2020 DEMAND-SIDE MANAGEMENT ANNUAL STATUS REPORT

Electric and Natural Gas
Public Service Company of Colorado

April 1, 2021 / Proceeding No. 18A-0606EG

Xcel Energy®

2020 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 2020 DSM Annual Status Report summarizes the natural gas and electric energy efficiency achievements made in 2020. 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 adapted to unprecedented challenges in 2020**. As the impacts of the COVID-19 pandemic spread through-out its service territory, Public Service adapted and evolved the operation of 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 466 GWh, second only to 2019's record-setting achievement and exceeding the prior 5-year average savings by 6 percent while accounting for 93 percent of the energy efficiency goal of 500 GWh. The natural gas portfolio realized even greater success, achieving energy savings in excess of 106 percent of the target at 96 percent of budget.
- **All programs were cost-effective for both Electric and Natural Gas offerings.** The Business Program was cost-effective for both fuels, showing the strongest improvement in Natural Gas offerings with a Modified Total Resource Cost ("MTRC") ratio of 3.56 compared to 2.69 in 2019. The Residential Program showed the greatest improvement in Electric offerings with an MTRC ratio of 3.61 compared to 2.57 in 2019. The Low-Income Program continued strong performance from 2019 as demonstrated by an MTRC ratio of 3.14 for Electric and 1.13 for Natural Gas.
- **A total of 231,594 tons of carbon dioxide ("CO_2") were avoided in 2020 through the natural gas and electric DSM achievements.** Additionally, more than 3.4 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 Home Lighting & Recycling, New Construction, and Lighting Efficiency. The electric and natural gas portfolios also avoided 277,363 tons of sulfur oxide ("SOx") emissions in 2020, with expected lifetime emissions reduction of just under 2.5 million tons.
- **Lighting programs continued to contribute to the majority of the electric energy savings**. Lighting programs contributed approximately 53 percent of the energy savings realized in 2020, down slightly from 54 percent in 2019 and more significantly from 66 percent in 2018.
- **New products and pilots expanded customer choice.** The Company continued to operate its Geo-targeting pilot in 2020 to explore the effectiveness of targeted DSM deployment in deferring investments in new distribution system upgrades. The Company also launched new offerings including Electric Vehicle Critical Peak Pricing, Peak Day Partners, and Small Commercial Building Controls to offer customers more opportunities to participate in Company's Demand Response Program.

Looking ahead, the Company will continue to offer more cost-effective choices for customers as approved in the 2021-22 DSM Plan in Proceeding No. 20A-0287EG in an effort to help Coloradans exceed their energy, climate, and sustainability goals. New offerings in 2021 include beneficial electrification technologies and an expanded Natural Gas portfolio. 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.

2020 Demand-Side Management Annual Status Report

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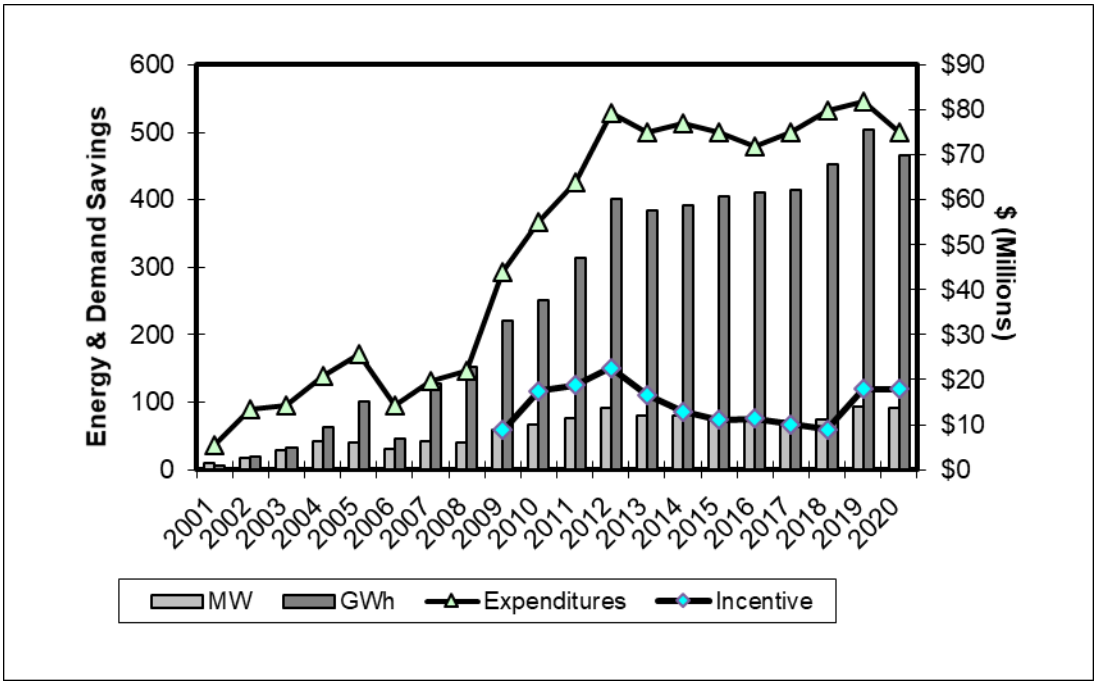
Executive Summary

Public Service respectfully submits this combined electric and natural gas 2020 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, 2020 through December 31, 2020.

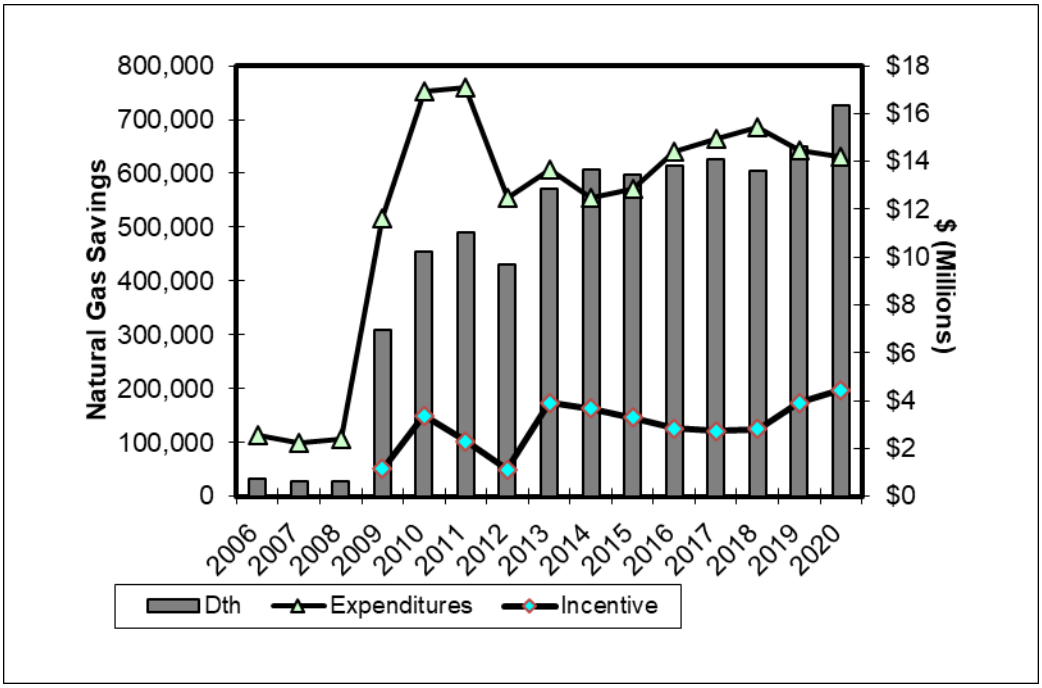
The electric energy efficiency savings of 466 GWh are a significant accomplishment given economy-wide impacts of the COVID-19 pandemic in 2020. Second only to 2019 achievement, 2020 electric savings exceed the prior 5-year average savings by 6 percent and account for 93 percent of the goal of 500 GWh. Natural gas savings of 727,480 Dth was 107 percent of the goal of 681,120 Dth. To achieve these savings, the Company spent a total of $89,925,283 million ($75.1 million electric energy efficiency, $14.8 million demand response) on its electric programs and $14.2 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 $17.9 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 $15 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] Proceeding No. 18A-0606EG, Unopposed Comprehensive Settlement Agreement, at Section III(C).

Figure 2: Historical Natural Gas Program Savings and Expenditures



History of the Plan

Over the last twenty 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

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 2020, Public Service's electric energy efficiency and demand response portfolio achieved demand savings of 136,505 net generator kW (103 percent of filed target) and energy savings of 466,645,244 net generator kWh (93 percent of goal and filed target) at a cost of $89,925,283 (81 percent of filed budget).

The natural gas portfolio achieved savings of 727,480 Dth (107 percent of filed target) at a cost of $14,221,453 (96 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 2020

2020 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)
Business	$ 59,115,505	$44,997,861	59,274	51,396	368,947,811	275,090,892	1.41	1.68
Residential	$ 23,385,992	$21,031,856	31,797	36,864	126,061,968	166,685,343	1.83	3.61
Low-Income	$ 3,872,811	$3,967,003	1,180	3,523	6,669,128	24,591,328	0.90	3.14
Indirect	$ 7,009,724	$5,087,760	0	0	0	0	-	-
Demand Response	$ 17,925,847	$14,840,802	40,494	44,722	37,082	277,681	1.49	1.22
2020 TOTAL	**$ 111,309,880**	**$89,925,283**	**132,745**	**136,505**	**501,715,988**	**466,645,244**	**1.42**	**1.96**

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 2020

2020 Programs	Natural Gas Budget	Natural Gas Expenditures (Actual)	Dth Target	Net. Realized Dth	MTRC Target	MTRC (Actual)
Business	$2,744,332	$2,420,477	156,603	211,278	1.78	3.56
Residential	$6,266,518	$7,055,479	451,753	447,504	1.68	1.50
Low-Income	$4,269,136	$3,762,018	72,765	68,697	1.03	1.13
Indirect	$1,587,110	$983,479	0	0	-	-
2020 TOTAL	**$14,867,096**	$14,221,453	**681,120**	**727,480**	**1.48**	**1.83**

These achievements shown in Tables 2a and 2b have provided electric net benefits of approximately $166 million and natural gas net benefits of $31 million. Based on these achievements and net benefits, the Company has calculated an associated financial incentive of $18 million for its electric portfolio and $4.5 million for its natural gas portfolio. This includes $3,555,363 for the incentive and an acknowledgement of lost revenues ("ALR") associated with gas DSM programs of $893,946. 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	$340,103,485	$68,739,657
MTRC Costs	$173,733,884	$37,561,815
MTRC Ratio	1.96	1.83
MTRC Benefits w/Adder	$340,103,485	$68,739,657
Incentive	$18,000,000	$3,555,363
Acknowledgement of Lost Revenue (ALR)	n/a	$893,946
MTRC Costs w/Incentive & ALR	$191,733,884	$42,011,124
MTRC Ratio w/Incentive & ALR	1.77	1.64

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 $101 million of electric net benefits and $25 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	$441,340,752	$93,366,648
MTRC Costs	$173,733,884	$37,561,815
MTRC Ratio	2.54	2.49
MTRC Benefits w/Adder + SCC	$441,340,752	$93,366,648
Incentive	$18,000,000	$3,555,363
Acknowledgement of Lost Revenue (ALR)	n/a	$893,946
MTRC Costs w/Incentive & ALR	$191,733,884	$42,011,124
MTRC Ratio w/Incentive & ALR	2.30	2.22

Some of the products that are part of the Company's portfolio did not pass the MTRC Test in 2020. While each product listed below is discussed in more detail in the 2020 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 2020.

Business Program

- *Heating Efficiency – Electric (0.48 MTRC)*
    - With ECM motors being discontinued at the end of 2019, the product was left with only one combo measure that provided electric savings. This measure, Infrared tube heaters, saw little participation primarily due to restrictions in place in response to the COVID-19 pandemic.

  Efforts to improve for 2021: The Company will aggressively promote Infrared tube heaters and explore new electric measures such as Heat Pump water heaters, to improve the product performance.

- *Recommissioning – Electric (0.88 MTRC)*
    - Recommissioning efforts stopped after March 2020 in response to restrictions related to the COVID-19 pandemic. Companies restricted access to facilities which prevented existing implementation efforts and new building assessments.

  Efforts to improve for 2021: The Recommissioning product was terminated on March 31, 2021 and was incorporated into the Building Energy Assessments (BEA) product under the 2021-22 DSM Plan.

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

Residential Program

- *Home Energy Squad – Natural Gas (0.91 MTRC)*
    - The product was forced to cease in-home visits for several months of the year due to restrictions in place related to the COVID-19 pandemic. Steps were taken to mitigate the disruption, including introducing virtual visits, however the product was not able to achieve sufficient gas savings to be cost-effective.

  Efforts to improve for 2021: The product will continue to offer virtual visit services as a strategy to increase participation and to be ready in the event of future disruptions. The product is also working to improve customer signup channels to ensure that customers select the visit type that best fits their needs. This will ensure that customers receive the services they most need and that the product is using its resources most effectively.

- *Home Performance with ENERGY STAR® – Electric (0.66 MTRC) and Natural Gas (0.85 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 2021: Renewed efforts to increase HVAC contractor participation to promote "whole home" improvements are underway. The 2021-22 DSM Plan increased the amount of energy efficient upgrades available to customers to better align the product with the standalone products and drive additional participation.

- *Insulation and Air Sealing – Electric (0.72 MTRC) and Natural Gas (0.87 MTRC)*
    - Higher than expected administrative and incremental capital costs impacted the cost effectiveness of the product.

  Efforts to improve for 2021: The product was modified in the 2021-22 DSM Plan to simplify the customer experience while also improving the cost effectiveness. Trade partner outreach will continue to ensure understanding of new program measures.

- *Residential Heating – Natural Gas (0.77 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 led to this product's low cost-benefit ratio.

  Efforts to improve for 2021: The Residential Heating product was terminated on March 31, 2021 and was incorporated into the Residential Heating & Cooling product under the 2021-22 DSM Plan. 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.

- *Water Heating – Natural Gas (0.61 MTRC)*
    - The high incremental and administrative costs for gas measures resulted in the product being not cost-effective.

  Efforts to improve for 2021: The Water Heating product was terminated on March 31, 2021 and was incorporated into the Residential Heating & Cooling product under the 2021-22 DSM Plan. 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. Additionally, instant rebates will be relaunched in 2021 to

reduce administrative costs and trade partner engagement will be utilized to emphasize the most cost-effective measures.

Low-Income Program

- *Non-Profit – Electric (0.98 MTRC) and Natural Gas (0.85 MTRC)*
    - Low natural gas prices combined with high incremental costs result in many measures not passing under custom cost-effective analyses.
    - Due to the COVID-19 pandemic, many non-profits were overwhelmed with need and could not afford higher capital expenditures. The Company elected to approve non-passing measures, including boiler replacements and control systems, to enable a number of projects to move forward in order to help these organizations save money.

  Efforts to improve for 2021: The Company will continue to seek cost-saving opportunities while ensuring that this customer segment receives necessary assistance. The Company will review its custom analysis tools and approach to ensure that they are adequately representing the savings opportunity for this segment.

- *Single Family Weatherization – Natural Gas (0.98 MTRC)*
    - The Company provided additional funding for marketing and outreach efforts to help expand the Colorado Affordable Residential Energy ("CARE") program and an educational workshop series. This funding greatly benefits the low-income customer segment but is weighted as an administrative cost to the program, thus, hurting cost effectiveness.
    - High participation in furnace and water heater replacements resulted in a lower MTRC score due to high incremental costs of the measures.

  Efforts to improve for 2021: The Company will continue to watch administrative costs while still ensuring this customer segment receives necessary assistance and equitable access to energy efficient technologies.

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.

Seventeen 60-Day Notices were posted that impacted calendar year 2020 and are shown in Table 3 below. These included the addition of new measures to the portfolio, updates to technical assumptions, and information for stakeholders 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 Issued in 2020

Product, Pilot, or Measure	Notice Date	Notice Type	
Business Program			
Commercial Refrigeration Efficiency and Lighting – Small Business	3/13/2020	60-Day	Technical Assumptions update
Heating Efficiency	3/13/2020	60-Day	Technical Assumptions, measure offerings, and rebate update
Heating Efficiency (2)	3/13/2020	60-Day	Process Evaluation update
Motor & Drive Efficiency	3/13/2020	60-Day	Comprehensive Evaluation update
Lighting Efficiency	3/13/2020	60-Day	Comprehensive Evaluation update
Cooling	5/29/2020	60-Day	Technical Assumptions update
Residential Program			
Insulation and Air Sealing	1/20/2020	60-Day	Product Write-up Correction
Insulation and Air Sealing (2)	3/13/2020	60-Day	Product eligibility update
Home Energy Squad	5/29/2020	60-Day	Technical Assumptions, measure offerings, and rebate update
Home Lighting & Recycling[6]	5/29/2020	60-Day	Technical Assumptions, measure offerings, and rebate update
School Education Kits	5/29/2020	60-Day	Technical Assumptions and measure offerings update
Low-Income Program			
Single-Family Weatherization	3/13/2020	60-Day	Process Evaluation update
Single-Family Weatherization	5/29/2020	60-Day	Technical Assumptions, measure offerings, and rebate update
Demand Response			
Small Commercial Building Controls[7]	1/20/2020	60-Day	New Product Offering
Peak Day Partners Pilot	3/13/2020	60-Day	Product eligibility update
Residential Demand Response[8]	5/29/2020	60-Day	New Measure Offering
Residential Battery Demand Response	8/7/2020	60-Day	Technical Assumptions and rebate update

Additional detail on the impact of these changes can be found in the 2020 Status Report section of this report, within each DSM product summary.

RFP Administrative Costs for Third-Party Implementation

As required by Decision No. C11-0442 (Proceeding No. 10A-554EG),[9] the Company continues to track administrative costs incurred for conducting requests for proposals ("RFPs"), shown in Table 4 below.

[6] The Home Lighting & Recycling 60-Day Notice also updated technical assumptions and measures for the Multifamily Buildings and Energy Savings Kits products.
[7] The Smart Thermostat Controls 60-Day Notice also updated technical assumptions and measures for the following products: Commercial Refrigeration Efficiency, Lighting – Small Business, Multifamily Buildings, Thermostat Optimization, Business Energy Analysis, and Residential Demand Response.
[8] The Residential Demand Response 60-Day Notice added a water heater demand response offering to the product and updated technical assumptions and measures for the Home Performance with ENERGY STAR and Water Heating products.
[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.

Table 4: RFP Administrative Costs in 2020

Product	2020 Expenditures
Energy Savings Kits	$1,500
Energy Star New Homes	$9,600
Xcel Energy Store - Platform Update	$13,750
Demand Response Field Services	$30,800
Residential Battery Demand Response - Measurement & Verification Services	$2,000
TOTAL	**$57,650**

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 2020 DSM Plan in Proceeding No 18A-0606EG. Tables 5b and 6b provide the Company's 2020 achievements, actual expenditures, and cost-effectiveness results by product.

Table 5a: 2020 Electric Program Targets and Budgets

2020	Electric Budget	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Business Program				
Commercial Refrigeration Efficiency	$672,990	516	2,911,442	1.44
Compressed Air Efficiency	$709,343	737	4,784,175	1.55
Cooling	$3,539,391	4,871	9,249,617	1.35
Custom Efficiency	$757,761	343	3,197,678	1.22
Data Center Efficiency	$1,829,881	1,829	14,539,038	1.89
Energy Management Systems	$532,829	72	4,582,521	0.94
Heating Efficiency	$16,297	7	103,747	2.15
LED Street Lighting	$43,000	0	2,658,138	0.58
Lighting Efficiency	$20,380,890	24,994	181,557,873	1.56
Lighting - Small Business	$5,987,360	5,553	34,654,488	1.18
Motor & Drive Efficiency	$2,644,398	2,316	13,175,865	1.45
Multifamily Buildings	$2,245,730	1,339	11,521,450	1.34
New Construction	$12,040,165	12,181	42,085,573	1.23
Recommissioning	$491,040	441	3,736,530	0.91
Self Direct	$639,733	769	5,053,868	1.70
Strategic Energy Management	$5,759,050	3,307	35,135,809	1.63
General Advertising-Bus	$825,647			
Business Program Total	**$59,115,505**	**59,274**	**368,947,811**	**1.41**
Residential Program				
Energy Efficient Showerhead	$38,017	86	1,011,152	13.46
Energy Feedback Residential	$3,140,084	4,914	20,141,191	1.14
ENERGY STAR New Homes	$1,292,286	1,000	2,988,677	0.89
Evaporative Cooling	$4,404,100	6,632	5,121,782	3.59
High Efficiency Air Conditioning	$2,820,998	2,704	2,566,184	1.29
Home Energy Squad	$685,665	613	2,448,239	1.15
Home Lighting & Recyding	$4,823,414	9,671	68,638,979	2.16
Home Performance with ENERGY STAR	$650,106	466	310,462	1.02
Insulation & Air Sealing	$465,908	461	515,024	0.89
Refrigerator & Freezer Recyding	$1,249,390	743	4,000,307	1.11
Residential Heating	$77,700	105	566,506	1.32
School Education Kits	$1,804,317	1,381	10,779,522	1.22
Water Heating	$334,751	739	5,018,807	1.33
Thermostat Optimization	$1,083,760	2,282	1,955,134	1.72
General Advertising-Res	$515,496			
Residential Program Total	**$23,385,992**	**31,797**	**126,061,968**	**1.83**
Low-Income Program				
Energy Savings Kit	$251,424	164	1,300,302	1.23
Multifamily Weatherization	$1,081,511	407	1,889,123	0.90
Non-Profit	$1,119,608	383	1,701,178	1.02
Single-Family Weatherization	$1,420,268	226	1,778,524	0.71
Low-Income Program Total	**$3,872,811**	**1,180**	**6,669,128**	**0.90**

Table 5a: (Cont.)

2020	Electric Budget	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Indirect Products & Services				
Education/Market Transformation				
Business Education	$176,739	-	-	-
Business Energy Analysis	$760,350	-	-	-
Consumer Education	$899,908	-	-	-
Energy Benchmarking	$97,240	-	-	-
Energy Efficiency Financing	$60,000	-	-	-
ENERGY STAR Retail Products Platform	$509,271			
Home Energy Audit	$444,675	-	-	-
Partners in Energy	$836,000	-	-	-
Education/Market Transformation Total	**$3,784,183**	**-**	**-**	**-**
Planning and Research				
EE Market Research	$382,134	-	-	-
EE Measurement & Verification	$12,000	-	-	-
EE Planning & Administration	$522,162	-	-	-
EE Program Evaluations	$378,737	-	-	-
EE Product Development	$1,854,964	-	-	-
Geo-targeting Pilot - EE	$75,544	-	-	-
EE Product Development Total	**$1,930,508**	**-**	**-**	**-**
EE Planning and Research Total	**$3,225,541**	**-**	**-**	**-**
EE Indirect Products & Services Total	**$7,009,724**	**-**	**-**	**-**
EE PORTFOLIO TOTAL	**$93,384,033**	**92,250**	**501,678,907**	**1.42**
Demand Response Program				
Critical Peak Pricing Pilot	$66,000	5,588	-	-
Geo-targeting Pilot - DR	$309,067	-	-	0.83
Peak Partner Rewards	$1,725,420	20,000	-	
Residential Battery Demand Response	$365,500	389	-16,752	1.51
Residential Demand Response	$13,339,940	14,517	53,834	1.83
DR Program Total	**$15,805,927**	**40,494**	**37,082**	**1.68**
Planning and Research				
DR Planning & Administration	$58,018	-	-	-
DR Program Evaluations	$206,937	-	-	-
DR Product Development	$1,854,964	-	-	-
DR Planning and Research Total	**$2,119,919**	**-**	**-**	**-**
DR PORTFOLIO TOTAL	**$17,925,847**	**40,494**	**37,082**	**1.49**
PORTFOLIO TOTAL	**$111,309,880**	**132,745**	**501,715,988**	**1.42**

Table 5b: 2020 Electric Program Achievements and Expenditures

2020	Electric Budget	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Business Program				
Commercial Refrigeration Efficiency	$812,472	867	8,273,975	1.51
Compressed Air Efficiency	$371,035	241	1,330,454	1.33
Cooling	$3,410,002	2,313	5,805,617	1.20
Custom Efficiency	$445,881	208	1,015,440	1.00
Data Center Efficiency	$257,734	194	1,449,578	1.23
Energy Management Systems	$557,081	87	3,876,179	1.21
Heating Efficiency	$28,375	2	25,827	0.48
LED Street Lighting	$0	0	2,161,494	1.31
Lighting Efficiency	$12,087,883	12,560	79,876,609	1.52
Lighting - Small Business	$4,265,042	7,548	46,776,938	1.93
Motor & Drive Efficiency	$2,126,321	2,434	16,929,647	1.85
Multifamily Buildings	$984,274	721	5,690,833	1.72
New Construction	$14,244,708	18,928	62,463,947	1.77
Recommissioning	$121,726	34	700,900	0.88
Self Direct	$279,493	158	1,132,524	1.21
Strategic Energy Management	$4,375,172	5,102	37,580,929	2.11
General Advertising-Bus	$630,664			
Business Program Total	**$44,997,861**	**51,396**	**275,090,892**	**1.68**
Residential Program				
Energy Efficient Showerhead	$18,540	44	541,883	15.88
Energy Feedback Residential	$1,593,925	4,855	14,944,750	1.99
ENERGY STAR New Homes	$935,434	713	4,253,055	1.20
Evaporative Cooling	$3,139,845	6,848	5,277,782	5.25
High Efficiency Air Conditioning	$3,133,689	2,944	3,651,620	1.44
Home Energy Squad	$401,549	157	1,029,017	1.59
Home Lighting & Recyding	$7,202,580	16,794	119,105,184	5.05
Home Performance with ENERGY STAR	$129,005	89	76,835	0.66
Insulation & Air Sealing	$366,267	443	423,922	0.72
Refrigerator & Freezer Recyding	$1,033,117	395	3,145,085	1.09
Residential Heating	$226,724	295	1,605,639	1.30
School Education Kits	$1,882,512	1,904	11,382,062	2.86
Thermostat Optimization	$260,905	1,345	985,994	1.61
Water Heating	$92,007	38	262,512	1.01
General Advertising-Res	$615,757			
Residential Program Total	**$21,031,856**	**36,864**	**166,685,343**	**3.61**
Low-Income Program				
Energy Savings Kit	$221,142	130	1,058,028	3.08
Multifamily Weatherization	$1,079,251	321	1,835,325	1.11
Non-Profit	$1,153,499	380	1,710,012	0.98
Single-Family Weatherization	$1,513,111	2,692	19,987,964	7.09
Low-Income Program Total	**$3,967,003**	**3,523**	**24,591,328**	**3.14**

Table 5b: (Cont.)

2020	Electric Budget	Net Generator kW	Net Generator kWh	Electric MTRC Test Ratio
Indirect Products & Services				
Education/Market Transformation				
Business Education	$118,361	-	-	-
Business Energy Analysis	$341,492	-	-	-
Consumer Education	$649,819	-	-	-
Energy Benchmarking	$70,346	-	-	-
Energy Efficiency Financing	$26,441	-	-	-
Home Energy Audit	$352,488	-	-	-
Partners in Energy	$744,419	-	-	-
Education/Market Transformation Total	**$2,303,366**	**-**	**-**	**-**
Planning and Research				
EE Market Research	$338,591	-	-	-
EE Measurement & Verification	$5,433	-	-	-
EE Planning & Administration	$419,268	-	-	-
EE Program Evaluations	$511,217	-	-	-
EE Product Development	$1,503,608	-	-	-
Geo-targeting Pilot - EE	$6,278	-	-	-
Product Development Total	**$1,509,885**	**-**	**-**	**-**
Planning and Research Total	**$2,784,394**	**-**	**-**	**-**
Indirect Products & Services Total	**$5,087,760**	**-**	**-**	**-**
EE PORTFOLIO TOTAL	**$75,084,481**	**91,783**	**466,367,563**	**2.03**
Demand Response Program				
Charging Perks Pilot	$56,844	-	-	-
Critical Peak Pricing Pilot	$212,107	10,844	-	-
EV Critical Peak Pricing	$93,494	336	-	-
Geo-targeting Pilot - DR	$6,278	-	-	-
Peak Day Partners	$123,177	21,000	231,000	-
Peak Partner Rewards	$775,673	1,079	-	-
Residential Battery Demand Response	$20,060	-	-	-
Residential Demand Response	$12,045,504	11,054	40,158	1.44
Small Commercial Building Controls	$127,464	409	6,523	1.58
DR Program Total	**$13,460,601**	**44,722**	**277,681**	**1.35**
Planning and Research				
DR Planning & Administration	$31,153	-	-	-
DR Program Evaluations	$157,930	-	-	-
DR Product Development	$1,191,118	-	-	-
DR Planning and Research Total	**$1,380,201**	**-**	**-**	**-**
DR PORTFOLIO TOTAL	**$14,840,802**	**44,722**	**277,681**	**1.22**
PORTFOLIO TOTAL	**$89,925,283**	**136,505**	**466,645,244**	**1.96**

Table 6a: 2020 Natural Gas Program Targets and Budgets

2020	Gas Budget	Net Annual Dth Savings	Annual Dth/$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Program					
Commercial Refrigeration Efficiency	$34,266	5,630	164,295	$190,468	2.16
Compressed Air Efficiency	-	-			
Cooling	-	-			
Custom Efficiency	$34,126	4,654	136,378	$131,184	1.64
Data Center Efficiency	-	-			
Energy Management Systems	$58,239	6,487	111,393	$125,080	1.46
Heating Efficiency	$718,820	28,872	40,166	$337,500	1.19
LED Street Lighting	-	-			
Lighting Efficiency	-	-			
Lighting - Small Business	$32,839	3,147	95,830	$500,409	16.14
Motor & Drive Efficiency	-	-			
Multifamily Buildings	$1,252,000	53,193	42,486	$4,654,984	2.80
New Construction	$506,817	51,627	101,865	$381,182	1.13
Recommissioning	$28,927	2,993	103,466	$7,132	1.09
Self Direct	-	-			
Strategic Energy Management	-	-			
General Advertising-Bus	$78,298				
Business Program Total	**$2,744,332**	**156,603**	**57,064**	**$6,249,641**	**1.78**
Residential Program					
Energy Efficient Showerhead	$459,736	53,968	117,389	$7,007,122	11.00
Energy Feedback Residential	$427,165	89,936	210,542	$530,649	2.24
ENERGY STAR New Homes	$1,848,007	75,359	40,779	-$173,160	0.97
Evaporative Cooling	-	-			
High Efficiency Air Conditioning	-	-			
Home Energy Squad	$369,071	15,731	42,624	$678,764	2.50
Home Lighting & Recycling	-	-			
Home Performance with ENERGY STAR	$341,805	19,248	56,312	-$202,357	0.85
Insulation & Air Sealing	$366,319	20,835	56,876	-$64,986	0.95
Refrigerator & Freezer Recycling	-	-			
Residential Heating	$1,353,800	62,884	46,450	-$1,377,348	0.77
School Education Kits	$626,354	46,226	73,802	$5,829,672	8.20
Water Heating	$114,758	5,385	46,922	-$295,991	0.56
Thermostat Optimization	$218,999	62,181	283,935	$488,630	1.75
General Advertising-Res	$140,504				
Residential Program Total	**$6,266,518**	**451,753**	**72,090**	**$12,280,492**	**1.68**

Table 6a: (Cont.)

2020	Gas Budget	Net Annual Dth Savings	Annual Dth/$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Low-Income Program					
Energy Savings Kit	$150,441	10,455	69,498	$1,390,728	8.61
Multifamily Weatherization	$773,681	10,693	13,821	-$311,370	0.80
Non-Profit	$431,913	3,999	9,260	-$208,482	0.75
Single-Family Weatherization	$2,913,101	47,617	16,346	-$623,414	0.90
Low-Income Program Total	**$4,269,136**	**72,765**	**17,044**	**$247,462**	**1.03**
Indirect Products & Services					
Education/Market Transformation					
Business Education	$19,638	-	-		
Business Energy Analysis	$78,000	-	-		
Consumer Education	$133,323	-	-		
Energy Benchmarking	$35,525	-	-		
Energy Efficiency Financing	$60,000	-	-		
ENERGY STAR Retail Products Platform Pilot	$7,121	-	-		
Home Energy Audit	$561,795	-	-		
Partners in Energy	$93,000	-	-		
Education/Market Transformation Total	**$988,402**	**-**	**-**		
Planning and Research					
EE Market Research	$118,187	-	-		
EE Measurement & Verification	$6,000	-	-		
EE Planning & Administration	$116,920	-	-		
EE Program Evaluations	$160,602	-	-		
EE Product Development	$197,000	-	-		
Geo-targeting Pilot - EE	$0	-	-		
Product Development Total	**$197,000**	**-**	**-**		
Planning and Research Total	**$598,708**	**-**	**-**		
Indirect Products & Services Total	**$1,587,110**	**-**	**-**		
EE PORTFOLIO TOTAL	**$14,867,096**	**681,120**	**45,814**	**$17,481,485**	**1.48**

Table 6b: 2020 Natural Gas Program Achievements and Expenditures

2020	Gas Budget	Net Annual Dth Savings	Annual Dth/$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Business Program					
Commercial Refrigeration Efficiency	$49,726	9,204	185,098	$392,358	2.69
Compressed Air Efficiency	-	-			
Cooling	-	-			
Custom Efficiency	$86,692	28,620	330,138	$1,375,744	5.17
Data Center Efficiency	-	-			
Energy Management Systems	$34,683	4,091	117,946	$60,781	1.27
Heating Efficiency	$863,188	26,987	31,264	$127,713	1.07
LED Street Lighting	-	-			
Lighting Efficiency	-	-			
Lighting - Small Business	$9,833	98	10,014	$6,956	1.68
Motor & Drive Efficiency	-	-			
Multifamily Buildings	$275,944	2,889	10,471	$320,752	2.03
New Construction	$1,020,953	138,493	135,651	$18,061,969	4.79
Recommissioning	$17,990	896	49,798	$15,287	1.73
Self Direct	-	-			
Strategic Energy Management	-	-			
General Advertising-Bus	$61,468				
Business Program Total	**$2,420,477**	**211,278**	**87,288**	**$20,300,092**	**3.56**
Residential Program					
Energy Efficient Showerhead	$268,330	33,473	124,747	$4,428,263	12.93
Energy Feedback Residential	$206,359	78,561	380,699	$634,782	4.08
ENERGY STAR New Homes	$2,190,095	80,409	36,715	$149,257	1.03
Evaporative Cooling	-	-			
High Efficiency Air Conditioning	$660,686	35,810	54,202	$1,759,076	3.08
Home Energy Squad	$181,033	2,137	11,802	-$16,999	0.91
Home Lighting & Recycling	-	-			
Home Performance with ENERGY STAR	$117,448	5,201	44,284	-$56,348	0.85
Insulation & Air Sealing	$578,886	32,506	56,153	-$293,101	0.87
Refrigerator & Freezer Recycling	-	-			
Residential Heating	$1,698,232	91,321	53,774	-$1,902,023	0.77
School Education Kits	$652,834	52,059	79,744	$5,961,855	8.03
Thermostat Optimization	$226,193	29,114	128,715	$415,528	1.58
Water Heating	$118,544	6,912	58,311	-$302,288	0.61
General Advertising-Res	$156,839				
Residential Program Total	**$7,055,479**	**447,504**	**63,427**	**$10,621,162**	**1.50**

Table 6b: (Cont.)

2020	Gas Budget	Net Annual Dth Savings	Annual Dth/$M	Gas MTRC Test Net Benefits	Gas MTRC Test Ratio
Low-Income Program					
Energy Savings Kit	$74,672	8,479	113,547	$1,180,368	12.95
Multifamily Weatherization	$534,880	6,324	11,823	$79,458	1.09
Non-Profit	$458,304	4,772	10,411	-$118,336	0.85
Single-Family Weatherization	$2,694,161	49,123	18,233	-$141,441	0.98
Low-Income Program Total	**$3,762,018**	**68,697**	**18,261**	**$1,000,050**	**1.13**
Indirect Products & Services					
Education/Market Transformation					
Business Education	$12,739	-	-	-	-
Business Energy Analysis	$42,917	-	-	-	-
Consumer Education	$44,166	-	-	-	-
Energy Benchmarking	$22,759	-	-	-	-
Energy Efficiency Financing	$21,450	-	-	-	-
Home Energy Audit	$392,659	-	-	-	-
Partners in Energy	$92,277	-	-	-	-
Education/Market Transformation Total	**$628,967**	**-**	**-**	**-**	**-**
Planning and Research					
EE Market Research	$122,999	-	-	-	-
EE Measurement & Verification	$604	-	-	-	-
EE Planning & Administration	$97,274	-	-	-	-
EE Program Evaluations	$87,112	-	-	-	-
EE Product Development	$46,524	-	-	-	-
Geo-targeting Pilot - EE	$0	-	-	-	-
Product Development Total	**$46,524**	**-**	**-**	**-**	**-**
Planning and Research Total	**$354,512**	**-**	**-**	**-**	**-**
Indirect Products & Services Total	**$983,479**	**-**	**-**	**-**	**-**
EE PORTFOLIO TOTAL	**$14,221,453**	**727,480**	**51,154**	**$31,177,842**	**1.83**

Table 7 below provides the CO_2 and SO_X emissions avoided for 2020 as well as cumulatively over the lifetime for each product.

Table 7: 2020 Avoided Emission

	Annual				Cumulative over Lifetime				Social Cost of Carbon	
	Tons CO_2			lbs SOx	Tons CO_2			lbs SOx	NPV of Avoided Emissions	
2020	**Electric**	**Gas**	**Total**	**Electric**	**Electric**	**Gas**	**Total**	**Electric**	**Electric**	**Gas**
Business Program										
Commercial Refrigeration Efficiency	3,418	557	3,975	4,920	45,056	10,776	55,832	39,929	$1,691,842	$389,187
Compressed Air Efficiency	505	0	505	791	9,126	0	9,126	8,479	$320,794	$0
Cooling	2,199	0	2,199	3,452	40,654	0	40,654	37,576	$1,450,685	$0
Custom Efficiency	377	1,732	2,108	604	7,534	34,631	42,165	6,898	$262,546	$1,194,036
Data Center Efficiency	622	0	622	862	6,019	0	6,019	4,988	$253,350	$0
Energy Management Systems	1,604	247	1,851	2,305	24,057	3,712	27,769	20,656	$879,522	$134,712
Heating Efficiency	10	1,633	1,643	15	157	29,519	29,676	138	$5,765	$1,084,864
LED Street Lighting	890	0	890	1,285	13,344	0	13,344	11,519	$489,316	$0
Lighting Efficiency	30,222	0	30,222	47,500	504,661	0	504,661	463,441	$18,568,664	$0
Lighting - Small Business	18,968	6	18,974	27,817	225,866	60	225,925	197,473	$8,944,245	$2,452
Motor & Drive Efficiency	6,680	0	6,680	10,068	106,207	0	106,207	95,624	$3,871,146	$0
Multifamily Buildings	2,319	175	2,494	3,384	30,199	1,887	32,087	27,134	$1,176,162	$76,772
New Construction	23,391	8,379	31,770	37,146	467,817	167,576	635,393	424,326	$16,299,232	$5,777,905
Recommissioning	324	54	378	417	1,820	326	2,147	1,521	$75,716	$14,173
Self Direct	433	0	433	673	7,794	0	7,794	7,195	$277,516	$0
Strategic Energy Management	14,399	0	14,399	22,348	236,049	0	236,049	217,170	$8,451,026	$0
General Advertising-Bus	0	0	0	0	0	0	0	0	$0	$0
Business Program Total	**106,362**	**12,782**	**119,144**	**163,589**	**1,726,360**	**248,488**	**1,974,848**	**1,564,064**	**$63,017,524**	**$8,674,100**
Residential Program										
Energy Efficient Showerhead	236	2,025	2,261	322	2,359	20,251	22,610	1,891	$92,499	$833,477
Energy Feedback Residential	9,312	4,753	14,065	8,887	27,935	14,259	42,194	18,435	$1,316,166	$437,321
ENERGY STAR New Homes	1,689	4,865	6,554	2,529	33,750	97,021	130,771	29,503	$1,189,152	$3,476,179
Evaporative Cooling	2,198	0	2,198	3,139	32,967	0	32,967	28,125	$1,219,201	$0
High Efficiency Air Conditioning	1,497	2,167	3,663	2,172	27,095	38,997	66,092	23,392	$968,974	$1,373,816
Home Energy Squad	394	129	523	612	7,735	1,292	9,027	7,015	$269,436	$53,183
Home Lighting & Recycling	48,391	0	48,391	70,828	588,208	0	588,208	527,626	$22,788,699	$0
Home Performance with ENERGY STAR	31	315	346	46	498	5,286	5,785	436	$18,019	$197,706
Insulation & Air Sealing	172	1,967	2,139	252	2,722	30,165	32,887	2,377	$98,578	$1,151,024
Refrigerator & Freezer Recycling	1,427	0	1,427	1,870	10,519	0	10,519	8,683	$446,466	$0
Residential Heating	626	5,525	6,151	955	11,270	99,448	110,718	10,200	$400,105	$3,659,017
School Education Kits	5,274	3,150	8,423	6,769	76,907	31,496	108,403	71,495	$2,743,261	$1,296,259
Thermostat Optimization	427	1,761	2,188	586	4,266	17,614	21,881	3,441	$167,319	$724,938
Water Heating	111	418	530	156	1,337	8,096	9,433	1,147	$51,002	$292,370
General Advertising-Res	0	0	0	0	0	0	0	0	$0	$0
Residential Program Total	**71,785**	**27,074**	**98,859**	**99,123**	**827,565**	**363,927**	**1,191,493**	**733,767**	**$31,768,877**	**$13,495,290**
Low-Income Program										
Energy Savings Kit	412	513	925	629	7,380	5,130	12,510	6,803	$260,480	$211,119
Multifamily Weatherization	713	383	1,096	1,091	12,834	5,356	18,190	11,660	$455,432	$208,247
Non-Profit	655	289	944	1,017	12,447	4,907	17,354	11,281	$436,821	$183,053
Single-Family Weatherization	7,632	2,972	10,603	11,886	152,008	49,512	201,520	138,227	$5,283,738	$1,855,182
Low-Income Program Total	**9,411**	**4,156**	**13,567**	**14,624**	**184,668**	**64,905**	**249,574**	**167,971**	**$6,436,472**	**$2,457,600**
Demand Response Program										
Charging Perks Pilot	0	0	0	0	0	0	0	0	$0	$0
Critical Peak Pricing Pilot	0	0	0	0	0	0	0	0	$0	$0
EV Critical Peak Pricing	0	0	0	0	0	0	0	0	$0	$0
Geo-targeting Pilot - DR	0	0	0	0	0	0	0	0	$0	$0
Peak Day Partners	144	0	144	137	144	0	144	0	$6,793	$0
Peak Partner Rewards	0	0	0	0	0	0	0	0	$0	$0
Residential Battery Demand Response	0	0	0	0	0	0	0	0	$0	$0
Residential Demand Response	19	0	19	24	177	0	177	130	$6,850	$0
Small Commercial Building Controls	4	0	4	4	18	0	18	13	$751	$0
DR PORTFOLIO TOTAL	**167**	**0**	**167**	**165**	**339**	**0**	**339**	**142**	**$14,393**	**$0**
PORTFOLIO TOTAL	**187,725**	**44,013**	**231,738**	**277,501**	**2,738,932**	**677,321**	**3,416,253**	**2,465,944**	**$101,237,266**	**$24,626,990**

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: 2020 Electric Program Costs by Category (Budget)

2020	Program Planning & Design	Admin & Program Delivery	Advertising/ Promotion/ Customer Ed	Participant Rebates and Incentives	Equip & Install	M&V	Total
Business Program							
Commercial Refrigeration Efficiency	$0	$427,207	$9,100	$209,683	$0	$27,000	$672,990
Compressed Air Efficiency	$0	$222,472	$1,500	$478,336	$0	$7,035	$709,343
Cooling	$0	$1,712,792	$0	$1,811,599	$0	$15,000	$3,539,391
Custom Efficiency	$0	$597,304	$600	$155,857	$0	$4,000	$757,761
Data Center Efficiency	$0	$230,050	$41,500	$1,536,331	$0	$22,000	$1,829,881
Energy Management Systems	$0	$205,723	$20,000	$287,342	$0	$19,764	$532,829
Heating Efficiency	$0	$10,035	$0	$6,262	$0	$0	$16,297
LED Street Lighting	$0	$0	$43,000	$0	$0	$0	$43,000
Lighting Efficiency	$0	$3,225,108	$692,065	$16,408,717	$0	$55,000	$20,380,890
Lighting - Small Business	$0	$2,774,253	$19,110	$3,166,497	$0	$27,500	$5,987,360
Motor & Drive Efficiency	$0	$539,581	$36,450	$2,046,767	$0	$21,600	$2,644,398
Multifamily Buildings	$0	$484,341	$200,000	$1,561,390	$0	$0	$2,245,730
New Construction	$0	$2,971,114	$5,632	$8,633,342	$0	$430,077	$12,040,165
Recommissioning	$0	$193,950	$76,000	$221,090	$0	$0	$491,040
Self Direct	$0	$137,550	$1,500	$500,683	$0	$0	$639,733
Strategic Energy Management	$0	$2,664,260	$101,497	$2,599,079	$0	$394,214	$5,759,050
General Advertising-Bus	$0	$0	$825,647	$0	$0	$0	$825,647
Business Program Total	**$0**	**$16,395,741**	**$2,073,601**	**$39,622,974**	**$0**	**$1,023,190**	**$59,115,505**
Residential Program							
Energy Efficient Showerhead	$0	$20,342	$4,612	$13,062	$0	$0	$38,017
Energy Feedback Residential	$0	$3,140,084	$0	$0	$0	$0	$3,140,084
ENERGY STAR New Homes	$0	$197,478	$300,861	$597,315	$310,815	$196,632	$1,292,286
Evaporative Cooling	$0	$1,129,327	$909,373	$2,330,400	$0	$35,000	$4,404,100
High Efficiency Air Conditioning	$0	$430,963	$45,000	$2,290,035	$0	$55,000	$2,820,998
Home Energy Squad	$0	$154,567	$49,707	$168,076	$0	$2,500	$685,665
Home Lighting & Recycling	$0	$956,203	$629,149	$3,233,061	$0	$5,000	$4,823,414
Home Performance with ENERGY STAR	$0	$216,782	$0	$403,324	$0	$30,000	$650,106
Insulation & Air Sealing	$0	$21,189	$405	$429,132	$0	$15,182	$465,908
Refrigerator & Freezer Recycling	$0	$678,158	$211,232	$350,000	$0	$10,000	$1,249,390
Residential Heating	$0	$6,000	$0	$70,700	$0	$1,000	$77,700
School Education Kits	$0	$543,691	$5,857	$1,254,768	$0	$0	$1,804,317
Water Heating	$0	$229,860	$281,500	$562,400	$310,815	$10,000	$1,083,760
Thermostat Optimization	$0	$107,674	$0	$220,703	$0	$6,374	$334,751
General Advertising-Res	$0	$0	$515,496	$0	$0	$0	$515,496
Residential Program Total	**$0**	**$7,832,320**	**$2,953,192**	**$11,922,977**	**$0**	**$366,688**	**$23,385,992**
Low-Income Program							
Energy Savings Kit	$0	$84,022	$48,379	$114,523	$0	$4,500	$251,424
Multifamily Weatherization	$0	$169,785	$10,851	$885,524	$0	$15,351	$1,081,511
Non-Profit	$0	$212,162	$3,274	$876,346	$0	$27,825	$1,119,608
Single-Family Weatherization	$0	$235,186	$80,000	$985,420	$0	$119,662	$1,420,268
Low-Income Program Total	**$0**	**$701,155**	**$142,504**	**$2,861,814**	**$0**	**$167,338**	**$3,872,811**

Table 8a: (Cont.)

2020	Program Planning & Design	Admin & Program Delivery	Advertising/ Promotion/ Customer Ed	Participant Rebates and Incentives	Equip & Install	M&V	Total
Indirect Products & Services							
Education/Market Transformation							
Business Education	$0	$0	$176,739	$0	$0	$0	$176,739
Business Energy Analysis	$0	$109,350	$249,000	$402,000	$0	$0	$760,350
Consumer Education	$0	$389,381	$510,527	$0	$0	$0	$899,908
Energy Benchmarking	$0	$97,240	$0	$0	$0	$0	$97,240
Energy Efficiency Financing	$0	$33,000	$17,000	$10,000	$0	$0	$60,000
ENERGY STAR Retail Products Platform Pilot	$0	$498,384	$0	$0	$0	$10,887	$509,271
Home Energy Audit	$0	$193,265	$17,014	$196,992	$0	$37,404	$444,675
Partners in Energy	$0	$752,800	$10,000	$0	$0	$73,200	$836,000
Education/Market Transformation Total	**$0**	**$2,073,420**	**$980,280**	**$608,992**	**$0**	**$121,491**	**$3,784,183**
Planning and Research							
EE Market Research	$0	$382,134	$0	$0	$0	$0	$382,134
EE Measurement & Verification	$0	$12,000	$0	$0	$0	$0	$12,000
EE Planning & Administration	$0	$522,162	$0	$0	$0	$0	$522,162
EE Program Evaluations	$0	$30,737	$0	$0	$0	$348,000	$378,737
EE Product Development	$0	$1,854,964	$0	$0	$0	$0	$1,854,964
Geo-targeting Pilot - EE	$0	$14,749	$30,213	$13,317	$0	$17,265	$75,544
Product Development Total	**$0**	**$1,869,713**	**$30,213**	**$13,317**	**$0**	**$17,265**	**$1,930,508**
Planning and Research Total	**$0**	**$2,816,746**	**$30,213**	**$13,317**	**$310,815**	**$365,265**	**$3,225,541**
Indirect Products & Services Total	**$0**	**$4,890,166**	**$1,010,494**	**$622,309**	**$0**	**$486,756**	**$7,009,724**
EE PORTFOLIO TOTAL	**$0**	**$29,819,382**	**$6,179,791**	**$55,030,073**	**$14,800**	**$2,043,971**	**$93,384,033**
Demand Response Program							
Critical Peak Pricing Pilot	$0	$21,200	$5,000	$0	$0	$25,000	$66,000
Geo-targeting Pilot - DR	$0	$60,251	$144,787	$21,294	$0	$82,735	$309,067
Peak Partner Rewards	$0	$253,420	$142,000	$1,330,000	$14,800	$0	$1,725,420
Residential Battery Demand Response	$0	$80,000	$1,000	$177,500	$0	$107,000	$365,500
Residential Demand Response	$0	$3,395,940	$1,150,000	$8,694,000	$0	$100,000	$13,339,940
Demand Response Total	**$0**	**$3,810,811**	**$1,442,787**	**$10,222,794**	**$0**	**$314,735**	**$15,805,927**
Planning and Research							
DR Planning & Administration	$0	$58,018	$0	$0	$0	$0	$58,018
DR Program Evaluations	$0	$26,937	$0	$0	$0	$180,000	$206,937
DR Product Development	$0	$1,854,964	$0	$0	$14,800	$0	$1,854,964
DR Planning and Research Total	**$0**	**$1,939,919**	**$0**	**$0**	**$0**	**$180,000**	**$2,119,919**
DR PORTFOLIO TOTAL	**$0**	**$5,750,731**	**$1,442,787**	**$10,222,794**	**$0**	**$494,735**	**$17,925,847**
PORTFOLIO TOTAL	**$0**	**$35,570,113**	**$7,622,578**	**$65,252,867**	**$0**	**$2,538,707**	**$111,309,880**

Table 8b: 2020 Electric Program Costs by Category (Actual Expenditures)

2020	Program Planning & Design	Admin & Program Delivery	Advertising/ Promotion/ Customer Ed	Participant Rebates and Incentives	Equip & Install	M&V	Total
Business Program							
Commercial Refrigeration Efficiency	$0	$466,437	$0	$343,279	$0	$2,756	$812,472
Compressed Air Efficiency	$0	$184,722	$7,185	$176,127	$0	$3,000	$371,035
Cooling	$0	$1,864,468	$0	$1,527,760	$0	$17,775	$3,410,002
Custom Efficiency	$0	$342,690	$0	$103,589	$0	-$398	$445,881
Data Center Efficiency	$0	$168,265	$0	$88,051	$0	$1,418	$257,734
Energy Management Systems	$0	$246,444	$0	$310,483	$0	$154	$557,081
Heating Efficiency	$0	$24,829	$0	$3,545	$0	$0	$28,375
LED Street Lighting	$0	$0	$0	$0	$0	$0	$0
Lighting Efficiency	$0	$2,340,323	$474,200	$9,251,382	$0	$21,977	$12,087,883
Lighting - Small Business	$0	$991,145	$0	$3,256,638	$0	$17,258	$4,265,042
Motor & Drive Efficiency	$0	$508,725	$0	$1,599,786	$0	$17,809	$2,126,321
Multifamily Buildings	$0	$233,710	$0	$750,565	$0	$0	$984,274
New Construction	$0	$3,774,421	$0	$10,007,795	$0	$462,492	$14,244,708
Recommissioning	$0	$69,547	$0	$52,179	$0	$0	$121,726
Self Direct	$0	$107,319	$0	$172,174	$0	$0	$279,493
Strategic Energy Management	$0	$974,053	$0	$3,211,480	$0	$189,639	$4,375,172
General Advertising-Bus	$0	$64,129	$566,535	$0	$0	$0	$630,664
Business Program Total	**$0**	**$12,361,227**	**$1,047,920**	**$30,854,834**	**$0**	**$733,880**	**$44,997,861**
Residential Program							
Energy Efficient Showerhead	$0	$14,195	$0	$4,345	$0	$0	$18,540
Energy Feedback Residential	$0	$1,593,925	$0	$0	$0	$0	$1,593,925
ENERGY STAR New Homes	$0	$230,222	$0	$606,618	$0	$98,595	$935,434
Evaporative Cooling	$0	$706,198	$252,587	$2,177,760	$0	$3,300	$3,139,845
High Efficiency Air Conditioning	$0	$597,890	$0	$2,490,635	$0	$45,164	$3,133,689
Home Energy Squad	$0	$113,746	$65,138	$60,555	$0	$0	$401,549
Home Lighting & Recycling	$0	$654,426	$576,607	$5,968,547	$0	$3,000	$7,202,580
Home Performance with ENERGY STAR	$0	$77,132	$0	$42,508	$0	$9,365	$129,005
Insulation & Air Sealing	$0	$30,622	$0	$335,645	$0	$0	$366,267
Refrigerator & Freezer Recycling	$0	$574,378	$130,960	$323,780	$0	$4,000	$1,033,117
Residential Heating	$0	$29,534	$0	$194,190	$0	$3,000	$226,724
School Education Kits	$0	$718,096	$1,625	$1,162,791	$0	$0	$1,882,512
Thermostat Optimization	$0	$80,347	$0	$180,558	$0	$0	$260,905
Water Heating	$0	$59,341	$4,296	$28,371	$0	$0	$92,007
General Advertising-Res	$0	$40,125	$575,632	$0	$0	$0	$615,757
Residential Program Total	**$0**	**$5,520,177**	**$1,606,844**	**$13,576,302**	**$0**	**$166,423**	**$21,031,856**
Low-Income Program							
Energy Savings Kit	$0	$130,369	$0	$86,574	$0	$4,200	$221,142
Multifamily Weatherization	$0	$158,659	$30,000	$875,242	$0	$15,350	$1,079,251
Non-Profit	$0	$209,652	$30,000	$887,557	$0	$26,291	$1,153,499
Single-Family Weatherization	$0	$150,664	$165,000	$1,156,013	$0	$41,434	$1,513,111
Low-Income Program Total	**$0**	**$649,343**	**$225,000**	**$3,005,385**	**$0**	**$87,275**	**$3,967,003**

Table 8b: (Cont.)

2020	Program Planning & Design	Admin & Program Delivery	Advertising/ Promotion/ Customer Ed	Participant Rebates and Incentives	Equip & Install	M&V	Total
Indirect Products & Services							
Education/Market Transformation							
Business Education	$0	$26,842	$91,519	$0	$0	$0	$118,361
Business Energy Analysis	$0	$119,723	$0	$221,769	$0	$0	$341,492
Consumer Education	$0	$74,068	$575,751	$0	$0	$0	$649,819
Energy Benchmarking	$0	$70,346	$0	$0	$0	$0	$70,346
Energy Efficiency Financing	$0	$26,441	$0	$0	$0	$0	$26,441
Home Energy Audit	$0	$178,507	$1,381	$150,695	$0	$21,906	$352,488
Partners in Energy	$0	$740,669	$3,750	$0	$0	$0	$744,419
Education/Market Transformation Total	**$0**	**$1,236,595**	**$672,402**	**$372,464**	**$0**	**$21,906**	**$2,303,366**
Planning and Research							
EE Market Research	$0	$338,591	$0	$0	$0	$0	$338,591
EE Measurement & Verification	$0	$5,433	$0	$0	$0	$0	$5,433
EE Planning & Administration	$0	$419,268	$0	$0	$0	$0	$419,268
EE Program Evaluations	$0	$19,127	$2,000	$0	$0	$490,091	$511,217
EE Product Development	$0	$1,499,858	$3,750	$0	$0	$0	$1,503,608
Geo-targeting Pilot - EE	$0	$6,278	$0	$0	$0	$0	$6,278
Product Development Total	**$0**	**$1,506,135**	**$3,750**	**$0**	**$0**	**$0**	**$1,509,885**
Planning and Research Total	**$0**	**$2,288,554**	**$5,750**	**$0**	**$0**	**$490,091**	**$2,784,394**
Indirect Products & Services Total	**$0**	**$3,525,149**	**$678,152**	**$372,464**	**$0**	**$511,996**	**$5,087,760**
EE PORTFOLIO TOTAL	**$0**	**$22,055,895**	**$3,557,916**	**$47,808,985**	**$0**	**$1,499,574**	**$75,084,481**
Demand Response Program							
Charging Perks Pilot	**$0**	**$22,764**	**$0**	**$0**	**$0**	**$34,080**	**$56,844**
Critical Peak Pricing Pilot	$0	$212,107	$0	$0	$0	$0	$212,107
EV Critical Peak Pricing	$0	$93,494	$0	$0	$0	$0	$93,494
Geo-targeting Pilot - DR	$0	$6,278	$0	$0	$0	$0	$6,278
Peak Day Partners	$0	$7,684	$0	$115,493	$0	$0	$123,177
Peak Partner Rewards	$0	$253,117	$58,667	$463,889	$0	$0	$775,673
Residential Battery Demand Response	$0	**$20,060**	**$0**	**$0**	**$0**	**$0**	$20,060
Residential Demand Response	$0	$2,846,815	$707,058	$8,372,881	$0	$118,750	$12,045,504
Small Commercial Building Controls	$0	$109,502	$0	$17,963	$0	$0	$127,464
DR Program Total	**$0**	**$3,571,819**	**$765,725**	**$8,970,226**	**$0**	**$152,830**	**$13,460,601**
Planning and Research							
DR Planning & Administration	$0	$31,153	$0	$0	$0	$0	$31,153
DR Program Evaluations	$0	$6,527	$0	$0	$0	$151,403	$157,930
DR Product Development	$0	$1,191,118	$0	$0	$0	$0	$1,191,118
DR Planning and Research Total	**$0**	**$1,228,798**	**$0**	**$0**	**$0**	**$151,403**	**$1,380,201**
DR PORTFOLIO TOTAL	**$0**	**$4,800,617**	**$765,725**	**$8,970,226**	**$0**	**$304,233**	**$14,840,802**
PORTFOLIO TOTAL	**$0**	**$26,856,512**	**$4,323,642**	**$56,779,211**	**$0**	**$1,803,807**	**$89,925,283**

Table 9a: 2020 Gas Program Costs by Category (Budget)

2020	Program Planning & Design	Admin & Program Delivery	Advertising/ Promotion/ Customer Ed	Participant Rebates and Incentives	Equip & Install	M&V	Total
Business Program							
Commercial Refrigeration Efficiency	$0	$12,600	$0	$21,666	$0	$0	$34,266
Compressed Air Efficiency	$0	$0	$0	$0	$0	$0	$0
Cooling	$0	$0	$0	$0	$0	$0	$0
Custom Efficiency	$0	$9,500	$0	$24,626	$0	$0	$34,126
Data Center Efficiency	$0	$0	$0	$0	$0	$0	$0
Energy Management Systems	$0	$23,906	$500	$33,833	$0	$0	$58,239
Heating Efficiency	$0	$252,320	$0	$450,000	$0	$16,500	$718,820
LED Street Lighting	$0	$0	$0	$0	$0	$0	$0
Lighting Efficiency	$0	$0	$0	$0	$0	$0	$0
Lighting - Small Business	$0	$32,596	$0	$244	$0	$0	$32,839
Motor & Drive Efficiency	$0	$0	$0	$0	$0	$0	$0
Multifamily Buildings	$0	$245,822	$0	$1,006,178	$0	$0	$1,252,000
New Construction	$0	$200,094	$3,307	$260,896	$0	$42,520	$506,817
Recommissioning	$0	$10,200	$250	$18,477	$0	$0	$28,927
Self Direct	$0	$0	$0	$0	$0	$0	$0
Strategic Energy Management	$0	$0	$0	$0	$0	$0	$0
General Advertising-Bus	$0	$0	$78,298	$0	$0	$0	$78,298
Business Program Total	**$0**	**$787,037**	**$82,355**	**$1,815,920**	**$0**	**$59,020**	**$2,744,332**
Residential Program							
Energy Efficient Showerhead	$0	$216,587	$72,898	$170,251	$0	$0	$459,736
Energy Feedback Residential	$0	$427,165	$0	$0	$0	$0	$427,165
ENERGY STAR New Homes	$0	$435,823	$70,832	$1,073,440	$0	$267,912	$1,848,007
Evaporative Cooling	$0	$0	$0	$0	$0	$0	$0
High Efficiency Air Conditioning	$0	$0	$0	$0	$0	$0	$0
Home Energy Squad	$0	$94,169	$81,473	$33,789	$157,141	$2,500	$369,071
Home Lighting & Recycling	$0	$0	$0	$0	$0	$0	$0
Home Performance with ENERGY STAR	$0	$102,327	$4,800	$204,678	$0	$30,000	$341,805
Insulation & Air Sealing	$0	$28,778	$2,005	$325,528	$0	$10,008	$366,319
Refrigerator & Freezer Recycling	$0	$0	$0	$0	$0	$0	$0
Residential Heating	$0	$105,100	$64,000	$1,172,700	$0	$12,000	$1,353,800
School Education Kits	$0	$423,407	$3,253	$199,694	$0	$0	$626,354
Water Heating	$0	$17,862	$2,000	$75,900	$0	$18,996	$114,758
Thermostat Optimization	$0	$89,826	$0	$125,547	$0	$3,626	$218,999
General Advertising-Res	$0	$0	$140,504	$0	$0	$0	$140,504
Residential Program Total	**$0**	**$1,941,043**	**$441,765**	**$3,381,527**	**$157,141**	**$345,042**	**$6,266,518**

Table 9a: (Cont.)

2020	Program Planning & Design	Admin & Program Delivery	Advertising/ Promotion/ Customer Ed	Participant Rebates and Incentives	Equip & Install	M&V	Total
Low-Income Program							
Energy Savings Kit	$0	$73,740	$40,000	$32,201	$0	$4,500	$150,441
Multifamily Weatherization	$0	$113,397	$1,032	$646,186	$0	$13,065	$773,681
Non-Profit	$0	$81,411	$1,186	$332,258	$0	$17,058	$431,913
Single-Family Weatherization	$0	$209,232	$30,000	$2,559,637	$0	$114,232	$2,913,101
Low-Income Program Total	**$0**	**$477,780**	**$72,218**	**$3,570,283**	**$0**	**$148,855**	**$4,269,136**
Indirect Products & Services							
Education/Market Transformation							
Business Education	$0	$4,200	$15,438	$0	$0	$0	$19,638
Business Energy Analysis	$0	$6,000	$12,000	$60,000	$0	$0	$78,000
Consumer Education	$0	$47,191	$86,132	$0	$0	$0	$133,323
Energy Benchmarking	$0	$35,525	$0	$0	$0	$0	$35,525
Energy Efficiency Financing	$0	$43,000	$17,000	$0	$0	$0	$60,000
ENERGY STAR Retail Products Platform Pilot	$0	$6,716	$0	$0	$0	$405	$7,121
Home Energy Audit	$0	$238,061	$56,254	$231,000	$0	$36,480	$561,795
Partners in Energy	$0	$83,780	$1,000	$0	$0	$8,220	$93,000
Education/Market Transformation Total	**$0**	**$464,473**	**$187,824**	**$291,000**	**$0**	**$45,105**	**$988,402**
Planning and Research							
EE Market Research	$0	$118,187	$0	$0	$0	$0	$118,187
EE Measurement & Verification	$0	$6,000	$0	$0	$0	$0	$6,000
EE Planning & Administration	$0	$116,920	$0	$0	$0	$0	$116,920
EE Program Evaluations	$0	$10,602	$0	$0	$0	$150,000	$160,602
EE Product Development	$0	$197,000	$0	$0	$0	$0	$197,000
Geo-targeting Pilot - EE	$0	$0	$0	$0	$0	$0	$0
Product Development Total	**$0**	**$197,000**	**$0**	**$0**	**$0**	**$0**	**$197,000**
Planning and Research Total	**$0**	**$448,708**	**$0**	**$0**	**$0**	**$150,000**	**$598,708**
Indirect Products & Services Total	**$0**	**$913,182**	**$187,824**	**$291,000**	**$0**	**$195,105**	**$1,587,110**
EE PORTFOLIO TOTAL	**$0**	**$4,119,041**	**$784,163**	**$9,058,729**	**$157,141**	**$748,022**	**$14,867,096**

Table 9b: 2020 Gas Program Costs by Category (Actual Expenditures)

2020	Program Planning & Design	Admin & Program Delivery	Advertising/ Promotion/ Customer Ed	Participant Rebates and Incentives	Equip & Install	M&V	Total
Business Program							
Commercial Refrigeration Efficiency	$0	$9,647	$0	$38,353	$0	$1,725	$49,726
Compressed Air Efficiency	$0	$0	$0	$0	$0	$0	$0
Cooling	$0	$0	$0	$0	$0	$0	$0
Custom Efficiency	$0	$18,663	$0	$67,107	$0	$922	$86,692
Data Center Efficiency	$0	$0	$0	$0	$0	$0	$0
Energy Management Systems	$0	$4,502	$0	$30,181	$0	$0	$34,683
Heating Efficiency	$0	$188,831	$0	$657,182	$0	$17,175	$863,188
LED Street Lighting	$0	$0	$0	$0	$0	$0	$0
Lighting Efficiency	$0	$0	$0	$0	$0	$0	$0
Lighting - Small Business	$0	$9,415	$0	$418	$0	$0	$9,833
Motor & Drive Efficiency	$0	$0	$0	$0	$0	$0	$0
Multifamily Buildings	$0	$28,657	$0	$247,288	$0	$0	$275,944
New Construction	$0	$331,838	$0	$625,430	$0	$63,684	$1,020,953
Recommissioning	$0	$416	$0	$17,574	$0	$0	$17,990
Self Direct	$0	$0	$0	$0	$0	$0	$0
Strategic Energy Management	$0	$0	$0	$0	$0	$0	$0
General Advertising-Bus	$0	$5,570	$55,899	$0	$0	$0	$61,468
Business Program Total	**$0**	**$597,539**	**$55,899**	**$1,683,533**	**$0**	**$83,506**	**$2,420,477**
Residential Program							
Energy Efficient Showerhead	$0	$133,502	$0	$134,828	$0	$0	$268,330
Energy Feedback Residential	$0	$206,359	$0	$0	$0	$0	$206,359
ENERGY STAR New Homes	$0	$446,075	$0	$1,513,966	$0	$230,055	$2,190,095
Evaporative Cooling	$0	$0	$0	$0	$0	$0	$0
High Efficiency Air Conditioning	$0	$0	$0	$660,686	$0	$0	$660,686
Home Energy Squad	$0	$59,049	$89,922	$5,568	$26,495	$0	$181,033
Home Lighting & Recycling	$0	$0	$0	$0	$0	$0	$0
Home Performance with ENERGY STAR	$0	$52,801	$0	$55,282	$0	$9,365	$117,448
Insulation & Air Sealing	$0	$54,473	$0	$522,413	$0	$2,000	$578,886
Refrigerator & Freezer Recycling	$0	$0	$0	$0	$0	$0	$0
Residential Heating	$0	$76,482	$0	$1,610,100	$0	$11,650	$1,698,232
School Education Kits	$0	$438,323	$811	$213,700	$0	$0	$652,834
Thermostat Optimization	$0	$58,098	$0	$168,095	$0	$0	$226,193
Water Heating	$0	$22,534	$0	$91,935	$0	$4,075	$118,544
General Advertising-Res	$0	$15,108	$141,731	$0	$0	$0	$156,839
Residential Program Total	**$0**	**$1,562,804**	**$232,464**	**$4,976,572**	**$26,495**	**$257,144**	**$7,055,479**

Table 9b: (Cont.)

2020	Program Planning & Design	Admin & Program Delivery	Advertising/ Promotion/ Customer Ed	Participant Rebates and Incentives	Equip & Install	M&V	Total
Low-Income Program							
Energy Savings Kit	$0	$48,563	$0	$24,309	$0	$1,800	$74,672
Multifamily Weatherization	$0	$93,273	$20,000	$408,677	$0	$12,931	$534,880
Non-Profit	$0	$70,722	$20,000	$357,615	$0	$9,968	$458,304
Single-Family Weatherization	$0	$184,442	$85,000	$2,312,207	$0	$112,512	$2,694,161
Low-Income Program Total	**$0**	**$397,000**	**$125,000**	**$3,102,807**	**$0**	**$137,210**	**$3,762,018**
Indirect Products & Services							
Education/Market Transformation							
Business Education	$0	$4,671	$8,069	$0	$0	$0	$12,739
Business Energy Analysis	$0	$9,140	$0	$33,777	$0	$0	$42,917
Consumer Education	$0	$12,018	$32,148	$0	$0	$0	$44,166
Energy Benchmarking	$0	$22,759	$0	$0	$0	$0	$22,759
Energy Efficiency Financing	$0	$21,450	$0	$0	$0	$0	$21,450
Home Energy Audit	$0	$163,133	$1,381	$206,240	$0	$21,906	$392,659
Partners in Energy	$0	$92,277	$0	$0	$0	$0	$92,277
Education/Market Transformation Total	**$0**	**$325,446**	**$41,598**	**$240,017**	**$0**	**$21,906**	**$628,967**
Planning and Research							
EE Market Research	$0	$122,999	$0	$0	$0	$0	$122,999
EE Measurement & Verification	$0	$604	$0	$0	$0	$0	$604
EE Planning & Administration	$0	$97,274	$0	$0	$0	$0	$97,274
EE Program Evaluations	$0	$5,903	$500	$0	$0	$80,709	$87,112
EE Product Development	$0	$46,524	$0	$0	$0	$0	$46,524
Geo-targeting Pilot - EE	$0	$0	$0	$0	$0	$0	$0
Product Development Total	**$0**	**$46,524**	**$0**	**$0**	**$0**	**$0**	**$46,524**
Planning and Research Total	**$0**	**$273,303**	**$500**	**$0**	**$0**	**$80,709**	**$354,512**
Indirect Products & Services Total	**$0**	**$598,749**	**$42,098**	**$240,017**	**$0**	**$102,615**	**$983,479**
EE PORTFOLIO TOTAL	**$0**	**$3,156,093**	**$455,460**	**$10,002,930**	**$26,495**	**$580,475**	**$14,221,453**

Participation Analysis

Decision No. C14-0731 within the 2013 DSM Strategic Issues Proceeding[10] 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."[11] 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."[12]

2020 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 2020 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.

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

Table 10a: 2020 Electric Participation, Percentage of Total by Customer Class

	Total Unique DSM Participants (Estimate)[13]		Total PSCo Customers[14]		PSCo Customers Participating in DSM		PSCo Customers Not Participating in DSM	
Electric	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
2020 Total	1,249,946		1,454,548		1,249,946	85.93%	204,602	14.07%
Bus	11,186	0.89%	110,830	7.62%	11,186	10.09%	99,644	89.91%
Res	1,238,760	99.11%	1,343,718	92.38%	1,238,760	92.19%	104,958	7.81%

Table 10b: 2020 Gas Participation, Percentage of Total by Customer Class

	Total Unique DSM Participants (Estimate)[15]		Total DSM-Eligible PSCo Customers		PSCo Customers Participating in DSM		PSCo Customers Not Participating in DSM	
Gas	**Count**	**%**	**Count**	**%**	**Count**	**%**	**Count**	**%**
2020 Total	411,487		1,435,311		411,487	28.67%	1,023,824	71.33%
Bus	438	0.11%	101,772	7.09%	438	0.43%	101,334	99.57%
Res	411,049	99.89%	1,333,539	92.91%	411,049	30.82%	922,490	69.18%

[13] 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).
[14] Customer count as of 12/31/2020.
[15] 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: 2020 Electric Participation, Average Rebate and Savings

Product	2020 Participants	Average Rebate per Customer	Average kWh Savings per Customer
Business Program			
Commercial Refrigeration Efficiency	117	$2,934.01	66,948
Compressed Air Efficiency	40	$4,403.19	37,934
Cooling	1,089	$1,402.90	5,673
Custom Efficiency	28	$3,699.61	39,463
Data Center Efficiency	3	$29,350.32	478,030
Energy Management Systems	19	$16,341.21	221,995
Heating Efficiency	9	$393.91	3,159
Lighting Efficiency	1,770	$5,226.77	54,723
Lighting - Small Business	4,859	$670.23	10,062
Motor & Drive Efficiency	249	$6,424.84	79,465
Multifamily Buildings	163	$4,604.69	32,941
New Construction	180	$55,598.86	345,816
Recommissioning	21	$2,484.74	35,108
Self Direct	2	$86,087.00	591,700
Strategic Energy Management	49	$65,540.41	774,336
Residential Program			
Energy Efficient Showerhead	1,424	$3.05	534
Energy Feedback Residential	391,421	$0.00	36
ENERGY STAR New Homes	2,319	$261.59	1,866
Evaporative Cooling	4,298	$506.69	1,589
High Efficiency Air Conditioning	7,247	$343.68	676
Home Energy Squad	929	$65.18	1,037
Home Lighting & Recycling	285,565	$20.90	646
Home Performance with ENERGY STAR	81	$524.79	766
Insulation & Air Sealing	1,029	$326.19	433
Refrigerator & Freezer Recycling	6,466	$50.07	768
Residential Heating	2,012	$96.52	795
School Education Kits	40,683	$28.58	471
Water Heating	70	$405.29	3,511
Thermostat Optimization	5,404	$33.41	171
Low-Income Program			
Energy Savings Kit	3,634	$23.82	351
Multifamily Weatherization	40	$21,881.06	42,956
Non-Profit	31	$28,630.86	52,222
Single-Family Weatherization	1,342	$861.41	14,077
Indirect Products & Services			
Business Education	2,131	$0.00	0
Business Energy Analysis	153	$0.00	0
Consumer Education	35,657	$0.00	0
Energy Efficiency Financing	12	$0.00	0
Home Energy Audit	1,174	$0.00	0
Demand Response Program			
Residential Demand Response	9,295	N/A	4
Small Commercial Building Controls	216	$83.16	28

Table 10d: 2020 Natural Gas Participation

Product	2020 Participants	Average Rebate Per Customer	Average Dth Savings Per Customer
Business Program			
Commercial Refrigeration Efficiency	45	$852.29	204.5
Custom Efficiency	4	$16,776.75	8224.2
Energy Management Systems	10	$3,018.10	454.5
Heating Efficiency	164	$4,007.21	191.3
Lighting - Small Business	12	$34.84	9.1
Multifamily Buildings	112	$2,207.93	25.8
New Construction	85	$7,358.00	1649.6
Recommissioning	6	$2,928.97	165.9
Residential Program			
Energy Efficient Showerhead	5,997	$22.48	8.4
Energy Feedback Residential	332,334	$0.00	0.2
ENERGY STAR New Homes	4,267	$354.81	20.5
High Efficiency Air Conditioning	5,763	$114.64	9.4
Home Energy Squad	718	$7.75	3.0
Home Performance with ENERGY STAR	99	$558.41	45.3
Insulation & Air Sealing	1,382	$378.01	27.7
Residential Heating	7,372	$218.41	14.4
School Education Kits	40,072	$5.33	6.9
Water Heating	1,019	$90.22	7.5
Thermostat Optimization	5,919	$28.40	4.9
Low-Income Program			
Energy Savings Kit	4,467	$5.44	2.5
Multifamily Weatherization	37	$11,045.32	170.9
Non-Profit	24	$14,900.61	198.8
Single-Family Weatherization	1,579	$1,464.35	31.1
Indirect Products & Services			
Business Education	76	$0.00	0.0
Business Energy Analysis	100	$337.77	0.0
Consumer Education	3,388	$0.00	0.0
Energy Efficiency Financing	20	$0.00	0.0
Home Energy Audit	1,448	$142.43	0.0

Table 10e: Estimated Customer Consumption Savings Range, 2009-2020

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%

Table 10f: Estimated Cumulative Rate Impact, 2009-2020

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%

Table 10g: Estimated Customer Bill Savings Range, 2009-2020

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%

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, 2021.
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 and Appendix B.
3	Public Service shall use the technical assumptions relating to the energy savings calculations for such measures actually installed during calendar years 2015 and 2020.	Proceeding No. 14A-1057EG, Stipulation & Settlement Agreement, p.17, ¶8	---	Deemed savings approved in Proceeding No. 18A-0606EG were used to calculate prescriptive product achievements for 1/1/2020–12/31/2020, unless amended via 60-Day Notice during 2019 or 2020.

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 2020.	Proceeding No. 14A-1057EG, Stipulation & Settlement Agreement, p.17, ¶8	See Cost-Effectiveness, Appendix B, and Financial Incentive Calculations sections	Technical assumptions approved in Proceeding No. 18A-0606EG were used to calculate prescriptive product achievements for 1/1/2020–12/31/2020, unless amended via 60-Day Notice during 2019 or 2020.
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, 2021.
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 did not issue any 60-Day Notices for new pilots in 2020.
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 $75.1 million on its Energy Efficiency Program in 2020.
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 466 GWh of savings in 2020 representing 1.6% 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 $4.0 million on its Low-Income electric energy efficiency program in 2020.
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 Write Up included in the Business Program section	The Company claimed behavioral savings for nine projects under the Strategic Energy Management product in 2020.

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 2020.
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 corresponding product Write Ups included in the Business Program, Residential Program, and Indirect Program sections	All listed services were provided in 2020.
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 was not able to deliver a Cohort offering in 2020 due to restrictions associated with the COVID-19 pandemic. The Company has already begun its first Cohort in 2021 and has opened recruiting for a second Cohort offering at this time.

30	Regarding Energy Star New Homes: The Company agrees to increase the 2020 forecasted budget, energy savings, and demand reduction to reflect a new product design and delivery strategies and expand eligible home types for 2020 to include electric only homes.	Proceeding No. 18A-0606EG Settlement Agreement, Para. III(D)(xiii)	See Energy Star New Homes Write Up included in the Residential Program section	Product design improvements contributed to the level of achievement on energy savings in 2020. Two all-electric homes participated in the Product in 2020.
31	Regarding Home Performance with Energy Star: The Company agrees to increase the 2020 forecasted budget, energy savings, and demand reduction to reflect a new product design and delivery strategies.	Proceeding No. 18A-0606EG Settlement Agreement, Para. III(D)(xv)	See Home Performance with Energy Star Write Up included in the Residential Program section	Initial phase of the product redesign was implemented via 60-Day Notice in 2019. 2020 efforts included facilitating partnerships between HVAC and Insulation contractors to provide "whole-home" updates for customers. Restrictions associated with the COVID-19 pandemic limited this work, but the Company has renewed these efforts in 2021.
32	Regarding School Education Kits: The Company agrees to pilot a new energy efficiency kit and educational activities in 2019 and 2020. The kit will be provided to high school students and will be preceded by a school-wide presentation and educational event. The new kit will include new measures such as specialty LEDs, weather stripping, and smart power strips. Discount coupons will also be included with the kit to encourage customers to purchase additional energy efficient measures.	Proceeding No. 18A-0606EG Settlement Agreement, Para. III(D)(xi)	See School Education Kits Write Up included in the Residential Program section	Two new kits were piloted in 2019 and 2020. The Company also added new advanced power strip and thermostat setback measures in 2020 to help customers save energy and money while spending more time at home due to the COVID-19 pandemic.

33	Regarding Energy Efficiency Financing: The Company agrees to redesign its website to highlight additional financing opportunities, including the Colorado Commercial Property Assessed Clean Energy program and the Colorado Residential Energy Upgrade loan program, for residential, commercial, and industrial customers. Provide customers with information on financing, including updating all applicable products websites, including, Home Performance with ENERGY STAR®.	Proceeding No. 18A-0606EG Settlement Agreement, Para. III(D)(xix)	See Energy Efficiency Financing Write Up included in the Indirect Program section	Energy Efficiency and additional applicable product websites were updated again in 2020. The Company started working with the National Energy Improvement Fund in 2020 to introduce its new online portal to Xcel Energy commercial customers and contractors.
34	Regarding Residential Battery Demand Response: The Company agrees to conduct an RFP in 2019 for at least two, but not more than four, vendors to provide services for the pilot in 2019 and 2020.	Proceeding No. 18A-0606EG Settlement Agreement, Para. III(D)(xx)	See Residential Battery Demand Response Write Up included in the Demand Response Program section	The Company completed the RFP in 2019. In 2020, the Company signed contracts with Tesla and SolarEdge to support the implementation of the pilot.

35	The Company agrees to work with and support CEO's Colorado Agricultural Energy Efficiency Program to increase the participation of agricultural customers in the Company's energy efficiency and demand response products.	Proceeding No. 18A-0606EG Settlement Agreement, Para. III(E)(i)	---	2020 activities described in footnote.[16]
36	Regarding the Green Roof Ordinance: The Company agrees to promote the "Flexible Compliance Option - Energy Savings/Using Less Than Energy Code" option identified in the City of Denver's Green Roof Ordinance, which may include the use of Company account managers and provide rebates for qualifying measures included in the 2019/2020 DSM Plan that are used to qualify with this option. The Company commits to including in its tracking database information regarding outreach to affected customers and will report on these efforts in its DSM Status Report.	Proceeding No. 18A-0606EG Settlement Agreement, Para. III(E)(ii)	See New Construction Write Up included in the Business Program section	The Company is tracking over 45 projects that fall under the Green Roof Ordinance within the New Construction product.
37	The Company agrees to develop Spanish language materials for its Residential and Low-Income products in 2019 and 2020 as applicable. The development of materials will focus on those products where the potential for increased participation is greatest. In conjunction with the development of Spanish language materials, the Company will evaluate ways to target marketing approaches to Spanish speaking communities and engage this demographic more holistically.	Proceeding No. 18A-0606EG Settlement Agreement, Para. III(E)(iii)	See the Low-Income Program section	Building on efforts from 2019, the Company introduced Google Translate functionality to the My Energy Portal in 2020. In addition, the Company hired a marketing coordinator to facilitate multilingual strategies across service territories and began evaluating the potential to collect customer language preferences to allow for more targeted marketing.

[16] Outreach efforts were adversely impacted by restrictions associated with the COVID-19 pandemic; however, the Company collaborated with the Colorado Energy Office ("CEO") on a direct mail campaign to all eligible agricultural customers in the Company's service territory notifying them about the CEO's free energy assessment and listing the Company's available custom and prescriptive rebate programs applicable to the segment. The Company also partnered with the CEO on a request for funding through the USDA Regional Conservation Partnership Program and has continued regular status update meetings with the CEO's project team to identify additional marketing tactics for launch in 2021.

38	Regarding Code Trainings: The Company agrees to provide $50,000 per year to support code trainings within its electric and natural gas service territories. Conduct a study in 2019 to identify the potential for energy efficiency impacts associated with code trainings and potential product designs for future implementation. The cost for this study will be provided through the existing budget forecast for Energy Efficiency Product Development.	Proceeding No. 18A-0606EG Settlement Agreement, Para. III(E)(iv)	---	Phase II of the Codes & Standards study was completed in May 2020, and a Codes & Standards offering was included in the Company's 2021-22 DSM Plan. Due to contracting delays and restrictions associated with the COVID-19 pandemic in 2020, the Company was only able to spend a total of approximately $73,000 on effective, well-attended training in 2019 and 2020. The Company is using unspent funds to continue training in 2021 until the Codes & Standards offering included in the 2021-22 DSM Plan is implemented.
39	The Company agrees to meet with the Settling Parties prior to the end of the third quarter of 2019 to discuss the status of the EISA. The Company will file a Motion in this proceeding to modify, in accordance with the stakeholder discussion above, the technical assumptions related to applicable products within the 2019/2020 DSM Plan, as modified by this Settlement Agreement, and, if necessary, propose any conforming modifications to the 2019/2020 DSM Plan, as modified by this Settlement Agreement, and/or this settlement Agreement including the removal of and discontinuation of rebates for measures which are determined to be baseline efficient measures upon the applicable timing of the baseline update.	Proceeding No. 18A-0606EG Settlement Agreement, Para. III(E)(v)	---	The Company notified Settling Parties and DSM Roundtable participants of a meeting on December 18, 2019, to discuss the impacts of the DOE ruling on EISA. Attendees included members from CEO, EEBC, OCC, WRA, and SWEEP. The discussion determined that no modifications were necessary for the 2020 plan year.

40	The Company agrees to meet with Settling Parties prior to the end of the second quarter of 2020 to discuss EISA implementation and potential changes to the Home Lighting & Recycling product in the 2021/2022 DSM Plan.	Proceeding No. 18A-0606EG Settlement Agreement, Para. III(E)(v)	---	The Company notified Settling Parties and DSM Roundtable participants of a meeting on May 28, 2020, to discuss the impacts of the DOE ruling on EISA and Colorado HB 19-1231 on lighting products in the 2021-22 DSM Plan. Attendees included members from CEC, CEO, EEBC, EOC, WRA, SWEEP, and other industry representatives. The discussion determined that specialty bulbs covered by HB 19-1231 were subject to a 3-year phase out beginning in 2021, and that there is a continued need for product offerings targeting bulbs under federal preemption.
41	The Company agrees to not post non-cost-effective 60-Day Notices for existing products or programs, except for low income products. The Company may post a 60-Day Notice to introduce a new pilot regardless of cost-effectiveness so long as the funding for such a pilot arrives from a predetermined budget or the adjustment of an existing budget.	Proceeding No. 18A-0606EG, Settlement Agreement, Para. III(E)(viii)	See Table 3 in Executive Summary	Two 60-Day Notices issued in 2020 contained non-cost-effective MTRC ratios; however, these notices related to products that were not cost-effective as filed and approved in the 2019/2020 DSM Plan and the modifications in the 60-Day Notice were intended to improve cost-effectiveness.

42	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 Company conducted evaluations for Lighting Efficiency, Lighting – Small Business, Energy Efficient Showerheads, Refrigerator & Freezer Recycling and a residential Lighting Baseline Review in 2020. The Home Lighting & Recycling evaluation was delayed until 2021 based on feedback received during the December 18, 2019 stakeholder meeting discussed in Item 39. Due to ambiguity related to the DOE ruling on EISA and Colorado HB 19-1231 enforcement, it was determined that the resulting market uncertainty would have significantly diminished the value of an evaluation as a decision-making tool. This decision was communicated to stakeholders during the February 12, 2020 DSM Roundtable.
43	As part of this Settlement Agreement, the Company agrees to increase the specific Residential Energy Efficiency program budget, independent of the Low-Income program budget, to 25 percent of the Energy Efficiency portfolio budget in 2019 and 2020.	Proceeding No. 18A-0606EG, Settlement Agreement, Para. III(E)(xii)	See Table 5b in Executive Summary	Residential Energy Efficiency program spend accounted for 28 percent of the total Energy Efficiency spend in 2020.

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, 2021.
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 $14.2 million on its natural gas DSM programs. This surpassed the statutory expenditure targets – $7.7 million (2% of gas base rate revenues), and $5.0 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 2020 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 2020 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 and Appendix B	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	---
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 $3.8 million on its Low-Income gas energy efficiency program in 2020.

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 Table 6b in Executive Summary	Natural gas DSM expenditures in 2020 totaled $14.2 million.

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 466 GWh and net benefits of $117,750,888 in 2020. The performance goal and incentive structure for 2020 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 2020 Plan year is 40 percent of net economic benefits[17] 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 2020 performance year. The full calculation of the Company's financial incentive for electric DSM is shown in Table 13 below.

[17] 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 2020 Electric DSM Incentive

Disincentive Offset (Grossed-up for Income Taxes)	**$1,500,000**
Performance Incentive Calculation	
Approved 2020 kWh Goal	500,000,000
kWh from YE Achievements	466,407,721
Net Economic Benefits from YE Achievements	**$117,750,888**
Net Economic Benefits Adjustments	
Total Low-Income Allowance	$814,146
Total Market Transformation Allowance from YE Achieve.	$2,303,366
FINAL Net Benefits from YE Achievements	**$120,868,400**
% of Net Benefits Eligible for Incentive (Achievement over 280 GWh)	40%
% of Eligible Net Benefits Awarded	40%
Performance Incentive	**$19,322,839**
Total Incentive: Disincentive Offset Total + Performance Incentive	$20,822,839
Incentive Cap (Hard Cap of $18,000,000)	$18,000,000
Total 2020 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 2020, the natural gas incentive is calculated to be $3,555,363 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 $893,946 for a total award of $4,449,309. The full calculation of Public Service's 2020 Natural Gas Incentive is detailed in Table 14 below.

Table 14: Public Service 2020 Natural Gas Bonus and Acknowledgement of Lost Revenue

Approved Energy Target (Goal)[18]	681,120	Dekatherm per year		
Energy Target Achieved - YE Forecast	727,480	Dekatherm per year		
Percent of Energy Target Achieved	106.8%			
			Dth	**Spend**
Approved Savings Target	45,814	Dekatherm per $1M	681,120	$14,867,096
Savings Target Achieved - Portfolio Total	51,154	Dekatherm per $1M	727,480	$14,221,453
Savings Target Achieved - Low-Income Program Adjustments				
Energy Savings Kit			8,479	$74,672
Multi-Family Weatherization			6,324	$534,880
Non-Profit Energy Efficiency			6,324	$458,304
Single-Family Weatherization			49,123	$2,694,161
Total Savings Target Achieved - Low-Income Program Adjustments	18,261	Dekatherm per $1M	68,697	$3,762,018
Savings Target Achieved - Adjusted*	62,985	Dekatherm per $1M	658,783	$10,459,435
Total DSM Expenditures	$14,221,453			
Energy Factor	13.0%			
Savings Factor	1.374791373			
Percent of Net Benefits Awarded	17.9%	= Energy Factor * Savings Factor		
Net Economic Benefits Achieved	$31,177,842			
Net Economic Benefits Adjustments				
Energy Savings Kit	$-			
Multi-Family Weatherization	$-			
Non-Profit Energy Efficiency	$118,336			
Single-Family Weatherization	$141,441			
Low-Income Allowance from Plan	$259,777			
FINAL Net Economic Benefits Achieved	$31,437,618			
Incentive Cap	$3,555,363	= less of 20% of net economic benefits or 25% of expenditures		
Uncapped 2020 Gas Financial Incentive Pre-Tax	$5,618,622			
Total 2020 Proposed Gas Financial Incentive Pre-Tax	**$3,555,363**			
Business/Residential Allocation				
Business Actual Savings (Dth)	211,278	29%		
Residential & Low-Income Actual Savings (Dth)	516,201	71%		
Total Savings	**727,480**	**100%**		
Allocated Bonus				
Business	1,032,566			
Residential & Low Income	2,522,797			
Total	3,555,363			
Acknowledgement of Lost Revenue [ALR] Calculation:				
Dollar Value Per Therm				
Business (Non-residential)	$0.09945			
Residential	$0.13248			
12-Month Therm Reduction Impact From 2020 Programs				
Business (Non-residential)	2,112,783			
Residential	5,162,014			
ALR Totals				
Business (Non-residential)	$210,106			
Residential	$683,839			
Total ALR	**$893,946**			
Total Gas Bonus and ALR	**$4,449,309**			

[18] Natural Gas savings goal set the 2020 goal in Proceeding No. 18A-0606EG.

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 2020, the electric products in the Company's Business Program achieved approximately 75 percent of the net generator kWh target, and spending was in line with achievement. Multiple products overachieved their forecast savings including: Commercial Refrigeration Efficiency, Lighting – Small Business, Motor & Drive Efficiency, New Construction, and Strategic Energy Management. 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 - 2020	**Electric Budget**	**Net Gen. kW**	**Net Gen. kWh**	**Electric MTRC Test Ratio**	**Electric Expenditures**	**Net Gen. kW**	**Net Gen. kWh**	**Electric MTRC Test Ratio**
Commercial Refrigeration Efficiency	$672,990	516	2,911,442	1.44	$812,472	867	8,273,975	1.51
Compressed Air Efficiency	$709,343	737	4,784,175	1.55	$371,035	241	1,330,454	1.33
Cooling	$3,539,391	4,871	9,249,617	1.35	$3,410,002	2,313	5,805,617	1.20
Custom Efficiency	$757,761	343	3,197,678	1.22	$445,881	208	1,015,440	1.00
Data Center Efficiency	$1,829,881	1,829	14,539,038	1.89	$257,734	194	1,449,578	1.23
Energy Management Systems	$532,829	72	4,582,521	0.94	$557,081	87	3,876,179	1.21
Heating Efficiency	$16,297	7	103,747	2.15	$28,375	2	25,827	0.48
LED Street Lighting	$43,000	-	2,658,138	0.58	$0	-	2,161,494	1.31
Lighting Efficiency	$20,380,890	24,994	181,557,873	1.56	$12,087,883	12,560	79,876,609	1.52
Lighting - Small Business	$5,987,360	5,553	34,654,488	1.18	$4,265,042	7,548	46,776,938	1.93
Motor & Drive Efficiency	$2,644,398	2,316	13,175,865	1.45	$2,126,321	2,434	16,929,647	1.85
Multifamily Buildings	$2,245,730	1,339	11,521,450	1.34	$984,274	721	5,690,833	1.72
New Construction	$12,040,165	12,181	42,085,573	1.23	$14,244,708	18,928	62,463,947	1.77
Recommissioning	$491,040	441	3,736,530	0.91	$121,726	34	700,900	0.88
Self Direct	$639,733	769	5,053,868	1.70	$279,493	158	1,132,524	1.21
Strategic Energy Management	$5,759,050	3,307	35,135,809	1.63	$4,375,172	5,102	37,580,929	2.11
General Advertising-Bus	$825,647	-	-		$630,664	-	-	
Business Program Total	**$59,115,505**	**59,274**	**368,947,811**	**1.41**	**$44,997,861**	**51,396**	**275,090,892**	**1.68**

Natural Gas

In 2020, the natural gas products in the Company's Business Program exceeded the Dth savings target by approximately 35%. Overachievement in Commercial Refrigeration Efficiency, Custom Efficiency, 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

	Budgets / Targets					Expenditures / Achievements				
Business Program - 2020	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
Commercial Refrigeration Efficiency	$34,266	5,630	164,295	$190,468	2.16	$49,726	9,204	185,098	$392,358	2.69
Compressed Air Efficiency	-	-				-	-			
Cooling	-	-				-	-			
Custom Efficiency	$34,126	4,654	136,378	$131,184	1.64	$86,692	28,620	330,138	$1,375,744	5.17
Data Center Efficiency	-	-				-	-			
Energy Management Systems	$58,239	6,487	111,393	$125,080	1.46	$34,683	4,091	117,946	$60,781	1.27
Heating Efficiency	$718,820	28,872	40,166	$337,500	1.19	$863,188	26,987	31,264	$127,713	1.07
LED Street Lighting	-	-				-	-			
Lighting Efficiency	-	-				-	-			
Lighting - Small Business	$32,839	3,147	95,830	$500,409	16.14	$9,833	98	10,014	$6,956	1.68
Motor & Drive Efficiency	-	-				-	-			
Multifamily Buildings	$1,252,000	53,193	42,486	$4,654,984	2.80	$275,944	2,889	10,471	$320,752	2.03
New Construction	$506,817	51,627	101,865	$381,182	1.13	$1,020,953	138,493	135,651	$18,061,969	4.79
Recommissioning	$28,927	2,993	103,466	$7,132	1.09	$17,990	896	49,798	$15,287	1.73
Self Direct	-	-				-	-			
Strategic Energy Management	-	-				-	-			
General Advertising-Bus	$78,298	-	-			$61,468	-	-		
Business Program Total	**$2,744,332**	**156,603**	**57,064**	**$6,249,641**	**1.78**	**$2,420,477**	**211,278**	**87,288**	**$20,300,092**	**3.56**

Business Products

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

Commercial Refrigeration Efficiency

The Commercial Refrigeration Efficiency product offers refrigeration maintenance and upgrades to commercial customers with significant refrigeration loads, notably restaurants, grocery, convenience and liquor stores. The product offers four major components to provide customers with the resources necessary to reduce their energy usage. These include a free onsite energy assessment with an assessment report, direct installation (DI) of complimentary energy saving measures, identification of prescriptive measures, and proactive project management to assist customers in implementing energy efficient measures.

2020 Product Achievement

The product greatly exceeded its electric and gas savings target for 2020. The product successfully engaged the large grocery segment, and the majority of projects completed were from this segment which was not significantly impacted by the COVID-19 pandemic. The product focused marketing efforts to engage small to mid-size refrigeration customers, like restaurants, with a 25% prescriptive bonus which launched on October 1st as well as marketing efforts emphasizing the free assessment, complimentary energy saving products, and recommendations for equipment upgrades that would have the biggest impact on reducing energy costs. The product also utilized a partnership with the CO Restaurant Association (CRA) to promote the product and associated website to restaurant owners in the CRA newsletter encouraging customers to take advantage of the free services offered by the product. New and existing trade partners were engaged mid-year through a virtual trade partner training and trade partner newsletters focusing on the refrigeration product and technology updates or news. Four new trade partners were added to the product in 2020 and there is opportunity to continue to grow the trade partner network in 2021.

The Commercial Refrigeration product will transition to the Small Business Energy Solutions and HVAC-R systems products launching in the 2021/2022 DSM plan.

Changes in 2020
In January 2020, the Company posted a 60-Day Notice to add smart thermostats measures into the direct install (DI) product offering. The Company posted an additional 60-Day notice in March 2020 to add a compact fluorescent baseline option for lamps replaced through the DI offering.

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 fixing 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 $500 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 $50 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.

2020 Product Achievement
The product did not achieve its 2020 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.

To support our customers during 2020 and increase participation, the Compressed Air product offered a bonus rebate of 25% beginning in the second quarter through the end of the year. Continuous communication with trade partners to understand the evolving market continued to be a key part of building the pipeline for 2021.

Changes in 2020
There were no changes to this product.

Cooling
The Cooling product offers rebates to customers who purchase and install select high-efficiency ("HE") cooling equipment and incentives to midstream distributors to stock and sell select HE equipment. Rebate dollars and study funding are offered to assist in buying down the incremental cost associated with purchasing the HE equipment, and to shorten the associated payback period. In addition, customers may qualify for a mix of prescriptive rebates for common HE equipment and custom rebates for newer, system-based HE solutions. Marketing efforts inform and educate customers and trade partners to encourage energy efficient choices in facilities.

2020 Product Achievement
The product did not achieve its electric energy savings target and spend was aligned with achievement. The product forecasted significant custom efficiency savings in the 2020 DSM Plan but did not see any custom projects submitted. The product will continue to encourage new technologies through custom.

Changes in 2020
In May, the Company posted a 60-Day Notice to update the Equivalent Full Load Hours deemed savings assumptions and expanded the market segment to include a hydronic segment for water cooled chillers.

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.

2020 Product Achievement
The Custom Efficiency product exceeded its natural gas savings target but did not achieve its electric savings target in 2020. Both the electric and natural gas products met participation targets in 2020, however, most electric projects that were submitted had smaller electric savings than a typical project. Larger projects with more significant electric savings potential planned for completion in 2020 were delayed or cancelled due to the COVID-19 pandemic. The product underspent its forecasted electric budget and overspent its gas budget to support energy savings achievements. The Company continues to work across key channels, including trade, to engage customers and identify potential solutions. These efforts focus on involving the Company earlier in the process, which provides valuable insight while customers are planning their energy efficiency improvements.

Changes in 2020
In 2020, the product modified its preapproval process to enable customers to purchase necessary equipment sooner. After submitting a signed application, the customer can proceed to purchase equipment without waiting for pre-approval; however, submitting a signed application does not guarantee a project will be approved.

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.

2020 Product Achievement
The Data Center Efficiency product did not achieve its electric savings target in 2020, but electric spend was in line with savings achieved. Various tactics, such as free on-site walkthroughs, used to drive achievement and build pipeline in the past were limited as a result of site restrictions in place due to the COVID-19 pandemic resulting in lower than forecasted savings. For completed projects, electric achievement was from a variety of prescriptive and custom projects focused on lighting, motors, and

power supply technologies. Many of the energy saving projects were identified in a data center study that previously received a study rebate through the product. The Company remained engaged with customers working through the Data Center New Construction offering.

Changes in 2020
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.

2020 Product Achievement
The product fell short of its electric and gas savings targets in 2020; however, two large projects that experienced delays due to the COVID-19 pandemic were within days of completion by the year's end. Had the two completed, the product would have surpassed its savings targets. Electric expenses were slightly above its budget, while gas expenses were below budget and consistent with the gas achievement.

Challenges to greater savings continue to be:

- Based on Trade Partner feedback, Trade Partners continue to be focused on new construction, and are less focused on system retrofits.
- 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 the separate, custom analysis of results.
- A large portion of EMS retrofits are not cost-beneficial because traditional systems seldom yield demand savings and are expensive relative to their energy savings.

In response to the challenges, the Company:

- Met with trade partners to promote control methods that can yield peak-coincident savings. The meetings also highlighted the value the product can have to the performance contractors.
- Evaluated and encouraged 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.
- Plans to meet with, or survey other utilities' programs to explore innovative program designs.

Changes in 2020
There were no changes to this product.

Heating Efficiency
The Heating Efficiency product provides rebates for retail natural gas business customers who purchase high-efficiency natural gas or dual-fuel commercial equipment for heating. The process load of the equipment must be less than 30 percent to qualify, (higher than 30 percent may qualify under the Custom Efficiency product). Product rebates are designed to promote, to qualifying customers, the installation of boilers, commercial water heaters, pipe insulation, unit heaters and boiler system auxiliary equipment that

improve combustion and seasonal efficiency. The Company communicates with customers and trade partners via direct mail, direct customer outreach via account managers and energy efficiency specialists. Low-cost and cost-efficient tactics such as email, newsletters, social media, association meetings and trade shows are also used, as well as strategic partnerships with the Colorado Boiler Inspection Office, and the bi-annual Heating Advisory Board.

2020 Product Achievement
The product did not achieve its electric and natural gas energy savings targets in 2020, and both electric and gas spend were below filed budget. Several measures were not cost effective and were shifted from prescriptive to custom to better evaluate actual performance. These measures historically contributed both electric and gas savings and did not contribute to the actual energy savings achieved in 2020 as originally filed.

Changes in 2020
In March, the Company posted a 60-Day Notice to discontinue offerings for condensing boilers, condensing unit heaters, low-temperature pipe insulation, and EC fan motors. A custom gas product was added to the program. Rebates for non-condensing boilers were also increased from $700 to $1400.

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.

2020 Product Achievement
The Company fell short of the forecasted target as most of the communities have participated in previous years.

Changes in 2020
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 networked 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.

2020 Product Achievement
The Lighting product did not meet filed energy savings targets despite robust marketing and advertising efforts. The COVID-19 pandemic had big impacts on customer's ability to make facility upgrades due to limited facility access, manufacturing delays, shipping delays, and maintenance staff layoffs. The product team launched bonus rebates May 1 in effort to bring down upfront equipment costs.

Many customers took advantage of the bonus rebates when building access was possible. The bonus rebates were made available to prescriptive downstream, midstream LED Instant rebates, and Custom efficiency projects and advertised through paid media, trade partner network, and customer emails. We pulled historical product participation data targeting customers who previously upgraded to efficient

fluorescent technology but had not yet upgraded to LEDs. This effort yielded a market boost as the number of new projects increased; however, the pandemic slowed many projects from completion.

The product also underwent a process and impact evaluation for the LED Instant Rebate offering in 2020. Preliminary results indicate the evaluation will reduce the net-to-gross in future years which will impact the product's ability to maintain high savings rates and cost effectiveness in the future. The final evaluation findings will be posted and implemented in 2021.

Changes in 2020
In February 2020, the Company posted a 60-Day Notice to make changes to the product in response to the 2019 Impact Evaluation. The evaluation provided key findings in the areas of net-to-gross, rebate application form, and investigated the DLC verses non-DLC qualified offerings.

Lighting – Small Business
The Lighting – Small Business product offers recommendations for energy-saving measures, special services, and attractive rebates to business customers who purchase and install energy-efficient lighting equipment in existing facilities. In addition, the product partners with the Energy Analysis product to provide customers with a comprehensive audit identifying energy savings opportunities from lighting to cooling to heating. Customers with a peak demand under 100kW are eligible to receive free direct installation (DI) 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 lighting equipment, and lack of access to quality contractors.

2020 Product Achievement
The product achieved its electric savings target and came in under budget with approximately 82 percent of achievement coming from the Business LED Instant Rebate offering. Achievement in the Business LED Instant Rebate program is allocated to the Lighting Efficiency and Small Business Lighting products based on a percentage determined from historical customer participation. Thus, the achievement captured from the Business LED Instant Rebate offering in the small business lighting product came from large, medium, and small business customers.

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 downstream and prescriptive pathways closed the year at less than half the achievement compared to the prescriptive and custom pathways in 2019. In the second quarter the lighting products launched a variety of bonuses for prescriptive, custom, downstream and Business LED Instant rebate measures to further support customers and incentivize them to complete their lighting upgrades. The product utilized various marketing tactics to engage customers in the bonus offering including emails blasts, follow-up campaigns with customers that had previously received an energy audit and launched a targeted campaign for customers that previously received rebates for upgrading to T8 Fluorescent technology but had not yet upgraded to LED technology.

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.

The product also underwent a Comprehensive Evaluation in 2020. The final evaluation findings will be posted and implemented in 2021.

The Lighting – Small Business product will transition to the Small Business Energy Solutions product launching in the 2021-22 DSM plan.

Changes in 2020
In January 2020, the Company posted a 60-Day Notice to add smart thermostats measures into the direct install product offering. The Company posted an additional 60-Day Notice in March 2020 to add a compact fluorescent baseline option for lamps replaced through the DI offering. In the same 60-day notice the Company also updated the lamp measure lifetime of the DI lamps based on the technical assumptions associated with the actual lamps the program implementer was installing. Finally, the direct install net-to-gross ratio was corrected from 89% to a 90% net-to-gross ratio as determined from the 2016 Small Business Lighting Comprehensive Evaluation.

Motor and Drive Efficiency
The Motor & Drive Efficiency product is designed to encourage customers to purchase high-efficiency motors and variable frequency drives used on fans, pumps, and eligible industrial equipment. The Company offers prescriptive rebates to customers who install qualifying equipment, and custom rebates to those customers whose projects do not meet the prescriptive criteria.

2020 Product Achievement
The Motor and Drives Efficiency product exceeded its savings target in 2020. The product underspent its filed budget. Variable Frequency Drives continued to be installed throughout the year and appears to be unaffected by building closures. This measure dominated the product achievement.

Changes in 2020
In March, the Company posted 60-Day Notice to make changes to the Motor & Drive Efficiency product in response to the 2019 Comprehensive Evaluation The evaluation provided key findings in the areas of net-to-gross. The evaluation provided key findings in the areas of estimated net-to-gross and found that the Motor & Drive Efficiency product is operating smoothly, with high levels of satisfaction among participating customers, near-participants, and trade partners.

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, custom/ prescriptive projects, etc.)

2020 Product Achievement
The Multifamily Buildings product was significantly impacted by the COVID-19 pandemic and underachieved the electric and gas savings targets. Field Operations were put on hold in the second quarter and at the end of the year, severely impacting in-unit direct install efforts. Capital expenditure freezes put larger energy savings projects on hold. Expenditures were in line with the achievements. Virtual and in-person audits have created a robust pipeline for direct installation measures in 2021.

Changes in 2020
In January 2020, the Company posted a 60-Day Notice to add a smart thermostat measure as part of the direct install offering. The Company posted an additional 60-Day notice in May 2020 to add a compact fluorescent baseline option for lamps replaced through the direct install offering, as well as, update lifetimes for screw-in LED lamps in response to the Department of Energy's final ruling on the Energy Independence and Security Act issued at the end of 2019.

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 2020. 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

2020 Product Achievement
The product exceeded its saving targets for both electric and gas. The product was cost-effective due to the efforts focused on more accurate reporting and an educational initiative with our modelers centered around the components affecting cost effectiveness and helping customers make the best choices. The product also allocated spend more accurately between the electric and gas components based on actual project achievement for each fuel. The EDA offering remained the primary offering in terms of share of overall achievement.

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, which in turn resulted in little budget constraints for customers. The implementation of remote Measurement and Verification activities kept the pipeline moving and projects were able to be completed through this method.

The Company also developed additional channels 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 45 projects that fall under the Green Roof Ordinance, and the company is currently working with the approved Energy Modeling Consultants and Xcel Energy Account Managers to help customers understand ordinance.

Changes in 2020
In response to the COVID-19 pandemic, the New Construction product implemented remote Measurement and Verification activities for projects completed in 2020.

Recommissioning
The Recommissioning product is designed to assist electric and/or natural gas business customers to improve the efficiency of their existing building operations by identifying functional systems that can be "tuned up" to run as efficiently as possible through low- or no-cost improvements. Recommissioning consists of two main steps: (1) diagnosis (studies) and (2) implementation. Public Service offers rebates for recommissioning studies and for the implementation of recommissioning measures.

2020 Product Achievement
The product did not achieve its electric and natural gas energy savings target in 2020. Restrictions related to the COVID-19 pandemic prevented Recommissioning study providers from entering customer premises to conduct studies. Eight new studies were submitted in 2020 but have not completed the approval process.

Changes in 2020
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.

2020 Product Achievement
The product did not reach its electric savings target in 2020. The COVID-19 pandemic delayed several new project starts in 2020 and prevented some active projects from proceeding. One delayed project will close in January 2021. The Company met with engineering firms throughout the year to identify potential new projects for the product pipeline and to discuss new technologies that can help customers better manage their energy and demand use.

Changes in 2020
There were no changes to this product.

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

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

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

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

2020 Product Achievement
The product exceeded its energy savings targets and its spending was within budget. The year's achievement was the best in the history of the Company's holistic program in Colorado. It also exceeded its expectations for peak coincident demand savings. A wide range of industrial and institutional customers, from twelve major segments, completed projects.

To expand customer enrollments, the Company continues to offer prospective customers a free SEM Qualification Assessment. Assessments include an on-site technical review and a management interview. Each assessment concludes with a brief report, which better informs decisions about enrollment. All prospects received a list of energy efficiency opportunities to pursue. The product began trial engagements at three multi-tenant office buildings which have thus far achieved minimal results. Additionally, the Company contracted with an expert to offer SEM consulting to large indoor agriculture customers. Several customers enrolled in the latter part of the year and are expected to yield results by the end of 2021.

In accordance with the 2019/2020 DSM Plan Settlement Agreement, the Company contracted with product implementers to conduct two Cohorts in the second and third quarters of the year. However, efforts to launch were suspended due to the pandemic. The Company and its implementers expect to launch three Cohorts within the next year.

Where possible, the SEMCs leverage existing measurement and management tools. They also offer consultation for scoping needed analytical systems. System incentives are available for enrollees who need sub-metering or need to augment their systems. For system incentives, customers do not need to enroll in a distinct program path. System incentives, however, require specific approval based on savings potential.

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

The product claimed behavioral savings for nine Systemic Operational projects in 2020. Systemic Operational savings result from specific actions that require programming or verified policy changes and that would require specific effort to reverse. Savings have a 3-year lifetime and are calculated using a regression model based on 1-year's baseline interval data to quantify energy savings attributable to identified actions during the treatment period. Each model was reviewed by Xcel Energy Engineering and developed by either Cascade Energy or Michaels Energy. Each model met or exceeded standards set by the BPA's *MT&R for Guidelines Monitoring, Targeting and Reporting (MT&R) Reference Guide*[19]. Table 16 below describes the primary actions that resulting in energy savings for each project.

[19] 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	Wastewater Treatment	726,235	1. Operate the most efficient Influent pumps first (profile each pump upon rebuild) 2. Put circulation pump at digester holding tank on automatic timer 3. Automate Primary Sludge Flow Meter 4. Implement Daylight Harvesting 5. Install protection on treatment system's shaker screen 6. Adjust settings and perform maintenance on HVAC economizers 7. Stabilize the digester transfer pump to consistent feed
Project 2	Wastewater Treatment	196,037	1. Reduce influent and effluent channel mixing pressure 2. Implement pipe repairs 3. Reduce centrifuge start/stop cycles 4. Deenergize mothballed motors and motor heaters 5. Optimize/reduce air pressure at Grit Removal 6. Fix sticky valve at sewage pumping station pump 7. Implement schedule policy changes: – Increase Dissolved Oxygen probe manual cleaning to every 2 weeks and to monthly for all others – Increase frequency of blower plenum filter changes
Project 3	Wastewater Treatment	97,435	1. Reduce minimum airflow and Dissolved Oxygen setpoint 2. Implement anoxic timer to reduce daily cycles 3. Decrease dilution water flow 4. Adjust channel mixing timer to reduce daily cycles
Project 4	Cold Storage	35,339	1. Install timer on kitchen exhaust fan to turn off when not in use 2. Program lower electric heating temperature setting 3. Repair exterior lighting photocells so that lights turn off 4. Set freezer door heaters to cycle off
Project 5	Cattle Feedlot	1,052,595	1. Reduce idle time of the feed processing mill to finish production faster and at higher tons/kWh (by staggering feed trucks with optimal queueing) 2. Programmatically shut down the mill earlier in the day 3. Reduce the operating schedule of drinking water pumps

			4. Program well-pump variable frequency drives to optimize how the pumps operate together, and set maximums for each pump
Project 6	Plastic Packager	308,349	1. Repair compressed air system leaks 2. Reduce pressure setpoint for cooling water system
Project 7	School District	261,317	1. Upgrade the building automation system and set new schedules (failed custom analysis on costs, but SEM influenced to implement) 2. Reducing extraneous equipment operation, including scheduling Variable Air Volume boxes off 3. Program kitchen makeup air units to reduce runtimes 4. Change Roof-Top Unit schedules to school schedules instead of business-day office hours 5. De-lamp display cases and fixtures in two over-lit spaces 6. Set policy for manual turn-off of hallway lights was implemented (but estimated to be minimal component of annual savings).
Project 8	School District	115,541	1. Replace broken sensors for space/mixed air temperature and calibrate all space temp/mixed air temperature sensors 2. Clean cooling/Heating coils and improve comprehensive HVAC Maintenance schedules to *add*: – Compressor check & starter – Check condenser fans & oil levels – Calibrate control panel and low-temp sensors – Leak tests – Coil cleanings
Project 9	Hospital	995,265	1. Chilled water adjust/reset temperature 2. Optimize fan control sequence for Cooling Tower 3. For air handling units: – Adjust static pressure/reset & allow dynamic adjustment based on variable air volume damper position – Adjust/reset supply temperature

Changes in 2020
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.

2020 Product Achievement

In 2020, during the Coronavirus pandemic, advertising played an important part in building awareness and motivating business customers 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 budget was under spent due to cancellations of certain promotions as a result of the COVID-19 pandemic.

Changes in 2020

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 2020, 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 STAR® New Homes, Evaporative Cooling, High Efficiency Air Conditioning, Residential Heating, and School Education Kits also cost-effectively exceeded their product specific forecasts in 2020. 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 - 2020	**Electric Budget**	**Net Gen. kW**	**Net Gen. kWh**	**Electric MTRC Test Ratio**	**Electric Expenditures**	**Net Gen. kW**	**Net Gen. kWh**	**Electric MTRC Test Ratio**
Energy Efficient Showerhead	$ 38,017	86	1,011,152	13.46	$ 18,540	44	541,883	15.88
Energy Feedback Residential	$ 3,140,084	4,914	20,141,191	1.14	$ 1,593,925	4,855	14,944,750	1.99
ENERGY STAR New Homes	$ 1,292,286	1,000	2,988,677	0.89	$ 935,434	713	4,253,055	1.20
Evaporative Cooling	$ 4,404,100	6,632	5,121,782	3.59	$ 3,139,845	6,848	5,277,782	5.25
High Efficiency Air Conditioning	$ 2,820,998	2,704	2,566,184	1.29	$ 3,133,689	2,944	3,651,620	1.44
Home Energy Squad	$ 685,665	613	2,448,239	1.15	$ 401,549	157	1,029,017	1.59
Home Lighting & Recycling	$ 4,823,414	9,671	68,638,979	2.16	$ 7,202,580	16,794	119,105,184	5.05
Home Performance with ENERGY STAR	$ 650,106	466	310,462	1.02	$ 129,005	89	76,835	0.66
Insulation & Air Sealing	$ 465,908	461	515,024	0.89	$ 366,267	443	423,922	0.72
Refrigerator & Freezer Recycling	$ 1,249,390	743	4,000,307	1.11	$ 1,033,117	395	3,145,085	1.09
Residential Heating	$ 77,700	105	566,506	1.32	$ 226,724	295	1,605,639	1.30
School Education Kits	$ 1,804,317	1,381	10,779,522	1.22	$ 1,882,512	1,904	11,382,062	2.86
Water Heating	$ 334,751	739	5,018,807	1.33	$ 92,007	38	262,512	1.01
Thermostat Optimization	$ 1,083,760	2,282	1,955,134	1.72	$ 260,905	1,345	985,994	1.61
General Advertising-Res	$ 515,496	-	-		$ 615,757	-	-	
Residential Program Total	**$ 23,385,992**	**31,797**	**126,061,968**	**1.83**	**$21,031,856**	**36,864**	**166,685,343**	**3.61**

Natural Gas

The Residential Program did not meet its natural gas savings target despite strong results in several of the products, including ENERGY STAR® New Homes, Insulation and Air Sealing, Residential Heating, School Education Kits and Water Heating. 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 - 2020	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	$459,736	53,968	117,389	$7,007,122	11.00	$268,330	33,473	124,747	$4,428,263	12.93
Energy Feedback Residential	$427,165	89,936	210,542	$530,649	2.24	$206,359	78,561	380,699	$634,782	4.08
ENERGY STAR New Homes	$1,848,007	75,359	40,779	-$173,160	0.97	$2,190,095	80,409	36,715	$149,257	1.03
Evaporative Cooling	-	-				-	-			
High Efficiency Air Conditioning	-	-				$660,686	35,810	54,202	$1,759,076	3.08
Home Energy Squad	$369,071	15,731	42,624	$678,764	2.50	$181,033	2,137	11,802	-$16,999	0.91
Home Lighting & Recycling	-	-				-	-			
Home Performance with ENERGY STAR	$341,805	19,248	56,312	-$202,357	0.85	$117,448	5,201	44,284	-$56,348	0.85
Insulation & Air Sealing	$366,319	20,835	56,876	-$64,986	0.95	$578,886	32,506	56,153	-$293,101	0.87
Refrigerator & Freezer Recycling	-	-				-	-			
Residential Heating	$1,353,800	62,884	46,450	-$1,377,348	0.77	$1,698,232	91,321	53,774	-$1,902,023	0.77
School Education Kits	$626,354	46,226	73,802	$5,829,672	8.20	$652,834	52,059	79,744	$5,961,855	8.03
Water Heating	$114,758	5,385	46,922	-$295,991	0.56	$118,544	6,912	58,311	-$302,288	0.61
Thermostat Optimization	$218,999	62,181	283,935	$488,630	1.75	$226,193	29,114	128,715	$415,528	1.58
General Advertising-Res	$140,504	-	-			$156,839	-	-		
Residential Program Total	**$6,266,518**	**451,753**	**72,090**	**$12,280,492**	**1.68**	**$7,055,479**	**447,504**	**63,427**	**$10,621,162**	**1.50**

Residential Products

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

Energy Efficiency Showerhead

The Energy Efficiency Showerhead product has delivered reliable and cost-effective natural gas and electric savings to Public Service customers since 2009. Residential natural gas and combination natural gas and electric customers are eligible to receive a free kit—valued at $30—containing energy-efficient showerheads and aerators to help reduce their energy and water use costs. The product continues to prove to be a popular energy saving solution. The product not only provides energy savings, but also water savings that are equally beneficial to customers and the environment.

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 and instructions for installing the units and later surveyed to determine the installation rates of each unit.

2020 Product Achievement

The product did not achieve its electric or gas savings targets. The Company has shifted the product to offer more customizable kits which has made digital marketing more difficult. Therefore, the Company has focused on direct mail marketing more than it has in previous years as well as non-traditional efforts like giveaways to drive participation. Communications to customers were reprioritized in 2020 to focus on safety messaging relating to the COVID-19 pandemic. The Company experimented with some alternative approaches in response to the pandemic, including sending "stay-at-home" kits which included showerheads as well as other items such as LED light bulbs and distributing showerheads at food banks. Additionally, some delays in the marketing schedule, fulfillment of orders, and technical limitations of the Company's rebate tracking systems caused some orders placed late in 2020 to be delayed to first quarter of 2021.

Changes in 2020

There were no changes to this product.

Energy Feedback Residential

The Energy Feedback Residential product provides targeted communication of energy-use comparisons and information called the Home Energy Report to residential customers, including specific recommendations and feedback intended to motivate and educate customers on how to reduce their energy consumption. Customers receive new information with each report that is delivered, by mail, email, or a combination of both. An online version, referred to as My Energy, provides similar information along with supplemental energy-awareness and savings tools. Savings are determined by comparing the energy consumption of the participating "treatment group" (those receiving the reports) to a non-participating "control group." Realized energy savings increase gradually over time as behavior is impacted by treatment. Product savings are measured and reported to the Company each month by the third-party implementer.

2020 Product Achievement

The product failed to achieve its electric and gas targets in 2020. The product switched to a new vendor in 2020 who faced some difficulty during product launch which resulted in delays and some lost savings opportunities. The vendor, however, did not report any long-term impacts due to the COVID-19 pandemic.

Changes in 2020

At the end of 2019, the Company selected a new vendor which began delivery of Energy Feedback reports starting in 2020.

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 in order 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.

2020 Product Achievement

The product exceeded electric and natural gas savings targets and spend was in line with overachievement. Sustained demand for housing in the greater Denver metro area, coupled with the benefit of construction classified as an essential industry, led to participation and achievement in line with prior years' success despite broader impacts on the local economy caused by the COVID-19 pandemic.

The Company saw the first two homes in product history take advantage of the all-electric path in 2020. The product also saw participation in new prescriptive measures. Smart thermostats and heat pump water heaters were the most popular new measures.

The product saw declines in participation by percentage in IECC 2009 and 2006 baselined homes, which was offset by increased participation in IECC 2018 baseline jurisdictions. IECC codes 2012-2018 will continue to represent most product homes. The Company anticipates that as the product's Codes & Standards support included in the 2021-22 DSM Plan influences the market, the jurisdictions that remain

on pre-2012 codes will be moved onto more updated baseline codes. The Company does not expect this to impact product participation and the product should remain cost effective in future years.

Changes in 2020
Company issued an RFP in 2020, choosing to maintain its strong relationship with the incumbent firm. The result of that will be the continued prudent stewardship of customer funds, delivering cost effective savings while keeping an eye toward the future of residential new construction.

Evaporative Cooling
The Evaporative Cooling product provides a rebate to Public Service's residential electric customers who purchase and install qualifying evaporative cooling equipment. For homes in dryer climates such as Colorado, this equipment provides cooler, more comfortable air—like an air conditioner—but with significantly lower ongoing energy usage. Upfront costs vary widely, depending on the evaporative cooler the customer chooses. Customers can do their own installations or use any contractor to help with the installation of the equipment.

2020 Product Achievement

The product exceeded participation and energy savings targets for the year. There were less expenditures than anticipated because several of the new marketing tactics designed and implemented for retail channel use in 2019 were cancelled or impacted by the COVID-19 pandemic in 2020. The "neighborhood" retail special events, 37 events in all, which created the opportunity for the vendor partner to personally educate over 4,000 customers about evaporative cooling, were cancelled for safety reasons. While the technology was in place so customers could still get an instant rebate coupon and use it at checkout through many retail locations, signage could not be replenished often due to staff safety concerns. Customers still purchased coolers through retailers, but the use of instant rebates was down about 50 percent from 2019 levels. Retail customers used the traditional rebate application often, but the number of retail coolers that were rebated was down about 10% from 2019.

A successful new digital advertising campaign helped drive mid- and late-summer participation. A mailing and calling campaign that targeted the property managers of manufactured home/mobile home communities did not produce significant results.

Changes in 2020
The 60-Day Notice issued in December 2019 simplified the rebate structure from 6 rebate levels to 3. This was implemented at the beginning of 2020. It served external and internal stakeholders well, resulting in fewer rebates being returned for correction – which delays the rebate payment to customers - or having to make rebate amount adjustments.

High Efficiency Air Conditioning
The High Efficiency Air Conditioning product 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"), and the Western Cooling Control ("WCC").

QI is the source of significant energy savings when customers have a new AC-ASHP-GSHP installed. QI consists of right-sizing the new system, having sufficient air flow, having ventilation ducts sealed, and

having the system refrigerant charged correctly. Third party inspections of participating contractors' work again confirmed their effective use of QI with realization rates of over 97 percent. NATE certification and an online class are requirements for participating contractors.

2020 Product Achievement
The product exceeded expectations related to participation and energy savings by approximately 20 percent. Expenditures were in line with participation.

The COVID-19 pandemic caused an early season manufacturing gap for cooling equipment, followed by higher than normal customer demand. The source of the intensified demand may have been due to the families working or schooling from home and experiencing intensified comfort concerns. Because of the increased demand and lack of supply, there were less AHRI-certified "matched" AC systems available to install. This set up a scenario for high customer and trade ally dissatisfaction, if a Company rebate was promised but could not be given. The Company responded by offering an AHRI waiver for the lower rebate tier. The integrity of the energy savings was secure because all of the savings at that level are based on Quality Installation, rather than on the equipment. This solution was well-received by both customers and trade allies.

Mini-split heat pump rebate participation increased by 25 percent. Ground source heat pump participation increased from the typical 2 per year to 11. Air Source Heat Pump participation held steady. Overall, heat pumps represented less than 7 percent of the air conditioning product rebates. No customers have used the rebate for the Western Cooling Control device since its introduction several years ago.

During 2019, the Company began claiming natural gas savings on AC systems where a natural gas furnace is also installed. In 2020, 85 percent of all rebated AC's included natural gas energy savings.

Changes in 2020
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. The product had a successful track record in other Xcel Energy service territories, and, therefore, was launched in Colorado in mid-2015.

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 on which products are right for their home, product cost and payback, and finding qualified installers.

2020 Product Achievement
The Home Energy Squad product did not achieve its energy savings targets. The product remained under its electric and natural gas budgets. The shortfall in savings and spend are primarily due to disruptions caused by the COVID-19 pandemic, including two significant stoppages of in-home customer visits due to state-imposed restrictions on in-person interactions.

In response to the pandemic the product developed and implemented a virtual visit option, through which customers could take part in a video chat-based walkthrough of their home with a Squad technician. The purpose of these virtual visits was two-fold: they offered a way for the product to help customers better manage their energy use during difficult times; and they enabled the product vendor to keep its trained and specialized staff employed. Through these virtual interactions, customers were able to identify opportunities to save energy in their home and had the opportunity to receive a customized kit of small energy-saving measures, such as LED bulbs, following their virtual visit. Virtual visits will continue to be offered in the future so that the product can serve customers who might not be comfortable with an in-person interaction.

The product utilized a multi-channel marketing campaign to promote the product which included digital advertising, social media, radio, bill onserts, and targeted emails during 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 2020 and contributed significant participation for the product.

Changes in 2020
The Company issued a 60-Day Notice in May to add a new measure to the product in 2020: an advanced power strip to replace the electronics/TV timer measure. In addition, the Company updated the lifetime for screw-in bulbs in response to the Department of Energy's final ruling on the Energy Independence and Security Act issued at the end of 2019.

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, and point-of-purchase displays.

2020 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 COVID-19 pandemic. We attribute the steady sales to: 1) Retailers who sold LEDs remained open during lock-down periods as they were considered essential businesses and 2) Once the pandemic hit, more customers were staying home, and thus using their lights more, so our promotion plans focused on low cost ways to save energy and money by using LEDs.

The community events that Home Lighting usually participates in were cancelled this year and therefore the product was not able to promote the program via in-person tactics. Instead, the product offered stay-at-home kits that included LEDs and low/no cost ways to save energy. We also partnered with the Single-Family Weatherization product to distribute LEDs to customers in need via food banks/shelves and provided educational content to help customers understand the benefits of LEDs and where to find our discounts if they wanted more bulbs. The Company also continued to offer a deep discount promotion

on A-line and BR30 multi-packs in select stores throughout the year, which continues to be well received by customers.

New rich media mobile tactics were developed to help customers locate the nearest store offering our discounts. Specifically, embedded ads told customers they were X.X miles from the closest participating retailer that offered product discounts to encourage customers to stop and shop at that specific store. The Company plans to build in additional features to our rich media campaign to expand our reach in 2021.

Changes in 2020
The Company issued a 60-Day Notice in May 2020 to add offerings for LED Type B and C linear tubes, LED pin-based lamps and LED Moguls to give customers more purchasing options. In addition, the Company updated the lifetime for screw-in bulbs in response to the Department of Energy's final ruling on the Energy Independence and Security Act issued at the end of 2019.

Home Performance with ENERGY STAR®
Home Performance with ENERGY STAR® ("HPwES") 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.

2020 Product Achievement
HPwES underachieved its electric and natural gas savings targets and came in under budget. 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 2020
The Company posted a 60-Day Notice in December 2019 to enact the first phase of the product redesign agreed to in the 2019/2020 DSM Plan Settlement Agreement. Phase two of the product redesign focused on increasing HVAC trade partner participation within the product. While interest was high at the beginning of 2020, the COVID-19 pandemic impacted progress for recruiting new trade partners. Recruiting efforts have resumed in 2021. The Company posted another 60-Day Notice in May to align eligibility requirements for heat pump water heaters with the Water Heating 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.

2020 Product Achievement
The Insulation 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 shortfall was partially because the rate of rebates for customers with no mechanical cooling was higher than expected. 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 2020
The Company issued a 60-Day Notice in March 2020 to clarify product eligibility requirements for residences where asbestos, black mold, or vermiculite has been present.

Refrigerator & Freezer Recycling
The Refrigerator & Freezer Recycling product is designed to decrease the number of inefficient refrigerators and freezers 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, direct mail, print, and online/social media efforts.

2020 Product Achievement
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. The product fell just short of its participation target in 2020 and did not meet its electric savings targets due customers recycling newer units than were forecasted resulting in lower-than-expected per-unit savings. Product spending was under-budget primarily due to efficient use of the marketing budget and lower administrative and rebate 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 2020
There were no changes to this product.

Residential Heating

The Residential Heating product provides rebates to customers who purchase 95%+ AFUE furnaces for residential use. Customers benefit because a high-efficiency furnace uses less energy and lowers monthly bills over the life of the equipment.

2020 Product Achievement

The product overachieved forecasted participation and energy savings for 95% AFUE natural gas furnaces and for Electronically Commutated Motors (ECMs). Expenditures were in line with the achievements. The ECM rebates were not offered in 2020 because they became standard in all manufactured furnaces in July 2019; the ECM rebates processed in 2020 were all installed in 2019.

Changes in 2020

There were no changes to this product.

School Education Kits

The School Education Kits product combines a set of classroom and in-home activities with projects that enable students and parents to install energy efficiency measures in their homes. The product is primarily targeted to fifth and sixth grade students in the Company's electric and natural gas combined service territory, with a smaller component of the product targeted to high school students. A third-party implementer fully administers the product, including recruiting and training teachers, providing all materials, and tracking participation and installation rates among the students.

2020 Product Achievement

The product exceeded its electric and gas savings targets. Over 1,200 students in natural gas-only service territory were enrolled in a joint effort with Fort Collins Utilities. 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 2020 due to the popularity of LED bulbs and accounting for customers planning to install measures in the near future.

While the COVID-19 pandemic presented many challenges both for participating teachers as well as students and families, the product was able to achieve its participation target by successfully pivoting to implement new ship-to-home capabilities and web tools. These new developments allowed the product to serve teachers and students whether they were in schools or learning remotely.

Changes in 2020

The Company issued a 60-Day Notice in May to add two new measures to the product in 2020: an advanced power strip as part of the high school innovation kits and a thermostat setback measure for heating and cooling adjustments completed as part of the product's core curriculum. In addition, the Company updated the lifetime for screw-in bulbs in response to the Department of Energy's final ruling on the Energy Independence and Security Act issued at the end of 2019.

Thermostat Optimization

The Thermostat Optimization product is designed to provide residential customers year-round savings using smart thermostat technology. The product incentivizes residential customers to purchase and install smart thermostats that have earned the ENERGY STAR® Connected Thermostat certification and are

compatible with the Residential Demand Response product, resulting in year-round electric and natural gas savings. This product is available to combination electric and natural gas service customers, natural gas service residential customers who have central gas heating or electric service customers who have central air conditioning.

2020 Product Achievement
The product did not achieve its savings targets; spend was in line with achievement. The product under performed due to the Company claiming only those savings associated with the smart thermostat measure and not those associated with the optimization measure due to a lag in data verification. The Company expanded eligible models with additional manufacturers in the 2020 program year offering customers additional choices and features at different price points. Company email marketing campaigns coinciding with manufacturing price reductions including during Memorial Day and Labor Day weekends, Black Friday/Cyber Monday and again during the December holiday shopping season proved to provide an attractive price point for customers and resulted in significant increased participation. Additionally, as the online delivery channel remained the most popular choice for customer participation, sales remained consistent with previous years despite the COVID-19 pandemic.

Changes in 2020
The Company issued a 60-Day Notice in December 2019 which became effective in January 2020 requiring that eligible devices be compatible with the Residential Demand Response product.

Water Heating
The Water Heating product leverages incentives to encourage residential customers to purchase energy-efficient water heating equipment. Rebates are available for natural gas storage tank and tankless water heaters and electric heat pump water heaters. Participating customers reduce their natural gas and electricity usage and long-term operating costs.

2020 Product Achievement
The product achieved its natural gas savings target while keeping spend in alignment with the budget. The product underachieved on its electric savings targets. The Company set very aggressive participation and savings targets for electric heat pump water heaters in the 2019/2020 DSM plan. Although the product underachieved its electric targets in 2020, participation in the heat pump water heater measures far exceeded previous years. The Company credits this to increased trade partner outreach, market research, and marketing campaigns.

Changes in 2020
The Company filed a 60-Day Notice in May to update eligibility requirements to include heat pump water heaters with tank sizes up to 80 gallons. In order to receive the $500 rebate for a heat pump water heater, the model must be eligible for the Company's Smart Water Heater demand response offering.

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

2020 Product Achievement
In 2020, the Company increased residential promotional efforts in response to the COVID-19 pandemic forcing customers to spend more time in their residences. 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.

No realized savings are tied to this budget.

Changes in 2020
There were no changes to this product.

Low-Income Program

The Low-Income 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 low-income customers and provide them with products, services, and education designed to assist in lowering their energy bills.

Electric

In 2020, the Low-Income Program greatly exceeded its electric savings target due, in part, to an effort to increase access to LEDs for hard to reach customers at food banks and community centers across the electric service territory. The Multifamily Weatherization and Non-Profit products met their electric energy savings targets. A summary of the Company's Low-Income Program achievements for electric DSM products is shown in Table 18a below.

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

	Budgets / Targets				Expenditures / Achievements			
Low-Income Program - 2020	Electric Budget	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio	Electric Expenditures	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio
Energy Savings Kit	$251,424	164	1,300,302	1.23	$221,142	130	1,058,028	3.08
Multifamily Weatherization	$1,081,511	407	1,889,123	0.90	$1,079,251	321	1,835,325	1.11
Non-Profit	$1,119,608	383	1,701,178	1.02	$1,153,499	380	1,710,012	0.98
Single-Family Weatherization	$1,420,268	226	1,778,524	0.71	$1,513,111	2,692	19,987,964	7.09
Low-Income Program Total	**$3,872,811**	**1,180**	**6,669,128**	**0.90**	**$3,967,003**	**3,523**	**24,591,328**	**3.14**

Natural Gas

In 2020, the Low-Income Program fell just short of natural gas savings targets due to low participation in Energy Savings Kits; however, strong achievement from the Single-Family Weatherization product almost completely made up the shortfall. Expenditures were at budget, primarily driven by rebates to participants. A summary of the Company's Low-Income Program achievements for natural gas DSM products is shown in Table 18b below.

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

	Budgets / Targets					Expenditures / Achievements				
Low-Income Program - 2020	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	$150,441	10,455	69,498	$1,390,728	8.61	$74,672	8,479	113,547	$1,180,368	12.95
Multifamily Weatherization	$773,681	10,693	13,821	-$311,370	0.80	$534,880	6,324	11,823	$79,458	1.09
Non-Profit	$431,913	3,999	9,260	-$208,482	0.75	$458,304	4,772	10,411	-$118,336	0.85
Single-Family Weatherization	$2,913,101	47,617	16,346	-$623,414	0.90	$2,694,161	49,123	18,233	-$141,441	0.98
Low-Income Program Total	**$4,269,136**	**72,765**	**17,044**	**$247,462**	**1.03**	**$3,762,018**	**68,697**	**18,261**	**$1,000,050**	**1.13**

Low-Income Products

The Low-Income Program (Energy Savings Kit, Multifamily Weatherization, Non-Profit, Single-Family Weatherization) has incorporated Spanish language collateral in several communication channels and continues to grow this initiative in 2020. All marketing and outreach material developed for the program has been translated into Spanish. New communication methods including text campaigns for education and follow-ups and community-based approaches have all included a Spanish language component. Non-profit partners, including the Hispanic/Latino community organization CREA Results, have been contracted with to engage the Spanish speaking community in order to make these products more

accessible. Energy Savings Kit collateral is printed and distributed in both English and Spanish. The following provides a brief summary of the performance of each low-income product in 2020.

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 other 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.

2020 Product Achievement

The product did not meet natural gas or electric savings targets and stayed under budget in line with achievement. Participation continues to be the largest challenge to the product, despite efforts to identify additional qualifying customers. The Company partnered with Energy Outreach Colorado ("EOC") to qualify customers and connect brochure offers to partnering agencies. While this tactic proved hard to scale and did not bring in a large percentage of the total participation, it was positively received by both customers and partner agencies.

Changes in 2020

The Company issued a 60-Day Notice in May to update lifetimes for screw-in LED lamps in response to the Department of Energy's final ruling on the Energy Independence and Security Act issued at the end of 2019.

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 Strategic Partnerships 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, 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 weatherization measures, the Company, in partnership with EOC, incorporates additional educational efforts into the product. It is a challenge to engage this customer segment with energy education materials in a way that can be scaled up, and in 2019 the focus was on creating a "Program in a Box", where property owners receive resources and support tailored to the level of engagement desired from both the property owners and tenants. The COVID-19 pandemic made it difficult to implement such tenant education during 2020, however materials for building maintenance to help keep their new boilers functional and efficient were well received. While no behavioral savings are presently captured,

the education increases customer understanding, use, and satisfaction with the upgrades installed through the product.

2020 Product Achievement
The product met its electric energy savings targets due to large common area lighting projects that were able to be completed but fell short of its natural gas savings targets due to the inability to enter units during pandemic lock-downs and capital expenditure freezes. The Company worked with Energy Outreach Colorado to distribute kits of energy saving measures to tenants during the stay-at-home order, however it was not able to bridge the gap in natural gas achievement. Resources within the low-income portfolio were shifted to the low-income single-family weatherization and non-profit products, where savings in 2020 exceeded targets.

Changes in 2020
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 low-income community, thus increasing the impact and participation in the product.

2020 Product Achievement
The product exceeded its electric demand reduction and energy savings targets, and natural gas targets. Assessments were completely virtual because of the COVID-19 pandemic; however, projects were scheduled to be completed when the necessary safety measures could be followed. While energy efficiency upgrades were not a priority for these organizations, the impact the product made on utility costs enables the organizations to put more of their funds back into the communities they serve, where need is surging

due to the pandemic. Xcel Energy rebates and leveraged funding from EOC allows for upgrades that these organizations would not otherwise be able to afford.

Changes in 2020
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 low-income, 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.

2020 Product Achievement
The product exceeded its natural gas savings targets and greatly exceeded its electric savings targets. Increased rebates for natural gas measures allowed for more participation in those measures, in addition to the health and safety funding. The Company partnered 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 is expected to continue into 2021, with efforts to distribute education and additional program resources along with the light bulbs.

Changes in 2020
The Company issued a 60-Day Notice in March to implement process and education improvements recommended by the 2019 Process Evaluation. The Company is working with Energy Outreach Colorado to update suggested materials and processes, as well as explore additional suggestions to improve the experience and increase participation where it makes sense.

The Company also issued a 60-Day Notice in May to update lifetimes for screw-in LED lamps in response to the Department of Energy's final ruling on the Energy Independence and Security Act issued at the end of 2019 as well as add a CFL replacement measure and incorporate self-install lightbulbs as a measure offered by the product.

Indirect Program

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

Within Education/Market Transformation, the Company offered eight customer-facing products in 2020, including: Business Education, Business Energy Analysis, Consumer Education, Energy Benchmarking, Energy Efficiency Financing, Energy Star Retail Products Platform, Home Energy Audit, and Partners in Energy. These products did not deliver measured savings in 2020 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 five internal services: DSM Planning and Administration, Program Evaluations, Market Research, M&V, and Product Development. In 2020, 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 - 2020	**Electric Budget**	**Net Gen. kW**	**Net Gen. kWh**	**Electric MTRC Test Ratio**	**Electric Expenditures**	**Net Gen. kW**	**Net Gen. kWh**	**Electric MTRC Test Ratio**
Education/Market Transformation								
Business Education	$176,739	-	-	-	$118,361	-	-	-
Business Energy Analysis	$760,350	-	-	-	$341,492	-	-	-
Consumer Education	$899,908	-	-	-	$649,819	-	-	-
Energy Benchmarking	$97,240	-	-	-	$70,346	-	-	-
Energy Efficiency Financing	$60,000	-	-	-	$26,441	-	-	-
ENERGY STAR Retail Products Platform Pilot	$509,271	-	-	-	-	-	-	-
Home Energy Audit	$444,675	-	-	-	$352,488	-	-	-
Partners in Energy	$836,000	-	-	-	$744,419	-	-	-
Education/Market Transformation Total	**$3,784,183**	**-**	**-**	**-**	**$2,303,366**	**-**	**-**	**-**
Planning and Research								
EE Market Research	$382,134	-	-	-	$338,591	-	-	-
EE Measurement & Verification	$12,000	-	-	-	$5,433	-	-	-
EE Planning & Administration	$522,162	-	-	-	$419,268	-	-	-
EE Program Evaluations	$378,737	-	-	-	$511,217	-	-	-
EE Product Development	$1,854,964	-	-	-	$1,503,608	-	-	-
Geo-targeting Pilot - EE	$75,544	-	-	-	$6,278	-	-	-
EE Product Development Total	**$1,930,508**	**-**	**-**	**-**	**$1,509,885**	**-**	**-**	**-**
EE Planning and Research Total	**$3,225,541**	**-**	**-**	**-**	**$2,784,394**	**-**	**-**	**-**
EE Indirect Products & Services Total	**$7,009,724**	**-**	**-**	**-**	**$5,087,760**	**-**	**-**	**-**

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 - 2020	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	$19,638	-	-	-		$12,739	-	-	-	-
Business Energy Analysis	$78,000	-	-	-	-	$42,917	-	-	-	-
Consumer Education	$133,323	-	-	-		$44,166	-	-	-	-
Energy Benchmarking	$35,525	-	-	-	-	$22,759	-	-	-	-
Energy Efficiency Financing	$60,000	-	-	-	-	$21,450	-	-	-	-
ENERGY STAR Retail Products Platform Pilot	$7,121	-	-	-		-	-	-	-	-
Home Energy Audit	$561,795	-	-	-		$392,659	-	-	-	-
Partners in Energy	$93,000	-	-	-		$92,277	-	-	-	-
Education/Market Transformation Total	**$988,402**	**-**	**-**	**-**		**$628,967**	**-**	**-**	**-**	**-**
Planning and Research										
DSM Planning & Administration	$118,187	-	-	-		$122,999	-	-	-	-
Program Evaluations	$6,000	-	-	-		$604	-	-	-	-
Market Research	$116,920	-	-	-		$97,274	-	-	-	-
Measurement & Verification	$160,602	-	-	-		$87,112	-	-	-	-
Product Development	$197,000	-	-	-		$46,524	-	-	-	-
Geo-targeting Pilot - EE	$0	-	-	-	-	$0	-	-	-	-
Product Development Total	$197,000	**-**	**-**	**-**	**-**	**$46,524**	**-**	**-**	**-**	**-**
Planning and Research Total	$598,708	**-**	**-**	**-**	**-**	**$354,512**	**-**	**-**	**-**	**-**
Indirect Products & Services Total	$1,587,110	**-**	**-**	**-**	**-**	**$983,479**	**-**	**-**	**-**	**-**

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 2020.

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.

2020 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 but 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 new offering supports local businesses struggling through the pandemic. Through our sponsorship with the Broncos, Xcel Energy was able to assist businesses find energy saving solutions and develop tools to improve their energy efficiency through participation in our programs. In person events were cancelled starting in March which limited our ability to connect and network with business owners. Our longstanding relationships with community partners offered additional outreach opportunities through

digital media. To continuously improve DSM participation, the team explored ways to increase awareness and participation via virtual events and digital outreach.

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: on-site audits, and engineering assistance studies. 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.

2020 Product Achievement

The product did not meet its target of 316 electric participants, due building restrictions and mandates 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 pandemic year. While the virtual audit offered flexibility, most customers were still interested in having an expert onsite and were willing to wait until they could safely have external parties in their facilities.

Despite not meeting the participation goal, the offering identified over 12 GWh of energy conservation opportunities in 2020. Marketing efforts included e-mail campaigns and outreach from the Business Solutions Center. 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.

2020 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 but stayed within the approved budgets while achieving approximately 80 percent of the year-end participation target. The Company was able to conduct 3 in-person community-based events in the first quarter; however, in person events planned for second, third and fourth quarters were cancelled due to the pandemic. These unforeseen disruptions forced the product to pivot and find new ways to reach customers. The product team planned and executed engaging opportunities to connect with customers via virtual events and digital educational outreach. The combination of innovative initiatives has driven an increased number of engaged participants in energy efficiency education and awareness of DSM products. Work was done to enhance our digital customer experience in order to meet customers where they are, on their phones and tablets. The product team also created new digital content and updated Xcel Energy's new event experience which will be launched and executed in 2021 when in person events can be conducted safely.

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.

2020 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 for the influx aggregated whole-building data requests. This upgrade process did cause some issues with customer data not uploading properly to Energy Star Portfolio Manager; however, the benchmarking team corrected the data in a timely manner for Company customers. With an anticipated state-wide benchmarking bill being brought to Colorado legislature in early 2021, the Company is vetting multiple options to enhance its benchmarking software to accommodate for 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.

2020 Product Achievement
An improved commercial finance portal was launched in early 2020 to help streamline the proposal process and facilitate loans for business customers. The 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 2020 activities focused mainly on quarterly financing webinars to the trade. In 2020, the product we offered 14 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 will continue to strategically promote the financing product through its trade partner network when possible in 2021 through webinars, workshops, on-site trade partner trainings, business and residential marketing communications, sponsorships, and events. The Company will also incorporate financing proposals in the various audits and studies Xcel Energy offers to customers, so 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 Home Performance with Energy Star 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.

2020 Product Achievement

The Home Energy Audit product did not achieve its participation targets for the year. Disruptions caused by the COVID-19 pandemic were a primary factor in not achieving the participation goal, as in-home interactions with customers were challenging for much of the year and were actively discouraged by state authorities at times. 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 in order to improve the customer experience and encourage participation in other DSM products.

Partners in Energy

Partners in Energy is an indirect product offering to support communities in reaching their energy goals. It provides community leaders and stakeholders the opportunity to jointly develop and implement energy conservation goals and action plans for municipal, commercial & industrial facilities and homes within the community's boundaries, track energy efficiency product participation and related activities. 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. In parallel, communities can incorporate renewables, electric vehicles and other carbon-reduction efforts into their plans but that cost for these is not charged to the DSM budget. Costs associated directly with the incremental participation in direct impact programs is reflected in those program budgets.

Partners in Energy staff work with community teams to develop workplans that target segments identified in their plan and incorporate local resources and communication channels in delivering messaging and support to drive 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 and online tools and resources.

2020 Product Achievement

The product supported development of conservation related energy action plans with seven Colorado communities in 2020 and provided direct plan implementation support to twelve additional communities who had completed plans in prior years. Planning workshops were delivered virtually in 2020 and an emphasis was placed on assisting communities as they transitioned to online outreach and education, as well as leveraging social media to achieve goals.

The Partners in Energy portal provided tools and resources to all twenty-nine communities who have participated in Partners in Energy to date.

Planning & Research Products

The following provides a brief summary of the performance of each Energy Efficiency planning and research product in 2020.

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.

2020 Product Achievement

In 2020, the Company's EE Planning & Administration expenditures for electric and gas were both under budget for the year. Product spend showed a significant increase from 2019 levels due to the development of the 2021-22 DSM Plan that was filed in July, and subsequent settlement negotiations that resulted in an unopposed, comprehensive settlement agreement with stakeholders filed in December.

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 2020, 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.
- Completed a home energy use study;
- Purchased E Source Consultative Services and research; and,
- Continued Residential Campaign Effectiveness Tracking research;
- Commenced work on Energy Efficiency Potential Study work (will be completed in late 2021).

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.

2020 Product Achievement
The Market Research expenditures were under budget for electric and over budget for natural gas . Natural gas exceeded the target due to a larger number of research projects that included a substantial gas customer component.

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 2020, comprehensive evaluations were conducted for four products: Energy Efficient Showerheads, Lighting Efficiency (Midstream only), Lighting Efficiency-Small Business, and Refrigerator and Freezer Recycling. Finally, the review of lighting baselines first proposed in 2019 was completed with the conclusion of a multi-sponsor study of residential lighting equipment available on non-program states.

High-level outcomes from these evaluations include:

- *Energy Efficient Showerheads (Residential):* The updated net-to-gross analysis for this product confirms that customers are influenced to make decisions about efficient equipment as a result of the product activities. The primary areas for improvement were more clear communication of anticipated energy savings and assistance for customers who had trouble removing old showerheads and/or installing the new equipment.
- *Lighting Efficiency (Midstream only) (Business)*: Updated net-to-gross analysis for this product identified measures that were driving higher free-ridership and an algorithm for the Company to calculate a prospective net-to-gross ratio based on the phase out of those lamp types. In addition, the evaluation noted that the COVID-19 pandemic introduced a large amount of uncertainty in the decision-making criteria for business and appears to have stalled the momentum toward natural adoption of LED measures. Finally, the trade partners interviewed for the evaluation identified opportunities to improve the usability of the portal that could help increase participation.
- *Lighting – Small Business (Business):* The updated net-to-gross analysis indicated that the product is very important for customers, especially the smallest businesses that participate. Product satisfaction with the process are high while the greatest opportunities for improvement include a more targeted lighting walk-through option for small business customers, more information about the ability to self-install for customers who are concerned that a turn-key project is out of reach for them, and more support from the implementer in the application process..
- *Refrigerator and Freezer Recycling (Residential):* The 2020 evaluation of Refrigerator and Freezer Recycling product found that the product has a higher effect (i.e. higher net-to-gross) than previously thought. The main data points supporting this were information provided by secondary market actors like used appliance dealers and non-participants that had recently considered recycling an eligible appliance. Opportunities for improvement focus on increasing the breadth of awareness and optimize messaging to appeal to the largest portion of eligible participants as possible.
- *Lighting Baseline Review (Residential):* The non-program state study was completed by Apex Analytics/CREED in late 2020 on behalf of Xcel Energy and multiple other program sponsors. The study identified the channels and lamp types where naturally occurring adoption and/or aggregated market effects due to multiple program administrators (including Xcel Energy) have driven the highest market share of LED sales.

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

2020 Product Achievement
Program Evaluations exceeded the electric budget in 2020 due to a shift in costs toward electric from gas to align costs with the products evaluated. As a result of the shift toward electric charges the gas budget was not exceeded.

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 2020, 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 2020 follows:

- Business Energy Assessments – new product in the 2021-22 DSM plan
- Codes and Standards Support – added to Business New Construction in the 2021-22 DSM Plan
- Codes and Standards Support – added to ENERGY STAR New Homes in the 2021-22 DSM Plan

2020 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.

2020 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. 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 delayed until 2021 due to technical issues associated with the Xcel Energy Store. No achievement was realized in 2020.

Changes in 2020
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 2020: (1) Direct Load Control, (2) Interruptible DR, and (3) Non-Dispatchable DR.[20] 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 2020 are shown in Table 20 below.

New in the 2019/2020 DSM Plan, the Company began to offer three internal services for the Demand Response Program: DR Planning and Administration, DR Program Evaluations, and DR Product Development. In 2020, the Company continued operating the Critical Peak Pricing and Geo-targeting DR pilots while launching three additional DR offerings: Electric Vehicle Critical Peak Pricing Pilot, Peak Day Partners Pilot, and the Small Commercial Business Controls. It also engaged in contracting negotiations for the Charging Perks Pilot, which is now expected to launch in 2021, and the Residential Battery Demand Response Pilot which launched on February 16, 2021.

Table 20: 2020 DR Results (MW)

	Goal[21]	**Actual**
Demand Response (DR)	476	494
Demand Reduction from Energy Efficiency (EE-DR)	75	92
Total	**551**	**586**

Ordering Paragraph 86 of Decision No. C18-0417 directed the Company to achieve total demand reduction goals of 551 MW in 2020. The Company's Demand Response program overachieved its forecasts and goals in 2020. The overperformance was mostly due to the successful launch of the new DR products, in particular the Peak Day Partners pilot. The Critical Peak Pricing pilot also contributed by exceeding its growth target for 2020. The Company continued targeting previous 1-Hour ISOC customers in 2020 and was successful at converting additional capacity into other DR products. The portfolio is expected to grow and increase available load in the future.

A summary of the Company's Demand Response Program achievements for electric DSM products and services is shown in Table 21 below.

[20] 2015/16 DSM Plan at 312. (Proceeding No. 14A-1057EG).
[21] *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 - 2020	Electric Budget	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio	Electric Expenditures	Net Gen. kW	Net Gen. kWh	Electric MTRC Test Ratio
Charging Perks Pilot	N/A	N/A	N/A	N/A	$56,844	-	-	-
Critical Peak Pricing Pilot	$66,000	5,588	-	-	$212,107	10,844	-	-
EV Critical Peak Pricing	N/A	N/A	N/A	N/A	$93,494	336	-	-
Geo-targeting Pilot - DR	$309,067	-	-	0.83	$6,278	-	-	-
Peak Day Partners	N/A	N/A	N/A	N/A	$123,177	21,000	231,000	-
Peak Partner Rewards	$1,725,420	20,000	-		$775,673	1,079	-	-
Residential Battery Demand Response	$365,500	389	(16,752)	1.51	$20,060	-	-	-
Residential Demand Response	$13,339,940	14,517	53,834	1.83	$12,045,504	11,054	40,158	1.44
Small Commercial Building Controls	N/A	N/A	N/A	N/A	$127,464	409	6,523	1.58
DR Program Total	**$15,805,927**	**40,494**	**37,082**	**1.68**	**$13,460,601**	**44,722**	**277,681**	**1.35**
Planning and Research								
DR Planning & Administration	$58,018	-	-	-	$31,153	-	-	-
DR Program Evaluations	$206,937	-	-	-	$157,930	-	-	-
DR Product Development	$1,854,964	-	-	-	$1,191,118	-	-	-
DR Planning and Research Total	**$2,119,919**	-	-	-	**$1,380,201**	-	-	-
								-
DR PORTFOLIO TOTAL	**$17,925,847**	**40,494**	**37,082**	**1.49**	**$14,840,802**	**44,722**	**277,681**	**1.22**

Demand Response Products

The following provides a brief summary of the performance of each Demand Response product in 2020.

Charging Perks Pilot

The Charging Perks pilot is a collaboration between the Company and four automakers to test electric vehicle ("EV") smart charging technologies. The pilot will involve each of the automakers accepting a demand management signal from the Company, and, in turn, creating a customized charging schedule for each enrolled customer that is sent directly to their vehicle. The schedule will shift a customer's home EV charging into hours of the day that are beneficial for the power grid, while still meeting the customer's charging requirements.

2020 Product Achievement

The pilot did not launch in 2020 and did not generate any savings. The pilot will be one of the first projects in the country to test how a utility can interact with a single smart charging platform that integrates with multiple automakers. The product team spent much of 2020 working through contracting and actively engaging in the development of the pilot with automakers. This work involved building and testing the data exchange integrations needed to carry out the enrollment and demand management components of the pilot. Due to the novelty of the pilot and the contracting challenges associated with contracting with four automakers, the pilot launch will not occur until 2021. In 2020, the Company also selected and completed contracting with Guidehouse to perform measurement and verification for the pilot once it launches.

Changes in 2020

There were no changes to this pilot.

Critical Peak Pricing Pilot

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") pilot 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. on non-holiday weekdays 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 pilot 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.

2020 Product Achievement

In 2020, the CPP pilot overachieved its incremental capacity target and exceeded its forecasted budget. The overachievement and overspend are directly correlated as the significant increase in new participants resulted in the overspend. The pilot added 28 new participants in 2020 without losing any existing participants, ending the year with 37 total participants. Using the 20% load reduction estimate for new participants, these 28 new CPP participants represent 10.5 MW of new capacity for the pilot.

The 2020 control season was very active, and the Company dispatched 14 CPP events during the months of June, July and August. Prior to 2020, the most CPP events dispatched in a single year was 11. Preliminary results suggest demand reductions varied from event to event, which is typical performance for a critical peak product, but on average demand reductions were realized for each dispatched event.

The Company finalized its RFP effort by selecting Franklin Energy to actively market the product and engage with prospective customers. These efforts began in the third quarter of 2020 but were impacted by the COVID-19 pandemic, as were the Company's own recruiting efforts. The Company will continue to evaluate the Pilot'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 2020

There were no changes to this product.

Electric Vehicle Critical Peak Pricing Pilot

The Electric Vehicle Critical Peak Pricing ("EV-CPP") Pilot operationalizes a tariff rate introduced by the Company as Secondary Voltage Time-of-Use Electrical Vehicles Service ("S-EV") 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.

2020 Product Achievement
The EV-CPP pilot launched in the first quarter of 2020 to support the new S-EV tariff. A total of 23 premises enrolled in the pilot throughout 2020. All 15 of the allowable CPP events were dispatched between June and August of 2020. Utilizing the baseline method defined in the DSM plan, the pilot achieved capacity savings during CPP events that exceeded forecasted savings for 2020. The Company will continue to evaluate the baseline methodology used throughout this pilot and will recommend changes if evidence supports alternative methods to more accurately calculate capacity savings.

A communication plan was created as part of the development of this pilot to regularly engage customers on the status of the pilot, upcoming events, and various other relevant details. Additionally, two brief surveys were sent to customers to collect feedback on customer satisfaction and to find ways to improve their experience in the future. Overall, participants were very satisfied with their experience in the pilot, but customers did express interest in learning about CPP events and how they can save more on their energy bills. This feedback will be incorporated into the 2021 communication plan and shared with relevant internal teams to ensure customers have the information they need to understand product operations.

In 2021, the company will continue to promote 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 expects the majority of new customers to be participants of the EV Supply Infrastructure Program, which will add approximately 70 new customers per year.

Changes in 2020
There were no changes to this pilot.

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.

2020 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 possible in 2020 due to regional distribution system and energy supply constraints. No achievement was realized in 2020.

Changes in 2020
There were no changes to this pilot.

Interruptible Service Option Credit
The Interruptible Service Option Credit ("ISOC") product offers savings opportunities for business customers on the ISOC Tariff[22] that can reduce their electric demand when notified. In return for

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

participating, customers receive a monthly credit based on the program options they signed up for. Participating customers must have a Contract Interruptible Load ("CIL") of 300 kW or more.

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

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

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

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

2020 Product Achievement
Total costs for the product were $23,810,391, 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 1.53 and produced net benefits of $12,575,849. Confidential Appendix C summarizes both the costs and benefits of the ISOC program in terms of capacity and energy.

The Company called three ISOC interruptions during 2020, two Capacity events and one Contingency event. The Company did not call any economic interruptions during 2020.

Changes in 2020
There were no changes to this product.

Peak Day Partners Pilot

The Peak Day Partners ("PDP") Pilot 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 Pilot 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 pilot and there is no penalty for non-participation.

2020 Product Achievement

The Company issued a 60-Day Notice for the Pilot in December 2019 and launched the Pilot in 2020. The Company saw interest in the flexibility of the program and four customers joined the program in 2020, with more anticipated sign-ups in 2021. After some price discovery earlier in the summer, three successful control events were executed during summer 2020.

Changes in 2020

There were no changes to this pilot.

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").

2020 Product Achievement

In 2020, the Peak Partner Rewards product underachieved its target of 20 MW incremental capacity but also underspent its budget. The product added five new participants and lost three existing participants, ending the year with 18 participants enrolled in the product. Of the three un-enrollments, one participant could not provide load capacity due to the COVID-19 pandemic but stated their intention to re-enroll in the product when their operations stabilize; and another participant left PPR to enroll in Critical Peak Pricing (CPP). The 2020 control season was very active, and the Company dispatched 14 PPR events during the months of June, July and August. Prior to 2020, the most PPR events dispatched in a single year was three.

The Company finalized its RFP effort by selecting Franklin Energy to actively market the product and engage with prospective customers. These efforts began in the third quarter of 2020 but were impacted by the COVID-19 pandemic, as were the Company's own recruiting efforts.

Changes in 2020

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. The pilot will be 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.

2020 Product Achievement
The pilot did not launch in 2020 and did not generate any savings; however, the pilot team has completed contracting with Tesla and SolarEdge. These vendors will enable the Company to monitor and control residential batteries based on the Company's demand response commands. In addition, the Company performed an RFP for measurement and evaluation services for the pilot and selected Nexant to provide these services. The Company launched the pilot on February 16, 2021.

Changes in 2020
The Company filed a 60-Day Notice that changed the rebate size and structure of the pilot. As originally filed, the Company proposed paying $500 at enrollment and $10/month to customers during the pilot term. In the Notice, the Company proposed to increase the upfront value to $1,250 and eliminate the monthly payment. In the same Notice, the Company also highlighted that it intends to control 80% of the battery in demand response events, up from the 50% it proposed originally.

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. As of the end of 2020 this product has not yet launched. But it is anticipated to open for enrollment in the spring of 2021.

2020 Product Achievement
The Saver's Switch® offering has been in existence since 2000 and has approximately 196,000 active participants. The company projects the current participants account for approximately 50 percent of the eligible (single family homes with central AC) population. 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 2020 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 in the third quarter. Due to the COVID-19 pandemic, the AC Rewards Direct Install channel was on hiatus for most of 2020 which limited additional participation. In 2020, the Company continued marketing AC Rewards and working with additional device manufacturers to add eligible thermostats to the lineup.

Changes in 2020
The AC Rewards offering expanded eligibility requirements to include Emerson Smart Thermostat devices in 2020.

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 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. Unlike Saver's Switch®, participants have the ability to override a control event.

2020 Product Achievement
AC Rewards for Business launched in Q2 of 2020 and had 124 customers enrolled by year end. The COVID-19 pandemic delayed direct installations due to safety precautions and necessary safety training. Despite the delay in installations, customer participation and interest was higher than anticipated. Due to customer interest and continued vendor partnerships, for the product has a strong pipeline heading into 2021.

Changes in 2020
AC Rewards for Business was added to the Company's Demand Response portfolio as a product in 2020.

Planning & Research Products
The following provides a brief summary of the performance of each Demand Response planning and research product in 2020.

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.

2020 Product Achievement
In 2020, the Company's DR Planning & Administration expenditures for electric was under budget for the year. Product spend showed a significant increase from 2019 levels due to the development of the

2021-22 DSM Plan that was filed in July, and subsequent settlement negotiations that resulted in an unopposed, comprehensive settlement agreement with stakeholders filed in December.

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. The Company continued the effort to evaluate the effectiveness of Demand Response products that is new in the 2019/2020 biennium. 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 2019 evaluations of Peak Partner Rewards and Saver's Switch in the 2019 Status Report. Below is a summary of the findings for each of those two evaluations.

- *Peak Partner Rewards (Business):* Participating customers are driven to participate due to energy cost reduction potential but encounter barriers for a few reasons. Some are unable to participate to the extent desired due to limitations of their equipment, the interface with Xcel Energy's tools, and/or an inability to automate the curtailment process. Customers valued the tools provided by the program that document the overall value proposition but there was a desire to have more visibility into the incentives in those tools.
- *Saver's Switch (Residential)*: Customers are generally satisfied with overall operation of the product, but research indicated that calling more frequent events could drive some customer dissatisfaction. The evaluation found that the high saturation of Saver's Switch among customers with Central A/C leads to some dissatisfaction among customers because many who become aware of the offering and are not already enrolled are unable to participate.

In 2020, an evaluation of AC Rewards was conducted. Like 2019, the evaluation for AC Rewards is not yet finalized. The Company will report on the findings from this research at future DSM Roundtable meetings and in the 2021 Status Report.

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

2020 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 2020, 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 2021. A summary of these activities in 2020 follows:

- Small Commercial Building Controls,
- Addition of smart thermostat controls to a number of existing products,
- Heat Pump Water Heater Demand Response,
- Charging Perks Pilot, and
- Residential Battery Demand Response

2020 Product Achievement

DR Product Development expenditures were under budget in 2020 largely due to lower-than-anticipated costs for research and consulting services.

Evaluation, Measurement, and Verification: 2020 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 2020, measurement and verification for the majority of direct-impact prescriptive products was conducted by a verification contractor (Nexant). For other products, such as ENERGY STAR New Homes, Home Performance with ENERGY STAR, 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 DSM Plan). The first step entails validating every application for accuracy and completeness as it is received prior to processing. In the second step, all rebates that have been entered into a tracking system are audited each day prior to issuing a rebate. The objective of this validation is to ensure that the rebate forms and the reported gross savings that are entered into the Company's databases are as accurate as possible and that customers are receiving the correct rebates.
- **Ongoing Measurement and Verification** is conducted with the primary objective of ensuring that the gross energy and demand savings reported by the Company are accurate. Ongoing M&V takes place during and just after the performance year. Ongoing measurement and verification of savings differs for prescriptive, custom, load management, and pilot products. For direct impact prescriptive products, Public Service contracts with third-party verification contractors and product implementers to perform M&V. Custom projects are verified through either engineering reviews of savings or through pre- and post-metering, depending on the size of the savings. The following sections describe the general M&V methods that have been used for prescriptive, custom, load management, and pilot products.

- For Prescriptive products, the verification activities follow a Deemed Savings approach, where the primary goal is to conduct field inspections for a sample of projects to determine that the measures are properly installed and have the potential to generate savings. The contractor selects a statistically valid number of projects to verify through field inspections or phone surveys. The sample size is designed to achieve accuracy levels of between 10% and 20% given a confidence level of 90% around the "realization rate" and is weighted to select larger projects. Inspection parameters gathered onsite will vary based on the product and sector but will generally confirm that the installed equipment matches equipment listed on rebate application. If they don't match, the product's reported savings are adjusted using the realization rate which reflects the actual results of these inspections.

- For Custom products, the M&V process depends on the size and scope of the project. Each project is typically pre-approved through an engineering analysis performed by one of the Company's internal energy efficiency engineers. Within the initial engineering analysis, the expected project savings and payback are calculated using technical assumptions that fit the specific measure(s) being implemented. Depending on the size of the project, these calculations are then reviewed by a second internal energy efficiency engineer and/or manager and a random sampling is sent for third-party review. After installation of the efficiency measure, an internal engineer reviews the efficiency measure invoices to determine if the project savings remained within ± 10% of its original scope. If the project did not remain within scope, then the project is re-analyzed. For projects with savings greater than or equal to 1 GWh and/or 20,000 Dth, pre- and post-installation metering is performed for a minimum of two weeks to measure and verify savings. For all metered projects, the analysis of the metering data is conducted by one of the Company's internal energy efficiency engineers, and then reviewed by a team of internal engineers and a manager. For all custom projects, installation and realization rates of 100% are applied and a net-to-gross of 87% is used.

- For direct impact Pilot products, the M&V treatment depends on the measures or services being tested. Often, additional testing beyond that performed for prescriptive or custom products is required. Typically, a control group is established and then a third-party contractor compares the results from the test group to those in the control group.

Post-Performance Year EM&V Activities

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

Outline of 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 2020 results and will continue to be used going forward.

For the 2020 product year, the 2019/20 DSM Plan technical assumptions, and subsequent 60-Day Notice changes, were applied to calculate net savings. All savings achieved in 2020 have the realization and installation rates applied to them resulting from M&V conducted for the 2020 M&V assessment period.

2020 M&V Results

The following paragraphs provide the M&V activities and results for each of the DSM products offered by the Company in 2020. All M&V activities followed the processes described above and outlined in the M&V Plan filed with the 2019/20 DSM Plan, unless noted below. Where sampling was used in the M&V process for prescriptive measures, the achieved precision and confidence level is provided.

Portfolio Results

With its best efforts, Public Service achieved energy efficiency portfolio realization rates of 100.0% for electric demand, 100.1% for electric energy, and 99.9% for natural gas energy in 2020. Applying the results to the portfolio's gross savings, the Company achieved energy efficiency savings of 91,784 net generator kW, 466,367,563 net generator kWh, and 727,480 net Dth.

Business Products

Commercial Refrigeration Efficiency

The Commercial Refrigeration Efficiency product offers prescriptive and custom rebates, as well as direct installation of several refrigeration efficiency measures. M&V of the prescriptive component of the product was performed by Nexant, following the prescriptive protocols described above. Nexant performed 10 field inspections of installed energy efficient equipment at randomly selected participant locations to verify key savings factors. The final electric demand and energy realization rates, as well as the gas realization rate for the 2020 Commercial Refrigeration Efficiency prescriptive measures were all 100.0% ± 0.0% around the targeted 90% confidence level. Custom measures were reviewed by internal engineers following the custom protocols described above.

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 Nexant, following the prescriptive protocols described above. Nexant performed 8 field inspections of installed energy efficient equipment at randomly selected participant locations to verify key savings factors. The final demand and energy realization rates for the 2020 Compressed Air Efficiency prescriptive measures were all 100.0% ± 0.0%

around the targeted 90% confidence level. Custom measures were reviewed by internal engineers following the custom protocols described above.

Cooling Efficiency

The Cooling Efficiency product offers prescriptive, custom, and study rebates. M&V of the prescriptive component of the product was performed by Nexant, following the prescriptive protocols described above. Nexant performed 42 field inspections of installed energy efficient equipment at randomly selected participant locations to verify key savings factors. The final demand and energy realization rates for the 2020 Cooling Efficiency prescriptive measures were both 100.0% ± 0.0% around the targeted 90% confidence level. 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. All of the 2020 Data Efficiency product prescriptive savings resulted from holistic projects. The custom savings were both study- and site-identified. As a result, Nexant did not perform site verifications to determine prescriptive realization for the 2020 results. 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.

Heating Efficiency

The Heating Efficiency product provides prescriptive and custom rebates for efficient heating equipment. In 2020, M&V of the prescriptive component of the product was performed by Nexant, following the prescriptive protocols described above. Nexant performed 35 field inspections of installed energy efficient equipment at randomly selected participant locations to verify key savings factors. The final realization rates for the 2020 Heating Efficiency prescriptive measures were 100.0% ± 0.0% for electric demand and energy, and 100.0% ± 0.0%for gas, around the targeted 90% confidence level. All Custom measures 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 by replacing legacy Company-owned streetlights with LED fixtures. In 2020, the program achieved savings of approximately 2 net GWh.

Lighting Efficiency

The Lighting Efficiency product offers prescriptive, custom, and study rebates. In 2020, M&V of the prescriptive component of the product were performed by Nexant, following the prescriptive protocols described above. Nexant performed 43 prescriptive field inspections of installed energy efficient

equipment at randomly selected participant locations to verify key savings factors. The final demand and energy realization rates for the 2020 Lighting Efficiency prescriptive measures were 100.4% ± 0.8% for demand and 100.5% ± 0.9% for energy around the targeted 90% confidence level. Custom measures were reviewed by internal engineers following the custom protocols described above.

Lighting - Small Business

The Lighting - Small Business product offers prescriptive, direct install, and custom rebates. In 2020, M&V of the prescriptive and midstream components of the product was performed by Nexant, following the prescriptive protocols described above. Nexant performed 44 prescriptive field inspections of installed energy efficient equipment at randomly selected participant locations to verify key savings factors. The final demand and energy realization rates for the 2020 Small Business Lighting prescriptive measures were 100.2% ± 0.3% for demand and 100.2% ± 0.4% for energy around the targeted 90% confidence level. Custom measures were reviewed by internal engineers following the custom protocols described above.

Motor & Drive Efficiency

The Motor & Drive Efficiency product offers prescriptive and custom rebates. In 2020, M&V of the prescriptive component of the product was performed by Nexant, following the prescriptive protocols described above. Nexant performed 39 field inspections of installed energy efficient equipment at randomly selected participant locations to verify key savings factors. The final demand and energy realization rates for the 2020 Motor & Drive Efficiency prescriptive measures were 100.0% ± 0.0% around the targeted 90% confidence level. Custom measures were reviewed by internal engineers following the custom protocols described above.

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, CLEAResult, is responsible for the measurement and verification of the product. This product follows the Company's standard prescriptive product measurement and verification process.

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. M&V for these projects was performed by Nexant. The Weidt Group, Group 14, and Nexant conducted verification on these projects. 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%.

Recommissioning

The Recommissioning product offers study and custom rebates. The measurement and verification of these projects was relatively simple because each implemented measure resulted from a previous Recommissioning study completed by an independent party. The customer hired an engineering firm to conduct a study of the building to determine energy savings for each measure; an internal engineer then reviewed and verified 100% of projects for savings calculation accuracy. In turn, each study was thoroughly reviewed and approved by a qualified Public Service engineer.

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 was 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.

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 DSM Biennial Plan EM&V Plans section.

Residential Products

Energy Efficient Showerheads

The Energy Efficient Showerheads product provides customers with free showerheads (primary and secondary), 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 Feedback Residential

The Energy Feedback Residential product offers customers a variety of methods of feedback on their energy consumption in order to quantify how these different forms of feedback impact customers' energy use. This product was implemented by a third-party provider, Franklin Energy, which utilizes a Randomized Control Trial with Random Encouragement (RCT) process that compares the consumption data of participants to an appropriately sized group of non-participants (Control Group) to determine the energy savings. The Control Group are uninformed by any direct action of this product. In addition to determining the savings, the third-party implementer tracked and adjusted savings for participant's incremental participation in other energy efficiency products. This RCT methodology is recommended by the State and Local Energy Efficiency Action Network (SEE Action). A small portion of the product savings were derived from the online tool called My Energy. Propensity Score Matching was used to construct a comparison group for My Energy login customers to non-login customers. Propensity score matching is recommended by the SEE Action guidelines for evaluating behavior-based programs when it is not feasible to construct a randomized control group. In 2020, the realization rate for the Energy Feedback Pilot was 100.0%.

ENERGY STAR New Homes

Public Service's ENERGY STAR New Homes product offers prescriptive rebates. In 2020, the product was administered by a third-party implementer, Residential Science Resources, Inc. (RSR). 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%.

Evaporative Cooling

The Evaporative Cooling Rebate product provides prescriptive rebates to customers who purchase efficient evaporative cooling units. In 2020, M&V of this product was performed by Nexant, following the prescriptive protocols described above. Nexant performed 11 field inspections of installed energy efficient equipment at randomly selected participant locations to verify key savings factors. The final demand and energy realization rates for the 2020 Evaporative Cooling product were 100.0% ± 0.0% around the targeted 90% confidence level.

High Efficiency Air Conditioning

The High Efficiency Air Conditioning Product provides rebates to customers who purchase high-efficiency equipment, properly install high efficiency air-conditioning equipment, or trade-in their old, inefficient equipment and purchase of high-efficiency equipment. Because air conditioners can only be field tested when the ambient outdoor temperature is above 70°F (or 55°F with a Field Diagnostic Services Inc. tool), this product maintains a slightly different M&V calendar than Public Service's other DSM products. Specifically, air conditioners that are installed after October 1 of each year will not be inspected until the following spring, and thus, the M&V period for this product runs from October 1 to September 30 of each year.

Group 14 performed the High Efficiency Air Conditioning product measurement and verification. The final demand and energy realization rates were 97.4% and 98.1%, respectively.

Home Energy Squad

The Home Energy Squad product offers installation services and discounted equipment to residential customers. CLEAResult verifies and reports implemented measures to the Company. The final demand and energy realization rates for the 2020 Home Energy Squad product were 100.0% ± 0.0% and 100.0% ± 0.0%, respectively, around the targeted 90% confidence level.

Home Lighting & Recycling

The Home Lighting & Recycling product provides prescriptive point-of-sale rebates to customers who purchase qualifying LED light bulbs. In 2020, Nexant 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. These invoices contained product buy-down dollar amounts and counts for each item SKU. No customer contact was made for the measurement and verification of this product. Nexant examined and verified 44 invoice line detail items out of the total 92,820 residential records contained within the Company's program tracking database. The 44 line items were taken from a sample of monthly manufacturer invoices and associated invoice details. This effort uncovered no discrepancies between Xcel Energy's database and the invoice data. The final demand and energy realization rates for the 2020 Home Lighting & Recycling product were both 100.0% ± 0.0% around the targeted 90% confidence level.

Home Performance with ENERGY STAR®

The Home Performance with ENERGY STAR product provides prescriptive rebates to residential customers. In 2020, Public Service's third-party product implementer, CLEAResult, 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%.

Insulation & Air Sealing

The Insulation & Air Sealing product provides prescriptive rebates to customers who add insulation to their homes. In 2020, M&V of this product was performed by Nexant, 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. The final demand, energy, and gas realization rates for the 2020 Insulation & Air Sealing product were all 100.0% ± 0.0% around the targeted 90% confidence level.

Refrigerator & Freezer Recycling

The Refrigerator & Freezer Recycling product provides a rebate to customers who retire their old, inefficient, but operational refrigerators and freezers. In 2020, M&V of this product was performed by Nexant, 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. The final realization rates for the 2020 Refrigerator & Freezer Recycling product were 100.0% ± 0.0% for both demand and energy savings.

Residential Heating

The Residential Heating product provides prescriptive rebates to customers who install efficient furnaces, boilers, and EC motor furnace fans. In 2020, M&V of this product was performed by Nexant, following the prescriptive protocols described above. Of these projects, Nexant performed 42 field inspections of installed energy efficient equipment at randomly selected participant locations to verify key savings factors. The final demand, energy, and gas realization rates for the 2020 Residential Heating product were all 100.0% ± 0.0% around the targeted 90% confidence level.

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 a third-party vendor, AM Conservation. AM Conservation used parental surveys to determine which measures were installed in the home. The 2020 year-end installation rates and savings for the product were determined by AM Conservation.

Thermostat Optimization

The Thermostat Optimization product utilizes thermostat optimization software in conjunction with eligible residential smart thermostats to enhance the energy efficiency savings of smart thermostats and improve peak demand reduction by smart thermostats during peak periods. The Thermostat Optimization product adheres to the prescriptive M&V process. In 2020, the Thermostat Optimization product was assumed to have realization and installation rates of 100%.

Water Heating

The Water Heating product provides prescriptive rebates to customers who purchase new, energy efficient water heaters. In 2020, M&V of this product was performed by Nexant, following the prescriptive protocols described above. Nexant performed 11 field inspections of installed energy efficient equipment at randomly selected participant locations to verify key savings factors. The final demand, energy, and gas realization rates for the 2020 Water Heating product were all 100.0% ± 0.0% around the targeted 90% confidence level.

Low-Income Products

Energy Savings Kit

The Energy Savings Kits product provides energy efficiency kits to low-income customers. This product was implemented by a third-party provider, Energy Federation Inc., who identified income-qualified customers to receive kits. InMoment performed a phone survey to those customers who received a kit and determined installation rates of 78.3% for LEDs, 77.3% for showerheads, 64/8% for kitchen aerators, and 65.9% for bathroom aerators.

Multifamily Weatherization

The Multifamily Weatherization product offers weatherization measures to qualifying low-income multi-family buildings. The third-party program implementer, Energy Outreach of Colorado, 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, Energy Outreach of Colorado, 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 implementers, the Colorado Energy Office and Energy Outreach Colorado, 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 2020 performance year were completed in late 2019 through 2020 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 2020

Public Service contracted for evaluators to perform evaluations on the following products in 2020: Energy Efficient Showerheads, Midstream Lighting, Refrigerator & Freezer Recycling, Small Business Lighting, as well as a study to establish the appropriate baseline for LED rebate measures. The following sections provide an overview of the findings of the evaluations and the evaluators' recommendations. The Company intends to address any recommended changes coming from these comprehensive evaluations through 60-Day Notices corresponding to the evaluation recommendations and Company responses.

Energy Efficient Showerheads

An evaluation team led by EMI Consulting conducted a process evaluation of Xcel Energy's Energy Efficient Showerheads product. The evaluation was conducted through Xcel Energy staff interviews, participating customer surveys, nonparticipating customer surveys, and peer utility interviews. The team's key findings are paraphrased below:

- Key Finding 1: Product shows strong influence in the market, with retrospective NTGR of 0.94.
    - Recommendation 1: Increase customer education about the products, highlighting quality features of the equipment, distributing installation follow-up surveys, and targeting customers not already in the market for kit equipment.
- Key Finding 2: Participating customers expressed dissatisfaction with realized energy savings and a lack of knowledge on how to determine energy savings.
    - Recommendation 2a: Improve energy efficiency information on marketing materials, including providing better expectations on estimates of expected energy and water bill savings.
    - Recommendation 2b: Send information for additional products that will further help customers see energy and bill savings.
    - Recommendation 2c: Increase information in marketing materials about both the premium and standard equipment options.
    - Recommendation 2d: Increase information and resources on documentation provided with kit equipment.
- Key Finding 3: Customers expressed difficulty or perceived difficulty with installing kit equipment and uninstalling previous equipment, and this resulted in participating customers storing or discarding kit equipment.
    - Recommendation 3a: The evaluation team recommends noting options for other Xcel Energy products that could involve installation assistance for showerheads and/or aerators to provide a resource to help customers with equipment installation.
    - Recommendation 3b: Amend current multi-product follow-up surveys to include questions on installation issues and barriers participating customers are facing.
    - Recommendation 3c: Consider providing options to help customers recycle or donate unused kit measures.
- Key Finding 4: Forty percent of participating customer respondents reported replacing showerheads within the past five years before installing the showerhead provided in the kit, while 69% of nonparticipating customer respondents installed showerhead equipment within the last six years.
    - Recommendation 4a: The evaluation team recommends conducting research to better establish the baseline flow rate for showerheads and bathroom faucet aerators due to market penetration of WaterSense and low-flow showerheads and faucet aerators.

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.

Midstream Lighting -- LED Instant Rebates

An evaluation team led by Apex Analytics and EMI Consulting conducted a product evaluation of the Midstream component of Xcel Energy's Lighting Efficiency product. The evaluation was conducted through interviews with participants and trade partners, as well as with peer utilities to serve as a benchmark. The team had the following key findings, paraphrased below:

- Key Finding 1: The product shows influence in the market, with a retrospective NTGR of 0.692.
  - Recommendation 1a: If the product design remains the same, the evaluation team recommends using a prospective NTGR of 0.692.
  - Recommendation 1b: The evaluation team recommends additional NTGR research for the additional direct-to manufacturer channel.
- Key Finding 2: Trade allies struggle with technical issues in the portal, including customer eligibility and entering the correct product codes.
  - Recommendation 2a. Update the portal to allow for 'fuzzy' matching in customer eligibility search tool.
  - Recommendation 2b. Allow all forms of product code (DLC, Energy Star, and Short and Long) as valid entries so that trade allies will be able to enter and process their product codes without guessing which file or code type they should input.
  - Recommendation 2c. Conduct a usability study of the trade ally portal to find bugs and areas for improvement.
- Key Finding 3: Customers were highly motivated by cost savings and when a small percentage did not see an impact on their bill, they became unsatisfied with their participation in the product.
  - Recommendation 3. Help customers understand what to expect for their energy bill. Provide print materials, and/or train trade allies to help customers understand what to expect for their next energy bill, particularly when lighting projects are taking place before a heavy heating or cooling season.
- Key Finding 4: Trade allies appreciated and noticed an uptick from the COVID-19 bonus on LED tubes.
  - Recommendation 4. Continue to utilize short-term bonus periods to promote upticks in project completion.
- Key Finding 5: Trade allies and manufacturers would like to see additional lighting products offered through the Business LED Instant Rebate product.
  - Recommendation 5a: Where possible, add more
  - lighting types to the Business LED Instant Rebate product, including HIDs, high/low bay lights, troffers, retrofit kits, parking garage, exteriors, controls, and integrated fixtures.
  - Recommendation 5b: Conduct an additional C&I baseline study to understand the greatest opportunities for marketing and promotion of the Business LED Instant Rebate product.

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.

Refrigerator & Freezer Recycling

An evaluation team led by EMI Consulting conducted a comprehensive process and impact evaluation of Xcel Energy's Colorado Refrigerator & Freezer Recycling product, in which they collected surveys with participating and nonparticipating customers, as well as interviews with peer utilities and secondary market actors. The team had the following key findings, paraphrased below:

- Key Finding 1: The product has a strong influence on participating customers' decision to recycle their appliance.
  - Recommendation 1: The evaluation team recommends applying the retrospective net-to-gross ratio of 0.73 if no program changes are made.
- Key Finding 2: Most participating customer respondents reported that they decided to recycle their appliance through the product because of the convenience of the free pick-up, the financial incentive, and the environmental benefits, but also reported that they needed to conduct additional research about product eligibility requirements before deciding to participate in the product.
  - Recommendation 2: To reduce barriers to participation, revisit marketing messaging to include prominent references to the eligibility requirements, the convenience and ease of participation relative to alternatives, and the environmental benefits.
- Key Finding 3: Participating customer respondents tended to have relatively high household incomes.
  - Recommendation 3a: Pursue deeper product savings by conducting additional outreach to low-income customers.
  - Recommendation 3b: Pursue deeper product savings by conducting additional research around nonparticipating customer decision-making and implementing findings from that research.
- Key Finding 4: Participating customers reported high satisfaction with all elements of their experience with the product.
  - Recommendation 4: Maintain current product implementation approach and continue to track product satisfaction to identify any threats to product satisfaction.

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.

Small Business Lighting Efficiency

An evaluation team led by EMI Consulting conducted a process and impact evaluation of Xcel Energy's Colorado Small Business Lighting product. The evaluation was conducted through participating customer surveys, participating customer follow-up interviews, near-participating customer interviews, trade partner interviews, and peer utility interviews. The team had the following key findings, paraphrased below:

- Key Finding 1: The SBL Product remains highly influential in encouraging small businesses to adopt LED technologies.
  - Recommendation 1a: The evaluation team recommends using a prospective NTGR of 0.92; however, the NTGR could increase to 0.94 if the following recommendations are met:
    - Increase the number of smaller businesses participating in the product since those businesses were less likely to be free riders.
    - Increase the number of energy assessments and/or direct installations performed since those projects were associated with less free-ridership.

  - Recommendation 1b: The evaluation team recommends Xcel Energy continue to plan for future scenarios when its ability to influence small businesses to install LEDs decreases due to larger market changes.
- Key Finding 2: Trade partner interviewees requested additional training events to learn more about product processes and additional support marketing to small businesses.
  - Recommendation 2a: Provide additional training to trade partners and direct engagement with less-engaged trade partners.
  - Recommendation 2b: Provide trade partners with marketing tools and rewards to help them market the SBL Product to their smallest business customers.
  - Recommendation 2c: Embed language in the Lighting Efficiency application that identifies the implementer as a resource to help trade partners and small businesses with SBL Product applications.
- Key Finding 3: Participation in the energy assessments dropped in 2019 from 2018 levels, which was attributed to the transition to an ASHRAE energy assessment. Peer utilities reported that the ASHRAE assessment was typically too detailed for small businesses and they preferred to create their own comprehensive energy assessment that they felt better suited the needs of small businesses.
  - Recommendation 3a: Consider developing an Xcel Energy small business energy assessment designed to focus specifically on meeting small business needs and aligned with Xcel Energy product offerings for small businesses.
  - Recommendation 3b: Increase outreach to qualifying businesses by canvassing areas (in person or via phone during COVID-19) and asking participating customers for references.
- Key Finding 4: Customers needed more support from Xcel Energy in following through with energy assessment recommendations. Near-participating customers reported they faced a variety of challenges in completing projects.
  - Recommendation 4a: Provide itemized cost estimates on energy assessment reports to allow customers to see both the estimated equipment and installation costs, as well as installation options.
  - Recommendation 4b: Ensure customers that receive energy assessments receive follow-up calls to better support customers implementing project recommendations.

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

M&V Results

The following pages provide Tables 23 and 24, which describe the installation rates and realization rates used to calculate net, verified savings by program component. The column headings of Tables 23 and 24 are defined in the following table:

Table 22: Defined Terms

Column Heading	Definition
2020 Product	The DSM product offered by Public Service in 2020.
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.
Gross Gen kW	The gross electric demand savings at the generator after line losses and coincidence with peak are factored in.
Gross Gen kWh	The gross electric energy savings at the generator after line losses are removed.
Gross Dth	The gross natural gas energy savings.
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.
Electric Demand NTG	The net-to-gross ratio (percentage) applied to the Verified Gross Gen kW value to arrive at the Verified Net Gen kW value.
Electric Energy NTG	The net-to-gross ratio (percentage) 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) applied to the Verified Gross Dth value to arrive at the Verified Net Dth value.
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 23: Business Segment Installation Rates, Realization Rates, and Final Net, Verified Savings by Program Component

2020 Products	End-Use/Measure Type	Gross Customer kW	Peak Coincident Customer kW	Demand Line Loss	Gross Peak Gen kW	Customer kWh	Energy Line Loss	Gross Gen kWh	Gross Dth	Installation Rate	Demand (kW) Realization Rate	Energy (kWh) Realization Rate	Energy (Dth) Realization Rate	Verified Gross Gen kW	Verified Gross Gen kWh	Verified Gross Dth	Elec Demand NTG	Elec Energy NTG	Gas NTG	Verified Net Gen kW	Verified Net Gen kWh	Verified Net Dth
Business Program																						
Commercial Refrigeration	Prescriptive and Custom	965	800	7.71%	867	7,832,972	5.33%	8,273,975	9,204	100.0%	100.0%	100.0%	100.0%	867	8,273,975	9,204	100.0%	100.0%	100.0%	867	8,273,975	9,204
Compressed Air Efficiency	Prescriptive	112	84	7.71%	91	432,508	5.33%	456,859	N/A	100.0%	100.0%	100.0%	N/A	91	456,859	N/A	73.00%	73.00%	N/A	66	333,507	N/A
	Studies & Custom	253	185	7.71%	201	1,084,839	5.33%	1,145,916	N/A	100.0%	100.0%	100.0%	N/A	201	1,145,916	N/A	87.00%	87.00%	N/A	174	996,947	N/A
Cooling	CFCH, DEPACC, SSCH	256	231	7.71%	250	598,906	5.33%	632,625	N/A	100.0%	100.0%	100.0%	N/A	250	632,625	N/A	71.00%	71.00%	N/A	177	449,164	N/A
	Custom	35	35	7.71%	37	-8,953	5.33%	-9,457	N/A	100.0%	100.0%	100.0%	N/A	37	-9,457	N/A	87.00%	87.00%	N/A	33	-8,228	N/A
	Midstream & General	2,290	2,061	7.71%	2,233	4,628,305	5.33%	4,888,882	N/A	100.0%	100.0%	100.0%	N/A	2,233	4,888,882	N/A	89.00%	89.00%	N/A	1,987	4,351,105	N/A
	MSHP , ECM, Anti-Sweat	110	106	7.71%	115	959,552	5.33%	1,013,576	N/A	100.0%	100.0%	100.0%	N/A	115	1,013,576	N/A	100.00%	100.00%	N/A	115	1,013,576	N/A
Custom Efficiency	Custom	289	221	7.71%	239	1,104,962	5.33%	1,167,172	32,897	100.0%	100.0%	100.0%	100.0%	239	1,167,172	32,897	87.0%	87.0%	87.0%	208	1,015,440	28,620
Data Center Efficiency	Customer-Identified	0	0	7.71%	0	0	5.33%	0	N/A	100.0%	100.0%	100.0%	N/A	0	0	N/A	45.0%	45.0%	N/A	0	0	N/A
	Site-Visit-Identified	37	37	7.71%	40	308,871	5.33%	326,261	N/A	100.0%	100.0%	100.0%	N/A	40	326,261	N/A	80.0%	80.0%	N/A	32	261,009	N/A
	Study-Identified	152	150	7.71%	162	1,125,219	5.33%	1,188,570	N/A	100.0%	100.0%	100.0%	N/A	162	1,188,570	N/A	100.0%	100.0%	N/A	162	1,188,570	N/A
Energy Management Systems	EMS	594	92	7.71%	100	4,217,907	5.33%	4,455,379	4,545	100.0%	100.0%	100.0%	100.0%	100	4,455,379	4,545	87.0%	87.0%	90.0%	87	3,876,179	4,091
Heating Efficiency	Prescriptive	12	2	7.71%	2	28,431	5.33%	30,032	31,344	100.0%	100.0%	100.0%	100.0%	2	30,032	31,344	86.0%	86.0%	86.0%	2	25,827	26,955
	DI, Custom	0	0	7.71%	0	0	5.33%	0	31	100.0%	100.0%	100.0%	100.0%	0	0	31	100.0%	100.0%	100.0%	0	0	31
LED Street Lights		547	0	7.71%	0	2,273,652	5.33%	2,401,661	N/A	100.0%	100.0%	100.0%	N/A	0	2,401,661	N/A	90.0%	90.0%	N/A	0	2,161,494	N/A
Lighting Efficiency	Prescriptive	12,616	7,572	7.71%	8,205	51,815,506	5.33%	54,732,762	N/A	100.0%	100.4%	100.5%	N/A	8,238	55,006,426	N/A	73.0%	73.0%	N/A	6,014	40,154,691	N/A
	Older Measures	292	214	7.71%	232	1,089,570	5.33%	1,150,914	N/A	99.2%	100.0%	100.0%	N/A	230	1,141,307	N/A	76.2%	76.8%	N/A	175	877,166	N/A
	Custom	3,483	2,860	7.71%	3,099	18,850,582	5.33%	19,911,885	N/A	100.0%	100.0%	100.0%	N/A	3,099	19,911,885	N/A	73.0%	73.0%	N/A	2,262	14,535,676	N/A
	Midstream	5,416	4,062	7.71%	4,402	24,729,330	5.33%	26,121,612	N/A	99.0%	100.4%	100.5%	N/A	4,375	25,989,698	N/A	92.0%	92.0%	N/A	4,025	23,910,522	N/A
	Network Lighting Controls	127	77	7.71%	84	375,433	5.33%	396,570	N/A	100.0%	100.4%	100.5%	N/A	84	398,553	N/A	100.0%	100.0%	N/A	84	398,553	N/A
Lighting - Small Business	General Prescriptive	2,031	1,029	7.71%	1,115	8,456,156	5.33%	8,932,245	N/A	100.0%	100.2%	100.2%	100.0%	1,117	8,950,109	N/A	89.0%	89.0%	100.0%	994	7,965,597	N/A
	Custom	58	40	7.71%	43	197,017	5.33%	208,109	N/A	100.0%	100.0%	100.0%	100.0%	43	208,109	N/A	89.0%	89.0%	100.0%	38	185,217	N/A
	Direct Install	3,174	2,372	7.71%	2,570	14,450,064	5.33%	15,263,615	109	100.0%	100.2%	100.2%	100.0%	2,576	15,294,142	109	90.0%	90.0%	90.0%	2,318	13,764,728	98
	Midstream	5,646	4,237	7.71%	4,591	25,750,225	5.33%	27,199,984	N/A	99.0%	100.2%	100.2%	100.0%	4,554	26,981,840	N/A	92.0%	92.0%	100.0%	4,189	24,823,293	N/A
	Network Lighting Controls	13	7	7.71%	8	36,000	5.33%	38,027	N/A	100.0%	100.2%	100.2%	100.0%	8	38,103	N/A	100.0%	100.0%	100.0%	8	38,103	N/A
Motor & Drive Efficiency		3,465	2,774	7.71%	3,005	19,786,786	5.33%	20,900,799	N/A	100.0%	100.0%	100.0%	N/A	3,005	20,900,799	N/A	81.0%	81.0%	N/A	2,434	16,929,647	N/A
Mutifamily Buildings	Business Measures	762	451	7.71%	489	3,753,197	5.33%	3,964,505	0	100.0%	100.0%	100.0%	100.0%	489	3,964,505	0	100.0%	100.0%	100.0%	489	3,964,505	0
	Residential Measures	1,639	211	9.13%	232	1,616,188	6.38%	1,726,328	2,889	100.0%	100.0%	100.0%	100.0%	232	1,726,328	2,889	100.0%	100.0%	100.0%	232	1,726,328	2,889
New Construction	Energy Efficient Buildings	2,216	1,572	7.71%	1,703	7,584,886	5.33%	8,011,921	16,199	100.0%	100.0%	100.0%	100.0%	1,703	8,011,921	16,199	95.0%	95.0%	97.0%	1,618	7,611,325	15,713
	Energy Design Assistance	16,816	16,816	7.71%	18,220	54,662,081	5.33%	57,739,602	124,020	100.0%	100.0%	100.0%	100.0%	18,220	57,739,602	124,020	95.0%	95.0%	99.0%	17,309	54,852,622	122,779
Recommissioning	Custom	65	35	7.71%	38	737,269	5.33%	778,778	995	100.0%	100.0%	100.0%	100.0%	38	778,778	995	90.0%	90.0%	90.0%	34	700,900	896
Self Direct	Custom	303	161	7.71%	174	1,183,400	5.33%	1,250,026	N/A	100.0%	100.0%	100.0%	N/A	174	1,250,026	N/A	90.6%	90.6%	N/A	158	1,132,524	N/A
Strategic Energy Management	Process	12,891	4,503	7.71%	4,880	33,779,807	5.33%	35,681,638	0	100.0%	100.0%	100.0%	100.0%	4,880	35,681,638	0	93.0%	93.0%	93.0%	4,538	33,183,924	N/A
		1,183	521	7.71%	564	4,162,645	5.33%	4,397,005	0	100.0%	100.0%	100.0%	100.0%	564	4,397,005	0	100.0%	100.0%	100.0%	564	4,397,005	N/A
Business Program Total		**63,774**	**48,492**	**7.71%**	**52,547**	**259,660,861**	**5.33%**	**274,299,131**	**222,234**	**100.0%**	**100.1%**	**100.2%**	**100.0%**	**52,522**	**274,263,581**	**222,234**	**97.9%**	**100.3%**	**95.1%**	**51,396**	**275,090,892**	**211,278**

Table 24: Residential Segment and Low-Income Segment Installation Rates, Realization Rates, and Final Net, Verified Savings by Program Component

2020 Products	End-Use/Measure Type	Gross Customer kW	Peak Coincident Customer kW	Demand Line Loss	Gross Peak Gen kW	Customer kWh	Energy Line Loss	Gross Gen kWh	Gross Dth	Installation Rate	Demand (kW) Realization Rate	Energy (kWh) Realization Rate	Energy (Dth) Realization Rate	Verified Gross Gen kW	Verified Gross Gen kWh	Verified Gross Dth	Elec Demand NTG	Elec Energy NTG	Gas NTG	Verified Net Gen kW	Verified Net Gen kWh	Verified Net Dth
Residential Program																						
Energy Efficient Showerhead	Showerhead	0	0	9.13%	0	0	6.38%	0	41,290	74.6%	100.0%	100.0%	100.0%	0	0	30,802	99.0%	99.0%	99.0%	0	0	30,494
	Second Showerhead	72	45	9.13%	50	628,278	6.38%	671,094	0	74.6%	100.0%	100.0%	100.0%	37	500,636	0	99.0%	99.0%	99.0%	37	495,630	0
	Kitchen Aerator	5	7	9.13%	8	46,118	6.38%	49,261	3,278	27.3%	100.0%	100.0%	100.0%	2	13,448	895	99.0%	99.0%	99.0%	2	13,314	886
	Bath Aerator 1.0gpm	9	13	9.13%	14	86,528	6.38%	92,425	5,873	36.0%	100.0%	100.0%	100.0%	5	33,273	2,114	99.0%	99.0%	99.0%	5	32,940	2,093
Energy Feedback Residential		4,703	4,412	9.13%	4,855	13,991,275	6.38%	14,944,750	78,561	100.0%	100.0%	100.0%	100.0%	4,855	14,944,750	78,561	100.0%	100.0%	100.0%	4,855	14,944,750	78,561
ENERGY STAR New Homes		840	704	9.13%	774	4,327,946	6.38%	4,622,886	87,401	100.0%	100.0%	100.0%	100.0%	774	4,622,886	87,401	92.0%	92.0%	92.0%	713	4,253,055	80,409
Evaporative Cooling	Standard, Premium	10,383	7,268	9.13%	7,999	5,777,053	6.38%	6,170,747	N/A	100.0%	100.0%	100.0%	N/A	7,999	6,170,747	N/A	70.0%	70.0%	N/A	5,599	4,319,523	N/A
		1,797	1,258	9.13%	1,384	993,810	6.38%	1,061,536	N/A	100.0%	100.0%	100.0%	N/A	1,384	1,061,536	N/A	85.1%	85.1%	N/A	1,178	903,367	N/A
	Premium Multi-Duct New Install	102	72	9.13%	79	57,100	6.38%	60,991	N/A	100.0%	100.0%	100.0%	N/A	79	60,991	N/A	90.0%	90.0%	N/A	71	54,892	N/A
High Efficiency Air Conditioning	AC, ASHP	3,923	3,531	9.13%	3,886	4,397,964	6.38%	4,697,676	54,022	100.0%	97.4%	98.1%	98.1%	3,786	4,606,541	52,974	67.6%	67.6%	67.6%	2,559	3,114,022	35,810
	GSHP, Mini-Split	467	350	9.13%	385	503,300	6.38%	537,599	0	100.0%	100.0%	100.0%	100.0%	385	537,599	0	100.0%	100.0%	100.0%	385	537,599	0
Home Energy Squad		974	143	9.13%	157	963,366	6.38%	1,029,017	2,137	100.0%	100.0%	100.0%	100.0%	157	1,029,017	2,137	100.0%	100.0%	100.0%	157	1,029,017	2,137
Home Lighting & Recycling	Residential Std LEDs	113,153	14,268	9.13%	15,701	111,568,817	6.38%	119,171,989	N/A	99.0%	100.0%	100.0%	N/A	15,544	117,980,270	N/A	61.0%	61.0%	N/A	9,482	71,967,964	N/A
	Small Business Std LEDs	7,066	4,736	7.71%	5,132	27,316,557	5.33%	28,854,502	N/A	99.0%	100.0%	100.0%	N/A	5,080	28,565,957	N/A	61.0%	61.0%	N/A	3,099	17,425,234	N/A
	Residential Specialty LEDs	36,081	4,550	9.13%	5,007	35,575,968	6.38%	38,000,393	N/A	99.0%	100.0%	100.0%	N/A	4,957	37,620,389	N/A	61.0%	61.0%	N/A	3,024	22,948,437	N/A
	Small Business Specialty LEDs	2,303	1,544	7.71%	1,673	8,903,588	5.33%	9,404,867	N/A	99.0%	100.0%	100.0%	N/A	1,656	9,310,819	N/A	61.0%	61.0%	N/A	1,010	5,679,599	N/A
	Residential TLEDs	286	36	9.13%	40	281,992	6.38%	301,209	N/A	99.0%	100.0%	100.0%	N/A	39	298,197	N/A	100.0%	100.0%	N/A	39	298,197	N/A
	Small Business TLEDs	194	130	7.71%	141	751,386	5.33%	793,690	N/A	99.0%	100.0%	100.0%	N/A	140	785,753	N/A	100.0%	100.0%	N/A	140	785,753	N/A
Home Performance w/ ENERGY STAR		93	70	9.13%	77	62,057	6.38%	66,286	4,486	100.0%	100.0%	100.0%	100.0%	77	66,286	4,486	116.0%	115.9%	115.9%	89	76,835	5,201
Insulation & Air Sealing		588	452	9.13%	497	445,928	6.38%	476,317	38,243	100.0%	100.0%	100.0%	100.0%	497	476,317	38,243	89.0%	89.0%	85.0%	443	423,922	32,506
Refrigerator & Freezer Recycling	Second Refrigerator	526	336	9.13%	369	2,939,939	6.38%	3,140,289	N/A	100.0%	100.0%	100.0%	N/A	369	3,140,289	N/A	64.0%	64.0%	N/A	236.3	2,009,785	N/A
	Primary Refrigerator	239	152	9.13%	168	1,335,058	6.38%	1,426,039	N/A	100.0%	100.0%	100.0%	N/A	168	1,426,039	N/A	52.5%	52.5%	N/A	88.0	748,671	N/A
	Primary Freezer	120	76	9.13%	84	670,203	6.38%	715,876	N/A	100.0%	100.0%	100.0%	N/A	84	715,876	N/A	52.5%	52.5%	N/A	44.2	375,835	N/A
	Room AC	47	42	9.13%	47	17,729	6.38%	18,937	N/A	100.0%	100.0%	100.0%	N/A	47	18,937	N/A	57.0%	57.0%	N/A	26.6	10,794	N/A
Residential Heating		391	285	9.13%	314	1,599,148	6.38%	1,708,126	106,187	100.0%	100.0%	100.0%	100.0%	314	1,708,126	106,187	94.0%	94.0%	86.0%	295	1,605,639	91,321
School Education Kits	11 Watt LED	3,417	474	9.13%	521	3,369,529	6.38%	3,599,155	N/A	89.2%	100.0%	100.0%	N/A	465	3,210,446	N/A	100.0%	100.0%	N/A	465	3,210,446	N/A
	9 Watt LED	5,498	693	9.13%	762	5,421,099	6.38%	5,790,535	N/A	89.8%	100.0%	100.0%	N/A	685	5,199,901	N/A	100.0%	100.0%	N/A	685	5,199,901	N/A
	Globe, Reflector, 3-Way LED	1,886	238	9.13%	262	1,859,953	6.38%	1,986,705	N/A	91.0%	100.0%	100.0%	N/A	238	1,807,901	N/A	100.0%	100.0%	N/A	238	1,807,901	N/A
	Showerhead	163	114	9.13%	126	1,429,361	6.38%	1,526,769	80,993	45.6%	100.0%	100.0%	100.0%	57	696,207	36,933	100.0%	100.0%	100.0%	57	696,207	36,933
	Kitchen Aerator	20	27	9.13%	30	172,907	6.38%	184,690	9,787	39.0%	100.0%	100.0%	100.0%	12	72,029	3,817	100.0%	100.0%	100.0%	12	72,029	3,817
	Bathroom Aerator 1.0gpm	21	28	9.13%	31	183,183	6.38%	195,666	10,367	41.4%	100.0%	100.0%	100.0%	13	81,006	4,292	100.0%	100.0%	100.0%	13	81,006	4,292
	Advanced Powerstrip	5	5	9.13%	5	34,632	6.38%	36,992	0	76.2%	100.0%	100.0%	100.0%	4	28,188	N/A	100.0%	100.0%	N/A	4	28,188	N/A
	Programmable Thermostat	11,698	9,783	9.13%	10,766	6,702,837	6.38%	7,159,620	175,445	4.0%	100.0%	100.0%	100.0%	431	286,385	7,018	100.0%	100.0%	100.0%	431	286,385	7,018
Thermostat Optimization		1,609	1,222	9.13%	1,345	923,088	6.38%	985,994	29,114	100.0%	100.0%	100.0%	100.0%	1,345	985,994	29,114	100.0%	100.0%	100.0%	1,345	985,994	29,114
Water Heating		35	35	9.13%	38	245,764	6.38%	262,512	7,681	100.0%	100.0%	100.0%	100.0%	38	262,512	7,681	100.0%	100.0%	90.0%	38	262,512	6,912
Residential Program Total		**208,716**	**57,098**		**62,727**	**243,583,459**		**259,745,142**	**734,864**	**82.6%**	**99.8%**	**100.0%**	**99.9%**	**51,724**	**248,325,248**	**492,654**	**71.3%**	**67.1%**	**90.8%**	**36,864**	**166,685,343**	**447,504**
Low-Income Program																						
Energy Savings Kits	LED	1,028	128	9.13%	141	1,012,504	6.38%	1,081,504	N/A	78.3%	100.0%	100.0%	N/A	111	846,818	N/A	100.0%	100.0%	N/A	111	846,818	N/A
	Showerhead	25	14	9.13%	16	211,210	6.38%	225,604	9,082	77.3%	100.0%	100.0%	100.0%	12	174,392	7,020	100.0%	100.0%	100.0%	12	174,392	7,020
	Kitchen Aerator	2	5	9.13%	5	26,095	6.38%	27,873	1,115	64.8%	100.0%	100.0%	100.0%	3	18,062	723	100.0%	100.0%	100.0%	3	18,062	723
	Bathroom Aerator 1.0gpm	2	5	9.13%	5	26,647	6.38%	28,463	1,117	65.9%	100.0%	100.0%	100.0%	4	18,757	736	100.0%	100.0%	100.0%	4	18,757	736
Multifamily Weatherization		699	292	9.13%	321	1,718,231	6.38%	1,835,325	6,324	100.0%	100.0%	100.0%	100.0%	321	1,835,325	6,324	100.0%	100.0%	100.0%	321	1,835,325	6,324
Non-Profit		517	351	7.71%	380	1,618,868	5.33%	1,710,012	4,772	100.0%	100.0%	100.0%	100.0%	380	1,710,012	4,772	100.0%	100.0%	100.0%	380	1,710,012	4,772
Single-Family Weatherization		19,016	2,470	9.13%	2,718	18,891,982	6.38%	20,179,430	49,123	99.1%	100.0%	100.0%	100.0%	2,692	19,987,731	49,123	100.0%	100.0%	100.0%	2,692	19,987,964	49,123
Low-Income Program Total		**21,287**	**3,265**	**7.69%**	**3,587**	**23,505,537**		**25,088,210**	**71,532**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**3,523**	**24,591,096**	**68,697**	**100.0%**	**100.0%**	**100.0%**	**3,523**	**24,591,328**	**68,697**

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 24 and 25 below.

The Company is reporting 2020 electric and natural gas portfolio MTRC test ratio results of 1.96 and 1.83, respectively. These results are shown in Table 25 and Table 26. The portfolio results are based upon electric net economic benefits of $166.4 million and natural gas net economic benefits $31.2 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:[23]

- 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)

[23] 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 25: 2020 Electric DSM Portfolio Cost-Benefit Analysis (CBA)

PORTFOLIO TOTAL | **2020 ELECTRIC** | **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$91,833,271	$91,833,271	$91,833,271
Trans. & Dist. Capacity	N/A	$11,500,755	$11,500,755	$11,500,755
Marginal Energy	N/A	$129,334,494	$129,334,494	$129,334,494
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$232,668,520
Non-Energy Benefits Adder (21.8%)				$50,655,754
Subtotal	N/A	$232,668,520	$232,668,520	$283,324,274
Other Benefits				
Bill Reduction - Electric	$567,960,027	N/A	N/A	N/A
Participant Rebates and Incentives	$56,779,211	N/A	N/A	$56,779,211
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$624,739,239	N/A	N/A	$56,779,211
Total Benefits	$624,739,239	$232,668,520	$232,668,520	$340,103,485
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$26,856,512	$26,856,512	$26,856,512
Advertising/Promotion/Customer Ed	N/A	$4,323,642	$4,323,642	$4,323,642
Participant Rebates and Incentives	N/A	$56,779,211	$56,779,211	$56,779,211
Equipment & Installation	N/A	$162,110	$162,110	$162,110
Measurement and Verification	N/A	$1,803,807	$1,803,807	$1,803,807
Subtotal	N/A	$89,925,283	$89,925,283	$89,925,283
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$431,711,407	N/A
Subtotal	N/A	N/A	$431,711,407	N/A
Participant Costs				
Incremental Capital Costs	$95,847,676	N/A	N/A	$82,859,479
Incremental O&M Costs	$914,697	N/A	N/A	$949,122
Subtotal	$96,762,373	N/A	N/A	$83,808,602
Total Costs	$96,762,373	$89,925,283	$521,636,690	$173,733,884
Net Benefit (Cost)	$527,976,866	$142,743,237	($288,968,170)	$166,369,601
Benefit/Cost Ratio	6.46	2.59	0.45	**1.96**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	14.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	37.11%
Gross Load Factor at Customer	E	19.32%
Net-to-Gross (Energy)	F	79.7%
Net-to-Gross (Demand)	G	84.1%
Transmission Loss Factor (Energy)	H	5.761%
Transmission Loss Factor (Demand)	I	8.767%
Installation Rate (Energy)*	**J**	**97.7%**
Installation Rate (Demand)*	**K**	**90.4%**
MTRC Net Benefit (Cost)	**L**	$498
MTRC Non-Energy Benefit Adder	**M**	$152
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.3094 kW
Gross Annual kWh Saved at Customer	(B x E x C)	1,692 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	1,317 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	1,398 kWh

Program Summary All Participant

Total Budget	N	**$89,925,283**
Gross kW Saved at Customer	O	333,741 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**103,246 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	564,736,012 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	551,485,396 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	439,545,245 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**466,414,244 kWh**
TRC Net Benefits with Adder	(O x L)	**$166,369,601**
TRC Net Benefits without Adder	(O x (L - M))	**$115,713,847**
Utility Program Cost per kWh Lifetime		**$0.0132**
Utility Program Cost per kW at Gen		**$871**

*Weighted average of installation and realization rates

Table 26: 2020 Natural Gas DSM Portfolio Cost-Benefit Analysis (CBA)

PORTFOLIO TOTAL | **2020** | **GAS** | **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$25,115,304	$25,115,304	$25,115,304
Variable O&M Savings	N/A	$426,411	$426,411	$426,411
Demand Savings	N/A	$2,353,273	$2,353,273	$2,353,273
Subtotal				$27,894,988
Non-Energy Benefits Adder (22.9%)				$6,388,078
Subtotal	N/A	$27,894,988	$27,894,988	$34,283,065
Other Benefits				
Bill Reduction - Gas	$50,765,113	N/A	N/A	N/A
Participant Rebates and Incentives	$10,002,930	N/A	N/A	$10,002,930
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$65,164,417	N/A	N/A	$24,453,662
Subtotal	$125,932,460	N/A	N/A	$34,456,592
Total Benefits	$125,932,460	$27,894,988	$27,894,988	$68,739,657
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$3,156,093	$3,156,093	$3,156,093
Advertising/Promotion/Customer Ed	N/A	$455,460	$455,460	$455,460
Participant Rebates and Incentives	N/A	$10,002,930	$10,002,930	$10,002,930
Equipment & Installation	N/A	$26,495	$26,495	$26,495
Measurement and Verification	N/A	$580,475	$580,475	$580,475
Subtotal	N/A	$14,221,453	$14,221,453	$14,221,453
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$46,574,967	N/A
Subtotal	N/A	N/A	$46,574,967	N/A
Participant Costs				
Incremental Capital Costs	$25,476,414	N/A	N/A	$23,340,363
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$25,476,414	N/A	N/A	$23,340,363
Total Costs	$25,476,414	$14,221,453	$60,796,420	$37,561,815
Net Benefit (Cost)	$100,456,047	$13,673,535	($32,901,432)	$31,177,842
Benefit/Cost Ratio	4.94	1.96	0.46	**1.83**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	15.39 years
Net-to-Gross (Weighted on Dth)	B	93.01%
Install Rate (Weighted on Dth)	C	82.1%

Program Totals:		
Total Dth/Yr Saved	D	**727,480**
Utility Costs per Net Dth/Yr	E	$19.55
Net Benefit (Cost) per Gross Dth/Yr	F	$42.86
Non-Energy Benefits Adder per Gross Dth/Yr	G	$8.78
Annual Dth/$M	($1M / E)	**51,154**
Total Utility Budget	(E x D)	**$14,221,453**
Total MTRC Net Benefits with Adder	(D x F)	**$31,177,842**
Total MTRC Net Benefits without Adder	(F - G) x D	**$24,789,764**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$1.27**

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 2020 calendar year achievements.

A. 2020 Electric Programs (January 1, 2020 through December 31, 2020)

In order to determine the cost-effectiveness of its electric energy efficiency and load management programs from January 1, 2020 through December 31, 2020, 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[24] within Proceeding No. 17A-0462EG.

	CT		CT
Year	**Gen Capacity $/kw-yr**	**Year**	**Gen Capacity $/kW-yr**
2020	$90.24	**2030**	$110.00
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

2. **Estimated Annual Avoided Transmission and Distribution ("T&D") Capacity Costs (*Source:* Public Service Resource Planning)**
   Decision No. C14-0731 within Proceeding No. 13A-0686EG required the Company to "…study the avoided transmission and distribution capacity costs and propose values in its DSM Biennial Plan for 2015 through 2016."[25] Consistent with the Commission's decision in C15-0735, the Company undertook a study, specific to its own territory, utilizing the system planning approach to estimate T&D costs. The study is included as Attachment SMW-6 to the Direct Testimony of

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

Shawn M. White in Proceeding No. 16A-0512EG and affirmed in Proceeding No. 17A-0462EG.[26] The table below documents the annual values of avoided T&D costs from this study:

	Avoided Capacity $/kW-yr				Avoided Capacity $/kW-yr		
Year	**Transmission**	**Distribution**	**T&D**	**Year**	**Transmission**	**Distribution**	**T&D**
2020	$8.88	$2.42	$11.30	**2030**	$10.83	$2.95	$13.78
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

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, as documented in Appendix G of the 2019/2020 DSM Plan. 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.

Simple-Average Hourly DSM Avoided Energy			
Year	**$/MWh**	**Year**	**$/MWh**
2020	$17.91	**2030**	$36.22
2021	$17.93	**2031**	$39.18
2022	$19.56	**2032**	$41.84
2023	$21.53	**2033**	$45.09
2024	$24.96	**2034**	$48.49
2025	$25.92	**2035**	$52.34
2026	$29.17	**2036**	$56.55
2027	$30.81	**2037**	$61.25
2028	$32.45	**2038**	$66.47
2029	$34.49	**2039**	$72.29

[26] *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. 2020 Natural Gas Programs (January 1, 2020 through December 31, 2020)

In order to determine the cost-effectiveness of its gas programs from January 1, 2020 through December 31, 2020, 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**
2020	$2.57	$2.56	**2030**	$4.44	$4.43
2021	$2.79	$2.77	**2031**	$4.58	$4.57
2022	$2.99	$2.98	**2032**	$4.79	$4.78
2023	$3.21	$3.20	**2033**	$4.96	$4.95
2024	$3.45	$3.44	**2034**	$5.10	$5.09
2025	$3.59	$3.58	**2035**	$5.28	$5.26
2026	$3.73	$3.72	**2036**	$5.48	$5.46
2027	$3.89	$3.88	**2037**	$5.58	$5.56
2028	$4.10	$4.09	**2038**	$5.75	$5.73
2029	$4.28	$4.26	**2039**	$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
2020-2039	$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
2020-2039	$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 2020 DSM Plan.

PORTFOLIO TOTAL **2020 ELECTRIC** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$91,833,271	$91,833,271	$91,833,271
Trans. & Dist. Capacity	N/A	$11,500,755	$11,500,755	$11,500,755
Marginal Energy	N/A	$129,334,494	$129,334,494	$129,334,494
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$232,668,520
Non-Energy Benefits Adder (21.8%)				$50,655,754
Subtotal	N/A	$232,668,520	$232,668,520	$283,324,274
Other Benefits				
Bill Reduction - Electric	$567,960,027	N/A	N/A	N/A
Participant Rebates and Incentives	$56,779,211	N/A	N/A	$56,779,211
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$624,739,239	N/A	N/A	$56,779,211
Total Benefits	$624,739,239	$232,668,520	$232,668,520	$340,103,485
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$26,856,512	$26,856,512	$26,856,512
Advertising/Promotion/Customer Ed	N/A	$4,323,642	$4,323,642	$4,323,642
Participant Rebates and Incentives	N/A	$56,779,211	$56,779,211	$56,779,211
Equipment & Installation	N/A	$162,110	$162,110	$162,110
Measurement and Verification	N/A	$1,803,807	$1,803,807	$1,803,807
Subtotal	N/A	$89,925,283	$89,925,283	$89,925,283
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$431,711,407	N/A
Subtotal	N/A	N/A	$431,711,407	N/A
Participant Costs				
Incremental Capital Costs	$95,847,676	N/A	N/A	$82,859,479
Incremental O&M Costs	$914,697	N/A	N/A	$949,122
Subtotal	$96,762,373	N/A	N/A	$83,808,602
Total Costs	$96,762,373	$89,925,283	$521,636,690	$173,733,884
Net Benefit (Cost)	$527,976,866	$142,743,237	($288,968,170)	$166,369,601
Benefit/Cost Ratio	6.46	2.59	0.45	**1.96**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	14.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	37.11%
Gross Load Factor at Customer	E	19.32%
Net-to-Gross (Energy)	F	79.7%
Net-to-Gross (Demand)	G	84.1%
Transmission Loss Factor (Energy)	H	5.761%
Transmission Loss Factor (Demand)	I	8.767%
Installation Rate (Energy)*	**J**	**97.7%**
Installation Rate (Demand)*	**K**	**90.4%**
MTRC Net Benefit (Cost)	**L**	$498
MTRC Non-Energy Benefit Adder	**M**	$152
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.3094 kW
Gross Annual kWh Saved at Customer	(B x E x C)	1,692 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	1,317 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	1,398 kWh

Program Summary All Participant

Total Budget	N	**$89,925,283**
Gross kW Saved at Customer	O	333,741 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**103,246 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	564,736,012 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	551,485,396 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	439,545,245 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**466,414,244 kWh**
TRC Net Benefits with Adder	(O x L)	**$166,369,601**
TRC Net Benefits without Adder	(O x (L - M))	**$115,713,847**
Utility Program Cost per kWh Lifetime		**$0.0132**
Utility Program Cost per kW at Gen		**$871**

*Weighted average of installation and realization rates

EE PORTFOLIO TOTAL — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$85,012,708	$85,012,708	$85,012,708
Trans. & Dist. Capacity	N/A	$10,646,591	$10,646,591	$10,646,591
Marginal Energy	N/A	$129,326,212	$129,326,212	$129,326,212
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$224,985,511
Non-Energy Benefits Adder (21.8%)				$49,119,152
Subtotal	N/A	$224,985,511	$224,985,511	$274,104,663
Other Benefits				
Bill Reduction - Electric	$567,921,767	N/A	N/A	N/A
Participant Rebates and Incentives	$47,808,985	N/A	N/A	$47,808,985
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$615,730,752	N/A	N/A	$47,808,985
Total Benefits	$615,730,752	$224,985,511	$224,985,511	$321,913,648
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$22,055,895	$22,055,895	$22,055,895
Advertising/Promotion/Customer Ed	N/A	$3,557,916	$3,557,916	$3,557,916
Participant Rebates and Incentives	N/A	$47,808,985	$47,808,985	$47,808,985
Equipment & Installation	N/A	$162,110	$162,110	$162,110
Measurement and Verification	N/A	$1,499,574	$1,499,574	$1,499,574
Subtotal	N/A	$75,084,481	$75,084,481	$75,084,481
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$431,673,147	N/A
Subtotal	N/A	N/A	$431,673,147	N/A
Participant Costs				
Incremental Capital Costs	$95,820,001	N/A	N/A	$82,831,804
Incremental O&M Costs	$914,697	N/A	N/A	$949,122
Subtotal	$96,734,698	N/A	N/A	$83,780,927
Total Costs	$96,734,698	$75,084,481	$506,757,628	$158,865,407
Net Benefit (Cost)	$518,996,054	$149,901,031	($281,772,116)	$163,048,241
Benefit/Cost Ratio	6.37	3.00	0.44	**2.03**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	14.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	36.85%
Gross Load Factor at Customer	E	20.94%
Net-to-Gross (Energy)	F	79.7%
Net-to-Gross (Demand)	G	82.7%
Transmission Loss Factor (Energy)	H	5.761%
Transmission Loss Factor (Demand)	I	8.736%
Installation Rate (Energy)*	**J**	**97.7%**
Installation Rate (Demand)*	**K**	**89.3%**
MTRC Net Benefit (Cost)	**L**	$530
MTRC Non-Energy Benefit Adder	**M**	$160
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.2981 kW
Gross Annual kWh Saved at Customer	(B x E x C)	1,834 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	1,428 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	1,515 kWh

Program Summary All Participant

Total Budget	N	**$75,084,481**
Gross kW Saved at Customer	O	307,852 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**91,783 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	564,692,309 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	551,441,424 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	439,501,478 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**466,367,563 kWh**
TRC Net Benefits with Adder	(O x L)	**$163,048,241**
TRC Net Benefits without Adder	(O x (L - M))	**$113,929,089**
Utility Program Cost per kWh Lifetime		**$0.0110**
Utility Program Cost per kW at Gen		**$818**

*Weighted average of installation and realization rates

BUSINESS PROGRAM TOTAL — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$52,161,938	$52,161,938	$52,161,938
Trans. & Dist. Capacity	N/A	$6,532,533	$6,532,533	$6,532,533
Marginal Energy	N/A	$81,830,380	$81,830,380	$81,830,380
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$140,524,851
Non-Energy Benefits Adder (20.1%)				$28,221,230
Subtotal	N/A	$140,524,851	$140,524,851	$168,746,082
Other Benefits				
Bill Reduction - Electric	$252,330,565	N/A	N/A	N/A
Participant Rebates and Incentives	$30,854,834	N/A	N/A	$30,854,834
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$283,185,399	N/A	N/A	$30,854,834
Total Benefits	$283,185,399	$140,524,851	$140,524,851	$199,600,916
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$12,361,227	$12,361,227	$12,361,227
Advertising/Promotion/Customer Ed	N/A	$1,047,920	$1,047,920	$1,047,920
Participant Rebates and Incentives	N/A	$30,854,834	$30,854,834	$30,854,834
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$733,880	$733,880	$733,880
Subtotal	N/A	$44,997,861	$44,997,861	$44,997,861
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$219,107,343	N/A
Subtotal	N/A	N/A	$219,107,343	N/A
Participant Costs				
Incremental Capital Costs	$85,281,776	N/A	N/A	$73,309,937
Incremental O&M Costs	$1,075,056	N/A	N/A	$776,262
Subtotal	$86,356,832	N/A	N/A	$74,086,199
Total Costs	$86,356,832	$44,997,861	$264,105,204	$119,084,061
Net Benefit (Cost)	$196,828,567	$95,526,990	($123,580,353)	$80,516,856
Benefit/Cost Ratio	3.28	3.12	0.53	**1.68**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	16.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	68.73%
Gross Load Factor at Customer	E	43.64%
Net-to-Gross (Energy)	F	87.5%
Net-to-Gross (Demand)	G	88.7%
Transmission Loss Factor (Energy)	H	5.336%
Transmission Loss Factor (Demand)	I	7.740%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**99.9%**
MTRC Net Benefit (Cost)	**L**	$1,034
MTRC Non-Energy Benefit Adder	**M**	$363
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.6602 kW
Gross Annual kWh Saved at Customer	(B x E x C)	3,823 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	3,345 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	3,534 kWh

Program Summary All Participant

Total Budget	N	**$44,997,861**
Gross kW Saved at Customer	O	77,849 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**51,396 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	297,603,313 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	297,512,515 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	260,412,686 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**275,090,892 kWh**
TRC Net Benefits with Adder	(O x L)	**$80,516,856**
TRC Net Benefits without Adder	(O x (L - M))	**$52,295,625**
Utility Program Cost per kWh Lifetime		**$0.0100**
Utility Program Cost per kW at Gen		**$876**

*Weighted average of installation and realization rates

RESIDENTIAL PROGRAM TOTAL — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$28,896,123	$28,896,123	$28,896,123
Trans. & Dist. Capacity	N/A	$3,618,795	$3,618,795	$3,618,795
Marginal Energy	N/A	$38,593,110	$38,593,110	$38,593,110
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$71,108,028
Non-Energy Benefits Adder (20%)				$14,221,606
Subtotal	N/A	$71,108,028	$71,108,028	$85,329,634
Other Benefits				
Bill Reduction - Electric	$281,705,251	N/A	N/A	N/A
Participant Rebates and Incentives	$13,576,302	N/A	N/A	$13,576,302
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$24,332	N/A	N/A	$0
Subtotal	$295,305,885	N/A	N/A	$13,576,302
Total Benefits	$295,305,885	$71,108,028	$71,108,028	$98,905,935
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$5,520,177	$5,520,177	$5,520,177
Advertising/Promotion/Customer Ed	N/A	$1,606,844	$1,606,844	$1,606,844
Participant Rebates and Incentives	N/A	$13,576,302	$13,576,302	$13,576,302
Equipment & Installation	N/A	$162,110	$162,110	$162,110
Measurement and Verification	N/A	$166,423	$166,423	$166,423
Subtotal	N/A	$21,031,856	$21,031,856	$21,031,856
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$179,341,079	N/A
Subtotal	N/A	N/A	$179,341,079	N/A
Participant Costs				
Incremental Capital Costs	$7,131,149	N/A	N/A	$6,114,715
Incremental O&M Costs	$0	N/A	N/A	$279,169
Subtotal	$7,131,149	N/A	N/A	$6,393,884
Total Costs	$7,131,149	$21,031,856	$200,372,935	$27,425,740
Net Benefit (Cost)	$288,174,737	$50,076,172	($129,264,907)	$71,480,195
Benefit/Cost Ratio	41.41	3.38	0.35	**3.61**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	12.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	27.33%
Gross Load Factor at Customer	E	13.32%
Net-to-Gross (Energy)	F	68.3%
Net-to-Gross (Demand)	G	76.1%
Transmission Loss Factor (Energy)	H	6.222%
Transmission Loss Factor (Demand)	I	9.066%
Installation Rate (Energy)*	**J**	**94.0%**
Installation Rate (Demand)*	**K**	**77.2%**
MTRC Net Benefit (Cost)	**L**	$342
MTRC Non-Energy Benefit Adder	**M**	$68
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.1766 kW
Gross Annual kWh Saved at Customer	(B x E x C)	1,167 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	749 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	799 kWh

Program Summary All Participant

Total Budget	N	**$21,031,856**
Gross kW Saved at Customer	O	208,716 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**36,864 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	243,583,459 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	228,986,481 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	156,313,962 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**166,685,343 kWh**
TRC Net Benefits with Adder	(O x L)	**$71,480,195**
TRC Net Benefits without Adder	(O x (L - M))	**$57,258,590**
Utility Program Cost per kWh Lifetime		**$0.0104**
Utility Program Cost per kW at Gen		**$571**

*Weighted average of installation and realization rates

LOW-INCOME PROGRAM TOTAL — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$3,954,647	$3,954,647	$3,954,647
Trans. & Dist. Capacity	N/A	$495,264	$495,264	$495,264
Marginal Energy	N/A	$8,902,721	$8,902,721	$8,902,721
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$13,352,632
Non-Energy Benefits Adder (50%)				$6,676,316
Subtotal	N/A	$13,352,632	$13,352,632	$20,028,948
Other Benefits				
Bill Reduction - Electric	$33,885,951	N/A	N/A	N/A
Participant Rebates and Incentives	$3,005,385	N/A	N/A	$3,005,385
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$136,027	N/A	N/A	$106,309
Subtotal	$37,027,364	N/A	N/A	$3,111,694
Total Benefits	$37,027,364	$13,352,632	$13,352,632	$23,140,642
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$649,343	$649,343	$649,343
Advertising/Promotion/Customer Ed	N/A	$225,000	$225,000	$225,000
Participant Rebates and Incentives	N/A	$3,005,385	$3,005,385	$3,005,385
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$87,275	$87,275	$87,275
Subtotal	N/A	$3,967,003	$3,967,003	$3,967,003
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$33,224,725	N/A
Subtotal	N/A	N/A	$33,224,725	N/A
Participant Costs				
Incremental Capital Costs	$3,407,077	N/A	N/A	$3,407,152
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$3,407,077	N/A	N/A	$3,407,152
Total Costs	$3,407,077	$3,967,003	$37,191,728	$7,374,155
Net Benefit (Cost)	$33,620,287	$9,385,629	($23,839,096)	$15,766,486
Benefit/Cost Ratio	10.87	3.37	0.36	**3.14**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	19.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	15.31%
Gross Load Factor at Customer	E	12.60%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	6.308%
Transmission Loss Factor (Demand)	I	9.096%
Installation Rate (Energy)*	**J**	**98.0%**
Installation Rate (Demand)*	**K**	**98.2%**
MTRC Net Benefit (Cost)	**L**	$741
MTRC Non-Energy Benefit Adder	**M**	$314
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.1655 kW
Gross Annual kWh Saved at Customer	(B x E x C)	1,104 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	1,082 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	1,155 kWh

Program Summary All Participant

Total Budget	N	**$3,967,003**
Gross kW Saved at Customer	O	21,287 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**3,523 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	23,505,537 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	23,039,785 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	23,040,001 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**24,591,328 kWh**
TRC Net Benefits with Adder	(O x L)	**$15,766,486**
TRC Net Benefits without Adder	(O x (L - M))	**$9,090,170**
Utility Program Cost per kWh Lifetime		**$0.0082**
Utility Program Cost per kW at Gen		**$1,126**

*Weighted average of installation and realization rates

DR PORTFOLIO TOTAL **2020 ELECTRIC** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$6,820,563	$6,820,563	$6,820,563
Trans. & Dist. Capacity	N/A	$854,164	$854,164	$854,164
Marginal Energy	N/A	$8,282	$8,282	$8,282
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$7,683,009
Non-Energy Benefits Adder (20%)				$1,536,602
Subtotal	N/A	$7,683,009	$7,683,009	$9,219,610
Other Benefits				
Bill Reduction - Electric	$38,260	N/A	N/A	N/A
Participant Rebates and Incentives	$8,970,226	N/A	N/A	$8,970,226
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$9,008,487	N/A	N/A	$8,970,226
Total Benefits	$9,008,487	$7,683,009	$7,683,009	$18,189,837
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$4,800,617	$4,800,617	$4,800,617
Advertising/Promotion/Customer Ed	N/A	$765,725	$765,725	$765,725
Participant Rebates and Incentives	N/A	$8,970,226	$8,970,226	$8,970,226
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$304,233	$304,233	$304,233
Subtotal	N/A	$14,840,802	$14,840,802	$14,840,802
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$38,260	N/A
Subtotal	N/A	N/A	$38,260	N/A
Participant Costs				
Incremental Capital Costs	$27,675	N/A	N/A	$27,675
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$27,675	N/A	N/A	$27,675
Total Costs	$27,675	$14,840,802	$14,879,062	$14,868,477
Net Benefit (Cost)	$8,980,812	($7,157,793)	($7,196,053)	$3,321,360
Benefit/Cost Ratio	325.51	0.52	0.52	**1.22**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	8.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	40.23%
Gross Load Factor at Customer	E	0.02%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$128
MTRC Non-Energy Benefit Adder	**M**	$59
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.4428 kW
Gross Annual kWh Saved at Customer	(B x E x C)	2 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	2 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	2 kWh

Program Summary All Participant

Total Budget	N	**$14,840,802**
Gross kW Saved at Customer	O	25,890 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**11,463 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	43,703 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	43,703 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	43,703 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**46,681 kWh**
TRC Net Benefits with Adder	(O x L)	**$3,321,360**
TRC Net Benefits without Adder	(O x (L - M))	**$1,784,758**
Utility Program Cost per kWh Lifetime		**$37.3901**
Utility Program Cost per kW at Gen		**$1,295**

*Weighted average of installation and realization rates

DR PROGRAM TOTAL **2020 ELECTRIC** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$6,820,563	$6,820,563	$6,820,563
Trans. & Dist. Capacity	N/A	$854,164	$854,164	$854,164
Marginal Energy	N/A	$8,282	$8,282	$8,282
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$7,683,009
Non-Energy Benefits Adder (20%)				$1,536,602
Subtotal	N/A	$7,683,009	$7,683,009	$9,219,610
Other Benefits				
Bill Reduction - Electric	$38,260	N/A	N/A	N/A
Participant Rebates and Incentives	$8,970,226	N/A	N/A	$8,970,226
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$9,008,487	N/A	N/A	$8,970,226
Total Benefits	$9,008,487	$7,683,009	$7,683,009	$18,189,837
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$3,571,819	$3,571,819	$3,571,819
Advertising/Promotion/Customer Ed	N/A	$765,725	$765,725	$765,725
Participant Rebates and Incentives	N/A	$8,970,226	$8,970,226	$8,970,226
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$152,830	$152,830	$152,830
Subtotal	N/A	$13,460,601	$13,460,601	$13,460,601
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$38,260	N/A
Subtotal	N/A	N/A	$38,260	N/A
Participant Costs				
Incremental Capital Costs	$27,675	N/A	N/A	$27,675
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$27,675	N/A	N/A	$27,675
Total Costs	$27,675	$13,460,601	$13,498,861	$13,488,276
Net Benefit (Cost)	$8,980,812	($5,777,592)	($5,815,852)	$4,701,561
Benefit/Cost Ratio	325.51	0.57	0.57	**1.35**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	8.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	40.23%
Gross Load Factor at Customer	E	0.02%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$182
MTRC Non-Energy Benefit Adder	**M**	$59
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.4428 kW
Gross Annual kWh Saved at Customer	(B x E x C)	2 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	2 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	2 kWh

Program Summary All Participant

Total Budget	N	**$13,460,601**
Gross kW Saved at Customer	O	25,890 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**11,463 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	43,703 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	43,703 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	43,703 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**46,681 kWh**
TRC Net Benefits with Adder	(O x L)	**$4,701,561**
TRC Net Benefits without Adder	(O x (L - M))	**$3,164,959**
Utility Program Cost per kWh Lifetime		**$33.9128**
Utility Program Cost per kW at Gen		**$1,174**

*Weighted average of installation and realization rates

COMMERCIAL REFRIGERATION EFFICIENCY — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$764,993	$764,993	$764,993
Trans. & Dist. Capacity	N/A	$95,804	$95,804	$95,804
Marginal Energy	N/A	$1,991,863	$1,991,863	$1,991,863
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$2,852,659
Non-Energy Benefits Adder (20.5%)				$583,700
Subtotal	N/A	$2,852,659	$2,852,659	$3,436,359
Other Benefits				
Bill Reduction - Electric	$5,209,556	N/A	N/A	N/A
Participant Rebates and Incentives	$343,279	N/A	N/A	$343,279
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$35,971	N/A	N/A	$35,971
Subtotal	$5,588,805	N/A	N/A	$379,249
Total Benefits	$5,588,805	$2,852,659	$2,852,659	$3,815,609
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$466,437	$466,437	$466,437
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$343,279	$343,279	$343,279
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$2,756	$2,756	$2,756
Subtotal	N/A	$812,472	$812,472	$812,472
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$5,209,556	N/A
Subtotal	N/A	N/A	$5,209,556	N/A
Participant Costs				
Incremental Capital Costs	$1,713,619	N/A	N/A	$1,713,619
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$1,713,619	N/A	N/A	$1,713,619
Total Costs	$1,713,619	$812,472	$6,022,028	$2,526,091
Net Benefit (Cost)	$3,875,186	$2,040,187	($3,169,369)	$1,289,517
Benefit/Cost Ratio	3.26	3.51	0.47	**1.51**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	13.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	82.93%
Gross Load Factor at Customer	E	92.65%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$1,336
MTRC Non-Energy Benefit Adder	**M**	$605
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.8986 kW
Gross Annual kWh Saved at Customer	(B x E x C)	8,117 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	8,117 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	8,574 kWh

Program Summary All Participant		
Total Budget	N	**$812,472**
Gross kW Saved at Customer	O	965 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**867 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	7,832,972 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	7,832,972 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	7,832,972 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**8,273,975 kWh**
TRC Net Benefits with Adder	(O x L)	**$1,289,517**
TRC Net Benefits without Adder	(O x (L - M))	**$705,817**
Utility Program Cost per kWh Lifetime		**$0.0075**
Utility Program Cost per kW at Gen		**$937**

*Weighted average of installation and realization rates

COMPRESSED AIR EFFICIENCY — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$254,224	$254,224	$254,224
Trans. & Dist. Capacity	N/A	$31,838	$31,838	$31,838
Marginal Energy	N/A	$434,823	$434,823	$434,823
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$720,885
Non-Energy Benefits Adder (20.2%)				$145,259
Subtotal	N/A	$720,885	$720,885	$866,144
Other Benefits				
Bill Reduction - Electric	$1,235,122	N/A	N/A	N/A
Participant Rebates and Incentives	$176,127	N/A	N/A	$176,127
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$1,004	N/A	N/A	$733
Subtotal	$1,412,253	N/A	N/A	$176,861
Total Benefits	$1,412,253	$720,885	$720,885	$1,043,005
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$184,722	$184,722	$184,722
Advertising/Promotion/Customer Ed	N/A	$7,185	$7,185	$7,185
Participant Rebates and Incentives	N/A	$176,127	$176,127	$176,127
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$3,000	$3,000	$3,000
Subtotal	N/A	$371,035	$371,035	$371,035
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,024,793	N/A
Subtotal	N/A	N/A	$1,024,793	N/A
Participant Costs				
Incremental Capital Costs	$495,120	N/A	N/A	$414,144
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$495,120	N/A	N/A	$414,144
Total Costs	$495,120	$371,035	$1,395,828	$785,178
Net Benefit (Cost)	$917,134	$349,850	($674,943)	$257,826
Benefit/Cost Ratio	2.85	1.94	0.52	**1.33**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	18.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	73.60%
Gross Load Factor at Customer	E	47.44%
Net-to-Gross (Energy)	F	83.0%
Net-to-Gross (Demand)	G	82.6%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$706
MTRC Non-Energy Benefit Adder	**M**	$398
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.6591 kW
Gross Annual kWh Saved at Customer	(B x E x C)	4,156 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	3,450 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	3,644 kWh

Program Summary All Participant		
Total Budget	N	**$371,035**
Gross kW Saved at Customer	O	365 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**241 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	1,517,347 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	1,517,347 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	1,259,541 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**1,330,454 kWh**
TRC Net Benefits with Adder	(O x L)	**$257,826**
TRC Net Benefits without Adder	(O x (L - M))	**$112,567**
Utility Program Cost per kWh Lifetime		**$0.0154**
Utility Program Cost per kW at Gen		**$1,542**

*Weighted average of installation and realization rates

COOLING **2020 ELECTRIC** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$2,541,320	$2,541,320	$2,541,320
Trans. & Dist. Capacity	N/A	$318,264	$318,264	$318,264
Marginal Energy	N/A	$2,022,148	$2,022,148	$2,022,148
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$4,881,732
Non-Energy Benefits Adder (20%)				$976,925
Subtotal	N/A	$4,881,732	$4,881,732	$5,858,657
Other Benefits				
Bill Reduction - Electric	$9,692,149	N/A	N/A	N/A
Participant Rebates and Incentives	$1,527,760	N/A	N/A	$1,527,760
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$11,219,909	N/A	N/A	$1,527,760
Total Benefits	$11,219,909	$4,881,732	$4,881,732	$7,386,417
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$1,864,468	$1,864,468	$1,864,468
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$1,527,760	$1,527,760	$1,527,760
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$17,775	$17,775	$17,775
Subtotal	N/A	$3,410,002	$3,410,002	$3,410,002
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$8,586,219	N/A
Subtotal	N/A	N/A	$8,586,219	N/A
Participant Costs				
Incremental Capital Costs	$3,145,011	N/A	N/A	$2,762,751
Incremental O&M Costs	$863	N/A	N/A	$613
Subtotal	$3,145,874	N/A	N/A	$2,763,364
Total Costs	$3,145,874	$3,410,002	$11,996,222	$6,173,366
Net Benefit (Cost)	$8,074,034	$1,471,730	($7,114,490)	$1,213,050
Benefit/Cost Ratio	3.57	1.43	0.41	**1.20**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	18.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	90.42%
Gross Load Factor at Customer	E	26.21%
Net-to-Gross (Energy)	F	89.0%
Net-to-Gross (Demand)	G	87.7%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$451
MTRC Non-Energy Benefit Adder	**M**	$363
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.8596 kW
Gross Annual kWh Saved at Customer	(B x E x C)	2,296 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	2,043 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	2,158 kWh

Program Summary All Participant		
Total Budget	N	**$3,410,002**
Gross kW Saved at Customer	O	2,690 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**2,313 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	6,177,810 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	6,177,810 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	5,496,178 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**5,805,617 kWh**
TRC Net Benefits with Adder	(O x L)	**$1,213,050**
TRC Net Benefits without Adder	(O x (L - M))	**$236,126**
Utility Program Cost per kWh Lifetime		**$0.0318**
Utility Program Cost per kW at Gen		**$1,474**

*Weighted average of installation and realization rates

CUSTOM EFFICIENCY **2020 ELECTRIC** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$232,516	$232,516	$232,516
Trans. & Dist. Capacity	N/A	$29,119	$29,119	$29,119
Marginal Energy	N/A	$356,238	$356,238	$356,238
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$617,874
Non-Energy Benefits Adder (19.3%)				$119,521
Subtotal	N/A	$617,874	$617,874	$737,395
Other Benefits				
Bill Reduction - Electric	$1,106,065	N/A	N/A	N/A
Participant Rebates and Incentives	$103,589	N/A	N/A	$103,589
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$1,209,654	N/A	N/A	$103,589
Total Benefits	$1,209,654	$617,874	$617,874	$840,984
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$342,690	$342,690	$342,690
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$103,589	$103,589	$103,589
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	($398)	($398)	($398)
Subtotal	N/A	$445,881	$445,881	$445,881
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$962,276	N/A
Subtotal	N/A	N/A	$962,276	N/A
Participant Costs				
Incremental Capital Costs	$452,623	N/A	N/A	$393,782
Incremental O&M Costs	$1,899	N/A	N/A	$1,652
Subtotal	$454,522	N/A	N/A	$395,434
Total Costs	$454,522	$445,881	$1,408,158	$841,315
Net Benefit (Cost)	$755,132	$171,992	($790,284)	($332)
Benefit/Cost Ratio	2.66	1.39	0.44	**1.00**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	20.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	76.56%
Gross Load Factor at Customer	E	43.71%
Net-to-Gross (Energy)	F	87.0%
Net-to-Gross (Demand)	G	87.0%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	-$1
MTRC Non-Energy Benefit Adder	**M**	$414
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.7217 kW
Gross Annual kWh Saved at Customer	(B x E x C)	3,829 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	3,331 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	3,519 kWh

Program Summary All Participant		
Total Budget	N	**$445,881**
Gross kW Saved at Customer	O	289 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**208 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	1,104,962 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	1,104,962 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	961,317 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**1,015,440 kWh**
TRC Net Benefits with Adder	(O x L)	**($332)**
TRC Net Benefits without Adder	(O x (L - M))	**($119,853)**
Utility Program Cost per kWh Lifetime		**$0.0220**
Utility Program Cost per kW at Gen		**$2,141**

*Weighted average of installation and realization rates

DATA CENTER EFFICIENCY — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$135,259	$135,259	$135,259
Trans. & Dist. Capacity	N/A	$16,939	$16,939	$16,939
Marginal Energy	N/A	$250,328	$250,328	$250,328
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$402,526
Non-Energy Benefits Adder (20%)				$80,547
Subtotal	N/A	$402,526	$402,526	$483,073
Other Benefits				
Bill Reduction - Electric	$722,678	N/A	N/A	N/A
Participant Rebates and Incentives	$88,051	N/A	N/A	$88,051
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$810,728	N/A	N/A	$88,051
Total Benefits	$810,728	$402,526	$402,526	$571,124
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$168,265	$168,265	$168,265
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$88,051	$88,051	$88,051
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$1,418	$1,418	$1,418
Subtotal	N/A	$257,734	$257,734	$257,734
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$690,297	N/A
Subtotal	N/A	N/A	$690,297	N/A
Participant Costs				
Incremental Capital Costs	$215,069	N/A	N/A	$205,025
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$215,069	N/A	N/A	$205,025
Total Costs	$215,069	$257,734	$948,031	$462,759
Net Benefit (Cost)	$595,659	$144,792	($545,505)	$108,365
Benefit/Cost Ratio	3.77	1.56	0.42	**1.23**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	9.7 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	98.91%
Gross Load Factor at Customer	E	86.96%
Net-to-Gross (Energy)	F	95.7%
Net-to-Gross (Demand)	G	96.1%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$576
MTRC Non-Energy Benefit Adder	**M**	$428
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	1.0296 kW
Gross Annual kWh Saved at Customer	(B x E x C)	7,618 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	7,290 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	7,700 kWh

Program Summary All Participant

Total Budget	N	**$257,734**
Gross kW Saved at Customer	O	188 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**194 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	1,434,090 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	1,434,090 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	1,372,316 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**1,449,578 kWh**
TRC Net Benefits with Adder	(O x L)	**$108,365**
TRC Net Benefits without Adder	(O x (L - M))	**$27,818**
Utility Program Cost per kWh Lifetime		**$0.0184**
Utility Program Cost per kW at Gen		**$1,330**

*Weighted average of installation and realization rates

ENERGY MANAGEMENT SYSTEMS — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$83,349	$83,349	$83,349
Trans. & Dist. Capacity	N/A	$10,438	$10,438	$10,438
Marginal Energy	N/A	$1,016,398	$1,016,398	$1,016,398
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$1,110,185
Non-Energy Benefits Adder (20.7%)				$229,515
Subtotal	N/A	$1,110,185	$1,110,185	$1,339,700
Other Benefits				
Bill Reduction - Electric	$2,114,060	N/A	N/A	N/A
Participant Rebates and Incentives	$310,483	N/A	N/A	$310,483
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$463,231	N/A	N/A	$403,011
Subtotal	$2,887,774	N/A	N/A	$713,494
Total Benefits	$2,887,774	$1,110,185	$1,110,185	$2,053,194
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$246,444	$246,444	$246,444
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$310,483	$310,483	$310,483
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$154	$154	$154
Subtotal	N/A	$557,081	$557,081	$557,081
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,839,232	N/A
Subtotal	N/A	N/A	$1,839,232	N/A
Participant Costs				
Incremental Capital Costs	$1,308,459	N/A	N/A	$1,138,359
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$1,308,459	N/A	N/A	$1,138,359
Total Costs	$1,308,459	$557,081	$2,396,313	$1,695,440
Net Benefit (Cost)	$1,579,315	$553,104	($1,286,128)	$357,754
Benefit/Cost Ratio	2.21	1.99	0.46	**1.21**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	15.55%
Gross Load Factor at Customer	E	81.09%
Net-to-Gross (Energy)	F	87.0%
Net-to-Gross (Demand)	G	87.0%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$602
MTRC Non-Energy Benefit Adder	**M**	$387
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.1466 kW
Gross Annual kWh Saved at Customer	(B x E x C)	7,103 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	6,180 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	6,528 kWh

Program Summary All Participant

Total Budget	N	**$557,081**
Gross kW Saved at Customer	O	594 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**87 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	4,217,907 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	4,217,907 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	3,669,579 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**3,876,179 kWh**
TRC Net Benefits with Adder	(O x L)	**$357,754**
TRC Net Benefits without Adder	(O x (L - M))	**$128,239**
Utility Program Cost per kWh Lifetime		**$0.0096**
Utility Program Cost per kW at Gen		**$6,400**

*Weighted average of installation and realization rates

HEATING EFFICIENCY — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$1,993	$1,993	$1,993
Trans. & Dist. Capacity	N/A	$250	$250	$250
Marginal Energy	N/A	$6,955	$6,955	$6,955
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$9,197
Non-Energy Benefits Adder (20%)				$1,839
Subtotal	N/A	$9,197	$9,197	$11,037
Other Benefits				
Bill Reduction - Electric	$19,502	N/A	N/A	N/A
Participant Rebates and Incentives	$3,545	N/A	N/A	$3,545
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$23,047	N/A	N/A	$3,545
Total Benefits	$23,047	$9,197	$9,197	$14,582
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$24,829	$24,829	$24,829
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$3,545	$3,545	$3,545
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$28,375	$28,375	$28,375
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$16,771	N/A
Subtotal	N/A	N/A	$16,771	N/A
Participant Costs				
Incremental Capital Costs	$2,066	N/A	N/A	$1,777
Incremental O&M Costs	$453	N/A	N/A	$389
Subtotal	$2,519	N/A	N/A	$2,166
Total Costs	$2,519	$28,375	$45,146	$30,541
Net Benefit (Cost)	$20,528	($19,177)	($35,949)	($15,959)
Benefit/Cost Ratio	9.15	0.32	0.20	**0.48**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	19.37%
Gross Load Factor at Customer	E	28.15%
Net-to-Gross (Energy)	F	86.0%
Net-to-Gross (Demand)	G	86.0%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	-$1,384
MTRC Non-Energy Benefit Adder	**M**	$160
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.1805 kW
Gross Annual kWh Saved at Customer	(B x E x C)	2,466 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	2,121 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	2,240 kWh

Program Summary All Participant		
Total Budget	N	**$28,375**
Gross kW Saved at Customer	O	12 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**2 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	28,431 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	28,431 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	24,451 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**25,827 kWh**
TRC Net Benefits with Adder	(O x L)	**($15,959)**
TRC Net Benefits without Adder	(O x (L - M))	**($17,798)**
Utility Program Cost per kWh Lifetime		**$0.0732**
Utility Program Cost per kW at Gen		**$13,636**

*Weighted average of installation and realization rates

LED STREET LIGHTING **2020 ELECTRIC** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$0	$0	$0
Trans. & Dist. Capacity	N/A	$0	$0	$0
Marginal Energy	N/A	$581,702	$581,702	$581,702
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$581,702
Non-Energy Benefits Adder (20%)				$116,340
Subtotal	N/A	$581,702	$581,702	$698,043
Other Benefits				
Bill Reduction - Electric	$1,596,722	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	$1,596,722	N/A	N/A	$0
Total Benefits	$1,596,722	$581,702	$581,702	$698,043
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	$1,437,050	N/A
Subtotal	N/A	N/A	$1,437,050	N/A
Participant Costs				
Incremental Capital Costs	$590,655	N/A	N/A	$531,589
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$590,655	N/A	N/A	$531,589
Total Costs	$590,655	$0	$1,437,050	$531,589
Net Benefit (Cost)	$1,006,068	$581,702	($855,348)	$166,453
Benefit/Cost Ratio	2.70	INF	0.40	**1.31**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	0.00%
Gross Load Factor at Customer	E	47.43%
Net-to-Gross (Energy)	F	90.0%
Net-to-Gross (Demand)	G	0.0%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**0.0%**
MTRC Net Benefit (Cost)	**L**	$304
MTRC Non-Energy Benefit Adder	**M**	$213
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	- kW
Gross Annual kWh Saved at Customer	(B x E x C)	4,155 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	3,740 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	3,950 kWh

Program Summary All Participant		
Total Budget	N	**$0**
Gross kW Saved at Customer	O	547 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**0 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	2,273,652 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	2,273,652 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	2,046,287 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**2,161,494 kWh**
TRC Net Benefits with Adder	(O x L)	**$166,453**
TRC Net Benefits without Adder	(O x (L - M))	**$50,113**
Utility Program Cost per kWh Lifetime		**$0.0000**
Utility Program Cost per kW at Gen		**#DIV/0!**

*Weighted average of installation and realization rates

LIGHTING EFFICIENCY — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$12,597,912	$12,597,912	$12,597,912
Trans. & Dist. Capacity	N/A	$1,577,707	$1,577,707	$1,577,707
Marginal Energy	N/A	$24,688,240	$24,688,240	$24,688,240
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$38,863,859
Non-Energy Benefits Adder (20.6%)				$8,011,397
Subtotal	N/A	$38,863,859	$38,863,859	$46,875,256
Other Benefits				
Bill Reduction - Electric	$84,126,303	N/A	N/A	N/A
Participant Rebates and Incentives	$9,251,382	N/A	N/A	$9,251,382
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$93,377,686	N/A	N/A	$9,251,382
Total Benefits	$93,377,686	$38,863,859	$38,863,859	$56,126,638
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$2,340,323	$2,340,323	$2,340,323
Advertising/Promotion/Customer Ed	N/A	$474,200	$474,200	$474,200
Participant Rebates and Incentives	N/A	$9,251,382	$9,251,382	$9,251,382
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$21,977	$21,977	$21,977
Subtotal	N/A	$12,087,883	$12,087,883	$12,087,883
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$64,441,001	N/A
Subtotal	N/A	N/A	$64,441,001	N/A
Participant Costs				
Incremental Capital Costs	$31,691,346	N/A	N/A	$23,873,061
Incremental O&M Costs	$1,313,001	N/A	N/A	$971,349
Subtotal	$33,004,346	N/A	N/A	$24,844,409
Total Costs	$33,004,346	$12,087,883	$76,528,884	$36,932,292
Net Benefit (Cost)	$60,373,339	$26,775,976	($37,665,025)	$19,194,346
Benefit/Cost Ratio	2.83	3.22	0.51	**1.52**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	16.7 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	67.41%
Gross Load Factor at Customer	E	50.41%
Net-to-Gross (Energy)	F	78.0%
Net-to-Gross (Demand)	G	78.4%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.1%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$875
MTRC Non-Energy Benefit Adder	**M**	$365
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.5726 kW
Gross Annual kWh Saved at Customer	(B x E x C)	4,416 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	3,447 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	3,642 kWh

Program Summary All Participant

Total Budget	N	**$12,087,883**
Gross kW Saved at Customer	O	21,935 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**12,560 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	96,860,421 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	96,949,373 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	75,619,186 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**79,876,609 kWh**
TRC Net Benefits with Adder	(O x L)	**$19,194,346**
TRC Net Benefits without Adder	(O x (L - M))	**$11,182,949**

Utility Program Cost per kWh Lifetime	**$0.0091**
Utility Program Cost per kW at Gen	**$962**

*Weighted average of installation and realization rates

LIGHTING - SMALL BUSINESS — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$5,863,089	$5,863,089	$5,863,089
Trans. & Dist. Capacity	N/A	$734,262	$734,262	$734,262
Marginal Energy	N/A	$10,432,290	$10,432,290	$10,432,290
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$17,029,641
Non-Energy Benefits Adder (20%)				$3,406,964
Subtotal	N/A	$17,029,641	$17,029,641	$20,436,605
Other Benefits				
Bill Reduction - Electric	$31,793,080	N/A	N/A	N/A
Participant Rebates and Incentives	$3,256,638	N/A	N/A	$3,256,638
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$35,049,718	N/A	N/A	$3,256,638
Total Benefits	$35,049,718	$17,029,641	$17,029,641	$23,693,243
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$991,145	$991,145	$991,145
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$3,256,638	$3,256,638	$3,256,638
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$17,258	$17,258	$17,258
Subtotal	N/A	$4,265,042	$4,265,042	$4,265,042
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$28,784,506	N/A
Subtotal	N/A	N/A	$28,784,506	N/A
Participant Costs				
Incremental Capital Costs	$8,642,008	N/A	N/A	$7,813,956
Incremental O&M Costs	$230,654	N/A	N/A	$207,182
Subtotal	$8,872,661	N/A	N/A	$8,021,138
Total Costs	$8,872,661	$4,265,042	$33,049,548	$12,286,179
Net Benefit (Cost)	$26,177,057	$12,764,600	($16,019,907)	$11,407,064
Benefit/Cost Ratio	3.95	3.99	0.52	**1.93**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	11.9 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	70.36%
Gross Load Factor at Customer	E	51.10%
Net-to-Gross (Energy)	F	90.9%
Net-to-Gross (Demand)	G	91.0%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**99.7%**
Installation Rate (Demand)*	**K**	**99.6%**
MTRC Net Benefit (Cost)	**L**	$1,044
MTRC Non-Energy Benefit Adder	**M**	$312
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.6910 kW
Gross Annual kWh Saved at Customer	(B x E x C)	4,476 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	4,054 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	4,283 kWh

Program Summary All Participant		
Total Budget	N	**$4,265,042**
Gross kW Saved at Customer	O	10,922 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**7,548 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	48,889,462 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	48,725,669 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	44,283,727 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**46,776,938 kWh**
TRC Net Benefits with Adder	(O x L)	**$11,407,064**
TRC Net Benefits without Adder	(O x (L - M))	**$8,000,100**
Utility Program Cost per kWh Lifetime		**$0.0077**
Utility Program Cost per kW at Gen		**$565**

*Weighted average of installation and realization rates

MOTOR & DRIVE EFFICIENCY — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$2,334,482	$2,334,482	$2,334,482
Trans. & Dist. Capacity	N/A	$292,360	$292,360	$292,360
Marginal Energy	N/A	$4,682,969	$4,682,969	$4,682,969
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$7,309,811
Non-Energy Benefits Adder (19%)				$1,387,905
Subtotal	N/A	$7,309,811	$7,309,811	$8,697,716
Other Benefits				
Bill Reduction - Electric	$17,237,091	N/A	N/A	N/A
Participant Rebates and Incentives	$1,599,786	N/A	N/A	$1,599,786
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$18,836,877	N/A	N/A	$1,599,786
Total Benefits	$18,836,877	$7,309,811	$7,309,811	$10,297,502
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$508,725	$508,725	$508,725
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$1,599,786	$1,599,786	$1,599,786
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$17,809	$17,809	$17,809
Subtotal	N/A	$2,126,321	$2,126,321	$2,126,321
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$13,962,044	N/A
Subtotal	N/A	N/A	$13,962,044	N/A
Participant Costs				
Incremental Capital Costs	$4,233,558	N/A	N/A	$3,429,182
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$4,233,558	N/A	N/A	$3,429,182
Total Costs	$4,233,558	$2,126,321	$16,088,364	$5,555,503
Net Benefit (Cost)	$14,603,319	$5,183,490	($8,778,553)	$4,742,000
Benefit/Cost Ratio	4.45	3.44	0.45	**1.85**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	15.9 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	80.03%
Gross Load Factor at Customer	E	65.18%
Net-to-Gross (Energy)	F	81.0%
Net-to-Gross (Demand)	G	81.0%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$1,368
MTRC Non-Energy Benefit Adder	**M**	$400
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.7024 kW
Gross Annual kWh Saved at Customer	(B x E x C)	5,710 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	4,625 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	4,885 kWh

Program Summary All Participant		
Total Budget	N	**$2,126,321**
Gross kW Saved at Customer	O	3,465 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**2,434 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	19,786,786 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	19,786,786 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	16,027,297 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**16,929,647 kWh**
TRC Net Benefits with Adder	(O x L)	**$4,742,000**
TRC Net Benefits without Adder	(O x (L - M))	**$3,354,095**
Utility Program Cost per kWh Lifetime		**$0.0079**
Utility Program Cost per kW at Gen		**$873**

*Weighted average of installation and realization rates

MULTIFAMILY BUILDINGS — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$615,827	$615,827	$615,827
Trans. & Dist. Capacity	N/A	$77,123	$77,123	$77,123
Marginal Energy	N/A	$1,370,557	$1,370,557	$1,370,557
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$2,063,507
Non-Energy Benefits Adder (20.4%)				$421,813
Subtotal	N/A	$2,063,507	$2,063,507	$2,485,320
Other Benefits				
Bill Reduction - Electric	$3,298,189	N/A	N/A	N/A
Participant Rebates and Incentives	$750,565	N/A	N/A	$750,565
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$4,048,754	N/A	N/A	$750,565
Total Benefits	$4,048,754	$2,063,507	$2,063,507	$3,235,885
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$233,710	$233,710	$233,710
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$750,565	$750,565	$750,565
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$984,274	$984,274	$984,274
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$3,298,189	N/A
Subtotal	N/A	N/A	$3,298,189	N/A
Participant Costs				
Incremental Capital Costs	$875,659	N/A	N/A	$875,659
Incremental O&M Costs	$22,287	N/A	N/A	$22,287
Subtotal	$897,946	N/A	N/A	$897,946
Total Costs	$897,946	$984,274	$4,282,464	$1,882,220
Net Benefit (Cost)	$3,150,808	$1,079,232	($2,218,957)	$1,353,665
Benefit/Cost Ratio	4.51	2.10	0.48	**1.72**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	13.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	27.41%
Gross Load Factor at Customer	E	25.53%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	5.649%
Transmission Loss Factor (Demand)	I	8.684%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$564
MTRC Non-Energy Benefit Adder	**M**	$176
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.3001 kW
Gross Annual kWh Saved at Customer	(B x E x C)	2,236 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	2,236 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	2,370 kWh

Program Summary All Participant

Total Budget	N	**$984,274**
Gross kW Saved at Customer	O	2,401 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**721 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	5,369,385 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	5,369,385 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	5,369,385 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**5,690,833 kWh**
TRC Net Benefits with Adder	(O x L)	**$1,353,665**
TRC Net Benefits without Adder	(O x (L - M))	**$931,852**
Utility Program Cost per kWh Lifetime		**$0.0133**
Utility Program Cost per kW at Gen		**$1,366**

*Weighted average of installation and realization rates

NEW CONSTRUCTION **2020 ELECTRIC** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$21,591,692	$21,591,692	$21,591,692
Trans. & Dist. Capacity	N/A	$2,704,055	$2,704,055	$2,704,055
Marginal Energy	N/A	$22,821,804	$22,821,804	$22,821,804
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$47,117,552
Non-Energy Benefits Adder (20%)				$9,423,510
Subtotal	N/A	$47,117,552	$47,117,552	$56,541,062
Other Benefits				
Bill Reduction - Electric	$62,822,530	N/A	N/A	N/A
Participant Rebates and Incentives	$10,007,795	N/A	N/A	$10,007,795
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$72,830,325	N/A	N/A	$10,007,795
Total Benefits	$72,830,325	$47,117,552	$47,117,552	$66,548,857
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$3,774,421	$3,774,421	$3,774,421
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$10,007,795	$10,007,795	$10,007,795
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$462,492	$462,492	$462,492
Subtotal	N/A	$14,244,708	$14,244,708	$14,244,708
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$59,681,403	N/A
Subtotal	N/A	N/A	$59,681,403	N/A
Participant Costs				
Incremental Capital Costs	$24,386,037	N/A	N/A	$23,166,735
Incremental O&M Costs	$234,253	N/A	N/A	$222,540
Subtotal	$24,620,289	N/A	N/A	$23,389,275
Total Costs	$24,620,289	$14,244,708	$73,926,111	$37,633,983
Net Benefit (Cost)	$48,210,036	$32,872,844	($26,808,559)	$28,914,874
Benefit/Cost Ratio	2.96	3.31	0.64	**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		
Lifetime (Weighted on Generator kWh)	A	20.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	96.61%
Gross Load Factor at Customer	E	37.34%
Net-to-Gross (Energy)	F	95.0%
Net-to-Gross (Demand)	G	95.0%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$1,519
MTRC Non-Energy Benefit Adder	**M**	$495
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.9945 kW
Gross Annual kWh Saved at Customer	(B x E x C)	3,271 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	3,107 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	3,282 kWh

Program Summary All Participant		
Total Budget	N	**$14,244,708**
Gross kW Saved at Customer	O	19,032 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**18,928 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	62,246,967 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	62,246,967 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	59,134,619 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**62,463,947 kWh**
TRC Net Benefits with Adder	(O x L)	**$28,914,874**
TRC Net Benefits without Adder	(O x (L - M))	**$19,491,364**
Utility Program Cost per kWh Lifetime		**$0.0114**
Utility Program Cost per kW at Gen		**$753**

*Weighted average of installation and realization rates

RECOMMISSIONING **2020 ELECTRIC** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$14,201	$14,201	$14,201
Trans. & Dist. Capacity	N/A	$1,778	$1,778	$1,778
Marginal Energy	N/A	$68,861	$68,861	$68,861
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$84,841
Non-Energy Benefits Adder (20%)				$16,968
Subtotal	N/A	$84,841	$84,841	$101,809
Other Benefits				
Bill Reduction - Electric	$239,347	N/A	N/A	N/A
Participant Rebates and Incentives	$52,179	N/A	N/A	$52,179
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$291,526	N/A	N/A	$52,179
Total Benefits	$291,526	$84,841	$84,841	$153,988
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$69,547	$69,547	$69,547
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$52,179	$52,179	$52,179
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$121,726	$121,726	$121,726
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$215,412	N/A
Subtotal	N/A	N/A	$215,412	N/A
Participant Costs				
Incremental Capital Costs	$58,777	N/A	N/A	$52,899
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$58,777	N/A	N/A	$52,899
Total Costs	$58,777	$121,726	$337,138	$174,625
Net Benefit (Cost)	$232,749	($36,886)	($252,298)	($20,637)
Benefit/Cost Ratio	4.96	0.70	0.25	**0.88**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	5.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	53.10%
Gross Load Factor at Customer	E	128.69%
Net-to-Gross (Energy)	F	90.0%
Net-to-Gross (Demand)	G	90.0%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	-$316
MTRC Non-Energy Benefit Adder	**M**	$259
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.5178 kW
Gross Annual kWh Saved at Customer	(B x E x C)	11,273 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	10,146 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	10,717 kWh

Program Summary All Participant		
Total Budget	N	**$121,726**
Gross kW Saved at Customer	O	65 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**34 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	737,269 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	737,269 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	663,542 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**700,900 kWh**
TRC Net Benefits with Adder	(O x L)	**($20,637)**
TRC Net Benefits without Adder	(O x (L - M))	**($37,605)**
Utility Program Cost per kWh Lifetime		**$0.0309**
Utility Program Cost per kW at Gen		**$3,594**

*Weighted average of installation and realization rates

SELF DIRECT **2020 ELECTRIC** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$169,453	$169,453	$169,453
Trans. & Dist. Capacity	N/A	$21,222	$21,222	$21,222
Marginal Energy	N/A	$372,727	$372,727	$372,727
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$563,402
Non-Energy Benefits Adder (20%)				$112,680
Subtotal	N/A	$563,402	$563,402	$676,082
Other Benefits				
Bill Reduction - Electric	$1,114,095	N/A	N/A	N/A
Participant Rebates and Incentives	$172,174	N/A	N/A	$172,174
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$89,219	N/A	N/A	$80,832
Subtotal	$1,375,487	N/A	N/A	$253,006
Total Benefits	$1,375,487	$563,402	$563,402	$929,088
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$107,319	$107,319	$107,319
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$172,174	$172,174	$172,174
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$279,493	$279,493	$279,493
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,009,370	N/A
Subtotal	N/A	N/A	$1,009,370	N/A
Participant Costs				
Incremental Capital Costs	$538,434	N/A	N/A	$487,821
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$538,434	N/A	N/A	$487,821
Total Costs	$538,434	$279,493	$1,288,863	$767,314
Net Benefit (Cost)	$837,053	$283,909	($725,461)	$161,774
Benefit/Cost Ratio	2.55	2.02	0.44	**1.21**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	18.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	53.09%
Gross Load Factor at Customer	E	44.59%
Net-to-Gross (Energy)	F	90.6%
Net-to-Gross (Demand)	G	90.6%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$534
MTRC Non-Energy Benefit Adder	**M**	$372
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.5212 kW
Gross Annual kWh Saved at Customer	(B x E x C)	3,906 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	3,539 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	3,738 kWh

Program Summary All Participant		
Total Budget	N	**$279,493**
Gross kW Saved at Customer	O	303 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**158 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	1,183,400 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	1,183,400 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	1,072,160 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**1,132,524 kWh**
TRC Net Benefits with Adder	(O x L)	**$161,774**
TRC Net Benefits without Adder	(O x (L - M))	**$49,093**
Utility Program Cost per kWh Lifetime		**$0.0137**
Utility Program Cost per kW at Gen		**$1,770**

*Weighted average of installation and realization rates

STRATEGIC ENERGY MANAGEMENT — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$4,961,628	$4,961,628	$4,961,628
Trans. & Dist. Capacity	N/A	$621,372	$621,372	$621,372
Marginal Energy	N/A	$10,732,479	$10,732,479	$10,732,479
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$16,315,479
Non-Energy Benefits Adder (19.5%)				$3,186,346
Subtotal	N/A	$16,315,479	$16,315,479	$19,501,825
Other Benefits				
Bill Reduction - Electric	$30,004,078	N/A	N/A	N/A
Participant Rebates and Incentives	$3,211,480	N/A	N/A	$3,211,480
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$138,927	N/A	N/A	$129,203
Subtotal	$33,354,486	N/A	N/A	$3,340,683
Total Benefits	$33,354,486	$16,315,479	$16,315,479	$22,842,508
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$974,053	$974,053	$974,053
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$3,211,480	$3,211,480	$3,211,480
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$189,639	$189,639	$189,639
Subtotal	N/A	$4,375,172	$4,375,172	$4,375,172
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$27,949,222	N/A
Subtotal	N/A	N/A	$27,949,222	N/A
Participant Costs				
Incremental Capital Costs	$6,933,336	N/A	N/A	$6,449,578
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$6,933,336	N/A	N/A	$6,449,578
Total Costs	$6,933,336	$4,375,172	$32,324,393	$10,824,750
Net Benefit (Cost)	$26,421,150	$11,940,307	($16,008,914)	$12,017,758
Benefit/Cost Ratio	4.81	3.73	0.50	**2.11**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	16.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	35.70%
Gross Load Factor at Customer	E	30.78%
Net-to-Gross (Energy)	F	93.8%
Net-to-Gross (Demand)	G	93.7%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$854
MTRC Non-Energy Benefit Adder	**M**	$226
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.3625 kW
Gross Annual kWh Saved at Customer	(B x E x C)	2,696 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	2,528 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	2,670 kWh

Program Summary All Participant

Total Budget	N	**$4,375,172**
Gross kW Saved at Customer	O	14,074 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**5,102 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	37,942,452 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	37,942,452 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	35,577,866 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**37,580,929 kWh**
TRC Net Benefits with Adder	(O x L)	**$12,017,758**
TRC Net Benefits without Adder	(O x (L - M))	**$8,831,412**
Utility Program Cost per kWh Lifetime		**$0.0071**
Utility Program Cost per kW at Gen		**$857**

*Weighted average of installation and realization rates

ENERGY EFFICIENT SHOWERHEAD — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$31,661	$31,661	$31,661
Trans. & Dist. Capacity	N/A	$3,965	$3,965	$3,965
Marginal Energy	N/A	$104,043	$104,043	$104,043
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$139,669
Non-Energy Benefits Adder (20%)				$27,934
Subtotal	N/A	$139,669	$139,669	$167,603
Other Benefits				
Bill Reduction - Electric	$700,210	N/A	N/A	N/A
Participant Rebates and Incentives	$4,345	N/A	N/A	$4,345
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$341,361	N/A	N/A	$228,244
Subtotal	$1,045,916	N/A	N/A	$232,589
Total Benefits	$1,045,916	$139,669	$139,669	$400,192
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$14,195	$14,195	$14,195
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$4,345	$4,345	$4,345
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$18,540	$18,540	$18,540
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$466,833	N/A
Subtotal	N/A	N/A	$466,833	N/A
Participant Costs				
Incremental Capital Costs	$6,734	N/A	N/A	$6,666
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$6,734	N/A	N/A	$6,666
Total Costs	$6,734	$18,540	$485,373	$25,206
Net Benefit (Cost)	$1,039,182	$121,130	($345,703)	$374,986
Benefit/Cost Ratio	155.32	7.53	0.29	**15.88**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	10.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	75.90%
Gross Load Factor at Customer	E	101.00%
Net-to-Gross (Energy)	F	99.0%
Net-to-Gross (Demand)	G	99.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**67.3%**
Installation Rate (Demand)*	**K**	**61.9%**
MTRC Net Benefit (Cost)	**L**	$4,360
MTRC Non-Energy Benefit Adder	**M**	$325
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.5123 kW
Gross Annual kWh Saved at Customer	(B x E x C)	8,847 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	5,899 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	6,301 kWh

Program Summary All Participant

Total Budget	N	**$18,540**
Gross kW Saved at Customer	O	86 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**44 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	760,924 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	512,436 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	507,311 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**541,883 kWh**
TRC Net Benefits with Adder	(O x L)	**$374,986**
TRC Net Benefits without Adder	(O x (L - M))	**$347,052**
Utility Program Cost per kWh Lifetime		**$0.0034**
Utility Program Cost per kW at Gen		**$421**

*Weighted average of installation and realization rates

ENERGY FEEDBACK RESIDENTIAL — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$1,314,403	$1,314,403	$1,314,403
Trans. & Dist. Capacity	N/A	$164,594	$164,594	$164,594
Marginal Energy	N/A	$1,161,267	$1,161,267	$1,161,267
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$2,640,265
Non-Energy Benefits Adder (20%)				$528,053
Subtotal	N/A	$2,640,265	$2,640,265	$3,168,318
Other Benefits				
Bill Reduction - Electric	$6,006,693	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	$6,006,693	N/A	N/A	$0
Total Benefits	$6,006,693	$2,640,265	$2,640,265	$3,168,318
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$1,593,925	$1,593,925	$1,593,925
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	$1,593,925	$1,593,925	$1,593,925
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$6,006,693	N/A
Subtotal	N/A	N/A	$6,006,693	N/A
Participant Costs				
Incremental Capital Costs	$0	N/A	N/A	$0
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$0	N/A	N/A	$0
Total Costs	$0	$1,593,925	$7,600,618	$1,593,925
Net Benefit (Cost)	$6,006,693	$1,046,340	($4,960,353)	$1,574,393
Benefit/Cost Ratio	INF	1.66	0.35	**1.99**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	3.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	93.82%
Gross Load Factor at Customer	E	33.96%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$335
MTRC Non-Energy Benefit Adder	**M**	$112
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	1.0324 kW
Gross Annual kWh Saved at Customer	(B x E x C)	2,975 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	2,975 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	3,178 kWh

Program Summary All Participant		
Total Budget	N	**$1,593,925**
Gross kW Saved at Customer	O	4,703 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**4,855 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	13,991,275 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	13,991,275 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	13,991,275 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**14,944,750 kWh**
TRC Net Benefits with Adder	(O x L)	**$1,574,393**
TRC Net Benefits without Adder	(O x (L - M))	**$1,046,340**
Utility Program Cost per kWh Lifetime		**$0.0356**
Utility Program Cost per kW at Gen		**$328**

*Weighted average of installation and realization rates

ENERGY STAR NEW HOMES — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$812,048	$812,048	$812,048
Trans. & Dist. Capacity	N/A	$101,698	$101,698	$101,698
Marginal Energy	N/A	$1,816,369	$1,816,369	$1,816,369
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$2,730,115
Non-Energy Benefits Adder (20%)				$546,023
Subtotal	N/A	$2,730,115	$2,730,115	$3,276,137
Other Benefits				
Bill Reduction - Electric	$8,097,836	N/A	N/A	N/A
Participant Rebates and Incentives	$606,618	N/A	N/A	$606,618
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$3,606	N/A	N/A	$3,318
Subtotal	$8,708,060	N/A	N/A	$609,936
Total Benefits	$8,708,060	$2,730,115	$2,730,115	$3,886,073
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$230,222	$230,222	$230,222
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$606,618	$606,618	$606,618
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$98,595	$98,595	$98,595
Subtotal	N/A	$935,434	$935,434	$935,434
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$7,450,009	N/A
Subtotal	N/A	N/A	$7,450,009	N/A
Participant Costs				
Incremental Capital Costs	$2,517,879	N/A	N/A	$2,316,449
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$2,517,879	N/A	N/A	$2,316,449
Total Costs	$2,517,879	$935,434	$8,385,444	$3,251,883
Net Benefit (Cost)	$6,190,181	$1,794,680	($5,655,329)	$634,190
Benefit/Cost Ratio	3.46	2.92	0.33	**1.20**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	20.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	83.78%
Gross Load Factor at Customer	E	58.81%
Net-to-Gross (Energy)	F	92.0%
Net-to-Gross (Demand)	G	92.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$755
MTRC Non-Energy Benefit Adder	**M**	$650
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.8482 kW
Gross Annual kWh Saved at Customer	(B x E x C)	5,152 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	4,740 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	5,063 kWh

Program Summary All Participant		
Total Budget	N	**$935,434**
Gross kW Saved at Customer	O	840 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**713 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	4,327,946 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	4,327,946 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	3,981,710 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**4,253,055 kWh**
TRC Net Benefits with Adder	(O x L)	**$634,190**
TRC Net Benefits without Adder	(O x (L - M))	**$88,167**
Utility Program Cost per kWh Lifetime		**$0.0110**
Utility Program Cost per kW at Gen		**$1,313**

*Weighted average of installation and realization rates

EVAPORATIVE COOLING — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$6,557,593	$6,557,593	$6,557,593
Trans. & Dist. Capacity	N/A	$821,244	$821,244	$821,244
Marginal Energy	N/A	$1,622,740	$1,622,740	$1,622,740
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$9,001,576
Non-Energy Benefits Adder (20%)				$1,800,315
Subtotal	N/A	$9,001,576	$9,001,576	$10,801,891
Other Benefits				
Bill Reduction - Electric	$9,486,497	N/A	N/A	N/A
Participant Rebates and Incentives	$2,177,760	N/A	N/A	$2,177,760
Incremental Capital Savings	$9,397,861	N/A	N/A	$6,554,555
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$21,062,118	N/A	N/A	$8,732,316
Total Benefits	$21,062,118	$9,001,576	$9,001,576	$19,534,207
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$706,198	$706,198	$706,198
Advertising/Promotion/Customer Ed	N/A	$252,587	$252,587	$252,587
Participant Rebates and Incentives	N/A	$2,177,760	$2,177,760	$2,177,760
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$3,300	$3,300	$3,300
Subtotal	N/A	$3,139,845	$3,139,845	$3,139,845
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$6,864,909	N/A
Subtotal	N/A	N/A	$6,864,909	N/A
Participant Costs				
Incremental Capital Costs	$0	N/A	N/A	$0
Incremental O&M Costs	$814,986	N/A	N/A	$581,356
Subtotal	$814,986	N/A	N/A	$581,356
Total Costs	$814,986	$3,139,845	$10,004,754	$3,721,201
Net Benefit (Cost)	$20,247,132	$5,861,731	($1,003,178)	$15,813,005
Benefit/Cost Ratio	25.84	2.87	0.90	**5.25**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	70.00%
Gross Load Factor at Customer	E	6.35%
Net-to-Gross (Energy)	F	72.4%
Net-to-Gross (Demand)	G	72.4%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$1,287
MTRC Non-Energy Benefit Adder	**M**	$147
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.5575 kW
Gross Annual kWh Saved at Customer	(B x E x C)	556 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	402 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	430 kWh

Program Summary All Participant		
Total Budget	N	**$3,139,845**
Gross kW Saved at Customer	O	12,283 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**6,848 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	6,827,963 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	6,827,963 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	4,941,059 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**5,277,782 kWh**
TRC Net Benefits with Adder	(O x L)	**$15,813,005**
TRC Net Benefits without Adder	(O x (L - M))	**$14,012,690**
Utility Program Cost per kWh Lifetime		**$0.0397**
Utility Program Cost per kW at Gen		**$459**

*Weighted average of installation and realization rates

HIGH EFFICIENCY AIR CONDITIONING — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$3,178,068	$3,178,068	$3,178,068
Trans. & Dist. Capacity	N/A	$398,008	$398,008	$398,008
Marginal Energy	N/A	$1,403,689	$1,403,689	$1,403,689
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$4,979,765
Non-Energy Benefits Adder (20%)				$995,953
Subtotal	N/A	$4,979,765	$4,979,765	$5,975,718
Other Benefits				
Bill Reduction - Electric	$8,365,457	N/A	N/A	N/A
Participant Rebates and Incentives	$2,490,635	N/A	N/A	$2,490,635
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$10,856,091	N/A	N/A	$2,490,635
Total Benefits	$10,856,091	$4,979,765	$4,979,765	$8,466,353
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$597,890	$597,890	$597,890
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$2,490,635	$2,490,635	$2,490,635
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$45,164	$45,164	$45,164
Subtotal	N/A	$3,133,689	$3,133,689	$3,133,689
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$5,772,105	N/A
Subtotal	N/A	N/A	$5,772,105	N/A
Participant Costs				
Incremental Capital Costs	$3,878,779	N/A	N/A	$2,734,212
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$3,878,779	N/A	N/A	$2,734,212
Total Costs	$3,878,779	$3,133,689	$8,905,794	$5,867,900
Net Benefit (Cost)	$6,977,312	$1,846,076	($3,926,029)	$2,598,452
Benefit/Cost Ratio	2.80	1.59	0.56	**1.44**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	18.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	88.40%
Gross Load Factor at Customer	E	12.75%
Net-to-Gross (Energy)	F	70.9%
Net-to-Gross (Demand)	G	70.5%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**98.3%**
Installation Rate (Demand)*	**K**	**97.8%**
MTRC Net Benefit (Cost)	**L**	$592
MTRC Non-Energy Benefit Adder	**M**	$227
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.6707 kW
Gross Annual kWh Saved at Customer	(B x E x C)	1,116 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	779 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	832 kWh

Program Summary All Participant		
Total Budget	N	**$3,133,689**
Gross kW Saved at Customer	O	4,390 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**2,944 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	4,901,264 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	4,819,946 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	3,418,647 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**3,651,620 kWh**
TRC Net Benefits with Adder	(O x L)	**$2,598,452**
TRC Net Benefits without Adder	(O x (L - M))	**$1,602,499**
Utility Program Cost per kWh Lifetime		**$0.0474**
Utility Program Cost per kW at Gen		**$1,064**

*Weighted average of installation and realization rates

HOME ENERGY SQUAD **2020 ELECTRIC** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$168,309	$168,309	$168,309
Trans. & Dist. Capacity	N/A	$21,078	$21,078	$21,078
Marginal Energy	N/A	$375,652	$375,652	$375,652
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$565,040
Non-Energy Benefits Adder (20%)				$113,008
Subtotal	N/A	$565,040	$565,040	$678,048
Other Benefits				
Bill Reduction - Electric	$1,431,573	N/A	N/A	N/A
Participant Rebates and Incentives	$60,555	N/A	N/A	$60,555
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$7,632	N/A	N/A	$7,632
Subtotal	$1,499,761	N/A	N/A	$68,188
Total Benefits	$1,499,761	$565,040	$565,040	$746,235
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$113,746	$113,746	$113,746
Advertising/Promotion/Customer Ed	N/A	$65,138	$65,138	$65,138
Participant Rebates and Incentives	N/A	$60,555	$60,555	$60,555
Equipment & Installation	N/A	$162,110	$162,110	$162,110
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$401,549	$401,549	$401,549
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,431,573	N/A
Subtotal	N/A	N/A	$1,431,573	N/A
Participant Costs				
Incremental Capital Costs	$67,600	N/A	N/A	$67,600
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$67,600	N/A	N/A	$67,600
Total Costs	$67,600	$401,549	$1,833,123	$469,149
Net Benefit (Cost)	$1,432,161	$163,490	($1,268,083)	$277,086
Benefit/Cost Ratio	22.19	1.41	0.31	**1.59**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	19.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	14.69%
Gross Load Factor at Customer	E	11.29%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$284
MTRC Non-Energy Benefit Adder	**M**	$116
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.1616 kW
Gross Annual kWh Saved at Customer	(B x E x C)	989 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	989 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	1,056 kWh

Program Summary All Participant		
Total Budget	N	**$401,549**
Gross kW Saved at Customer	O	974 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**157 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	963,366 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	963,366 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	963,366 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**1,029,017 kWh**
TRC Net Benefits with Adder	(O x L)	**$277,086**
TRC Net Benefits without Adder	(O x (L - M))	**$164,078**
Utility Program Cost per kWh Lifetime		**$0.0199**
Utility Program Cost per kW at Gen		**$2,550**

*Weighted average of installation and realization rates

HOME LIGHTING & RECYCLING — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$12,934,314	$12,934,314	$12,934,314
Trans. & Dist. Capacity	N/A	$1,619,825	$1,619,825	$1,619,825
Marginal Energy	N/A	$27,086,074	$27,086,074	$27,086,074
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$41,640,213
Non-Energy Benefits Adder (20%)				$8,328,043
Subtotal	N/A	$41,640,213	$41,640,213	$49,968,256
Other Benefits				
Bill Reduction - Electric	$214,675,195	N/A	N/A	N/A
Participant Rebates and Incentives	$5,968,547	N/A	N/A	$5,968,547
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$220,643,742	N/A	N/A	$5,968,547
Total Benefits	$220,643,742	$41,640,213	$41,640,213	$55,936,803
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$654,426	$654,426	$654,426
Advertising/Promotion/Customer Ed	N/A	$576,607	$576,607	$576,607
Participant Rebates and Incentives	N/A	$5,968,547	$5,968,547	$5,968,547
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$3,000	$3,000	$3,000
Subtotal	N/A	$7,202,580	$7,202,580	$7,202,580
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$130,193,399	N/A
Subtotal	N/A	N/A	$130,193,399	N/A
Participant Costs				
Incremental Capital Costs	$6,247,668	N/A	N/A	$3,881,338
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$6,247,668	N/A	N/A	$3,881,338
Total Costs	$6,247,668	$7,202,580	$137,395,979	$11,083,918
Net Benefit (Cost)	$214,396,074	$34,437,634	($95,755,765)	$44,852,885
Benefit/Cost Ratio	35.32	5.78	0.30	**5.05**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	12.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	15.83%
Gross Load Factor at Customer	E	13.23%
Net-to-Gross (Energy)	F	61.2%
Net-to-Gross (Demand)	G	61.3%
Transmission Loss Factor (Energy)	H	6.171%
Transmission Loss Factor (Demand)	I	9.046%
Installation Rate (Energy)*	**J**	**99.0%**
Installation Rate (Demand)*	**K**	**99.0%**
MTRC Net Benefit (Cost)	**L**	$282
MTRC Non-Energy Benefit Adder	**M**	$52
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.1056 kW
Gross Annual kWh Saved at Customer	(B x E x C)	1,159 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	702 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	749 kWh

Program Summary All Participant

Total Budget	N	**$7,202,580**
Gross kW Saved at Customer	O	159,083 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**16,794 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	184,398,307 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	182,554,324 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	111,754,789 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**119,105,184 kWh**
TRC Net Benefits with Adder	(O x L)	**$44,852,885**
TRC Net Benefits without Adder	(O x (L - M))	**$36,524,842**
Utility Program Cost per kWh Lifetime		**$0.0050**
Utility Program Cost per kW at Gen		**$429**

*Weighted average of installation and realization rates

HOME PERFORMANCE WITH ENERGY STAR — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$91,706	$91,706	$91,706
Trans. & Dist. Capacity	N/A	$11,485	$11,485	$11,485
Marginal Energy	N/A	$24,615	$24,615	$24,615
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$127,806
Non-Energy Benefits Adder (20%)				$25,561
Subtotal	N/A	$127,806	$127,806	$153,368
Other Benefits				
Bill Reduction - Electric	$87,145	N/A	N/A	N/A
Participant Rebates and Incentives	$42,508	N/A	N/A	$42,508
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$129,653	N/A	N/A	$42,508
Total Benefits	$129,653	$127,806	$127,806	$195,875
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$77,132	$77,132	$77,132
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$42,508	$42,508	$42,508
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$9,365	$9,365	$9,365
Subtotal	N/A	$129,005	$129,005	$129,005
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$101,039	N/A
Subtotal	N/A	N/A	$101,039	N/A
Participant Costs				
Incremental Capital Costs	$142,485	N/A	N/A	$165,239
Incremental O&M Costs	$429	N/A	N/A	$497
Subtotal	$142,914	N/A	N/A	$165,736
Total Costs	$142,914	$129,005	$230,044	$294,741
Net Benefit (Cost)	($13,261)	($1,198)	($102,237)	($98,865)
Benefit/Cost Ratio	0.91	0.99	0.56	**0.66**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	16.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	74.88%
Gross Load Factor at Customer	E	7.63%
Net-to-Gross (Energy)	F	115.9%
Net-to-Gross (Demand)	G	115.9%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	-$1,064
MTRC Non-Energy Benefit Adder	**M**	$275
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.9550 kW
Gross Annual kWh Saved at Customer	(B x E x C)	668 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	774 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	827 kWh

Program Summary All Participant		
Total Budget	N	**$129,005**
Gross kW Saved at Customer	O	93 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**89 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	62,057 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	62,057 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	71,933 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**76,835 kWh**
TRC Net Benefits with Adder	(O x L)	**($98,865)**
TRC Net Benefits without Adder	(O x (L - M))	**($124,427)**
Utility Program Cost per kWh Lifetime		**$0.1051**
Utility Program Cost per kW at Gen		**$1,454**

*Weighted average of installation and realization rates

INSULATION & AIR SEALING — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$434,726	$434,726	$434,726
Trans. & Dist. Capacity	N/A	$54,443	$54,443	$54,443
Marginal Energy	N/A	$133,750	$133,750	$133,750
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$622,920
Non-Energy Benefits Adder (20%)				$124,584
Subtotal	N/A	$622,920	$622,920	$747,504
Other Benefits				
Bill Reduction - Electric	$614,715	N/A	N/A	N/A
Participant Rebates and Incentives	$335,645	N/A	N/A	$335,645
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$950,360	N/A	N/A	$335,645
Total Benefits	$950,360	$622,920	$622,920	$1,083,149
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$30,622	$30,622	$30,622
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$335,645	$335,645	$335,645
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$366,267	$366,267	$366,267
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$547,096	N/A
Subtotal	N/A	N/A	$547,096	N/A
Participant Costs				
Incremental Capital Costs	$1,290,293	N/A	N/A	$1,148,361
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$1,290,293	N/A	N/A	$1,148,361
Total Costs	$1,290,293	$366,267	$913,364	$1,514,628
Net Benefit (Cost)	($339,933)	$256,652	($290,444)	($431,480)
Benefit/Cost Ratio	0.74	1.70	0.68	**0.72**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	15.8 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	76.91%
Gross Load Factor at Customer	E	8.66%
Net-to-Gross (Energy)	F	89.0%
Net-to-Gross (Demand)	G	89.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	-$734
MTRC Non-Energy Benefit Adder	**M**	$212
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.7533 kW
Gross Annual kWh Saved at Customer	(B x E x C)	759 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	675 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	721 kWh

Program Summary All Participant		
Total Budget	N	**$366,267**
Gross kW Saved at Customer	O	588 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**443 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	445,928 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	445,928 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	396,876 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**423,922 kWh**
TRC Net Benefits with Adder	(O x L)	**($431,480)**
TRC Net Benefits without Adder	(O x (L - M))	**($556,064)**
Utility Program Cost per kWh Lifetime		**$0.0547**
Utility Program Cost per kW at Gen		**$827**

*Weighted average of installation and realization rates

REFRIGERATOR & FREEZER RECYCLING — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$216,565	$216,565	$216,565
Trans. & Dist. Capacity	N/A	$27,121	$27,121	$27,121
Marginal Energy	N/A	$420,776	$420,776	$420,776
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$664,462
Non-Energy Benefits Adder (20%)				$132,892
Subtotal	N/A	$664,462	$664,462	$797,354
Other Benefits				
Bill Reduction - Electric	$4,216,265	N/A	N/A	N/A
Participant Rebates and Incentives	$323,780	N/A	N/A	$323,780
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$4,540,045	N/A	N/A	$323,780
Total Benefits	$4,540,045	$664,462	$664,462	$1,121,134
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$574,378	$574,378	$574,378
Advertising/Promotion/Customer Ed	N/A	$130,960	$130,960	$130,960
Participant Rebates and Incentives	N/A	$323,780	$323,780	$323,780
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$4,000	$4,000	$4,000
Subtotal	N/A	$1,033,117	$1,033,117	$1,033,117
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$2,475,122	N/A
Subtotal	N/A	N/A	$2,475,122	N/A
Participant Costs				
Incremental Capital Costs	$0	N/A	N/A	$0
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$0	N/A	N/A	$0
Total Costs	$0	$1,033,117	$3,508,239	$1,033,117
Net Benefit (Cost)	$4,540,045	($368,655)	($2,843,777)	$88,017
Benefit/Cost Ratio	INF	0.64	0.19	**1.09**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	7.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	65.15%
Gross Load Factor at Customer	E	60.82%
Net-to-Gross (Energy)	F	59.3%
Net-to-Gross (Demand)	G	59.2%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$94
MTRC Non-Energy Benefit Adder	**M**	$143
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.4242 kW
Gross Annual kWh Saved at Customer	(B x E x C)	5,328 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	3,161 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	3,376 kWh

Program Summary All Participant		
Total Budget	N	**$1,033,117**
Gross kW Saved at Customer	O	932 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**395 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	4,962,929 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	4,962,929 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	2,944,429 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**3,145,085 kWh**
TRC Net Benefits with Adder	(O x L)	**$88,017**
TRC Net Benefits without Adder	(O x (L - M))	**($44,875)**
Utility Program Cost per kWh Lifetime		**$0.0446**
Utility Program Cost per kW at Gen		**$2,614**

*Weighted average of installation and realization rates

RESIDENTIAL HEATING — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$316,310	$316,310	$316,310
Trans. & Dist. Capacity	N/A	$39,613	$39,613	$39,613
Marginal Energy	N/A	$515,933	$515,933	$515,933
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$871,856
Non-Energy Benefits Adder (20%)				$174,371
Subtotal	N/A	$871,856	$871,856	$1,046,227
Other Benefits				
Bill Reduction - Electric	$2,246,771	N/A	N/A	N/A
Participant Rebates and Incentives	$194,190	N/A	N/A	$194,190
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$2,440,961	N/A	N/A	$194,190
Total Benefits	$2,440,961	$871,856	$871,856	$1,240,417
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$29,534	$29,534	$29,534
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$194,190	$194,190	$194,190
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$3,000	$3,000	$3,000
Subtotal	N/A	$226,724	$226,724	$226,724
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$2,111,964	N/A
Subtotal	N/A	N/A	$2,111,964	N/A
Participant Costs				
Incremental Capital Costs	$469,416	N/A	N/A	$441,251
Incremental O&M Costs	$304,825	N/A	N/A	$286,535
Subtotal	$774,241	N/A	N/A	$727,786
Total Costs	$774,241	$226,724	$2,338,689	$954,510
Net Benefit (Cost)	$1,666,720	$645,132	($1,466,833)	$285,907
Benefit/Cost Ratio	3.15	3.85	0.37	**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		
Lifetime (Weighted on Generator kWh)	A	18.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	72.78%
Gross Load Factor at Customer	E	46.63%
Net-to-Gross (Energy)	F	94.0%
Net-to-Gross (Demand)	G	94.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$730
MTRC Non-Energy Benefit Adder	**M**	$445
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.7529 kW
Gross Annual kWh Saved at Customer	(B x E x C)	4,085 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	3,840 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	4,102 kWh

Program Summary All Participant		
Total Budget	N	**$226,724**
Gross kW Saved at Customer	O	391 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**295 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	1,599,148 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	1,599,148 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	1,503,199 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**1,605,639 kWh**
TRC Net Benefits with Adder	(O x L)	**$285,907**
TRC Net Benefits without Adder	(O x (L - M))	**$111,536**
Utility Program Cost per kWh Lifetime		**$0.0078**
Utility Program Cost per kW at Gen		**$769**

*Weighted average of installation and realization rates

SCHOOL EDUCATION KITS — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$1,842,350	$1,842,350	$1,842,350
Trans. & Dist. Capacity	N/A	$230,728	$230,728	$230,728
Marginal Energy	N/A	$3,692,088	$3,692,088	$3,692,088
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$5,765,166
Non-Energy Benefits Adder (20%)				$1,153,033
Subtotal	N/A	$5,765,166	$5,765,166	$6,918,200
Other Benefits				
Bill Reduction - Electric	$24,661,852	N/A	N/A	N/A
Participant Rebates and Incentives	$1,162,791	N/A	N/A	$1,162,791
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$797,404	N/A	N/A	$355,458
Subtotal	$26,622,047	N/A	N/A	$1,518,249
Total Benefits	$26,622,047	$5,765,166	$5,765,166	$8,436,448
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$718,096	$718,096	$718,096
Advertising/Promotion/Customer Ed	N/A	$1,625	$1,625	$1,625
Participant Rebates and Incentives	N/A	$1,162,791	$1,162,791	$1,162,791
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$1,882,512	$1,882,512	$1,882,512
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$14,805,294	N/A
Subtotal	N/A	N/A	$14,805,294	N/A
Participant Costs				
Incremental Capital Costs	$1,071,737	N/A	N/A	$1,071,737
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$1,071,737	N/A	N/A	$1,071,737
Total Costs	$1,071,737	$1,882,512	$16,687,806	$2,954,249
Net Benefit (Cost)	$25,550,310	$3,882,654	($10,922,639)	$5,482,199
Benefit/Cost Ratio	24.84	3.06	0.35	**2.86**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	14.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	50.03%
Gross Load Factor at Customer	E	9.64%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**55.6%**
Installation Rate (Demand)*	**K**	**15.2%**
MTRC Net Benefit (Cost)	**L**	$241
MTRC Non-Energy Benefit Adder	**M**	$51
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.0838 kW
Gross Annual kWh Saved at Customer	(B x E x C)	844 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	469 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	501 kWh

Program Summary All Participant

Total Budget	N	**$1,882,512**
Gross kW Saved at Customer	O	22,709 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**1,904 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	19,173,500 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	10,655,887 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	10,655,887 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**11,382,062 kWh**
TRC Net Benefits with Adder	(O x L)	**$5,482,199**
TRC Net Benefits without Adder	(O x (L - M))	**$4,329,166**
Utility Program Cost per kWh Lifetime		**$0.0113**
Utility Program Cost per kW at Gen		**$989**

*Weighted average of installation and realization rates

THERMOSTAT OPTIMIZATION — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$966,498	$966,498	$966,498
Trans. & Dist. Capacity	N/A	$121,039	$121,039	$121,039
Marginal Energy	N/A	$176,195	$176,195	$176,195
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$1,263,732
Non-Energy Benefits Adder (20%)				$252,746
Subtotal	N/A	$1,263,732	$1,263,732	$1,516,479
Other Benefits				
Bill Reduction - Electric	$855,677	N/A	N/A	N/A
Participant Rebates and Incentives	$180,558	N/A	N/A	$180,558
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$1,036,234	N/A	N/A	$180,558
Total Benefits	$1,036,234	$1,263,732	$1,263,732	$1,697,036
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$80,347	$80,347	$80,347
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$180,558	$180,558	$180,558
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$260,905	$260,905	$260,905
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$855,677	N/A
Subtotal	N/A	N/A	$855,677	N/A
Participant Costs				
Incremental Capital Costs	$792,639	N/A	N/A	$792,639
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$792,639	N/A	N/A	$792,639
Total Costs	$792,639	$260,905	$1,116,581	$1,053,544
Net Benefit (Cost)	$243,595	$1,002,827	$147,151	$643,492
Benefit/Cost Ratio	1.31	4.84	1.13	**1.61**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	10.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	75.95%
Gross Load Factor at Customer	E	6.55%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$400
MTRC Non-Energy Benefit Adder	**M**	$157
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.8358 kW
Gross Annual kWh Saved at Customer	(B x E x C)	574 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	574 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	613 kWh

Program Summary All Participant

Total Budget	N	**$260,905**
Gross kW Saved at Customer	O	1,609 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**1,345 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	923,088 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	923,088 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	923,088 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**985,994 kWh**
TRC Net Benefits with Adder	(O x L)	**$643,492**
TRC Net Benefits without Adder	(O x (L - M))	**$390,746**
Utility Program Cost per kWh Lifetime		**$0.0265**
Utility Program Cost per kW at Gen		**$194**

*Weighted average of installation and realization rates

WATER HEATING **2020 ELECTRIC** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$31,571	$31,571	$31,571
Trans. & Dist. Capacity	N/A	$3,954	$3,954	$3,954
Marginal Energy	N/A	$59,918	$59,918	$59,918
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$95,443
Non-Energy Benefits Adder (20%)				$19,089
Subtotal	N/A	$95,443	$95,443	$114,531
Other Benefits				
Bill Reduction - Electric	$259,365	N/A	N/A	N/A
Participant Rebates and Incentives	$28,371	N/A	N/A	$28,371
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$287,736	N/A	N/A	$28,371
Total Benefits	$287,736	$95,443	$95,443	$142,902
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$59,341	$59,341	$59,341
Advertising/Promotion/Customer Ed	N/A	$4,296	$4,296	$4,296
Participant Rebates and Incentives	N/A	$28,371	$28,371	$28,371
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$92,007	$92,007	$92,007
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$259,365	N/A
Subtotal	N/A	N/A	$259,365	N/A
Participant Costs				
Incremental Capital Costs	$43,778	N/A	N/A	$43,778
Incremental O&M Costs	$5,432	N/A	N/A	$5,432
Subtotal	$49,210	N/A	N/A	$49,210
Total Costs	$49,210	$92,007	$351,372	$141,217
Net Benefit (Cost)	$238,526	$3,435	($255,930)	$1,685
Benefit/Cost Ratio	5.85	1.04	0.27	**1.01**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	12.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	100.00%
Gross Load Factor at Customer	E	80.37%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$48
MTRC Non-Energy Benefit Adder	**M**	$547
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	1.1005 kW
Gross Annual kWh Saved at Customer	(B x E x C)	7,041 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	7,041 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	7,521 kWh

Program Summary All Participant		
Total Budget	N	**$92,007**
Gross kW Saved at Customer	O	35 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**38 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	245,764 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	245,764 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	245,764 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**262,512 kWh**
TRC Net Benefits with Adder	(O x L)	**$1,685**
TRC Net Benefits without Adder	(O x (L - M))	**($17,404)**
Utility Program Cost per kWh Lifetime		**$0.0292**
Utility Program Cost per kW at Gen		**$2,395**

*Weighted average of installation and realization rates

ENERGY SAVINGS KIT **2020 ELECTRIC** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$140,085	$140,085	$140,085
Trans. & Dist. Capacity	N/A	$17,544	$17,544	$17,544
Marginal Energy	N/A	$354,790	$354,790	$354,790
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$512,418
Non-Energy Benefits Adder (50%)				$256,209
Subtotal	N/A	$512,418	$512,418	$768,627
Other Benefits				
Bill Reduction - Electric	$1,766,282	N/A	N/A	N/A
Participant Rebates and Incentives	$86,574	N/A	N/A	$86,574
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$118,579	N/A	N/A	$88,909
Subtotal	$1,971,435	N/A	N/A	$175,483
Total Benefits	$1,971,435	$512,418	$512,418	$944,110
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$130,369	$130,369	$130,369
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$86,574	$86,574	$86,574
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$4,200	$4,200	$4,200
Subtotal	N/A	$221,142	$221,142	$221,142
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,374,773	N/A
Subtotal	N/A	N/A	$1,374,773	N/A
Participant Costs				
Incremental Capital Costs	$85,528	N/A	N/A	$85,528
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$85,528	N/A	N/A	$85,528
Total Costs	$85,528	$221,142	$1,595,915	$306,670
Net Benefit (Cost)	$1,885,907	$291,276	($1,083,497)	$637,440
Benefit/Cost Ratio	23.05	2.32	0.32	**3.08**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	17.9 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	14.44%
Gross Load Factor at Customer	E	13.80%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**77.6%**
Installation Rate (Demand)*	**K**	**77.4%**
MTRC Net Benefit (Cost)	**L**	$604
MTRC Non-Energy Benefit Adder	**M**	$243
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.1230 kW
Gross Annual kWh Saved at Customer	(B x E x C)	1,209 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	938 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	1,002 kWh

Program Summary All Participant		
Total Budget	N	**$221,142**
Gross kW Saved at Customer	O	1,056 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**130 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	1,276,456 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	990,526 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	990,526 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**1,058,028 kWh**
TRC Net Benefits with Adder	(O x L)	**$637,440**
TRC Net Benefits without Adder	(O x (L - M))	**$381,231**
Utility Program Cost per kWh Lifetime		**$0.0117**
Utility Program Cost per kW at Gen		**$1,702**

*Weighted average of installation and realization rates

MULTIFAMILY WEATHERIZATION — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$344,335	$344,335	$344,335
Trans. & Dist. Capacity	N/A	$43,123	$43,123	$43,123
Marginal Energy	N/A	$585,176	$585,176	$585,176
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$972,634
Non-Energy Benefits Adder (50%)				$486,317
Subtotal	N/A	$972,634	$972,634	$1,458,951
Other Benefits				
Bill Reduction - Electric	$2,431,818	N/A	N/A	N/A
Participant Rebates and Incentives	$875,242	N/A	N/A	$875,242
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$48,396	N/A	N/A	$48,396
Subtotal	$3,355,456	N/A	N/A	$923,638
Total Benefits	$3,355,456	$972,634	$972,634	$2,382,589
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$158,659	$158,659	$158,659
Advertising/Promotion/Customer Ed	N/A	$30,000	$30,000	$30,000
Participant Rebates and Incentives	N/A	$875,242	$875,242	$875,242
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$15,350	$15,350	$15,350
Subtotal	N/A	$1,079,251	$1,079,251	$1,079,251
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$2,431,818	N/A
Subtotal	N/A	N/A	$2,431,818	N/A
Participant Costs				
Incremental Capital Costs	$1,061,629	N/A	N/A	$1,061,629
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$1,061,629	N/A	N/A	$1,061,629
Total Costs	$1,061,629	$1,079,251	$3,511,069	$2,140,881
Net Benefit (Cost)	$2,293,826	($106,617)	($2,538,435)	$241,708
Benefit/Cost Ratio	3.16	0.90	0.28	**1.11**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	18.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	41.71%
Gross Load Factor at Customer	E	28.06%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$346
MTRC Non-Energy Benefit Adder	**M**	$696
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.4590 kW
Gross Annual kWh Saved at Customer	(B x E x C)	2,458 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	2,458 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	2,626 kWh

Program Summary All Participant		
Total Budget	N	**$1,079,251**
Gross kW Saved at Customer	O	699 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**321 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	1,718,231 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	1,718,231 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	1,718,231 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**1,835,325 kWh**
TRC Net Benefits with Adder	(O x L)	**$241,708**
TRC Net Benefits without Adder	(O x (L - M))	**($244,609)**
Utility Program Cost per kWh Lifetime		**$0.0327**
Utility Program Cost per kW at Gen		**$3,364**

*Weighted average of installation and realization rates

NON-PROFIT **2020 ELECTRIC** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$421,252	$421,252	$421,252
Trans. & Dist. Capacity	N/A	$52,756	$52,756	$52,756
Marginal Energy	N/A	$575,765	$575,765	$575,765
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$1,049,772
Non-Energy Benefits Adder (50%)				$524,886
Subtotal	N/A	$1,049,772	$1,049,772	$1,574,658
Other Benefits				
Bill Reduction - Electric	$1,342,490	N/A	N/A	N/A
Participant Rebates and Incentives	$887,557	N/A	N/A	$887,557
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$2,230,047	N/A	N/A	$887,557
Total Benefits	$2,230,047	$1,049,772	$1,049,772	$2,462,215
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$209,652	$209,652	$209,652
Advertising/Promotion/Customer Ed	N/A	$30,000	$30,000	$30,000
Participant Rebates and Incentives	N/A	$887,557	$887,557	$887,557
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$26,291	$26,291	$26,291
Subtotal	N/A	$1,153,499	$1,153,499	$1,153,499
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$1,342,490	N/A
Subtotal	N/A	N/A	$1,342,490	N/A
Participant Costs				
Incremental Capital Costs	$1,322,338	N/A	N/A	$1,322,338
Incremental O&M Costs	$31,030	N/A	N/A	$31,030
Subtotal	$1,353,368	N/A	N/A	$1,353,368
Total Costs	$1,353,368	$1,153,499	$2,495,989	$2,506,866
Net Benefit (Cost)	$876,679	($103,727)	($1,446,217)	($44,651)
Benefit/Cost Ratio	1.65	0.91	0.42	**0.98**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	19.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	67.92%
Gross Load Factor at Customer	E	35.77%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	5.330%
Transmission Loss Factor (Demand)	I	7.710%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	-$86
MTRC Non-Energy Benefit Adder	**M**	$1,016
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.7359 kW
Gross Annual kWh Saved at Customer	(B x E x C)	3,133 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	3,133 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	3,310 kWh

Program Summary All Participant		
Total Budget	N	**$1,153,499**
Gross kW Saved at Customer	O	517 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**380 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	1,618,868 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	1,618,868 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	1,618,868 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**1,710,012 kWh**
TRC Net Benefits with Adder	(O x L)	**($44,651)**
TRC Net Benefits without Adder	(O x (L - M))	**($569,538)**
Utility Program Cost per kWh Lifetime		**$0.0355**
Utility Program Cost per kW at Gen		**$3,034**

*Weighted average of installation and realization rates

SINGLE-FAMILY WEATHERIZATION — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$3,048,975	$3,048,975	$3,048,975
Trans. & Dist. Capacity	N/A	$381,841	$381,841	$381,841
Marginal Energy	N/A	$7,386,991	$7,386,991	$7,386,991
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$10,817,808
Non-Energy Benefits Adder (50%)				$5,408,904
Subtotal	N/A	$10,817,808	$10,817,808	$16,226,712
Other Benefits				
Bill Reduction - Electric	$28,345,362	N/A	N/A	N/A
Participant Rebates and Incentives	$1,156,013	N/A	N/A	$1,156,013
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$82	N/A	N/A	$33
Subtotal	$29,501,456	N/A	N/A	$1,156,045
Total Benefits	$29,501,456	$10,817,808	$10,817,808	$17,382,757
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$150,664	$150,664	$150,664
Advertising/Promotion/Customer Ed	N/A	$165,000	$165,000	$165,000
Participant Rebates and Incentives	N/A	$1,156,013	$1,156,013	$1,156,013
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$41,434	$41,434	$41,434
Subtotal	N/A	$1,513,111	$1,513,111	$1,513,111
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$28,075,644	N/A
Subtotal	N/A	N/A	$28,075,644	N/A
Participant Costs				
Incremental Capital Costs	$937,582	N/A	N/A	$937,657
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$937,582	N/A	N/A	$937,657
Total Costs	$937,582	$1,513,111	$29,588,755	$2,450,768
Net Benefit (Cost)	$28,563,874	$9,304,697	($18,770,947)	$14,931,989
Benefit/Cost Ratio	31.47	7.15	0.37	**7.09**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	19.9 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	12.99%
Gross Load Factor at Customer	E	11.34%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**99.1%**
Installation Rate (Demand)*	**K**	**99.1%**
MTRC Net Benefit (Cost)	**L**	$785
MTRC Non-Energy Benefit Adder	**M**	$284
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.1416 kW
Gross Annual kWh Saved at Customer	(B x E x C)	993 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	984 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	1,051 kWh

Program Summary All Participant

Total Budget	N	**$1,513,111**
Gross kW Saved at Customer	O	19,016 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**2,692 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	18,891,982 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	18,712,514 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	18,712,732 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**19,987,964 kWh**
TRC Net Benefits with Adder	(O x L)	**$14,931,989**
TRC Net Benefits without Adder	(O x (L - M))	**$9,523,085**
Utility Program Cost per kWh Lifetime		**$0.0038**
Utility Program Cost per kW at Gen		**$562**

*Weighted average of installation and realization rates

RESIDENTIAL DEMAND RESPONSE — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$6,654,182	$6,654,182	$6,654,182
Trans. & Dist. Capacity	N/A	$833,327	$833,327	$833,327
Marginal Energy	N/A	$7,588	$7,588	$7,588
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$7,495,097
Non-Energy Benefits Adder (20%)				$1,499,019
Subtotal	N/A	$7,495,097	$7,495,097	$8,994,117
Other Benefits				
Bill Reduction - Electric	$34,659	N/A	N/A	N/A
Participant Rebates and Incentives	$8,372,881	N/A	N/A	$8,372,881
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$8,407,541	N/A	N/A	$8,372,881
Total Benefits	$8,407,541	$7,495,097	$7,495,097	$17,366,998
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$2,846,815	$2,846,815	$2,846,815
Advertising/Promotion/Customer Ed	N/A	$707,058	$707,058	$707,058
Participant Rebates and Incentives	N/A	$8,372,881	$8,372,881	$8,372,881
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$118,750	$118,750	$118,750
Subtotal	N/A	$12,045,504	$12,045,504	$12,045,504
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$34,659	N/A
Subtotal	N/A	N/A	$34,659	N/A
Participant Costs				
Incremental Capital Costs	$675	N/A	N/A	$675
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$675	N/A	N/A	$675
Total Costs	$675	$12,045,504	$12,080,164	$12,046,179
Net Benefit (Cost)	$8,406,866	($4,550,407)	($4,585,067)	$5,320,818
Benefit/Cost Ratio	12,455.62	0.62	0.62	**1.44**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	9.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	39.36%
Gross Load Factor at Customer	E	0.02%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$209
MTRC Non-Energy Benefit Adder	**M**	$59
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	0.4332 kW
Gross Annual kWh Saved at Customer	(B x E x C)	1 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	1 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	2 kWh

Program Summary All Participant

Total Budget	N	**$12,045,504**
Gross kW Saved at Customer	O	25,518 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**11,054 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	37,596 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	37,596 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	37,596 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**40,158 kWh**
TRC Net Benefits with Adder	(O x L)	**$5,320,818**
TRC Net Benefits without Adder	(O x (L - M))	**$3,821,799**
Utility Program Cost per kWh Lifetime		**$33.0646**
Utility Program Cost per kW at Gen		**$1,090**

*Weighted average of installation and realization rates

SMALL COMMERCIAL BUILDING CONTROLS — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	$166,381	$166,381	$166,381
Trans. & Dist. Capacity	N/A	$20,836	$20,836	$20,836
Marginal Energy	N/A	$695	$695	$695
Avoided Emissions (CO2)	N/A	N/A	N/A	$0
Subtotal				$187,911
Non-Energy Benefits Adder (20%)				$37,582
Subtotal	N/A	$187,911	$187,911	$225,494
Other Benefits				
Bill Reduction - Electric	$3,601	N/A	N/A	N/A
Participant Rebates and Incentives	$17,963	N/A	N/A	$17,963
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$21,564	N/A	N/A	$17,963
Total Benefits	$21,564	$187,911	$187,911	$243,457
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$109,502	$109,502	$109,502
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$17,963	$17,963	$17,963
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$127,464	$127,464	$127,464
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	$3,601	N/A
Subtotal	N/A	N/A	$3,601	N/A
Participant Costs				
Incremental Capital Costs	$27,000	N/A	N/A	$27,000
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$27,000	N/A	N/A	$27,000
Total Costs	$27,000	$127,464	$131,065	$154,464
Net Benefit (Cost)	($5,436)	$60,447	$56,846	$88,992
Benefit/Cost Ratio	0.80	1.47	1.43	**1.58**

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

Input Summary and Totals

Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	5.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	100.00%
Gross Load Factor at Customer	E	0.19%
Net-to-Gross (Energy)	F	100.0%
Net-to-Gross (Demand)	G	100.0%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.130%
Installation Rate (Energy)*	**J**	**100.0%**
Installation Rate (Demand)*	**K**	**100.0%**
MTRC Net Benefit (Cost)	**L**	$239
MTRC Non-Energy Benefit Adder	**M**	$101
Net coincident kW Saved at Generator	**(G x C x K) x D / (1 - I)**	1.1005 kW
Gross Annual kWh Saved at Customer	(B x E x C)	16 kWh
Net Annual kWh Saved at Customer	**(F x (B x E x C x J))**	16 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x C x J)) / (1 - H)**	18 kWh

Program Summary All Participant

Total Budget	N	**$127,464**
Gross kW Saved at Customer	O	372 kW
Net coincident kW Saved at Generator	**(G x O x K) x D / (1 - I)**	**409 kW**
Gross Annual kWh Saved at Customer	(B x E x O)	6,107 kWh
Gross Installed Annual kWh Saved at Customer	**(B x E x O x J)**	6,107 kWh
Net Annual kWh Saved at Customer	(F x (B x E x O x J)	6,107 kWh
Net Annual kWh Saved at Generator	**(F x (B x E x O x J)) / (1 - H)**	**6,523 kWh**
TRC Net Benefits with Adder	(O x L)	**$88,992**
TRC Net Benefits without Adder	(O x (L - M))	**$51,410**
Utility Program Cost per kWh Lifetime		**$3.9080**
Utility Program Cost per kW at Gen		**$312**

*Weighted average of installation and realization rates

PORTFOLIO TOTAL — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$25,115,304	$25,115,304	$25,115,304
Variable O&M Savings	N/A	$426,411	$426,411	$426,411
Demand Savings	N/A	$2,353,273	$2,353,273	$2,353,273
Subtotal				$27,894,988
Non-Energy Benefits Adder (22.9%)				$6,388,078
Subtotal	N/A	$27,894,988	$27,894,988	$34,283,065
Other Benefits				
Bill Reduction - Gas	$50,765,113	N/A	N/A	N/A
Participant Rebates and Incentives	$10,002,930	N/A	N/A	$10,002,930
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$65,164,417	N/A	N/A	$24,453,662
Subtotal	$125,932,460	N/A	N/A	$34,456,592
Total Benefits	$125,932,460	$27,894,988	$27,894,988	$68,739,657
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$3,156,093	$3,156,093	$3,156,093
Advertising/Promotion/Customer Ed	N/A	$455,460	$455,460	$455,460
Participant Rebates and Incentives	N/A	$10,002,930	$10,002,930	$10,002,930
Equipment & Installation	N/A	$26,495	$26,495	$26,495
Measurement and Verification	N/A	$580,475	$580,475	$580,475
Subtotal	N/A	$14,221,453	$14,221,453	$14,221,453
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$46,574,967	N/A
Subtotal	N/A	N/A	$46,574,967	N/A
Participant Costs				
Incremental Capital Costs	$25,476,414	N/A	N/A	$23,340,363
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$25,476,414	N/A	N/A	$23,340,363
Total Costs	$25,476,414	$14,221,453	$60,796,420	$37,561,815
Net Benefit (Cost)	$100,456,047	$13,673,535	($32,901,432)	$31,177,842
Benefit/Cost Ratio	4.94	1.96	0.46	**1.83**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	15.39 years
Net-to-Gross (Weighted on Dth)	B	93.01%
Install Rate (Weighted on Dth)	C	82.1%

Program Totals:		
Total Dth/Yr Saved	D	**727,480**
Utility Costs per Net Dth/Yr	E	$19.55
Net Benefit (Cost) per Gross Dth/Yr	F	$42.86
Non-Energy Benefits Adder per Gross Dth/Yr	G	$8.78
Annual Dth/$M	($1M / E)	**51,154**
Total Utility Budget	(E x D)	**$14,221,453**
Total MTRC Net Benefits with Adder	(D x F)	**$31,177,842**
Total MTRC Net Benefits without Adder	(F - G) x D	**$24,789,764**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$1.27**

BUSINESS PROGRAM TOTAL — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$8,937,730	$8,937,730	$8,937,730
Variable O&M Savings	N/A	$114,947	$114,947	$114,947
Demand Savings	N/A	$805,138	$805,138	$805,138
Subtotal				$9,857,815
Non-Energy Benefits Adder (20%)				$1,971,563
Subtotal	N/A	$9,857,815	$9,857,815	$11,829,379
Other Benefits				
Bill Reduction - Gas	$16,427,609	N/A	N/A	N/A
Participant Rebates and Incentives	$1,683,533	N/A	N/A	$1,683,533
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$29,719,515	N/A	N/A	$14,707,207
Subtotal	$47,830,658	N/A	N/A	$16,390,740
Total Benefits	$47,830,658	$9,857,815	$9,857,815	$28,220,119
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$597,539	$597,539	$597,539
Advertising/Promotion/Customer Ed	N/A	$55,899	$55,899	$55,899
Participant Rebates and Incentives	N/A	$1,683,533	$1,683,533	$1,683,533
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$83,506	$83,506	$83,506
Subtotal	N/A	$2,420,477	$2,420,477	$2,420,477
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$15,635,553	N/A
Subtotal	N/A	N/A	$15,635,553	N/A
Participant Costs				
Incremental Capital Costs	$5,781,569	N/A	N/A	$5,499,550
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$5,781,569	N/A	N/A	$5,499,550
Total Costs	$5,781,569	$2,420,477	$18,056,030	$7,920,027
Net Benefit (Cost)	$42,049,088	$7,437,338	($8,198,215)	$20,300,092
Benefit/Cost Ratio	8.27	4.07	0.55	**3.56**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	19.44 years
Net-to-Gross (Weighted on Dth)	B	95.20%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**211,278**
Utility Costs per Net Dth/Yr	E	$11.46
Net Benefit (Cost) per Gross Dth/Yr	F	$96.08
Non-Energy Benefits Adder per Gross Dth/Yr	G	$9.33
Annual Dth/$M	($1M / E)	**87,288**
Total Utility Budget	(E x D)	**$2,420,477**
Total MTRC Net Benefits with Adder	(D x F)	**$20,300,092**
Total MTRC Net Benefits without Adder	(F - G) x D	**$18,328,529**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$0.59**

RESIDENTIAL PROGRAM TOTAL — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$13,743,126	$13,743,126	$13,743,126
Variable O&M Savings	N/A	$277,751	$277,751	$277,751
Demand Savings	N/A	$1,319,362	$1,319,362	$1,319,362
Subtotal				$15,340,239
Non-Energy Benefits Adder (20%)				$3,068,048
Subtotal	N/A	$15,340,239	$15,340,239	$18,408,287
Other Benefits				
Bill Reduction - Gas	$29,411,994	N/A	N/A	N/A
Participant Rebates and Incentives	$4,976,572	N/A	N/A	$4,976,572
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$32,174,228	N/A	N/A	$8,411,148
Subtotal	$66,562,794	N/A	N/A	$13,387,721
Total Benefits	$66,562,794	$15,340,239	$15,340,239	$31,796,007
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$1,562,804	$1,562,804	$1,562,804
Advertising/Promotion/Customer Ed	N/A	$232,464	$232,464	$232,464
Participant Rebates and Incentives	N/A	$4,976,572	$4,976,572	$4,976,572
Equipment & Installation	N/A	$26,495	$26,495	$26,495
Measurement and Verification	N/A	$257,144	$257,144	$257,144
Subtotal	N/A	$7,055,479	$7,055,479	$7,055,479
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$26,013,904	N/A
Subtotal	N/A	N/A	$26,013,904	N/A
Participant Costs				
Incremental Capital Costs	$15,973,398	N/A	N/A	$14,119,367
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$15,973,398	N/A	N/A	$14,119,367
Total Costs	$15,973,398	$7,055,479	$33,069,383	$21,174,846
Net Benefit (Cost)	$50,589,396	$8,284,760	($17,729,144)	$10,621,162
Benefit/Cost Ratio	4.17	2.17	0.46	**1.50**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	13.44 years
Net-to-Gross (Weighted on Dth)	B	91.16%
Install Rate (Weighted on Dth)	C	71.4%
Program Totals:		
Total Dth/Yr Saved	D	**447,504**
Utility Costs per Net Dth/Yr	E	$15.77
Net Benefit (Cost) per Gross Dth/Yr	F	$23.73
Non-Energy Benefits Adder per Gross Dth/Yr	G	$6.86
Annual Dth/$M	($1M / E)	**63,427**
Total Utility Budget	(E x D)	**$7,055,479**
Total MTRC Net Benefits with Adder	(D x F)	**$10,621,162**
Total MTRC Net Benefits without Adder	(F - G) x D	**$7,553,114**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$1.17**

LOW-INCOME PROGRAM TOTAL — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$2,434,447	$2,434,447	$2,434,447
Variable O&M Savings	N/A	$33,713	$33,713	$33,713
Demand Savings	N/A	$228,773	$228,773	$228,773
Subtotal				$2,696,933
Non-Energy Benefits Adder (50%)				$1,348,467
Subtotal	N/A	$2,696,933	$2,696,933	$4,045,400
Other Benefits				
Bill Reduction - Gas	$4,925,510	N/A	N/A	N/A
Participant Rebates and Incentives	$3,102,807	N/A	N/A	$3,102,807
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$3,270,674	N/A	N/A	$1,335,307
Subtotal	$11,298,992	N/A	N/A	$4,438,114
Total Benefits	$11,298,992	$2,696,933	$2,696,933	$8,483,514
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$397,000	$397,000	$397,000
Advertising/Promotion/Customer Ed	N/A	$125,000	$125,000	$125,000
Participant Rebates and Incentives	N/A	$3,102,807	$3,102,807	$3,102,807
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$137,210	$137,210	$137,210
Subtotal	N/A	$3,762,018	$3,762,018	$3,762,018
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$4,925,510	N/A
Subtotal	N/A	N/A	$4,925,510	N/A
Participant Costs				
Incremental Capital Costs	$3,721,446	N/A	N/A	$3,721,446
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$3,721,446	N/A	N/A	$3,721,446
Total Costs	$3,721,446	$3,762,018	$8,687,528	$7,483,464
Net Benefit (Cost)	$7,577,545	($1,065,084)	($5,990,594)	$1,000,050
Benefit/Cost Ratio	3.04	0.72	0.31	**1.13**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	15.62 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	97.4%

Program Totals:		
Total Dth/Yr Saved	D	**68,697**
Utility Costs per Net Dth/Yr	E	$54.76
Net Benefit (Cost) per Gross Dth/Yr	F	$14.56
Non-Energy Benefits Adder per Gross Dth/Yr	G	$19.63
Annual Dth/$M	($1M / E)	**18,261**
Total Utility Budget	(E x D)	**$3,762,018**
Total MTRC Net Benefits with Adder	(D x F)	**$1,000,050**
Total MTRC Net Benefits without Adder	(F - G) x D	**-$348,417**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$3.51**

COMMERCIAL REFRIGERATION EFFICIENCY — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$387,640	$387,640	$387,640
Variable O&M Savings	N/A	$4,989	$4,989	$4,989
Demand Savings	N/A	$34,947	$34,947	$34,947
Subtotal				$427,576
Non-Energy Benefits Adder (20%)				$85,515
Subtotal	N/A	$427,576	$427,576	$513,091
Other Benefits				
Bill Reduction - Gas	$677,223	N/A	N/A	N/A
Participant Rebates and Incentives	$38,353	N/A	N/A	$38,353
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$144,940	N/A	N/A	$72,470
Subtotal	$860,517	N/A	N/A	$110,823
Total Benefits	$860,517	$427,576	$427,576	$623,914
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$9,647	$9,647	$9,647
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$38,353	$38,353	$38,353
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$1,725	$1,725	$1,725
Subtotal	N/A	$49,726	$49,726	$49,726
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$677,223	N/A
Subtotal	N/A	N/A	$677,223	N/A
Participant Costs				
Incremental Capital Costs	$181,831	N/A	N/A	$181,831
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$181,831	N/A	N/A	$181,831
Total Costs	$181,831	$49,726	$726,949	$231,557
Net Benefit (Cost)	$678,686	$377,850	($299,373)	$392,358
Benefit/Cost Ratio	4.73	8.60	0.59	**2.69**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	19.35 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**9,204**
Utility Costs per Net Dth/Yr	E	$5.40
Net Benefit (Cost) per Gross Dth/Yr	F	$42.63
Non-Energy Benefits Adder per Gross Dth/Yr	G	$9.29
Annual Dth/$M	($1M / E)	**185,098**
Total Utility Budget	(E x D)	**$49,726**
Total MTRC Net Benefits with Adder	(D x F)	**$392,358**
Total MTRC Net Benefits without Adder	(F - G) x D	**$306,843**

Utility Program Cost per Net Dth Lifetime	(E / A)	**$0.28**

CUSTOM EFFICIENCY — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$1,238,786	$1,238,786	$1,238,786
Variable O&M Savings	N/A	$15,837	$15,837	$15,837
Demand Savings	N/A	$110,929	$110,929	$110,929
Subtotal				$1,365,551
Non-Energy Benefits Adder (20%)				$273,110
Subtotal	N/A	$1,365,551	$1,365,551	$1,638,662
Other Benefits				
Bill Reduction - Gas	$2,487,585	N/A	N/A	N/A
Participant Rebates and Incentives	$67,107	N/A	N/A	$67,107
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$2,554,692	N/A	N/A	$67,107
Total Benefits	$2,554,692	$1,365,551	$1,365,551	$1,705,769
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$18,663	$18,663	$18,663
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$67,107	$67,107	$67,107
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$922	$922	$922
Subtotal	N/A	$86,692	$86,692	$86,692
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$2,164,199	N/A
Subtotal	N/A	N/A	$2,164,199	N/A
Participant Costs				
Incremental Capital Costs	$279,693	N/A	N/A	$243,333
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$279,693	N/A	N/A	$243,333
Total Costs	$279,693	$86,692	$2,250,891	$330,025
Net Benefit (Cost)	$2,274,999	$1,278,860	($885,340)	$1,375,744
Benefit/Cost Ratio	9.13	15.75	0.61	**5.17**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	20.00 years
Net-to-Gross (Weighted on Dth)	B	87.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**28,620**
Utility Costs per Net Dth/Yr	E	$3.03
Net Benefit (Cost) per Gross Dth/Yr	F	$48.07
Non-Energy Benefits Adder per Gross Dth/Yr	G	$9.54
Annual Dth/$M	($1M / E)	**330,138**
Total Utility Budget	(E x D)	**$86,692**
Total MTRC Net Benefits with Adder	(D x F)	**$1,375,744**
Total MTRC Net Benefits without Adder	(F - G) x D	**$1,102,634**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$0.15**

ENERGY MANAGEMENT SYSTEMS — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$142,911	$142,911	$142,911
Variable O&M Savings	N/A	$1,956	$1,956	$1,956
Demand Savings	N/A	$13,701	$13,701	$13,701
Subtotal				$158,567
Non-Energy Benefits Adder (20%)				$31,713
Subtotal	N/A	$158,567	$158,567	$190,281
Other Benefits				
Bill Reduction - Gas	$277,409	N/A	N/A	N/A
Participant Rebates and Incentives	$30,181	N/A	N/A	$30,181
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$136,669	N/A	N/A	$61,501
Subtotal	$444,259	N/A	N/A	$91,682
Total Benefits	$444,259	$158,567	$158,567	$281,963
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$4,502	$4,502	$4,502
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$30,181	$30,181	$30,181
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$34,683	$34,683	$34,683
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$249,668	N/A
Subtotal	N/A	N/A	$249,668	N/A
Participant Costs				
Incremental Capital Costs	$207,220	N/A	N/A	$186,498
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$207,220	N/A	N/A	$186,498
Total Costs	$207,220	$34,683	$284,352	$221,181
Net Benefit (Cost)	$237,039	$123,884	($125,784)	$60,781
Benefit/Cost Ratio	2.14	4.57	0.56	**1.27**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	15.00 years
Net-to-Gross (Weighted on Dth)	B	90.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**4,091**
Utility Costs per Net Dth/Yr	E	$8.48
Net Benefit (Cost) per Gross Dth/Yr	F	$14.86
Non-Energy Benefits Adder per Gross Dth/Yr	G	$7.75
Annual Dth/$M	($1M / E)	**117,946**
Total Utility Budget	(E x D)	**$34,683**
Total MTRC Net Benefits with Adder	(D x F)	**$60,781**
Total MTRC Net Benefits without Adder	(F - G) x D	**$29,068**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$0.57**

HEATING EFFICIENCY — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$1,081,565	$1,081,565	$1,081,565
Variable O&M Savings	N/A	$14,154	$14,154	$14,154
Demand Savings	N/A	$99,139	$99,139	$99,139
Subtotal				$1,194,858
Non-Energy Benefits Adder (20%)				$238,972
Subtotal	N/A	$1,194,858	$1,194,858	$1,433,829
Other Benefits				
Bill Reduction - Gas	$2,196,768	N/A	N/A	N/A
Participant Rebates and Incentives	$657,182	N/A	N/A	$657,182
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$2,853,950	N/A	N/A	$657,182
Total Benefits	$2,853,950	$1,194,858	$1,194,858	$2,091,012
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$188,831	$188,831	$188,831
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$657,182	$657,182	$657,182
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$17,175	$17,175	$17,175
Subtotal	N/A	$863,188	$863,188	$863,188
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$1,889,526	N/A
Subtotal	N/A	N/A	$1,889,526	N/A
Participant Costs				
Incremental Capital Costs	$1,278,866	N/A	N/A	$1,100,110
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$1,278,866	N/A	N/A	$1,100,110
Total Costs	$1,278,866	$863,188	$2,752,714	$1,963,298
Net Benefit (Cost)	$1,575,085	$331,670	($1,557,856)	$127,713
Benefit/Cost Ratio	2.23	1.38	0.43	**1.07**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	18.08 years
Net-to-Gross (Weighted on Dth)	B	86.01%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**26,987**
Utility Costs per Net Dth/Yr	E	$31.99
Net Benefit (Cost) per Gross Dth/Yr	F	$4.73
Non-Energy Benefits Adder per Gross Dth/Yr	G	$8.86
Annual Dth/$M	($1M / E)	**31,264**
Total Utility Budget	(E x D)	**$863,188**
Total MTRC Net Benefits with Adder	(D x F)	**$127,713**
Total MTRC Net Benefits without Adder	(F - G) x D	**-$111,258**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$1.77**

LIGHTING - SMALL BUSINESS — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$2,439	$2,439	$2,439
Variable O&M Savings	N/A	$37	$37	$37
Demand Savings	N/A	$256	$256	$256
Subtotal				$2,731
Non-Energy Benefits Adder (20%)				$546
Subtotal	N/A	$2,731	$2,731	$3,278
Other Benefits				
Bill Reduction - Gas	$4,736	N/A	N/A	N/A
Participant Rebates and Incentives	$418	N/A	N/A	$418
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$29,835	N/A	N/A	$13,426
Subtotal	$34,989	N/A	N/A	$13,844
Total Benefits	$34,989	$2,731	$2,731	$17,122
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$9,415	$9,415	$9,415
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$418	$418	$418
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$9,833	$9,833	$9,833
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$4,262	N/A
Subtotal	N/A	N/A	$4,262	N/A
Participant Costs				
Incremental Capital Costs	$370	N/A	N/A	$333
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$370	N/A	N/A	$333
Total Costs	$370	$9,833	$14,095	$10,166
Net Benefit (Cost)	$34,619	($7,101)	($11,363)	$6,956
Benefit/Cost Ratio	94.54	0.28	0.19	**1.68**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	10.00 years
Net-to-Gross (Weighted on Dth)	B	90.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**98**
Utility Costs per Net Dth/Yr	E	$99.87
Net Benefit (Cost) per Gross Dth/Yr	F	$70.65
Non-Energy Benefits Adder per Gross Dth/Yr	G	$5.55
Annual Dth/$M	($1M / E)	**10,014**
Total Utility Budget	(E x D)	**$9,833**
Total MTRC Net Benefits with Adder	(D x F)	**$6,956**
Total MTRC Net Benefits without Adder	(F - G) x D	**$6,410**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$9.99**

MULTIFAMILY BUILDINGS — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$76,126	$76,126	$76,126
Variable O&M Savings	N/A	$1,114	$1,114	$1,114
Demand Savings	N/A	$7,801	$7,801	$7,801
Subtotal				$85,041
Non-Energy Benefits Adder (20%)				$17,008
Subtotal	N/A	$85,041	$85,041	$102,049
Other Benefits				
Bill Reduction - Gas	$154,022	N/A	N/A	N/A
Participant Rebates and Incentives	$247,288	N/A	N/A	$247,288
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$562,974	N/A	N/A	$281,487
Subtotal	$964,283	N/A	N/A	$528,775
Total Benefits	$964,283	$85,041	$85,041	$630,823
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$28,657	$28,657	$28,657
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$247,288	$247,288	$247,288
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$275,944	$275,944	$275,944
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$154,022	N/A
Subtotal	N/A	N/A	$154,022	N/A
Participant Costs				
Incremental Capital Costs	$34,127	N/A	N/A	$34,127
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$34,127	N/A	N/A	$34,127
Total Costs	$34,127	$275,944	$429,966	$310,071
Net Benefit (Cost)	$930,156	($190,904)	($344,925)	$320,752
Benefit/Cost Ratio	28.26	0.31	0.20	**2.03**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	10.80 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**2,889**
Utility Costs per Net Dth/Yr	E	$95.50
Net Benefit (Cost) per Gross Dth/Yr	F	$111.01
Non-Energy Benefits Adder per Gross Dth/Yr	G	$5.89
Annual Dth/$M	($1M / E)	**10,471**
Total Utility Budget	(E x D)	**$275,944**
Total MTRC Net Benefits with Adder	(D x F)	**$320,752**
Total MTRC Net Benefits without Adder	(F - G) x D	**$303,744**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$8.84**

NEW CONSTRUCTION — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$5,994,448	$5,994,448	$5,994,448
Variable O&M Savings	N/A	$76,635	$76,635	$76,635
Demand Savings	N/A	$536,781	$536,781	$536,781
Subtotal				$6,607,864
Non-Energy Benefits Adder (20%)				$1,321,573
Subtotal	N/A	$6,607,864	$6,607,864	$7,929,437
Other Benefits				
Bill Reduction - Gas	$10,603,027	N/A	N/A	N/A
Participant Rebates and Incentives	$625,430	N/A	N/A	$625,430
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$28,845,097	N/A	N/A	$14,278,323
Subtotal	$40,073,555	N/A	N/A	$14,903,753
Total Benefits	$40,073,555	$6,607,864	$6,607,864	$22,833,190
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$331,838	$331,838	$331,838
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$625,430	$625,430	$625,430
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$63,684	$63,684	$63,684
Subtotal	N/A	$1,020,953	$1,020,953	$1,020,953
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$10,472,498	N/A
Subtotal	N/A	N/A	$10,472,498	N/A
Participant Costs				
Incremental Capital Costs	$3,796,075	N/A	N/A	$3,750,269
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$3,796,075	N/A	N/A	$3,750,269
Total Costs	$3,796,075	$1,020,953	$11,493,451	$4,771,222
Net Benefit (Cost)	$36,277,480	$5,586,912	($4,885,586)	$18,061,969
Benefit/Cost Ratio	10.56	6.47	0.57	**4.79**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	20.00 years
Net-to-Gross (Weighted on Dth)	B	98.77%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**138,493**
Utility Costs per Net Dth/Yr	E	$7.37
Net Benefit (Cost) per Gross Dth/Yr	F	$130.42
Non-Energy Benefits Adder per Gross Dth/Yr	G	$9.54
Annual Dth/$M	($1M / E)	**135,651**
Total Utility Budget	(E x D)	**$1,020,953**
Total MTRC Net Benefits with Adder	(D x F)	**$18,061,969**
Total MTRC Net Benefits without Adder	(F - G) x D	**$16,740,396**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$0.37**

RECOMMISSIONING **2020** **GAS** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$13,816	$13,816	$13,816
Variable O&M Savings	N/A	$226	$226	$226
Demand Savings	N/A	$1,585	$1,585	$1,585
Subtotal				$15,627
Non-Energy Benefits Adder (20%)				$3,125
Subtotal	N/A	$15,627	$15,627	$18,752
Other Benefits				
Bill Reduction - Gas	$26,839	N/A	N/A	N/A
Participant Rebates and Incentives	$17,574	N/A	N/A	$17,574
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$44,412	N/A	N/A	$17,574
Total Benefits	$44,412	$15,627	$15,627	$36,326
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$416	$416	$416
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$17,574	$17,574	$17,574
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$17,990	$17,990	$17,990
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$24,155	N/A
Subtotal	N/A	N/A	$24,155	N/A
Participant Costs				
Incremental Capital Costs	$3,388	N/A	N/A	$3,049
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$3,388	N/A	N/A	$3,049
Total Costs	$3,388	$17,990	$42,145	$21,039
Net Benefit (Cost)	$41,025	($2,363)	($26,518)	$15,287
Benefit/Cost Ratio	13.11	0.87	0.37	**1.73**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	6.02 years
Net-to-Gross (Weighted on Dth)	B	90.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**896**
Utility Costs per Net Dth/Yr	E	$20.08
Net Benefit (Cost) per Gross Dth/Yr	F	$17.06
Non-Energy Benefits Adder per Gross Dth/Yr	G	$3.49
Annual Dth/$M	($1M / E)	**49,798**
Total Utility Budget	(E x D)	**$17,990**
Total MTRC Net Benefits with Adder	(D x F)	**$15,287**
Total MTRC Net Benefits without Adder	(F - G) x D	**$12,162**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$3.34**

ENERGY EFFICIENT SHOWERHEAD — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$829,227	$829,227	$829,227
Variable O&M Savings	N/A	$18,522	$18,522	$18,522
Demand Savings	N/A	$86,965	$86,965	$86,965
Subtotal				$934,714
Non-Energy Benefits Adder (20%)				$186,943
Subtotal	N/A	$934,714	$934,714	$1,121,657
Other Benefits				
Bill Reduction - Gas	$1,463,625	N/A	N/A	N/A
Participant Rebates and Incentives	$134,828	N/A	N/A	$134,828
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$10,605,343	N/A	N/A	$3,543,050
Subtotal	$12,203,796	N/A	N/A	$3,677,877
Total Benefits	$12,203,796	$934,714	$934,714	$4,799,535
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$133,502	$133,502	$133,502
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$134,828	$134,828	$134,828
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$268,330	$268,330	$268,330
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$1,448,989	N/A
Subtotal	N/A	N/A	$1,448,989	N/A
Participant Costs				
Incremental Capital Costs	$103,982	N/A	N/A	$102,942
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$103,982	N/A	N/A	$102,942
Total Costs	$103,982	$268,330	$1,717,319	$371,272
Net Benefit (Cost)	$12,099,814	$666,384	($782,604)	$4,428,263
Benefit/Cost Ratio	117.36	3.48	0.54	**12.93**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	10.00 years
Net-to-Gross (Weighted on Dth)	B	99.00%
Install Rate (Weighted on Dth)	C	67.0%

Program Totals:		
Total Dth/Yr Saved	D	**33,473**
Utility Costs per Net Dth/Yr	E	$8.02
Net Benefit (Cost) per Gross Dth/Yr	F	$132.29
Non-Energy Benefits Adder per Gross Dth/Yr	G	$5.58
Annual Dth/$M	($1M / E)	**124,747**
Total Utility Budget	(E x D)	**$268,330**
Total MTRC Net Benefits with Adder	(D x F)	**$4,428,263**
Total MTRC Net Benefits without Adder	(F - G) x D	**$4,241,320**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$0.80**

ENERGY FEEDBACK RESIDENTIAL — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$606,626	$606,626	$606,626
Variable O&M Savings	N/A	$11,784	$11,784	$11,784
Demand Savings	N/A	$82,541	$82,541	$82,541
Subtotal				$700,951
Non-Energy Benefits Adder (20%)				$140,190
Subtotal	N/A	$700,951	$700,951	$841,141
Other Benefits				
Bill Reduction - Gas	$1,227,360	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	$1,227,360	N/A	N/A	$0
Total Benefits	$1,227,360	$700,951	$700,951	$841,141
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$206,359	$206,359	$206,359
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	$206,359	$206,359	$206,359
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$1,227,360	N/A
Subtotal	N/A	N/A	$1,227,360	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	$206,359	$1,433,719	$206,359
Net Benefit (Cost)	$1,227,360	$494,592	($732,768)	$634,782
Benefit/Cost Ratio	INF	3.40	0.49	**4.08**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	3.00 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**78,561**
Utility Costs per Net Dth/Yr	E	$2.63
Net Benefit (Cost) per Gross Dth/Yr	F	$8.08
Non-Energy Benefits Adder per Gross Dth/Yr	G	$1.78
Annual Dth/$M	($1M / E)	**380,699**
Total Utility Budget	(E x D)	**$206,359**
Total MTRC Net Benefits with Adder	(D x F)	**$634,782**
Total MTRC Net Benefits without Adder	(F - G) x D	**$494,592**

Utility Program Cost per Net Dth Lifetime	(E / A)	**$0.88**

ENERGY STAR NEW HOMES — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$3,472,004	$3,472,004	$3,472,004
Variable O&M Savings	N/A	$44,412	$44,412	$44,412
Demand Savings	N/A	$311,078	$311,078	$311,078
Subtotal				$3,827,493
Non-Energy Benefits Adder (20%)				$765,499
Subtotal	N/A	$3,827,493	$3,827,493	$4,592,992
Other Benefits				
Bill Reduction - Gas	$6,593,162	N/A	N/A	N/A
Participant Rebates and Incentives	$1,513,966	N/A	N/A	$1,513,966
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$22,554	N/A	N/A	$10,375
Subtotal	$8,129,682	N/A	N/A	$1,524,341
Total Benefits	$8,129,682	$3,827,493	$3,827,493	$6,117,333
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$446,075	$446,075	$446,075
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$1,513,966	$1,513,966	$1,513,966
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$230,055	$230,055	$230,055
Subtotal	N/A	$2,190,095	$2,190,095	$2,190,095
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$6,065,709	N/A
Subtotal	N/A	N/A	$6,065,709	N/A
Participant Costs				
Incremental Capital Costs	$4,106,501	N/A	N/A	$3,777,981
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$4,106,501	N/A	N/A	$3,777,981
Total Costs	$4,106,501	$2,190,095	$8,255,805	$5,968,076
Net Benefit (Cost)	$4,023,181	$1,637,398	($4,428,311)	$149,257
Benefit/Cost Ratio	1.98	1.75	0.46	**1.03**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	19.94 years
Net-to-Gross (Weighted on Dth)	B	92.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**80,409**
Utility Costs per Net Dth/Yr	E	$27.24
Net Benefit (Cost) per Gross Dth/Yr	F	$1.86
Non-Energy Benefits Adder per Gross Dth/Yr	G	$9.52
Annual Dth/$M	($1M / E)	**36,715**
Total Utility Budget	(E x D)	**$2,190,095**
Total MTRC Net Benefits with Adder	(D x F)	**$149,257**
Total MTRC Net Benefits without Adder	(F - G) x D	**-$616,242**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$1.37**

HIGH EFFICIENCY AIR CONDITIONING — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$1,466,947	$1,466,947	$1,466,947
Variable O&M Savings	N/A	$19,224	$19,224	$19,224
Demand Savings	N/A	$134,655	$134,655	$134,655
Subtotal				$1,620,827
Non-Energy Benefits Adder (20%)				$324,165
Subtotal	N/A	$1,620,827	$1,620,827	$1,944,992
Other Benefits				
Bill Reduction - Gas	$3,791,135	N/A	N/A	N/A
Participant Rebates and Incentives	$660,686	N/A	N/A	$660,686
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$4,451,820	N/A	N/A	$660,686
Total Benefits	$4,451,820	$1,620,827	$1,620,827	$2,605,678
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	$660,686	$660,686	$660,686
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$660,686	$660,686	$660,686
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$2,562,807	N/A
Subtotal	N/A	N/A	$2,562,807	N/A
Participant Costs				
Incremental Capital Costs	$275,024	N/A	N/A	$185,916
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$275,024	N/A	N/A	$185,916
Total Costs	$275,024	$660,686	$3,223,493	$846,602
Net Benefit (Cost)	$4,176,797	$960,141	($1,602,666)	$1,759,076
Benefit/Cost Ratio	16.19	2.45	0.50	**3.08**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	18.00 years
Net-to-Gross (Weighted on Dth)	B	67.60%
Install Rate (Weighted on Dth)	C	100.0%
Program Totals:		
Total Dth/Yr Saved	D	**35,810**
Utility Costs per Net Dth/Yr	E	$18.45
Net Benefit (Cost) per Gross Dth/Yr	F	$49.12
Non-Energy Benefits Adder per Gross Dth/Yr	G	$9.05
Annual Dth/$M	($1M / E)	**54,202**
Total Utility Budget	(E x D)	**$660,686**
Total MTRC Net Benefits with Adder	(D x F)	**$1,759,076**
Total MTRC Net Benefits without Adder	(F - G) x D	**$1,434,911**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$1.02**

HOME ENERGY SQUAD — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$53,109	$53,109	$53,109
Variable O&M Savings	N/A	$792	$792	$792
Demand Savings	N/A	$5,549	$5,549	$5,549
Subtotal				$59,450
Non-Energy Benefits Adder (20%)				$11,890
Subtotal	N/A	$59,450	$59,450	$71,340
Other Benefits				
Bill Reduction - Gas	$107,453	N/A	N/A	N/A
Participant Rebates and Incentives	$5,568	N/A	N/A	$5,568
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$199,958	N/A	N/A	$99,979
Subtotal	$312,979	N/A	N/A	$105,547
Total Benefits	$312,979	$59,450	$59,450	$176,887
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$59,049	$59,049	$59,049
Advertising/Promotion/Customer Ed	N/A	$89,922	$89,922	$89,922
Participant Rebates and Incentives	N/A	$5,568	$5,568	$5,568
Equipment & Installation	N/A	$26,495	$26,495	$26,495
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$181,033	$181,033	$181,033
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$107,453	N/A
Subtotal	N/A	N/A	$107,453	N/A
Participant Costs				
Incremental Capital Costs	$12,854	N/A	N/A	$12,854
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$12,854	N/A	N/A	$12,854
Total Costs	$12,854	$181,033	$288,485	$193,886
Net Benefit (Cost)	$300,125	($121,582)	($229,035)	($16,999)
Benefit/Cost Ratio	24.35	0.33	0.21	**0.91**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	10.00 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**2,137**
Utility Costs per Net Dth/Yr	E	$84.73
Net Benefit (Cost) per Gross Dth/Yr	F	($7.96)
Non-Energy Benefits Adder per Gross Dth/Yr	G	$5.56
Annual Dth/$M	($1M / E)	**11,802**
Total Utility Budget	(E x D)	**$181,033**
Total MTRC Net Benefits with Adder	(D x F)	**-$16,999**
Total MTRC Net Benefits without Adder	(F - G) x D	**-$28,889**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$8.48**

HOME PERFORMANCE WITH ENERGY STAR — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$195,038	$195,038	$195,038
Variable O&M Savings	N/A	$2,575	$2,575	$2,575
Demand Savings	N/A	$18,035	$18,035	$18,035
Subtotal				$215,648
Non-Energy Benefits Adder (20%)				$43,130
Subtotal	N/A	$215,648	$215,648	$258,778
Other Benefits				
Bill Reduction - Gas	$340,341	N/A	N/A	N/A
Participant Rebates and Incentives	$55,282	N/A	N/A	$55,282
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$395,623	N/A	N/A	$55,282
Total Benefits	$395,623	$215,648	$215,648	$314,060
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$52,801	$52,801	$52,801
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$55,282	$55,282	$55,282
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$9,365	$9,365	$9,365
Subtotal	N/A	$117,448	$117,448	$117,448
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$394,612	N/A
Subtotal	N/A	N/A	$394,612	N/A
Participant Costs				
Incremental Capital Costs	$218,104	N/A	N/A	$252,960
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$218,104	N/A	N/A	$252,960
Total Costs	$218,104	$117,448	$512,059	$370,408
Net Benefit (Cost)	$177,519	$98,200	($296,412)	($56,348)
Benefit/Cost Ratio	1.81	1.84	0.42	**0.85**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	16.80 years
Net-to-Gross (Weighted on Dth)	B	115.95%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**5,201**
Utility Costs per Net Dth/Yr	E	$22.58
Net Benefit (Cost) per Gross Dth/Yr	F	($10.83)
Non-Energy Benefits Adder per Gross Dth/Yr	G	$8.29
Annual Dth/$M	($1M / E)	**44,284**
Total Utility Budget	(E x D)	**$117,448**
Total MTRC Net Benefits with Adder	(D x F)	**-$56,348**
Total MTRC Net Benefits without Adder	(F - G) x D	**-$99,478**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$1.34**

INSULATION & AIR SEALING — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$1,130,591	$1,130,591	$1,130,591
Variable O&M Savings	N/A	$15,223	$15,223	$15,223
Demand Savings	N/A	$106,631	$106,631	$106,631
Subtotal				$1,252,445
Non-Energy Benefits Adder (20%)				$250,489
Subtotal	N/A	$1,252,445	$1,252,445	$1,502,934
Other Benefits				
Bill Reduction - Gas	$2,691,146	N/A	N/A	N/A
Participant Rebates and Incentives	$522,413	N/A	N/A	$522,413
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$3,213,559	N/A	N/A	$522,413
Total Benefits	$3,213,559	$1,252,445	$1,252,445	$2,025,347
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$54,473	$54,473	$54,473
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$522,413	$522,413	$522,413
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$2,000	$2,000	$2,000
Subtotal	N/A	$578,886	$578,886	$578,886
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$2,287,474	N/A
Subtotal	N/A	N/A	$2,287,474	N/A
Participant Costs				
Incremental Capital Costs	$2,046,543	N/A	N/A	$1,739,562
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$2,046,543	N/A	N/A	$1,739,562
Total Costs	$2,046,543	$578,886	$2,866,360	$2,318,448
Net Benefit (Cost)	$1,167,016	$673,559	($1,613,915)	($293,101)
Benefit/Cost Ratio	1.57	2.16	0.44	**0.87**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	15.34 years
Net-to-Gross (Weighted on Dth)	B	85.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**32,506**
Utility Costs per Net Dth/Yr	E	$17.81
Net Benefit (Cost) per Gross Dth/Yr	F	($9.02)
Non-Energy Benefits Adder per Gross Dth/Yr	G	$7.71
Annual Dth/$M	($1M / E)	**56,153**
Total Utility Budget	(E x D)	**$578,886**
Total MTRC Net Benefits with Adder	(D x F)	**-$293,101**
Total MTRC Net Benefits without Adder	(F - G) x D	**-$543,590**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$1.16**

RESIDENTIAL HEATING — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$3,681,337	$3,681,337	$3,681,337
Variable O&M Savings	N/A	$48,074	$48,074	$48,074
Demand Savings	N/A	$336,726	$336,726	$336,726
Subtotal				$4,066,137
Non-Energy Benefits Adder (20%)				$813,227
Subtotal	N/A	$4,066,137	$4,066,137	$4,879,364
Other Benefits				
Bill Reduction - Gas	$8,660,798	N/A	N/A	N/A
Participant Rebates and Incentives	$1,610,100	N/A	N/A	$1,610,100
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$10,270,898	N/A	N/A	$1,610,100
Total Benefits	$10,270,898	$4,066,137	$4,066,137	$6,489,464
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$76,482	$76,482	$76,482
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$1,610,100	$1,610,100	$1,610,100
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$11,650	$11,650	$11,650
Subtotal	N/A	$1,698,232	$1,698,232	$1,698,232
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$7,448,287	N/A
Subtotal	N/A	N/A	$7,448,287	N/A
Participant Costs				
Incremental Capital Costs	$7,782,854	N/A	N/A	$6,693,255
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$7,782,854	N/A	N/A	$6,693,255
Total Costs	$7,782,854	$1,698,232	$9,146,519	$8,391,487
Net Benefit (Cost)	$2,488,044	$2,367,904	($5,080,382)	($1,902,023)
Benefit/Cost Ratio	1.32	2.39	0.44	**0.77**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	18.00 years
Net-to-Gross (Weighted on Dth)	B	86.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**91,321**
Utility Costs per Net Dth/Yr	E	$18.60
Net Benefit (Cost) per Gross Dth/Yr	F	($20.83)
Non-Energy Benefits Adder per Gross Dth/Yr	G	$8.91
Annual Dth/$M	($1M / E)	**53,774**
Total Utility Budget	(E x D)	**$1,698,232**
Total MTRC Net Benefits with Adder	(D x F)	**-$1,902,023**
Total MTRC Net Benefits without Adder	(F - G) x D	**-$2,715,250**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$1.03**

SCHOOL EDUCATION KITS — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$1,294,489	$1,294,489	$1,294,489
Variable O&M Savings	N/A	$102,592	$102,592	$102,592
Demand Savings	N/A	$135,252	$135,252	$135,252
Subtotal				$1,532,333
Non-Energy Benefits Adder (20%)				$306,467
Subtotal	N/A	$1,532,333	$1,532,333	$1,838,800
Other Benefits				
Bill Reduction - Gas	$2,619,082	N/A	N/A	N/A
Participant Rebates and Incentives	$213,700	N/A	N/A	$213,700
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$21,346,372	N/A	N/A	$4,757,745
Subtotal	$24,179,154	N/A	N/A	$4,971,445
Total Benefits	$24,179,154	$1,532,333	$1,532,333	$6,810,245
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$438,323	$438,323	$438,323
Advertising/Promotion/Customer Ed	N/A	$811	$811	$811
Participant Rebates and Incentives	N/A	$213,700	$213,700	$213,700
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$652,834	$652,834	$652,834
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$2,619,082	N/A
Subtotal	N/A	N/A	$2,619,082	N/A
Participant Costs				
Incremental Capital Costs	$195,556	N/A	N/A	$195,556
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$195,556	N/A	N/A	$195,556
Total Costs	$195,556	$652,834	$3,271,916	$848,390
Net Benefit (Cost)	$23,983,598	$879,499	($1,739,583)	$5,961,855
Benefit/Cost Ratio	123.64	2.35	0.47	**8.03**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	10.00 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	18.8%

Program Totals:		
Total Dth/Yr Saved	D	**52,059**
Utility Costs per Net Dth/Yr	E	$12.54
Net Benefit (Cost) per Gross Dth/Yr	F	$114.52
Non-Energy Benefits Adder per Gross Dth/Yr	G	$5.89
Annual Dth/$M	($1M / E)	**79,744**
Total Utility Budget	(E x D)	**$652,834**
Total MTRC Net Benefits with Adder	(D x F)	**$5,961,855**
Total MTRC Net Benefits without Adder	(F - G) x D	**$5,655,388**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$1.25**

THERMOSTAT OPTIMIZATION — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$721,242	$721,242	$721,242
Variable O&M Savings	N/A	$10,799	$10,799	$10,799
Demand Savings	N/A	$75,640	$75,640	$75,640
Subtotal				$807,681
Non-Energy Benefits Adder (20%)				$161,536
Subtotal	N/A	$807,681	$807,681	$969,217
Other Benefits				
Bill Reduction - Gas	$1,260,296	N/A	N/A	N/A
Participant Rebates and Incentives	$168,095	N/A	N/A	$168,095
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$1,428,391	N/A	N/A	$168,095
Total Benefits	$1,428,391	$807,681	$807,681	$1,137,313
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$58,098	$58,098	$58,098
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$168,095	$168,095	$168,095
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$0	$0	$0
Subtotal	N/A	$226,193	$226,193	$226,193
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$1,260,296	N/A
Subtotal	N/A	N/A	$1,260,296	N/A
Participant Costs				
Incremental Capital Costs	$495,592	N/A	N/A	$495,592
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$495,592	N/A	N/A	$495,592
Total Costs	$495,592	$226,193	$1,486,489	$721,785
Net Benefit (Cost)	$932,799	$581,488	($678,808)	$415,528
Benefit/Cost Ratio	2.88	3.57	0.54	**1.58**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	10.00 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**29,114**
Utility Costs per Net Dth/Yr	E	$7.77
Net Benefit (Cost) per Gross Dth/Yr	F	$14.27
Non-Energy Benefits Adder per Gross Dth/Yr	G	$5.55
Annual Dth/$M	($1M / E)	**128,715**
Total Utility Budget	(E x D)	**$226,193**
Total MTRC Net Benefits with Adder	(D x F)	**$415,528**
Total MTRC Net Benefits without Adder	(F - G) x D	**$253,992**

Utility Program Cost per Net Dth Lifetime	(E / A)	**$0.78**

WATER HEATING — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$292,517	$292,517	$292,517
Variable O&M Savings	N/A	$3,753	$3,753	$3,753
Demand Savings	N/A	$26,289	$26,289	$26,289
Subtotal				$322,559
Non-Energy Benefits Adder (20%)				$64,512
Subtotal	N/A	$322,559	$322,559	$387,071
Other Benefits				
Bill Reduction - Gas	$657,597	N/A	N/A	N/A
Participant Rebates and Incentives	$91,935	N/A	N/A	$91,935
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$0	N/A	N/A	$0
Subtotal	$749,531	N/A	N/A	$91,935
Total Benefits	$749,531	$322,559	$322,559	$479,006
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$22,534	$22,534	$22,534
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$91,935	$91,935	$91,935
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$4,075	$4,075	$4,075
Subtotal	N/A	$118,544	$118,544	$118,544
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$591,837	N/A
Subtotal	N/A	N/A	$591,837	N/A
Participant Costs				
Incremental Capital Costs	$736,389	N/A	N/A	$662,750
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$736,389	N/A	N/A	$662,750
Total Costs	$736,389	$118,544	$710,381	$781,294
Net Benefit (Cost)	$13,143	$204,015	($387,822)	($302,288)
Benefit/Cost Ratio	1.02	2.72	0.45	**0.61**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	19.36 years
Net-to-Gross (Weighted on Dth)	B	90.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**6,912**
Utility Costs per Net Dth/Yr	E	$17.15
Net Benefit (Cost) per Gross Dth/Yr	F	($43.73)
Non-Energy Benefits Adder per Gross Dth/Yr	G	$9.33
Annual Dth/$M	($1M / E)	**58,311**
Total Utility Budget	(E x D)	**$118,544**
Total MTRC Net Benefits with Adder	(D x F)	**-$302,288**
Total MTRC Net Benefits without Adder	(F - G) x D	**-$366,800**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$0.89**

ENERGY SAVINGS KIT — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$210,830	$210,830	$210,830
Variable O&M Savings	N/A	$4,196	$4,196	$4,196
Demand Savings	N/A	$22,028	$22,028	$22,028
Subtotal				$237,055
Non-Energy Benefits Adder (50%)				$118,527
Subtotal	N/A	$237,055	$237,055	$355,582
Other Benefits				
Bill Reduction - Gas	$426,564	N/A	N/A	N/A
Participant Rebates and Incentives	$24,309	N/A	N/A	$24,309
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$2,398,573	N/A	N/A	$899,256
Subtotal	$2,849,446	N/A	N/A	$923,565
Total Benefits	$2,849,446	$237,055	$237,055	$1,279,147
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$48,563	$48,563	$48,563
Advertising/Promotion/Customer Ed	N/A	$0	$0	$0
Participant Rebates and Incentives	N/A	$24,309	$24,309	$24,309
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$1,800	$1,800	$1,800
Subtotal	N/A	$74,672	$74,672	$74,672
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$426,564	N/A
Subtotal	N/A	N/A	$426,564	N/A
Participant Costs				
Incremental Capital Costs	$24,107	N/A	N/A	$24,107
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$24,107	N/A	N/A	$24,107
Total Costs	$24,107	$74,672	$501,236	$98,779
Net Benefit (Cost)	$2,825,338	$162,383	($264,181)	$1,180,368
Benefit/Cost Ratio	118.20	3.17	0.47	**12.95**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	10.00 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	74.9%

Program Totals:		
Total Dth/Yr Saved	D	**8,479**
Utility Costs per Net Dth/Yr	E	$8.81
Net Benefit (Cost) per Gross Dth/Yr	F	$139.21
Non-Energy Benefits Adder per Gross Dth/Yr	G	$13.98
Annual Dth/$M	($1M / E)	**113,547**
Total Utility Budget	(E x D)	**$74,672**
Total MTRC Net Benefits with Adder	(D x F)	**$1,180,368**
Total MTRC Net Benefits without Adder	(F - G) x D	**$1,061,840**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$0.88**

MULTIFAMILY WEATHERIZATION — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$209,750	$209,750	$209,750
Variable O&M Savings	N/A	$2,907	$2,907	$2,907
Demand Savings	N/A	$20,359	$20,359	$20,359
Subtotal				$233,016
Non-Energy Benefits Adder (50%)				$116,508
Subtotal	N/A	$233,016	$233,016	$349,524
Other Benefits				
Bill Reduction - Gas	$424,379	N/A	N/A	N/A
Participant Rebates and Incentives	$408,677	N/A	N/A	$408,677
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$507,869	N/A	N/A	$253,934
Subtotal	$1,340,925	N/A	N/A	$662,611
Total Benefits	$1,340,925	$233,016	$233,016	$1,012,136
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$93,273	$93,273	$93,273
Advertising/Promotion/Customer Ed	N/A	$20,000	$20,000	$20,000
Participant Rebates and Incentives	N/A	$408,677	$408,677	$408,677
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$12,931	$12,931	$12,931
Subtotal	N/A	$534,880	$534,880	$534,880
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$424,379	N/A
Subtotal	N/A	N/A	$424,379	N/A
Participant Costs				
Incremental Capital Costs	$397,797	N/A	N/A	$397,797
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$397,797	N/A	N/A	$397,797
Total Costs	$397,797	$534,880	$959,259	$932,677
Net Benefit (Cost)	$943,128	($301,864)	($726,243)	$79,458
Benefit/Cost Ratio	3.37	0.44	0.24	**1.09**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	14.00 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**6,324**
Utility Costs per Net Dth/Yr	E	$84.58
Net Benefit (Cost) per Gross Dth/Yr	F	$12.56
Non-Energy Benefits Adder per Gross Dth/Yr	G	$18.42
Annual Dth/$M	($1M / E)	**11,823**
Total Utility Budget	(E x D)	**$534,880**
Total MTRC Net Benefits with Adder	(D x F)	**$79,458**
Total MTRC Net Benefits without Adder	(F - G) x D	**-$37,050**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$6.04**

NON-PROFIT **2020** **GAS** **ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$184,375	$184,375	$184,375
Variable O&M Savings	N/A	$2,440	$2,440	$2,440
Demand Savings	N/A	$17,094	$17,094	$17,094
Subtotal				$203,909
Non-Energy Benefits Adder (50%)				$101,955
Subtotal	N/A	$203,909	$203,909	$305,864
Other Benefits				
Bill Reduction - Gas	$373,038	N/A	N/A	N/A
Participant Rebates and Incentives	$357,615	N/A	N/A	$357,615
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$4,865	N/A	N/A	$2,433
Subtotal	$735,518	N/A	N/A	$360,047
Total Benefits	$735,518	$203,909	$203,909	$665,911
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$70,722	$70,722	$70,722
Advertising/Promotion/Customer Ed	N/A	$20,000	$20,000	$20,000
Participant Rebates and Incentives	N/A	$357,615	$357,615	$357,615
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$9,968	$9,968	$9,968
Subtotal	N/A	$458,304	$458,304	$458,304
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$373,038	N/A
Subtotal	N/A	N/A	$373,038	N/A
Participant Costs				
Incremental Capital Costs	$325,943	N/A	N/A	$325,943
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$325,943	N/A	N/A	$325,943
Total Costs	$325,943	$458,304	$831,342	$784,247
Net Benefit (Cost)	$409,575	($254,395)	($627,433)	($118,336)
Benefit/Cost Ratio	2.26	0.44	0.25	**0.85**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	17.00 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**4,772**
Utility Costs per Net Dth/Yr	E	$96.05
Net Benefit (Cost) per Gross Dth/Yr	F	($24.80)
Non-Energy Benefits Adder per Gross Dth/Yr	G	$21.37
Annual Dth/$M	($1M / E)	**10,411**
Total Utility Budget	(E x D)	**$458,304**
Total MTRC Net Benefits with Adder	(D x F)	**-$118,336**
Total MTRC Net Benefits without Adder	(F - G) x D	**-$220,290**

Utility Program Cost per Net Dth Lifetime	(E / A)	**$5.65**

SINGLE-FAMILY WEATHERIZATION — 2020 — GAS — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Modified TRC Test ($Total)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	$1,829,492	$1,829,492	$1,829,492
Variable O&M Savings	N/A	$24,169	$24,169	$24,169
Demand Savings	N/A	$169,292	$169,292	$169,292
Subtotal				$2,022,953
Non-Energy Benefits Adder (50%)				$1,011,477
Subtotal	N/A	$2,022,953	$2,022,953	$3,034,430
Other Benefits				
Bill Reduction - Gas	$3,701,530	N/A	N/A	N/A
Participant Rebates and Incentives	$2,312,207	N/A	N/A	$2,312,207
Incremental Capital Savings	$0	N/A	N/A	$0
Incremental O&M Savings	$359,367	N/A	N/A	$179,684
Subtotal	$6,373,104	N/A	N/A	$2,491,891
Total Benefits	$6,373,104	$2,022,953	$2,022,953	$5,526,320
Costs				
Utility Project Costs				
Program Planning & Design	N/A	$0	$0	$0
Administration & Program Delivery	N/A	$184,442	$184,442	$184,442
Advertising/Promotion/Customer Ed	N/A	$85,000	$85,000	$85,000
Participant Rebates and Incentives	N/A	$2,312,207	$2,312,207	$2,312,207
Equipment & Installation	N/A	$0	$0	$0
Measurement and Verification	N/A	$112,512	$112,512	$112,512
Subtotal	N/A	$2,694,161	$2,694,161	$2,694,161
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	$3,701,530	N/A
Subtotal	N/A	N/A	$3,701,530	N/A
Participant Costs				
Incremental Capital Costs	$2,973,600	N/A	N/A	$2,973,600
Incremental O&M Costs	$0	N/A	N/A	$0
Subtotal	$2,973,600	N/A	N/A	$2,973,600
Total Costs	$2,973,600	$2,694,161	$6,395,691	$5,667,761
Net Benefit (Cost)	$3,399,504	($671,208)	($4,372,738)	($141,441)
Benefit/Cost Ratio	2.14	0.75	0.32	**0.98**

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

Input Summary and Totals

Program Assumptions:		
Lifetime (Weighted on Dth)	A	16.66 years
Net-to-Gross (Weighted on Dth)	B	100.00%
Install Rate (Weighted on Dth)	C	100.0%

Program Totals:		
Total Dth/Yr Saved	D	**49,123**
Utility Costs per Net Dth/Yr	E	$54.85
Net Benefit (Cost) per Gross Dth/Yr	F	($2.88)
Non-Energy Benefits Adder per Gross Dth/Yr	G	$20.59
Annual Dth/$M	($1M / E)	**18,233**
Total Utility Budget	(E x D)	**$2,694,161**
Total MTRC Net Benefits with Adder	(D x F)	**-$141,441**
Total MTRC Net Benefits without Adder	(F - G) x D	**-$1,152,917**
Utility Program Cost per Net Dth Lifetime	(E / A)	**$3.29**

Confidential Appendix C: ISOC Product Cost and Benefit Summary

The following section summarizes both the cost and benefits of the ISOC product for 2020 in terms of capacity and energy.

2020 ISOC Product 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			$35,728,211.76

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	$ -	$ -	$ -	$ -	$-	$ 95,167.42	$ 124,271.37	$ 435,589.28	$ -	$ -	$ -	$ -	$ 655,028.07
Total Energy Savings	$ -	$ -	$ -	$ -	$-	$ 95,167.42	$ 124,271.37	$ 435,589.28	$ -	$ -	$ -	$ -	$ 655,028.07

Total ISOC Benefits		$36,383,239.83
Total ISOC Costs		$ (23,810,391.11)
Total Admin Costs	[redacted]	[redacted]
Total Customer Credits		
Total Product Net Benefit		$12,572,848.72

CERTIFICATE OF SERVICE

I hereby certify that on April 1, 2021 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/ Alicia D. Harvey