,144,910)	**($653,247)**
Benefit/Cost Ratio	1.31	0.31	0.21	**0.69**

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	501.9
Net Annual Dth Saved	E	501.9

Program Summary All Participants		
Total Budget	F	**$973,945**
Gross Annual Dth Saved	G	**9,536 Dth**
Net Annual Dth Saved	H	**9,536 Dth**
Total MTRC Net Benefits with Adder	I	**($653,247)**
Total MTRC Net Benefits without Adder	J	**($804,425)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$7.2949**

NON-PROFIT

2021 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	$237,169	$237,169	$237,169
Variable O&M Savings	N/A	$3,992	$3,992	$3,992
Demand Savings	N/A	$27,961	$27,961	$27,961
Subtotal				$269,123
Non-Energy Benefits Adder (50.0%)				$134,561
Subtotal	N/A	$269,123	$269,123	$403,684
Participant Benefits				
Bill Reduction - Gas	$449,104	N/A	N/A	N/A
Participant Rebates and Incentives	$255,497	N/A	N/A	$255,497
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$274,451	N/A	N/A	$274,451
Subtotal	$979,052	N/A	N/A	$529,948
Total Benefits	$979,052	$269,123	$269,123	$933,632
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$85,410	$85,410	$85,410
Advertising/Promotion/Customer Ed	N/A	$20,833	$20,833	$20,833
Participant Rebates and Incentives	N/A	$255,497	$255,497	$255,497
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$9,392	$9,392	$9,392
Subtotal	N/A	$371,133	$371,133	$371,133
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$449,104	N/A
Subtotal	N/A	N/A	$449,104	N/A
Participant Costs				
Incremental Capital Costs	$322,674	N/A	N/A	$322,674
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$322,674	N/A	N/A	$322,674
Total Costs	$322,674	$371,133	$820,237	$693,807
Net Benefit (Cost)	$656,378	($102,010)	($551,114)	**$239,825**
Benefit/Cost Ratio	3.03	0.73	0.33	**1.35**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	16.0 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant		
Gross Annual Dth Saved	D	163.3
Net Annual Dth Saved	E	163.3

Program Summary All Participants		
Total Budget	F	**$371,133**
Gross Annual Dth Saved	G	**7,635 Dth**
Net Annual Dth Saved	H	**7,635 Dth**
Total MTRC Net Benefits with Adder	I	**$239,825**
Total MTRC Net Benefits without Adder	J	**$105,264**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$3.0382**

SINGLE-FAMILY WEATHERIZATION

2021 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	$994,140	$994,140	$994,140
Variable O&M Savings	N/A	$16,414	$16,414	$16,414
Demand Savings	N/A	$114,970	$114,970	$114,970
Subtotal				$1,125,525
Non-Energy Benefits Adder (50.0%)				$562,762
Subtotal	N/A	$1,125,525	$1,125,525	$1,688,287
Participant Benefits				
Bill Reduction - Gas	$1,771,998	N/A	N/A	N/A
Participant Rebates and Incentives	$2,613,554	N/A	N/A	$2,613,554
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$193,673	N/A	N/A	$193,673
Subtotal	$4,579,225	N/A	N/A	$2,807,227
Total Benefits	$4,579,225	$1,125,525	$1,125,525	$4,495,514
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$251,342	$251,342	$251,342
Advertising/Promotion/Customer Ed	N/A	$87,500	$87,500	$87,500
Participant Rebates and Incentives	N/A	$2,613,554	$2,613,554	$2,613,554
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$205,489	$205,489	$205,489
Subtotal	N/A	$3,157,885	$3,157,885	$3,157,885
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$1,771,998	N/A
Subtotal	N/A	N/A	$1,771,998	N/A
Participant Costs				
Incremental Capital Costs	$2,414,658	N/A	N/A	$2,414,658
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$2,414,658	N/A	N/A	$2,414,658
Total Costs	$2,414,658	$3,157,885	$4,929,884	$5,572,543
Net Benefit (Cost)	$2,164,567	($2,032,361)	($3,804,359)	**($1,077,029)**
Benefit/Cost Ratio	1.90	0.36	0.23	**0.81**

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

2021 GAS ACTUALS

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	14.9 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant		
Gross Annual Dth Saved	D	6.1
Net Annual Dth Saved	E	6.1

Program Summary All Participants		
Total Budget	F	**$3,157,885**
Gross Annual Dth Saved	G	**33,859 Dth**
Net Annual Dth Saved	H	**33,859 Dth**
Total MTRC Net Benefits with Adder	I	**($1,077,029)**
Total MTRC Net Benefits without Adder	J	**($1,639,791)**
Utility Program Cost per Dth Lifetime	F /(A x H)	**$6.2526**

Confidential Appendix C: ISOC Product Cost and Benefit Summary

The following section summarizes both the cost and benefits of the ISOC product for 2021 in terms of capacity and energy.

2021 ISOC Program Cost and Benefit Summary

Avoided Capacity Benefit	Total kW at transmission	Capacity Savings Rate/kw-	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			$33,498,370.82

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	$ 121,139.43	$ -	$ -	$ -	$-	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 121,139.43
Total Energy Savings	$ 121,139.43	$ -	$ -	$ -	$-	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 121,139.43

Total ISOC Benefits	$33,619,510.25
Total ISOC Costs	$ (25,480,885.49)
Total Admin Costs	[redacted]
Total Customer Credits	
Total Program Net Benefit	$8,138,624.76

CERTIFICATE OF SERVICE

I hereby certify that on April 1, 2022 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/ Angela R. Smelser