2020 STATUS REPORT & ASSOCIATED COMPLIANCE FILINGS

MINNESOTA ELECTRIC AND NATURAL GAS
CONSERVATION IMPROVEMENT PROGRAM
DOCKET NO. E,G002/CIP-16-115

Xcel Energy®

March 31, 2021

—Via Electronic Filing—

Dr. Aditya Ranade
Deputy Commissioner
Minnesota Department of Commerce
85 7th Place East, Suite 500
St. Paul, MN 55101-2198

RE: 2020 Status Report & Associated Compliance Filings
Minnesota Electric and Natural Gas Conservation Improvement Program
Docket No. E,G002/CIP-16-115.09

Dear Deputy Commissioner Ranade:

Pursuant to Minnesota R.7690.0550, Northern States Power Company doing business as Xcel Energy electronically submits to the Minnesota Department of Commerce – Division of Energy Resources this 2020 Status Report and Associated Compliance Filings for its Minnesota Electric and Natural Gas Conservation Improvement Program.

We have electronically filed this document through the eDockets system maintained by the Minnesota Department of Commerce and the Minnesota Public Utilities Commission. By copy of this transmittal letter, Xcel Energy is notifying persons on the attached service list of this filing.

Parties wishing to access our 2020 CIP Status Report can access the eDockets system through the websites of the Department of Commerce, the Public Utilities Commission, or by going to the eDockets homepage and searching for docket E,G002/CIP-16-115.09. We provide a direct link to the eDockets website: https://www.edockets.state.mn.us/EFiling/home.jsp.

We request parties to address any questions regarding the report to Ashly McFarlane at ashly.a.mcfarlane@xcelenergy.com or 612.337.2389.

SINCERELY,

/s/

SHAWN WHITE
DIRECTOR
DEMAND SIDE MANAGEMENT AND RENEWABLE OPERATIONS

Enclosures
c: Service Lists

CERTIFICATE OF SERVICE

I, Crystal Syvertsen, hereby certify that I have this day served copies of the foregoing document on the attached list of persons.

xx by depositing a true and correct copy thereof, properly enveloped with postage paid in the United States mail at Minneapolis, Minnesota; or

xx by electronic filing.

Docket No.: E,G002/CIP-16-115.09 & CIP Special Service List

Dated this 31st day of March 2021.

/s/

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Crystal Syvertsen
Regulatory Administrator

Northern States Power Company,
a Minnesota corporation
2020 Conservation Improvement Program Status Report
Executive Summary

Northern States Power Company, doing business as Xcel Energy, respectfully submits the following comprehensive report of its electric and natural gas Conservation Improvement Program (CIP) achievements for 2020. This report addresses:

- Overall CIP achievements including participation, expenditures, energy conserved, demand reduced, and estimated carbon dioxide (CO_2) emissions avoided by each segment and program;
- CIP Trackers, including 2020 expenditures and cost recovery by month;
- Calculation of the CIP Adjustment Factors for the period from October 2021 through September 2022, including estimated expenditures, cost recovery, and financial incentives;
- Calculation of the 2020 CIP Financial Incentives;
- Cost-benefit analyses by program, as well as explanations of deviations from goal and changes during 2020; and,
- Other compliance reports, as required by the Minnesota Department of Commerce, Division of Energy Resources ("Department") and the Minnesota Public Utilities Commission ("Commission").

Achievements

In 2020, the electric portfolio met and surpassed the state's 1.5% energy savings target for the ninth consecutive year, achieving more than 646 GWh of electric savings, or 2.25% of sales. Our electric savings performance was higher than recent years due to three main factors: first, the Company responded to the COVID-19 pandemic and civil unrest by offering bonus incentives through many of our business and residential programs. The bonus incentives contributed to increased participation in the several programs, including but not limited to the Business Lighting Efficiency and Business New Construction programs. Second, we partnered with local food banks to distribute LED light bulbs to households in need, increasing program participation and savings. Third, at the end of 2019 several large commercial and industrial (C&I) projects moved their completion dates to 2020.

In response to the COVID-19 pandemic we adapted our residential programs and began offering virtual, no contact audit options. Despite the program changes, participation in the Low-Income Segment and associated savings were still negatively impacted. Programs with in-unit audits and direct installations, such as Home Energy Squad and Multi-Family Building Efficiency programs were particularly impacted due to accessibility issues related to compliance with public health orders as a result of COVID-19. Access to customer homes and apartment units was restricted for much of 2020 – especially in vulnerable communities such as long-term care facilities. While virtual audit options were provided to customers, many opted to delay participation in the programs.

As in past years, lighting made up a large portion of the Company's energy savings in the Business Segment in 2020. Lighting Efficiency accounted for more than 35% of the business electric portfolio achievement in 2020 due to increased and new advertising as well as bonus incentives. The Business New Construction, Commercial Efficiency, and Process Efficiency programs also made significant contributions towards the savings goal. Altogether, those four programs contributed more than 247 GWh of electric savings, accounting for more than three-fourths of total electric savings in the business portfolio.

Lighting also played a major role in the Residential Segment's electric savings achievement. The Home Lighting program accounted for more than 78% of the residential electric portfolio achievement. Other top contributors included the Energy Feedback, Residential Heating, and Residential Cooling programs. Collectively, those four programs achieved more than 251 GWh, which translates to 93% of the residential portfolio's total electric achievement.

The natural gas portfolio also surpassed the state's 1.0% energy savings goal for natural gas in 2020. The portfolio achieved over 868,000 Dth of total natural gas savings, which is 1.21% of sales. In the Business Segment, several programs that offer both electric and natural gas savings opportunities exceeded their natural gas savings goals, in particular, the Process Efficiency program, which saved more than 277,000 Dth. Most Residential Segment natural gas programs continue to exceed their goals despite increasingly stringent building codes and standards and the COVID-19 pandemic. Only two programs came in under their goals, Home Energy Squad and Whole Home Efficiency. Participation in these programs was impacted as direct installations and onsite verification was delayed for several months.

In 2020, the Company spent a total of $119.05 million to achieve the savings results, including $104.46 million on electric programs and $14.59 million on natural gas programs. Electric spending was 101% of the approved regulatory budget and natural gas spending was 78% of the approved regulatory budget.

In total, the electric programs will provide more than $308 million in net benefits to our customers. Net benefits are a measure of the generation, transmission, distribution and energy costs avoided as a result of the conservation programs less the costs to run the programs. The natural gas programs will provide more than $46 million in net benefits to our customers.

The Company's 2020 CIP achievements are summarized in Table 1.

Table 1: Xcel Energy's 2020 CIP Expenditures and Energy Savings

2020	Expenditures ($)	Energy Savings (kWh or Dth)	Demand Savings (kW)
Total Electric CIP	$104,461,579	646,796,991 kWh	165,742
Total Natural Gas CIP	$14,587,983	868,599 Dth	
Total Expenditures	$119,049,562		

The Company's cumulative achievements since 1992 are nearly 10,850 GWh of electric energy saved, 18.1 million Dth of natural gas saved, and more than $6.9 billion in net benefits achieved, with total spending of $2.0 billion. Figures 1 and 2 highlight total achievements and spending for electric and natural gas programs from 2005 to 2020.

Figure 1: Xcel Energy's 2005-2020 Electric CIP Achievements

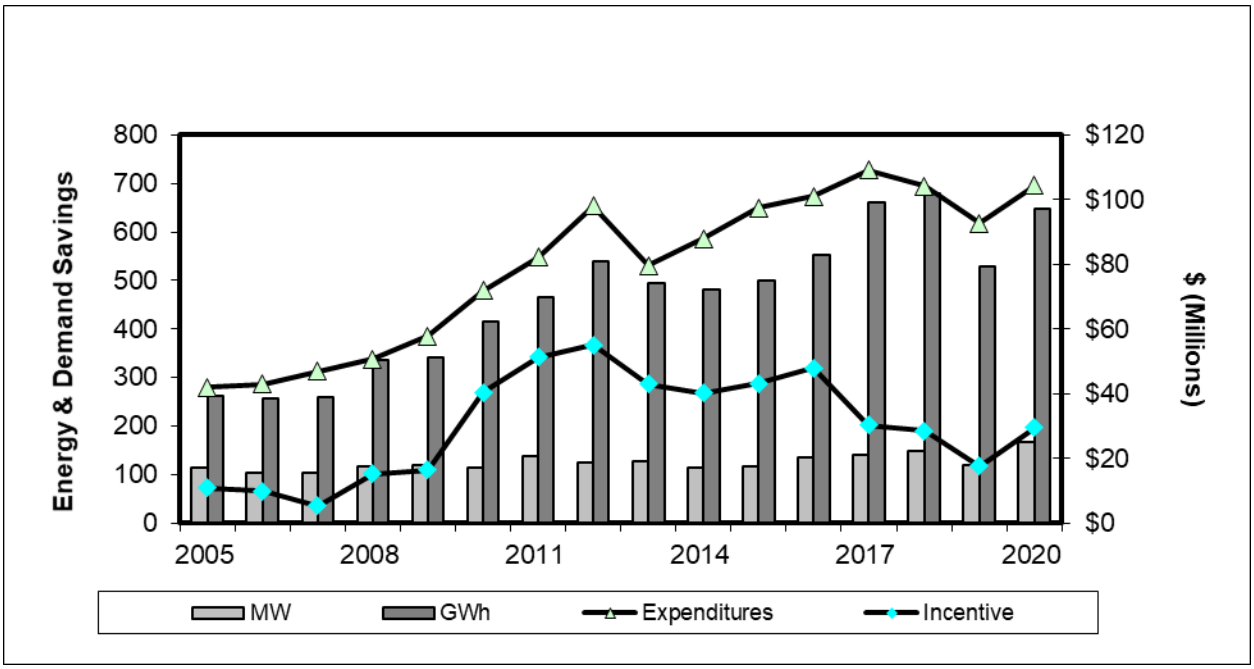
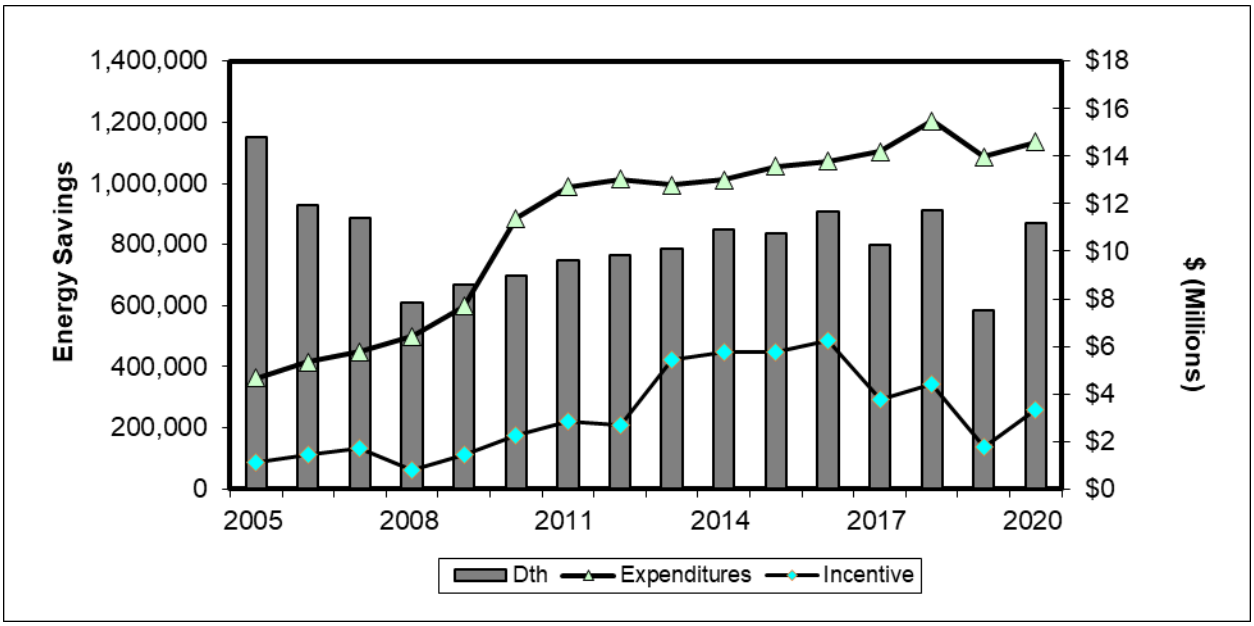


Figure 2: Xcel Energy's 2005-2020 Natural Gas CIP Achievements



The following sections provide greater, detail on Xcel Energy's 2020 electric and natural gas CIP achievements.

- ***Compliance Reporting*** – Provides information to satisfy provisions in Minnesota Statutes sections 216B.2401, 216B.241, and 216B.2411, including spending requirements and caps. This section also includes all other ordered compliance requirements, including those required by the Commissioner's November 25, 2019 Decision in this docket.

- ***Conservation Cost Recovery Report*** (Docket No. E002/GR-92-1185) – Provides the 2020 CIP Trackers. Xcel Energy seeks approval to record $104,461,579 in electric spending and $14,587,983 in natural gas spending in its CIP Tracker accounts.

- ***CIP Adjustment Rate Report*** (Docket No. E002/M-94-1016) – Calculates the electric and natural gas CIP Adjustment Factors to be applied to customer usage for recovery of 2020 conservation expenditures, effective for the period October 2021 through September 2022. Xcel Energy is proposing new electric and natural gas CIP Adjustment Factors of $0.003628/kWh and $0.024551/therm, respectively.

- ***Cost-Effectiveness and Performance Mechanism Report*** (Docket No. E,G999/CI-08-133 and Docket No. E002/M-11-1101) – Details the mechanisms and calculations of Xcel Energy's DSM Financial Incentives. The Company requests approval to record and recover from customers $30,500,073 in electric and $4,268,369 in natural gas DSM performance incentives in its CIP Trackers.

- ***2020 CIP Status Report*** – Minn. R. 7690.0550 outlines the information that a utility must include in its annual program status report. This report provides budgets and goals, expenditures, actual energy savings, and participation.

- ***Cost-Effectiveness*** – Minn. R. 7690.0550, subd. E requires a utility to provide information on the cost-effectiveness of its programs, as calculated from the utility, participant, ratepayer, and societal perspectives. This section includes all cost-effectiveness analyses, detailed technical assumptions by program and by segment, and project information sheets.

Avoided Emissions

In addition to the cost-effectiveness of the Company's 2020 portfolio, we have also analyzed the avoided carbon dioxide (CO_2) emissions resulting from our portfolio's achievement. We have performed the avoided CO_2 analysis to highlight this important benefit of our CIP programs and help inform any future portfolio changes that optimize the avoidance of CO_2 emissions.

As Northern States Power Company's electric generation portfolio continues to evolve, especially with the significant growth in wind generation, the CO_2 emissions avoided by each implemented measure varies according to the time the measure avoids electric consumption. To accurately capture the time variation of avoided CO_2 emissions from 2020, the analysis is based on a 2019 run of the hourly marginal energy costs and total system average emissions (lbs of CO2/MWh) for 2017-2030. Marginal emissions are determined by first examining the marginal energy cost. If the marginal energy cost for a single hour is less than or equal to $0/MWh, it is assumed that wind generation is the source of the marginal energy and avoided emissions for those hours is 0 lbs of CO_2. For all other hours, it is assumed that the avoided emissions are the total system average emissions for that hour. Similar to the process used to determine Marginal Energy Avoided Revenue Requirements in the portfolio's cost-effectiveness tests, this hourly data is then applied to an hourly load shape for each measure to determine the first year and lifetime avoided emissions for the measure.

The first year and lifetime avoided CO_2 emissions and emissions intensities for each program and segment in 2020 are summarized in Table 4.

Table 2: Xcel Energy's Electric and Gas CIP Goals

2020	Electric Participants	Electric Budget	Customer kW	Generator kW	Generator kWh	Gas Participants	Gas Budget	Dth Savings
Business Segment								
Business New Construction	122	$4,671,924	5,502	4,316	23,001,531	25	$384,505	23,360
Commercial Efficiency	182	$3,709,232	4,417	3,803	28,029,199	46	$512,882	41,186
Commercial Refrigeration Efficiency	343	$362,735	1,330	237	2,165,547	51	$31,621	1,472
Cooling Efficiency	1,941	$2,720,524	2,893	2,414	7,004,146	3	$48,579	5,968
Custom Efficiency	52	$1,385,389	984	783	4,894,015	21	$225,559	17,011
Data Center Efficiency	80	$1,357,410	1,139	961	9,495,027	0	$0	0
Efficiency Controls	70	$1,232,065	1,239	280	9,155,555	17	$184,029	16,062
Fluid Systems Optimization	347	$1,644,768	2,275	1,930	14,117,816	0	$0	0
Foodservice Equipment	73	$54,753	109	73	501,133	67	$96,428	5,992
Heating Efficiency	64	$7,830	40	32	156,350	579	$1,469,793	121,001
Lighting Efficiency	1,635	$6,695,907	10,087	7,650	58,276,520	0	$0	0
Motor Efficiency	1,740	$4,088,786	7,245	6,566	39,113,756	0	$0	0
Multi-Family Building Efficiency	6,860	$1,476,811	2,815	674	4,782,568	2,280	$672,343	15,773
Process Efficiency	238	$6,764,286	8,734	5,222	46,147,183	75	$1,088,323	180,160
Recommissioning	89	$808,898	1,022	561	6,626,083	49	$203,129	21,058
Self-Direct	0	$28,312	0	0	0	0	$9,243	0
Turn Key	306	$1,680,254	1,571	928	7,990,299	70	$240,922	5,785
Business Segment Energy Efficiency Total	**14,142**	**$38,689,884**	**51,404**	**36,431**	**261,456,728**	**3,283**	**$5,167,356**	**454,829**
Electric Rate Savings	45	$559,716	9,000	4,593	170,174	0	$0	0
Saver's Switch for Business	1,505	$2,897,083	21,030	6,507	364,589	206	$0	5,529
Peak Partner Rewards	15	$910,277	13,279	14,279	85,307	0	$0	0
Business Segment Load Management Total	**1,565**	**$4,367,077**	**43,309**	**25,379**	**620,069**	**206**	**$0**	**5,529**
Business Education	14,000	$247,498	0	0	0	19,000	$37,412	0
Small Business Lamp Recycling	60,000	$62,983	0	0	0	0	$0	0
Indirect Business Subtotal	**74,000**	**$310,481**	**0**	**0**	**0**	**19,000**	**$37,412**	**0**
Business Segment with Indirect Participants	**89,707**	**$43,367,442**	**94,714**	**61,810**	**262,076,797**	**22,489**	**$5,204,768**	**460,359**
Business Segment Direct Participants Only	**15,707**	**$43,056,961**	**94,714**	**61,810**	**262,076,797**	**3,489**	**$5,167,356**	**460,359**
Residential Segment								
Energy Efficient Showerhead	1,920	$41,801	114	92	1,092,357	14,080	$293,766	31,295
Energy Feedback Residential	256,320	$2,179,675	3,718	3,930	16,722,476	170,898	$330,672	24,762
Efficient New Home Construction	2,226	$752,352	1,126	981	1,012,391	960	$1,573,561	30,514
Residential Heating	10,000	$1,233,702	1,906	1,380	7,199,127	12,272	$2,517,413	120,000
Home Energy Squad	5,371	$889,545	4,256	810	5,242,782	2,200	$1,306,189	20,261
Home Lighting	160,418	$7,471,646	80,664	14,409	108,628,729	0	$0	0
Whole Home Efficiency	230	$127,500	186	140	226,532	205	$290,615	7,998
Insulation Rebate	619	$252,072	1,210	164	1,743,586	773	$330,435	17,985
Refrigerator Recycling	7,100	$972,934	1,299	940	7,496,782	0	$0	0
Residential Cooling	11,582	$4,139,360	5,701	5,626	3,930,467	0	$0	0
School Education Kits	29,000	$982,930	4,097	594	4,762,874	14,000	$326,365	11,391
Water Heater Rebate	66	$85,700	37	40	288,310	1,071	$202,544	3,461
Thermostat Optimization Program	0	$0	0	0	0	0	$0	0
Residential Segment Energy Efficiency Total	**484,852**	**$19,129,217**	**104,315**	**29,106**	**158,346,413**	**216,459**	**$7,171,559**	**267,669**
Residential Demand Response	39,665	$8,603,202	51,718	22,957	1,725,403	6,150	$108,980	42,952
Consumer Education	433,854	$765,640	0	0	0	382,912	$540,806	0
Home Energy Audit	3,500	$691,758	0	0	0	2,800	$561,704	0
Lamp Recycling - Residential	325,000	$513,529	0	0	0	0	$0	0
Residential Segment with Indirect Participants	**1,286,871**	**$29,703,346**	**156,033**	**52,063**	**160,071,817**	**608,321**	**$8,383,050**	**310,621**
Residential Segment Direct Participants Only	**524,517**	**$27,732,419**	**156,033**	**52,063**	**160,071,817**	**222,609**	**$7,280,539**	**310,621**
Low Income Segment								
Home Energy Savings Program	2,132	$1,349,151	330	120	914,519	554	$1,488,341	4,919
LI Home Energy Squad	1,900	$327,675	1,312	192	1,506,651	1,500	$412,977	9,777
Multi-Family Energy Savings Program	1,772	$813,518	555	128	998,639	0	$0	0
Low Income Segment Total	**5,804**	**$2,490,344**	**2,197**	**440**	**3,419,810**	**2,054**	**$1,901,318**	**14,697**
Planning Segment								
Application Development and Maintenance	0	$1,242,743	0	0	0	0	$455,912	0
Advertising & Promotion	0	$6,286,899	0	0	0	0	$1,564,532	0
CIP Training	0	$148,974	0	0	0	0	$54,847	0
Regulatory Affairs	0	$473,159	0	0	0	0	$153,533	0
Planning Segment Total	**0**	**$8,151,775**	**0**	**0**	**0**	**0**	**$2,228,824**	**0**
Research, Evaluations & Pilots Segment								
Market Research	0	$953,478	0	0	0	0	$262,471	0
Product Development	0	$1,764,124	0	0	0	0	$216,187	0
Energy Star Retail Products	38,156	$706,966	7,999	1,345	4,113,554	0	$0	0
Energy Information Systems	45	$326,580	423	232	2,938,653	13	$117,575	4,568
Research, Evaluations & Pilots Segment Total	**38,201**	**$3,751,148**	**8,422**	**1,577**	**7,052,207**	**13**	**$596,233**	**4,568**
PORTFOLIO SUBTOTAL	**1,420,584**	**$87,464,056**	**261,365**	**115,891**	**432,620,631**	**632,877**	**$18,314,192**	**790,244**
Anticipated Alternative Filings								
CEE One Stop Efficiency Shop	1,671	$12,964,780	10,419	10,500	48,000,000	0	$0	0
EnerChange	0	$418,500	0	0	0	0	$46,500	0
Energy Smart	0	$402,750	0	0	0	0	$18,500	0
Trillion BTU	0	$174,600	0	0	0	0	$19,400	0
Energy Intelligence	0	$0	0	0	0	0	$0	0
Anticipated Alternative Filings Total	**1,671**	**$13,960,630**	**10,419**	**10,500**	**48,000,000**	**0**	**$84,400**	**0**
Assessments Segment	**0**	**$1,974,981**	**0**	**0**	**0**	**0**	**$345,600**	**0**
Made In Minnesota	**0**	**$0**	**0**	**0**	**0**	**0**	**$0**	**0**
Electric Utility Infrastructure	**0**	**$0**	**0**	**0**	**0**	**0**	**$0**	**0**
PORTFOLIO TOTAL	**1,422,255**	**$103,399,667**	**271,784**	**126,391**	**480,620,631**	**632,877**	**$18,744,192**	**790,244**

Table 3: Xcel Energy's Electric and Gas CIP Achievements

2020	Electric Participants	Electric Spend	Customer kW	Generator kW	Generator kWh	Gas Participants	Gas Spend	Dth Savings
Business Segment								
Business New Construction	257	$10,286,209	13,030	10,843	53,830,566	53	$827,300	78,336
Commercial Efficiency	254	$3,332,311	5,738	4,476	30,183,305	29	$201,689	42,063
Commercial Refrigeration Efficiency	399	$547,783	408	283	2,582,951	48	$2,625	273
Cooling Efficiency	502	$1,846,557	3,207	2,855	3,919,423	1	$17,286	1,690
Custom Efficiency	23	$1,067,831	1,797	1,627	8,780,224	2	$48,020	558
Data Center Efficiency	12	$170,708	405	103	3,703,762	0	$0	0
Efficiency Controls	22	$466,986	442	138	3,379,907	6	$56,341	7,116
Fluid Systems Optimization	210	$986,942	1,175	1,128	7,541,525	0	$0	0
Foodservice Equipment	64	$42,891	133	83	578,615	110	$76,068	9,312
Heating Efficiency	103	$24,407	107	115	511,221	424	$841,179	65,715
Lighting Efficiency	3,430	$11,637,453	22,656	16,633	108,358,073	0	$0	0
Motor Efficiency	250	$1,884,244	3,462	2,497	14,104,642	0	$0	0
Multi-Family Building Efficiency	520	$1,424,511	1,928	366	2,862,788	176	$496,775	5,010
Process Efficiency	297	$6,677,036	7,982	7,105	54,710,938	37	$1,451,887	277,835
Recommissioning	30	$576,220	411	125	3,204,112	1	$93,482	3,678
Self-Direct	1	$192,123	182	195	1,621,769	0	$488	0
Turn Key	113	$2,034,386	2,652	2,216	10,425,894	326	$175,670	6,647
Business Segment Energy Efficiency Total	**6,487**	**$43,198,600**	**65,715**	**50,790**	**310,299,714**	**1,213**	**$4,288,810**	**498,233**
Electric Rate Savings	100	$417,297	69,036	35,260	1,308,289	0	$0	0
Saver's Switch for Business	749	$1,511,356	7,649	1,586	3,865	0	$0	0
Peak Partner Rewards	3	$128,738	3,365	3,618	3,338	0	$0	0
Business Segment Load Management Total	**852**	**$2,057,391**	**80,050**	**40,465**	**1,315,493**	**0**	**$0**	**0**
Business Education	8,400	$149,106	0	0	0	11,400	$40,819	0
Small Business Lamp Recycling	14,250	$14,959	0	0	0	0	$0	0
Indirect Business Subtotal	**22,650**	**$164,065**	**0**	**0**	**0**	**11,400**	**$40,819**	**0**
Business Segment with Indirect Participants	**29,989**	**$45,420,055**	**145,764**	**91,254**	**311,615,206**	**12,613**	**$4,329,629**	**498,233**
Business Segment Direct Participants Only	**7,339**	**$45,255,990**	**145,764**	**91,254**	**311,615,206**	**1,213**	**$4,288,810**	**498,233**
Residential Segment								
Energy Efficient Showerhead	7,716	$11,202	159	117	1,524,060	57,122	$185,639	43,918
Energy Feedback Residential	391,662	$965,027	4,005	4,640	19,181,496	229,488	$75,890	43,135
Efficient New Home Construction	2,936	$985,416	913	814	4,800,508	1,921	$1,849,579	53,409
Residential Heating	19,227	$2,186,898	3,641	2,798	14,008,022	9,287	$3,118,310	162,470
Home Energy Squad	2,596	$718,233	2,806	462	3,082,860	725	$265,957	3,750
Home Lighting	337,370	$8,275,291	165,889	23,967	211,699,362	0	$0	0
Whole Home Efficiency	31	$21,456	25	25	20,097	33	$48,516	1,908
Insulation Rebate	401	$99,271	393	397	253,276	1,697	$402,852	34,356
Refrigerator Recycling	5,425	$859,623	744	543	4,274,087	0	$0	0
Residential Cooling	19,726	$5,819,033	9,194	8,998	6,411,719	0	$0	0
School Education Kits	29,909	$949,192	4,336	467	5,317,402	14,397	$344,245	15,608
Water Heater Rebate	51	$23,485	28	31	206,110	938	$179,188	4,161
Thermostat Optimization Program	0	$0	0	0	0	0	$0	0
Residential Segment Energy Efficiency Total	**817,050**	**$20,914,127**	**192,134**	**43,260**	**270,779,000**	**315,608**	**$6,470,176**	**362,715**
Residential Demand Response	30,247	$9,744,176	60,125	18,840	166,959	206	$134,324	2,198
Consumer Education	303,697	$613,773	0	0	0	268,000	$301,656	0
Home Energy Audit	2,457	$485,518	0	0	0	1,472	$295,242	0
Lamp Recycling - Residential	277,565	$438,578	0	0	0	0	$0	0
Residential Segment with Indirect Participants	**1,431,016**	**$32,196,172**	**252,258**	**62,100**	**270,945,958**	**585,285**	**$7,201,398**	**364,913**
Residential Segment Direct Participants Only	**847,297**	**$30,658,303**	**252,258**	**62,100**	**270,945,958**	**315,813**	**$6,604,500**	**364,913**
Low Income Segment								
Home Energy Savings Program	1,471	$995,236	646	144	871,462	244	$1,141,375	4,141
LI Home Energy Squad	507	$159,545	407	68	461,022	259	$87,005	1,313
Multi-Family Energy Savings Program	882	$541,586	89	32	189,494	0	$0	0
Low Income Segment Total	**2,860**	**$1,696,367**	**1,142**	**244**	**1,521,977**	**503**	**$1,228,380**	**5,454**
Planning Segment								
Application Development and Maintenance	0	$1,194,484	0	0	0	0	$217,092	0
Advertising & Promotion	0	$3,544,821	0	0	0	0	$863,823	0
CIP Training	0	$36,600	0	0	0	0	$14,921	0
Regulatory Affairs	0	$490,864	0	0	0	0	$122,316	0
Planning Segment Total	**0**	**$5,266,769**	**0**	**0**	**0**	**0**	**$1,218,152**	**0**
Research, Evaluations & Pilots Segment								
Market Research	0	$731,536	0	0	0	0	$169,692	0
Product Development	0	$1,569,347	0	0	0	0	$67,381	0
Energy Star Retail Products	47,173	$893,684	16,468	1,340	6,515,449	0	$0	0
Energy Information Systems	30	$426,069	693	267	3,067,716	0	$13,265	0
Research, Evaluations & Pilots Segment Total	**47,203**	**$3,620,634**	**17,161**	**1,607**	**9,583,165**	**0**	**$250,338**	**0**
PORTFOLIO SUBTOTAL	**1,511,067**	**$88,199,999**	**416,325**	**155,205**	**593,666,306**	**598,402**	**$14,227,897**	**868,599**
Anticipated Alternative Filings								
CEE One Stop Efficiency Shop	1,769	$13,466,911	12,476	10,537	53,130,685	0	$0	0
EnerChange	0	$409,972	0	0	0	0	$46,107	0
Energy Smart	0	$397,091	0	0	0	0	$18,662	0
Trillion BTU	0	$52,122	0	0	0	0	$2,567	0
Energy Intelligence	0	$0	0	0	0	0	$0	0
Anticipated Alternative Filings Total	**1,769**	**$14,326,095**	**12,476**	**10,537**	**53,130,685**	**0**	**$67,337**	**0**
Assessments Segment	**0**	**$1,935,486**	**0**	**0**	**0**	**0**	**$292,749**	**0**
Made In Minnesota	**0**	**$0**	**0**	**0**	**0**	**0**	**$0**	**0**
Electric Utility Infrastructure	**0**	**$0**	**0**	**0**	**0**	**0**	**$0**	**0**
PORTFOLIO TOTAL	**1,512,836**	**$104,461,579**	**428,801**	**165,742**	**646,796,991**	**598,402**	**$14,587,983**	**868,599**

Table 4: Xcel Energy's Electric Avoided CO2 Emissions

2020	Avoided First Year Emissions (short tons of CO_2)	Avoided Lifetime Emissions (short tons of CO_2)	Avoided First Year Emissions Intensities (lbs CO_2/generator MWH)	Avoided Lifetime Emissions Intensities (lbs CO_2/generator MWH)
Business Segment				
Business New Construction	19,298	216,335	717	430
Commercial Efficiency	10,821	107,820	717	437
Commercial Refrigeration Efficiency	893	7,493	691	500
Cooling Efficiency	1,416	14,963	723	460
Custom Efficiency	3,148	32,563	717	428
Data Center Efficiency	1,279	10,696	690	542
Efficiency Controls	1,153	11,055	682	467
Fluid Systems Optimization	2,604	24,798	691	441
Foodservice Equipment	200	2,107	690	437
Heating Efficiency	176	1,842	690	432
Lighting Efficiency	38,638	354,694	713	462
Motor Efficiency	5,053	47,289	717	474
Multi-Family Building Efficiency	998	10,396	698	449
Process Efficiency	19,533	190,577	714	453
Recommissioning	1,093	6,665	682	636
Self-Direct	597	6,004	736	466
Turn Key	3,838	37,267	736	403
Business Segment Energy Efficiency Total	**110,739**	**1,082,565**	**714**	**449**
Electric Rate Savings	504	2,320	771	759
Saver's Switch for Business	1	15	771	562
Peak Partner Rewards	1	1	771	825
Business Segment Load Management Total	**507**	**2,336**	**771**	**758**
Business Segment Direct Participants Only	**111,246**	**1,084,902**	**714**	**450**
Residential Segment				
Energy Efficient Showerhead	532	4,206	698	603
Energy Feedback Residential	7,089	21,267	739	807
Efficient New Home Construction	1,688	19,472	703	443
Residential Heating	4,929	52,287	704	454
Home Energy Squad	1,064	11,617	690	424
Home Lighting	73,850	672,390	698	439
Whole Home Efficiency	7	67	725	556
Insulation Rebate	94	940	739	579
Refrigerator Recycling	1,484	9,501	695	608
Residential Cooling	2,370	24,616	739	549
School Education Kits	1,869	20,213	703	464
Water Heater Rebate	74	571	722	605
Residential Segment Energy Efficiency Total	**95,050**	**837,147**	**702**	**451**
Residential Demand Response	63	566	750	636
Residential Segment Total	**95,113**	**837,713**	**702**	**451**
Low Income Segment				
Home Energy Savings Program	303	3,422	696	445
LI Home Energy Squad	159	1,737	690	422
Multi-Family Energy Savings Program	66	703	694	443
Low Income Segment Total	**528**	**5,863**	**694**	**438**
Research, Evaluations & Pilots Segment				
Energy Star Retail Products	2,290	19,308	703	578
Energy Information Systems	1,047	5,161	682	656
Research, Evaluations & Pilots Segment Total	**3,337**	**24,469**	**696**	**593**
PORTFOLIO SUBTOTAL	**210,224**	**1,952,947**	**708**	**451**

Compliance Reporting

Minnesota Rules ch. 7690 contains the requirements and procedures for CIP filings. Minnesota Statutes sections § 216B.2401, 216B.241, and 216B.2411 contain provisions the Company must meet in its CIP. All compliance points are addressed in this section.

Statutory Requirements

Minimum Spending Requirement

Minn. Stat. § 216B.241 subd. 1a requires that 2.0% of the Company's electric Gross Operating Revenues (GOR) be spent on electric CIP and 0.5% of natural gas GOR be spent on natural gas CIP. Table 5 shows our spending in relation to our approved minimum spending requirement.

Table 5: Minimum Spending Requirement

	Minimum Spending Requirement	Approved Spend*	Actual Spend	Variance of Actual to Minimum Spend
Electric	$57,007,184	$103,399,665	$104,461,579	$47,454,395
Natural Gas	$2,180,986	$18,796,102	$14,587,983	$12,406,997
Total	$59,188,170	$122,195,767	$119,049,563	$59,861,393

*Approved Spend matches the total approved budgets in the November 3, 2016 Decision filed under this docket plus program modifications.

2020 Achievements as a Percentage of Sales

Table 6 shows our achievements as a percent of our 2013-2015 weather-normalized retail sales, adjusted for exempt customers as of May 15, 2016. On April 11, 2019, the Deputy Commissioner issued a Decision to extend the investor-owned utilities' (IOU) 2017-2019 Conservation Improvement Program (CIP) Triennial Plans by one-year. The Decision extended the use of the baseline sales from the 2017-2019 Triennial Plan shown in Table 6.

Table 6: Achievements as Percent of Sales

	Electric			Natural Gas		
Year	Energy Savings Achieved (MWh)	Total Adjusted Sales (MWh)	Savings as % of Retail Sales	Energy Savings Achieved (Dth)	Total Adjusted Sales (Dth)	Savings as % of Retail Sales
2020	646,797	28,767,282	2.25%	868,599	71,897,513	1.21%

2020 Low-Income Spending Requirement

The following table compares our 2020 actual spend to the updated requirement. Both the approved low-income spend and actual spend are representative of programs only found in the Low-Income Segment and do not include spending associated with alternative programs, specifically EnerChange

and EnergyWise, even though they also target low-income and non-profit customers. The Low-Income Segment section provides greater detail on low-income program achievements.

Table 7: Low-Income Spending Requirement

	Minimum Spending Requirement	Approved Low-Income Spend*	Actual Spend	Variance of Actual to Minimum Spend
Electric	$2,159,572	$2,490,344	$1,696,367	-$463,205
Natural Gas	$1,268,504	$1,901,318	$1,228,380	-$40,124
Total	$3,428,076	$4,391,662	$2,924,747	-$503,329

*Approved Spend matches the total approved budgets in the November 26, 2019 Decision filed under this docket plus program modifications.

Low-Income Segment participation and savings were significantly impacted by Company and third-party provider compliance with public health orders during the COVID-19 pandemic. Access to customer homes and apartment units was restricted for much of 2020 – especially in vulnerable communities such as long-term care facilities. Low-income program operations were either delayed or canceled to guard against exposure to the virus. This led to decreased program participation and the segment missing the minimum electric and minimum natural gas spend requirements.

In response to the COVID-19 pandemic and challenges accessing customer homes, the Company started offering virtual audit options. However, this adaptation to program service delivery only addressed the one barrier, others could not be addressed through changes to the program. With the vaccine roll-out in 2021 we expect restrictions on in-unit access will loosen and lead to higher participation. In addition, we have a strong pipeline of customers developed since we continued recruitment efforts in 2020 and kept interested customers on the list for service(s) when conditions improve to allow for us to return to normal program delivery.

Xcel Energy has exceeded the minimum spend requirement in the last six years by an average of $300,275 per year on electric programs and $319,787 on natural gas programs. 2020 was an unusual year with the COVID-19 pandemic and associated stay-at-home orders. As noted above, we expect participation in low-income programs to rebound in 2021 and have filed two modifications to increase our low-income segment spending. The first modification which increases spend for the existing Home Energy Savings Program and Multi-Family Energy Savings Program was approved on February 22, 2021. With this modification our 2021 electric low-income budget is $2,847,592 ($463,860 above minimum spend requirement) and our natural gas low-income budget is $1,794,107 ($655,733 above minimum spend requirement).

2020 Research & Development 10% Spending Cap

Minn. Stat. § 216B.241, subd. 2(c) limits spending on Research & Development to 10% of the minimum spending requirement. As discussed on page 123 of the 2020 CIP Extension Plan (extension of the 2017-2019 Triennial Plan), all Product Development spend is subject to this cap, except for pilot programs. Spending details are shown below.

Table 8: Research & Development Spending Cap

	Annual Spending Cap	Approved Spend	Actual Spend	Variance of Actual to Cap
Electric	$5,700,718	$1,764,124	$1,569,347	-$4,131,371
Natural Gas	$218,099	$216,187	$67,381	-$150,718
Total	$5,918,817	$1,980,311	$1,636,728	-$4,282,089

Distributed Energy Resources Spending Cap

Minn. Stat. § 216B.2411, subd. 1(a) allows utilities to spend up to five percent of the utility's minimum spending requirement on distributed generation projects. In 2020, the Company did not have any distributed energy resources spending in CIP.

Lighting Use and Recycling Programs

Minn. Stat. § 216B.241, subd. 5 requires utilities to invest in projects that encourage the use of energy efficient lighting and reclamation or recycling of spent fluorescent and high intensity discharge lamps. Xcel Energy met this requirement through its business and residential lighting and lamp recycling programs.

Carry-Forward Provision

Minn. Stat. §216B.241, subd. 1c. allows utilities to carry forward energy savings in excess of 1.5% for a year to the succeeding three calendar years for customer program savings and five years for electric utility infrastructure (EUI) projects. Because we surpassed the 1.5% electric savings goal, we meet the eligibility guidelines for use of the carry-forward provision.

On February 20, 2018, the Department issued updated guidance in the matter of claiming energy savings through electric utility infrastructure (EUI) improvements and the energy savings carry forward provision (Docket No. E, G999/CIP-17-856). As the Company noted in our Comments on the new guidance, we are committed to transparency and reporting on our EUI projects and investments specifically motivated by efficiency in our annual CIP status reports, even if not electing to carry forward savings.

In 2020, the Company completed eight EUI improvement projects that result in energy savings as documented in Table 9. While the Company does not request to claim these EUI savings in 2020, we are including them in our 2020 CIP Status Report to document the projects and make them eligible for the carry forward provision in future program years.

Table 9: 2020 EUI Project Energy Savings

Facility	Project Type	kWh savings
Maple Grove	Restroom lighting upgrades	6,074
St Cloud	Exterior lighting/wall pack upgrade	13,140
Rice St	Occupancy sensors	100,740
Newport	Occupancy sensors	30,806
White Bear	Occupancy sensors	33,288
Wyoming	Occupancy sensors	10,512
Winona	Occupancy sensors	44,676
Red Wing	Occupancy sensors	34,164
	Total:	**273,400**

2020 Extension Plan Decision Requirements

The following requirements were established in the Commissioner's November 26, 2019 Decision approving our 2020 CIP Extension Plan in Docket No. E,G002/CIP-16-115.

Budget Flexibility

In the November 26, 2019 Decision approving our CIP Extension Plan (E,G002/CIP-16-115), the 2017-2019 Triennial decision regarding budget flexibility was continued. With this decision the Company was granted the ability to exceed the approved budgets for all direct impact segments as long as the additional spending does not result in the segment becoming non-cost effective from the societal perspective. In 2020, no segment level spending exceeded approved spending flexibility.

Program Modifications

Minn. R. 7690.1400 requires utilities to file formal program modifications when:

- Proposing a new project;
- Discontinuing an existing project;
- Reducing the minimum qualifying efficiency level of a measure or technology;
- Decreasing project budgets, savings and participation goals;
- Increasing the Planning Segment annual budget by more than 25%; and
- Increasing the Research, Evaluations, and Pilots Segment by more than 25%.

In the November 26, 2019 Decision on the CIP Extension Plan (E, G002/CIP-16-115), the Deputy Commissioner instructed the Company to continue the use of the formal modification process and courtesy notifications first described in the 2017-2019 Triennial Plan Decision. In 2020, the Company submitted the following program modification requests and courtesy notifications that impact our 2020 CIP Plan.

Table 10: Program Modification Filings

Modification Filing Date	Programs Included	Approval Date
December Courtesy Notification (12/23/2019)	Commercial Refrigeration, Cooling Efficiency, Custom Efficiency, Heating Efficiency, Multi-Family Building Efficiency, Motor and Drive Efficiency, Refrigeration Recycling	N/A
December Modification Request (12/23/19)	Cooling Efficiency, Heating Efficiency, Lighting Efficiency, Saver's Switch for Business	2/21/2020
Courtesy Notification (4/6/2020)	Home Energy Squad	N/A
May Modification Request (5/5/2020)	Heating Efficiency Home Lighting, Home Energy Savings, Home Energy Squad, Low-Income Home Energy Squad, Multi-Family Energy Savings, Multi-Family Building Efficiency and School Education Kits Motor and Drive Efficiency Residential Demand Response	7/17/2020
May Courtesy Notification (5/8/2020)	Cooling Efficiency, Custom Efficiency, Heating Efficiency	N/A

Customer Incentive Flexibility

The Company has the flexibility to change rebate amounts provided changes do not result in the rebate exceeding the incremental cost of the efficiency improvement and are not made in an effort to take a customer away from a competitor. The Company complied with this requirement.

Other Regulatory Requirements

Compliance with Measurement and Verification ("M&V") Protocols for Large Custom CIP Projects

On July 23, 2008, the Deputy Commissioner approved the M&V Protocols for Large Custom CIP Projects, as part of Docket No. E,G999/CIP-06-1591. The Protocols apply to custom projects that have savings greater than 1 GWh or 20,000 Dth and are initiated after April 1, 2008. As required by the protocols, we submitted 10 projects that met these criteria and required monitoring. We submitted monitoring reports for all of these qualifying projects to the Department.

2020 Employee Expenses

In the Department's August 13, 2010 Comments in Docket No. E002/M-10-296, the Department proposed employee expense guidelines, including a recommended cap on employee expenses of 0.5 percent of total annual budgets or expenses. In 2020, the Company had a total of $104,788.45 in employee expenses related to CIP. These expenses comprise about 0.08% of our total CIP spending

for 2020, which is below the Department's proposed cap of 0.5% of total annual budget for expenses. The following table summarizes our employee expenses for 2020.

Table 11: Summary of 2020 Employee Expenses

Employee Expense Category	Electric Amount	Natural Gas Amount	Total
Airfare	$13,758.08	$1,717.04	$15,475.12
Car Rental	$128.62	$0.00	$128.62
Taxi/bus	$1,250.69	$186.69	$1,437.38
Mileage	$10,542.58	$2,013.91	$12,556.49
Conferences/Seminars/Training	$16,588.78	$1,569.86	$18,158.64
Hotel	$11,895.80	$1,290.83	$13,186.63
Business Meals- Employees Only	$4,626.31	$1,151.12	$5,777.43
Business Meals- Including Non-Employees	$8,596.57	$2,661.17	$11,257.74
Parking	$2,524.03	$284.57	$2,808.60
Personal Communication	$7,758.51	$41.86	$7,800.37
Other Employee Expenses	$7,409.67	$1,935.09	$9,344.76
	$85,079.64	**$12,852.14**	**$97,931.78**

These expenses were incurred consistent with our employee expense policies, which provide guidance on the types of charges that are recoverable and non-recoverable through CIP. Two new categories were added in 2020 for personal communication devices and other employee expenses. The funding in the personal communication line item covered the cost to transition employees to remote locations in response to the COVID-19 pandemic. Reimbursing employees for part of their personal communications costs will enable us to leverage some of the work-from home investments to manage travel costs over the long term. While we do expect that a portion of the travel that was charged in the past will return once it is safe to do so, the electronic communication tools an associated stipend will keep costs lower than in their absence. We report these expenses at the level of detail available from a query of our accounting system.

2020 Influenced Savings Projects

There are two influenced savings projects to report for 2020. The term "Influenced Savings" refers to projects for which Xcel Energy played a significant role in the customer's decision to implement an energy efficiency measure and for which the customer participated in the normal Custom Efficiency project submission process, yet whose cost-effective analysis or payback period failed. For such projects, Xcel Energy denies the customer any rebate for their efficiency measure, but claims Influenced Savings in order to appropriately account for the Company's role in achieving implementation of the higher energy efficiency technology and to recognize the often significant labor and/or study costs invested in the project.

To qualify as an influenced savings project, the project must satisfy the following guidelines:

1. Project Pre-approval – Must occur prior to purchase and installation.
2. Cost-Effectiveness Tests – Projects must pass the Participant and Societal Tests.
3. Payback – Projects with a payback period of less than nine months may be considered only if they meet all the other Influenced Savings guidelines herein.
4. Large Projects – Projects with savings of 2 GWh and greater require separate DER pre-review. All other projects will be reviewed as part of the Status Report.
5. Savings Cap – Influenced Savings claims cannot exceed 4% of the Company's annual CIP achievements.
6. Documentation – Documentation must be provided to show Xcel Energy's involvement was an important factor in implementing the energy saving project.

Xcel Energy submits the following supplemental information for its two influenced savings projects in 2020. Table 12 summarizes the programs affected by these projects and the associated savings. To maintain customer anonymity, the projects will be referred using their OID number. As required for Influenced Savings, these projects received Xcel Energy preapproval and passed the societal and participant tests but did not receive a rebate. Influenced savings projects are included in the programs they fall under. Savings from Influenced Savings projects account for less than 0.32% of total electric savings.

Table 12: Summary of Influenced Savings Projects

Project OID	Program	Customer KW	Customer kWh	Dth
3393993	Custom Efficiency	79.99	332,772	0
3579400	Custom Efficiency	397.13	1,673,812	0
	Totals	**477.12**	**2,006,584**	**0**

Influenced Savings Project Descriptions

The 2020 Influenced Savings Project summary trackers comprise the following two pages.

2020 Influenced Savings
Supplementary Information Worksheet

Project Number OID3393993

Program Name Custom Efficiency

Project Type Electric Only

Project Information		
Pre-approval Date	**Equipment Installed**	**Payback (years)**
May 30, 2018	New dust collection system	0.54

Electric Cost-Benefit Test Results			
Participant Test	**Utility Test**	**Rate Impact Test**	**Societal Test**
25.44	0.00	0.87	26.21

Gas Cost-Benefit Test Results			
Participant Test	**Utility Test**	**Rate Impact Test**	**Societal Test**
N/A	N/A	N/A	N/A

Project Description
The customer needs to expand their existing dust collection system. The existing system ((1) 75hp and (1) 10 hp) motor cannot meet the demands. The customer is considering installing one of two new systems.

Estimated Energy Savings			
Customer kW	**Customer kWh**	**Dth Natural Gas**	**Reason for Rebate Denial**
79.99	332,772	0	did not meet program payback requirements

Project History	
Note: Please make sure there is no customer-identifying info in history	
Date	**Description**
5/10/2018	Application received
5/30/2018	Pre- Approval
6/5/2018	Earliest Invoice
6/22/2020	Date Completed

2020 Influenced Savings
Supplementary Information Worksheet

Project Number OID3579400
Program Name Custom Efficiency
Project Type Electric Only

Project Information		
Pre-approval Date	**Equipment Installed**	**Payback (years)**
November 8, 2019	58 Furnaces	0.03

Electric Cost-Benefit Test Results			
Participant Test	**Utility Test**	**Rate Impact Test**	**Societal Test**
396.34	0.00	0.94	487.89

Gas Cost-Benefit Test Results			
Participant Test	**Utility Test**	**Rate Impact Test**	**Societal Test**
N/A	N/A	N/A	N/A

Project Description
Programmed setback schedule on 58 electric furnaces

Estimated Energy Savings			
Customer kW	**Customer kWh**	**Dth Natural Gas**	**Reason for Rebate Denial**
397.13	1,673,812	0	did not meet program payback requirements

Project History	
Note: Please make sure there is no customer-identifying info in history	
Date	**Description**
8/14/2018	MNTAP Study done
5/17/2019	Earliest Invoice date
10/31/2019	Pre- Approval date
1/10/2020	Date Completed
1/31/2020	Completion Analysis date

Northern States Power Company,
a Minnesota corporation
Summary of the Evaluations of Product Impact Measurement Methods
Reference Docket No. E002/M-90-1159

Background

In a January 3, 1992 Order in Docket No. E002/M-90-1159, the Commission required a performance measurement evaluation to accompany Northern States Power Company, a Minnesota corporation's, financial incentive mechanism filing. This information, suggested by the Department of Public Service (now the Division of Energy Resources), was required in order to provide a sound basis for Xcel Energy's DSM Financial Incentive. In 1999, 2010, 2012, and again in 2016, the Commission modified Xcel Energy's financial incentive but retained the basic performance-based philosophy that requires ongoing efforts to ensure that impacts are reasonably well measured.

Xcel Energy considers the following factors in determining what impact measurement methods are appropriate**:**

- The uncertainties associated with existing impact estimates;
- The relative importance of the individual product;
- The cost of impact measurement relative to the overall cost and cost-effectiveness of its various products;
- Informal ongoing product management evaluation efforts to identify issues requiring a more formal evaluation;
- The extent to which previous evaluation work remains pertinent;
- Cost-effective developments in measurement and evaluation methods; and
- Effects of free-ridership, free-drivership, and spillover.

The Company's process and/or impact analysis efforts since 2013 are shown in the table on the following page.

Table 13: Xcel Energy's Process and/or Impact Analysis Efforts Since 2013

Product	Type	Status
MN Electric Potential Study - Xcel Energy Service Area	Potential Study	Completed in 2012 Updated in 2014
Business Custom Efficiency	Process and Impact Evaluation	Completed in 2013
Residential Consumer Education	Process Evaluation	Completed in 2013
Residential Home Performance	Process and Impact Evaluation	Completed in 2013
Residential Home Energy Squad	Process and Impact Evaluation	Completed in 2014
Residential Heating Systems Rebates	Process and Impact Evaluation	Completed in 2014
Fluid System Optimization	Process and Impact Evaluation	Completed in 2015
Recommissioning	Process and Impact Evaluation	Completed in 2015
School Education Kits	Process and Impact Evaluation	Completed in 2015
Computer Efficiency	Process and Impact Evaluation	Completed in 2016
Lighting Efficiency	Process and Impact Evaluation	Completed in 2016
Efficiency Controls	Process and Impact Evaluation	Completed in 2016
Refrigerator Recycling	Process and Impact Evaluation	Completed in 2016
Data Center Efficiency	Process and Impact Evaluation	Completed in 2017
Heating Efficiency	Process and Impact Evaluation	Completed in 2017
Insulation Rebates	Process and Impact Evaluation	Completed in 2017
Business New Construction	Process and Impact Evaluation	Completed in 2018
Motor and Drive Efficiency	Process and Impact Evaluation	Completed in 2018
Multi-Family Building Efficiency	Process Evaluation +	Completed in 2018
Water Heater Rebates	Process Evaluation +	Completed in 2018
Efficient New Home Construction	Process and Impact Evaluation	Completed in 2019
Residential Cooling *	Process and Impact Evaluation	Completed in 2020
Saver's Switch	Process Evaluation +	Completed in 2019
Saver's Switch for Business	Process Evaluation +	Completed in 2019
AC Rewards	Process Evaluation +	Completed in 2020
Energy Efficient Showerheads	Process and Impact Evaluation	Completed in 2020
Home Lighting Baseline Research	Special Study ^	Completed in 2020

+ 2018 Multi-Family Building Efficiency (MFBE) and Water Heater Rebates, 2019 Saver's Switch/Saver's Switch for Business, and 2020 AC Rewards evaluations included a modified impact component that examined qualitative indicators of free ridership and/or spillover.

* Residential Cooling evaluation commenced in late 2019 to capture responses from customers who installed equipment during the 2019 cooling season; the reporting element of this evaluation will be completed in 2019.

^ Home Lighting Baseline Research was a multi-state, multi-sponsor study that Xcel Energy participated in to examine the naturally occurring market transformation of the residential lighting market.

Following is a summary of current energy savings calculation methods and M&V practices. For products where technical assumptions have changed due to evaluation or impact analysis results, the specific changes have been documented in the text of this status report and incorporated into the respective CIP cost-benefit analyses.

Current Analysis Methods

Product impact estimates are typically developed for demand savings, energy savings, coincidence, loss factors, and the lifetime of DSM measures. These parameters are needed for product economic analyses and for direct tracking of product impacts as required for the Company's CIP and Resource Plans.

Energy Efficiency Programs

Developing a good baseline from which to estimate the savings for more efficient technologies is an important part of impact estimation. We regularly update our DSM products and impact estimates to keep pace with changing energy efficiency standards. In addition, we have conducted broad-based market assessments to track technology market saturation and use patterns and make appropriate changes to products' impact estimates. Finally, we maintain regular contacts with various researchers, equipment manufacturers, distributors, and retailers to keep abreast of current efficiency market trends in order to make any needed changes to DSM products or their impact estimates.

For custom projects, energy savings and coincidence factor estimates are usually based on Xcel Energy-specific market and/or load research regarding annual hours of use and times of operation.

Load Management Programs

Load management programs either require interval data collection to calculate customer bills, or they involve behavioral changes on the part of customers. We base the impacts on our analysis of metering data, as the effects are more difficult to estimate through engineering methods. The extensive metering data gathered, covering both interrupt and non-interrupt periods, allows more accurate estimation of customers' baseline electricity use and net product impacts than is readily achievable with energy efficiency programs.

Current Measurement and Verification Practices

In 2020, our M&V efforts mirrored those filed on pages 115-120 of our 2020 Plan. Each program has an M&V plan to provide assurance that rebated measures were implemented as reported and that our reported savings are as accurate as possible. For prescriptive business and residential programs, we hire third party contractors to perform random audits on a statistically valid number of rebated projects in order to determine an appropriate realization rate for each program. This realization rate is then applied to the total gross savings for each program for that given year. Some prescriptive residential programs have M&V plans tailored to their program design and delivery method. For Custom business programs, the Company follows the M&V Protocols for Large Custom CIP Projects approved by the Director in Docket No. E,G999/CIP-06-1591.

Low-Income and Renter Participants

On June 24, 2016, the Company filed a letter to supplement the 2017-2019 CIP Triennial Plan. In that letter the Company mentioned that it would provide the following information in all future status reports:

> For each project targeted at residential consumers, an estimate of the anticipated percentage of participation of each project among:
>
> a. Low-income participants; and
> b. Renters;

Tables 14 and 15 provide the following information.

Table 14: Low-Income Participation by Project, 2020

Project	Low-Income - Electric			Low-Income - Gas		
	Participants	Low-Income Participants	Percent of Participation	Participants	Low-Income Participants	Percent of Participation
Business Segment						
Multi-Family Building Efficiency	15,446	3,917	25.4%	4,968	979	19.7%
Residential Segment						
Energy Efficient Showerhead	219	14	6.4%	554	34	6.1%
Energy Feedback Residential	391,662	15,280	3.9%	229,488	10,736	4.7%
Efficient New Home Construction	2,988	23	0.8%	1,883	15	0.8%
Residential Heating	18,950	340	1.8%	9,126	224	2.5%
Home Energy Squad	2,469	31	1.3%	677	11	1.6%
Home Lighting	337,370	2,008	0.6%			
Whole Home Efficiency	30	1	3.3%	31	1	3.2%
Insulation Rebate	925	21	2.3%	956	25	2.6%
Refrigerator Recycling	5,074	133	2.6%			
Residential Cooling	19,382	217	1.1%			
School Education Kits	29,909	11,455	38.3%	14,397	5,514	38.3%
Thermostat Optimization	5,463	46	0.8%	299	5	1.7%
Water Heater Rebate	51	0	0.0%	924	30	3.2%
Residential Demand Response	24,376	549	2.3%	15	0	0.0%
Consumer Education	303,697	33,407	11.0%	268,000	29,480	11.0%
Home Energy Audit	522	22	4.2%	478	22	4.6%
Lamp Recycling - Residential	277,565	1,652	0.6%			
Residential Total	**1,420,652**	**65,199**	**4.6%**	**526,828**	**46,097**	**8.8%**
Low Income Segment						
Home Energy Savings Program	1,049	1,049	100.0%	208	208	100.0%
LI Home Energy Squad	479	479	100.0%	245	245	100.0%
Multi-Family Energy Savings Program	703	703	100.0%			
Low Income Segment Total	**2,231**	**2,231**	**100.0%**	**453**	**453**	**100.0%**
TOTAL	**1,438,329**	**71,347**	**5.0%**	**532,249**	**47,529**	**8.9%**

Table 15: Renter Participation by Project, 2020

Project	Renter - Electric			Renter - Gas		
	Participants	Renter Participants	Percent of Participation	Participants	Renter Participants	Percent of Participation
Business Segment						
Multi-Family Building Efficiency	15,446	14,114	91.4%	4,968	4,369	87.9%
Residential Segment						
Energy Efficient Showerhead	219	7	3.2%	554	12	2.2%
Energy Feedback Residential	391,662	178,598	45.6%	229,488	104,647	45.6%
Efficient New Home Construction	2,988	12	0.4%	1,883	0	0.0%
Residential Heating	18,950	649	3.4%	9,126	107	1.2%
Home Energy Squad	2,469	58	2.3%	677	13	1.9%
Home Lighting	337,370	73,209	21.7%			
Whole Home Efficiency	30	1	3.3%	31	1	3.2%
Insulation Rebate	925	19	2.1%	956	26	2.7%
Refrigerator Recycling	5,074	133	2.6%			
Residential Cooling	19,382	650	3.4%			
School Education Kits	29,909	6,490	21.7%	14,397	3,124	21.7%
Thermostat Optimization	5,463	134	2.5%	299	5	1.7%
Water Heater Rebate	51	4	7.8%	924	14	1.5%
Residential Demand Response	24,376	561	2.3%	15	0	0.0%
Consumer Education	303,697	33,407	11.0%	268,000	29,480	11.0%
Home Energy Audit	522	9	1.7%	478	7	1.5%
Lamp Recycling - Residential	277,565	60,232	21.7%			
Residential Total	**1,420,652**	**354,173**	**24.9%**	**526,828**	**137,436**	**26.1%**
Low Income Segment						
Home Energy Savings Program	1,049	152	14.5%	208	2	1.0%
LI Home Energy Squad	479	30	6.3%	245	11	4.5%
Multi-Family Energy Savings Program	703	703	100.0%			
Low Income Segment Total	**2,231**	**885**	**39.7%**	**453**	**13**	**2.9%**
TOTAL	**1,438,329**	**369,172**	**25.7%**	**532,249**	**141,818**	**26.6%**

Northern States Power Company
a Minnesota corporation
2020 Conservation Cost Recovery Report
Reference Docket No. E002/GR-92-1185

Cost-effective conservation benefits all of our customers by reducing the need to build new power plants or other generation facilities to meet our customers' electricity needs. Conservation also has environmental benefits, including a reduction in air pollution and greenhouse gas emissions associated with using fossil fuels. This section reports the actual 2020 spending and cost recovery, as well as the electric tax and rate base factors and calculation of the cost of capital.

Electric Achievements

In 2020, Xcel Energy spent $104,461,579 on its electric CIP efforts. These expenditures provided an overall reduction of nearly 647 GWh. Xcel Energy is requesting recovery of $104,461,579 in 2020 electric CIP expenses. We are also requesting recovery of $30,500,073 in financial incentives earned for our 2020 electric CIP performance for total electric recovery of $134,961,652.

Natural Gas Achievements

Xcel Energy conserved 868,599 Dth through its 2020 natural gas CIP at a cost of $14,587,983. The Company requests recovery of $14,587,983 in CIP expenditures, as well as $4,268,369 in financial incentive earned for our 2020 natural gas CIP performance for total natural gas recovery of $18,856,352.

The tables on the following pages include:

- Xcel Energy's 2020 electric (Table 17) and natural gas (Table 18) CIP Trackers, which document monthly CIP expenditures and recovered costs;
- Summary of the electric tax and rate base factors (Table 19) used in the electric CIP Tracker; and
- Calculation of the Cost of Capital (Table 20) provides the tax factors and capital structure used to determine cost recovery and return on rate base in the electric CIP Trackers.

Northern States Power Company, a Minnesota corporation
State of Minnesota- Electric Utility
DSM Cost Recovery & Incentive Mechanism - Total
2020 Actuals

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
	EXPENSES	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	
1.	Balance	14,097,193	13,080,929	11,019,731	7,980,201	6,411,555	4,665,301	2,570,673	(1,853,426)	(6,398,219)	(3,566,113)	13,136,316	8,780,187	
2.	CIP Program Expenditures	10,115,173	7,944,443	7,264,126	6,939,983	7,456,517	9,324,040	9,251,761	8,324,805	12,861,746	9,617,805	5,957,597	9,403,582	104,461,579
3.	2019 Performance Incentive										17,589,180			17,589,180
4.	Total Expenses + Incentive (Line 1 + 2 + 3)	24,212,366	21,025,372	18,283,857	14,920,184	13,868,073	13,989,340	11,822,434	6,471,379	6,463,528	23,640,871	19,093,914	18,183,769	
	RECOVERY													
5.	CCRC Rate ($/MWh)	3.133	3.133	3.133	3.133	3.133	3.133	3.133	3.133	3.133	3.133	3.133	3.133	
6.	CCRC Cost Recovery (CCRC times Sales)	7,264,261	6,528,376	6,717,334	5,546,799	5,995,615	7,434,030	8,895,520	8,363,500	6,520,226	6,627,952	6,501,062	7,070,427	83,465,102
7.	CIP Adjustment Factor Rate ($/MWh)	1.682	1.682	1.682	1.682	1.682	1.682	1.682	1.682	1.682	1.848	1.848	1.848	
8.	CIP Adjustment Factor Recovery (Factor times Sales)	3,899,932	3,504,861	3,606,306	2,977,886	3,218,840	3,991,075	4,775,699	4,490,076	3,500,485	3,909,498	3,834,652	4,170,491	45,879,798
9.	Sub-Balance (Line 4 - 6 - 8)	13,048,173	10,992,136	7,960,217	6,395,500	4,653,618	2,564,236	(1,848,785)	(6,382,197)	(3,557,183)	13,103,421	8,758,200	6,942,851	
10.	Accum Deferred Tax (Line 9 * 28.742%)	3,750,306 0	3,159,360 0	2,287,926 0	1,838,195 0	1,337,543 0	737,013 0	(531,378) 0	(1,834,371) 0	(1,022,406) 0	3,766,185 0	2,517,282 0	1,995,514 0	
11.	Net Investment (Line 9 - 10)	9,297,867	7,832,776	5,672,291	4,557,305	3,316,075	1,827,223	(1,317,407)	(4,547,826)	(2,534,777)	9,337,236	6,240,918	4,947,337	
12.	Carrying Charge (Line 11 * Carrying Charge Rate)	32,756	27,595	19,983	16,055	11,683	6,437	(4,641)	(16,022)	(8,930)	32,895	21,987	17,429	157,228
13.	End of Month Balance (Line 9 + 12)	13,080,929	11,019,731	7,980,201	6,411,555	4,665,301	2,570,673	(1,853,426)	(6,398,219)	(3,566,113)	13,136,316	8,780,187	6,960,280	

Table 17: 2020 Electric CIP Tracker (DSM Cost Recovery)

Northern States Power Company, a Minnesota corporation
State of Minnesota - Gas Utility
DSM Cost Recovery and Incentive Mechanism
Tracker and Balance ($)
2020 Actual

EXPENSES	Jan Actual	Feb Actual	Mar Actual	Apr Actual	May Actual	Jun Actual	Jul Actual	Aug Actual	Sept Actual	Oct Actual	Nov Actual	Dec Actual	Total
1. Balance	$(3,730,035)	($5,348,961)	($6,736,306)	($7,272,540)	($7,837,546)	($7,907,748)	($7,580,540)	($7,192,880)	($6,798,958)	($6,069,324)	($3,632,281)	($4,397,064)	**($3,730,035)**
1a. Other Adjustments													
1b. Adj. Beginning Balance	(3,730,035)	(5,348,961)	(6,736,306)	(7,272,540)	(7,837,546)	(7,907,748)	(7,580,540)	(7,192,880)	(6,798,958)	(6,069,324)	(3,632,281)	(4,397,064)	
2. CIP Program Expenditures	1,596,482	1,508,013	1,544,118	896,371	766,408	914,568	852,743	891,667	1,354,770	1,837,755	983,674	1,441,414	14,587,983
3. 2019 Performance Incentive										1,790,002			1,790,002
4. **Total Expenses** (Line 1b. + 2 + 3)	**(2,133,553)**	**(3,840,948)**	**(5,192,188)**	**(6,376,169)**	**(7,071,138)**	**(6,993,180)**	**(6,727,797)**	**(6,301,213)**	**(5,444,188)**	**(2,441,567)**	**(2,648,607)**	**(2,955,650)**	**12,647,951**
RECOVERY													
5. CCRC Rate ($/Dth)	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	
6. CCRC Cost Recovery	676,896	609,195	437,303	306,730	175,019	122,533	96,823	103,774	130,751	289,277	424,960	581,979	3,955,240
7. CIP Adjustment Factor Rate ($/Dth)	0.19618	0.19618	0.19618	0.19618	0.19618	0.19618	0.19618	0.19618	0.19618	0.16276	0.16276	0.16276	
8. CIP Adjustment Factor Recovery	2,534,225	2,280,762	1,637,217	1,148,364	655,251	458,750	362,493	388,520	489,519	898,525	1,319,971	1,807,689	13,981,288
9. **Total Recovery** (Line 6 + 8)	**3,211,120**	**2,889,958**	**2,074,521**	**1,455,094**	**830,269**	**581,283**	**459,316**	**492,294**	**620,271**	**1,187,802**	**1,744,931**	**2,389,668**	**17,936,528**
10. Rate Refund	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Sub-Balance (Line 4-9+10)	(5,344,673)	(6,730,906)	(7,266,709)	(7,831,263)	(7,901,408)	(7,574,463)	(7,187,113)	(6,793,507)	(6,064,458)	(3,629,369)	(4,393,539)	(5,345,319)	
12. Accum Deferred Tax (Line 11 * 28.742%)	(1,536,166)	(1,934,597)	(2,088,597)	(2,250,861)	(2,271,023)	(2,177,052)	(2,065,720)	(1,952,590)	(1,743,047)	(1,043,153)	(1,262,791)	(1,536,352)	(21,861,949)
13. Net Investment (Line 11-12)	(3,808,507)	(4,796,309)	(5,178,111)	(5,580,401)	(5,630,385)	(5,397,411)	(5,121,393)	(4,840,917)	(4,321,412)	(2,586,216)	(3,130,748)	(3,808,967)	(54,200,777)
14. Carrying Charge (a) (Line 13 * Carrying Charge Rate)	(4,288.379)	(5,400.644)	(5,830.554)	(6,283.532)	(6,339.814)	(6,077.485)	(5,766.689)	(5,450.873)	(4,865.910)	(2,912.079)	(3,525.222)	(4,288.897)	(61,030.07)
15. **End of Month Balance** (Line 11+14)	**(5,348,961)**	**(6,736,306)**	**(7,272,540)**	**(7,837,546)**	**(7,907,748)**	**(7,580,540)**	**(7,192,880)**	**(6,798,958)**	**(6,069,324)**	**(3,632,281)**	**(4,397,064)**	**(5,349,608)**	

Table 18: 2020 Gas CIP Tracker (DSM Cost Recovery)

Table 19: Summary of Electric Tax and Rate Base Factors

The following variables are used in the electric CIP Tracker. These values were established in rate cases. Xcel Energy used the rates approved in its 2019 Multi-Year rate case, which was based off of the 2019 test year, (E002/GR15-826)

Variables	2020	Tax Rates	2020
Number of Months =	12	Tax Factor =	1.92%
Monthly Carrying Charge =	0.3523%		
Annual Amortization Fctr =	20.00%	Accumulated Deferred Tax =	28.74%
		Tax Rate =	28.74%
Common Equity % =	52.50%		
Preferred Equity % =	0.00%	Rate Base Factor =	8.92%
Total Debt % =	47.50%		
Weighted Cost Common Equity =	4.76%		
Weighted Cost Pref Equity =	0.00%		
Weighted Cost Total Debt =	2.25%		
Normal ROI =	7.01%		
CCRC ($/MWh)	$3.133		

Table 20: Calculation of the 2020 Cost of Capital

This table shows the tax factors and capital structure used for the electric cost recovery and return on rate base calculations in Tables 16 (2020 Electric CIP Tracker) and 18 (Summary of Electric Tax and Rate Base Factors).

Capital Structure	Capitalization	Cost of Capital	Weighted Average
	2020 Test Yr	2020 Test Yr	2020 Test Yr
Long-Term Debt	45.81%	4.75%	2.18%
Short-Term Debt	1.69%	4.31%	0.07%
TOTAL DEBT	47.50%		2.25%
Common Equity	52.50%	9.06%	4.76%
TOTAL EQUITY	52.50%		4.76%
TOTAL CAPITAL	100.00%		7.01%
MN Tax Rate =			28.74%
Normal Return =			7.01%
Rate Base Factor =	{ROI - (WTD Cost Debt x Tax Rate)} / (1-Tax Rate)		8.92%
Tax Factor =	Rate Base Factor - ROI		1.92%
Monthly Carrying Charge Rate Calculation			
Annual Revenue Requirements Factor =	{ROI - (WTD Cost Debt x Tax Rate)} / (1-Tax Rate)		8.92%
Monthly Revenue Requirements Factor =	{(1 + short term debt) to the 1/12 Power} -1		0.3523%
CCRC Tracker Rate ($/MWh)		$	3.133

Northern States Power Company
a Minnesota corporation
2020 Electric and Natural Gas CIP Adjustment Rate Report

On March 20, 1995, the Commission approved Xcel Energy's request to implement a CIP Adjustment Factor (Docket No. E002/M-94-1016). This bill rider, adjusted annually, provides the Company with a secondary cost recovery method above the amounts included in base rates (Conservation Cost Recovery Charge or CCRC). The CIP Adjustment Factor is normally approved by the Commission for a 12-month period beginning in the month following the Commission's approval, and is calculated by dividing the forecasted CIP tracker balance by the forecasted sales (kWh or therms) for the period over which the adjustment will be in place. Xcel Energy is required to file a recalculation of its CIP Adjustment Factors each April in conjunction with its financial incentive and CIP status report filings.

The current electric CIP Adjustment Factor of $0.001848 per customer kWh was approved by the Commission on August 13, 2020 in Docket No. E002/M-20-402. This rate was implemented on October 1, 2020 and is designed to reduce the electric CIP Tracker balance to $0 by September 30, 2021. The current natural gas CIP Adjustment Factor of $0.016276 per therm was approved by the Commission on August 13, 2020 in Docket No. G002/M-20-403 and implemented on October 1, 2020. It was also designed to reduce the natural gas CIP Tracker to $0 by September 30, 2021.

Xcel Energy submits this compliance filing and report to support our request of the following:

- Recovery of $30,500,073 for our 2020 electric DSM financial incentives;
- Recovery of $4,268,369 for our 2020 natural gas DSM financial incentive;
- A change in the electric CIP Adjustment Factor from $0.001848 to $0.003628 per kWh effective the first billing cycle beginning in October 2021 through September 2022; and
- A change in the natural gas CIP Adjustment Factor from $0.016276 per therm to $0.024551 per therm effective the first billing cycle beginning in October 2021 through September 2022.

Proposed Electric CIP Adjustment Factor for Period October 2021 Through September 2022

Xcel Energy requests a new electric CIP Adjustment Factor of $0.003628 per customer kWh to be effective with the first billing cycle of October 2021 and to remain in effect through the September 2022 billing period. This proposed factor is calculated to reduce the electric CIP Tracker balance to $0 by the end of September 2022. It is based on the forecasted September 2022 unrecovered balance in the Company's electric CIP Tracker account. This forecasted balance is $96.69 million, based on the forecasted October 2021 beginning balance, October 2021 through September 2022 approved and projected expenditures, forecasted 2020 incentives and forecasted CCRC recovery at the current CCRC rate. The inputs and calculation are shown below.

Forecasted beginning balance (Oct 2021)	$31,886,777
Approved expenditures (Oct 2021 - Sept 22)	$126,944,775
Forecasted 2021 incentive	$21,464,518
Less forecasted CCRC recovery (Oct 2021 - Sept 22)	$83,603,714
Forecasted October 2022 beginning of month balance	$96,692,356

As in the past, Xcel Energy will include a message referencing the change in the CIP Adjustment Factor in customers' bills. In the event that Commission approval of the proposed adjustment is delayed beyond September 20, 2021 (in order to implement the rate change by October 1), the Company will continue to apply the current CIP Adjustment of $0.001848 per kWh up to the first cycle of the first full billing period following Commission approval of a revised factor.

Calculation of Revised Electric CIP Adjustment Factor

(1) Forecasted Oct 2022 Electric CIP Tracker Balance	$96,692,356
(2) Forecasted Electric Sales (MWh)– Oct 2021 through Sept 2022[1]	26,684,875
(3) Recalculated Electric CIP Adjustment Rate = (1)/(2)	$3.623/MWh
	$0.003623/kWh

Our above forecasted balance does not include carrying charges. To get as close as possible to a $0 balance by Sept 30, 2022, the calculated rate of $0.003623/kWh was incrementally increased to incorporate the effect of carrying charges, which are projected to be positive for several months. We determined the final rate by decreasing the calculated rate until the September 2022 forecasted CIP Tracker balance approached zero ($0) without going negative. The resulting rate is $0.003628/kWh. As shown in Table 22, this rate results in a forecasted September 30, 2022 Tracker balance of $10,161.

Proposed Natural Gas CIP Adjustment Factor for Period October 2021 Through September 2022

Xcel Energy requests a new natural gas CIP Adjustment Factor of $0.024551 per therm to be effective with the first billing cycle of October 2021 and remaining in effect through the September 2022 billing period. The proposed factor is based on the forecasted October 1, 2022 unrecovered balance in the Company's natural gas CIP Tracker account. This forecasted balance is $19.1 million, based on the forecasted October 2021 beginning balance, October 2021 through September 2022 approved and projected expenditures, forecasted 2021 incentive and forecasted CCRC recovery at the current CCRC rate. The inputs and calculation are shown below.

Forecasted beginning balance (Oct 2021)	$748,601
Approved expenditures (Oct 2021 - Sept 22)	$18,841,229
Forecasted 2021 incentive	$3,612,740
Less forecasted CCRC recovery (Oct 2021 - Sept 22)	$4,075,189
Forecasted October 2022 beginning of month balance	$19,127,381

As done in the past, Xcel Energy will include in customers' bills a message referencing the change in the CIP Adjustment Factor. In the event that Commission approval of the proposed factor is delayed beyond September 20, 2021 (in order to implement the rate change by October 1), the

[1] Forecasted sales exclude the customers exempted from electric CIP charges.

Company will continue to apply the current CIP Adjustment Factor of $0.016276 per therm up to the first cycle of the first full billing period following Commission approval of a revised factor.

Calculation of Revised Natural Gas CIP Adjustment Rate

(1) Forecasted Oct 2021 Natural Gas CIP Tracker Balance	$19,127,381
(2) Forecasted Gas Sales[2] – October 2020 through September 2021	77,770,783
(3) Recalculated Gas CIP Adjustment Rate = (1)/(2)	$0.24595/ dth
	$0.024595/therm

Our above forecasted balance does not include carrying charges. To get as close as possible to a $0 balance by Sept 30, 2022, the calculated rate of $0.024595 per therm was incrementally decreased to incorporate the effect of carrying charges, which are projected to be negative for several months. We determined the final rate by decreasing the calculated rate until the September 2021 forecasted CIP Tracker balance approached zero ($0) without going negative. The resulting rate is **$0.024551 per therm**. As shown in Table 24, this rate results in a forecasted September 30, 2022 Tracker balance of $73.

[2] Forecasted sales exclude the exempt customers and natural gas sales to qualifying large energy facilities.

Northern States Power Company, a Minnesota corporation
State of Minnesota- Electric Utility
DSM Cost Recovery & Incentive Mechanism - Total
2021 Forecast

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
	EXPENSES	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	
1.	Balance	6,960,280	7,595,571	7,233,407	4,752,304	3,322,347	1,879,381	1,624,897	(536,237)	(3,402,819)	31,886,777	29,301,999	22,668,080	18,726,692
2.	CIP Program Expenditures	12,092,084	9,497,106	8,683,828	8,296,334	8,913,820	11,146,330	11,059,925	9,951,805	15,375,447	11,497,509	7,121,951	11,241,419	124,877,557
3.	2020 Performance Incentive									30,500,073				30,500,073
4.	Total Expenses + Incentive (Line 1 + 2 + 3)	19,052,364	17,092,676	15,917,235	13,048,638	12,236,167	13,025,711	12,684,822	9,415,568	42,472,700	43,384,286	36,423,949	33,909,499	174,104,321
	RECOVERY													
5.	CCRC Rate ($/MWh)	3.133	3.133	3.133	3.133	3.133	3.133	3.133	3.133	3.133	3.133	3.133	3.133	
6.	CCRC Cost Recovery (CCRC times Sales)	7,218,172	6,212,775	7,030,116	6,122,974	6,517,277	7,173,559	8,315,072	8,057,280	6,708,660	6,559,631	6,400,675	7,057,334	83,373,526
7.	CIP Adjustment Factor Rate ($/MWh)	1.848	1.848	1.848	1.848	1.848	1.848	1.848	1.848	1.848	3.628	3.628	3.628	
8.	CIP Adjustment Factor Recovery (Factor times Sales)	4,257,639	3,664,605	4,146,714	3,611,636	3,844,216	4,231,324	4,904,645	4,752,587	3,957,103	7,596,024	7,411,953	8,172,362	60,550,806
9.	Sub-Balance (Line 4 - 6 - 8)	7,576,553	7,215,296	4,740,405	3,314,028	1,874,675	1,620,828	(534,894)	(3,394,299)	31,806,937	29,228,631	22,611,322	18,679,803	
10.	Accum Deferred Tax (Line 9 * 28.742%)	2,177,653	2,073,820	1,362,487	952,518	538,819	465,858	(153,739)	(975,589)	9,141,950	8,400,893	6,498,946	5,368,949	
11.	Net Investment (Line 9 - 10)	5,398,900	5,141,476	3,377,918	2,361,510	1,335,856	1,154,970	(381,155)	(2,418,710)	22,664,987	20,827,738	16,112,376	13,310,854	
12.	Carrying Charge (Line 11 * Carrying Charge Rate)	19,018	18,111	11,899	8,319	4,706	4,069	(1,343)	(8,520)	79,840	73,368	56,758	46,889	313,114
13.	End of Month Balance (Line 9 + 12)	7,595,571	7,233,407	4,752,304	3,322,347	1,879,381	1,624,897	(536,237)	(3,402,819)	31,886,777	29,301,999	22,668,080	18,726,692	

Table 21: 2021 Electric CIP Tracker Forecast, With Cost Recovery in 2020

Northern States Power Company, a Minnesota corporation
State of Minnesota- Electric Utility
DSM Cost Recovery & Incentive Mechanism - Total
2022 Forecast

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	EXPENSES	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
1.	Balance	18,726,692	15,457,257	11,694,830	5,306,953	479,049	(4,582,521)	(8,775,906)	(15,446,319)	(22,707,672)
2.	CIP Program Expenditures	12,355,163	9,703,728	8,872,756	8,476,832	9,107,752	11,388,834	11,300,549	10,168,321	15,709,961
3.	2021 Performance Incentive									21,464,518
4.	Total Expenses + Incentive (Line 1 + 2 + 3)	31,081,855	25,160,985	20,567,586	13,783,786	9,586,801	6,806,314	2,524,643	(5,277,998)	14,466,807
	RECOVERY									
5.	CCRC Rate ($/MWh)	3.133	3.133	3.133	3.133	3.133	3.133	3.133	3.133	3.133
6.	CCRC Cost Recovery (CCRC times Sales)	7,258,264	6,253,691	7,077,828	6,165,878	6,560,647	7,210,509	8,309,696	8,050,442	6,699,120
7.	CIP Adjustment Factor Rate ($/MWh)	3.628	3.628	3.628	3.628	3.628	3.628	3.628	3.628	3.628
8.	CIP Adjustment Factor Recovery (Factor times Sales)	8,405,037	7,241,746	8,196,093	7,140,059	7,597,200	8,349,737	9,622,591	9,322,375	7,757,551
9.	Sub-Balance (Line 4 - 6 - 8)	15,418,554	11,665,548	5,293,665	477,849	(4,571,047)	(8,753,932)	(15,407,643)	(22,650,815)	10,136
10.	Accum Deferred Tax (Line 9 * 28.742%)	4,431,601	3,352,912	1,521,505	137,343	(1,313,810)	(2,516,055)	(4,428,465)	(6,510,297)	2,913
11.	Net Investment (Line 9 - 10)	10,986,953	8,312,636	3,772,160	340,506	(3,257,236)	(6,237,877)	(10,979,178)	(16,140,518)	7,223
12.	Carrying Charge (Line 11 * Carrying Charge Rate)	38,703	29,282	13,288	1,199	(11,474)	(21,974)	(38,675)	(56,857)	25
13.	End of Month Balance (Line 9 + 12)	15,457,257	11,694,830	5,306,953	479,049	(4,582,521)	(8,775,906)	(15,446,319)	(22,707,672)	10,161

Table 22: 2022 Electric CIP Tracker Forecast, With Cost Recovery in 2021

Northern States Power Company, a Minnesota corporation
State of Minnesota - Gas Utility
DSM Cost Recovery and Incentive Mechanism
Tracker and Balance ($)
2021

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
EXPENSES	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	
1. Balance	($5,349,608)	($6,295,663)	($6,822,905)	($6,911,165)	($6,951,469)	($6,674,012)	($6,026,493)	($5,364,471)	($4,689,209)	$748,601	$1,585,256	$260,305	
2. CIP Program Expenditures	2,006,585	1,895,390	1,940,769	1,126,630	963,282	1,149,501	1,071,795	1,120,718	1,702,782	2,309,836	1,236,359	1,811,682	18,335,329
3. 2020 Performance Incentive									4,268,369				4,268,369
4. **Total Expenses** (Line 1 + 2 + 3)	**(3,343,023)**	**(4,400,273)**	**(4,882,135)**	**(5,784,536)**	**(5,988,187)**	**(5,524,510)**	**(4,954,698)**	**(4,243,753)**	**1,281,942**	**3,058,437**	**2,821,615**	**2,071,987**	
RECOVERY													
5. CCRC Rate ($/Dth)	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	
6. CCRC Cost Recovery	717,856	588,675	492,800	282,837	165,722	121,076	98,749	107,571	130,036	259,344	450,551	637,528	4,052,744
7. CIP Adjustment Factor Rate	0.16276	0.16276	0.16276	0.16276	0.16276	0.16276	0.16276	0.16276	0.16276	0.24551	0.24551	0.24551	
8. CIP Adjustment Factor Recovery	2,229,737	1,828,487	1,530,689	878,523	514,752	376,075	306,724	334,126	403,905	1,215,108	2,110,968	2,987,012	14,716,105
9. **Total Recovery** (Line 6 + 8)	**2,947,593**	**2,417,162**	**2,023,489**	**1,161,360**	**680,474**	**497,150**	**405,473**	**441,697**	**533,941**	**1,474,452**	**2,561,519**	**3,624,540**	
10. Rate Refund	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Sub-Balance (Line 4-9)	(6,290,616)	(6,817,434)	(6,905,624)	(6,945,895)	(6,668,661)	(6,021,661)	(5,360,170)	(4,685,450)	748,001	1,583,985	260,096	(1,552,552)	
12. Accum Deferred Tax (Line 11 * 28.742%)	(1,808,049)	(1,959,467)	(1,984,815)	(1,996,389)	(1,916,707)	(1,730,746)	(1,540,620)	(1,346,692)	214,990	455,269	74,757	(446,235)	(13,984,702)
13. Net Investment (Line 11-12)	(4,482,567)	(4,857,967)	(4,920,810)	(4,949,506)	(4,751,954)	(4,290,915)	(3,819,550)	(3,338,758)	533,010	1,128,716	185,339	(1,106,318)	(34,671,280)
14. Carrying Charge (a) (Line 13 * Carrying Charge Rate)	(5,047)	(5,470)	(5,541)	(5,573)	(5,351)	(4,832)	(4,301)	(3,759)	600	1,271	209	(1,246)	(39,040)
15. **End of Month Balance** (Line 11+14)	**(6,295,663)**	**(6,822,905)**	**(6,911,165)**	**(6,951,469)**	**(6,674,012)**	**(6,026,493)**	**(5,364,471)**	**(4,689,209)**	**748,601**	**1,585,256**	**260,305**	**(1,553,798)**	

Table 23: 2021 Gas CIP Tracker Forecast, With Cost Recovery in 2020

Northern States Power Company, a Minnesota corporation
State of Minnesota - Gas Utility

DSM Cost Recovery and Incentive Mechanism
Tracker and Balance ($)
2022 Forecast

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept
	EXPENSES	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
1.	Balance	($1,553,798)	($3,589,908)	($5,000,295)	($5,816,596)	($6,272,429)	($6,225,501)	($5,728,574)	($5,183,711)	($4,638,153)
2.	CIP Program Expenditures	2,084,807	1,969,278	2,016,426	1,170,549	1,000,833	1,194,312	1,113,577	1,164,407	1,769,162
3.	2021 Performance Incentive									3,612,740
4.	**Total Expenses** (Line 1 + 2 + 3)	**531,009**	**(1,620,630)**	**(2,983,869)**	**(4,646,047)**	**(5,271,595)**	**(5,031,189)**	**(4,614,997)**	**(4,019,305)**	**743,749**
	RECOVERY									
5.	CCRC Rate ($/Dth)	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524	0.0524
6.	CCRC Cost Recovery	724,330	593,751	497,434	285,183	166,906	121,857	99,301	108,196	130,807
7.	CIP Adjustment Factor Rate	0.24551	0.24551	0.24551	0.24551	0.24551	0.24551	0.24551	0.24551	0.24551
8.	CIP Adjustment Factor Recovery	3,393,709	2,781,906	2,330,630	1,336,170	782,008	570,936	465,257	506,933	612,869
9.	**Total Recovery** (Line 6 + 8)	**4,118,039**	**3,375,657**	**2,828,063**	**1,621,353**	**948,914**	**692,793**	**564,558**	**615,130**	**743,676**
10.	Rate Refund	0	0	0	0	0	0	0	0	0
11.	Sub-Balance (Line 4-9)	(3,587,030)	(4,996,287)	(5,811,933)	(6,267,400)	(6,220,510)	(5,723,981)	(5,179,556)	(4,634,434)	73
12.	Accum Deferred Tax (Line 11 * 28.742%)	(1,030,984)	(1,436,033)	(1,670,466)	(1,801,376)	(1,787,899)	(1,645,187)	(1,488,708)	(1,332,029)	21
13.	Net Investment (Line 11-12)	(2,556,046)	(3,560,254)	(4,141,467)	(4,466,024)	(4,432,611)	(4,078,795)	(3,690,848)	(3,302,405)	52
14.	Carrying Charge (a) (Line 13 * Carrying Charge Rate)	(2,878)	(4,009)	(4,663)	(5,029)	(4,991)	(4,593)	(4,156)	(3,719)	0
15.	**End of Month Balance** (Line 11+14)	**(3,589,908)**	**(5,000,295)**	**(5,816,596)**	**(6,272,429)**	**(6,225,501)**	**(5,728,574)**	**(5,183,711)**	**(4,638,153)**	**73**

Table 24: 2022 Gas CIP Tracker Forecast, With Cost Recovery in 2021

Northern States Power Company
a Minnesota corporation
2020 CIP Financial Incentive Calculations
Cost-Effectiveness & Performance Mechanism Report
Reference Docket Nos. E,G999/CI-08-133

In 2010, the Commission approved a new Shared Savings Incentive Mechanism (Docket No. E,G999/CI-08-133). The shared savings incentive mechanism awards a percentage of the net benefits created by a utility's energy conservation program, beginning once a utility surpasses its earnings threshold. Order Point 1 in the February 20, 2020 ORDER EXTENDING EXISTING INCENTIVE FORMULA AND ENCOURAGE DISCUSSIONS FOR FUTURE REVISIONS extended the incentive mechanism from the 2017-2019 CIP Plan years through the 2020 CIP Plan year. The mechanism, originally approved in 2016, sets a fixed range of percentages of net benefits based on the percent of sales savings achieved. The percentage of net benefits awarded increases as achievements increase, up to a cap of percent of net benefits awarded and a cap of total spend. Additionally, during the 2013 Legislature, a provision was added to MN Statute 216B.241, subdivision 7, which allows utilities the option to exclude the net benefits of low-income programs, if negative, from the calculation of the DSM financial incentive. On February 20, 2020 the Commission approved the Shared Savings Mechanism for 2020 with the same parameters as 2019.

Xcel Energy's 2020 CIP portfolio achieved electric energy savings of nearly 647 GWh which will provide net benefits of over $308 million to Xcel Energy electric customers. The Company also achieved natural gas savings of 868,599 Dth, which will provide Xcel Energy customers with net benefits of more than $46 million. As a result of these achievements, we request approval of a 2020 CIP electric financial incentive of $30,500,073 and a 2020 CIP natural gas financial incentive of $4,268,369.

The performance measurements of Xcel Energy's individual electric and natural gas CIP programs, including indirect impact programs, are reported in Tables 2 and 3, respectively. The cost-effectiveness of individual programs is reported in the Cost-Effectiveness Report included in this filing.

Northern States Power Company
a Minnesota corporation
2020 Financial Incentive Calculations

In accordance with the Minnesota PUC Orders dated January 27, 2010, August 5, 2016 and February 20, 2020 (Docket No. E,G999/CI-08-133), Xcel Energy respectfully submits these financial incentive calculations.

In 2020, the Company achieved electric energy savings of 646,796,991 kWh at the generator (135% of goal) at a cost of $104,461,579 (101% of budget). As a result, we respectfully request approval of our CIP electric financial incentive in the amount of $30,500,073.

CIP Electric Financial Incentive Calculation

According to Orders in Docket No. E,G999/CI-08-133, certain expenses and savings are excluded from the incentive calculation, including regulatory assessments, electric utility infrastructure projects, qualifying solar projects, and third party projects not selected for inclusion in the annual incentive compliance filing. As first stated in our January 30, 2013 incentive compliance filing and continued through the 2020 compliance filings, we elected to include the One Stop Shop program administered by the Center for Energy and the Environment (CEE).[1] The indirect impact third party programs—Enerchange, Energy Intelligence, Energy Smart, and Trillion Btu—are not included in the calculation of the incentive. In addition, during the 2013 Legislature, a provision was added to MN Statute 216B.241, subdivision 7, which allows utilities to exclude the net benefits of low-income programs from the calculation of net benefits for the incentive if the net benefits are negative.

Model Year Inputs

3-year Weather Normalized Sales Average (kWh)	28,767,281,504

Incentive Mechanism

Max Percent of Net Benefits Awarded	10.0%
Max Percent Expenditures Awarded	30.0%
Earnings Threshold	1.0%
Net Benefits Cap Achievement Level	1.7%
Increase in Net Benefits Awarded Per 0.1% Increase in Achievement Level	0.75%

Summary of 2020 Achievements

Actual Spending for Incentive[2]	$104,461,579
Actual Energy Savings (kWh)[3]	646,796,991
Net Benefits Achieved[4]	$308,239,130

[1] Docket No. E,G999/CI-08-133 and Docket No. E,G002/CI-10-81.
[2] Portfolio Subtotal spend plus CEE One-Stop Shop spend.
[3] Portfolio Subtotal energy savings plus CEE One-Stop Shop energy savings.
[4] The net benefits are equal to the utility test net benefits shown on Electric CIP Total cost-benefit analysis plus the utility test net benefits shown on the CEE One Stop Shop cost-benefit analysis, included in the Cost-Effectiveness Section. Excludes any net costs from low-income programs that failed the Utility Test.

2020 Financial Incentive Mechanism

In order to calculate the CIP financial incentive, it is necessary to calculate the percent of net benefits awarded. The following calculations and incentive table detail Xcel Energy's financial incentive.

Percent of Sales Achievement Level =

Actual Energy Savings (kWh) / 3-year Weather Normalized Sales Average (kWh) =

646,796,991 / 28,767,281,504

= 2.25%

Percent of Net Benefits Awarded =

Max Percent of Net Benefits Awarded – Increase in Net Benefits Awarded Per 0.1% Increase in Achievement Level x (Amount the % of Sales Achievement is below the Net Benefits Cap Achievement) / 0.1% =

= 10.0% - 0.75% x 0[5] / 0.1%

= 10.0%

Expenditures Award Cap =

Max Percent Expenditures Awarded x Actual Spend for Incentive =

30% x $101,666,909[6]

= $30,500,073

Incentive Awarded =

Net Benefits Achieved x Percent of Net Benefits Awarded less than Expenditures Award Cap =

$308,239,130x 10.0% less than $30,500,073

= **$30,500,073**

2020 Electric Incentive Request

Based on the above calculation, Xcel Energy respectfully requests approval of a CIP financial incentive of $30,500,073.

[5] % of Sales Achievement is greater than Net Benefits Cap Achievement Level. Therefore, no adjustment is made to the Percent of Net Benefits Awarded.

[6] Total portfolio spend minus Assessment Segment and the EnerChange, Energy Smart, and Trillion BTU Indirect Programs.

Northern States Power Company
a Minnesota corporation
2020 Natural Gas Incentive Calculation

In accordance with the Minnesota PUC Orders dated January 27, 2010, August 5, 2016 and February 202, 2020 (Docket No. E,G999/CI-08-133), Xcel Energy respectfully submits these financial incentive calculations.

In 2020, Xcel Energy achieved energy savings of 868,599 Dth (110% of goal) at a cost of $14,587,983 (78% of budget). As a result, we respectfully request approval of our financial incentive in the amount of $4,268,369.

According to Orders in Docket No. E,G999/CI-08-133, certain expenses and savings are excluded from the natural gas incentive calculation, including regulatory assessments and third party projects not selected for inclusion in the annual incentive compliance filing. As stated in our January 30, 2013 incentive compliance filing and maintained through our 2020 filing, we elected not to include any of the natural gas third party programs in the calculation of the incentive.[7]

Model Year Inputs

3-yr Weather Normalized Sales Average (Dth)	71,897,513

Incentive Mechanism

Max Percent of Net Benefits Awarded	10.0%
Max Percent Expenditures Awarded (up to 2% achievement)	30.0%
Earnings Threshold	0.7%
Net Benefits Cap Achievement Level	1.2%
Increase in Net Benefits Awarded Per 0.1% Increase in Achievement Level	0.75%

Summary of 2020 Achievements

Actual Spending for Incentive	$14,587,983
Actual Energy Savings (Dth)	868,599
Net Benefits Achieved[8]	$46,802,220

[7] Docket No. E,G999/CI-08-133 and Docket No. G002/M-16-108.

[8] The net benefits are equal to the utility test net benefits shown on the Total Gas CIP with Indirect Participants BENCOST sheet included in the Cost-Effectiveness section. Excludes any net costs from low-income programs that failed the Utility Test.

2020 Financial Incentive Mechanism

In order to calculate the financial incentive achieved, it is necessary to calculate the percent of net benefits awarded. The following calculations and incentive table detail Xcel Energy's financial incentive.

Percent of Sales Achievement Level =

Actual Energy Savings (Dth) / 3-year Weather Normalized Sales Average (Dth) =

868,599 / 71,897,513

= 1.2081%

Percent of Net Benefits Awarded =

Max Percent of Net Benefits Awarded – Increase in Net Benefits Awarded Per 0.1% Increase in Achievement Level x (% of Sales Achievement Level less than Net Benefits Cap Achievement Level) / 0.1% =

10.0% - 0.75% x 0[9] / 0.1% =

= 10%

Expenditures Award Cap =

Max Percent Expenditures Awarded x Actual Spend for Incentive =

30% x $14,227,897[10]

= $4,268,369

Incentive Awarded =

Net Benefits Achieved x Percent of Net Benefits Awarded less than Expenditures Award Cap =

$46,802,220 x 10% less than $4,268,369

= **$4,268,369**

2020 Natural Gas Incentive Request

Based on the above calculation, Xcel Energy respectfully requests approval of a financial incentive of $4,268,369.

[9] Percent of Sales Achievement is greater than Net Benefits Cap Achievement Level. Therefore, no adjustment is made to the Percent of Net Benefits Awarded.

[10] Total portfolio spend minus Assessment Segment and the EnerChange, Energy Smart, and Trillion BTU Indirect Programs.

Northern States Power Company
a Minnesota corporation
2020 CIP Status Report
Docket No. E,G002/CIP-16-115.09

Summary

The 2020 CIP Status Report compares the actual achievements accomplished by Xcel Energy in 2020 to the forecasts that were approved in the 2020 CIP Plan. These comparisons focus on generator kWh and kW reduced, Dth saved, participation, and dollars spent compared to goal. The report discusses program accomplishments by segment, including:

- Business;
- Residential;
- Low-Income;
- Planning;
- Research, Evaluations, & Pilots;
- Alternative Filings; and
- Assessments.

Xcel Energy's CIP program continues to encourage energy savings and build awareness of the benefits of energy efficiency. In 2020, the electric portfolio and natural gas portfolio successfully exceeded their savings goals. The Company achieved more than 646 GWh of electric savings, 166 MW of demand reduction, and 868,599 Dth of natural gas savings, while spending $104.46 million on its electric programs and $14.59 million on its natural gas programs.

Summary of Achievements

2020	Electric Goal	Electric Actual	% of Electric Goal	Natural Gas Goal	Natural Gas Actual	% of Natural Gas Goal
Budget	$103,399,667	$104,461,579	101%	$18,744,192	$14,587,983	78%
Generator kW	126,171	165,742	131%	N/A	N/A	N/A
kWh/Dth Saved	480,620,631	646,796,991	135%	790,244	868,599	110%
Participation	1,422,255	1,512,836	106%	632,877	598,402	95%

In compliance with Minn. R. 7690.0550, this 2020 CIP Status Report includes the cost-effectiveness of the overall Xcel Energy CIP Plan based on 2020 actual performance, as calculated from the utility, participant, ratepayer, and societal perspectives. The results are listed by segment and by program. The cost-benefit analyses can be found in a separate section after the "Cost-Effectiveness" tab.

Business Segment

Xcel Energy's Business Segment motivates business customers to save energy by lowering their energy bills and/or peak demand while helping to minimize impact on the environment. The Business Segment offers a variety of programs and rebates for customers, including:

- Equipment rebate programs that lower the cost for customers to purchase and install energy efficient equipment or make process improvements;
- Studies and audits that help customers identify, prioritize, develop a plan and implement energy efficiency projects;
- Holistic programs that encourage broader, long-term energy planning to help customers analyze, track, and implement efficiency plans rather than ad-hoc efficiency projects;
- Demand management programs that help lower customers' electricity demand during peak periods in exchange for lower rates or energy bill discounts; and
- Business education, advertising and promotional efforts that work to increase customer and trade awareness of energy use and conservation options, leading to future participation in programs.

Summary of Achievements

Business Segment	Electric Goal	Electric Actual	% of Electric Goal	Natural Gas Goal	Natural Gas Actual	% of Natural Gas Goal
Budget	$43,367,441	$45,420,055	105%	$5,204,768	$4,329,629	83%
Generator kW	61,810	91,254	148%	N/A	N/A	N/A
kWh/Dth Saved	262,076,797	311,615,206	119%	460,359	498,233	108%
Participation	89,707	29,989	33%	22,489	12,613	56%

In 2020, the Business Segment electric portfolio exceeded its energy savings goals while spending 20 percent less in proportion to savings achievement. During the COVID-19 pandemic customers were able to leverage rebates and make energy efficiency improvements while their facilities had low occupancy due to employees working remotely and fewer customers on-site. The Business Segment's highest contributing programs were Business New Construction, Commercial Efficiency, Lighting Efficiency and Process Efficiency. The Lighting Efficiency program contributed the most towards portfolio performance, realizing strong results through advertising and bonus rebates. The other high performing programs are all holistic type offerings, continuing the trend of customer interest in broader, long-term planning and support providing greater influence over energy efficiency decisions.

The Business Segment natural gas portfolio achieved its savings goals while spending significantly less than its budget. The Business New Construction, Heating Efficiency and Process Efficiency programs contributed the most towards the segment's natural gas performance.

As part of its commitment to helping the community repair and rebuild following the widespread acts of property damage in the Twin Cities, Xcel Energy began offering special help for businesses in mid-June 2020. This Special Recovery offer includes additional rebates on equipment that are up to double the usual amount to help replace equipment that was damaged or destroyed, as well as free energy consulting services. Customers are referred to either the Turn Key or Energy Efficient Buildings programs to get the support they need and to maximize rebate dollars. For this Special Recovery rebate offer, the Turn Key assessment fee was waived.

Business Direct Impact Programs

Business New Construction

The Business New Construction program offers free consulting services as well as electric and natural gas rebates to customers that incorporate energy efficiency into their new construction project, building addition or major renovation. The program includes two offerings: Energy Design Assistance (EDA), which is an integrated design approach that utilizes energy modeling to identify whole building energy savings opportunities and provides customized rebates; and, Energy Efficient Buildings (EEB) which is typically for smaller, less complicated projects. EEB projects utilize our existing custom and prescriptive rebates to develop a project-specific rebate offering for the customer.

The program is primarily marketed through the design community. Given the program's longevity, it has an established trade network of design professionals that regularly participate, and the Company's consultant regularly communicates with this target audience. Xcel Energy account managers and Business Solutions Center representatives also promote the program to customers.

Deviation from Goal or Budget

Given the ongoing construction boom, the Business New Construction program significantly exceeded its electric and natural gas savings goals. Changes as a result of the COVID-19 pandemic had little impact on program achievement, as results were mainly driven from projects that started 2-3 years ago and were nearing completion when the pandemic hit.

However, if construction slows due to economic uncertainties or possible resource shortages, achievement in future years could be impacted. another future consideration is changes in codes and certification requirements. As codes and certification requirements increase, the savings per project decrease; however, the costs to attract and manage these projects through the program will continue to increase.

Changes in 2020

As part of its commitment to helping neighborhoods and businesses repair and rebuild following the widespread acts of property damage in the Twin Cities, Xcel Energy began offering special help for businesses in mid-June 2020. That includes special rebates on equipment that are up to double the usual amount to help replace equipment that was damaged or destroyed, as well as free energy consulting services. Customers are referred to either the Turn Key or Energy Efficient Buildings programs to get the support they need and maximize rebate dollars. (For the Special Recovery rebate offer, the Turn Key assessment fee is waived). Enrollment in this offer will be available through July 1, 2021.

Commercial Efficiency

The Commercial Efficiency program offers large commercial customers resources to develop a holistic, sustainable energy management plan. The program provides funding for studies to identify and scope energy efficiency recommendations. This program is primarily marketed to large

commercial customers through our account managers. Annual and system optimization bonuses are offered to customers who exceed goals.

Deviation from Goal or Budget
In 2020, the program exceeded its electric and natural gas goals. Bonuses offered in 2020 helped the program exceed goals. Both electric and natural gas spending were less than the forecasted amount. In the future the Company expects expenditures to increase due to more customers participating in Phase 2 and Phase 3 of the program. Changes to building codes will likely reduce achievements. The number of new customers per year will decline because the target market (commercial customers with the potential to save 1 GWh) is mostly saturated.

Changes in 2020
None.

Commercial Refrigeration Efficiency
The Commercial Refrigeration program provides a walk-through energy assessment to identify efficiency improvement opportunities and uses a combination of direct installation, prescriptive, and custom improvement measures. The program is primarily marketed to small business customers. Rebates are offered to lower the incremental capital cost associated with energy improvement opportunities.

The program uses a third-party implementer to perform on-site energy assessments and help customers identify and implement energy efficiency opportunities. The program is promoted through our energy efficiency specialists, third-party implementer, trade and advertising.

Deviation from Goal or Budget
In 2020, the program exceeded its electric goal, however, the program was below the natural gas goal. The natural gas goal achievements in 2020 were primarily from direct install measures. Trade incentives were used to encourage trade participation. The number of assessments completed in 2020 was in line with past years, which will help fill the pipeline for 2021.

Changes in 2020
None.

Cooling Efficiency
The Cooling Efficiency program offers prescriptive and custom rebates and study funding to business customers that purchase and install efficient cooling systems for space and process cooling. Rebates help offset the incremental first costs associated with energy efficient equipment purchases to reduce the payback period of a customer's capital investment.

This program is marketed to business customers of all sizes as well as trade partners through a variety of channels including advertising, customer direct email, bill messaging, and newsletters. In a typical year the Company conducts significant in-person outreach through in-person trainings and community energy organizations. In-person meetings and outreach were curtailed for several

months based on the State of Minnesota stay at home order as well as Xcel Energy's requirements for in-person meetings as a result of the COVID-19 pandemic.
Promotional activities were also impacted since many companies transition to a working from home, limiting the reach of mailers sent to businesses. Instead promotions consisted of utility bill onserts, web-based promotions and emails. The most notable promotion was the partnership with the Saver's Switch for Business program to promote demand management to customers who are not current participants.

Deviation from Goal or Budget
The Cooling Efficiency program did not meet its electric or natural gas savings goals in 2020. Program participation for both electric and natural gas measures reflect installing low-cost cooling equipment instead of large capital investment measures that are associated with higher saving measures. This was especially true for the natural gas portion of the program. This is a continuation of a trend that the program has been experiencing since the implementation of the new energy codes in 2017 and again in 2020. Program spending for both natural gas and electric was in line with program achievement.

Changes in 2020
The program filed one courtesy notification in May of 2020. The courtesy notification changed the invoice window time frame for prescriptive measures from 12 months to 24 months for all equipment purchases. This change was done to remove barriers for customers that have long lead time on projects and purchasing custom built equipment.

The operating hours policy does not affect our efficiency standards or the savings that the Company is capturing for each chiller.

Custom Efficiency
The Custom Efficiency program offers custom electric and natural gas rebates to business customers who implement energy saving projects that are not eligible for rebates through our prescriptive programs. The program is an important piece of our portfolio as it provides a place to evaluate unique savings opportunities and serves as a launch pad for new program ideas.

The program is open to all commercial business customers, but primarily marketed to mid-size customers through direct contact with our account managers, Business Solutions Center, internet resources and trade partners. Promotional efforts continue to focus on market segments not served by our holistic programs as well as energy efficiency equipment and unique strategies that do not have corresponding end-use rebates. It is becoming more challenging to bring qualifying projects into the program.

Deviation from Goal or Budget
In 2020, the Custom Efficiency program exceeded its electric savings goal but fell short of the natural gas savings goal as several key projects shifted completion dates to 2021. The program underspent its forecasted natural gas budget and the electric spend aligned with savings achievement.

There were large projects with rebates that were capped, due to payback constraints, that resulted in high savings and lower spend.

Changes in 2020
None.

Data Center Efficiency
The Data Center Efficiency program offers study, prescriptive and custom electric rebates to customers that implement energy-saving measures in data centers. This is a unique segment-focused program tailored to the specialized needs of data centers. The program is primarily marketed to enterprise and colocation data centers through the Company's account managers, Business Solutions Center and trade partners, as well as through new construction partners and professional organizations. Data centers of any size may participate in the program.

Deviation from Goal or Budget
The Data Center Efficiency program did not meet it savings goal and program spending aligned with program achievement. Historically, various tactics were used to increase achievement and build pipeline, such as offering free walkthroughs to identify energy saving opportunities and meeting with targeted data center vendors to increase participation. However, the COVID-19 pandemic limited accessibility to perform site visits. And, given the nature of the highly tailored offering and unusually long sales cycles, achievement fell below our targets.

Changes in 2020
None.

Efficiency Controls
The Efficiency Controls program offers custom electric and natural gas rebates to businesses that install automated control systems resulting in energy savings. Rebates apply to new systems for HVAC or lighting that can be centrally controlled either locally or via web interface. Customers receive customized energy savings estimates when they apply for rebates under the program.

The program is marketed directly to commercial businesses of all sizes through our active trade partner relationships, account managers, and energy advisors.

Deviation from Goal or Budget
In 2020, the program fell short of its electric and natural gas goals, and program spending aligned with program achievement. Achieving significant energy savings continues to be challenging, especially during peak customer usage times.

Changes in 2020
None.

Fluid Systems Optimization

The Fluid Systems Optimization program offers prescriptive and custom electric rebates as well as study funding to customers that make improvements in their fluid and compressed air systems. The program helps customers identify and implement energy-saving improvements in compressed air, blower, fan, and vacuum, hydraulic and pump systems.

The program is primarily marketed to large and mid-sized industrial customers through strong trade partner relationships, the Company's account management and energy efficiency specialist teams, and digital and event marketing.

Deviation from Goal or Budget

In 2020, the program did not meet its filed goal due to the cyclical nature of the technology's sales, in addition to financial restraints as a result of economic strain resulting from the COVID-19 pandemic preventing capital energy upgrades. Expenditures were controlled and aligned with performance. Bonus rebates were available for prescriptive and custom projects to retain existing pipeline. Web content was streamlined to improve customer and trade experience when locating forms and applications. Participation in Compressed Air studies continues to be a driving factor for implementing energy upgrades. Additional participation in program measures occurred within the Process Efficiency program.

Future promotional efforts will include email campaigns to increase study participants, having a presence in the Company's trade newsletter, and offering trade and customer training opportunities.

Changes in 2020

None.

Foodservice Equipment

The Foodservice Equipment program offers prescriptive electric and natural gas rebates to businesses that purchase and install qualifying energy efficient foodservice equipment. The objective of the program is to encourage customers to purchase higher efficiency foodservice equipment. The program is primarily marketed through the Company's account managers, energy efficiency specialists and trade partners. The Company also offers a trade incentive to help stimulate greater awareness and increase trade participation.

Deviation from Goal or Budget

The Foodservice Equipment program exceeded natural gas and electric achievement goals due to strong trade support, promotion in a local publication and search engine optimization efforts. The Company offers the trade an incentive to encourage them to support the program. Despite exceeding savings goals, the program remained under budget.

To retain a strong pipeline, future promotion efforts will continue to include search engine optimization as well as a recurring presence in a local foodservice publication.

Changes in 2020
None.

Heating Efficiency
The Heating Efficiency program offers prescriptive and custom natural gas and electric rebates and study funding to business customers that improve heating system efficiency. The program encourages customers to optimize and/or replace their existing heating systems to energy efficient systems through the funding of audits, equipment repairs, and tune-ups on an ongoing basis from rebates.
The program is primarily marketed to customers through the Company's account managers and energy efficiency specialists. The secondary marketing channel consists of a heating trade network that includes manufacturer representatives, contractors, and distributors. The relationships with the heating trade are critical to helping customers understand the importance of having efficient heating systems even when natural gas prices are low.

The program's promotional activities include direct mail, email, bill onserts, trade partner newsletters and trainings offered to customers, trade partners and internal personnel. In a normal year the Company does significant in-person outreach through community energy organizations. Due to the COVID-19 pandemic the outreach was done through promotional activities with our trade partners such as Minnesota Blue Flame Association, the primary natural gas association in Minnesota. Our engagement with Minnesota Blue Flame is used to assess engagement, strengthen and grow the program through leveraged trade outreach and gather their feedback.

Deviation from Goal or Budget
As a result of restrictions due to the COVID-19 pandemic the program did not meet its filed natural gas goal or budget, but it did exceed the electric goal and budget. Program spending was proportionate with the overall achievement for both fuels. Program participation for both electric and natural gas measures is comprised of a high number of measures with lower savings and fewer participants for system replacement or upgrade measures. Ongoing and forecasted low natural gas prices impact customer decisions when considering capital investments towards heating system efficiency.

Changes in 2020
The program filed both a modification and courtesy notice in 2020. The program modification in May of 2020, for condensing boilers replaced the five percent efficiency adjustment factor with a deemed value of 90% efficiency. For non-condensing boilers lowered the minimum rated efficiency from 92% to 88% as outlined in the Minnesota Technical Reference Manual (TRM).

The courtesy notice in February of 2020, changed the invoice window time frame for prescriptive measures from 12 months to 24 months for all equipment purchases. This change was done to remove barriers for customers that have long lead time on projects and purchasing custom built equipment.

Lighting Efficiency

The Lighting Efficiency program offers rebates to motivate business customers to purchase and install energy efficient light fixtures and lamps. Rebates are provided through a prescriptive program for new and existing facilities. Custom rebates are available for projects in which prescriptive measures are not available. Lighting discounts are offered on LED lamps for businesses through participating distributors. In addition, study funding is available for customers looking to make energy efficient improvements but need to determine proper lighting levels within a facility.

The Company continues to observe declining LED equipment costs, which is driving greater affordability and adoption of LED technologies. Business customers have a variety of LED options at various price points to upgrade their lighting equipment, such as entirely new LED fixtures, LED retrofit kits that use existing fixtures or simple replacements of LED tubes.

The Company offered limited time bonus rebates on fixtures and lamps to drive the purchase of energy efficient equipment. For many companies, restrictions as a result of the COVID-19 pandemic created less occupancy during this period, providing the ideal time for renovations. Advertising was used to drive customers to purchase energy efficient lighting products and to leverage the bonus rebates. Marketing efforts focused on developing and maintaining relationships with trade partners to continue to engage with them in the important role of educating and motivating customers. The program's highest performing measures were high bay fixtures, LED linear tubes and troffers.

Deviation from Goal or Budget

In 2020, the program was able to surpass the energy savings goal. The spending exceeded the filed budget, but it was in line with the increased achievement.

Changes in 2020

A limited time rebate bonus was offered on fixtures and lamps from March 1 to December 1, 2020.

Motor and Drive Efficiency

The Motor and Drive Efficiency program offers prescriptive and custom rebates to qualifying electric business customers that install efficient motors, constant speed motor controllers (CSMCs) and variable frequency drives (VFDs) and clean water pumps (CWPs).

The program is marketed through multi-channels including the Company's account managers, energy efficiency specialists and equally important the trade partner network. The CWPs product is marketed primarily through a group of registered distributors that sell qualifying pump equipment. To increase program awareness and participation, the program leverages various activities such as training for customer and trade partners, utility bill onserts, email campaigns, e-newsletters, customer and trade partner case studies and social media outlets. Traditionally, the Company does significant in-person outreach through community energy organizations. Due to the COVID-19 pandemic in-person meetings and outreach were curtailed for several months based on the State of Minnesota stay at home order as well as Xcel Energy's requirements for in-person meetings.

Promotional activities were also impacted as many businesses transitioned to working from home limiting the reach of mailers sent to business locations. Instead promotions in 2020 consisted of utility bill onserts and emails.

Deviation from Goal or Budget
The program fell short of its electric savings goal in 2020. Program spending was in-line with program achievement.

Changes in 2020
The program filed a modification request in May 2020. The program modification moved integrated fans and integrated fan systems found in air handling units, dust collection, and fan walls that currently fall under the custom portion of the program to prescriptive measures.

Multi-Family Building Efficiency
The Multi-Family Building Efficiency (MFBE) program is a holistic approach in reaching the multi-family housing market segment to achieve deep, whole-building energy savings. The program is delivered in partnership with CenterPoint Energy and offers a whole-building energy use baseline, free energy audit, direct installation of low-cost energy saving measures and the potential for higher incentives with the implementation of a cost-effective energy efficiency bundle. Unlike other CIP programs, MFBE is focused on the entire multi-family building, including resident spaces and common areas.

The program is marketed through a variety of venues, which include Minnesota Multi Housing Association advertising, direct mail, email and social media. Additional interest in the program is driven through various stakeholder groups and communities.

Deviation from Goal or Budget
While the program exceeded participation goals for both fuels, it came in under the filed budget and savings goals. This can primarily be attributed to the challenges and access restrictions related to COVID-19 pandemic and compliance with public health orders. We found for much of the year, there were properties that chose to postpone participation throughout the year or until 2021. These delays were due to property specific COVID-19 safety protocol or in properties where many of the residents in the property are considered to have a higher impact risk from the virus exposure.

Despite offering virtual energy audits, only one property chose to participate in a virtual audit. On-site audits resumed once the restrictions were relaxed and occurred mostly in the building's common spaces which could be managed following the Center for Disease Control guidelines with limited or no contact.

Although audits continued in various forms, the direct install (DI) portion of the program offering was impacted more significantly since it required access to the resident's units. However, where DI continued, work was completed under strict adherence to safety protocol and only in properties where residents and owners/managers allowed controlled access.

Rebates and incentive bundles continued but were below expectations. We believe this too is a result of COVID-19 pandemic as many property owners/managers were focused on the immediate needs and safety of their residents. As a result, it is difficult to determine the full benefit of the changes made to the program design in 2020.

As in previous years, the program operations did not require any limits on participation. There was enough capacity to include all properties requesting participation in the program.

2020 MFBE Building Participation

	2020 Buildings	***2020 Units***
Low Income	101	3,917
Market Rate	351	11,529
Totals	452	15,446

Changes in 2020
The program had a design change to the incentive structure starting in 2020. Instead of requiring a building reach and complete a bundle of measures that achieve the minimum 15% energy savings before receiving an incentive, all cost-effective energy conservation opportunities (ECOs) could be completed and submitted one at a time and receive the standard rebate with an MFBE bonus rebate on top for each ECO.

Process Efficiency
The Process Efficiency program offers customized resources to large and mid-sized industrial customers to develop a holistic, sustainable energy management plan. Specifically, this program provides funding for studies to identify and scope energy efficiency opportunities. Prescriptive and custom rebates are available to customers who implement qualifying energy efficiency recommendations. This program is primarily marketed through the Company's account managers.

Deviation from Goal or Budget
In 2020, the program exceeded its electric and natural gas goals as several key projects were completed in 2020. The program also provided COVID-19 pandemic related prescriptive and custom rebate bonuses to encourage conservation investments in 2020. Spending was in line with achievement.

Changes in 2020
None.

Recommissioning

The Recommissioning program offers study funding as well as electric and natural gas implementation rebates to commercial customers that optimize their existing equipment to run more efficiently. Recommissioning consists of two main steps: study and implementation. The Company offers rebates to offset the cost of Recommissioning studies, as well as rebates for the implementation of Recommissioning measures. Through a study provider chosen by the customer, the program supports a systematic investigation and implementation plan to improve building operations, decrease costs and reduce peak electric demand and natural gas usage.

The Recommissioning program also includes a benchmarking service that provides a free data aggregation and data upload tool to the Company's electric and natural gas customers interested in tracking whole building data. Data is uploaded automatically to the U.S. Environmental Protection Agency's (EPA) online tool, the ENERGY STAR Portfolio Manager.

The program is primarily marketed through the Company's account managers, Business Solutions Center and study providers.

Deviation from Goal or Budget

In 2020, the program did not meet electric or natural gas savings targets. Electric and natural gas spending remained under budget and in-line with program achievement. The participation ramped down in the second half of 2020 as the program prepared for retirement. It has been replaced in our 2021-2023 Triennial plan by the Business Energy Assessments program.

Changes in 2020

None.

Self-Direct Efficiency

The Self-Direct Efficiency program is targeted toward business customers who have the resources to manage their own energy efficiency improvement projects and the capability to perform and to conduct their own measurement and verification (M&V) for their project(s). Some customers prefer to use their in-house experience and resources, while others may choose an energy service company (ESCO) or other energy partner to assist them with their efforts. Regardless, customers who implement and commission qualifying projects can receive rebates based upon the amount of energy savings achieved.

Deviation from Goal or Budget

The Self-Direct program had one project that exceeded the electric savings target but had no natural gas savings contributions. The program incurred typical project management costs during the year. The Company continues to work with vendors and recognizes that most customers gravitate to holistic, full-service programs. The Company offers this product to eligible customers interested in self-managing their energy efficiency projects.

Changes in 2020

None.

Turn Key Services

The Turn Key Services program provides business customers with on-site audits to identify electric and natural gas energy efficiency opportunities, free implementation support, and prescriptive or custom rebates. Implementation services and rebates are available for any qualifying conservation project, regardless of whether it was identified in an audit. The program uses a hands-on approach and third-party assistance to help customers bridge the gap between identifying and implementing energy-saving opportunities. The program is primarily promoted through the Company's account managers, energy efficiency specialists and advertising.

Deviation from Goal or Budget

In 2020, the program exceeded its electric and natural gas targets while operating under budget. This success can be attributed to the strong pipeline that has been built through the large volume of studies conducted in current and recent program years, as well as ongoing follow-ups with customers who have completed audits. Participants are offered a one-year bonus rebate period to implement measures identified in their audit, which is a strategy that has continuously proved successful. An unexpected contributor to the program's success was the Special Recovery rebate promotion that launched in July, following the political unrest that resulted in damage to several facilities in the Twin Cities. Damaged buildings were eligible for additional funding through the Turn Key program to restore operations.

Changes in 2020

None.

Business Load Management Programs

Electric Rate Savings

The Electric Rate Savings (ERS) program is offered to any business customer that can reduce their electric loads by at least 50 kW during control periods initiated by the Company or the Midcontinent Independent System Operator (MISO). In return for reducing their loads, customers receive a monthly discount on their demand charges and can potentially save up to 50 percent on their demand charges over the entire year. ERS is promoted directly to customers through Xcel Energy's Account Management and Business Solutions Center teams.

Deviation from Goal or Budget

In the first half of 2020, the program experienced small gains of controllable load. As the year progressed and the impacts of the COVID-19 pandemic effected program participants, the Company saw a significant increase in participant contract renewals with increased predetermined demand levels resulting in a decrease of controllable load for the program. The program has yet to fully recover from the losses experienced due to the testing period that occurred from the summer 2014 through the winter of 2017. This testing, along with the real power validation testing requirement for MISO, which went into effect in 2019, continues to result in customer adjustments to controllable load commitment levels. The program finished the year under budget, with a decrease in program participation and controllable load due to the loss of one of the program's largest participants.

Changes in 2020

None.

Saver's Switch for Business®

Saver's Switch for Business® is a prescriptive load management program available to business electric customers with central air conditioning. Participating customers receive a monthly discount on their June through September bills. In exchange for the discounts, participants allow Xcel Energy to cycle their air conditioner on and off during control events, which typically occur on hot, humid summer days. The program is marketed via direct mail, customer care agents, account managers, and advertising.

AC Rewards for Business is a demand response product that uses smart communicating thermostats for reducing air conditioning 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.

Deviation from Goal or Budget

Saver's Switch for Business® fell short of its goals in 2020 due to a challenging recruiting environment for new participants. With fewer switches than anticipated installed in the field, the program costs were also below expectations. The Company anticipates increased volumes in 2021 with changes to advertising and stronger involvement from its Business Solutions Center and account managers in the recruiting process.

AC Rewards for Business fell short of its goals in 2020 due to the COVID-19 pandemic delaying direct installations due to safety precautions and necessary safety training. Despite the delay, participation was higher than anticipated. Customer interest and continued vendor partnerships have positioned the program to be on track to achieve program goals for 2021.

Changes in 2020
The AC Rewards for Business pilot became a program in 2020 tracked under Saver's Switch for Business.

Peak Partner Rewards
The Peak Partner Rewards (PPR) program is offered to any business customer that can reduce their electric load during control periods by at least 25 kW, June through September. With Peak Partner Rewards, customers receive credits on electric bills for agreeing to reduce electric usage during periods of peak energy demand, such as hot summer days. Customers receive additional bill credits when they reduce their electric usage by their agreed upon amount or more during control periods.

The program is primarily marketed to commercial customers by Xcel Energy account managers and Business Solutions Center representatives. To assist customers during the COVID-19 pandemic, a temporary waiver was granted in 2020 allowing customers who were enrolled in the Electric Rate Savings (ERS) program to terminate their existing ERS contract prior to the required notification period by enrolling in PPR.

Deviation from Goal or Budget
The launch of Peak Partner Rewards in March of 2020 coincided with the start of the COVID-19 pandemic response. Due to this launch timing, enrollments for 2020 fell below goal and program spend was below approved budget.

Despite lower than expected participation in 2020, there has been promising engagement from account managers and Business Solutions Center representatives with several C&I customers throughout 2020 who are currently assessing the benefits of the PPR program and their ability to participate. Because of this, we believe that we are on target to achieve the forecasted participation for 2021.

Changes in 2020
Peak Partner Rewards was a new program launched in March 2020.

Business Indirect Impact Programs

Business Education

The Business Education program creates awareness of energy conservation by providing business customers with information and resources to reduce their energy use. The program encourages customers to make Xcel Energy their first contact when considering equipment or process upgrades and engages customers to make changes that lower their energy use. The program focuses on removing the barriers to adoption of energy efficiency measures by educating customers and their employees on the impacts of their energy use and offering information on how to achieve long-term energy savings. The program is primarily marketed to small and mid-sized business customers through sponsorships and events, customer outreach, networking opportunities, advertising campaigns and email newsletters.

Deviation from Goal or Budget

In 2020, the company did not reach the electric and natural gas participation targets for this program. Spend was in line with achievement. Due to the COVID-19 pandemic, in-person events were cancelled starting in March, limiting the ability to connect and network with business customers. Community sponsorship partners provided outreach opportunities and digital education channels to drive awareness to business energy efficiency products. In a pivot from successful tactics of face-to-face engagements, the team explored ways to increase awareness and participation via virtual events and digital outreach.

Changes in 2020

None.

Small Business Lamp Recycling

The Small Business Lamp Recycling program encourages electric customers in Minnesota to recycle their spent fluorescent bulbs instead of discarding them, to ensure that hazardous materials such as mercury do not enter the environment. The program's main offerings include free compact fluorescent light bulb recycling at participating local hardware stores and partnering county waste facilities. In addition, the Company offers coupons to help reduce the recycling fees for fluorescent tubes and HID bulbs at participating hardware stores. The coupons are available at participating hardware stores and on the xcelenergy.com website.

The Small Business Lamp Recycling Program is primarily marketed through Xcel Energy's Home Lighting program promotions, participating hardware stores, and on the main Xcel Energy website. A search feature allows customers to search by zip code to find the nearest recycling locations.

Deviation from Goal or Budget

The program did not meet its participation or achievement goal in 2020. The budget was in line with the achievement. Participation dropped in 2020 for various reasons including the phasing out of CFL bulbs in businesses. Due to the COVID-19 pandemic, recycling drop-off locations had limited operation with increased safety protocols. Many stores were closed to in-person shopping for part of the year, not allowing customers to buy new LEDs, which affected recycling counts.

Changes in 2020

None.

Residential Segment

The Residential Segment provides cost-effective, direct and indirect impact energy efficiency and demand management programs that target customers' homes. Prescriptive rebates, in-home services and consumer education make up the portfolio across a variety of programs. They are designed to inform and influence customer knowledge and purchasing decisions related to energy use and conservation.

Summary of Achievements

Residential Segment	Electric Goal	Electric Actual	% of Electric Goal	Natural Gas Goal	Natural Gas Actual	% of Natural Gas Goal
Budget	$29,703,346	$32,196,172	108%	$8,383,050	$7,201,398	86%
Generator kW	51,843	62,100	120%	N/A	N/A	N/A
kWh/Mcf Saved	160,071,817	270,945,958	169%	310,621	364,913	117%
Participation	1,286,871	1,431,016	111%	608,321	585,285	96%

In 2020, the Residential Segment's electric portfolio exceeded its participation and filed energy savings goals. Electric spending was commensurate with achievement. Respectively, Home Lighting, Energy Feedback and Residential Heating System Rebate programs were the leading electric energy savings performers. The Home Lighting program demonstrated continued strong customer response to promotions and additional outreach. The Residential Cooling, Refrigerator Recycling, School Education Kits, and Efficient New Home Construction programs also contributed significant electric savings. Home Lighting, Residential Demand Response, and Residential Cooling brought in the most demand savings among the programs in this segment.

The Residential Segment's natural gas portfolio exceeded its participation and filed savings goals while spending was below filed budget. Although natural gas spending was under filed budget, natural gas savings were proportionally higher indicating individual projects in 2020 had strong natural gas savings. The majority of natural gas programs exceeded filed savings goals. Having surpassed their savings goals, the Energy Feedback and Energy Efficient Showerheads programs spent significantly less per dekatherm saved compared to the filed goals. Energy Efficient Showerheads, Energy Feedback, Efficient New Home Construction, Heating System Rebate, Insulation Rebate, School Education Kits and Water Heater Rebate programs all surpassed their filed natural gas savings goals. Respectively, Heating System Rebate, Efficient New Home Construction, Energy Efficient Showerhead and Energy Feedback programs were the lead contributors toward the segment's total natural gas achievements.

Residential Direct Impact Programs

Efficient New Home Construction

The Efficient New Home Construction program helps local builders construct energy efficient homes for residential customers by providing incentives based on the "percent better than baseline" savings achieved by the home. The program also provides annual trainings and consulting services for builders to help them learn and employ better building practices.

Deviation from Goal or Budget

In 2020, the program performed well, exceeding both the natural gas and electric customer participation goals, primarily due to a continued strong construction market, which as an essential industry was minimally affected by the COVID-19 pandemic. Electric and natural gas savings totals also exceeded filed goals, which is largely attributable to improving construction practices among program builders. Additionally, electric savings were high due to an increased saturation of high efficiency lighting. The program overspent its natural gas and electric budget but by proportionally less than achievement.

Changes in 2020

In 2020, the program invested in direct-to-consumer marketing to draw potential new home buyers to program builders. These efforts in digital marketing proved to have strong engagement, bringing many potential new home buyers to the program website shared with Center Point Energy.

Energy Efficient Showerheads

The Energy Efficient Showerheads program is designed to offer year-round natural gas and electric savings to Xcel Energy customers. Residential natural gas and combination gas and electric customers in Minnesota receive a direct mail or email offer for a 1.5 gallon per minute (GPM) showerhead, a 1.5 GPM kitchen aerator, and a 1.0 GPM bathroom aerator. Customers accept the offer by mailing in a business reply card, signing up via an online portal, or calling the vendor's toll-free number prior to the promotion's deadline. Following sign-up, customers are mailed a showerhead kit free of charge, which includes the showerhead, two aerators, thread seal tape and installation instructions.

Deviation from Goal or Budget

In 2020, the program exceeded its filed savings and participation goals. Program spending was under the filed budget. The program tried two distribution methods for the first time which contributed to this success. Showerheads and aerators were included in some of the "stay-at-home" kits sent to customers who requested them, which was a new offering in response to the COVID-19 pandemic. Additionally, showerheads were distributed along with LEDs at select food banks within the Company's natural gas service territory.

Changes in 2020

Showerheads and aerators were included in some of the "stay-at-home" kits sent to customers who requested them. Additionally, showerheads were distributed along with LEDs at select food banks within the Company's natural gas service territory.

Energy Feedback

The Energy Feedback program is a behavioral energy conservation program that provides home energy reporting, online portal and savings recommendations to customers. This is an opt-out program that uses a participant and control group to statistically calculate how much energy was saved by the participants.

To grow energy savings, the program is encouraging increased customer engagement in the My Energy portal. This would allow more customers to be exposed to low- and no-cost energy savings opportunities as well as recommendations for advanced energy savings measures.

Deviation from Goal or Budget

In 2020, the program achieved its electric and natural gas savings goals while being under budget. While energy usage patterns changed in 2020, the vendor did not find any significant impacts to program effectiveness and savings due to the COVID-19 pandemic and resulting stay-at-home policies.

Changes in 2020

The Company selected a new vendor who began delivering Home Energy Reports and Online Portal starting in 2020.

Heating System Rebate

The Heating System Rebate program offers prescriptive electric and natural gas rebates to customers that install new high-efficiency furnaces and boilers as well as Electronically Commutated Motors (ECM). The natural gas portion of the program is designed to encourage customers to choose high-efficiency heating equipment through a tiered rebate schedule, and the electric portion is designed to encourage customers to upgrade the fan motor of a forced-air furnace, or purchase a new furnace with an ECM.

The program is primarily marketed to homeowners via various forms of mass media messaging including TV, radio and digital advertising. It is also marketed through an extensive trade ally network that serves as in-home spokespeople for the program while selling new equipment. This network is supported by a dedicated Channel Manager who trains and informs trade on the program. The Heating System Rebate program is also cross-marketed with the Insulation Rebate and Water Heating Rebate programs.

Deviation from Goal or Budget

In 2020, the program dramatically exceeded its natural gas and electric savings goals. Spending was commensurate with the achieved energy savings. We believe the performance was driven by system bundle sales techniques utilized by trade partners. In addition, the COVID-19 pandemic may have led to homeowners taking on more HVAC related home improvement projects and accelerating HVAC sales.

Changes in 2020
None.

Home Energy Squad
Home Energy Squad is a direct install program for electric and natural gas customers searching for ways to improve the energy efficiency and comfort of their home as well as lower their utility bill. The program is a co-branded partnership with CenterPoint Energy and implemented by a contracted third party. The primary marketing tactics include mass media advertising, event marketing, bill onserts, and email marketing initiated by both utilities.

Deviation from Goal or Budget
In 2020, the program did not achieve its electric or natural gas savings targets. Electric and natural gas spending also were below filed budgets. The program was severely impacted by the pandemic and was forced to cease operations for several months due to Minnesota state-imposed restrictions on in-person interactions. In response to the COVID-19 pandemic the program 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 program to help customers better manage their energy use during difficult times; and they enabled the program vendor to keep its trained and specialized staff employed. Through these virtual interactions, Squad technicians were able to help customers identify opportunities to save energy in their home. Virtual visits will continue to be offered in the future so that the program can serve customers who might not be comfortable with an in-person interaction.

Changes in 2020
The Company filed a modification in May 2020 to update 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
The Home Lighting & Recycling product offers discounted prices, via upstream incentives to retailers and manufacturers, on ENERGY STAR LEDs. LEDs are an easy, low-cost way for customers to save energy and reduce their monthly electric bills. The Company is focused on increasing awareness and sales of LED bulbs to drive market transformation.

The Home Lighting program is widely promoted through a variety of marketing channels including radio, TV, social media, print publications, bill onserts and point-of purchase displays. In 2020, the Company continued to feature our discounted bulbs periodically on retailer end-caps, which increases visibility of the program. Typically, the Company promotes the product through bulb giveaways at local events in the community such as fairs, Earth Day celebrations, and sporting events including partnering with the Minnesota Twins and Minnesota Wild. However, due to the COVID-19 pandemic these in-person promotions could not be done. In-store retailer demos were also put on hold. With in-store demos field representatives work with consumers to provide education on bulb color, lumens and wattage equivalencies, helping customers find the right bulb for the right task and promoting ENERGY STAR products.

Deviation from Goal or Budget
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. Realizing that many customers were impacted financially by the pandemic, we partnered with local food banks and shelves throughout the year to giveaway four-packs of LEDs to help customers reduce their electricity bills.

As a result of our in person promotional tactics being cancelled, we increased our awareness by offering stay-at-home kits that included LEDs and low/no cost ways to save energy. 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, the ad provided the name and distance to the closest participating retailer that offered program 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 filed a modification in May 2020 to add offerings for LED Type A, 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.

Insulation Rebate
The Insulation Rebate program offers prescriptive electric and natural gas rebates to residential customers to improve their home's air-sealing and attic and wall insulation. Customers must have products installed by an insulation contractor that has Building Performance Institute certification, or a utility approved training course, in order to qualify for the rebate.

The program is marketed primarily to homeowners via various forms of mass media messaging including TV, radio and digital advertising. It is also marketed through an extensive trade ally network that serves as in-home spokespeople for the program while selling insulation products. This network is supported by a dedicated Channel Manager who trains and informs on the program. To increase awareness and maintain costs, the program leverages various electronic channels, cross-marketing with other Xcel Energy residential programs and social media outlets.

Deviation from Goal or Budget
The Insulation Rebate program exceeded its natural gas savings and electric kW target but did not meet its electric kWh savings target in 2020. The electric savings shortfall was partially because the

rate of rebates for customers with mechanical cooling was higher than expected. Also, the participation rate for customers with electric only cooling was lower than anticipated. Program spending was in line with achievement.

Changes in 2020
None.

Refrigerator Recycling
The Refrigerator Recycling program offers residential electric customers prescriptive rebates and free pick-up services to dispose of their operable, inefficient refrigerator and freezer units in an environmentally safe and compliant manner. In addition, air conditioners and dehumidifiers are picked up and recycled for free with no rebate. 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, digital and social media channels.

Deviation from Goal or Budget
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 to lower-than-expected per-unit savings. Customers recycled newer units than were forecasted. Product spending was under-budget primarily due to efficient use of the marketing budget and to remain cost-effective. 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
The Company raised the rebate from $35 to $50 to increase customer enrollment in the product.

Residential Cooling
The Residential Cooling program offers prescriptive rebates to electric customers in single-family homes that purchase new high efficiency cooling equipment and install this equipment using Quality Installation (QI) standards. QI specifications are based on the Air Conditioning Contractors of America (ACCA) Standard 5 which dictates proper sizing, airflow, duct sealing, and refrigeration charge.

The program gives flexibility to customers by offering incentives for air source or ground source heat pumps. Marketing is done through a variety of channels, including advertising, cross-promotions with other programs, bill onserts, and trade partners. As customers are required to use a participating contractor to ensure quality installation for most systems, customer awareness and participation rely heavily on our trade relationships.

Deviation from Goal or Budget
The program exceeded its filed savings and spending goals. Participation may have increased due to the COVID-19 pandemic, since customers were spending more time at home and were more aware of their comfort and energy bills in relation to their cooling equipment.

Changes in 2020
Contractors experienced difficulty in providing equipment in the AHRI directory due to high demand and supply issues related to the COVID-19 pandemic. Due to the lack of supply, the Company worked with customers to rebate similar equipment at the quality-installation level.

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

Deviation from Goal or Budget
This program greatly exceeded its filed targets for participation and for electric and natural gas savings in 2020. The program ended the year below its filed electric budget but slightly above its natural gas budget. A new partnership with CenterPoint Energy allowed the program to reach new customers who receive electric service from the Company and natural gas service from CenterPoint Energy. This expansion contributed to the program's electric savings achievement, as did strong installation rates of LED bulbs and water conservation measures.

Changes in 2020
A new partnership with CenterPoint Energy allowed the program to serve an additional 15,000 customers who receive electric service from the Company. While the COVID-19 pandemic presented many challenges both for participating teachers as well as students and families, the program 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. The Company filed a modification in May 2020 to update 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.

Water Heater Rebate
The Water Heater Rebate program offers prescriptive rebates to residential customers who purchase and install high-efficiency natural gas water heating equipment or electric heat pump water heaters. By providing these incentives, Xcel Energy helps participating customers reduce their natural gas or

electric usage and long-term operating costs. The program is primarily marketed through trade and retail partners, as well as through cross-promotions with the Residential Heating and Insulation Rebate programs.

Deviation from Goal or Budget
In 2020, the program exceeded its filed natural gas saving goals. The program underspent its filed natural gas budgets and fell short of its natural gas participation target. The proportion of customers purchasing tankless water heaters, which yield greater savings, has significantly increased in the past few years, which contributes higher savings for the program. The program fell slightly short of its filed electric savings goal and participation goal and underspent its filed electric budget. This was the first year the program included an electric component.

Changes in 2020
Rebates for electric heat pump water heaters were offered for the first time in 2020. Customers replacing an electric resistance water heater with an electric heat pump water heater received a $400-$500 rebate depending on whether the water heater included certain communication protocols which would enable participation in future demand management offerings. A total of 51 customers participated in this offering in its first year.

Whole Home Efficiency
Whole Home Efficiency is a comprehensive "whole home" retrofit program available to Xcel Energy residential combination natural gas and electric customers living in single-family homes or multi-unit complexes with no more than four units. This program is designed to offer higher prescriptive electric and natural gas rebates to customers who implement an insulation measure along with other efficiency options. Participants have one year to implement three required measures and have the option of receiving free direct install measures upon project completion. While rebates for mechanical devices in Whole Home Efficiency move in tandem with their prescriptive analogs, building envelope rebates have historically had more freedom to differentiate from the prescriptive insulation program.

Deviation from Goal or Budget
The program did not reach its participation goals in 2020 and consequently fell short of savings goals. Natural gas savings were proportionally higher than spend, indicating the Whole Home Efficiency projects that were completed were more cost-effective natural gas savings relative to measure level estimates. Electric spending was proportionately high relative to electric savings. Low participation is primarily attributed to lack of differentiation from the prescriptive Insulation Rebate program, causing insulation trades to guide customers toward the simpler and more immediate prescriptive program. COVID-19 also limited program participation, as on-site verification was suspended for several months.

Changes in 2020
None.

Residential Load Management Programs

Residential Demand Response

Xcel Energy offers two residential demand response products: Saver's Switch® and AC Rewards, the AC Rewards program also captures the Energy Efficiency component, Thermostat Optimization, simplifying the customer experience. All products target central air conditioners for reducing system load during times of peak demand. All offerings were primarily promoted through online and TV advertising, email, direct mail, and the Company's customer care organization.

Saver's Switch offers a seasonal bill discount to customers who agree to allow the Company to control remotely their central air conditioners during the summer months. Customers with qualifying electric water heaters can enroll this equipment as well. Electric water heaters can be controlled year-round, and customers receive incentives for their participation year-round. Due to the aging of previously installed switches, most of the program's achievements in 2020 were derived from the replacement of older hardware or hardware identified as no longer working.

AC Rewards also seeks to reduce AC load during demand peaks. Participants can receive up-front rebates on qualifying smart communicating thermostats and receive annual bill credits in exchange for allowing the Company to temporarily adjust the set point on the thermostat during control events.

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 natural gas heating or electric service customers who have central air conditioning.

Deviation from Goal or Budget

Saver's Switch exceeded its targets for the year by a substantial amount as the Company replaced a larger than projected number of outdated switches in the field. With the increased volume, Saver's Switch also exceeded its 2020 budget. The Company anticipates continuing the trend of robust volumes of switch upgrades.

The AC Rewards product had an increase in participation compared to prior years, but still did not achieve its savings target for 2020. The Company is continuing efforts to grow the AC Rewards program through new market segments. Due to resulting impacts of the COVID-19 pandemic, the AC Rewards Direct Install channel was on pause for most of 2020. In 2020, the Company continued marketing AC Rewards and working with additional device manufacturers to add eligible thermostats to the lineup.

Thermostat optimization did not achieve its savings targets; spend was in line with achievement. Thermostat optimization is the only component of Residential Demand Response to capture natural

gas savings. 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 be provide an attractive price point for customers and resulted in significant increased participation. Additionally, due to the online delivery channel remaining the most popular choice for customer participation, sales remained consistent with previous years. The Company is working to follow up with customers who purchased thermostats to take the next step and enroll in AC Rewards, the program working to further develop this customer path to help increase future participation.

Changes in 2020

The AC Rewards program added Emerson Smart Thermostat devices to the program offering in the second quarter of 2020.

Residential Indirect Impact Programs

Consumer Education

The Consumer Education program 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 of empowering customers to act by participating in programs to help them save energy and money.

Deviation from Goal or Budget

In 2020, the company did not meet the electric and gas participation targets for this program. Due to the COVID-19 pandemic, in-person events were cancelled starting in March and the team pivoted and began exploring ways to increase awareness and participation through virtual events and engaging digital tactics. In 2020 the program focused on creating new digital content and planning Xcel Energy's new event experience which will be launched in 2021 when in-person events are expected to resume. Despite the pandemic, innovative initiatives drove awareness of the Company's energy efficiency products.

Changes in 2020

None.

Home Energy Audit

The Home Energy Audit program offers substantially discounted energy auditing services to residential customers. This program is designed to improve energy savings in residential homes by influencing customer behavior through conservation education and encouraging identification and implementation of energy efficiency efforts. Considered a gateway program to the other Xcel Energy residential CIP programs, the Home Energy Audit program is cross promoted with other programs. This marketing strategy helps minimize promotional and advertising costs.

Deviation from Goal or Budget

The program fell short of its natural gas and electric participation goals and remained under budget. The COVID-19 pandemic contributed significantly to the reduction in participation, with participation dropping sharply in March. While participation rebounded partially later in 2020, levels were still lower than in previous years.

Changes in 2020

The Company offered virtual home energy audits as an innovation to provide this service to customers who may be hesitant to invite an auditor into their home during the COVID-19 pandemic. This service was offered to customers free of charge. Customers also had the option to later upgrade to a full audit or Home Energy Squad visit at a later time.

Residential Lamp Recycling

The Residential Lamp Recycling program encourages electric customers in Minnesota to recycle their spent fluorescent bulbs instead of discarding them, to ensure that hazardous materials such as mercury do not enter the environment. The program's main offerings include free compact fluorescent light bulb recycling at participating local hardware stores and partnering county waste facilities. In addition, the Company offers coupons to help reduce the recycling fees for fluorescent tubes and HID bulbs at participating hardware stores. The coupons are available at participating hardware stores and on the xcelenergy.com website.

The Residential Lamp Recycling Program is primarily marketed through Xcel Energy's Home Lighting program promotions, participating hardware stores, and on the main Xcel Energy website. An online search feature allows customers to search by zip code to find the nearest recycling locations.

Deviation from Goal or Budget

The program did not meet its participation or achievement goal in 2020. The budget was in line with the achievement. Participation dropped in 2020 for various reasons including the phasing out of CFL bulbs in homes. Due to the stay-at-home orders, recycling drop-off locations had limited operation with increased safety protocols. Many stores were closed to in-person shopping for part of the year, not allowing customers to buy new LEDs, which affected recycling counts.

Changes in 2020

None.

Low-Income Segment

The Low-Income Segment helps income-qualified customers to minimize the impact that utility bills have on their households. The Home Energy Savings (HESP) program offers an in-home walk-through and energy usage analysis to identify areas for energy savings and energy efficient upgrades for the home. Multi-Family Energy Savings (MESP) provides electric home energy efficiency measures in addition to educating tenants about energy conservation. Low Income Home Energy Squad (LIHES) performs a quick assessment of each participant's home prior to installing energy-saving measures during one visit.

Summary of Achievements

Low-Income Segment	Electric Goal	Electric Actual	% of Electric Goal	Natural Gas Goal	Natural Gas Actual	% of Natural Gas Goal
Budget	$2,490,344	$1,696,367	68%	$1,901,318	$1,228,380	65%
Generator kW	440	244	55%	N/A	N/A	N/A
kWh/Mcf Saved	3,419,810	1,521,977	45%	14,697	5,454	37%
Participation	5,804	2,860	49%	2,054	503	24%

The segment missed its minimum electric and fell slightly (3%) below minimum natural gas spend requirements while electric and natural gas participation and savings achievements were below target. HESP and MESP spent a high percent of their budgets to help build project pipeline and drive future participation. HESP's electric load reduction, electric and natural gas energy savings achievements exceeded their respective spends. Whenever possible this segment cross-promoted its programs to economize promotional spends while building awareness of the offerings. Additionally, outreach and marketing of the Low Income Home Energy Squad, and associated costs, were shared with CenterPoint Energy to reduce redundant costs.

Low-Income Segment participation and savings were significantly impacted by Company and third-party provider compliance with public health orders during the COVID-19 pandemic. Access to customer homes and apartment units was restricted for much of 2020 – especially in vulnerable communities such as long-term care facilities. Low-income program operations were either delayed or canceled to guard against exposure to the virus.

Across the three programs within this segment, a broad marketing mix is implemented including mass media advertising, bill inserts, email marketing, and sponsored events. In addition, the programs are supported through neighborhood community events, workshops and partnerships with local non-profit organizations.

With existing program enhancements and expansions as well as new program introductions, the Company will broaden its commitment to delivering energy efficiency services to our customers in traditionally underserved communities during the 2021-23 CIP Triennial Plan – especially those customers whose lives and livelihoods have been disproportionately affected by COVID-19 and civil

unrest – and the Company will further explore improvements with a robust, two-year evaluation of our Low-Income Customer Segment portfolio.

Home Energy Savings

The Home Energy Savings program (HESP) offers home energy assessments and education services to income-qualifying customers. The program is designed to provide customers with free energy-saving measures and information to help reduce their energy usage and ultimately make their energy bills more manageable. HESP is marketed through various channels that include the Company's partner vendors and communications channels. The program is also marketed through community events and collaboration, and support from Xcel Energy's call centers.

Deviation from Goal or Budget

Although the program exceeded its load reduction/kW goal, it ended the year under the natural gas and electric energy savings goals and actual spend was commensurately below filed budget. This can be attributed primarily to the impacts of the COVID-19 pandemic. Challenges encountered have been access restrictions or limited participation by customers served by HESP considered vulnerable with a higher impact risk from the virus exposure. As a result, many customers chose to delay or avoid assessments or services that would require entry into their homes. Lastly the supply of energy efficient appliances provided through the program was impacted and often unavailable or back-ordered – these widespread shortages were the result of various indirect impacts – although related to the COVID-19 pandemic.

Once we determined there would be an impact from the pandemic to the program, we worked with the Department and vendors to find ways of providing services and assessments virtually and with little or no contact. These included virtual assessments to determine what qualified energy efficient upgrades the customers needed and providing the appropriate LEDs identified through the assessment to the resident(s) to self-install. Lastly when appropriate, limited on-site assessments and audits were made available by following Center for Disease Control (CDC) guidelines for safe access.

Changes in 2020

No changes were made to the program except the addition of virtual assessments in response to the COVID-19 pandemic.

Low-Income Home Energy Squad

Low-Income Home Energy Squad is a direct install program for income-eligible customers who are searching for ways to improve the energy efficiency and comfort of their home while also lowering their utility bill. The program is a co-branded partnership with CenterPoint Energy and is administered by a contracted third party. While in the home, technicians work closely with customers to help them identify measures that will help optimize energy efficiency. Before, during and after installation of measures, the implementers work toward educating customers about each measure's efficiency benefits. The primary marketing tactics include email marketing, event marketing, bill onserts and cross-promotion with other Xcel Energy Low-Income programs.

Deviation from Goal or Budget
The program continued to struggle to reach participation targets. This target market has been a challenge to reach per the program implementer, and the COVID-19 pandemic served to exacerbate these difficulties. The program was forced to cease operations for several months due to state-imposed restrictions on in-person interactions. In response to the pandemic the program 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 program to help customers better manage their energy use during difficult times; and they enabled the program 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.

Despite offering a virtual audit option, the program was not able to deliver significant energy savings through virtual visits. Participation, electric and natural gas savings, and spend were all lower than in the 2019 program year and did not meet their targets.

Changes in 2020
The Company filed a modification in May 2020 to update 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.

Multi-Family Energy Savings
The Multi-Family Energy Savings program (MESP) offers free energy-saving education and services to qualifying multi-family buildings. MESP provides electric services to income-qualifying buildings and is designed to reach renters and support low-income housing through electric energy efficient upgrades in resident units. MESP is primarily marketed through our vendor partner and targeted to building owners or property managers, with additional support from Xcel Energy. In addition, income-qualified buildings participating in the Multi-Family Building Efficiency program are referred to MESP for the additional services available through this program. Promotional activities were paused in 2020 since access restrictions made participation in the program challenging.

Deviation from Goal or Budget
The program ended the year under filed goals and budget. This can be attributed primarily to the impacts of the COVID-19 pandemic. Challenges encountered have been access restrictions in the resident's units due to property specific COVID-19 safety protocol or in properties where many of the residents in the property are considered to have a higher impact risk from the virus exposure. As a result, many buildings chose to delay or avoid services until restriction are eased or lifted and the risk of exposure is minimized. In addition to the delay in participation, the supply of energy efficient appliances provided through the program was impacted and often unavailable or back-ordered – these widespread shortages were the result of various indirect impacts – although related to COVID-19.

As more information about virus safety protocol and exposure mitigation became available, the program vendor reached out to properties pending participation to determine the best method for delivering the program services. With this, the vendor performed appliance-only virtual assessments with the property owner/manager when LED opportunities were unavailable.

Changes in 2020
None.

Planning Segment

The CIP Planning Segment includes Advertising and Promotion, Application Development and Maintenance, CIP Training, and DSM Regulatory Affairs. These programs are all indirect impact activities meaning that while the activities enable programs that save energy, they are not directly attributed energy savings values. The table below provides goal and actual spending in this segment for 2020.

Summary of Achievements

Planning Segment	Electric Goal	Electric Actual	% of Electric Goal	Natural Gas Goal	Natural Gas Actual	% of Natural Gas Goal
Advertising and Promotion	$6,286,899	$3,544,821	56%	$1,564,532	$863,823	55%
Application Development and Maintenance	$1,242,743	$1,194,484	96%	$455,912	$217,092	48%
CIP Training	$148,974	$36,600	25%	$54,847	$14,921	27%
Regulatory Affairs	$473,159	$490,864	104%	$153,533	$122,316	80%
Total	$8,151,775	$5,266,769	65%	$2,228,824	$1,218,152	55%

Advertising and Promotion

The Advertising and Promotion budget provides the opportunity to create awareness and motivate customers to seek out energy conservation offerings at Xcel Energy.

In 2020, during the COVID-19 pandemic, business and residential advertising played an important part in building awareness and motivating customers to pursue energy efficiency opportunities. With more customers working from home, the residential program focus was expanded within the given budget. Strategies used to connect with business and residential customers included advertising through various mediums, promotion of programs, segment campaigns, and a variety of promotions and sponsorships designed to enhance customer and trade partner engagement. Digital and interactive components targeting high-impact venues early in the year played a large part in reaching the goal of educating customers. Community partnerships created outreach opportunities providing mutually beneficial, and longstanding relationships. These strategies enabled the Company to reach a myriad of customer audiences, build awareness, inform and influence consumers, and promote specific energy efficiency benefits.

Deviation from Goal or Budget

The budget was under spent due to cancellations of events as a result of the COVID-19 pandemic.

Changes in 2020

None.

Application, Development, and Maintenance

The Application, Development, and Maintenance (ADM) program provides funds for software purchases, enhancements and upgrades that support the Company's CIP portfolio. This includes in-house and external resources needed to configure and maintain the software. The ADM budget was created to allow for simplified expense control and tracking. As an indirect program in the Planning Segment, this program is an internal only budget and is not marketed to customers.

Deviation from Goal or Budget

In 2020, the Company under spent its ADM budget as a result of using internal labor to perform many longer-term planning initiatives. As well as reviewing the numbers of software licenses to ensure ADM dollars are spent appropriately. Investments in software purchases are also done with prudence that reduced the overall budget spend.

The ADM budget will continue to be an important part of future filings as the Company seeks to proactively improve the systems and software packages used to improve the customer's experience in the DSM portfolio.

Changes in 2020

None.

CIP Training

The CIP Training budget is used to advance the energy efficiency education of the Company's marketing, engineering, regulatory, operations and sales personnel. The budget provides funding for educational trainings, seminars and conferences focused on energy efficient electric and natural gas equipment, industry best practices, new advances in technology and changes in the energy efficiency industry. This budget helps ensure that the Company's staff are informed on the latest advances in demand side management and provide better service to our customers. As an indirect program in the Planning Segment, this program is an internal only budget and is not marketed to customers.

Deviation from Goal or Budget

In 2020, due to the COVID-19 pandemic the Company under-spent both the electric budget and the natural gas training budgets as many of the in-person training and development sessions were cancelled. In place of the in-person trainings web-based trainings were utilized and the web-based trainings are typically are less expensive than attending an in-person training.

The CIP Training budget will continue to be an important part of future filings as the Company seeks to continuously grow its expertise to enhance its CIP portfolio with new technologies and practices.

Changes in 2020

None.

Regulatory Affairs

Regulatory Affairs manages all DSM regulatory filings, directs and prepares cost-benefit analyses, provides results of energy conservation achievements, manages electric and natural gas potential studies, and analyzes and prepares cost recovery reports. The group also provides procedures for effectively addressing requirements for the DSM regulatory process. These functions are needed to ensure a cohesive and high-quality DSM portfolio that meets legal requirements as well as the expectations of Xcel Energy's customers, regulators and staff.

In addition, Regulatory Affairs supports the DSM component of resource planning, rate cases, and certificates of need, and provides strategic evaluation planning and internal policy guidance. These functions are needed to ensure the cost-effectiveness of DSM, the quality of DSM impact estimates, help generate ideas for future DSM projects, establish programmatic consistency and manage DSM-related marketing information.

Deviation from Goal or Budget

In 2020, Regulatory Affairs over spent on the electric budget due to an increased focus on electric efficiency programs and underspent on the natural gas budget.

Changes in 2020

None.

Research, Evaluations, & Pilots Segment

The Research, Evaluations, and Pilots Segment provides Market Research and Product Development services to Xcel Energy. This segment includes the pilots being managed within the Product Development program. The table below shows goal and actual spending in this segment for 2020.

Research, Evaluations, & Pilots Segment	Electric Goal	Electric Actual	% of Electric Goal	Gas Goal	Gas Actual	% of Gas Goal
Market Research	$953,478	$731,536	77%	$262,471	$169,692	65%
Product Development	$1,764,124	$1,569,347	89%	$216,187	$67,381	31%
Energy Star Retail Products Platform	$706,966	$893,684	126%	N/A	N/A	N/A
Energy Information Systems Pilot	$326,580	$426,069	130%	$117,575	$13,265	11%
Total	$3,751,148	$3,620,634	97%	$596,233	$250,338	42%

Market Research

DSM Market Research conducts surveys and studies to understand customer needs that relate to DSM conservation efforts. In 2020, the Company conducted the following general research projects:

- Contribute to purchase (of business and residential customer segmentation data via 3rd party data/segmentation firms;
- Contribute to larger project developing Xcel Energy-specific residential segmentation model;
- Support a Product Experience Survey that monitors customer satisfaction by surveying most participants after a rebate has been processed.
- Home use study;
- E Source Consultative Services and research; and,
- Residential Campaign Effectiveness Tracking research.

Market Research funds are also used to procure third-party services for comprehensive, process, and impact evaluations on individual programs. In 2020, the Company conducted research on the following programs:

- AC Rewards;
- Energy Efficient Showerheads; and
- Home Lighting Baseline Study.

In addition to the evaluations completed in 2020, the Company also commenced evaluation planning for the 2021-2022 Low Income Segment evaluation.

Deviation from Goal or Budget
In 2020, the Market Research program spending was under budget for electric and natural gas due to the lower number of evaluations relative to other years.

Changes in 2020
None.

Product Development
Product Development identifies, assesses, and develops new energy efficiency and demand response products and services for eventual inclusion as new CIP programs, products, and measures. This work enables the Company to identify and promote promising new energy-saving technologies for customers. The group also develops improvements to existing products.

In 2020, the Product Development group developed the following products, pilots or measures:

Business DSM
- Business Energy Assessments
- Small Commercial Building Controls
- Integrated fans and integrated fan systems

Residential DSM
- Heat Pump Water Heater Demand Response
- Smart thermostat optimization measure to the Residential Demand Response program

Deviation from Goal or Budget
In 2020, Product Development remained under its electric and natural gas budgets due to lower than anticipated costs for research, consulting services, and association dues.

Changes in 2020
None.

Energy Information Systems Pilot
The Energy Information Systems (EIS) pilot offers consulting resources to help large customers:
- Design and implement web-based systems to visualize and analyze real-time energy data across the customer's facility;
- Identify and implement energy-saving measures, including low-cost recommissioning measures, and low- or no-cost behavioral and operational measures;
- Measure pre- and post- implementation conditions to verify savings; and
- Repeat and refine data analysis for the continuous improvement of energy performance.

For new enrollees, the pilot invests heavily in incentives and support for the installation of analytical systems, and in the consultancy provided for the customer during a data-gathering period.

Deviation from Goal or Budget
In 2020, the pilot achieved its electric target although expenses exceeded the annual budget. Gas targets were not achieved, however, spend was in line with achievement. In preparation for the pilot's transition to a program in the 2021-2023 triennial filing, additional resources were spent on customer recruitment efforts in the latter half of 2020.

Changes in 2020
None.

ENERGY STAR® Retail Products Platform Pilot
The ENERGY STAR® Retail Products Platform Pilot program is intended to test a national, mid-stream incentive approach to driving transformation of the appliance and consumer electronics market. The pilot is part of an effort coordinated by the U.S. Environmental Protection Agency (EPA) to evaluate whether incentivizing retailers for efficient product sales can drive increased market penetration of ENERGY STAR® products. With EPA coordination, the pilot first launched in 2016 and included participating utilities and energy efficiency program implementers from California, the Pacific Northwest, New York, Vermont, Wisconsin, Hawaii and New Jersey.

Deviation from Goal or Budget
The program exceeded its participation and savings goals in 2020. This is attributed to the COVID-19 pandemic increasing demand for appliances as customers spent more time at home. Program spend also exceeded the expected budget but in proportion to the overachievement.

Changes in 2020
In 2020, the Company made the decision to exit support for this program going forward. This is based on challenges to cost effectiveness based on diminishing energy savings spread between product baselines and the ENERGY STAR criteria, eroding measure-level savings.

Assessments Segment

The Assessments Segment accounts for assessments from the DER to support state energy policy. This segment includes assessments authorized by Minnesota statute, as well as fees for DER and PUC review of our filings.

Summary of Achievements

Assessments Segment	Electric Goal	Electric Actual	% of Electric Goal	Natural Gas Goal	Natural Gas Actual	% of Natural Gas Goal
Budget	$1,974,981	$1,935,486	98%	$345,600	$292,740	85%

Deviation from Goal or Budget

Assessments from the DER and PUC were slightly below the filed electric budget and approximately 85% of the filed gas budget.

Changes in 2020

None.

Alternative Filings

Summary of Achievements

Alternative Filings	Electric Goal	Electric Actual	% of Electric Goal	Natural Gas Goal	Natural Gas Actual	% of Natural Gas Goal
One Stop	$12,964,780	$13,466,911	104%	N/A	N/A	N/A
EnerChange	$418,500	$409,972	98%	$46,500	$46,107	99%
Energy Smart	$402,750	$397,091	99%	$18,500	$18,662	101%
Trillion Btu	$174,600	$52,122	30%	$19,400	$2,567	13%
Total	**$13,960,630**	**$14,326,095**	**103%**	**$84,400**	**$67,337**	**80%**

EnerChange

EnerChange is an indirect impact program that provides non-profit organizations with facility evaluations, recommendations for conservation, reviews of available electric and natural gas utility rebates, customer assistance to drive implementation of measures, and assistance with implementation financing. EnerChange leverages referrals, networking, associations, organizations and social media to market the program.

Deviation from Goal or Budget

This Alternative-Filing program spent its electric and natural gas budget in 2020. More specific information about 2020 results can be found in EnerChange's 2020 Annual Report which is separately filed with the Department.

Changes in 2020

None.

Energy Smart

Energy Smart is an indirect impact energy efficiency assistance program developed by Minnesota Waste Wise, a non-profit affiliate of the Minnesota Chamber of Commerce. The mission of the program is to engage Minnesota businesses and direct them toward existing utility energy efficiency and load management programs.

The Energy Smart program offers a number of electric and natural gas services, such as on-site business consultations and distribution of CIP program information. The program is primarily marketed to the business community through direct contact with members of the Minnesota Chamber of Commerce and Waste Wise Contract participants, partnership with the local chambers and business groups, door-to-door outreach, direct mailings, inquiries via the Energy Smart website, and various social media channels.

Deviation from Goal or Budget
In 2020, the program slightly underspent its electric budget and very slightly overspent its gas budget. Variation from year to year is primarily due to slight variations in employee labor.

Changes in 2020
None.

One-Stop Efficiency Shop®

The One-Stop Efficiency Shop (One-Stop) is a full-service lighting and rooftop unit (RTU) rebate program designed to save energy in the hard-to-serve small business sector. One-Stop's technical experts offer unbiased recommendations tailored to meet program participants' specific financial needs, as well as the specific requirements of their space. The combination of program services brings education, financial resources, and minimal time commitment directly to the business owner.

Designed and implemented by the Center for Energy and Environment (CEE), One-Stop targets small businesses with a 400 kW demand or less. This sector requires a more focused approach because small businesses are difficult to serve with traditional rebate programs due to limitations on financial resources, time, and knowledge of energy efficient products.

One-Stop is structured to address these specific needs by offering qualified businesses:

- a free assessment with actionable cost savings recommendations;
- substantial incentives combined with the option of convenient and attractive financing;
- a simple, one-stop service that keeps customer time requirements to a minimum;
- access to quality contractors; and
- start-to-finish oversight of the entire retrofit project and completion of all program paperwork.

Deviation from Goal or Budget
In 2020, One-Stop exceeded its energy savings, demand savings, and participation goals. CEE worked closely with Xcel Energy to track the program metrics.

Changes in 2020
None.

Trillion BTU

Trillion BTU is an indirect program aimed at increasing participation in Xcel Energy's existing commercial and industrial energy efficiency programs. The program leverages funding awarded to the St. Paul Port Authority (SPPA) through resources from economic development agencies and municipalities in Xcel Energy's electric and gas service territories, to create a revolving loan fund and provide technical assistance to prospective participating businesses. The program targets customers looking to implement relatively large energy saving projects and is primarily delivered to customers by the SPPA.

Deviation from Goal or Budget
The Trillion BTU program remained under its electric and gas budgets as SPPA administrative costs were lower than projected.

Changes in 2020
None.

ELECTRIC CIP TOTAL — 2020 ELECTRIC GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$68,531,158	$68,531,158	$68,531,158	$68,531,158
T & D	N/A	$43,112,608	$43,112,608	$43,112,608	$43,112,608
Marginal Energy	N/A	$169,128,197	$169,128,197	$169,128,197	$169,128,197
Environmental Externality	N/A	N/A	N/A	N/A	$60,492,611
Subtotal	N/A	$280,771,963	$280,771,963	$280,771,963	$341,264,574
Participant Benefits					
Bill Reduction - Electric	$499,104,774	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$39,376,880	N/A	N/A	$39,376,880	$39,376,880
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$44,694,442	N/A	N/A	$39,690,985	$39,690,985
Subtotal	$583,176,097	N/A	N/A	$79,067,865	$79,067,865
Total Benefits	$583,176,097	$280,771,963	$280,771,963	$359,839,828	$420,332,439
Costs					
Utility Project Costs					
Customer Services	N/A	$2,650,395	$2,650,395	$2,650,395	$2,650,395
Project Administration	N/A	$31,572,421	$31,572,421	$31,572,421	$31,572,421
Advertising & Promotion	N/A	$10,706,664	$10,706,664	$10,706,664	$10,706,664
Measurement & Verification	N/A	$1,416,800	$1,416,800	$1,416,800	$1,416,800
Rebates	N/A	$39,376,880	$39,376,880	$39,376,880	$39,376,880
Other	N/A	$1,740,895	$1,740,895	$1,740,895	$1,740,895
Subtotal	N/A	$87,464,056	$87,464,056	$87,464,056	$87,464,056
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$499,104,774	N/A	N/A
Subtotal	N/A	N/A	$499,104,774	N/A	N/A
Participant Costs					
Incremental Capital Costs	$102,345,012	N/A	N/A	$102,345,012	$102,345,012
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$102,345,012	N/A	N/A	$102,345,012	$102,345,012
Total Costs	$102,345,012	$87,464,056	$586,568,830	$189,809,067	$189,809,067
Net Benefit (Cost)	$480,831,085	$193,307,907	($305,796,867)	$170,030,760	$230,523,371
Benefit/Cost Ratio	5.70	3.21	0.48	1.90	2.21

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	15.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	40.61%
Gross Load Factor at Customer	E	17.37%
Transmission Loss Factor (Energy)	F	8.1258%
Transmission Loss Factor (Demand)	G	8.3228%
Societal Net Benefit (Cost)	H	$883

Program Summary per Participant

Gross kW Saved at Customer	I	0.18 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.08 kW
Gross Annual kWh Saved at Customer	(B x E x I)	280 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	305 kWh

Program Summary All Participants

Total Participants	J	1,420,584
Total Budget	K	**$87,464,056**
Gross kW Saved at Customer	(J x I)	261,143 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**115,672 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	397,466,826 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**432,620,631 kWh**
Societal Net Benefits	(J x I x H)	**$230,523,371**

Utility Program Cost per kWh Lifetime	**$0.0130**
Utility Program Cost per kW at Gen	**$756**

ELECTRIC CIP TOTAL — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$88,306,123	$88,306,123	$88,306,123	$88,306,123
T & D	N/A	$55,556,629	$55,556,629	$55,556,629	$55,556,629
Marginal Energy	N/A	$232,044,954	$232,044,954	$232,044,954	$232,044,954
Environmental Externality	N/A	N/A	N/A	N/A	$82,795,614
Subtotal	N/A	$375,907,705	$375,907,705	$375,907,705	$458,703,319
Participant Benefits					
Bill Reduction - Electric	$713,790,461	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$48,209,063	N/A	N/A	$48,209,063	$48,209,063
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$28,972,369	N/A	N/A	$28,972,369	$28,972,369
Subtotal	$790,971,893	N/A	N/A	$77,181,432	$77,181,432
Total Benefits	$790,971,893	$375,907,705	$375,907,705	$453,089,137	$535,884,751
Costs					
Utility Project Costs					
Customer Services	N/A	$1,902,008	$1,902,008	$1,902,008	$1,902,008
Project Administration	N/A	$29,934,169	$29,934,169	$29,934,169	$29,934,169
Advertising & Promotion	N/A	$5,550,415	$5,550,415	$5,550,415	$5,550,415
Measurement & Verification	N/A	$1,607,047	$1,607,047	$1,607,047	$1,607,047
Rebates	N/A	$48,209,063	$48,209,063	$48,209,063	$48,209,063
Other	N/A	$997,298	$997,298	$997,298	$997,298
Subtotal	N/A	$88,199,999	$88,199,999	$88,199,999	$88,199,999
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$713,790,461	N/A	N/A
Subtotal	N/A	N/A	$713,790,461	N/A	N/A
Participant Costs					
Incremental Capital Costs	$136,600,644	N/A	N/A	$136,600,644	$136,600,644
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$136,600,644	N/A	N/A	$136,600,644	$136,600,644
Total Costs	$136,600,644	$88,199,999	$801,990,460	$224,800,642	$224,800,642
Net Benefit (Cost)	$654,371,249	$287,707,707	($426,082,754)	$228,288,495	$311,084,109
Benefit/Cost Ratio	5.79	4.26	0.47	2.02	2.38

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	15.7 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	34.25%
Gross Load Factor at Customer	E	15.09%
Transmission Loss Factor (Energy)	F	7.2861%
Transmission Loss Factor (Demand)	G	8.1374%
Societal Net Benefit (Cost)	H	$747

Program Summary per Participant		
Gross kW Saved at Customer	I	0.28 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.10 kW
Gross Annual kWh Saved at Customer	(B x E x I)	364 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	393 kWh

Program Summary All Participants		
Total Participants	J	1,511,067
Total Budget	K	**$88,199,999**
Gross kW Saved at Customer	(J x I)	416,325 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**155,205 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	550,411,444 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**593,666,306 kWh**
Societal Net Benefits	(J x I x H)	**$311,084,109**

Utility Program Cost per kWh Lifetime	**$0.0094**
Utility Program Cost per kW at Gen	**$568**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Total Gas CIP With Indirect Participants**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$11,132,983
Incentive Costs =	$7,082,481
16) Total Utility Project Costs =	$18,215,463
17) Direct Participant Costs ($/Part.) =	$45
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$2
Escalation Rate =	2.16%
20) Project Life (Years) =	10.7
21) Avg. Dth/Part. Saved =	1.25
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	632,877
24) Total Annual Dth Saved =	790,244
25) Incentive/Participant =	$11.19

Cost Summary	**2020**
Utility Cost per Participant =	$29
Cost per Participant per Dth =	$59.08
Lifetime Energy Reduction (Dth)	8,493,433
Societal Cost per Dth	$4.28

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($31,708,083)	0.57
Utility Cost Test	$23,056,573	2.27
Societal Test	$35,645,201	1.98
Participant Test	$58,950,006	3.06

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Total Gas CIP With Indirect Participants**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$6,096,636
Incentive Costs =	$8,131,262
16) Total Utility Project Costs =	$14,227,897
17) Direct Participant Costs ($/Part.) =	$56
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$2
Escalation Rate =	2.16%
20) Project Life (Years) =	14.9
21) Avg. Dth/Part. Saved =	1.45
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	598,402
24) Total Annual Dth Saved =	868,599
25) Incentive/Participant =	$13.59

Cost Summary	2020
Utility Cost per Participant =	$24
Cost per Participant per Dth =	$54.75
Lifetime Energy Reduction (Dth)	12,951,857
Societal Cost per Dth	$3.05

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($34,207,585)	0.64
Utility Cost Test	$45,966,786	4.23
Societal Test	$65,571,348	2.66
Participant Test	$83,908,361	3.51

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Total Gas CIP Direct Participants Only**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$7,198,979
Incentive Costs =	$7,051,506
16) Total Utility Project Costs =	$14,250,485
17) Direct Participant Costs ($/Part.) =	$125
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$6
Escalation Rate =	2.16%
20) Project Life (Years) =	10.8
21) Avg. Dth/Part. Saved =	3.44
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	228,152
24) Total Annual Dth Saved =	785,676
25) Incentive/Participant =	$30.91

Cost Summary	2020
Utility Cost per Participant =	$62
Cost per Participant per Dth =	$54.33
Lifetime Energy Reduction (Dth)	8,462,926
Societal Cost per Dth	$3.82

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($27,699,498)	0.60
Utility Cost Test	$26,855,469	2.89
Societal Test	$38,995,161	2.21
Participant Test	$57,270,070	3.00

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Total Gas CIP Direct Participants Only**

Input Data 2020

1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

Administrative & Operating Costs =	$3,990,428
Incentive Costs =	$8,131,262
16) Total Utility Project Costs =	$12,121,690
17) Direct Participant Costs ($/Part.) =	$105
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$5
Escalation Rate =	2.16%
20) Project Life (Years) =	14.9
21) Avg. Dth/Part. Saved =	2.74
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	317,530
24) Total Annual Dth Saved =	868,599
25) Incentive/Participant =	$25.61

Cost Summary	**2020**
Utility Cost per Participant =	$38
Cost per Participant per Dth =	$52.33
Lifetime Energy Reduction (Dth)	12,951,857
Societal Cost per Dth	$2.89

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($32,101,377)	0.65
Utility Cost Test	$48,072,994	4.97
Societal Test	$67,677,556	2.81
Participant Test	$83,908,361	3.51

ELECTRIC CIP CONSERVATION TOTAL — 2020 ELECTRIC GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$48,545,538	$48,545,538	$48,545,538	$48,545,538
T & D	N/A	$30,636,190	$30,636,190	$30,636,190	$30,636,190
Marginal Energy	N/A	$168,214,719	$168,214,719	$168,214,719	$168,214,719
Environmental Externality	N/A	N/A	N/A	N/A	$60,251,000
Subtotal	N/A	$247,396,447	$247,396,447	$247,396,447	$307,647,446
Participant Benefits					
Bill Reduction - Electric	$496,974,737	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$36,840,370	N/A	N/A	$36,840,370	$36,840,370
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$44,694,442	N/A	N/A	$39,690,985	$39,690,985
Subtotal	$578,509,550	N/A	N/A	$76,531,355	$76,531,355
Total Benefits	$578,509,550	$247,396,447	$247,396,447	$323,927,802	$384,178,802
Costs					
Utility Project Costs					
Customer Services	N/A	$2,620,395	$2,620,395	$2,620,395	$2,620,395
Project Administration	N/A	$16,029,302	$16,029,302	$16,029,302	$16,029,302
Advertising & Promotion	N/A	$3,736,228	$3,736,228	$3,736,228	$3,736,228
Measurement & Verification	N/A	$1,023,800	$1,023,800	$1,023,800	$1,023,800
Rebates	N/A	$36,840,370	$36,840,370	$36,840,370	$36,840,370
Other	N/A	$1,092,896	$1,092,896	$1,092,896	$1,092,896
Subtotal	N/A	$61,342,992	$61,342,992	$61,342,992	$61,342,992
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$496,974,737	N/A	N/A
Subtotal	N/A	N/A	$496,974,737	N/A	N/A
Participant Costs					
Incremental Capital Costs	$100,143,451	N/A	N/A	$100,143,451	$100,143,451
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$100,143,451	N/A	N/A	$100,143,451	$100,143,451
Total Costs	$100,143,451	$61,342,992	$558,317,729	$161,486,442	$161,486,442
Net Benefit (Cost)	$478,366,099	$186,053,455	($310,921,282)	$162,441,359	$222,692,359
Benefit/Cost Ratio	5.78	4.03	0.44	2.01	2.38

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	15.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	37.08%
Gross Load Factor at Customer	E	27.17%
Transmission Loss Factor (Energy)	F	8.1269%
Transmission Loss Factor (Demand)	G	8.5130%
Societal Net Benefit (Cost)	H	$1,341

Program Summary per Participant		
Gross kW Saved at Customer	I	0.31 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.12 kW
Gross Annual kWh Saved at Customer	(B x E x I)	728 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	792 kWh

Program Summary All Participants		
Total Participants	J	542,999
Total Budget	K	**$61,342,992**
Gross kW Saved at Customer	(J x I)	166,115 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**67,335 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	395,307,212 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**430,275,158 kWh**
Societal Net Benefits	(J x I x H)	**$222,692,359**

Utility Program Cost per kWh Lifetime	**$0.0092**
Utility Program Cost per kW at Gen	**$911**

ELECTRIC CIP CONSERVATION TOTAL — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$68,149,877	$68,149,877	$68,149,877	$68,149,877
T & D	N/A	$43,029,444	$43,029,444	$43,029,444	$43,029,444
Marginal Energy	N/A	$231,714,798	$231,714,798	$231,714,798	$231,714,798
Environmental Externality	N/A	N/A	N/A	N/A	$82,691,875
Subtotal	N/A	$342,894,119	$342,894,119	$342,894,119	$425,585,994
Participant Benefits					
Bill Reduction - Electric	$712,809,457	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$47,417,292	N/A	N/A	$47,417,292	$47,417,292
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$28,972,369	N/A	N/A	$28,972,369	$28,972,369
Subtotal	$789,199,117	N/A	N/A	$76,389,661	$76,389,661
Total Benefits	$789,199,117	$342,894,119	$342,894,119	$419,283,780	$501,975,654
Costs					
Utility Project Costs					
Customer Services	N/A	$1,902,008	$1,902,008	$1,902,008	$1,902,008
Project Administration	N/A	$13,984,000	$13,984,000	$13,984,000	$13,984,000
Advertising & Promotion	N/A	$1,923,508	$1,923,508	$1,923,508	$1,923,508
Measurement & Verification	N/A	$904,741	$904,741	$904,741	$904,741
Rebates	N/A	$47,417,292	$47,417,292	$47,417,292	$47,417,292
Other	N/A	$997,298	$997,298	$997,298	$997,298
Subtotal	N/A	$67,128,847	$67,128,847	$67,128,847	$67,128,847
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$712,809,457	N/A	N/A
Subtotal	N/A	N/A	$712,809,457	N/A	N/A
Participant Costs					
Incremental Capital Costs	$136,549,512	N/A	N/A	$136,549,512	$136,549,512
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$136,549,512	N/A	N/A	$136,549,512	$136,549,512
Total Costs	$136,549,512	$67,128,847	$779,938,303	$203,678,359	$203,678,359
Net Benefit (Cost)	$652,649,605	$275,765,272	($437,044,184)	$215,605,421	$298,297,295
Benefit/Cost Ratio	5.78	5.11	0.44	2.06	2.46

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	31.84%
Gross Load Factor at Customer	E	22.70%
Transmission Loss Factor (Energy)	F	7.2873%
Transmission Loss Factor (Demand)	G	8.3174%
Societal Net Benefit (Cost)	H	$1,080

Program Summary per Participant		
Gross kW Saved at Customer	I	0.32 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.11 kW
Gross Annual kWh Saved at Customer	(B x E x I)	628 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	678 kWh

Program Summary All Participants		
Total Participants	J	873,599
Total Budget	K	**$67,128,847**
Gross kW Saved at Customer	(J x I)	276,151 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**95,901 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	549,029,840 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**592,183,855 kWh**
Societal Net Benefits	(J x I x H)	**$298,297,295**
Utility Program Cost per kWh Lifetime		**$0.0072**
Utility Program Cost per kW at Gen		**$700**

ELECTRIC CIP LOAD MANAGEMENT TOTAL

2020 ELECTRIC GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$19,985,620	$19,985,620	$19,985,620	$19,985,620
T & D	N/A	$12,476,418	$12,476,418	$12,476,418	$12,476,418
Marginal Energy	N/A	$913,478	$913,478	$913,478	$913,478
Environmental Externality	N/A	N/A	N/A	N/A	$241,611
Subtotal	N/A	$33,375,516	$33,375,516	$33,375,516	$33,617,127
Participant Benefits					
Bill Reduction - Electric	$2,130,037	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$2,536,510	N/A	N/A	$2,536,510	$2,536,510
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$4,666,547	N/A	N/A	$2,536,510	$2,536,510
Total Benefits	$4,666,547	$33,375,516	$33,375,516	$35,912,026	$36,153,637
Costs					
Utility Project Costs					
Customer Services	N/A	$30,000	$30,000	$30,000	$30,000
Project Administration	N/A	$9,258,261	$9,258,261	$9,258,261	$9,258,261
Advertising & Promotion	N/A	$752,508	$752,508	$752,508	$752,508
Measurement & Verification	N/A	$393,000	$393,000	$393,000	$393,000
Rebates	N/A	$2,536,510	$2,536,510	$2,536,510	$2,536,510
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$12,970,279	$12,970,279	$12,970,279	$12,970,279
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,130,037	N/A	N/A
Subtotal	N/A	N/A	$2,130,037	N/A	N/A
Participant Costs					
Incremental Capital Costs	$2,201,561	N/A	N/A	$2,201,561	$2,201,561
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$2,201,561	N/A	N/A	$2,201,561	$2,201,561
Total Costs	$2,201,561	$12,970,279	$15,100,316	$15,171,840	$15,171,840
Net Benefit (Cost)	$2,464,986	$20,405,238	$18,275,200	$20,740,187	$20,981,798
Benefit/Cost Ratio	2.12	2.57	2.21	2.37	2.38

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	9.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	46.80%
Gross Load Factor at Customer	E	0.26%
Transmission Loss Factor (Energy)	F	7.9241%
Transmission Loss Factor (Demand)	G	7.9884%
Societal Net Benefit (Cost)	H	$221

Program Summary per Participant		
Gross kW Saved at Customer	I	2.30 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.17 kW
Gross Annual kWh Saved at Customer	(B x E x I)	52 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	57 kWh

Program Summary All Participants		
Total Participants	J	41,230
Total Budget	K	**$12,970,279**
Gross kW Saved at Customer	(J x I)	95,027 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**48,337 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,159,614 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,345,472 kWh**
Societal Net Benefits	(J x I x H)	**$20,981,798**

Utility Program Cost per kWh Lifetime	**$0.5924**
Utility Program Cost per kW at Gen	**$268**

ELECTRIC CIP LOAD MANAGEMENT TOTAL — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$20,156,246	$20,156,246	$20,156,246	$20,156,246
T & D	N/A	$12,527,185	$12,527,185	$12,527,185	$12,527,185
Marginal Energy	N/A	$330,155	$330,155	$330,155	$330,155
Environmental Externality	N/A	N/A	N/A	N/A	$103,739
Subtotal	N/A	$33,013,586	$33,013,586	$33,013,586	$33,117,326
Participant Benefits					
Bill Reduction - Electric	$981,004	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$778,971	N/A	N/A	$778,971	$778,971
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$1,759,975	N/A	N/A	$778,971	$778,971
Total Benefits	$1,759,975	$33,013,586	$33,013,586	$33,792,557	$33,896,297
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$10,101,821	$10,101,821	$10,101,821	$10,101,821
Advertising & Promotion	N/A	$680,275	$680,275	$680,275	$680,275
Measurement & Verification	N/A	$240,500	$240,500	$240,500	$240,500
Rebates	N/A	$778,971	$778,971	$778,971	$778,971
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$11,801,566	$11,801,566	$11,801,566	$11,801,566
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$981,004	N/A	N/A
Subtotal	N/A	N/A	$981,004	N/A	N/A
Participant Costs					
Incremental Capital Costs	$51,131	N/A	N/A	$51,131	$51,131
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$51,131	N/A	N/A	$51,131	$51,131
Total Costs	$51,131	$11,801,566	$12,782,571	$11,852,698	$11,852,698
Net Benefit (Cost)	$1,708,844	$21,212,020	$20,231,016	$21,939,860	$22,043,599
Benefit/Cost Ratio	34.42	2.80	2.58	2.85	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	5.8 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	39.02%
Gross Load Factor at Customer	E	0.11%
Transmission Loss Factor (Energy)	F	6.8027%
Transmission Loss Factor (Demand)	G	7.7807%
Societal Net Benefit (Cost)	H	$157

Program Summary per Participant		
Gross kW Saved at Customer	I	4.51 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.91 kW
Gross Annual kWh Saved at Customer	(B x E x I)	44 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	48 kWh

Program Summary All Participants		
Total Participants	J	31,099
Total Budget	K	**$11,801,566**
Gross kW Saved at Customer	(J x I)	140,174 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**59,304 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,381,604 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,482,451 kWh**
Societal Net Benefits	(J x I x H)	**$22,043,599**
Utility Program Cost per kWh Lifetime		**$1.3812**
Utility Program Cost per kW at Gen		**$199**

BUSINESS SEGMENT TOTAL — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$34,677,494	$34,677,494	$34,677,494	$34,677,494
T & D	N/A	$21,843,155	$21,843,155	$21,843,155	$21,843,155
Marginal Energy	N/A	$106,426,511	$106,426,511	$106,426,511	$106,426,511
Environmental Externality	N/A	N/A	N/A	N/A	$38,910,151
Subtotal	N/A	$162,947,160	$162,947,160	$162,947,160	$201,857,311
Participant Benefits					
Bill Reduction - Electric	$272,858,973	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$25,340,112	N/A	N/A	$25,340,112	$25,340,112
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$39,646,670	N/A	N/A	$40,602,971	$40,602,971
Subtotal	$337,845,755	N/A	N/A	$65,943,084	$65,943,084
Total Benefits	$337,845,755	$162,947,160	$162,947,160	$228,890,244	$267,800,395
Costs					
Utility Project Costs					
Customer Services	N/A	$1,745,900	$1,745,900	$1,745,900	$1,745,900
Project Administration	N/A	$13,178,907	$13,178,907	$13,178,907	$13,178,907
Advertising & Promotion	N/A	$1,180,219	$1,180,219	$1,180,219	$1,180,219
Measurement & Verification	N/A	$849,468	$849,468	$849,468	$849,468
Rebates	N/A	$25,340,112	$25,340,112	$25,340,112	$25,340,112
Other	N/A	$1,072,836	$1,072,836	$1,072,836	$1,072,836
Subtotal	N/A	$43,367,442	$43,367,442	$43,367,442	$43,367,442
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$272,858,973	N/A	N/A
Subtotal	N/A	N/A	$272,858,973	N/A	N/A
Participant Costs					
Incremental Capital Costs	$82,124,149	N/A	N/A	$82,124,149	$82,124,149
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$82,124,149	N/A	N/A	$82,124,149	$82,124,149
Total Costs	$82,124,149	$43,367,442	$316,226,415	$125,491,591	$125,491,591
Net Benefit (Cost)	$255,721,606	$119,579,718	($153,279,254)	$103,398,654	$142,308,805
Benefit/Cost Ratio	4.11	3.76	0.52	1.82	2.13

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	60.38%
Gross Load Factor at Customer	E	29.07%
Transmission Loss Factor (Energy)	F	7.9675%
Transmission Loss Factor (Demand)	G	7.4802%
Societal Net Benefit (Cost)	H	$1,503

Program Summary per Participant

Gross kW Saved at Customer	I	1.06 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.69 kW
Gross Annual kWh Saved at Customer	(B x E x I)	2,689 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	2,921 kWh

Program Summary All Participants

Total Participants	J	89,707
Total Budget	K	**$43,367,442**
Gross kW Saved at Customer	(J x I)	94,714 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**61,810 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	241,195,779 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**262,076,797 kWh**
Societal Net Benefits	(J x I x H)	**$142,308,805**
Utility Program Cost per kWh Lifetime		**$0.0101**
Utility Program Cost per kW at Gen		**$702**

BUSINESS SEGMENT TOTAL — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$51,880,729	$51,880,729	$51,880,729	$51,880,729
T & D	N/A	$32,614,780	$32,614,780	$32,614,780	$32,614,780
Marginal Energy	N/A	$128,294,811	$128,294,811	$128,294,811	$128,294,811
Environmental Externality	N/A	N/A	N/A	N/A	$46,261,771
Subtotal	N/A	$212,790,319	$212,790,319	$212,790,319	$259,052,091
Participant Benefits					
Bill Reduction - Electric	$327,188,161	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$30,010,264	N/A	N/A	$30,010,264	$30,010,264
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$29,795,862	N/A	N/A	$29,795,862	$29,795,862
Subtotal	$386,994,287	N/A	N/A	$59,806,126	$59,806,126
Total Benefits	$386,994,287	$212,790,319	$212,790,319	$272,596,445	$318,858,217
Costs					
Utility Project Costs					
Customer Services	N/A	$1,410,472	$1,410,472	$1,410,472	$1,410,472
Project Administration	N/A	$11,936,295	$11,936,295	$11,936,295	$11,936,295
Advertising & Promotion	N/A	$457,505	$457,505	$457,505	$457,505
Measurement & Verification	N/A	$650,687	$650,687	$650,687	$650,687
Rebates	N/A	$30,010,264	$30,010,264	$30,010,264	$30,010,264
Other	N/A	$954,833	$954,833	$954,833	$954,833
Subtotal	N/A	$45,420,055	$45,420,055	$45,420,055	$45,420,055
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$327,188,161	N/A	N/A
Subtotal	N/A	N/A	$327,188,161	N/A	N/A
Participant Costs					
Incremental Capital Costs	$110,419,513	N/A	N/A	$110,419,513	$110,419,513
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$110,419,513	N/A	N/A	$110,419,513	$110,419,513
Total Costs	$110,419,513	$45,420,055	$372,608,217	$155,839,569	$155,839,569
Net Benefit (Cost)	$276,574,774	$167,370,264	($159,817,897)	$116,756,877	$163,018,648
Benefit/Cost Ratio	3.50	4.68	0.57	1.75	2.05

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	16.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	58.22%
Gross Load Factor at Customer	E	22.80%
Transmission Loss Factor (Energy)	F	6.5899%
Transmission Loss Factor (Demand)	G	6.9975%
Societal Net Benefit (Cost)	H	$1,118

Program Summary per Participant

Gross kW Saved at Customer	I	4.86 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	3.04 kW
Gross Annual kWh Saved at Customer	(B x E x I)	9,706 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	10,391 kWh

Program Summary All Participants

Total Participants	J	29,989
Total Budget	K	**$45,420,055**
Gross kW Saved at Customer	(J x I)	145,764 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**91,254 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	291,079,979 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**311,615,206 kWh**
Societal Net Benefits	(J x I x H)	**$163,018,648**
Utility Program Cost per kWh Lifetime		**$0.0088**
Utility Program Cost per kW at Gen		**$498**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Business Segment with Indirect Participants**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$2,698,158
Incentive Costs =	$2,442,262
16) Total Utility Project Costs =	$5,140,420
17) Direct Participant Costs ($/Part.) =	$651
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$29
Escalation Rate =	2.16%
20) Project Life (Years) =	8.4
21) Avg. Dth/Part. Saved =	20.47
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	22,489
24) Total Annual Dth Saved =	460,359
25) Incentive/Participant =	$108.60

Cost Summary	2020
Utility Cost per Participant =	$229
Cost per Participant per Dth =	$42.95
Lifetime Energy Reduction (Dth)	3,881,942
Societal Cost per Dth	$3.66

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($10,270,517)	0.65
Utility Cost Test	$14,089,116	3.71
Societal Test	$17,763,632	2.25
Participant Test	$17,116,854	2.16

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Business Segment with Indirect Participants**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$1,716,836
Incentive Costs =	$2,612,793
16) Total Utility Project Costs =	$4,329,629
17) Direct Participant Costs ($/Part.) =	$1,145
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$44
Escalation Rate =	2.16%
20) Project Life (Years) =	15.1
21) Avg. Dth/Part. Saved =	39.50
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	12,613
24) Total Annual Dth Saved =	498,233
25) Incentive/Participant =	$207.14

Cost Summary	2020
Utility Cost per Participant =	$343
Cost per Participant per Dth =	$37.68
Lifetime Energy Reduction (Dth)	7,504,865
Societal Cost per Dth	$2.16

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($14,453,881)	0.71
Utility Cost Test	$30,265,956	7.99
Societal Test	$41,768,706	3.58
Participant Test	$38,334,585	3.64

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Business Segment Direct Participants Only**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$2,660,746
Incentive Costs =	$2,442,262
16) Total Utility Project Costs =	$5,103,008
17) Direct Participant Costs ($/Part.) =	$4,193
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$189
Escalation Rate =	2.16%
20) Project Life (Years) =	8.4
21) Avg. Dth/Part. Saved =	131.95
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	3,489
24) Total Annual Dth Saved =	460,359
25) Incentive/Participant =	$700.00

Cost Summary	2020
Utility Cost per Participant =	$1,463
Cost per Participant per Dth =	$42.86
Lifetime Energy Reduction (Dth)	3,881,942
Societal Cost per Dth	$3.65

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($10,233,105)	0.65
Utility Cost Test	$14,126,528	3.73
Societal Test	$17,801,044	2.26
Participant Test	$17,116,854	2.16

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Business Segment Direct Participants Only**

Input Data 2020

1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

Administrative & Operating Costs =	$1,676,017
Incentive Costs =	$2,612,793
16) Total Utility Project Costs =	$4,288,810
17) Direct Participant Costs ($/Part.) =	$11,901
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$455
Escalation Rate =	2.16%
20) Project Life (Years) =	15.1
21) Avg. Dth/Part. Saved =	410.59
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	1,213
24) Total Annual Dth Saved =	498,233
25) Incentive/Participant =	$2,153.19

Cost Summary	**2020**
Utility Cost per Participant =	$3,534
Cost per Participant per Dth =	$37.59
Lifetime Energy Reduction (Dth)	7,504,865
Societal Cost per Dth	$2.15

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($14,413,062)	0.71
Utility Cost Test	$30,306,775	8.07
Societal Test	$41,809,525	3.59
Participant Test	$38,334,585	3.64

BUSINESS SEGMENT ENERGY EFFICIENCY TOTAL — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$28,734,338	$28,734,338	$28,734,338	$28,734,338
T & D	N/A	$18,148,397	$18,148,397	$18,148,397	$18,148,397
Marginal Energy	N/A	$106,281,235	$106,281,235	$106,281,235	$106,281,235
Environmental Externality	N/A	N/A	N/A	N/A	$38,858,704
Subtotal	N/A	$153,163,969	$153,163,969	$153,163,969	$192,022,673
Participant Benefits					
Bill Reduction - Electric	$272,474,496	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$24,607,002	N/A	N/A	$24,607,002	$24,607,002
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$39,646,670	N/A	N/A	$40,602,971	$40,602,971
Subtotal	$336,728,168	N/A	N/A	$65,209,974	$65,209,974
Total Benefits	$336,728,168	$153,163,969	$153,163,969	$218,373,943	$257,232,647
Costs					
Utility Project Costs					
Customer Services	N/A	$1,715,900	$1,715,900	$1,715,900	$1,715,900
Project Administration	N/A	$9,923,139	$9,923,139	$9,923,139	$9,923,139
Advertising & Promotion	N/A	$714,539	$714,539	$714,539	$714,539
Measurement & Verification	N/A	$656,468	$656,468	$656,468	$656,468
Rebates	N/A	$24,607,002	$24,607,002	$24,607,002	$24,607,002
Other	N/A	$1,072,836	$1,072,836	$1,072,836	$1,072,836
Subtotal	N/A	$38,689,884	$38,689,884	$38,689,884	$38,689,884
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$272,474,496	N/A	N/A
Subtotal	N/A	N/A	$272,474,496	N/A	N/A
Participant Costs					
Incremental Capital Costs	$81,817,307	N/A	N/A	$81,817,307	$81,817,307
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$81,817,307	N/A	N/A	$81,817,307	$81,817,307
Total Costs	$81,817,307	$38,689,884	$311,164,380	$120,507,191	$120,507,191
Net Benefit (Cost)	$254,910,860	$114,474,085	($158,000,410)	$97,866,752	$136,725,455
Benefit/Cost Ratio	4.12	3.96	0.49	1.81	2.13

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	65.29%
Gross Load Factor at Customer	E	53.43%
Transmission Loss Factor (Energy)	F	7.9708%
Transmission Loss Factor (Demand)	G	7.8810%
Societal Net Benefit (Cost)	H	$2,660

Program Summary per Participant

Gross kW Saved at Customer	I	3.63 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	2.58 kW
Gross Annual kWh Saved at Customer	(B x E x I)	17,014 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	18,488 kWh

Program Summary All Participants

Total Participants	J	14,142
Total Budget	K	**$38,689,884**
Gross kW Saved at Customer	(J x I)	51,404 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**36,431 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	240,616,635 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**261,456,728 kWh**
Societal Net Benefits	(J x I x H)	**$136,725,455**
Utility Program Cost per kWh Lifetime		**$0.0090**
Utility Program Cost per kW at Gen		**$1,062**

BUSINESS SEGMENT ENERGY EFFICIENCY TOTAL — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$39,942,794	$39,942,794	$39,942,794	$39,942,794
T & D	N/A	$25,240,326	$25,240,326	$25,240,326	$25,240,326
Marginal Energy	N/A	$128,038,432	$128,038,432	$128,038,432	$128,038,432
Environmental Externality	N/A	N/A	N/A	N/A	$46,178,252
Subtotal	N/A	$193,221,552	$193,221,552	$193,221,552	$239,399,804
Participant Benefits					
Bill Reduction - Electric	$326,404,596	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$30,002,714	N/A	N/A	$30,002,714	$30,002,714
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$29,795,862	N/A	N/A	$29,795,862	$29,795,862
Subtotal	$386,203,172	N/A	N/A	$59,798,576	$59,798,576
Total Benefits	$386,203,172	$193,221,552	$193,221,552	$253,020,128	$299,198,380
Costs					
Utility Project Costs					
Customer Services	N/A	$1,410,472	$1,410,472	$1,410,472	$1,410,472
Project Administration	N/A	$9,994,950	$9,994,950	$9,994,950	$9,994,950
Advertising & Promotion	N/A	$239,194	$239,194	$239,194	$239,194
Measurement & Verification	N/A	$596,437	$596,437	$596,437	$596,437
Rebates	N/A	$30,002,714	$30,002,714	$30,002,714	$30,002,714
Other	N/A	$954,833	$954,833	$954,833	$954,833
Subtotal	N/A	$43,198,600	$43,198,600	$43,198,600	$43,198,600
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$326,404,596	N/A	N/A
Subtotal	N/A	N/A	$326,404,596	N/A	N/A
Participant Costs					
Incremental Capital Costs	$110,419,513	N/A	N/A	$110,419,513	$110,419,513
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$110,419,513	N/A	N/A	$110,419,513	$110,419,513
Total Costs	$110,419,513	$43,198,600	$369,603,195	$153,618,113	$153,618,113
Net Benefit (Cost)	$275,783,658	$150,022,952	($176,381,644)	$99,402,015	$145,580,267
Benefit/Cost Ratio	3.50	4.47	0.52	1.65	1.95

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	16.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	71.88%
Gross Load Factor at Customer	E	50.35%
Transmission Loss Factor (Energy)	F	6.5899%
Transmission Loss Factor (Demand)	G	6.9944%
Societal Net Benefit (Cost)	H	$2,215

Program Summary per Participant		
Gross kW Saved at Customer	I	10.13 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	7.83 kW
Gross Annual kWh Saved at Customer	(B x E x I)	44,685 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	47,837 kWh

Program Summary All Participants		
Total Participants	J	6,487
Total Budget	K	**$43,198,600**
Gross kW Saved at Customer	(J x I)	65,715 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**50,790 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	289,851,309 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**310,299,714 kWh**
Societal Net Benefits	(J x I x H)	**$145,580,267**
Utility Program Cost per kWh Lifetime		**$0.0084**
Utility Program Cost per kW at Gen		**$851**

BUSINESS NEW CONSTRUCTION — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$3,936,829	$3,936,829	$3,936,829	$3,936,829
T & D	N/A	$2,497,783	$2,497,783	$2,497,783	$2,497,783
Marginal Energy	N/A	$11,164,541	$11,164,541	$11,164,541	$11,164,541
Environmental Externality	N/A	N/A	N/A	N/A	$3,947,648
Subtotal	N/A	$17,599,154	$17,599,154	$17,599,154	$21,546,801
Participant Benefits					
Bill Reduction - Electric	$28,805,593	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$2,722,945	N/A	N/A	$2,722,945	$2,722,945
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$31,528,538	N/A	N/A	$2,722,945	$2,722,945
Total Benefits	$31,528,538	$17,599,154	$17,599,154	$20,322,099	$24,269,746
Costs					
Utility Project Costs					
Customer Services	N/A	$750,000	$750,000	$750,000	$750,000
Project Administration	N/A	$568,979	$568,979	$568,979	$568,979
Advertising & Promotion	N/A	$94,000	$94,000	$94,000	$94,000
Measurement & Verification	N/A	$286,000	$286,000	$286,000	$286,000
Rebates	N/A	$2,722,945	$2,722,945	$2,722,945	$2,722,945
Other	N/A	$250,000	$250,000	$250,000	$250,000
Subtotal	N/A	$4,671,924	$4,671,924	$4,671,924	$4,671,924
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$28,805,593	N/A	N/A
Subtotal	N/A	N/A	$28,805,593	N/A	N/A
Participant Costs					
Incremental Capital Costs	$8,489,292	N/A	N/A	$8,489,292	$8,489,292
Incremental O&M Costs	$56,198	N/A	N/A	$56,198	$56,198
Subtotal	$8,545,490	N/A	N/A	$8,545,490	$8,545,490
Total Costs	$8,545,490	$4,671,924	$33,477,517	$13,217,414	$13,217,414
Net Benefit (Cost)	$22,983,048	$12,927,230	($15,878,364)	$7,104,684	$11,052,332
Benefit/Cost Ratio	3.69	3.77	0.53	1.54	1.84

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	72.94%
Gross Load Factor at Customer	E	44.57%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$2,009

Program Summary per Participant		
Gross kW Saved at Customer	I	45.10 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	35.37 kW
Gross Annual kWh Saved at Customer	(B x E x I)	176,094 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	188,537 kWh

Program Summary All Participants		
Total Participants	J	122
Total Budget	K	**$4,671,924**
Gross kW Saved at Customer	(J x I)	5,502 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**4,316 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	21,483,430 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**23,001,531 kWh**
Societal Net Benefits	(J x I x H)	**$11,052,332**
Utility Program Cost per kWh Lifetime		**$0.0102**
Utility Program Cost per kW at Gen		**$1,083**

BUSINESS NEW CONSTRUCTION — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$9,894,082	$9,894,082	$9,894,082	$9,894,082
T & D	N/A	$6,277,456	$6,277,456	$6,277,456	$6,277,456
Marginal Energy	N/A	$26,144,723	$26,144,723	$26,144,723	$26,144,723
Environmental Externality	N/A	N/A	N/A	N/A	$9,244,460
Subtotal	N/A	$42,316,261	$42,316,261	$42,316,261	$51,560,720
Participant Benefits					
Bill Reduction - Electric	$67,455,906	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$7,012,634	N/A	N/A	$7,012,634	$7,012,634
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$74,468,541	N/A	N/A	$7,012,634	$7,012,634
Total Benefits	$74,468,541	$42,316,261	$42,316,261	$49,328,895	$58,573,355
Costs					
Utility Project Costs					
Customer Services	N/A	$1,402,450	$1,402,450	$1,402,450	$1,402,450
Project Administration	N/A	$654,025	$654,025	$654,025	$654,025
Advertising & Promotion	N/A	$11,250	$11,250	$11,250	$11,250
Measurement & Verification	N/A	$530,042	$530,042	$530,042	$530,042
Rebates	N/A	$7,012,634	$7,012,634	$7,012,634	$7,012,634
Other	N/A	$675,807	$675,807	$675,807	$675,807
Subtotal	N/A	$10,286,209	$10,286,209	$10,286,209	$10,286,209
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$67,455,906	N/A	N/A
Subtotal	N/A	N/A	$67,455,906	N/A	N/A
Participant Costs					
Incremental Capital Costs	$23,596,081	N/A	N/A	$23,596,081	$23,596,081
Incremental O&M Costs	$559,121	N/A	N/A	$559,121	$559,121
Subtotal	$24,155,202	N/A	N/A	$24,155,202	$24,155,202
Total Costs	$24,155,202	$10,286,209	$77,742,115	$34,441,411	$34,441,411
Net Benefit (Cost)	$50,313,339	$32,030,052	($35,425,854)	$14,887,484	$24,131,944
Benefit/Cost Ratio	3.08	4.11	0.54	1.43	1.70

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	77.41%
Gross Load Factor at Customer	E	44.08%
Transmission Loss Factor (Energy)	F	6.5417%
Transmission Loss Factor (Demand)	G	6.9716%
Societal Net Benefit (Cost)	H	$1,852

Program Summary per Participant

Gross kW Saved at Customer	I	50.70 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	42.19 kW
Gross Annual kWh Saved at Customer	(B x E x I)	195,755 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	209,457 kWh

Program Summary All Participants

Total Participants	J	257
Total Budget	K	**$10,286,209**
Gross kW Saved at Customer	(J x I)	13,030 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**10,843 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	50,309,126 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**53,830,566 kWh**
Societal Net Benefits	(J x I x H)	**$24,131,944**
Utility Program Cost per kWh Lifetime		**$0.0096**
Utility Program Cost per kW at Gen		**$949**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Business New Construction**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$239,064
Incentive Costs =	$145,441
16) Total Utility Project Costs =	$384,505
17) Direct Participant Costs ($/Part.) =	$38,363
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	20.0
21) Avg. Dth/Part. Saved =	934.41
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	25
24) Total Annual Dth Saved =	23,360
25) Incentive/Participant =	$5,817.66

Cost Summary	2020
Utility Cost per Participant =	$15,380
Cost per Participant per Dth =	$57.52
Lifetime Energy Reduction (Dth)	467,207
Societal Cost per Dth	$2.56

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($933,539)	0.69
Utility Cost Test	$1,706,597	5.44
Societal Test	$2,192,362	2.83
Participant Test	$1,826,503	2.90

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Business New Construction**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$377,818
Incentive Costs =	$449,482
16) Total Utility Project Costs =	$827,300
17) Direct Participant Costs ($/Part.) =	$104,798
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$2,397
Escalation Rate =	2.16%
20) Project Life (Years) =	20.0
21) Avg. Dth/Part. Saved =	1,478.04
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	53
24) Total Annual Dth Saved =	78,336
25) Incentive/Participant =	$8,480.79

Cost Summary	2020
Utility Cost per Participant =	$15,609
Cost per Participant per Dth =	$81.46
Lifetime Energy Reduction (Dth)	1,566,720
Societal Cost per Dth	$3.79

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($2,668,416)	0.72
Utility Cost Test	$6,184,946	8.48
Societal Test	$6,837,401	2.15
Participant Test	$5,148,451	1.93

COMMERCIAL EFFICIENCY — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$3,090,603	$3,090,603	$3,090,603	$3,090,603
T & D	N/A	$1,950,577	$1,950,577	$1,950,577	$1,950,577
Marginal Energy	N/A	$12,467,913	$12,467,913	$12,467,913	$12,467,913
Environmental Externality	N/A	N/A	N/A	N/A	$4,348,802
Subtotal	N/A	$17,509,094	$17,509,094	$17,509,094	$21,857,896
Participant Benefits					
Bill Reduction - Electric	$30,933,295	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$2,892,511	N/A	N/A	$2,892,511	$2,892,511
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,019,970	N/A	N/A	$1,019,970	$1,019,970
Subtotal	$34,845,777	N/A	N/A	$3,912,481	$3,912,481
Total Benefits	$34,845,777	$17,509,094	$17,509,094	$21,421,575	$25,770,378
Costs					
Utility Project Costs					
Customer Services	N/A	$75,000	$75,000	$75,000	$75,000
Project Administration	N/A	$679,221	$679,221	$679,221	$679,221
Advertising & Promotion	N/A	$25,000	$25,000	$25,000	$25,000
Measurement & Verification	N/A	$30,000	$30,000	$30,000	$30,000
Rebates	N/A	$2,892,511	$2,892,511	$2,892,511	$2,892,511
Other	N/A	$7,500	$7,500	$7,500	$7,500
Subtotal	N/A	$3,709,232	$3,709,232	$3,709,232	$3,709,232
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$30,933,295	N/A	N/A
Subtotal	N/A	N/A	$30,933,295	N/A	N/A
Participant Costs					
Incremental Capital Costs	$10,369,388	N/A	N/A	$10,369,388	$10,369,388
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$10,369,388	N/A	N/A	$10,369,388	$10,369,388
Total Costs	$10,369,388	$3,709,232	$34,642,527	$14,078,620	$14,078,620
Net Benefit (Cost)	$24,476,389	$13,799,862	($17,133,434)	$7,342,955	$11,691,758
Benefit/Cost Ratio	3.36	4.72	0.51	1.52	1.83

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	17.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	80.06%
Gross Load Factor at Customer	E	67.65%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$2,647

Program Summary per Participant		
Gross kW Saved at Customer	I	24.27 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	20.89 kW
Gross Annual kWh Saved at Customer	(B x E x I)	143,842 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	154,007 kWh

Program Summary All Participants		
Total Participants	J	182
Total Budget	K	**$3,709,232**
Gross kW Saved at Customer	(J x I)	4,417 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**3,803 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	26,179,272 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**28,029,199 kWh**
Societal Net Benefits	(J x I x H)	**$11,691,758**

Utility Program Cost per kWh Lifetime	**$0.0076**
Utility Program Cost per kW at Gen	**$975**

COMMERCIAL EFFICIENCY — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$3,654,466	$3,654,466	$3,654,466	$3,654,466
T & D	N/A	$2,306,550	$2,306,550	$2,306,550	$2,306,550
Marginal Energy	N/A	$13,492,129	$13,492,129	$13,492,129	$13,492,129
Environmental Externality	N/A	N/A	N/A	N/A	$4,707,069
Subtotal	N/A	$19,453,145	$19,453,145	$19,453,145	$24,160,214
Participant Benefits					
Bill Reduction - Electric	$33,502,194	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$2,394,133	N/A	N/A	$2,394,133	$2,394,133
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,229,092	N/A	N/A	$1,229,092	$1,229,092
Subtotal	$37,125,419	N/A	N/A	$3,623,225	$3,623,225
Total Benefits	$37,125,419	$19,453,145	$19,453,145	$23,076,370	$27,783,439
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$925,403	$925,403	$925,403	$925,403
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$1,596	$1,596	$1,596	$1,596
Rebates	N/A	$2,394,133	$2,394,133	$2,394,133	$2,394,133
Other	N/A	$11,179	$11,179	$11,179	$11,179
Subtotal	N/A	$3,332,311	$3,332,311	$3,332,311	$3,332,311
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$33,502,194	N/A	N/A
Subtotal	N/A	N/A	$33,502,194	N/A	N/A
Participant Costs					
Incremental Capital Costs	$8,063,738	N/A	N/A	$8,063,738	$8,063,738
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$8,063,738	N/A	N/A	$8,063,738	$8,063,738
Total Costs	$8,063,738	$3,332,311	$36,834,505	$11,396,049	$11,396,049
Net Benefit (Cost)	$29,061,682	$16,120,834	($17,381,360)	$11,680,322	$16,387,391
Benefit/Cost Ratio	4.60	5.84	0.53	2.02	2.44

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	17.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	72.55%
Gross Load Factor at Customer	E	56.09%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$2,856

Program Summary per Participant		
Gross kW Saved at Customer	I	22.59 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	17.62 kW
Gross Annual kWh Saved at Customer	(B x E x I)	110,989 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	118,832 kWh

Program Summary All Participants		
Total Participants	J	254
Total Budget	K	**$3,332,311**
Gross kW Saved at Customer	(J x I)	5,738 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**4,476 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	28,191,207 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**30,183,305 kWh**
Societal Net Benefits	(J x I x H)	**$16,387,391**

Utility Program Cost per kWh Lifetime	**$0.0063**
Utility Program Cost per kW at Gen	**$744**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Commercial Efficiency**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$282,179
Incentive Costs =	$230,703
16) Total Utility Project Costs =	$512,882
17) Direct Participant Costs ($/Part.) =	$33,219
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$5,288
Escalation Rate =	2.16%
20) Project Life (Years) =	14.9
21) Avg. Dth/Part. Saved =	895.35
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	46
24) Total Annual Dth Saved =	41,186
25) Incentive/Participant =	$5,015.29

Cost Summary	2020
Utility Cost per Participant =	$11,150
Cost per Participant per Dth =	$49.55
Lifetime Energy Reduction (Dth)	612,933
Societal Cost per Dth	$2.95

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($1,288,048)	0.70
Utility Cost Test	$2,439,488	5.76
Societal Test	$4,807,226	3.66
Participant Test	$4,748,318	4.11

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Commercial Efficiency**

Input Data	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$96,520
Incentive Costs =	$105,169
16) Total Utility Project Costs =	$201,689
17) Direct Participant Costs ($/Part.) =	$33,012
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$112
Escalation Rate =	2.16%
20) Project Life (Years) =	15.0
21) Avg. Dth/Part. Saved =	1,450.45
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	29
24) Total Annual Dth Saved =	42,063
25) Incentive/Participant =	$3,626.52

Cost Summary	**2020**
Utility Cost per Participant =	$6,955
Cost per Participant per Dth =	$27.55
Lifetime Energy Reduction (Dth)	630,947
Societal Cost per Dth	$1.67

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($999,526)	0.75
Utility Cost Test	$2,837,031	15.07
Societal Test	$3,403,092	4.23
Participant Test	$3,015,440	4.15

COMMERCIAL REFRIGERATION EFFICIENCY — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$143,434	$143,434	$143,434	$143,434
T & D	N/A	$90,050	$90,050	$90,050	$90,050
Marginal Energy	N/A	$725,953	$725,953	$725,953	$725,953
Environmental Externality	N/A	N/A	N/A	N/A	$254,447
Subtotal	N/A	$959,437	$959,437	$959,437	$1,213,885
Participant Benefits					
Bill Reduction - Electric	$1,608,836	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$141,165	N/A	N/A	$141,165	$141,165
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$135,074	N/A	N/A	$7,045	$7,045
Subtotal	$1,885,075	N/A	N/A	$148,210	$148,210
Total Benefits	$1,885,075	$959,437	$959,437	$1,107,647	$1,362,094
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$209,780	$209,780	$209,780	$209,780
Advertising & Promotion	N/A	$9,969	$9,969	$9,969	$9,969
Measurement & Verification	N/A	$1,821	$1,821	$1,821	$1,821
Rebates	N/A	$141,165	$141,165	$141,165	$141,165
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$362,735	$362,735	$362,735	$362,735
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,608,836	N/A	N/A
Subtotal	N/A	N/A	$1,608,836	N/A	N/A
Participant Costs					
Incremental Capital Costs	$505,497	N/A	N/A	$505,497	$505,497
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$505,497	N/A	N/A	$505,497	$505,497
Total Costs	$505,497	$362,735	$1,971,571	$868,232	$868,232
Net Benefit (Cost)	$1,379,578	$596,702	($1,012,134)	$239,415	$493,862
Benefit/Cost Ratio	3.73	2.65	0.49	1.28	1.57

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	16.59%
Gross Load Factor at Customer	E	17.36%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$371

Program Summary per Participant		
Gross kW Saved at Customer	I	3.88 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.69 kW
Gross Annual kWh Saved at Customer	(B x E x I)	5,897 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	6,314 kWh

Program Summary All Participants		
Total Participants	J	343
Total Budget	K	**$362,735**
Gross kW Saved at Customer	(J x I)	1,330 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**237 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,022,621 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,165,547 kWh**
Societal Net Benefits	(J x I x H)	**$493,862**

Utility Program Cost per kWh Lifetime	**$0.0141**
Utility Program Cost per kW at Gen	**$1,529**

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 ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$197,953	$197,953	$197,953	$197,953
T & D	N/A	$124,409	$124,409	$124,409	$124,409
Marginal Energy	N/A	$949,369	$949,369	$949,369	$949,369
Environmental Externality	N/A	N/A	N/A	N/A	$336,288
Subtotal	N/A	$1,271,731	$1,271,731	$1,271,731	$1,608,019
Participant Benefits					
Bill Reduction - Electric	$2,003,396	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$209,612	N/A	N/A	$209,612	$209,612
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$2,213,008	N/A	N/A	$209,612	$209,612
Total Benefits	$2,213,008	$1,271,731	$1,271,731	$1,481,343	$1,817,631
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$320,999	$320,999	$320,999	$320,999
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$209,612	$209,612	$209,612	$209,612
Other	N/A	$17,172	$17,172	$17,172	$17,172
Subtotal	N/A	$547,783	$547,783	$547,783	$547,783
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,003,396	N/A	N/A
Subtotal	N/A	N/A	$2,003,396	N/A	N/A
Participant Costs					
Incremental Capital Costs	$849,628	N/A	N/A	$849,628	$849,628
Incremental O&M Costs	$15,392	N/A	N/A	$15,392	$15,392
Subtotal	$865,020	N/A	N/A	$865,020	$865,020
Total Costs	$865,020	$547,783	$2,551,180	$1,412,803	$1,412,803
Net Benefit (Cost)	$1,347,989	$723,948	($1,279,449)	$68,540	$404,828
Benefit/Cost Ratio	2.56	2.32	0.50	1.05	1.29

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	12.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	64.49%
Gross Load Factor at Customer	E	67.48%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$992

Program Summary per Participant		
Gross kW Saved at Customer	I	1.02 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.71 kW
Gross Annual kWh Saved at Customer	(B x E x I)	6,046 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	6,474 kWh

Program Summary All Participants		
Total Participants	J	399
Total Budget	K	**$547,783**
Gross kW Saved at Customer	(J x I)	408 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**283 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,412,477 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,582,951 kWh**
Societal Net Benefits	(J x I x H)	**$404,828**
Utility Program Cost per kWh Lifetime		**$0.0171**
Utility Program Cost per kW at Gen		**$1,936**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Commercial Refrigeration Efficiency**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$21,810
Incentive Costs =	$9,812
16) Total Utility Project Costs =	$31,621
17) Direct Participant Costs ($/Part.) =	$619
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$49
Escalation Rate =	2.16%
20) Project Life (Years) =	11.5
21) Avg. Dth/Part. Saved =	28.87
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	51
24) Total Annual Dth Saved =	1,472
25) Incentive/Participant =	$192.38

Cost Summary	**2020**
Utility Cost per Participant =	$620
Cost per Participant per Dth =	$42.92
Lifetime Energy Reduction (Dth)	16,941
Societal Cost per Dth	$3.15

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($54,174)	0.61
Utility Cost Test	$54,275	2.72
Societal Test	$81,072	2.52
Participant Test	$105,000	4.33

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Commercial Refrigeration Efficiency**

Input Data 2020

1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

Administrative & Operating Costs =	$1,062
Incentive Costs =	$1,563
16) Total Utility Project Costs =	$2,625
17) Direct Participant Costs ($/Part.) =	$230
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$1
Escalation Rate =	2.16%
20) Project Life (Years) =	19.6
21) Avg. Dth/Part. Saved =	5.69
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	48
24) Total Annual Dth Saved =	273
25) Incentive/Participant =	$32.55

Cost Summary	**2020**
Utility Cost per Participant =	$55
Cost per Participant per Dth =	$50.06
Lifetime Energy Reduction (Dth)	5,344
Societal Cost per Dth	$2.26

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($8,918)	0.73
Utility Cost Test	$21,344	9.13
Societal Test	$26,867	3.22
Participant Test	$21,005	2.90

COOLING EFFICIENCY — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$2,120,921	$2,120,921	$2,120,921	$2,120,921
T & D	N/A	$1,343,665	$1,343,665	$1,343,665	$1,343,665
Marginal Energy	N/A	$3,005,825	$3,005,825	$3,005,825	$3,005,825
Environmental Externality	N/A	N/A	N/A	N/A	$1,129,803
Subtotal	N/A	$6,470,411	$6,470,411	$6,470,411	$7,600,214
Participant Benefits					
Bill Reduction - Electric	$8,233,170	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,984,596	N/A	N/A	$1,984,596	$1,984,596
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$38,737	N/A	N/A	$38,737	$38,737
Subtotal	$10,256,503	N/A	N/A	$2,023,333	$2,023,333
Total Benefits	$10,256,503	$6,470,411	$6,470,411	$8,493,744	$9,623,547
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$457,668	$457,668	$457,668	$457,668
Advertising & Promotion	N/A	$63,260	$63,260	$63,260	$63,260
Measurement & Verification	N/A	$18,000	$18,000	$18,000	$18,000
Rebates	N/A	$1,984,596	$1,984,596	$1,984,596	$1,984,596
Other	N/A	$197,000	$197,000	$197,000	$197,000
Subtotal	N/A	$2,720,524	$2,720,524	$2,720,524	$2,720,524
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$8,233,170	N/A	N/A
Subtotal	N/A	N/A	$8,233,170	N/A	N/A
Participant Costs					
Incremental Capital Costs	$4,814,671	N/A	N/A	$4,814,671	$4,814,671
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$4,814,671	N/A	N/A	$4,814,671	$4,814,671
Total Costs	$4,814,671	$2,720,524	$10,953,694	$7,535,195	$7,535,195
Net Benefit (Cost)	$5,441,831	$3,749,887	($4,483,283)	$958,549	$2,088,352
Benefit/Cost Ratio	2.13	2.38	0.59	1.13	1.28

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

Input Summary and Totals

Program "Inputs" per Customer kW		
Lifetime (Weighted on Generator kWh)	A	18.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	77.60%
Gross Load Factor at Customer	E	25.81%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$722

Program Summary per Participant		
Gross kW Saved at Customer	I	1.49 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.24 kW
Gross Annual kWh Saved at Customer	(B x E x I)	3,370 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	3,609 kWh

Program Summary All Participants		
Total Participants	J	1,941
Total Budget	K	**$2,720,524**
Gross kW Saved at Customer	(J x I)	2,893 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**2,414 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	6,541,873 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**7,004,146 kWh**
Societal Net Benefits	(J x I x H)	**$2,088,352**
Utility Program Cost per kWh Lifetime		**$0.0214**
Utility Program Cost per kW at Gen		**$1,127**

COOLING EFFICIENCY — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$2,406,392	$2,406,392	$2,406,392	$2,406,392
T & D	N/A	$1,521,860	$1,521,860	$1,521,860	$1,521,860
Marginal Energy	N/A	$1,671,910	$1,671,910	$1,671,910	$1,671,910
Environmental Externality	N/A	N/A	N/A	N/A	$626,430
Subtotal	N/A	$5,600,163	$5,600,163	$5,600,163	$6,226,593
Participant Benefits					
Bill Reduction - Electric	$4,526,036	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,435,653	N/A	N/A	$1,435,653	$1,435,653
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$5,961,690	N/A	N/A	$1,435,653	$1,435,653
Total Benefits	$5,961,690	$5,600,163	$5,600,163	$7,035,817	$7,662,247
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$308,799	$308,799	$308,799	$308,799
Advertising & Promotion	N/A	$4,830	$4,830	$4,830	$4,830
Measurement & Verification	N/A	$8,943	$8,943	$8,943	$8,943
Rebates	N/A	$1,435,653	$1,435,653	$1,435,653	$1,435,653
Other	N/A	$88,332	$88,332	$88,332	$88,332
Subtotal	N/A	$1,846,557	$1,846,557	$1,846,557	$1,846,557
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$4,526,036	N/A	N/A
Subtotal	N/A	N/A	$4,526,036	N/A	N/A
Participant Costs					
Incremental Capital Costs	$3,436,766	N/A	N/A	$3,436,766	$3,436,766
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$3,436,766	N/A	N/A	$3,436,766	$3,436,766
Total Costs	$3,436,766	$1,846,557	$6,372,594	$5,283,324	$5,283,324
Net Benefit (Cost)	$2,524,924	$3,753,606	($772,431)	$1,752,493	$2,378,923
Benefit/Cost Ratio	1.73	3.03	0.88	1.33	1.45

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	17.8 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	82.81%
Gross Load Factor at Customer	E	13.03%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$742

Program Summary per Participant		
Gross kW Saved at Customer	I	6.39 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	5.69 kW
Gross Annual kWh Saved at Customer	(B x E x I)	7,292 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	7,808 kWh

Program Summary All Participants		
Total Participants	J	502
Total Budget	K	**$1,846,557**
Gross kW Saved at Customer	(J x I)	3,207 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**2,855 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	3,660,741 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**3,919,423 kWh**
Societal Net Benefits	(J x I x H)	**$2,378,923**

Utility Program Cost per kWh Lifetime	**$0.0265**
Utility Program Cost per kW at Gen	**$647**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Cooling Efficiency**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$15,000
Incentive Costs =	$33,579
16) Total Utility Project Costs =	$48,579
17) Direct Participant Costs ($/Part.) =	$38,413
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	15.0
21) Avg. Dth/Part. Saved =	1,989.31
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	3
24) Total Annual Dth Saved =	5,968
25) Incentive/Participant =	$11,192.86

Cost Summary	2020
Utility Cost per Participant =	$16,193
Cost per Participant per Dth =	$27.45
Lifetime Energy Reduction (Dth)	89,519
Societal Cost per Dth	$1.45

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($161,776)	0.73
Utility Cost Test	$382,556	8.87
Societal Test	$497,710	4.82
Participant Test	$462,673	5.01

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Cooling Efficiency**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$8,278
Incentive Costs =	$9,008
16) Total Utility Project Costs =	$17,286
17) Direct Participant Costs ($/Part.) =	$31,046
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	15.0
21) Avg. Dth/Part. Saved =	1,689.70
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	1
24) Total Annual Dth Saved =	1,690
25) Incentive/Participant =	$9,008.00

Cost Summary	**2020**
Utility Cost per Participant =	$17,286
Cost per Participant per Dth =	$28.60
Lifetime Energy Reduction (Dth)	25,346
Societal Cost per Dth	$1.55

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($49,336)	0.71
Utility Cost Test	$104,781	7.06
Societal Test	$138,467	4.52
Participant Test	$132,078	5.25

CUSTOM EFFICIENCY — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$665,180	$665,180	$665,180	$665,180
T & D	N/A	$420,577	$420,577	$420,577	$420,577
Marginal Energy	N/A	$2,255,194	$2,255,194	$2,255,194	$2,255,194
Environmental Externality	N/A	N/A	N/A	N/A	$790,382
Subtotal	N/A	$3,340,951	$3,340,951	$3,340,951	$4,131,333
Participant Benefits					
Bill Reduction - Electric	$5,672,045	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$341,571	N/A	N/A	$341,571	$341,571
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$6,923,777	N/A	N/A	$6,923,777	$6,923,777
Subtotal	$12,937,393	N/A	N/A	$7,265,348	$7,265,348
Total Benefits	$12,937,393	$3,340,951	$3,340,951	$10,606,300	$11,396,681
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$988,068	$988,068	$988,068	$988,068
Advertising & Promotion	N/A	$36,796	$36,796	$36,796	$36,796
Measurement & Verification	N/A	$16,491	$16,491	$16,491	$16,491
Rebates	N/A	$341,571	$341,571	$341,571	$341,571
Other	N/A	$2,464	$2,464	$2,464	$2,464
Subtotal	N/A	$1,385,389	$1,385,389	$1,385,389	$1,385,389
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,672,045	N/A	N/A
Subtotal	N/A	N/A	$5,672,045	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,386,935	N/A	N/A	$1,386,935	$1,386,935
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,386,935	N/A	N/A	$1,386,935	$1,386,935
Total Costs	$1,386,935	$1,385,389	$7,057,434	$2,772,324	$2,772,324
Net Benefit (Cost)	$11,550,458	$1,955,562	($3,716,483)	$7,833,975	$8,624,357
Benefit/Cost Ratio	9.33	2.41	0.47	3.83	4.11

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	18.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	73.96%
Gross Load Factor at Customer	E	53.00%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$8,760

Program Summary per Participant		
Gross kW Saved at Customer	I	18.93 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	15.06 kW
Gross Annual kWh Saved at Customer	(B x E x I)	87,904 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	94,116 kWh

Program Summary All Participants		
Total Participants	J	52
Total Budget	K	**$1,385,389**
Gross kW Saved at Customer	(J x I)	984 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**783 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	4,571,010 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**4,894,015 kWh**
Societal Net Benefits	(J x I x H)	**$8,624,357**

Utility Program Cost per kWh Lifetime	**$0.0152**
Utility Program Cost per kW at Gen	**$1,770**

CUSTOM EFFICIENCY — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,335,907	$1,335,907	$1,335,907	$1,335,907
T & D	N/A	$843,862	$843,862	$843,862	$843,862
Marginal Energy	N/A	$3,912,319	$3,912,319	$3,912,319	$3,912,319
Environmental Externality	N/A	N/A	N/A	N/A	$1,408,697
Subtotal	N/A	$6,092,088	$6,092,088	$6,092,088	$7,500,785
Participant Benefits					
Bill Reduction - Electric	$10,176,068	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$544,002	N/A	N/A	$544,002	$544,002
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$3,444,843	N/A	N/A	$3,444,843	$3,444,843
Subtotal	$14,164,913	N/A	N/A	$3,988,845	$3,988,845
Total Benefits	$14,164,913	$6,092,088	$6,092,088	$10,080,933	$11,489,630
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$510,894	$510,894	$510,894	$510,894
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$753	$753	$753	$753
Rebates	N/A	$544,002	$544,002	$544,002	$544,002
Other	N/A	$12,182	$12,182	$12,182	$12,182
Subtotal	N/A	$1,067,831	$1,067,831	$1,067,831	$1,067,831
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$10,176,068	N/A	N/A
Subtotal	N/A	N/A	$10,176,068	N/A	N/A
Participant Costs					
Incremental Capital Costs	$4,880,187	N/A	N/A	$4,880,187	$4,880,187
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$4,880,187	N/A	N/A	$4,880,187	$4,880,187
Total Costs	$4,880,187	$1,067,831	$11,243,898	$5,948,018	$5,948,018
Net Benefit (Cost)	$9,284,726	$5,024,258	($5,151,810)	$4,132,916	$5,541,613
Benefit/Cost Ratio	2.90	5.71	0.54	1.69	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	18.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	84.23%
Gross Load Factor at Customer	E	52.10%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$3,084

Program Summary per Participant		
Gross kW Saved at Customer	I	78.13 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	70.76 kW
Gross Annual kWh Saved at Customer	(B x E x I)	356,553 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	381,749 kWh

Program Summary All Participants		
Total Participants	J	23
Total Budget	K	**$1,067,831**
Gross kW Saved at Customer	(J x I)	1,797 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,627 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	8,200,729 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**8,780,224 kWh**
Societal Net Benefits	(J x I x H)	**$5,541,613**

Utility Program Cost per kWh Lifetime	**$0.0066**
Utility Program Cost per kW at Gen	**$656**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Custom Efficiency**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$122,199
Incentive Costs =	$103,360
16) Total Utility Project Costs =	$225,559
17) Direct Participant Costs ($/Part.) =	$64,744
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$2,613
Escalation Rate =	2.16%
20) Project Life (Years) =	19.5
21) Avg. Dth/Part. Saved =	810.05
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	21
24) Total Annual Dth Saved =	17,011
25) Incentive/Participant =	$4,921.90

Cost Summary	2020
Utility Cost per Participant =	$10,741
Cost per Participant per Dth =	$93.18
Lifetime Energy Reduction (Dth)	331,141
Societal Cost per Dth	$4.47

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($617,713)	0.71
Utility Cost Test	$1,268,034	6.62
Societal Test	$1,509,592	2.02
Participant Test	$1,226,579	1.90

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Custom Efficiency**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$33,610
Incentive Costs =	$14,410
16) Total Utility Project Costs =	$48,020
17) Direct Participant Costs ($/Part.) =	$28,683
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$978
Escalation Rate =	2.16%
20) Project Life (Years) =	20.0
21) Avg. Dth/Part. Saved =	279.21
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	2
24) Total Annual Dth Saved =	558
25) Incentive/Participant =	$7,205.15

Cost Summary	2020
Utility Cost per Participant =	$24,010
Cost per Participant per Dth =	$188.72
Lifetime Energy Reduction (Dth)	11,168
Societal Cost per Dth	$8.15

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($62,252)	0.44
Utility Cost Test	$859	1.02
Societal Test	$8,537	1.09
Participant Test	$41,695	1.73

DATA CENTER EFFICIENCY — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$583,095	$583,095	$583,095	$583,095
T & D	N/A	$364,495	$364,495	$364,495	$364,495
Marginal Energy	N/A	$3,270,690	$3,270,690	$3,270,690	$3,270,690
Environmental Externality	N/A	N/A	N/A	N/A	$1,147,277
Subtotal	N/A	$4,218,280	$4,218,280	$4,218,280	$5,365,556
Participant Benefits					
Bill Reduction - Electric	$6,931,472	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$665,624	N/A	N/A	$665,624	$665,624
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$331,419	N/A	N/A	$332,673	$332,673
Subtotal	$7,928,515	N/A	N/A	$998,297	$998,297
Total Benefits	$7,928,515	$4,218,280	$4,218,280	$5,216,576	$6,363,853
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$526,163	$526,163	$526,163	$526,163
Advertising & Promotion	N/A	$27,603	$27,603	$27,603	$27,603
Measurement & Verification	N/A	$66,220	$66,220	$66,220	$66,220
Rebates	N/A	$665,624	$665,624	$665,624	$665,624
Other	N/A	$71,800	$71,800	$71,800	$71,800
Subtotal	N/A	$1,357,410	$1,357,410	$1,357,410	$1,357,410
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$6,931,472	N/A	N/A
Subtotal	N/A	N/A	$6,931,472	N/A	N/A
Participant Costs					
Incremental Capital Costs	$2,104,432	N/A	N/A	$2,104,432	$2,104,432
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$2,104,432	N/A	N/A	$2,104,432	$2,104,432
Total Costs	$2,104,432	$1,357,410	$8,288,882	$3,461,842	$3,461,842
Net Benefit (Cost)	$5,824,083	$2,860,870	($4,070,603)	$1,754,734	$2,902,011
Benefit/Cost Ratio	3.77	3.11	0.51	1.51	1.84

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	11.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	78.46%
Gross Load Factor at Customer	E	88.91%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$2,549

Program Summary per Participant

Gross kW Saved at Customer	I	14.23 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	12.01 kW
Gross Annual kWh Saved at Customer	(B x E x I)	110,854 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	118,688 kWh

Program Summary All Participants

Total Participants	J	80
Total Budget	K	**$1,357,410**
Gross kW Saved at Customer	(J x I)	1,139 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**961 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	8,868,355 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**9,495,027 kWh**
Societal Net Benefits	(J x I x H)	**$2,902,011**
Utility Program Cost per kWh Lifetime		**$0.0124**
Utility Program Cost per kW at Gen		**$1,413**

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 ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$65,643	$65,643	$65,643	$65,643
T & D	N/A	$41,120	$41,120	$41,120	$41,120
Marginal Energy	N/A	$1,267,972	$1,267,972	$1,267,972	$1,267,972
Environmental Externality	N/A	N/A	N/A	N/A	$444,522
Subtotal	N/A	$1,374,735	$1,374,735	$1,374,735	$1,819,257
Participant Benefits					
Bill Reduction - Electric	$2,677,781	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$107,594	N/A	N/A	$107,594	$107,594
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$2,785,376	N/A	N/A	$107,594	$107,594
Total Benefits	$2,785,376	$1,374,735	$1,374,735	$1,482,330	$1,926,851
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$62,392	$62,392	$62,392	$62,392
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	($10)	($10)	($10)	($10)
Rebates	N/A	$107,594	$107,594	$107,594	$107,594
Other	N/A	$731	$731	$731	$731
Subtotal	N/A	$170,708	$170,708	$170,708	$170,708
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,677,781	N/A	N/A
Subtotal	N/A	N/A	$2,677,781	N/A	N/A
Participant Costs					
Incremental Capital Costs	$433,109	N/A	N/A	$433,109	$433,109
Incremental O&M Costs	$384	N/A	N/A	$384	$384
Subtotal	$433,492	N/A	N/A	$433,492	$433,492
Total Costs	$433,492	$170,708	$2,848,489	$604,200	$604,200
Net Benefit (Cost)	$2,351,883	$1,204,027	($1,473,754)	$878,129	$1,322,651
Benefit/Cost Ratio	6.43	8.05	0.48	2.45	3.19

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	11.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	23.66%
Gross Load Factor at Customer	E	97.55%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$3,267

Program Summary per Participant		
Gross kW Saved at Customer	I	33.74 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	8.58 kW
Gross Annual kWh Saved at Customer	(B x E x I)	288,276 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	308,647 kWh

Program Summary All Participants		
Total Participants	J	12
Total Budget	K	**$170,708**
Gross kW Saved at Customer	(J x I)	405 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**103 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	3,459,313 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**3,703,762 kWh**
Societal Net Benefits	(J x I x H)	**$1,322,651**

Utility Program Cost per kWh Lifetime	**$0.0040**
Utility Program Cost per kW at Gen	**$1,657**

EFFICIENCY CONTROLS — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$209,233	$209,233	$209,233	$209,233
T & D	N/A	$131,583	$131,583	$131,583	$131,583
Marginal Energy	N/A	$3,292,533	$3,292,533	$3,292,533	$3,292,533
Environmental Externality	N/A	N/A	N/A	N/A	$1,322,399
Subtotal	N/A	$3,633,349	$3,633,349	$3,633,349	$4,955,748
Participant Benefits					
Bill Reduction - Electric	$7,381,977	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$796,294	N/A	N/A	$796,294	$796,294
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$833,528	N/A	N/A	$833,528	$833,528
Subtotal	$9,011,799	N/A	N/A	$1,629,822	$1,629,822
Total Benefits	$9,011,799	$3,633,349	$3,633,349	$5,263,171	$6,585,570
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$352,119	$352,119	$352,119	$352,119
Advertising & Promotion	N/A	$58,652	$58,652	$58,652	$58,652
Measurement & Verification	N/A	$5,000	$5,000	$5,000	$5,000
Rebates	N/A	$796,294	$796,294	$796,294	$796,294
Other	N/A	$20,000	$20,000	$20,000	$20,000
Subtotal	N/A	$1,232,065	$1,232,065	$1,232,065	$1,232,065
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$7,381,977	N/A	N/A
Subtotal	N/A	N/A	$7,381,977	N/A	N/A
Participant Costs					
Incremental Capital Costs	$3,056,863	N/A	N/A	$3,056,863	$3,056,863
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$3,056,863	N/A	N/A	$3,056,863	$3,056,863
Total Costs	$3,056,863	$1,232,065	$8,614,042	$4,288,928	$4,288,928
Net Benefit (Cost)	$5,954,936	$2,401,284	($4,980,693)	$974,243	$2,296,642
Benefit/Cost Ratio	2.95	2.95	0.42	1.23	1.54

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	21.05%
Gross Load Factor at Customer	E	78.78%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$1,853

Program Summary per Participant

Gross kW Saved at Customer	I	17.70 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	4.01 kW
Gross Annual kWh Saved at Customer	(B x E x I)	122,161 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	130,794 kWh

Program Summary All Participants

Total Participants	J	70
Total Budget	K	**$1,232,065**
Gross kW Saved at Customer	(J x I)	1,239 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**280 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	8,551,289 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**9,155,555 kWh**
Societal Net Benefits	(J x I x H)	**$2,296,642**
Utility Program Cost per kWh Lifetime		**$0.0090**
Utility Program Cost per kW at Gen		**$4,393**

EFFICIENCY CONTROLS — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$103,193	$103,193	$103,193	$103,193
T & D	N/A	$64,896	$64,896	$64,896	$64,896
Marginal Energy	N/A	$1,221,083	$1,221,083	$1,221,083	$1,221,083
Environmental Externality	N/A	N/A	N/A	N/A	$488,183
Subtotal	N/A	$1,389,172	$1,389,172	$1,389,172	$1,877,355
Participant Benefits					
Bill Reduction - Electric	$2,725,165	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$215,795	N/A	N/A	$215,795	$215,795
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$335,589	N/A	N/A	$335,589	$335,589
Subtotal	$3,276,549	N/A	N/A	$551,384	$551,384
Total Benefits	$3,276,549	$1,389,172	$1,389,172	$1,940,557	$2,428,740
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$229,379	$229,379	$229,379	$229,379
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$2,756	$2,756	$2,756	$2,756
Rebates	N/A	$215,795	$215,795	$215,795	$215,795
Other	N/A	$19,056	$19,056	$19,056	$19,056
Subtotal	N/A	$466,986	$466,986	$466,986	$466,986
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,725,165	N/A	N/A
Subtotal	N/A	N/A	$2,725,165	N/A	N/A
Participant Costs					
Incremental Capital Costs	$982,512	N/A	N/A	$982,512	$982,512
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$982,512	N/A	N/A	$982,512	$982,512
Total Costs	$982,512	$466,986	$3,192,151	$1,449,498	$1,449,498
Net Benefit (Cost)	$2,294,037	$922,186	($1,802,979)	$491,058	$979,242
Benefit/Cost Ratio	3.33	2.97	0.44	1.34	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	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	29.08%
Gross Load Factor at Customer	E	81.46%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$2,214

Program Summary per Participant		
Gross kW Saved at Customer	I	20.11 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	6.29 kW
Gross Annual kWh Saved at Customer	(B x E x I)	143,492 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	153,632 kWh

Program Summary All Participants		
Total Participants	J	22
Total Budget	K	**$466,986**
Gross kW Saved at Customer	(J x I)	442 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**138 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	3,156,833 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**3,379,907 kWh**
Societal Net Benefits	(J x I x H)	**$979,242**
Utility Program Cost per kWh Lifetime		**$0.0092**
Utility Program Cost per kW at Gen		**$3,376**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Efficiency Controls**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$49,300
Incentive Costs =	$134,729
16) Total Utility Project Costs =	$184,029
17) Direct Participant Costs ($/Part.) =	$59,037
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$1,567
Escalation Rate =	2.16%
20) Project Life (Years) =	15.0
21) Avg. Dth/Part. Saved =	944.80
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	17
24) Total Annual Dth Saved =	16,062
25) Incentive/Participant =	$7,925.25

Cost Summary	2020
Utility Cost per Participant =	$10,825
Cost per Participant per Dth =	$73.94
Lifetime Energy Reduction (Dth)	240,924
Societal Cost per Dth	$4.37

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($488,679)	0.70
Utility Cost Test	$976,291	6.31
Societal Test	$891,006	1.85
Participant Test	$849,998	1.85

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Efficiency Controls**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$7,008
Incentive Costs =	$49,333
16) Total Utility Project Costs =	$56,341
17) Direct Participant Costs ($/Part.) =	$72,660
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$3,874
Escalation Rate =	2.16%
20) Project Life (Years) =	14.8
21) Avg. Dth/Part. Saved =	1,185.98
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	6
24) Total Annual Dth Saved =	7,116
25) Incentive/Participant =	$8,222.17

Cost Summary	2020
Utility Cost per Participant =	$9,390
Cost per Participant per Dth =	$69.18
Lifetime Energy Reduction (Dth)	105,378
Societal Cost per Dth	$4.20

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($199,018)	0.72
Utility Cost Test	$443,572	8.87
Societal Test	$487,530	2.10
Participant Test	$475,878	2.09

FLUID SYSTEMS OPTIMIZATION — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,550,993	$1,550,993	$1,550,993	$1,550,993
T & D	N/A	$981,899	$981,899	$981,899	$981,899
Marginal Energy	N/A	$5,130,010	$5,130,010	$5,130,010	$5,130,010
Environmental Externality	N/A	N/A	N/A	N/A	$2,137,518
Subtotal	N/A	$7,662,902	$7,662,902	$7,662,902	$9,800,420
Participant Benefits					
Bill Reduction - Electric	$14,088,216	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,155,973	N/A	N/A	$1,155,973	$1,155,973
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$33,734	N/A	N/A	$33,734	$33,734
Subtotal	$15,277,923	N/A	N/A	$1,189,707	$1,189,707
Total Benefits	$15,277,923	$7,662,902	$7,662,902	$8,852,609	$10,990,128
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$411,552	$411,552	$411,552	$411,552
Advertising & Promotion	N/A	$20,000	$20,000	$20,000	$20,000
Measurement & Verification	N/A	$31,243	$31,243	$31,243	$31,243
Rebates	N/A	$1,155,973	$1,155,973	$1,155,973	$1,155,973
Other	N/A	$26,000	$26,000	$26,000	$26,000
Subtotal	N/A	$1,644,768	$1,644,768	$1,644,768	$1,644,768
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$14,088,216	N/A	N/A
Subtotal	N/A	N/A	$14,088,216	N/A	N/A
Participant Costs					
Incremental Capital Costs	$3,314,169	N/A	N/A	$3,314,169	$3,314,169
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$3,314,169	N/A	N/A	$3,314,169	$3,314,169
Total Costs	$3,314,169	$1,644,768	$15,732,984	$4,958,937	$4,958,937
Net Benefit (Cost)	$11,963,754	$6,018,134	($8,070,082)	$3,893,672	$6,031,191
Benefit/Cost Ratio	4.61	4.66	0.49	1.79	2.22

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	17.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	78.91%
Gross Load Factor at Customer	E	66.17%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$2,651

Program Summary per Participant		
Gross kW Saved at Customer	I	6.56 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	5.57 kW
Gross Annual kWh Saved at Customer	(B x E x I)	38,050 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	40,738 kWh

Program Summary All Participants		
Total Participants	J	347
Total Budget	K	**$1,644,768**
Gross kW Saved at Customer	(J x I)	2,275 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,930 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	13,186,040 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**14,117,816 kWh**
Societal Net Benefits	(J x I x H)	**$6,031,191**

Utility Program Cost per kWh Lifetime	**$0.0068**
Utility Program Cost per kW at Gen	**$852**

FLUID SYSTEMS OPTIMIZATION — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$851,397	$851,397	$851,397	$851,397
T & D	N/A	$538,612	$538,612	$538,612	$538,612
Marginal Energy	N/A	$2,868,280	$2,868,280	$2,868,280	$2,868,280
Environmental Externality	N/A	N/A	N/A	N/A	$1,061,369
Subtotal	N/A	$4,258,289	$4,258,289	$4,258,289	$5,319,658
Participant Benefits					
Bill Reduction - Electric	$7,058,386	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$680,310	N/A	N/A	$680,310	$680,310
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$213,819	N/A	N/A	$213,819	$213,819
Subtotal	$7,952,515	N/A	N/A	$894,130	$894,130
Total Benefits	$7,952,515	$4,258,289	$4,258,289	$5,152,419	$6,213,788
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$280,804	$280,804	$280,804	$280,804
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$10,663	$10,663	$10,663	$10,663
Rebates	N/A	$680,310	$680,310	$680,310	$680,310
Other	N/A	$15,165	$15,165	$15,165	$15,165
Subtotal	N/A	$986,942	$986,942	$986,942	$986,942
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$7,058,386	N/A	N/A
Subtotal	N/A	N/A	$7,058,386	N/A	N/A
Participant Costs					
Incremental Capital Costs	$2,024,512	N/A	N/A	$2,024,512	$2,024,512
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$2,024,512	N/A	N/A	$2,024,512	$2,024,512
Total Costs	$2,024,512	$986,942	$8,045,328	$3,011,455	$3,011,455
Net Benefit (Cost)	$5,928,003	$3,271,347	($3,787,039)	$2,140,964	$3,202,333
Benefit/Cost Ratio	3.93	4.31	0.53	1.71	2.06

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	89.28%
Gross Load Factor at Customer	E	68.43%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$2,725

Program Summary per Participant		
Gross kW Saved at Customer	I	5.60 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	5.37 kW
Gross Annual kWh Saved at Customer	(B x E x I)	33,542 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	35,912 kWh

Program Summary All Participants		
Total Participants	J	210
Total Budget	K	**$986,942**
Gross kW Saved at Customer	(J x I)	1,175 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,128 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	7,043,785 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**7,541,525 kWh**
Societal Net Benefits	(J x I x H)	**$3,202,333**

Utility Program Cost per kWh Lifetime	**$0.0082**
Utility Program Cost per kW at Gen	**$875**

FOODSERVICE EQUIPMENT — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$57,811	$57,811	$57,811	$57,811
T & D	N/A	$36,499	$36,499	$36,499	$36,499
Marginal Energy	N/A	$213,876	$213,876	$213,876	$213,876
Environmental Externality	N/A	N/A	N/A	N/A	$76,044
Subtotal	N/A	$308,186	$308,186	$308,186	$384,230
Participant Benefits					
Bill Reduction - Electric	$488,858	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$28,781	N/A	N/A	$28,781	$28,781
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$319,254	N/A	N/A	$27,531	$27,531
Subtotal	$836,893	N/A	N/A	$56,312	$56,312
Total Benefits	$836,893	$308,186	$308,186	$364,499	$440,542
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$12,087	$12,087	$12,087	$12,087
Advertising & Promotion	N/A	$7,885	$7,885	$7,885	$7,885
Measurement & Verification	N/A	$5,000	$5,000	$5,000	$5,000
Rebates	N/A	$28,781	$28,781	$28,781	$28,781
Other	N/A	$1,000	$1,000	$1,000	$1,000
Subtotal	N/A	$54,753	$54,753	$54,753	$54,753
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$488,858	N/A	N/A
Subtotal	N/A	N/A	$488,858	N/A	N/A
Participant Costs					
Incremental Capital Costs	$218,783	N/A	N/A	$218,783	$218,783
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$218,783	N/A	N/A	$218,783	$218,783
Total Costs	$218,783	$54,753	$543,611	$273,536	$273,536
Net Benefit (Cost)	$618,110	$253,433	($235,425)	$90,963	$167,006
Benefit/Cost Ratio	3.83	5.63	0.57	1.33	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	16.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	62.19%
Gross Load Factor at Customer	E	49.09%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$1,534

Program Summary per Participant		
Gross kW Saved at Customer	I	1.49 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.00 kW
Gross Annual kWh Saved at Customer	(B x E x I)	6,412 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	6,865 kWh

Program Summary All Participants		
Total Participants	J	73
Total Budget	K	**$54,753**
Gross kW Saved at Customer	(J x I)	109 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**73 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	468,058 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**501,133 kWh**
Societal Net Benefits	(J x I x H)	**$167,006**
Utility Program Cost per kWh Lifetime		**$0.0066**
Utility Program Cost per kW at Gen		**$752**

FOODSERVICE EQUIPMENT — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$69,999	$69,999	$69,999	$69,999
T & D	N/A	$44,282	$44,282	$44,282	$44,282
Marginal Energy	N/A	$258,823	$258,823	$258,823	$258,823
Environmental Externality	N/A	N/A	N/A	N/A	$92,296
Subtotal	N/A	$373,104	$373,104	$373,104	$465,400
Participant Benefits					
Bill Reduction - Electric	$600,181	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$27,450	N/A	N/A	$27,450	$27,450
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,200,815	N/A	N/A	$1,200,815	$1,200,815
Subtotal	$1,828,446	N/A	N/A	$1,228,265	$1,228,265
Total Benefits	$1,828,446	$373,104	$373,104	$1,601,368	$1,693,665
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$9,248	$9,248	$9,248	$9,248
Advertising & Promotion	N/A	$3,891	$3,891	$3,891	$3,891
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$27,450	$27,450	$27,450	$27,450
Other	N/A	$2,302	$2,302	$2,302	$2,302
Subtotal	N/A	$42,891	$42,891	$42,891	$42,891
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$600,181	N/A	N/A
Subtotal	N/A	N/A	$600,181	N/A	N/A
Participant Costs					
Incremental Capital Costs	$79,013	N/A	N/A	$79,013	$79,013
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$79,013	N/A	N/A	$79,013	$79,013
Total Costs	$79,013	$42,891	$643,073	$121,904	$121,904
Net Benefit (Cost)	$1,749,433	$330,212	($269,969)	$1,479,464	$1,571,761
Benefit/Cost Ratio	23.14	8.70	0.58	13.14	13.89

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

Input Summary and Totals

Program "Inputs" per Customer kW		
Lifetime (Weighted on Generator kWh)	A	17.8 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	57.92%
Gross Load Factor at Customer	E	46.34%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$11,806

Program Summary per Participant		
Gross kW Saved at Customer	I	2.09 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.30 kW
Gross Annual kWh Saved at Customer	(B x E x I)	8,504 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	9,105 kWh

Program Summary All Participants		
Total Participants	J	64
Total Budget	K	**$42,891**
Gross kW Saved at Customer	(J x I)	133 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**83 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	540,426 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**578,615 kWh**
Societal Net Benefits	(J x I x H)	**$1,571,761**
Utility Program Cost per kWh Lifetime		**$0.0042**
Utility Program Cost per kW at Gen		**$517**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Foodservice Equipment**

Input Data	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$66,245
Incentive Costs =	$30,183
16) Total Utility Project Costs =	$96,428
17) Direct Participant Costs ($/Part.) =	$2,753
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$23
Escalation Rate =	2.16%
20) Project Life (Years) =	12.3
21) Avg. Dth/Part. Saved =	89.43
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	67
24) Total Annual Dth Saved =	5,992
25) Incentive/Participant =	$450.50

Cost Summary	**2020**
Utility Cost per Participant =	$1,439
Cost per Participant per Dth =	$46.88
Lifetime Energy Reduction (Dth)	73,643
Societal Cost per Dth	$3.40

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($192,529)	0.66
Utility Cost Test	$269,591	3.80
Societal Test	$273,224	2.09
Participant Test	$351,111	2.90

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Foodservice Equipment**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$26,148
Incentive Costs =	$49,920
16) Total Utility Project Costs =	$76,068
17) Direct Participant Costs ($/Part.) =	$2,525
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$3
Escalation Rate =	2.16%
20) Project Life (Years) =	12.6
21) Avg. Dth/Part. Saved =	84.31
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	110
24) Total Annual Dth Saved =	9,312
25) Incentive/Participant =	$451.97

Cost Summary	2020
Utility Cost per Participant =	$689
Cost per Participant per Dth =	$38.12
Lifetime Energy Reduction (Dth)	117,406
Societal Cost per Dth	$2.60

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($228,190)	0.72
Utility Cost Test	$503,318	7.62
Societal Test	$514,259	2.69
Participant Test	$505,930	2.81

HEATING EFFICIENCY — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$24,308	$24,308	$24,308	$24,308
T & D	N/A	$15,322	$15,322	$15,322	$15,322
Marginal Energy	N/A	$64,875	$64,875	$64,875	$64,875
Environmental Externality	N/A	N/A	N/A	N/A	$23,600
Subtotal	N/A	$104,504	$104,504	$104,504	$128,105
Participant Benefits					
Bill Reduction - Electric	$249,465	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$7,780	N/A	N/A	$7,780	$7,780
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$257,245	N/A	N/A	$7,780	$7,780
Total Benefits	$257,245	$104,504	$104,504	$112,284	$135,885
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$0	$0	$0	$0
Advertising & Promotion	N/A	$25	$25	$25	$25
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$7,780	$7,780	$7,780	$7,780
Other	N/A	$25	$25	$25	$25
Subtotal	N/A	$7,830	$7,830	$7,830	$7,830
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$249,465	N/A	N/A
Subtotal	N/A	N/A	$249,465	N/A	N/A
Participant Costs					
Incremental Capital Costs	$16,675	N/A	N/A	$16,675	$16,675
Incremental O&M Costs	$7,653	N/A	N/A	$0	$0
Subtotal	$24,328	N/A	N/A	$16,675	$16,675
Total Costs	$24,328	$7,830	$257,295	$24,505	$24,505
Net Benefit (Cost)	$232,917	$96,674	($152,791)	$87,779	$111,380
Benefit/Cost Ratio	10.57	13.35	0.41	4.58	5.55

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	71.65%
Gross Load Factor at Customer	E	40.69%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$2,772

Program Summary per Participant		
Gross kW Saved at Customer	I	0.63 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.49 kW
Gross Annual kWh Saved at Customer	(B x E x I)	2,238 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	2,443 kWh

Program Summary All Participants		
Total Participants	J	64
Total Budget	K	**$7,830**
Gross kW Saved at Customer	(J x I)	40 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**32 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	143,217 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**156,350 kWh**
Societal Net Benefits	(J x I x H)	**$111,380**

Utility Program Cost per kWh Lifetime	**$0.0031**
Utility Program Cost per kW at Gen	**$248**

HEATING EFFICIENCY — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$97,430	$97,430	$97,430	$97,430
T & D	N/A	$61,595	$61,595	$61,595	$61,595
Marginal Energy	N/A	$224,805	$224,805	$224,805	$224,805
Environmental Externality	N/A	N/A	N/A	N/A	$82,038
Subtotal	N/A	$383,830	$383,830	$383,830	$465,868
Participant Benefits					
Bill Reduction - Electric	$876,097	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$21,400	N/A	N/A	$21,400	$21,400
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$897,497	N/A	N/A	$21,400	$21,400
Total Benefits	$897,497	$383,830	$383,830	$405,230	$487,268
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$1,635	$1,635	$1,635	$1,635
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$1,372	$1,372	$1,372	$1,372
Rebates	N/A	$21,400	$21,400	$21,400	$21,400
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$24,407	$24,407	$24,407	$24,407
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$876,097	N/A	N/A
Subtotal	N/A	N/A	$876,097	N/A	N/A
Participant Costs					
Incremental Capital Costs	$45,368	N/A	N/A	$45,368	$45,368
Incremental O&M Costs	$41,533	N/A	N/A	$41,533	$41,533
Subtotal	$86,901	N/A	N/A	$86,901	$86,901
Total Costs	$86,901	$24,407	$900,504	$111,307	$111,307
Net Benefit (Cost)	$810,597	$359,424	($516,673)	$293,923	$375,961
Benefit/Cost Ratio	10.33	15.73	0.43	3.64	4.38

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	100.00%
Gross Load Factor at Customer	E	50.76%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$3,501

Program Summary per Participant		
Gross kW Saved at Customer	I	1.04 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1.12 kW
Gross Annual kWh Saved at Customer	(B x E x I)	4,636 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	4,963 kWh

Program Summary All Participants		
Total Participants	J	103
Total Budget	K	**$24,407**
Gross kW Saved at Customer	(J x I)	107 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**115 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	477,480 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**511,221 kWh**
Societal Net Benefits	(J x I x H)	**$375,961**

Utility Program Cost per kWh Lifetime	**$0.0027**
Utility Program Cost per kW at Gen	**$211**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Heating Efficiency**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$716,628
Incentive Costs =	$753,165
16) Total Utility Project Costs =	$1,469,793
17) Direct Participant Costs ($/Part.) =	$4,035
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$45
Escalation Rate =	2.16%
20) Project Life (Years) =	7.5
21) Avg. Dth/Part. Saved =	209.01
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	579
24) Total Annual Dth Saved =	121,001
25) Incentive/Participant =	$1,300.95

Cost Summary	2020
Utility Cost per Participant =	$2,539
Cost per Participant per Dth =	$31.45
Lifetime Energy Reduction (Dth)	912,600
Societal Cost per Dth	$3.52

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($2,654,433)	0.63
Utility Cost Test	$3,042,136	3.07
Societal Test	$3,458,494	2.08
Participant Test	$4,271,110	2.71

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Heating Efficiency**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$302,105
Incentive Costs =	$539,074
16) Total Utility Project Costs =	$841,179
17) Direct Participant Costs ($/Part.) =	$3,635
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	7.8
21) Avg. Dth/Part. Saved =	154.99
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	424
24) Total Annual Dth Saved =	65,715
25) Incentive/Participant =	$1,271.40

Cost Summary	2020
Utility Cost per Participant =	$1,984
Cost per Participant per Dth =	$36.26
Lifetime Energy Reduction (Dth)	512,629
Societal Cost per Dth	$3.69

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($1,499,111)	0.63
Utility Cost Test	$1,664,683	2.98
Societal Test	$1,736,822	1.92
Participant Test	$2,151,881	2.35

LIGHTING EFFICIENCY — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$5,475,736	$5,475,736	$5,475,736	$5,475,736
T & D	N/A	$3,455,656	$3,455,656	$3,455,656	$3,455,656
Marginal Energy	N/A	$22,311,614	$22,311,614	$22,311,614	$22,311,614
Environmental Externality	N/A	N/A	N/A	N/A	$8,273,859
Subtotal	N/A	$31,243,005	$31,243,005	$31,243,005	$39,516,864
Participant Benefits					
Bill Reduction - Electric	$56,993,499	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$4,489,335	N/A	N/A	$4,489,335	$4,489,335
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$6,407	$6,407
Subtotal	$61,482,834	N/A	N/A	$4,495,742	$4,495,742
Total Benefits	$61,482,834	$31,243,005	$31,243,005	$35,738,747	$44,012,606
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$1,966,570	$1,966,570	$1,966,570	$1,966,570
Advertising & Promotion	N/A	$65,002	$65,002	$65,002	$65,002
Measurement & Verification	N/A	$75,000	$75,000	$75,000	$75,000
Rebates	N/A	$4,489,335	$4,489,335	$4,489,335	$4,489,335
Other	N/A	$100,000	$100,000	$100,000	$100,000
Subtotal	N/A	$6,695,907	$6,695,907	$6,695,907	$6,695,907
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$56,993,499	N/A	N/A
Subtotal	N/A	N/A	$56,993,499	N/A	N/A
Participant Costs					
Incremental Capital Costs	$17,084,608	N/A	N/A	$17,084,608	$17,084,608
Incremental O&M Costs	$1,826,474	N/A	N/A	$0	$0
Subtotal	$18,911,082	N/A	N/A	$17,084,608	$17,084,608
Total Costs	$18,911,082	$6,695,907	$63,689,406	$23,780,515	$23,780,515
Net Benefit (Cost)	$42,571,753	$24,547,098	($32,446,401)	$11,958,233	$20,232,091
Benefit/Cost Ratio	3.25	4.67	0.49	1.50	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	15.8 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	70.54%
Gross Load Factor at Customer	E	61.60%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$2,006

Program Summary per Participant		
Gross kW Saved at Customer	I	6.17 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	4.68 kW
Gross Annual kWh Saved at Customer	(B x E x I)	33,283 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	35,634 kWh

Program Summary All Participants		
Total Participants	J	1,635
Total Budget	K	**$6,695,907**
Gross kW Saved at Customer	(J x I)	10,087 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**7,650 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	54,430,269 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**58,276,520 kWh**
Societal Net Benefits	(J x I x H)	**$20,232,091**
Utility Program Cost per kWh Lifetime		**$0.0073**
Utility Program Cost per kW at Gen		**$875**

LIGHTING EFFICIENCY — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$11,427,003	$11,427,003	$11,427,003	$11,427,003
T & D	N/A	$7,208,283	$7,208,283	$7,208,283	$7,208,283
Marginal Energy	N/A	$40,611,635	$40,611,635	$40,611,635	$40,611,635
Environmental Externality	N/A	N/A	N/A	N/A	$14,914,624
Subtotal	N/A	$59,246,921	$59,246,921	$59,246,921	$74,161,545
Participant Benefits					
Bill Reduction - Electric	$103,288,847	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$9,357,851	N/A	N/A	$9,357,851	$9,357,851
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$112,646,698	N/A	N/A	$9,357,851	$9,357,851
Total Benefits	$112,646,698	$59,246,921	$59,246,921	$68,604,772	$83,519,396
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$2,051,752	$2,051,752	$2,051,752	$2,051,752
Advertising & Promotion	N/A	$195,246	$195,246	$195,246	$195,246
Measurement & Verification	N/A	$17,311	$17,311	$17,311	$17,311
Rebates	N/A	$9,357,851	$9,357,851	$9,357,851	$9,357,851
Other	N/A	$15,293	$15,293	$15,293	$15,293
Subtotal	N/A	$11,637,453	$11,637,453	$11,637,453	$11,637,453
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$103,288,847	N/A	N/A
Subtotal	N/A	N/A	$103,288,847	N/A	N/A
Participant Costs					
Incremental Capital Costs	$32,581,404	N/A	N/A	$32,581,404	$32,581,404
Incremental O&M Costs	$8,376,408	N/A	N/A	$8,376,408	$8,376,408
Subtotal	$40,957,813	N/A	N/A	$40,957,813	$40,957,813
Total Costs	$40,957,813	$11,637,453	$114,926,300	$52,595,266	$52,595,266
Net Benefit (Cost)	$71,688,885	$47,609,468	($55,679,379)	$16,009,506	$30,924,130
Benefit/Cost Ratio	2.75	5.09	0.52	1.30	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	15.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	68.28%
Gross Load Factor at Customer	E	50.99%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$1,365

Program Summary per Participant		
Gross kW Saved at Customer	I	6.61 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	4.85 kW
Gross Annual kWh Saved at Customer	(B x E x I)	29,506 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	31,591 kWh

Program Summary All Participants		
Total Participants	J	3,430
Total Budget	K	**$11,637,453**
Gross kW Saved at Customer	(J x I)	22,656 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**16,633 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	101,206,440 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**108,358,073 kWh**
Societal Net Benefits	(J x I x H)	**$30,924,130**

Utility Program Cost per kWh Lifetime	**$0.0071**
Utility Program Cost per kW at Gen	**$700**

MOTOR EFFICIENCY — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$5,267,889	$5,267,889	$5,267,889	$5,267,889
T & D	N/A	$3,324,191	$3,324,191	$3,324,191	$3,324,191
Marginal Energy	N/A	$16,372,789	$16,372,789	$16,372,789	$16,372,789
Environmental Externality	N/A	N/A	N/A	N/A	$5,981,434
Subtotal	N/A	$24,964,869	$24,964,869	$24,964,869	$30,946,303
Participant Benefits					
Bill Reduction - Electric	$43,287,912	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$2,837,786	N/A	N/A	$2,837,786	$2,837,786
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$84,863	N/A	N/A	$84,863	$84,863
Subtotal	$46,210,561	N/A	N/A	$2,922,649	$2,922,649
Total Benefits	$46,210,561	$24,964,869	$24,964,869	$27,887,519	$33,868,952
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$776,000	$776,000	$776,000	$776,000
Advertising & Promotion	N/A	$250,000	$250,000	$250,000	$250,000
Measurement & Verification	N/A	$20,000	$20,000	$20,000	$20,000
Rebates	N/A	$2,837,786	$2,837,786	$2,837,786	$2,837,786
Other	N/A	$205,000	$205,000	$205,000	$205,000
Subtotal	N/A	$4,088,786	$4,088,786	$4,088,786	$4,088,786
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$43,287,912	N/A	N/A
Subtotal	N/A	N/A	$43,287,912	N/A	N/A
Participant Costs					
Incremental Capital Costs	$8,199,166	N/A	N/A	$8,199,166	$8,199,166
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$8,199,166	N/A	N/A	$8,199,166	$8,199,166
Total Costs	$8,199,166	$4,088,786	$47,376,698	$12,287,952	$12,287,952
Net Benefit (Cost)	$38,011,396	$20,876,083	($22,411,828)	$15,599,567	$21,581,001
Benefit/Cost Ratio	5.64	6.11	0.53	2.27	2.76

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	16.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	79.41%
Gross Load Factor at Customer	E	51.99%
Transmission Loss Factor (Energy)	F	15.6395%
Transmission Loss Factor (Demand)	G	12.3756%
Societal Net Benefit (Cost)	H	$2,979

Program Summary per Participant		
Gross kW Saved at Customer	I	4.16 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	3.77 kW
Gross Annual kWh Saved at Customer	(B x E x I)	18,964 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	22,479 kWh

Program Summary All Participants		
Total Participants	J	1,740
Total Budget	K	**$4,088,786**
Gross kW Saved at Customer	(J x I)	7,245 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**6,566 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	32,996,576 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**39,113,756 kWh**
Societal Net Benefits	(J x I x H)	**$21,581,001**

Utility Program Cost per kWh Lifetime	**$0.0063**
Utility Program Cost per kW at Gen	**$623**

MOTOR EFFICIENCY — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,881,865	$1,881,865	$1,881,865	$1,881,865
T & D	N/A	$1,184,051	$1,184,051	$1,184,051	$1,184,051
Marginal Energy	N/A	$5,691,357	$5,691,357	$5,691,357	$5,691,357
Environmental Externality	N/A	N/A	N/A	N/A	$2,070,498
Subtotal	N/A	$8,757,273	$8,757,273	$8,757,273	$10,827,771
Participant Benefits					
Bill Reduction - Electric	$14,597,175	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,379,285	N/A	N/A	$1,379,285	$1,379,285
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$64,153	N/A	N/A	$64,153	$64,153
Subtotal	$16,040,613	N/A	N/A	$1,443,438	$1,443,438
Total Benefits	$16,040,613	$8,757,273	$8,757,273	$10,200,711	$12,271,209
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$433,201	$433,201	$433,201	$433,201
Advertising & Promotion	N/A	$18,891	$18,891	$18,891	$18,891
Measurement & Verification	N/A	$13,475	$13,475	$13,475	$13,475
Rebates	N/A	$1,379,285	$1,379,285	$1,379,285	$1,379,285
Other	N/A	$39,391	$39,391	$39,391	$39,391
Subtotal	N/A	$1,884,244	$1,884,244	$1,884,244	$1,884,244
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$14,597,175	N/A	N/A
Subtotal	N/A	N/A	$14,597,175	N/A	N/A
Participant Costs					
Incremental Capital Costs	$4,726,781	N/A	N/A	$4,726,781	$4,726,781
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$4,726,781	N/A	N/A	$4,726,781	$4,726,781
Total Costs	$4,726,781	$1,884,244	$16,481,418	$6,611,025	$6,611,025
Net Benefit (Cost)	$11,313,831	$6,873,029	($7,724,146)	$3,589,686	$5,660,184
Benefit/Cost Ratio	3.39	4.65	0.53	1.54	1.86

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	15.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	67.09%
Gross Load Factor at Customer	E	43.44%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$1,635

Program Summary per Participant		
Gross kW Saved at Customer	I	13.85 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	9.99 kW
Gross Annual kWh Saved at Customer	(B x E x I)	52,695 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	56,419 kWh

Program Summary All Participants		
Total Participants	J	250
Total Budget	K	**$1,884,244**
Gross kW Saved at Customer	(J x I)	3,462 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**2,497 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	13,173,735 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**14,104,642 kWh**
Societal Net Benefits	(J x I x H)	**$5,660,184**

Utility Program Cost per kWh Lifetime	**$0.0088**
Utility Program Cost per kW at Gen	**$755**

MULTI-FAMILY BUILDING EFFICIENCY — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$466,203	$466,203	$466,203	$466,203
T & D	N/A	$294,068	$294,068	$294,068	$294,068
Marginal Energy	N/A	$1,807,154	$1,807,154	$1,807,154	$1,807,154
Environmental Externality	N/A	N/A	N/A	N/A	$659,251
Subtotal	N/A	$2,567,425	$2,567,425	$2,567,425	$3,226,676
Participant Benefits					
Bill Reduction - Electric	$6,613,612	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$565,593	N/A	N/A	$565,593	$565,593
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$18,670	N/A	N/A	$32,800	$32,800
Subtotal	$7,197,875	N/A	N/A	$598,393	$598,393
Total Benefits	$7,197,875	$2,567,425	$2,567,425	$3,165,818	$3,825,069
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$894,043	$894,043	$894,043	$894,043
Advertising & Promotion	N/A	$10,800	$10,800	$10,800	$10,800
Measurement & Verification	N/A	$6,375	$6,375	$6,375	$6,375
Rebates	N/A	$565,593	$565,593	$565,593	$565,593
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,476,811	$1,476,811	$1,476,811	$1,476,811
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$6,613,612	N/A	N/A
Subtotal	N/A	N/A	$6,613,612	N/A	N/A
Participant Costs					
Incremental Capital Costs	$785,381	N/A	N/A	$785,381	$785,381
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$785,381	N/A	N/A	$785,381	$785,381
Total Costs	$785,381	$1,476,811	$8,090,423	$2,262,192	$2,262,192
Net Benefit (Cost)	$6,412,495	$1,090,614	($5,522,998)	$903,627	$1,562,878
Benefit/Cost Ratio	9.16	1.74	0.32	1.40	1.69

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	15.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	21.91%
Gross Load Factor at Customer	E	17.93%
Transmission Loss Factor (Energy)	F	7.5506%
Transmission Loss Factor (Demand)	G	8.5050%
Societal Net Benefit (Cost)	H	$555

Program Summary per Participant		
Gross kW Saved at Customer	I	0.41 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.10 kW
Gross Annual kWh Saved at Customer	(B x E x I)	645 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	697 kWh

Program Summary All Participants		
Total Participants	J	6,860
Total Budget	K	**$1,476,811**
Gross kW Saved at Customer	(J x I)	2,815 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**674 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	4,421,454 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**4,782,568 kWh**
Societal Net Benefits	(J x I x H)	**$1,562,878**
Utility Program Cost per kWh Lifetime		**$0.0202**
Utility Program Cost per kW at Gen		**$2,190**

MULTI-FAMILY BUILDING EFFICIENCY — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$300,097	$300,097	$300,097	$300,097
T & D	N/A	$189,924	$189,924	$189,924	$189,924
Marginal Energy	N/A	$1,196,437	$1,196,437	$1,196,437	$1,196,437
Environmental Externality	N/A	N/A	N/A	N/A	$438,710
Subtotal	N/A	$1,686,457	$1,686,457	$1,686,457	$2,125,168
Participant Benefits					
Bill Reduction - Electric	$4,645,646	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$422,749	N/A	N/A	$422,749	$422,749
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,824	N/A	N/A	$1,824	$1,824
Subtotal	$5,070,219	N/A	N/A	$424,573	$424,573
Total Benefits	$5,070,219	$1,686,457	$1,686,457	$2,111,030	$2,549,741
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$997,003	$997,003	$997,003	$997,003
Advertising & Promotion	N/A	$4,760	$4,760	$4,760	$4,760
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$422,749	$422,749	$422,749	$422,749
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,424,511	$1,424,511	$1,424,511	$1,424,511
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$4,645,646	N/A	N/A
Subtotal	N/A	N/A	$4,645,646	N/A	N/A
Participant Costs					
Incremental Capital Costs	$552,231	N/A	N/A	$552,231	$552,231
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$552,231	N/A	N/A	$552,231	$552,231
Total Costs	$552,231	$1,424,511	$6,070,157	$1,976,742	$1,976,742
Net Benefit (Cost)	$4,517,988	$261,946	($4,383,700)	$134,288	$572,998
Benefit/Cost Ratio	9.18	1.18	0.28	1.07	1.29

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	17.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	17.68%
Gross Load Factor at Customer	E	15.84%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$297

Program Summary per Participant		
Gross kW Saved at Customer	I	3.71 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.70 kW
Gross Annual kWh Saved at Customer	(B x E x I)	5,142 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	5,505 kWh

Program Summary All Participants		
Total Participants	J	520
Total Budget	K	**$1,424,511**
Gross kW Saved at Customer	(J x I)	1,928 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**366 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,673,844 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,862,788 kWh**
Societal Net Benefits	(J x I x H)	**$572,998**
Utility Program Cost per kWh Lifetime		**$0.0287**
Utility Program Cost per kW at Gen		**$3,888**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Multi-Family Building Efficiency**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$503,687
Incentive Costs =	$168,656
16) Total Utility Project Costs =	$672,343
17) Direct Participant Costs ($/Part.) =	$191
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$33
Escalation Rate =	2.16%
20) Project Life (Years) =	10.9
21) Avg. Dth/Part. Saved =	6.92
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	2,280
24) Total Annual Dth Saved =	15,773
25) Incentive/Participant =	$73.97

Cost Summary	2020
Utility Cost per Participant =	$295
Cost per Participant per Dth =	$70.18
Lifetime Energy Reduction (Dth)	171,606
Societal Cost per Dth	$5.47

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($899,182)	0.49
Utility Cost Test	$191,615	1.28
Societal Test	$798,256	1.85
Participant Test	$1,379,470	4.17

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Multi-Family Building Efficiency**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$455,922
Incentive Costs =	$40,853
16) Total Utility Project Costs =	$496,775
17) Direct Participant Costs ($/Part.) =	$310
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$321
Escalation Rate =	2.16%
20) Project Life (Years) =	9.9
21) Avg. Dth/Part. Saved =	28.47
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	176
24) Total Annual Dth Saved =	5,010
25) Incentive/Participant =	$232.12

Cost Summary	2020
Utility Cost per Participant =	$2,823
Cost per Participant per Dth =	$110.03
Lifetime Energy Reduction (Dth)	49,761
Societal Cost per Dth	$10.26

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($563,820)	0.31
Utility Cost Test	($241,423)	0.51
Societal Test	$247,717	1.49
Participant Test	$727,243	14.33

PROCESS EFFICIENCY — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$4,265,710	$4,265,710	$4,265,710	$4,265,710
T & D	N/A	$2,693,147	$2,693,147	$2,693,147	$2,693,147
Marginal Energy	N/A	$19,449,217	$19,449,217	$19,449,217	$19,449,217
Environmental Externality	N/A	N/A	N/A	N/A	$7,166,221
Subtotal	N/A	$26,408,074	$26,408,074	$26,408,074	$33,574,295
Participant Benefits					
Bill Reduction - Electric	$50,915,379	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$4,456,249	N/A	N/A	$4,456,249	$4,456,249
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$30,937,931	N/A	N/A	$31,106,161	$31,106,161
Subtotal	$86,309,559	N/A	N/A	$35,562,410	$35,562,410
Total Benefits	$86,309,559	$26,408,074	$26,408,074	$61,970,484	$69,136,705
Costs					
Utility Project Costs					
Customer Services	N/A	$675,000	$675,000	$675,000	$675,000
Project Administration	N/A	$1,506,202	$1,506,202	$1,506,202	$1,506,202
Advertising & Promotion	N/A	$6,835	$6,835	$6,835	$6,835
Measurement & Verification	N/A	$87,000	$87,000	$87,000	$87,000
Rebates	N/A	$4,456,249	$4,456,249	$4,456,249	$4,456,249
Other	N/A	$33,000	$33,000	$33,000	$33,000
Subtotal	N/A	$6,764,286	$6,764,286	$6,764,286	$6,764,286
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$50,915,379	N/A	N/A
Subtotal	N/A	N/A	$50,915,379	N/A	N/A
Participant Costs					
Incremental Capital Costs	$18,076,083	N/A	N/A	$18,076,083	$18,076,083
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$18,076,083	N/A	N/A	$18,076,083	$18,076,083
Total Costs	$18,076,083	$6,764,286	$57,679,665	$24,840,369	$24,840,369
Net Benefit (Cost)	$68,233,476	$19,643,788	($31,271,591)	$37,130,115	$44,296,336
Benefit/Cost Ratio	4.77	3.90	0.46	2.49	2.78

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	17.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	55.61%
Gross Load Factor at Customer	E	56.34%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$5,072

Program Summary per Participant

Gross kW Saved at Customer	I	36.70 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	21.94 kW
Gross Annual kWh Saved at Customer	(B x E x I)	181,099 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	193,896 kWh

Program Summary All Participants

Total Participants	J	238
Total Budget	K	**$6,764,286**
Gross kW Saved at Customer	(J x I)	8,734 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**5,222 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	43,101,469 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**46,147,183 kWh**
Societal Net Benefits	(J x I x H)	**$44,296,336**
Utility Program Cost per kWh Lifetime		**$0.0085**
Utility Program Cost per kW at Gen		**$1,295**

PROCESS EFFICIENCY **2020 ELECTRIC ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$5,715,155	$5,715,155	$5,715,155	$5,715,155
T & D	N/A	$3,610,143	$3,610,143	$3,610,143	$3,610,143
Marginal Energy	N/A	$22,265,464	$22,265,464	$22,265,464	$22,265,464
Environmental Externality	N/A	N/A	N/A	N/A	$8,177,337
Subtotal	N/A	$31,590,761	$31,590,761	$31,590,761	$39,768,099
Participant Benefits					
Bill Reduction - Electric	$57,201,213	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$4,413,285	N/A	N/A	$4,413,285	$4,413,285
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$26,437,712	N/A	N/A	$26,437,712	$26,437,712
Subtotal	$88,052,211	N/A	N/A	$30,850,998	$30,850,998
Total Benefits	$88,052,211	$31,590,761	$31,590,761	$62,441,759	$70,619,096
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$2,223,663	$2,223,663	$2,223,663	$2,223,663
Advertising & Promotion	N/A	$325	$325	$325	$325
Measurement & Verification	N/A	$9,536	$9,536	$9,536	$9,536
Rebates	N/A	$4,413,285	$4,413,285	$4,413,285	$4,413,285
Other	N/A	$30,227	$30,227	$30,227	$30,227
Subtotal	N/A	$6,677,036	$6,677,036	$6,677,036	$6,677,036
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$57,201,213	N/A	N/A
Subtotal	N/A	N/A	$57,201,213	N/A	N/A
Participant Costs					
Incremental Capital Costs	$22,424,623	N/A	N/A	$22,424,623	$22,424,623
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$22,424,623	N/A	N/A	$22,424,623	$22,424,623
Total Costs	$22,424,623	$6,677,036	$63,878,249	$29,101,659	$29,101,659
Net Benefit (Cost)	$65,627,588	$24,913,725	($32,287,488)	$33,340,100	$41,517,437
Benefit/Cost Ratio	3.93	4.73	0.49	2.15	2.43

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	16.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	82.78%
Gross Load Factor at Customer	E	73.08%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$5,201

Program Summary per Participant

Gross kW Saved at Customer	I	26.88 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	23.92 kW
Gross Annual kWh Saved at Customer	(B x E x I)	172,054 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	184,212 kWh

Program Summary All Participants

Total Participants	J	297
Total Budget	K	**$6,677,036**
Gross kW Saved at Customer	(J x I)	7,982 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**7,105 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	51,100,016 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**54,710,938 kWh**
Societal Net Benefits	(J x I x H)	**$41,517,437**
Utility Program Cost per kWh Lifetime		**$0.0074**
Utility Program Cost per kW at Gen		**$940**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Process Efficiency**

Input Data	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$458,152
Incentive Costs =	$630,171
16) Total Utility Project Costs =	$1,088,323
17) Direct Participant Costs ($/Part.) =	$81,097
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$2,199
Escalation Rate =	2.16%
20) Project Life (Years) =	3.9
21) Avg. Dth/Part. Saved =	2,402.13
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	75
24) Total Annual Dth Saved =	180,160
25) Incentive/Participant =	$8,402.29

Cost Summary	**2020**
Utility Cost per Participant =	$14,511
Cost per Participant per Dth =	$39.80
Lifetime Energy Reduction (Dth)	703,932
Societal Cost per Dth	$4.62

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($2,125,476)	0.65
Utility Cost Test	$2,861,876	3.63
Societal Test	$1,953,532	1.60
Participant Test	$111,352	1.02

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Process Efficiency**

Input Data	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$268,908
Incentive Costs =	$1,182,979
16) Total Utility Project Costs =	$1,451,887
17) Direct Participant Costs ($/Part.) =	$143,532
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$9,026
Escalation Rate =	2.16%
20) Project Life (Years) =	15.7
21) Avg. Dth/Part. Saved =	7,509.06
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	37
24) Total Annual Dth Saved =	277,835
25) Incentive/Participant =	$31,972.41

Cost Summary	**2020**
Utility Cost per Participant =	$39,240
Cost per Participant per Dth =	$24.34
Lifetime Energy Reduction (Dth)	4,370,818
Societal Cost per Dth	$1.28

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($7,718,442)	0.72
Utility Cost Test	$18,499,738	13.74
Societal Test	$27,937,173	6.01
Participant Test	$25,417,947	5.79

RECOMMISSIONING — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$222,731	$222,731	$222,731	$222,731
T & D	N/A	$137,889	$137,889	$137,889	$137,889
Marginal Energy	N/A	$1,573,866	$1,573,866	$1,573,866	$1,573,866
Environmental Externality	N/A	N/A	N/A	N/A	$541,204
Subtotal	N/A	$1,934,487	$1,934,487	$1,934,487	$2,475,690
Participant Benefits					
Bill Reduction - Electric	$2,729,770	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$451,293	N/A	N/A	$451,293	$451,293
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$246,171	N/A	N/A	$246,171	$246,171
Subtotal	$3,427,234	N/A	N/A	$697,464	$697,464
Total Benefits	$3,427,234	$1,934,487	$1,934,487	$2,631,951	$3,173,154
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$295,605	$295,605	$295,605	$295,605
Advertising & Promotion	N/A	$12,000	$12,000	$12,000	$12,000
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$451,293	$451,293	$451,293	$451,293
Other	N/A	$50,000	$50,000	$50,000	$50,000
Subtotal	N/A	$808,898	$808,898	$808,898	$808,898
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,729,770	N/A	N/A
Subtotal	N/A	N/A	$2,729,770	N/A	N/A
Participant Costs					
Incremental Capital Costs	$901,948	N/A	N/A	$901,948	$901,948
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$901,948	N/A	N/A	$901,948	$901,948
Total Costs	$901,948	$808,898	$3,538,668	$1,710,846	$1,710,846
Net Benefit (Cost)	$2,525,285	$1,125,589	($1,604,181)	$921,104	$1,462,308
Benefit/Cost Ratio	3.80	2.39	0.55	1.54	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	6.8 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	51.08%
Gross Load Factor at Customer	E	69.12%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$1,431

Program Summary per Participant		
Gross kW Saved at Customer	I	11.48 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	6.31 kW
Gross Annual kWh Saved at Customer	(B x E x I)	69,537 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	74,450 kWh

Program Summary All Participants		
Total Participants	J	89
Total Budget	K	**$808,898**
Gross kW Saved at Customer	(J x I)	1,022 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**561 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	6,188,761 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**6,626,083 kWh**
Societal Net Benefits	(J x I x H)	**$1,462,308**

Utility Program Cost per kWh Lifetime	**$0.0178**
Utility Program Cost per kW at Gen	**$1,441**

RECOMMISSIONING	2020	ELECTRIC	ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$50,182	$50,182	$50,182	$50,182
T & D	N/A	$31,072	$31,072	$31,072	$31,072
Marginal Energy	N/A	$775,469	$775,469	$775,469	$775,469
Environmental Externality	N/A	N/A	N/A	N/A	$266,685
Subtotal	N/A	$856,724	$856,724	$856,724	$1,123,409
Participant Benefits					
Bill Reduction - Electric	$1,347,952	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$300,979	N/A	N/A	$300,979	$300,979
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$308,287	N/A	N/A	$308,287	$308,287
Subtotal	$1,957,219	N/A	N/A	$609,266	$609,266
Total Benefits	$1,957,219	$856,724	$856,724	$1,465,990	$1,732,675
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$259,593	$259,593	$259,593	$259,593
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$300,979	$300,979	$300,979	$300,979
Other	N/A	$15,648	$15,648	$15,648	$15,648
Subtotal	N/A	$576,220	$576,220	$576,220	$576,220
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,347,952	N/A	N/A
Subtotal	N/A	N/A	$1,347,952	N/A	N/A
Participant Costs					
Incremental Capital Costs	$166,297	N/A	N/A	$166,297	$166,297
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$166,297	N/A	N/A	$166,297	$166,297
Total Costs	$166,297	$576,220	$1,924,173	$742,517	$742,517
Net Benefit (Cost)	$1,790,922	$280,504	($1,067,449)	$723,473	$990,158
Benefit/Cost Ratio	11.77	1.49	0.45	1.97	2.33

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	7.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	28.23%
Gross Load Factor at Customer	E	83.15%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$2,410

Program Summary per Participant

Gross kW Saved at Customer	I	13.69 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	4.16 kW
Gross Annual kWh Saved at Customer	(B x E x I)	99,755 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	106,804 kWh

Program Summary All Participants

Total Participants	J	30
Total Budget	K	**$576,220**
Gross kW Saved at Customer	(J x I)	411 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**125 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,992,641 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**3,204,112 kWh**
Societal Net Benefits	(J x I x H)	**$990,158**

Utility Program Cost per kWh Lifetime	**$0.0257**
Utility Program Cost per kW at Gen	**$4,620**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Recommissioning**

Input Data	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$52,576
Incentive Costs =	$150,553
16) Total Utility Project Costs =	$203,129
17) Direct Participant Costs ($/Part.) =	$7,014
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$1,294
Escalation Rate =	2.16%
20) Project Life (Years) =	6.7
21) Avg. Dth/Part. Saved =	429.76
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	49
24) Total Annual Dth Saved =	21,058
25) Incentive/Participant =	$3,072.52

Cost Summary	**2020**
Utility Cost per Participant =	$4,145
Cost per Participant per Dth =	$25.97
Lifetime Energy Reduction (Dth)	141,973
Societal Cost per Dth	$2.79

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($406,518)	0.66
Utility Cost Test	$571,518	3.81
Societal Test	$908,461	3.29
Participant Test	$1,146,581	4.34

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Recommissioning**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$26,174
Incentive Costs =	$67,308
16) Total Utility Project Costs =	$93,482
17) Direct Participant Costs ($/Part.) =	$12,828
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$4,481
Escalation Rate =	2.16%
20) Project Life (Years) =	7.0
21) Avg. Dth/Part. Saved =	3,677.60
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	1
24) Total Annual Dth Saved =	3,678
25) Incentive/Participant =	$67,308.04

Cost Summary	**2020**
Utility Cost per Participant =	$93,482
Cost per Participant per Dth =	$28.91
Lifetime Energy Reduction (Dth)	25,743
Societal Cost per Dth	$1.52

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($130,250)	0.52
Utility Cost Test	$46,554	1.50
Societal Test	$157,777	5.05
Participant Test	$256,853	21.02

SELF-DIRECT **2020 ELECTRIC GOAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$0	$0	$0	$0
T & D	N/A	$0	$0	$0	$0
Marginal Energy	N/A	$0	$0	$0	$0
Environmental Externality	N/A	N/A	N/A	N/A	$0
Subtotal	N/A	$0	$0	$0	$0
Participant Benefits					
Bill Reduction - Electric	$0	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Benefits	$0	$0	$0	$0	$0
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$27,505	$27,505	$27,505	$27,505
Advertising & Promotion	N/A	$442	$442	$442	$442
Measurement & Verification	N/A	$318	$318	$318	$318
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$47	$47	$47	$47
Subtotal	N/A	$28,312	$28,312	$28,312	$28,312
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$0	N/A	N/A
Subtotal	N/A	N/A	$0	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$28,312	$28,312	$28,312	$28,312
Net Benefit (Cost)	$0	($28,312)	($28,312)	($28,312)	($28,312)
Benefit/Cost Ratio	INF	-	-	-	-

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	0.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	0.00%
Gross Load Factor at Customer	E	#DIV/0!
Transmission Loss Factor (Energy)	F	0.0000%
Transmission Loss Factor (Demand)	G	0.0000%
Societal Net Benefit (Cost)	H	#DIV/0!

Program Summary per Participant		
Gross kW Saved at Customer	I	#DIV/0!
Net coincident kW Saved at Generator	(I x D) / (1 - G)	#DIV/0!
Gross Annual kWh Saved at Customer	(B x E x I)	#DIV/0!
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	#DIV/0!

Program Summary All Participants		
Total Participants	J	0
Total Budget	K	**$28,312**
Gross kW Saved at Customer	(J x I)	#DIV/0!
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**#DIV/0!**
Gross Annual kWh Saved at Customer	(B x E x I) x J	#DIV/0!
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**#DIV/0!**
Societal Net Benefits	(J x I x H)	**#DIV/0!**

Utility Program Cost per kWh Lifetime	**#DIV/0!**
Utility Program Cost per kW at Gen	**#DIV/0!**

SELF-DIRECT **2020 ELECTRIC ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$159,559	$159,559	$159,559	$159,559
T & D	N/A	$100,707	$100,707	$100,707	$100,707
Marginal Energy	N/A	$761,753	$761,753	$761,753	$761,753
Environmental Externality	N/A	N/A	N/A	N/A	$252,914
Subtotal	N/A	$1,022,019	$1,022,019	$1,022,019	$1,274,932
Participant Benefits					
Bill Reduction - Electric	$1,923,123	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$151,473	N/A	N/A	$151,473	$151,473
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$2,074,596	N/A	N/A	$151,473	$151,473
Total Benefits	$2,074,596	$1,022,019	$1,022,019	$1,173,492	$1,426,405
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$40,650	$40,650	$40,650	$40,650
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$151,473	$151,473	$151,473	$151,473
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$192,123	$192,123	$192,123	$192,123
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,923,123	N/A	N/A
Subtotal	N/A	N/A	$1,923,123	N/A	N/A
Participant Costs					
Incremental Capital Costs	$571,939	N/A	N/A	$571,939	$571,939
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$571,939	N/A	N/A	$571,939	$571,939
Total Costs	$571,939	$192,123	$2,115,245	$764,062	$764,062
Net Benefit (Cost)	$1,502,657	$829,896	($1,093,227)	$409,430	$662,344
Benefit/Cost Ratio	3.63	5.32	0.48	1.54	1.87

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	17.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	100.00%
Gross Load Factor at Customer	E	95.13%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$3,644

Program Summary per Participant		
Gross kW Saved at Customer	I	181.76 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	195.44 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,514,732 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,621,769 kWh

Program Summary All Participants		
Total Participants	J	1
Total Budget	K	**$192,123**
Gross kW Saved at Customer	(J x I)	182 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**195 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,514,732 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,621,769 kWh**
Societal Net Benefits	(J x I x H)	**$662,344**

Utility Program Cost per kWh Lifetime	**$0.0070**
Utility Program Cost per kW at Gen	**$983**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Self-Direct**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$9,243
Incentive Costs =	$0
16) Total Utility Project Costs =	$9,243
17) Direct Participant Costs ($/Part.) =	$0
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	0.0
21) Avg. Dth/Part. Saved =	-
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	-
24) Total Annual Dth Saved =	0
25) Incentive/Participant =	$0.00

Cost Summary	**2020**
Utility Cost per Participant =	#DIV/0!
Cost per Participant per Dth =	#DIV/0!
Lifetime Energy Reduction (Dth)	0
Societal Cost per Dth	#DIV/0!

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($9,243)	0.00
Utility Cost Test	($9,243)	0.00
Societal Test	($9,243)	0.00
Participant Test	$0	#DIV/0!

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Self-Direct**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$488
Incentive Costs =	$0
16) Total Utility Project Costs =	$488
17) Direct Participant Costs ($/Part.) =	$0
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	0.0
21) Avg. Dth/Part. Saved =	-
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	-
24) Total Annual Dth Saved =	0
25) Incentive/Participant =	$0.00

Cost Summary	**2020**
Utility Cost per Participant =	#DIV/0!
Cost per Participant per Dth =	#DIV/0!
Lifetime Energy Reduction (Dth)	0
Societal Cost per Dth	#DIV/0!

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($488)	0.00
Utility Cost Test	($488)	0.00
Societal Test	($488)	0.00
Participant Test	$0	#DIV/0!

TURN KEY **2020 ELECTRIC GOAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$653,661	$653,661	$653,661	$653,661
T & D	N/A	$410,996	$410,996	$410,996	$410,996
Marginal Energy	N/A	$3,175,184	$3,175,184	$3,175,184	$3,175,184
Environmental Externality	N/A	N/A	N/A	N/A	$1,058,814
Subtotal	N/A	$4,239,841	$4,239,841	$4,239,841	$5,298,655
Participant Benefits					
Bill Reduction - Electric	$7,541,395	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,069,506	N/A	N/A	$1,069,506	$1,069,506
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$613,866	N/A	N/A	$0	$0
Subtotal	$9,224,767	N/A	N/A	$1,069,506	$1,069,506
Total Benefits	$9,224,767	$4,239,841	$4,239,841	$5,309,347	$6,368,161
Costs					
Utility Project Costs					
Customer Services	N/A	$215,900	$215,900	$215,900	$215,900
Project Administration	N/A	$251,578	$251,578	$251,578	$251,578
Advertising & Promotion	N/A	$26,270	$26,270	$26,270	$26,270
Measurement & Verification	N/A	$8,000	$8,000	$8,000	$8,000
Rebates	N/A	$1,069,506	$1,069,506	$1,069,506	$1,069,506
Other	N/A	$109,000	$109,000	$109,000	$109,000
Subtotal	N/A	$1,680,254	$1,680,254	$1,680,254	$1,680,254
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$7,541,395	N/A	N/A
Subtotal	N/A	N/A	$7,541,395	N/A	N/A
Participant Costs					
Incremental Capital Costs	$2,493,416	N/A	N/A	$2,493,416	$2,493,416
Incremental O&M Costs	$0	N/A	N/A	$34,228	$34,228
Subtotal	$2,493,416	N/A	N/A	$2,527,644	$2,527,644
Total Costs	$2,493,416	$1,680,254	$9,221,649	$4,207,898	$4,207,898
Net Benefit (Cost)	$6,731,351	$2,559,587	($4,981,808)	$1,101,449	$2,160,263
Benefit/Cost Ratio	3.70	2.52	0.46	1.26	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	13.9 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	54.93%
Gross Load Factor at Customer	E	54.22%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$1,375

Program Summary per Participant		
Gross kW Saved at Customer	I	5.13 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	3.03 kW
Gross Annual kWh Saved at Customer	(B x E x I)	24,389 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	26,112 kWh

Program Summary All Participants		
Total Participants	J	306
Total Budget	K	**$1,680,254**
Gross kW Saved at Customer	(J x I)	1,571 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**928 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	7,462,940 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**7,990,299 kWh**
Societal Net Benefits	(J x I x H)	**$2,160,263**

Utility Program Cost per kWh Lifetime	**$0.0151**
Utility Program Cost per kW at Gen	**$1,810**

TURN KEY **2020 ELECTRIC ACTUAL**

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,732,470	$1,732,470	$1,732,470	$1,732,470
T & D	N/A	$1,091,504	$1,091,504	$1,091,504	$1,091,504
Marginal Energy	N/A	$4,724,903	$4,724,903	$4,724,903	$4,724,903
Environmental Externality	N/A	N/A	N/A	N/A	$1,566,132
Subtotal	N/A	$7,548,877	$7,548,877	$7,548,877	$9,115,009
Participant Benefits					
Bill Reduction - Electric	$11,799,429	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,328,506	N/A	N/A	$1,328,506	$1,328,506
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$5,552,565	N/A	N/A	$5,552,565	$5,552,565
Subtotal	$18,680,501	N/A	N/A	$6,881,071	$6,881,071
Total Benefits	$18,680,501	$7,548,877	$7,548,877	$14,429,948	$15,996,080
Costs					
Utility Project Costs					
Customer Services	N/A	$8,022	$8,022	$8,022	$8,022
Project Administration	N/A	$685,510	$685,510	$685,510	$685,510
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$1,328,506	$1,328,506	$1,328,506	$1,328,506
Other	N/A	$12,348	$12,348	$12,348	$12,348
Subtotal	N/A	$2,034,386	$2,034,386	$2,034,386	$2,034,386
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$11,799,429	N/A	N/A
Subtotal	N/A	N/A	$11,799,429	N/A	N/A
Participant Costs					
Incremental Capital Costs	$5,005,324	N/A	N/A	$5,005,324	$5,005,324
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$5,005,324	N/A	N/A	$5,005,324	$5,005,324
Total Costs	$5,005,324	$2,034,386	$13,833,816	$7,039,711	$7,039,711
Net Benefit (Cost)	$13,675,177	$5,514,490	($6,284,939)	$7,390,238	$8,956,370
Benefit/Cost Ratio	3.73	3.71	0.55	2.05	2.27

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	77.69%
Gross Load Factor at Customer	E	41.91%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$3,377

Program Summary per Participant		
Gross kW Saved at Customer	I	23.47 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	19.61 kW
Gross Annual kWh Saved at Customer	(B x E x I)	86,175 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	92,265 kWh

Program Summary All Participants		
Total Participants	J	113
Total Budget	K	**$2,034,386**
Gross kW Saved at Customer	(J x I)	2,652 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**2,216 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	9,737,785 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**10,425,894 kWh**
Societal Net Benefits	(J x I x H)	**$8,956,370**
Utility Program Cost per kWh Lifetime		**$0.0103**
Utility Program Cost per kW at Gen		**$918**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Turn Key**

Input Data	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$124,663
Incentive Costs =	$0
16) Total Utility Project Costs =	$124,663
17) Direct Participant Costs ($/Part.) =	$2,854
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	11.1
21) Avg. Dth/Part. Saved =	82.65
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	70
24) Total Annual Dth Saved =	5,785
25) Incentive/Participant =	$0.00

Cost Summary	**2020**
Utility Cost per Participant =	$1,781
Cost per Participant per Dth =	$56.08
Lifetime Energy Reduction (Dth)	64,229
Societal Cost per Dth	$5.05

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($326,394)	0.50
Utility Cost Test	$84,616	1.35
Societal Test	$116,147	1.36
Participant Test	$327,490	2.64

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Turn Key**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$71,977
Incentive Costs =	$103,694
16) Total Utility Project Costs =	$175,670
17) Direct Participant Costs ($/Part.) =	$602
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$2
Escalation Rate =	2.16%
20) Project Life (Years) =	12.6
21) Avg. Dth/Part. Saved =	20.39
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	326
24) Total Annual Dth Saved =	6,647
25) Incentive/Participant =	$318.08

Cost Summary	**2020**
Utility Cost per Participant =	$539
Cost per Participant per Dth =	$55.94
Lifetime Energy Reduction (Dth)	83,606
Societal Cost per Dth	$3.21

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($285,296)	0.59
Utility Cost Test	$241,860	2.38
Societal Test	$314,370	2.17
Participant Test	$440,185	3.24

BUSINESS SEGMENT LOAD MANAGEMENT TOTAL — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$5,943,156	$5,943,156	$5,943,156	$5,943,156
T & D	N/A	$3,694,759	$3,694,759	$3,694,759	$3,694,759
Marginal Energy	N/A	$145,277	$145,277	$145,277	$145,277
Environmental Externality	N/A	N/A	N/A	N/A	$51,447
Subtotal	N/A	$9,783,191	$9,783,191	$9,783,191	$9,834,638
Participant Benefits					
Bill Reduction - Electric	$384,477	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$306,841	N/A	N/A	$306,841	$306,841
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$691,318	N/A	N/A	$306,841	$306,841
Total Benefits	$691,318	$9,783,191	$9,783,191	$10,090,032	$10,141,479
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$2,210,242	$2,210,242	$2,210,242	$2,210,242
Advertising & Promotion	N/A	$212,000	$212,000	$212,000	$212,000
Measurement & Verification	N/A	$168,000	$168,000	$168,000	$168,000
Rebates	N/A	$306,841	$306,841	$306,841	$306,841
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,897,083	$2,897,083	$2,897,083	$2,897,083
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$384,477	N/A	N/A
Subtotal	N/A	N/A	$384,477	N/A	N/A
Participant Costs					
Incremental Capital Costs	$306,841	N/A	N/A	$306,841	$306,841
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$306,841	N/A	N/A	$306,841	$306,841
Total Costs	$306,841	$2,897,083	$3,281,560	$3,203,925	$3,203,925
Net Benefit (Cost)	$384,477	$6,886,108	$6,501,630	$6,886,107	$6,937,555
Benefit/Cost Ratio	2.25	3.38	2.98	3.15	3.17

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	7.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	54.50%
Gross Load Factor at Customer	E	0.15%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$160

Program Summary per Participant		
Gross kW Saved at Customer	I	27.67 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	16.21 kW
Gross Annual kWh Saved at Customer	(B x E x I)	370 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	396 kWh

Program Summary All Participants		
Total Participants	J	1,565
Total Budget	K	**$2,897,083**
Gross kW Saved at Customer	(J x I)	43,309 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**25,379 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	579,144 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**620,069 kWh**
Societal Net Benefits	(J x I x H)	**$6,937,555**

Utility Program Cost per kWh Lifetime	**$0.6376**
Utility Program Cost per kW at Gen	**$114**

BUSINESS SEGMENT LOAD MANAGEMENT TOTAL — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$11,937,936	$11,937,936	$11,937,936	$11,937,936
T & D	N/A	$7,374,453	$7,374,453	$7,374,453	$7,374,453
Marginal Energy	N/A	$256,379	$256,379	$256,379	$256,379
Environmental Externality	N/A	N/A	N/A	N/A	$83,519
Subtotal	N/A	$19,568,768	$19,568,768	$19,568,768	$19,652,287
Participant Benefits					
Bill Reduction - Electric	$783,566	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$7,550	N/A	N/A	$7,550	$7,550
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$791,116	N/A	N/A	$7,550	$7,550
Total Benefits	$791,116	$19,568,768	$19,568,768	$19,576,318	$19,659,837
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$1,844,875	$1,844,875	$1,844,875	$1,844,875
Advertising & Promotion	N/A	$150,715	$150,715	$150,715	$150,715
Measurement & Verification	N/A	$54,250	$54,250	$54,250	$54,250
Rebates	N/A	$7,550	$7,550	$7,550	$7,550
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,057,391	$2,057,391	$2,057,391	$2,057,391
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$783,566	N/A	N/A
Subtotal	N/A	N/A	$783,566	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$2,057,391	$2,840,956	$2,057,391	$2,057,391
Net Benefit (Cost)	$791,116	$17,511,377	$16,727,812	$17,518,927	$17,602,446
Benefit/Cost Ratio	INF	9.51	6.89	9.52	9.56

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	47.01%
Gross Load Factor at Customer	E	0.18%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$220

Program Summary per Participant		
Gross kW Saved at Customer	I	93.95 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	47.49 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,442 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,544 kWh

Program Summary All Participants		
Total Participants	J	852
Total Budget	K	**$2,057,391**
Gross kW Saved at Customer	(J x I)	80,050 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**40,465 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,228,670 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,315,493 kWh**
Societal Net Benefits	(J x I x H)	**$17,602,446**
Utility Program Cost per kWh Lifetime		**$0.3116**
Utility Program Cost per kW at Gen		**$51**

ELECTRIC RATE SAVINGS — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,370,516	$1,370,516	$1,370,516	$1,370,516
T & D	N/A	$845,089	$845,089	$845,089	$845,089
Marginal Energy	N/A	$33,111	$33,111	$33,111	$33,111
Environmental Externality	N/A	N/A	N/A	N/A	$10,785
Subtotal	N/A	$2,248,717	$2,248,717	$2,248,717	$2,259,502
Participant Benefits					
Bill Reduction - Electric	$101,088	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$101,088	N/A	N/A	$0	$0
Total Benefits	$101,088	$2,248,717	$2,248,717	$2,248,717	$2,259,502
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$544,208	$544,208	$544,208	$544,208
Advertising & Promotion	N/A	$15,508	$15,508	$15,508	$15,508
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$559,716	$559,716	$559,716	$559,716
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$101,088	N/A	N/A
Subtotal	N/A	N/A	$101,088	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$559,716	$660,804	$559,716	$559,716
Net Benefit (Cost)	$101,088	$1,689,001	$1,587,913	$1,689,001	$1,699,786
Benefit/Cost Ratio	INF	4.02	3.40	4.02	4.04

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	47.46%
Gross Load Factor at Customer	E	0.20%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$189

Program Summary per Participant		
Gross kW Saved at Customer	I	200.00 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	102.06 kW
Gross Annual kWh Saved at Customer	(B x E x I)	3,532 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	3,782 kWh

Program Summary All Participants		
Total Participants	J	45
Total Budget	K	**$559,716**
Gross kW Saved at Customer	(J x I)	9,000 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**4,593 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	158,942 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**170,174 kWh**
Societal Net Benefits	(J x I x H)	**$1,699,786**

Utility Program Cost per kWh Lifetime	**$0.6578**
Utility Program Cost per kW at Gen	**$122**

ELECTRIC RATE SAVINGS — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$10,521,633	$10,521,633	$10,521,633	$10,521,633
T & D	N/A	$6,487,861	$6,487,861	$6,487,861	$6,487,861
Marginal Energy	N/A	$254,559	$254,559	$254,559	$254,559
Environmental Externality	N/A	N/A	N/A	N/A	$82,915
Subtotal	N/A	$17,264,053	$17,264,053	$17,264,053	$17,346,967
Participant Benefits					
Bill Reduction - Electric	$777,160	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$777,160	N/A	N/A	$0	$0
Total Benefits	$777,160	$17,264,053	$17,264,053	$17,264,053	$17,346,967
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$417,297	$417,297	$417,297	$417,297
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$417,297	$417,297	$417,297	$417,297
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$777,160	N/A	N/A
Subtotal	N/A	N/A	$777,160	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$417,297	$1,194,457	$417,297	$417,297
Net Benefit (Cost)	$777,160	$16,846,756	$16,069,596	$16,846,756	$16,929,670
Benefit/Cost Ratio	INF	41.37	14.45	41.37	41.57

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	47.50%
Gross Load Factor at Customer	E	0.20%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$245

Program Summary per Participant		
Gross kW Saved at Customer	I	690.36 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	352.60 kW
Gross Annual kWh Saved at Customer	(B x E x I)	12,219 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	13,083 kWh

Program Summary All Participants		
Total Participants	J	100
Total Budget	K	**$417,297**
Gross kW Saved at Customer	(J x I)	69,036 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**35,260 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,221,942 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,308,289 kWh**
Societal Net Benefits	(J x I x H)	**$16,929,670**

Utility Program Cost per kWh Lifetime	**$0.0638**
Utility Program Cost per kW at Gen	**$12**

SAVER'S SWITCH FOR BUSINESS — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$3,652,762	$3,652,762	$3,652,762	$3,652,762
T & D	N/A	$2,287,332	$2,287,332	$2,287,332	$2,287,332
Marginal Energy	N/A	$108,461	$108,461	$108,461	$108,461
Environmental Externality	N/A	N/A	N/A	N/A	$39,565
Subtotal	N/A	$6,048,555	$6,048,555	$6,048,555	$6,088,120
Participant Benefits					
Bill Reduction - Electric	$273,356	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$306,841	N/A	N/A	$306,841	$306,841
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$580,197	N/A	N/A	$306,841	$306,841
Total Benefits	$580,197	$6,048,555	$6,048,555	$6,355,396	$6,394,961
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$2,210,242	$2,210,242	$2,210,242	$2,210,242
Advertising & Promotion	N/A	$212,000	$212,000	$212,000	$212,000
Measurement & Verification	N/A	$168,000	$168,000	$168,000	$168,000
Rebates	N/A	$306,841	$306,841	$306,841	$306,841
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,897,083	$2,897,083	$2,897,083	$2,897,083
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$273,356	N/A	N/A
Subtotal	N/A	N/A	$273,356	N/A	N/A
Participant Costs					
Incremental Capital Costs	$306,841	N/A	N/A	$306,841	$306,841
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$306,841	N/A	N/A	$306,841	$306,841
Total Costs	$306,841	$2,897,083	$3,170,439	$3,203,925	$3,203,925
Net Benefit (Cost)	$273,355	$3,151,472	$2,878,116	$3,151,472	$3,191,037
Benefit/Cost Ratio	1.89	2.09	1.91	1.98	2.00

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	9.9 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	28.78%
Gross Load Factor at Customer	E	0.18%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$152

Program Summary per Participant		
Gross kW Saved at Customer	I	13.97 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	4.32 kW
Gross Annual kWh Saved at Customer	(B x E x I)	226 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	242 kWh

Program Summary All Participants		
Total Participants	J	1,505
Total Budget	K	**$2,897,083**
Gross kW Saved at Customer	(J x I)	21,030 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**6,507 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	340,526 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**364,589 kWh**
Societal Net Benefits	(J x I x H)	**$3,191,037**

Utility Program Cost per kWh Lifetime	**$0.8031**
Utility Program Cost per kW at Gen	**$445**

SAVER'S SWITCH FOR BUSINESS — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,183,206	$1,183,206	$1,183,206	$1,183,206
T & D	N/A	$744,096	$744,096	$744,096	$744,096
Marginal Energy	N/A	$1,665	$1,665	$1,665	$1,665
Environmental Externality	N/A	N/A	N/A	N/A	$558
Subtotal	N/A	$1,928,967	$1,928,967	$1,928,967	$1,929,525
Participant Benefits					
Bill Reduction - Electric	$5,985	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$5,985	N/A	N/A	$0	$0
Total Benefits	$5,985	$1,928,967	$1,928,967	$1,928,967	$1,929,525
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$1,306,390	$1,306,390	$1,306,390	$1,306,390
Advertising & Promotion	N/A	$150,715	$150,715	$150,715	$150,715
Measurement & Verification	N/A	$54,250	$54,250	$54,250	$54,250
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,511,356	$1,511,356	$1,511,356	$1,511,356
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,985	N/A	N/A
Subtotal	N/A	N/A	$5,985	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$1,511,356	$1,517,341	$1,511,356	$1,511,356
Net Benefit (Cost)	$5,985	$417,611	$411,626	$417,611	$418,170
Benefit/Cost Ratio	INF	1.28	1.27	1.28	1.28

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

Input Summary and Totals

Program "Inputs" per Customer kW		
Lifetime (Weighted on Generator kWh)	A	15.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	19.29%
Gross Load Factor at Customer	E	0.01%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$55

Program Summary per Participant		
Gross kW Saved at Customer	I	10.21 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	2.12 kW
Gross Annual kWh Saved at Customer	(B x E x I)	5 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	5 kWh

Program Summary All Participants		
Total Participants	J	749
Total Budget	K	**$1,511,356**
Gross kW Saved at Customer	(J x I)	7,649 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,586 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	3,610 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**3,865 kWh**
Societal Net Benefits	(J x I x H)	**$418,170**

Utility Program Cost per kWh Lifetime	**$26.0684**
Utility Program Cost per kW at Gen	**$953**

PEAK PARTNER REWARDS — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$919,878	$919,878	$919,878	$919,878
T & D	N/A	$562,337	$562,337	$562,337	$562,337
Marginal Energy	N/A	$3,704	$3,704	$3,704	$3,704
Environmental Externality	N/A	N/A	N/A	N/A	$1,097
Subtotal	N/A	$1,485,919	$1,485,919	$1,485,919	$1,487,016
Participant Benefits					
Bill Reduction - Electric	$10,034	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$426,269	N/A	N/A	$426,269	$426,269
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$436,303	N/A	N/A	$426,269	$426,269
Total Benefits	$436,303	$1,485,919	$1,485,919	$1,912,188	$1,913,285
Costs					
Utility Project Costs					
Customer Services	N/A	$30,000	$30,000	$30,000	$30,000
Project Administration	N/A	$404,008	$404,008	$404,008	$404,008
Advertising & Promotion	N/A	$25,000	$25,000	$25,000	$25,000
Measurement & Verification	N/A	$25,000	$25,000	$25,000	$25,000
Rebates	N/A	$426,269	$426,269	$426,269	$426,269
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$910,277	$910,277	$910,277	$910,277
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$10,034	N/A	N/A
Subtotal	N/A	N/A	$10,034	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$910,277	$920,311	$910,277	$910,277
Net Benefit (Cost)	$436,303	$575,642	$565,608	$1,001,911	$1,003,008
Benefit/Cost Ratio	INF	1.63	1.61	2.10	2.10

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	1.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	100.00%
Gross Load Factor at Customer	E	0.07%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$76

Program Summary per Participant		
Gross kW Saved at Customer	I	885.29 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	951.93 kW
Gross Annual kWh Saved at Customer	(B x E x I)	5,312 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	5,687 kWh

Program Summary All Participants		
Total Participants	J	15
Total Budget	K	**$910,277**
Gross kW Saved at Customer	(J x I)	13,279 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**14,279 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	79,676 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**85,307 kWh**
Societal Net Benefits	(J x I x H)	**$1,003,008**

Utility Program Cost per kWh Lifetime	**$10.6706**
Utility Program Cost per kW at Gen	**$64**

PEAK PARTNER REWARDS — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$233,097	$233,097	$233,097	$233,097
T & D	N/A	$142,496	$142,496	$142,496	$142,496
Marginal Energy	N/A	$155	$155	$155	$155
Environmental Externality	N/A	N/A	N/A	N/A	$46
Subtotal	N/A	$375,748	$375,748	$375,748	$375,794
Participant Benefits					
Bill Reduction - Electric	$420	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$7,550	N/A	N/A	$7,550	$7,550
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$7,970	N/A	N/A	$7,550	$7,550
Total Benefits	$7,970	$375,748	$375,748	$383,298	$383,344
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$121,188	$121,188	$121,188	$121,188
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$7,550	$7,550	$7,550	$7,550
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$128,738	$128,738	$128,738	$128,738
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$420	N/A	N/A
Subtotal	N/A	N/A	$420	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$128,738	$129,158	$128,738	$128,738
Net Benefit (Cost)	$7,970	$247,010	$246,590	$254,560	$254,606
Benefit/Cost Ratio	INF	2.92	2.91	2.98	2.98

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	1.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	100.00%
Gross Load Factor at Customer	E	0.01%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$76

Program Summary per Participant		
Gross kW Saved at Customer	I	1121.67 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	1206.09 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,039 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,113 kWh

Program Summary All Participants		
Total Participants	J	3
Total Budget	K	**$128,738**
Gross kW Saved at Customer	(J x I)	3,365 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**3,618 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	3,118 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**3,338 kWh**
Societal Net Benefits	(J x I x H)	**$254,606**
Utility Program Cost per kWh Lifetime		**$38.5635**
Utility Program Cost per kW at Gen		**$36**

RESIDENTIAL SEGMENT TOTAL — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$32,684,330	$32,684,330	$32,684,330	$32,684,330
T & D	N/A	$20,537,518	$20,537,518	$20,537,518	$20,537,518
Marginal Energy	N/A	$59,190,218	$59,190,218	$59,190,218	$59,190,218
Environmental Externality	N/A	N/A	N/A	N/A	$20,345,412
Subtotal	N/A	$112,412,065	$112,412,065	$112,412,065	$132,757,477
Participant Benefits					
Bill Reduction - Electric	$214,445,404	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$11,956,338	N/A	N/A	$11,956,338	$11,956,338
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,509,112	N/A	N/A	$0	$0
Subtotal	$227,910,854	N/A	N/A	$11,956,338	$11,956,338
Total Benefits	$227,910,854	$112,412,065	$112,412,065	$124,368,403	$144,713,815
Costs					
Utility Project Costs					
Customer Services	N/A	$445,581	$445,581	$445,581	$445,581
Project Administration	N/A	$12,823,437	$12,823,437	$12,823,437	$12,823,437
Advertising & Promotion	N/A	$3,930,486	$3,930,486	$3,930,486	$3,930,486
Measurement & Verification	N/A	$544,004	$544,004	$544,004	$544,004
Rebates	N/A	$11,956,338	$11,956,338	$11,956,338	$11,956,338
Other	N/A	$3,500	$3,500	$3,500	$3,500
Subtotal	N/A	$29,703,346	$29,703,346	$29,703,346	$29,703,346
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$214,445,404	N/A	N/A
Subtotal	N/A	N/A	$214,445,404	N/A	N/A
Participant Costs					
Incremental Capital Costs	$16,705,969	N/A	N/A	$16,705,969	$16,705,969
Incremental O&M Costs	$0	N/A	N/A	$903,284	$903,284
Subtotal	$16,705,969	N/A	N/A	$17,609,253	$17,609,253
Total Costs	$16,705,969	$29,703,346	$244,148,750	$47,312,599	$47,312,599
Net Benefit (Cost)	$211,204,884	$82,708,719	($131,736,685)	$77,055,804	$97,401,217
Benefit/Cost Ratio	13.64	3.78	0.46	2.63	3.06

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	14.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	30.35%
Gross Load Factor at Customer	E	10.74%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$625

Program Summary per Participant		
Gross kW Saved at Customer	I	0.12 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.04 kW
Gross Annual kWh Saved at Customer	(B x E x I)	114 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	124 kWh

Program Summary All Participants		
Total Participants	J	1,286,871
Total Budget	K	**$29,703,346**
Gross kW Saved at Customer	(J x I)	155,810 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**51,844 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	146,625,784 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**160,071,817 kWh**
Societal Net Benefits	(J x I x H)	**$97,401,217**

Utility Program Cost per kWh Lifetime	**$0.0129**
Utility Program Cost per kW at Gen	**$573**

RESIDENTIAL SEGMENT TOTAL — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$36,095,700	$36,095,700	$36,095,700	$36,095,700
T & D	N/A	$22,735,066	$22,735,066	$22,735,066	$22,735,066
Marginal Energy	N/A	$100,337,189	$100,337,189	$100,337,189	$100,337,189
Environmental Externality	N/A	N/A	N/A	N/A	$35,326,673
Subtotal	N/A	$159,167,956	$159,167,956	$159,167,956	$194,494,629
Participant Benefits					
Bill Reduction - Electric	$375,303,096	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$16,249,193	N/A	N/A	$16,249,193	$16,249,193
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$391,552,289	N/A	N/A	$16,249,193	$16,249,193
Total Benefits	$391,552,289	$159,167,956	$159,167,956	$175,417,149	$210,743,822
Costs					
Utility Project Costs					
Customer Services	N/A	$410,449	$410,449	$410,449	$410,449
Project Administration	N/A	$12,384,917	$12,384,917	$12,384,917	$12,384,917
Advertising & Promotion	N/A	$2,624,391	$2,624,391	$2,624,391	$2,624,391
Measurement & Verification	N/A	$484,758	$484,758	$484,758	$484,758
Rebates	N/A	$16,249,193	$16,249,193	$16,249,193	$16,249,193
Other	N/A	$42,465	$42,465	$42,465	$42,465
Subtotal	N/A	$32,196,172	$32,196,172	$32,196,172	$32,196,172
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$375,303,096	N/A	N/A
Subtotal	N/A	N/A	$375,303,096	N/A	N/A
Participant Costs					
Incremental Capital Costs	$22,063,431	N/A	N/A	$22,063,431	$22,063,431
Incremental O&M Costs	$807,075	N/A	N/A	$807,075	$807,075
Subtotal	$22,870,506	N/A	N/A	$22,870,506	$22,870,506
Total Costs	$22,870,506	$32,196,172	$407,499,269	$55,066,679	$55,066,679
Net Benefit (Cost)	$368,681,783	$126,971,783	($248,331,313)	$120,350,470	$155,677,143
Benefit/Cost Ratio	17.12	4.94	0.39	3.19	3.83

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	22.47%
Gross Load Factor at Customer	E	11.27%
Transmission Loss Factor (Energy)	F	8.0614%
Transmission Loss Factor (Demand)	G	8.7406%
Societal Net Benefit (Cost)	H	$617

Program Summary per Participant		
Gross kW Saved at Customer	I	0.18 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.04 kW
Gross Annual kWh Saved at Customer	(B x E x I)	174 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	189 kWh

Program Summary All Participants		
Total Participants	J	1,431,016
Total Budget	K	**$32,196,172**
Gross kW Saved at Customer	(J x I)	252,258 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**62,100 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	249,103,936 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**270,945,958 kWh**
Societal Net Benefits	(J x I x H)	**$155,677,143**
Utility Program Cost per kWh Lifetime		**$0.0079**
Utility Program Cost per kW at Gen		**$518**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Residential Segment with Indirect Participants**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$5,031,153
Incentive Costs =	$3,317,516
16) Total Utility Project Costs =	$8,348,670
17) Direct Participant Costs ($/Part.) =	$21
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$1
Escalation Rate =	2.16%
20) Project Life (Years) =	14.2
21) Avg. Dth/Part. Saved =	0.51
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	608,321
24) Total Annual Dth Saved =	310,621
25) Incentive/Participant =	$5.45

Cost Summary	2020
Utility Cost per Participant =	$14
Cost per Participant per Dth =	$67.15
Lifetime Energy Reduction (Dth)	4,406,711
Societal Cost per Dth	$3.95

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($16,334,412)	0.56
Utility Cost Test	$12,662,346	2.53
Societal Test	$20,405,273	2.17
Participant Test	$38,197,979	4.05

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Residential Segment with Indirect Participants**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$2,583,725
Incentive Costs =	$4,617,674
16) Total Utility Project Costs =	$7,201,398
17) Direct Participant Costs ($/Part.) =	$31
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$2
Escalation Rate =	2.16%
20) Project Life (Years) =	14.7
21) Avg. Dth/Part. Saved =	0.62
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	585,285
24) Total Annual Dth Saved =	364,913
25) Incentive/Participant =	$7.89

Cost Summary	2020
Utility Cost per Participant =	$12
Cost per Participant per Dth =	$69.06
Lifetime Energy Reduction (Dth)	5,368,967
Societal Cost per Dth	$3.83

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($16,913,444)	0.60
Utility Cost Test	$18,025,251	3.50
Societal Test	$25,881,590	2.26
Participant Test	$44,787,331	3.49

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Residential Segment Direct Participants Only**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$3,928,643
Incentive Costs =	$3,317,516
16) Total Utility Project Costs =	$7,246,159
17) Direct Participant Costs ($/Part.) =	$56
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$3
Escalation Rate =	2.16%
20) Project Life (Years) =	14.2
21) Avg. Dth/Part. Saved =	1.40
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	222,609
24) Total Annual Dth Saved =	310,621
25) Incentive/Participant =	$14.90

Cost Summary	**2020**
Utility Cost per Participant =	$33
Cost per Participant per Dth =	$63.60
Lifetime Energy Reduction (Dth)	4,406,711
Societal Cost per Dth	$3.70

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($15,231,902)	0.58
Utility Cost Test	$13,764,856	2.92
Societal Test	$21,507,783	2.32
Participant Test	$38,197,979	4.05

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Residential Segment Direct Participants Only**

Input Data 2020

1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$1,986,826
Incentive Costs =	$4,617,674
16) Total Utility Project Costs =	$6,604,500
17) Direct Participant Costs ($/Part.) =	$57
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$3
Escalation Rate =	2.16%
20) Project Life (Years) =	14.7
21) Avg. Dth/Part. Saved =	1.16
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	315,813
24) Total Annual Dth Saved =	364,913
25) Incentive/Participant =	$14.62

Cost Summary	2020
Utility Cost per Participant =	$21
Cost per Participant per Dth =	$67.42
Lifetime Energy Reduction (Dth)	5,368,967
Societal Cost per Dth	$3.72

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($16,316,545)	0.61
Utility Cost Test	$18,622,149	3.82
Societal Test	$26,478,488	2.32
Participant Test	$44,787,331	3.49

RESIDENTIAL SEGMENT ENERGY EFFICIENCY TOTAL — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$529,506	$529,506	$529,506	$529,506
T & D	N/A	$335,741	$335,741	$335,741	$335,741
Marginal Energy	N/A	$2,143,014	$2,143,014	$2,143,014	$2,143,014
Environmental Externality	N/A	N/A	N/A	N/A	$792,855
Subtotal	N/A	$3,008,261	$3,008,261	$3,008,261	$3,801,116
Participant Benefits					
Bill Reduction - Electric	$8,585,125	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$472,775	N/A	N/A	$472,775	$472,775
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$190,694	N/A	N/A	$190,694	$190,694
Subtotal	$9,248,594	N/A	N/A	$663,469	$663,469
Total Benefits	$9,248,594	$3,008,261	$3,008,261	$3,671,730	$4,464,585
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$504,260	$504,260	$504,260	$504,260
Advertising & Promotion	N/A	$5,895	$5,895	$5,895	$5,895
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$472,775	$472,775	$472,775	$472,775
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$982,930	$982,930	$982,930	$982,930
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$8,585,125	N/A	N/A
Subtotal	N/A	N/A	$8,585,125	N/A	N/A
Participant Costs					
Incremental Capital Costs	$472,775	N/A	N/A	$472,775	$472,775
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$472,775	N/A	N/A	$472,775	$472,775
Total Costs	$472,775	$982,930	$9,568,055	$1,455,705	$1,455,705
Net Benefit (Cost)	$8,775,819	$2,025,331	($6,559,794)	$2,216,025	$3,008,880
Benefit/Cost Ratio	19.56	3.06	0.31	2.52	3.07

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	19.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	13.22%
Gross Load Factor at Customer	E	12.16%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$734

Program Summary per Participant		
Gross kW Saved at Customer	I	0.14 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.02 kW
Gross Annual kWh Saved at Customer	(B x E x I)	150 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	164 kWh

Program Summary All Participants		
Total Participants	J	29,000
Total Budget	K	**$982,930**
Gross kW Saved at Customer	(J x I)	4,097 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**594 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	4,362,793 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**4,762,874 kWh**
Societal Net Benefits	(J x I x H)	**$3,008,880**
Utility Program Cost per kWh Lifetime		**$0.0108**
Utility Program Cost per kW at Gen		**$1,655**

RESIDENTIAL SEGMENT ENERGY EFFICIENCY TOTAL — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$27,877,390	$27,877,390	$27,877,390	$27,877,390
T & D	N/A	$17,582,334	$17,582,334	$17,582,334	$17,582,334
Marginal Energy	N/A	$100,263,413	$100,263,413	$100,263,413	$100,263,413
Environmental Externality	N/A	N/A	N/A	N/A	$35,306,453
Subtotal	N/A	$145,723,137	$145,723,137	$145,723,137	$181,029,590
Participant Benefits					
Bill Reduction - Electric	$375,105,657	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$15,477,772	N/A	N/A	$15,477,772	$15,477,772
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$390,583,429	N/A	N/A	$15,477,772	$15,477,772
Total Benefits	$390,583,429	$145,723,137	$145,723,137	$161,200,909	$196,507,362
Costs					
Utility Project Costs					
Customer Services	N/A	$410,449	$410,449	$410,449	$410,449
Project Administration	N/A	$3,154,391	$3,154,391	$3,154,391	$3,154,391
Advertising & Promotion	N/A	$1,530,543	$1,530,543	$1,530,543	$1,530,543
Measurement & Verification	N/A	$298,508	$298,508	$298,508	$298,508
Rebates	N/A	$15,477,772	$15,477,772	$15,477,772	$15,477,772
Other	N/A	$42,465	$42,465	$42,465	$42,465
Subtotal	N/A	$20,914,127	$20,914,127	$20,914,127	$20,914,127
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$375,105,657	N/A	N/A
Subtotal	N/A	N/A	$375,105,657	N/A	N/A
Participant Costs					
Incremental Capital Costs	$22,012,300	N/A	N/A	$22,012,300	$22,012,300
Incremental O&M Costs	$807,075	N/A	N/A	$807,075	$807,075
Subtotal	$22,819,375	N/A	N/A	$22,819,375	$22,819,375
Total Costs	$22,819,375	$20,914,127	$396,019,785	$43,733,502	$43,733,502
Net Benefit (Cost)	$367,764,054	$124,809,010	($250,296,647)	$117,467,407	$152,773,860
Benefit/Cost Ratio	17.12	6.97	0.37	3.69	4.49

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	20.55%
Gross Load Factor at Customer	E	14.79%
Transmission Loss Factor (Energy)	F	8.0612%
Transmission Loss Factor (Demand)	G	8.7219%
Societal Net Benefit (Cost)	H	$795

Program Summary per Participant		
Gross kW Saved at Customer	I	0.24 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.05 kW
Gross Annual kWh Saved at Customer	(B x E x I)	305 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	331 kWh

Program Summary All Participants		
Total Participants	J	817,050
Total Budget	K	**$20,914,127**
Gross kW Saved at Customer	(J x I)	192,134 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**43,260 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	248,951,002 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**270,779,000 kWh**
Societal Net Benefits	(J x I x H)	**$152,773,860**
Utility Program Cost per kWh Lifetime		**$0.0052**
Utility Program Cost per kW at Gen		**$483**

EFFICIENT NEW HOME CONSTRUCTION — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$891,374	$891,374	$891,374	$891,374
T & D	N/A	$565,484	$565,484	$565,484	$565,484
Marginal Energy	N/A	$464,202	$464,202	$464,202	$464,202
Environmental Externality	N/A	N/A	N/A	N/A	$168,838
Subtotal	N/A	$1,921,061	$1,921,061	$1,921,061	$2,089,898
Participant Benefits					
Bill Reduction - Electric	$1,838,511	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$429,912	N/A	N/A	$429,912	$429,912
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$52,902	N/A	N/A	$52,902	$52,902
Subtotal	$2,321,325	N/A	N/A	$482,814	$482,814
Total Benefits	$2,321,325	$1,921,061	$1,921,061	$2,403,875	$2,572,712
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$21,835	$21,835	$21,835	$21,835
Advertising & Promotion	N/A	$50,605	$50,605	$50,605	$50,605
Measurement & Verification	N/A	$250,000	$250,000	$250,000	$250,000
Rebates	N/A	$429,912	$429,912	$429,912	$429,912
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$752,352	$752,352	$752,352	$752,352
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,838,511	N/A	N/A
Subtotal	N/A	N/A	$1,838,511	N/A	N/A
Participant Costs					
Incremental Capital Costs	$764,234	N/A	N/A	$764,234	$764,234
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$764,234	N/A	N/A	$764,234	$764,234
Total Costs	$764,234	$752,352	$2,590,863	$1,516,586	$1,516,586
Net Benefit (Cost)	$1,557,091	$1,168,709	($669,802)	$887,289	$1,056,127
Benefit/Cost Ratio	3.04	2.55	0.74	1.59	1.70

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	19.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	79.43%
Gross Load Factor at Customer	E	9.40%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$938

Program Summary per Participant		
Gross kW Saved at Customer	I	0.51 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.44 kW
Gross Annual kWh Saved at Customer	(B x E x I)	417 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	455 kWh

Program Summary All Participants		
Total Participants	J	2,226
Total Budget	K	**$752,352**
Gross kW Saved at Customer	(J x I)	1,126 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**981 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	927,350 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,012,391 kWh**
Societal Net Benefits	(J x I x H)	**$1,056,127**

Utility Program Cost per kWh Lifetime	**$0.0387**
Utility Program Cost per kW at Gen	**$767**

EFFICIENT NEW HOME CONSTRUCTION — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$741,858	$741,858	$741,858	$741,858
T & D	N/A	$470,668	$470,668	$470,668	$470,668
Marginal Energy	N/A	$2,259,782	$2,259,782	$2,259,782	$2,259,782
Environmental Externality	N/A	N/A	N/A	N/A	$823,139
Subtotal	N/A	$3,472,309	$3,472,309	$3,472,309	$4,295,448
Participant Benefits					
Bill Reduction - Electric	$9,017,180	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$598,350	N/A	N/A	$598,350	$598,350
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$14,287	N/A	N/A	$14,287	$14,287
Subtotal	$9,629,817	N/A	N/A	$612,637	$612,637
Total Benefits	$9,629,817	$3,472,309	$3,472,309	$4,084,946	$4,908,085
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$34,698	$34,698	$34,698	$34,698
Advertising & Promotion	N/A	$42,113	$42,113	$42,113	$42,113
Measurement & Verification	N/A	$267,790	$267,790	$267,790	$267,790
Rebates	N/A	$598,350	$598,350	$598,350	$598,350
Other	N/A	$42,465	$42,465	$42,465	$42,465
Subtotal	N/A	$985,416	$985,416	$985,416	$985,416
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$9,017,180	N/A	N/A
Subtotal	N/A	N/A	$9,017,180	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,229,653	N/A	N/A	$1,229,653	$1,229,653
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,229,653	N/A	N/A	$1,229,653	$1,229,653
Total Costs	$1,229,653	$985,416	$10,002,596	$2,215,069	$2,215,069
Net Benefit (Cost)	$8,400,164	$2,486,893	($6,530,287)	$1,869,877	$2,693,016
Benefit/Cost Ratio	7.83	3.52	0.35	1.84	2.22

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	20.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	81.29%
Gross Load Factor at Customer	E	54.97%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$2,949

Program Summary per Participant		
Gross kW Saved at Customer	I	0.31 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.28 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,498 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,635 kWh

Program Summary All Participants		
Total Participants	J	2,936
Total Budget	K	**$985,416**
Gross kW Saved at Customer	(J x I)	913 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**814 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	4,397,265 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**4,800,508 kWh**
Societal Net Benefits	(J x I x H)	**$2,693,016**

Utility Program Cost per kWh Lifetime	**$0.0103**
Utility Program Cost per kW at Gen	**$1,211**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Efficient New Home Construction**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$1,081,194
Incentive Costs =	$492,367
16) Total Utility Project Costs =	$1,573,561
17) Direct Participant Costs ($/Part.) =	$2,112
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$3
Escalation Rate =	2.16%
20) Project Life (Years) =	20.0
21) Avg. Dth/Part. Saved =	31.79
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	960
24) Total Annual Dth Saved =	30,514
25) Incentive/Participant =	$512.88

Cost Summary	2020
Utility Cost per Participant =	$1,639
Cost per Participant per Dth =	$118.03
Lifetime Energy Reduction (Dth)	609,936
Societal Cost per Dth	$5.10

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($2,624,658)	0.51
Utility Cost Test	$1,156,621	1.74
Societal Test	$1,348,651	1.43
Participant Test	$4,288,913	3.11

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Efficient New Home Construction**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$834,719
Incentive Costs =	$1,014,860
16) Total Utility Project Costs =	$1,849,579
17) Direct Participant Costs ($/Part.) =	$2,592
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$1
Escalation Rate =	2.16%
20) Project Life (Years) =	20.0
21) Avg. Dth/Part. Saved =	27.80
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	1,921
24) Total Annual Dth Saved =	53,409
25) Incentive/Participant =	$528.23

Cost Summary	2020
Utility Cost per Participant =	$963
Cost per Participant per Dth =	$127.88
Lifetime Energy Reduction (Dth)	1,067,929
Societal Cost per Dth	$5.45

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($3,689,828)	0.56
Utility Cost Test	$2,930,393	2.58
Societal Test	$1,952,417	1.34
Participant Test	$6,195,010	2.24

ENERGY EFFICIENT SHOWERHEAD — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$50,090	$50,090	$50,090	$50,090
T & D	N/A	$31,203	$31,203	$31,203	$31,203
Marginal Energy	N/A	$417,613	$417,613	$417,613	$417,613
Environmental Externality	N/A	N/A	N/A	N/A	$119,960
Subtotal	N/A	$498,906	$498,906	$498,906	$618,866
Participant Benefits					
Bill Reduction - Electric	$1,175,499	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$16,094	N/A	N/A	$16,094	$16,094
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$527,168	N/A	N/A	$527,168	$527,168
Subtotal	$1,718,761	N/A	N/A	$543,262	$543,262
Total Benefits	$1,718,761	$498,906	$498,906	$1,042,167	$1,162,127
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$20,169	$20,169	$20,169	$20,169
Advertising & Promotion	N/A	$5,038	$5,038	$5,038	$5,038
Measurement & Verification	N/A	$500	$500	$500	$500
Rebates	N/A	$16,094	$16,094	$16,094	$16,094
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$41,801	$41,801	$41,801	$41,801
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,175,499	N/A	N/A
Subtotal	N/A	N/A	$1,175,499	N/A	N/A
Participant Costs					
Incremental Capital Costs	$20,021	N/A	N/A	$20,021	$20,021
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$20,021	N/A	N/A	$20,021	$20,021
Total Costs	$20,021	$41,801	$1,217,300	$61,822	$61,822
Net Benefit (Cost)	$1,698,740	$457,105	($718,395)	$980,345	$1,100,305
Benefit/Cost Ratio	85.85	11.94	0.41	16.86	18.80

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

Input Summary and Totals

Program "Inputs" per Customer kW		
Lifetime (Weighted on Generator kWh)	A	10.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	73.53%
Gross Load Factor at Customer	E	100.00%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$9,633

Program Summary per Participant		
Gross kW Saved at Customer	I	0.06 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.05 kW
Gross Annual kWh Saved at Customer	(B x E x I)	521 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	569 kWh

Program Summary All Participants		
Total Participants	J	1,920
Total Budget	K	**$41,801**
Gross kW Saved at Customer	(J x I)	114 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**92 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,000,599 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,092,357 kWh**
Societal Net Benefits	(J x I x H)	**$1,100,305**

Utility Program Cost per kWh Lifetime	**$0.0038**
Utility Program Cost per kW at Gen	**$454**

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 ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$63,798	$63,798	$63,798	$63,798
T & D	N/A	$39,742	$39,742	$39,742	$39,742
Marginal Energy	N/A	$582,654	$582,654	$582,654	$582,654
Environmental Externality	N/A	N/A	N/A	N/A	$167,369
Subtotal	N/A	$686,194	$686,194	$686,194	$853,563
Participant Benefits					
Bill Reduction - Electric	$1,640,061	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	($358)	N/A	N/A	($358)	($358)
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,301,140	N/A	N/A	$1,301,140	$1,301,140
Subtotal	$2,940,843	N/A	N/A	$1,300,783	$1,300,783
Total Benefits	$2,940,843	$686,194	$686,194	$1,986,977	$2,154,346
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$11,560	$11,560	$11,560	$11,560
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	($358)	($358)	($358)	($358)
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$11,202	$11,202	$11,202	$11,202
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,640,061	N/A	N/A
Subtotal	N/A	N/A	$1,640,061	N/A	N/A
Participant Costs					
Incremental Capital Costs	$18,102	N/A	N/A	$18,102	$18,102
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$18,102	N/A	N/A	$18,102	$18,102
Total Costs	$18,102	$11,202	$1,651,263	$29,305	$29,305
Net Benefit (Cost)	$2,922,741	$674,992	($965,069)	$1,957,672	$2,125,041
Benefit/Cost Ratio	162.46	61.25	0.42	67.80	73.52

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	10.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	67.12%
Gross Load Factor at Customer	E	100.00%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$13,334

Program Summary per Participant		
Gross kW Saved at Customer	I	0.02 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.02 kW
Gross Annual kWh Saved at Customer	(B x E x I)	181 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	198 kWh

Program Summary All Participants		
Total Participants	J	7,716
Total Budget	K	**$11,202**
Gross kW Saved at Customer	(J x I)	159 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**117 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,396,039 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,524,060 kWh**
Societal Net Benefits	(J x I x H)	**$2,125,041**

Utility Program Cost per kWh Lifetime	**$0.0007**
Utility Program Cost per kW at Gen	**$96**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Energy Efficient Showerhead**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$146,942
Incentive Costs =	$146,824
16) Total Utility Project Costs =	$293,766
17) Direct Participant Costs ($/Part.) =	$10
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$34
Escalation Rate =	2.16%
20) Project Life (Years) =	10.0
21) Avg. Dth/Part. Saved =	2.22
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	14,080
24) Total Annual Dth Saved =	31,295
25) Incentive/Participant =	$10.43

Cost Summary	2020
Utility Cost per Participant =	$21
Cost per Participant per Dth =	$14.08
Lifetime Energy Reduction (Dth)	312,954
Societal Cost per Dth	$0.94

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($919,512)	0.64
Utility Cost Test	$1,331,584	5.53
Societal Test	$6,091,067	21.73
Participant Test	$7,025,826	48.85

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Energy Efficient Showerhead**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$89,814
Incentive Costs =	$95,824
16) Total Utility Project Costs =	$185,639
17) Direct Participant Costs ($/Part.) =	$2
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$12
Escalation Rate =	2.16%
20) Project Life (Years) =	10.0
21) Avg. Dth/Part. Saved =	0.77
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	57,122
24) Total Annual Dth Saved =	43,918
25) Incentive/Participant =	$1.68

Cost Summary	2020
Utility Cost per Participant =	$3
Cost per Participant per Dth =	$7.27
Lifetime Energy Reduction (Dth)	439,184
Societal Cost per Dth	$0.51

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($1,063,779)	0.68
Utility Cost Test	$2,095,297	12.29
Societal Test	$8,766,767	40.22
Participant Test	$9,851,943	74.69

ENERGY FEEDBACK RESIDENTIAL — 2020 — ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$759,490	$759,490	$759,490	$759,490
T & D	N/A	$464,289	$464,289	$464,289	$464,289
Marginal Energy	N/A	$3,417,976	$3,417,976	$3,417,976	$3,417,976
Environmental Externality	N/A	N/A	N/A	N/A	$690,838
Subtotal	N/A	$4,641,755	$4,641,755	$4,641,755	$5,332,593
Participant Benefits					
Bill Reduction - Electric	$5,731,163	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$5,731,163	N/A	N/A	$0	$0
Total Benefits	$5,731,163	$4,641,755	$4,641,755	$4,641,755	$5,332,593
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$2,146,030	$2,146,030	$2,146,030	$2,146,030
Advertising & Promotion	N/A	$8,645	$8,645	$8,645	$8,645
Measurement & Verification	N/A	$25,000	$25,000	$25,000	$25,000
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,179,675	$2,179,675	$2,179,675	$2,179,675
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,731,163	N/A	N/A
Subtotal	N/A	N/A	$5,731,163	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$2,179,675	$7,910,838	$2,179,675	$2,179,675
Net Benefit (Cost)	$5,731,163	$2,462,080	($3,269,083)	$2,462,080	$3,152,918
Benefit/Cost Ratio	INF	2.13	0.59	2.13	2.45

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	96.39%
Gross Load Factor at Customer	E	47.03%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$848

Program Summary per Participant

Gross kW Saved at Customer	I	0.01 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.02 kW
Gross Annual kWh Saved at Customer	(B x E x I)	60 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	65 kWh

Program Summary All Participants

Total Participants	J	256,320
Total Budget	K	**$2,179,675**
Gross kW Saved at Customer	(J x I)	3,718 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**3,930 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	15,317,788 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**16,722,476 kWh**
Societal Net Benefits	(J x I x H)	**$3,152,918**
Utility Program Cost per kWh Lifetime		**$0.0434**
Utility Program Cost per kW at Gen		**$555**

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 ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$896,822	$896,822	$896,822	$896,822
T & D	N/A	$548,243	$548,243	$548,243	$548,243
Marginal Energy	N/A	$3,920,585	$3,920,585	$3,920,585	$3,920,585
Environmental Externality	N/A	N/A	N/A	N/A	$792,425
Subtotal	N/A	$5,365,650	$5,365,650	$5,365,650	$6,158,075
Participant Benefits					
Bill Reduction - Electric	$6,573,924	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$6,573,924	N/A	N/A	$0	$0
Total Benefits	$6,573,924	$5,365,650	$5,365,650	$5,365,650	$6,158,075
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$965,027	$965,027	$965,027	$965,027
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$965,027	$965,027	$965,027	$965,027
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$6,573,924	N/A	N/A
Subtotal	N/A	N/A	$6,573,924	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$965,027	$7,538,951	$965,027	$965,027
Net Benefit (Cost)	$6,573,924	$4,400,624	($2,173,300)	$4,400,624	$5,193,048
Benefit/Cost Ratio	INF	5.56	0.71	5.56	6.38

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	105.68%
Gross Load Factor at Customer	E	50.08%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$1,297

Program Summary per Participant

Gross kW Saved at Customer	I	0.01 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.01 kW
Gross Annual kWh Saved at Customer	(B x E x I)	45 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	49 kWh

Program Summary All Participants

Total Participants	J	391,662
Total Budget	K	**$965,027**
Gross kW Saved at Customer	(J x I)	4,005 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**4,640 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	17,570,250 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**19,181,496 kWh**
Societal Net Benefits	(J x I x H)	**$5,193,048**

Utility Program Cost per kWh Lifetime	**$0.0168**
Utility Program Cost per kW at Gen	**$208**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Energy Feedback Residential**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$330,672
Incentive Costs =	$0
16) Total Utility Project Costs =	$330,672
17) Direct Participant Costs ($/Part.) =	$0
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	3.0
21) Avg. Dth/Part. Saved =	0.14
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	170,898
24) Total Annual Dth Saved =	24,762
25) Incentive/Participant =	$0.00

Cost Summary	2020
Utility Cost per Participant =	$2
Cost per Participant per Dth =	$13.35
Lifetime Energy Reduction (Dth)	74,287
Societal Cost per Dth	$4.45

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($501,748)	0.47
Utility Cost Test	$113,692	1.34
Societal Test	$144,440	1.44
Participant Test	$615,440	#DIV/0!

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Energy Feedback Residential**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$75,890
Incentive Costs =	$0
16) Total Utility Project Costs =	$75,890
17) Direct Participant Costs ($/Part.) =	$0
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	3.0
21) Avg. Dth/Part. Saved =	0.19
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	229,488
24) Total Annual Dth Saved =	43,135
25) Incentive/Participant =	$0.00

Cost Summary	2020
Utility Cost per Participant =	$0
Cost per Participant per Dth =	$1.76
Lifetime Energy Reduction (Dth)	129,406
Societal Cost per Dth	$0.59

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($373,901)	0.67
Utility Cost Test	$698,181	10.20
Societal Test	$751,743	10.91
Participant Test	$1,072,082	#DIV/0!

RESIDENTIAL HEATING — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$1,167,805	$1,167,805	$1,167,805	$1,167,805
T & D	N/A	$738,321	$738,321	$738,321	$738,321
Marginal Energy	N/A	$3,188,453	$3,188,453	$3,188,453	$3,188,453
Environmental Externality	N/A	N/A	N/A	N/A	$1,158,504
Subtotal	N/A	$5,094,579	$5,094,579	$5,094,579	$6,253,083
Participant Benefits					
Bill Reduction - Electric	$12,481,917	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,000,000	N/A	N/A	$1,000,000	$1,000,000
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$13,481,917	N/A	N/A	$1,000,000	$1,000,000
Total Benefits	$13,481,917	$5,094,579	$5,094,579	$6,094,579	$7,253,083
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$78,475	$78,475	$78,475	$78,475
Advertising & Promotion	N/A	$141,690	$141,690	$141,690	$141,690
Measurement & Verification	N/A	$13,537	$13,537	$13,537	$13,537
Rebates	N/A	$1,000,000	$1,000,000	$1,000,000	$1,000,000
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,233,702	$1,233,702	$1,233,702	$1,233,702
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$12,481,917	N/A	N/A
Subtotal	N/A	N/A	$12,481,917	N/A	N/A
Participant Costs					
Incremental Capital Costs	$2,120,000	N/A	N/A	$2,120,000	$2,120,000
Incremental O&M Costs	$1,771,708	N/A	N/A	$1,771,708	$1,771,708
Subtotal	$3,891,708	N/A	N/A	$3,891,708	$3,891,708
Total Costs	$3,891,708	$1,233,702	$13,715,619	$5,125,410	$5,125,410
Net Benefit (Cost)	$9,590,209	$3,860,877	($8,621,039)	$969,170	$2,127,673
Benefit/Cost Ratio	3.46	4.13	0.37	1.19	1.42

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	66.03%
Gross Load Factor at Customer	E	39.50%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$1,116

Program Summary per Participant		
Gross kW Saved at Customer	I	0.19 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.14 kW
Gross Annual kWh Saved at Customer	(B x E x I)	659 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	720 kWh

Program Summary All Participants		
Total Participants	J	10,000
Total Budget	K	**$1,233,702**
Gross kW Saved at Customer	(J x I)	1,906 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,380 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	6,594,400 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**7,199,127 kWh**
Societal Net Benefits	(J x I x H)	**$2,127,673**

Utility Program Cost per kWh Lifetime	**$0.0096**
Utility Program Cost per kW at Gen	**$894**

RESIDENTIAL HEATING — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$2,372,685	$2,372,685	$2,372,685	$2,372,685
T & D	N/A	$1,500,143	$1,500,143	$1,500,143	$1,500,143
Marginal Energy	N/A	$6,216,785	$6,216,785	$6,216,785	$6,216,785
Environmental Externality	N/A	N/A	N/A	N/A	$2,259,018
Subtotal	N/A	$10,089,613	$10,089,613	$10,089,613	$12,348,631
Participant Benefits					
Bill Reduction - Electric	$24,345,699	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,922,600	N/A	N/A	$1,922,600	$1,922,600
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$26,268,299	N/A	N/A	$1,922,600	$1,922,600
Total Benefits	$26,268,299	$10,089,613	$10,089,613	$12,012,213	$14,271,231
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$133,598	$133,598	$133,598	$133,598
Advertising & Promotion	N/A	$120,265	$120,265	$120,265	$120,265
Measurement & Verification	N/A	$10,435	$10,435	$10,435	$10,435
Rebates	N/A	$1,922,600	$1,922,600	$1,922,600	$1,922,600
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,186,898	$2,186,898	$2,186,898	$2,186,898
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$24,345,699	N/A	N/A
Subtotal	N/A	N/A	$24,345,699	N/A	N/A
Participant Costs					
Incremental Capital Costs	$4,076,147	N/A	N/A	$4,076,147	$4,076,147
Incremental O&M Costs	$3,419,724	N/A	N/A	$3,419,724	$3,419,724
Subtotal	$7,495,871	N/A	N/A	$7,495,871	$7,495,871
Total Costs	$7,495,871	$2,186,898	$26,532,597	$9,682,769	$9,682,769
Net Benefit (Cost)	$18,772,428	$7,902,715	($16,442,984)	$2,329,444	$4,588,462
Benefit/Cost Ratio	3.50	4.61	0.38	1.24	1.47

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	70.08%
Gross Load Factor at Customer	E	40.23%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$1,260

Program Summary per Participant		
Gross kW Saved at Customer	I	0.19 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.15 kW
Gross Annual kWh Saved at Customer	(B x E x I)	667 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	729 kWh

Program Summary All Participants		
Total Participants	J	19,227
Total Budget	K	**$2,186,898**
Gross kW Saved at Customer	(J x I)	3,641 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**2,798 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	12,831,348 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**14,008,022 kWh**
Societal Net Benefits	(J x I x H)	**$4,588,462**

Utility Program Cost per kWh Lifetime	**$0.0087**
Utility Program Cost per kW at Gen	**$782**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Residential Heating**

Input Data	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$386,713
Incentive Costs =	$2,130,700
16) Total Utility Project Costs =	$2,517,413
17) Direct Participant Costs ($/Part.) =	$590
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	18.1
21) Avg. Dth/Part. Saved =	9.78
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	12,272
24) Total Annual Dth Saved =	120,000
25) Incentive/Participant =	$173.62

Cost Summary	**2020**
Utility Cost per Participant =	$205
Cost per Participant per Dth =	$81.27
Lifetime Energy Reduction (Dth)	2,171,608
Societal Cost per Dth	$3.51

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($6,363,810)	0.61
Utility Cost Test	$7,473,450	3.97
Societal Test	$7,935,461	2.04
Participant Test	$15,237,022	3.11

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Residential Heating**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$274,510
Incentive Costs =	$2,843,800
16) Total Utility Project Costs =	$3,118,310
17) Direct Participant Costs ($/Part.) =	$1,070
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	18.1
21) Avg. Dth/Part. Saved =	17.49
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	9,287
24) Total Annual Dth Saved =	162,470
25) Incentive/Participant =	$306.21

Cost Summary	**2020**
Utility Cost per Participant =	$336
Cost per Participant per Dth =	$80.38
Lifetime Energy Reduction (Dth)	2,948,559
Societal Cost per Dth	$3.46

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($8,336,620)	0.62
Utility Cost Test	$10,436,041	4.35
Societal Test	$10,915,249	2.07
Participant Test	$20,532,696	3.07

HOME ENERGY SQUAD — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$690,615	$690,615	$690,615	$690,615
T & D	N/A	$436,960	$436,960	$436,960	$436,960
Marginal Energy	N/A	$2,358,783	$2,358,783	$2,358,783	$2,358,783
Environmental Externality	N/A	N/A	N/A	N/A	$867,480
Subtotal	N/A	$3,486,358	$3,486,358	$3,486,358	$4,353,838
Participant Benefits					
Bill Reduction - Electric	$9,340,079	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,516,060	N/A	N/A	$136,521	$136,521
Subtotal	$10,856,139	N/A	N/A	$136,521	$136,521
Total Benefits	$10,856,139	$3,486,358	$3,486,358	$3,622,879	$4,490,359
Costs					
Utility Project Costs					
Customer Services	N/A	$438,581	$438,581	$438,581	$438,581
Project Administration	N/A	$180,544	$180,544	$180,544	$180,544
Advertising & Promotion	N/A	$270,420	$270,420	$270,420	$270,420
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$889,545	$889,545	$889,545	$889,545
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$9,340,079	N/A	N/A
Subtotal	N/A	N/A	$9,340,079	N/A	N/A
Participant Costs					
Incremental Capital Costs	$49,292	N/A	N/A	$49,292	$49,292
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$49,292	N/A	N/A	$49,292	$49,292
Total Costs	$49,292	$889,545	$10,229,624	$938,837	$938,837
Net Benefit (Cost)	$10,806,847	$2,596,813	($6,743,266)	$2,684,042	$3,551,523
Benefit/Cost Ratio	220.24	3.92	0.34	3.86	4.78

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	19.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	17.35%
Gross Load Factor at Customer	E	12.88%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$834

Program Summary per Participant		
Gross kW Saved at Customer	I	0.79 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.15 kW
Gross Annual kWh Saved at Customer	(B x E x I)	894 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	976 kWh

Program Summary All Participants		
Total Participants	J	5,371
Total Budget	K	**$889,545**
Gross kW Saved at Customer	(J x I)	4,256 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**810 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	4,802,388 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**5,242,782 kWh**
Societal Net Benefits	(J x I x H)	**$3,551,523**

Utility Program Cost per kWh Lifetime	**$0.0088**
Utility Program Cost per kW at Gen	**$1,099**

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 ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$407,633	$407,633	$407,633	$407,633
T & D	N/A	$258,186	$258,186	$258,186	$258,186
Marginal Energy	N/A	$1,401,493	$1,401,493	$1,401,493	$1,401,493
Environmental Externality	N/A	N/A	N/A	N/A	$513,656
Subtotal	N/A	$2,067,312	$2,067,312	$2,067,312	$2,580,968
Participant Benefits					
Bill Reduction - Electric	$5,539,213	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$87,521	N/A	N/A	$87,521	$87,521
Subtotal	$5,626,734	N/A	N/A	$87,521	$87,521
Total Benefits	$5,626,734	$2,067,312	$2,067,312	$2,154,832	$2,668,489
Costs					
Utility Project Costs					
Customer Services	N/A	$410,219	$410,219	$410,219	$410,219
Project Administration	N/A	$174,484	$174,484	$174,484	$174,484
Advertising & Promotion	N/A	$133,530	$133,530	$133,530	$133,530
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$718,233	$718,233	$718,233	$718,233
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,539,213	N/A	N/A
Subtotal	N/A	N/A	$5,539,213	N/A	N/A
Participant Costs					
Incremental Capital Costs	$146,509	N/A	N/A	$146,509	$146,509
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$146,509	N/A	N/A	$146,509	$146,509
Total Costs	$146,509	$718,233	$6,257,446	$864,742	$864,742
Net Benefit (Cost)	$5,480,224	$1,349,079	($4,190,134)	$1,290,090	$1,803,747
Benefit/Cost Ratio	38.41	2.88	0.33	2.49	3.09

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	19.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	15.03%
Gross Load Factor at Customer	E	11.49%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$643

Program Summary per Participant		
Gross kW Saved at Customer	I	1.08 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.18 kW
Gross Annual kWh Saved at Customer	(B x E x I)	1,088 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,188 kWh

Program Summary All Participants		
Total Participants	J	2,596
Total Budget	K	**$718,233**
Gross kW Saved at Customer	(J x I)	2,806 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**462 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,823,900 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**3,082,860 kWh**
Societal Net Benefits	(J x I x H)	**$1,803,747**

Utility Program Cost per kWh Lifetime	**$0.0120**
Utility Program Cost per kW at Gen	**$1,553**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Home Energy Squad**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$1,306,189
Incentive Costs =	$0
16) Total Utility Project Costs =	$1,306,189
17) Direct Participant Costs ($/Part.) =	$64
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$39
Escalation Rate =	2.16%
20) Project Life (Years) =	9.7
21) Avg. Dth/Part. Saved =	9.21
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	2,200
24) Total Annual Dth Saved =	20,261
25) Incentive/Participant =	$0.00

Cost Summary	2020
Utility Cost per Participant =	$594
Cost per Participant per Dth =	$71.47
Lifetime Energy Reduction (Dth)	196,578
Societal Cost per Dth	$7.37

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($1,701,041)	0.38
Utility Cost Test	($280,578)	0.79
Societal Test	$638,008	1.44
Participant Test	$2,345,752	17.54

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Home Energy Squad**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$265,957
Incentive Costs =	$0
16) Total Utility Project Costs =	$265,957
17) Direct Participant Costs ($/Part.) =	$2
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$25
Escalation Rate =	2.16%
20) Project Life (Years) =	9.7
21) Avg. Dth/Part. Saved =	5.17
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	725
24) Total Annual Dth Saved =	3,750
25) Incentive/Participant =	$0.00

Cost Summary	2020
Utility Cost per Participant =	$367
Cost per Participant per Dth =	$71.36
Lifetime Energy Reduction (Dth)	36,376
Societal Cost per Dth	$7.36

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($339,025)	0.36
Utility Cost Test	($76,168)	0.71
Societal Test	$139,345	1.52
Participant Test	$479,606	291.67

HOME LIGHTING — 2020 — ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$9,859,193	$9,859,193	$9,859,193	$9,859,193
T & D	N/A	$6,234,698	$6,234,698	$6,234,698	$6,234,698
Marginal Energy	N/A	$40,456,217	$40,456,217	$40,456,217	$40,456,217
Environmental Externality	N/A	N/A	N/A	N/A	$14,774,702
Subtotal	N/A	$56,550,109	$56,550,109	$56,550,109	$71,324,811
Participant Benefits					
Bill Reduction - Electric	$158,200,887	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$4,166,400	N/A	N/A	$4,166,400	$4,166,400
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$162,367,287	N/A	N/A	$4,166,400	$4,166,400
Total Benefits	$162,367,287	$56,550,109	$56,550,109	$60,716,509	$75,491,211
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$1,401,206	$1,401,206	$1,401,206	$1,401,206
Advertising & Promotion	N/A	$1,894,040	$1,894,040	$1,894,040	$1,894,040
Measurement & Verification	N/A	$10,000	$10,000	$10,000	$10,000
Rebates	N/A	$4,166,400	$4,166,400	$4,166,400	$4,166,400
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$7,471,646	$7,471,646	$7,471,646	$7,471,646
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$158,200,887	N/A	N/A
Subtotal	N/A	N/A	$158,200,887	N/A	N/A
Participant Costs					
Incremental Capital Costs	$3,897,155	N/A	N/A	$3,897,155	$3,897,155
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$3,897,155	N/A	N/A	$3,897,155	$3,897,155
Total Costs	$3,897,155	$7,471,646	$165,672,533	$11,368,801	$11,368,801
Net Benefit (Cost)	$158,470,133	$49,078,463	($109,122,425)	$49,347,708	$64,122,410
Benefit/Cost Ratio	41.66	7.57	0.34	5.34	6.64

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	16.29%
Gross Load Factor at Customer	E	14.08%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$795

Program Summary per Participant		
Gross kW Saved at Customer	I	0.50 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.09 kW
Gross Annual kWh Saved at Customer	(B x E x I)	620 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	677 kWh

Program Summary All Participants		
Total Participants	J	160,418
Total Budget	K	**$7,471,646**
Gross kW Saved at Customer	(J x I)	80,664 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**14,409 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	99,503,916 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**108,628,729 kWh**
Societal Net Benefits	(J x I x H)	**$64,122,410**

Utility Program Cost per kWh Lifetime	**$0.0043**
Utility Program Cost per kW at Gen	**$519**

HOME LIGHTING — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$15,758,129	$15,758,129	$15,758,129	$15,758,129
T & D	N/A	$9,961,266	$9,961,266	$9,961,266	$9,961,266
Marginal Energy	N/A	$78,146,864	$78,146,864	$78,146,864	$78,146,864
Environmental Externality	N/A	N/A	N/A	N/A	$28,536,994
Subtotal	N/A	$103,866,259	$103,866,259	$103,866,259	$132,403,253
Participant Benefits					
Bill Reduction - Electric	$305,683,814	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$6,601,782	N/A	N/A	$6,601,782	$6,601,782
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$312,285,597	N/A	N/A	$6,601,782	$6,601,782
Total Benefits	$312,285,597	$103,866,259	$103,866,259	$110,468,041	$139,005,035
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$556,421	$556,421	$556,421	$556,421
Advertising & Promotion	N/A	$1,117,087	$1,117,087	$1,117,087	$1,117,087
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$6,601,782	$6,601,782	$6,601,782	$6,601,782
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$8,275,291	$8,275,291	$8,275,291	$8,275,291
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$305,683,814	N/A	N/A
Subtotal	N/A	N/A	$305,683,814	N/A	N/A
Participant Costs					
Incremental Capital Costs	$6,736,308	N/A	N/A	$6,736,308	$6,736,308
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$6,736,308	N/A	N/A	$6,736,308	$6,736,308
Total Costs	$6,736,308	$8,275,291	$313,959,105	$15,011,599	$15,011,599
Net Benefit (Cost)	$305,549,289	$95,590,968	($210,092,846)	$95,456,442	$123,993,436
Benefit/Cost Ratio	46.36	12.55	0.33	7.36	9.26

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	13.19%
Gross Load Factor at Customer	E	13.41%
Transmission Loss Factor (Energy)	F	7.9666%
Transmission Loss Factor (Demand)	G	8.7096%
Societal Net Benefit (Cost)	H	$747

Program Summary per Participant		
Gross kW Saved at Customer	I	0.49 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.07 kW
Gross Annual kWh Saved at Customer	(B x E x I)	578 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	627 kWh

Program Summary All Participants		
Total Participants	J	337,370
Total Budget	K	**$8,275,291**
Gross kW Saved at Customer	(J x I)	165,889 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**23,967 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	194,834,054 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**211,699,362 kWh**
Societal Net Benefits	(J x I x H)	**$123,993,436**
Utility Program Cost per kWh Lifetime		**$0.0025**
Utility Program Cost per kW at Gen		**$345**

INSULATION REBATE — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$134,631	$134,631	$134,631	$134,631
T & D	N/A	$85,159	$85,159	$85,159	$85,159
Marginal Energy	N/A	$1,241,134	$1,241,134	$1,241,134	$1,241,134
Environmental Externality	N/A	N/A	N/A	N/A	$288,379
Subtotal	N/A	$1,460,925	$1,460,925	$1,460,925	$1,749,303
Participant Benefits					
Bill Reduction - Electric	$2,915,287	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$206,972	N/A	N/A	$206,972	$206,972
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,032,856	N/A	N/A	$0	$0
Subtotal	$4,155,115	N/A	N/A	$206,972	$206,972
Total Benefits	$4,155,115	$1,460,925	$1,460,925	$1,667,897	$1,956,275
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$27,800	$27,800	$27,800	$27,800
Advertising & Promotion	N/A	$9,800	$9,800	$9,800	$9,800
Measurement & Verification	N/A	$4,000	$4,000	$4,000	$4,000
Rebates	N/A	$206,972	$206,972	$206,972	$206,972
Other	N/A	$3,500	$3,500	$3,500	$3,500
Subtotal	N/A	$252,072	$252,072	$252,072	$252,072
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,915,287	N/A	N/A
Subtotal	N/A	N/A	$2,915,287	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,612,667	N/A	N/A	$1,612,667	$1,612,667
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,612,667	N/A	N/A	$1,612,667	$1,612,667
Total Costs	$1,612,667	$252,072	$3,167,359	$1,864,739	$1,864,739
Net Benefit (Cost)	$2,542,448	$1,208,853	($1,706,434)	($196,842)	$91,537
Benefit/Cost Ratio	2.58	5.80	0.46	0.89	1.05

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	19.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	12.38%
Gross Load Factor at Customer	E	15.07%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$76

Program Summary per Participant		
Gross kW Saved at Customer	I	1.95 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.27 kW
Gross Annual kWh Saved at Customer	(B x E x I)	2,580 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	2,817 kWh

Program Summary All Participants		
Total Participants	J	619
Total Budget	K	**$252,072**
Gross kW Saved at Customer	(J x I)	1,210 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**164 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,597,125 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,743,586 kWh**
Societal Net Benefits	(J x I x H)	**$91,537**

Utility Program Cost per kWh Lifetime	**$0.0076**
Utility Program Cost per kW at Gen	**$1,534**

INSULATION REBATE — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$281,172	$281,172	$281,172	$281,172
T & D	N/A	$177,013	$177,013	$177,013	$177,013
Marginal Energy	N/A	$148,752	$148,752	$148,752	$148,752
Environmental Externality	N/A	N/A	N/A	N/A	$34,082
Subtotal	N/A	$606,937	$606,937	$606,937	$641,019
Participant Benefits					
Bill Reduction - Electric	$329,614	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$61,357	N/A	N/A	$61,357	$61,357
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$390,971	N/A	N/A	$61,357	$61,357
Total Benefits	$390,971	$606,937	$606,937	$668,293	$702,375
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$36,119	$36,119	$36,119	$36,119
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$1,795	$1,795	$1,795	$1,795
Rebates	N/A	$61,357	$61,357	$61,357	$61,357
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$99,271	$99,271	$99,271	$99,271
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$329,614	N/A	N/A
Subtotal	N/A	N/A	$329,614	N/A	N/A
Participant Costs					
Incremental Capital Costs	$369,582	N/A	N/A	$369,582	$369,582
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$369,582	N/A	N/A	$369,582	$369,582
Total Costs	$369,582	$99,271	$428,886	$468,853	$468,853
Net Benefit (Cost)	$21,389	$507,665	$178,051	$199,440	$233,522
Benefit/Cost Ratio	1.06	6.11	1.42	1.43	1.50

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

Input Summary and Totals

Program "Inputs" per Customer kW		
Lifetime (Weighted on Generator kWh)	A	14.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	92.12%
Gross Load Factor at Customer	E	6.74%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$594

Program Summary per Participant		
Gross kW Saved at Customer	I	0.98 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.99 kW
Gross Annual kWh Saved at Customer	(B x E x I)	579 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	632 kWh

Program Summary All Participants		
Total Participants	J	401
Total Budget	K	**$99,271**
Gross kW Saved at Customer	(J x I)	393 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**397 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	232,001 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**253,276 kWh**
Societal Net Benefits	(J x I x H)	**$233,522**
Utility Program Cost per kWh Lifetime		**$0.0280**
Utility Program Cost per kW at Gen		**$250**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Insulation Rebate**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$100,625
Incentive Costs =	$229,810
16) Total Utility Project Costs =	$330,435
17) Direct Participant Costs ($/Part.) =	$2,150
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	18.0
21) Avg. Dth/Part. Saved =	23.27
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	773
24) Total Annual Dth Saved =	17,985
25) Incentive/Participant =	$297.30

Cost Summary	2020
Utility Cost per Participant =	$427
Cost per Participant per Dth =	$110.77
Lifetime Energy Reduction (Dth)	324,365
Societal Cost per Dth	$4.96

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($899,124)	0.62
Utility Cost Test	$1,146,712	4.47
Societal Test	$727,300	1.45
Participant Test	$1,752,683	2.05

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Insulation Rebate**

Input Data	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$34,524
Incentive Costs =	$368,328
16) Total Utility Project Costs =	$402,852
17) Direct Participant Costs ($/Part.) =	$1,354
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	13.6
21) Avg. Dth/Part. Saved =	20.25
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	1,697
24) Total Annual Dth Saved =	34,356
25) Incentive/Participant =	$217.09

Cost Summary	**2020**
Utility Cost per Participant =	$237
Cost per Participant per Dth =	$78.58
Lifetime Energy Reduction (Dth)	466,340
Societal Cost per Dth	$5.00

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($1,267,429)	0.64
Utility Cost Test	$1,842,853	5.57
Societal Test	$948,294	1.41
Participant Test	$2,353,610	2.02

REFRIGERATOR RECYCLING — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$391,043	$391,043	$391,043	$391,043
T & D	N/A	$242,396	$242,396	$242,396	$242,396
Marginal Energy	N/A	$2,081,196	$2,081,196	$2,081,196	$2,081,196
Environmental Externality	N/A	N/A	N/A	N/A	$666,178
Subtotal	N/A	$2,714,636	$2,714,636	$2,714,636	$3,380,814
Participant Benefits					
Bill Reduction - Electric	$6,314,704	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$241,500	N/A	N/A	$241,500	$241,500
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$6,556,204	N/A	N/A	$241,500	$241,500
Total Benefits	$6,556,204	$2,714,636	$2,714,636	$2,956,136	$3,622,314
Costs					
Utility Project Costs					
Customer Services	N/A	$7,000	$7,000	$7,000	$7,000
Project Administration	N/A	$517,490	$517,490	$517,490	$517,490
Advertising & Promotion	N/A	$206,944	$206,944	$206,944	$206,944
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$241,500	$241,500	$241,500	$241,500
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$972,934	$972,934	$972,934	$972,934
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$6,314,704	N/A	N/A
Subtotal	N/A	N/A	$6,314,704	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$972,934	$7,287,638	$972,934	$972,934
Net Benefit (Cost)	$6,556,204	$1,741,702	($4,573,002)	$1,983,202	$2,649,380
Benefit/Cost Ratio	INF	2.79	0.37	3.04	3.72

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	8.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	65.98%
Gross Load Factor at Customer	E	60.34%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$2,039

Program Summary per Participant

Gross kW Saved at Customer	I	0.18 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.13 kW
Gross Annual kWh Saved at Customer	(B x E x I)	967 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	1,056 kWh

Program Summary All Participants

Total Participants	J	7,100
Total Budget	K	**$972,934**
Gross kW Saved at Customer	(J x I)	1,299 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**940 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	6,867,053 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**7,496,782 kWh**
Societal Net Benefits	(J x I x H)	**$2,649,380**

Utility Program Cost per kWh Lifetime	**$0.0160**
Utility Program Cost per kW at Gen	**$1,035**

REFRIGERATOR RECYCLING — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$224,414	$224,414	$224,414	$224,414
T & D	N/A	$139,081	$139,081	$139,081	$139,081
Marginal Energy	N/A	$1,173,831	$1,173,831	$1,173,831	$1,173,831
Environmental Externality	N/A	N/A	N/A	N/A	$376,148
Subtotal	N/A	$1,537,326	$1,537,326	$1,537,326	$1,913,474
Participant Benefits					
Bill Reduction - Electric	$3,561,640	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$259,375	N/A	N/A	$259,375	$259,375
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$3,821,015	N/A	N/A	$259,375	$259,375
Total Benefits	$3,821,015	$1,537,326	$1,537,326	$1,796,701	$2,172,849
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$483,189	$483,189	$483,189	$483,189
Advertising & Promotion	N/A	$117,059	$117,059	$117,059	$117,059
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$259,375	$259,375	$259,375	$259,375
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$859,623	$859,623	$859,623	$859,623
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$3,561,640	N/A	N/A
Subtotal	N/A	N/A	$3,561,640	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$859,623	$4,421,263	$859,623	$859,623
Net Benefit (Cost)	$3,821,015	$677,703	($2,883,937)	$937,078	$1,313,226
Benefit/Cost Ratio	INF	1.79	0.35	2.09	2.53

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	8.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	66.63%
Gross Load Factor at Customer	E	60.09%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$1,766

Program Summary per Participant		
Gross kW Saved at Customer	I	0.14 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.10 kW
Gross Annual kWh Saved at Customer	(B x E x I)	722 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	788 kWh

Program Summary All Participants		
Total Participants	J	5,425
Total Budget	K	**$859,623**
Gross kW Saved at Customer	(J x I)	744 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**543 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	3,915,064 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**4,274,087 kWh**
Societal Net Benefits	(J x I x H)	**$1,313,226**

Utility Program Cost per kWh Lifetime	**$0.0252**
Utility Program Cost per kW at Gen	**$1,582**

RESIDENTIAL COOLING — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$4,047,400	$4,047,400	$4,047,400	$4,047,400
T & D	N/A	$2,545,746	$2,545,746	$2,545,746	$2,545,746
Marginal Energy	N/A	$2,491,961	$2,491,961	$2,491,961	$2,491,961
Environmental Externality	N/A	N/A	N/A	N/A	$570,401
Subtotal	N/A	$9,085,108	$9,085,108	$9,085,108	$9,655,509
Participant Benefits					
Bill Reduction - Electric	$5,555,311	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$3,552,450	N/A	N/A	$3,552,450	$3,552,450
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$9,107,761	N/A	N/A	$3,552,450	$3,552,450
Total Benefits	$9,107,761	$9,085,108	$9,085,108	$12,637,558	$13,207,959
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$364,869	$364,869	$364,869	$364,869
Advertising & Promotion	N/A	$212,074	$212,074	$212,074	$212,074
Measurement & Verification	N/A	$9,967	$9,967	$9,967	$9,967
Rebates	N/A	$3,552,450	$3,552,450	$3,552,450	$3,552,450
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$4,139,360	$4,139,360	$4,139,360	$4,139,360
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,555,311	N/A	N/A
Subtotal	N/A	N/A	$5,555,311	N/A	N/A
Participant Costs					
Incremental Capital Costs	$5,723,187	N/A	N/A	$5,723,187	$5,723,187
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$5,723,187	N/A	N/A	$5,723,187	$5,723,187
Total Costs	$5,723,187	$4,139,360	$9,694,671	$9,862,547	$9,862,547
Net Benefit (Cost)	$3,384,574	$4,945,748	($609,563)	$2,775,011	$3,345,412
Benefit/Cost Ratio	1.59	2.19	0.94	1.28	1.34

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

Input Summary and Totals

Program "Inputs" per Customer kW		
Lifetime (Weighted on Generator kWh)	A	15.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	90.00%
Gross Load Factor at Customer	E	7.50%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$611

Program Summary per Participant		
Gross kW Saved at Customer	I	0.47 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.47 kW
Gross Annual kWh Saved at Customer	(B x E x I)	311 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	339 kWh

Program Summary All Participants		
Total Participants	J	11,582
Total Budget	K	**$4,139,360**
Gross kW Saved at Customer	(J x I)	5,479 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**5,406 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	3,600,307 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**3,930,467 kWh**
Societal Net Benefits	(J x I x H)	**$3,345,412**

Utility Program Cost per kWh Lifetime	**$0.0696**
Utility Program Cost per kW at Gen	**$766**

RESIDENTIAL COOLING — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$6,793,234	$6,793,234	$6,793,234	$6,793,234
T & D	N/A	$4,274,439	$4,274,439	$4,274,439	$4,274,439
Marginal Energy	N/A	$4,086,493	$4,086,493	$4,086,493	$4,086,493
Environmental Externality	N/A	N/A	N/A	N/A	$935,821
Subtotal	N/A	$15,154,166	$15,154,166	$15,154,166	$16,089,987
Participant Benefits					
Bill Reduction - Electric	$9,128,496	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$5,459,900	N/A	N/A	$5,459,900	$5,459,900
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$14,588,396	N/A	N/A	$5,459,900	$5,459,900
Total Benefits	$14,588,396	$15,154,166	$15,154,166	$20,614,066	$21,549,887
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$340,645	$340,645	$340,645	$340,645
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$18,488	$18,488	$18,488	$18,488
Rebates	N/A	$5,459,900	$5,459,900	$5,459,900	$5,459,900
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$5,819,033	$5,819,033	$5,819,033	$5,819,033
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$9,128,496	N/A	N/A
Subtotal	N/A	N/A	$9,128,496	N/A	N/A
Participant Costs					
Incremental Capital Costs	$8,887,543	N/A	N/A	$8,887,543	$8,887,543
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$8,887,543	N/A	N/A	$8,887,543	$8,887,543
Total Costs	$8,887,543	$5,819,033	$14,947,529	$14,706,575	$14,706,575
Net Benefit (Cost)	$5,700,854	$9,335,134	$206,637	$5,907,491	$6,843,312
Benefit/Cost Ratio	1.64	2.60	1.01	1.40	1.47

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	15.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	89.25%
Gross Load Factor at Customer	E	7.29%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$744

Program Summary per Participant		
Gross kW Saved at Customer	I	0.47 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.46 kW
Gross Annual kWh Saved at Customer	(B x E x I)	298 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	325 kWh

Program Summary All Participants		
Total Participants	J	19,726
Total Budget	K	**$5,819,033**
Gross kW Saved at Customer	(J x I)	9,194 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**8,998 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	5,873,134 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**6,411,719 kWh**
Societal Net Benefits	(J x I x H)	**$6,843,312**

Utility Program Cost per kWh Lifetime	**$0.0594**
Utility Program Cost per kW at Gen	**$647**

SCHOOL EDUCATION KITS — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$529,506	$529,506	$529,506	$529,506
T & D	N/A	$335,741	$335,741	$335,741	$335,741
Marginal Energy	N/A	$2,143,014	$2,143,014	$2,143,014	$2,143,014
Environmental Externality	N/A	N/A	N/A	N/A	$792,855
Subtotal	N/A	$3,008,261	$3,008,261	$3,008,261	$3,801,116
Participant Benefits					
Bill Reduction - Electric	$8,585,125	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$472,775	N/A	N/A	$472,775	$472,775
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$190,694	N/A	N/A	$190,694	$190,694
Subtotal	$9,248,594	N/A	N/A	$663,469	$663,469
Total Benefits	$9,248,594	$3,008,261	$3,008,261	$3,671,730	$4,464,585
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$504,260	$504,260	$504,260	$504,260
Advertising & Promotion	N/A	$5,895	$5,895	$5,895	$5,895
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$472,775	$472,775	$472,775	$472,775
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$982,930	$982,930	$982,930	$982,930
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$8,585,125	N/A	N/A
Subtotal	N/A	N/A	$8,585,125	N/A	N/A
Participant Costs					
Incremental Capital Costs	$472,775	N/A	N/A	$472,775	$472,775
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$472,775	N/A	N/A	$472,775	$472,775
Total Costs	$472,775	$982,930	$9,568,055	$1,455,705	$1,455,705
Net Benefit (Cost)	$8,775,819	$2,025,331	($6,559,794)	$2,216,025	$3,008,880
Benefit/Cost Ratio	19.56	3.06	0.31	2.52	3.07

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	19.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	13.22%
Gross Load Factor at Customer	E	12.16%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$734

Program Summary per Participant		
Gross kW Saved at Customer	I	0.14 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.02 kW
Gross Annual kWh Saved at Customer	(B x E x I)	150 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	164 kWh

Program Summary All Participants		
Total Participants	J	29,000
Total Budget	K	**$982,930**
Gross kW Saved at Customer	(J x I)	4,097 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**594 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	4,362,793 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**4,762,874 kWh**
Societal Net Benefits	(J x I x H)	**$3,008,880**

Utility Program Cost per kWh Lifetime	**$0.0108**
Utility Program Cost per kW at Gen	**$1,655**

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 ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$317,320	$317,320	$317,320	$317,320
T & D	N/A	$200,718	$200,718	$200,718	$200,718
Marginal Energy	N/A	$2,259,881	$2,259,881	$2,259,881	$2,259,881
Environmental Externality	N/A	N/A	N/A	N/A	$842,651
Subtotal	N/A	$2,777,918	$2,777,918	$2,777,918	$3,620,569
Participant Benefits					
Bill Reduction - Electric	$9,039,501	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$546,889	N/A	N/A	$546,889	$546,889
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,216,727	N/A	N/A	$1,216,727	$1,216,727
Subtotal	$10,803,117	N/A	N/A	$1,763,617	$1,763,617
Total Benefits	$10,803,117	$2,777,918	$2,777,918	$4,541,535	$5,384,186
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$401,814	$401,814	$401,814	$401,814
Advertising & Promotion	N/A	$488	$488	$488	$488
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$546,889	$546,889	$546,889	$546,889
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$949,192	$949,192	$949,192	$949,192
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$9,039,501	N/A	N/A
Subtotal	N/A	N/A	$9,039,501	N/A	N/A
Participant Costs					
Incremental Capital Costs	$496,215	N/A	N/A	$496,215	$496,215
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$496,215	N/A	N/A	$496,215	$496,215
Total Costs	$496,215	$949,192	$9,988,693	$1,445,407	$1,445,407
Net Benefit (Cost)	$10,306,903	$1,828,726	($7,210,774)	$3,096,128	$3,938,779
Benefit/Cost Ratio	21.77	2.93	0.28	3.14	3.73

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	9.83%
Gross Load Factor at Customer	E	12.82%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$908

Program Summary per Participant		
Gross kW Saved at Customer	I	0.14 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.02 kW
Gross Annual kWh Saved at Customer	(B x E x I)	163 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	178 kWh

Program Summary All Participants		
Total Participants	J	29,909
Total Budget	K	**$949,192**
Gross kW Saved at Customer	(J x I)	4,336 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**467 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	4,870,740 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**5,317,402 kWh**
Societal Net Benefits	(J x I x H)	**$3,938,779**
Utility Program Cost per kWh Lifetime		**$0.0100**
Utility Program Cost per kW at Gen		**$2,031**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **School Education Kits**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$262,015
Incentive Costs =	$64,350
16) Total Utility Project Costs =	$326,365
17) Direct Participant Costs ($/Part.) =	$5
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$12
Escalation Rate =	2.16%
20) Project Life (Years) =	10.0
21) Avg. Dth/Part. Saved =	0.81
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	14,000
24) Total Annual Dth Saved =	11,391
25) Incentive/Participant =	$4.60

Cost Summary	2020
Utility Cost per Participant =	$23
Cost per Participant per Dth =	$34.30
Lifetime Energy Reduction (Dth)	113,912
Societal Cost per Dth	$2.87

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($554,130)	0.52
Utility Cost Test	$265,245	1.81
Societal Test	$1,988,028	7.09
Participant Test	$2,547,708	40.59

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **School Education Kits**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$275,606
Incentive Costs =	$68,639
16) Total Utility Project Costs =	$344,245
17) Direct Participant Costs ($/Part.) =	$4
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$16
Escalation Rate =	2.16%
20) Project Life (Years) =	10.0
21) Avg. Dth/Part. Saved =	1.08
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	14,397
24) Total Annual Dth Saved =	15,608
25) Incentive/Participant =	$4.77

Cost Summary	2020
Utility Cost per Participant =	$24
Cost per Participant per Dth =	$26.05
Lifetime Energy Reduction (Dth)	156,077
Societal Cost per Dth	$2.17

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($656,318)	0.55
Utility Cost Test	$466,353	2.35
Societal Test	$2,836,046	9.39
Participant Test	$3,499,969	57.11

WHOLE HOME EFFICIENCY — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$98,804	$98,804	$98,804	$98,804
T & D	N/A	$62,210	$62,210	$62,210	$62,210
Marginal Energy	N/A	$82,697	$82,697	$82,697	$82,697
Environmental Externality	N/A	N/A	N/A	N/A	$25,452
Subtotal	N/A	$243,711	$243,711	$243,711	$269,163
Participant Benefits					
Bill Reduction - Electric	$251,109	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$37,135	N/A	N/A	$37,135	$37,135
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$288,244	N/A	N/A	$37,135	$37,135
Total Benefits	$288,244	$243,711	$243,711	$280,846	$306,298
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$45,950	$45,950	$45,950	$45,950
Advertising & Promotion	N/A	$14,415	$14,415	$14,415	$14,415
Measurement & Verification	N/A	$30,000	$30,000	$30,000	$30,000
Rebates	N/A	$37,135	$37,135	$37,135	$37,135
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$127,500	$127,500	$127,500	$127,500
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$251,109	N/A	N/A
Subtotal	N/A	N/A	$251,109	N/A	N/A
Participant Costs					
Incremental Capital Costs	$111,563	N/A	N/A	$111,563	$111,563
Incremental O&M Costs	$9,225	N/A	N/A	$9,225	$9,225
Subtotal	$120,789	N/A	N/A	$120,789	$120,789
Total Costs	$120,789	$127,500	$378,609	$248,289	$248,289
Net Benefit (Cost)	$167,455	$116,211	($134,897)	$32,558	$58,010
Benefit/Cost Ratio	2.39	1.91	0.64	1.13	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	11.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	68.62%
Gross Load Factor at Customer	E	12.73%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$312

Program Summary per Participant

Gross kW Saved at Customer	I	0.81 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.61 kW
Gross Annual kWh Saved at Customer	(B x E x I)	902 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	985 kWh

Program Summary All Participants

Total Participants	J	230
Total Budget	K	**$127,500**
Gross kW Saved at Customer	(J x I)	186 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**140 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	207,503 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**226,532 kWh**
Societal Net Benefits	(J x I x H)	**$58,010**
Utility Program Cost per kWh Lifetime		**$0.0507**
Utility Program Cost per kW at Gen		**$911**

WHOLE HOME EFFICIENCY — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$19,750	$19,750	$19,750	$19,750
T & D	N/A	$12,478	$12,478	$12,478	$12,478
Marginal Energy	N/A	$9,982	$9,982	$9,982	$9,982
Environmental Externality	N/A	N/A	N/A	N/A	$2,516
Subtotal	N/A	$42,210	$42,210	$42,210	$44,725
Participant Benefits					
Bill Reduction - Electric	$24,719	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$7,076	N/A	N/A	$7,076	$7,076
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$31,795	N/A	N/A	$7,076	$7,076
Total Benefits	$31,795	$42,210	$42,210	$49,286	$51,801
Costs					
Utility Project Costs					
Customer Services	N/A	$230	$230	$230	$230
Project Administration	N/A	$14,150	$14,150	$14,150	$14,150
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$7,076	$7,076	$7,076	$7,076
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$21,456	$21,456	$21,456	$21,456
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$24,719	N/A	N/A
Subtotal	N/A	N/A	$24,719	N/A	N/A
Participant Costs					
Incremental Capital Costs	$21,058	N/A	N/A	$21,058	$21,058
Incremental O&M Costs	$676	N/A	N/A	$676	$676
Subtotal	$21,733	N/A	N/A	$21,733	$21,733
Total Costs	$21,733	$21,456	$46,175	$43,189	$43,189
Net Benefit (Cost)	$10,062	$20,753	($3,966)	$6,096	$8,612
Benefit/Cost Ratio	1.46	1.97	0.91	1.14	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	13.0 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	90.20%
Gross Load Factor at Customer	E	8.29%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$340

Program Summary per Participant		
Gross kW Saved at Customer	I	0.82 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.81 kW
Gross Annual kWh Saved at Customer	(B x E x I)	594 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	648 kWh

Program Summary All Participants		
Total Participants	J	31
Total Budget	K	**$21,456**
Gross kW Saved at Customer	(J x I)	25 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**25 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	18,409 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**20,097 kWh**
Societal Net Benefits	(J x I x H)	**$8,612**
Utility Program Cost per kWh Lifetime		**$0.0819**
Utility Program Cost per kW at Gen		**$855**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Whole Home Efficiency**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$207,299
Incentive Costs =	$83,316
16) Total Utility Project Costs =	$290,615
17) Direct Participant Costs ($/Part.) =	$2,581
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$20
Escalation Rate =	2.16%
20) Project Life (Years) =	15.4
21) Avg. Dth/Part. Saved =	38.97
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	205
24) Total Annual Dth Saved =	7,998
25) Incentive/Participant =	$405.93

Cost Summary	2020
Utility Cost per Participant =	$1,416
Cost per Participant per Dth =	$102.58
Lifetime Energy Reduction (Dth)	123,380
Societal Cost per Dth	$5.97

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($513,438)	0.53
Utility Cost Test	$288,160	1.99
Societal Test	$177,779	1.24
Participant Test	$737,707	2.39

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Whole Home Efficiency**

Input Data	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$18,690
Incentive Costs =	$29,826
16) Total Utility Project Costs =	$48,516
17) Direct Participant Costs ($/Part.) =	$3,978
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$1
Escalation Rate =	2.16%
20) Project Life (Years) =	16.8
21) Avg. Dth/Part. Saved =	57.81
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	33
24) Total Annual Dth Saved =	1,908
25) Incentive/Participant =	$903.82

Cost Summary	**2020**
Utility Cost per Participant =	$1,470
Cost per Participant per Dth =	$94.25
Lifetime Energy Reduction (Dth)	32,096
Societal Cost per Dth	$4.67

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($105,566)	0.58
Utility Cost Test	$99,671	3.05
Societal Test	$80,221	1.53
Participant Test	$199,429	2.52

WATER HEATER REBATE — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$21,913	$21,913	$21,913	$21,913
T & D	N/A	$13,650	$13,650	$13,650	$13,650
Marginal Energy	N/A	$78,769	$78,769	$78,769	$78,769
Environmental Externality	N/A	N/A	N/A	N/A	$31,662
Subtotal	N/A	$114,332	$114,332	$114,332	$145,993
Participant Benefits					
Bill Reduction - Electric	$310,253	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$29,700	N/A	N/A	$29,700	$29,700
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$339,953	N/A	N/A	$29,700	$29,700
Total Benefits	$339,953	$114,332	$114,332	$144,032	$175,693
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$30,000	$30,000	$30,000	$30,000
Advertising & Promotion	N/A	$25,000	$25,000	$25,000	$25,000
Measurement & Verification	N/A	$1,000	$1,000	$1,000	$1,000
Rebates	N/A	$29,700	$29,700	$29,700	$29,700
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$85,700	$85,700	$85,700	$85,700
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$310,253	N/A	N/A
Subtotal	N/A	N/A	$310,253	N/A	N/A
Participant Costs					
Incremental Capital Costs	$40,356	N/A	N/A	$40,356	$40,356
Incremental O&M Costs	$29,635	N/A	N/A	$29,635	$29,635
Subtotal	$69,991	N/A	N/A	$69,991	$69,991
Total Costs	$69,991	$85,700	$395,953	$155,691	$155,691
Net Benefit (Cost)	$269,962	$28,632	($281,621)	($11,659)	$20,002
Benefit/Cost Ratio	4.86	1.33	0.29	0.93	1.13

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	100.00%
Gross Load Factor at Customer	E	82.06%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$544

Program Summary per Participant		
Gross kW Saved at Customer	I	0.56 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.61 kW
Gross Annual kWh Saved at Customer	(B x E x I)	4,001 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	4,368 kWh

Program Summary All Participants		
Total Participants	J	66
Total Budget	K	**$85,700**
Gross kW Saved at Customer	(J x I)	37 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**40 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	264,092 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**288,310 kWh**
Societal Net Benefits	(J x I x H)	**$20,002**
Utility Program Cost per kWh Lifetime		**$0.0297**
Utility Program Cost per kW at Gen		**$2,127**

WATER HEATER REBATE — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$575	$575	$575	$575
T & D	N/A	$358	$358	$358	$358
Marginal Energy	N/A	$56,311	$56,311	$56,311	$56,311
Environmental Externality	N/A	N/A	N/A	N/A	$22,635
Subtotal	N/A	$57,244	$57,244	$57,244	$79,878
Participant Benefits					
Bill Reduction - Electric	$221,796	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$20,800	N/A	N/A	$20,800	$20,800
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$242,596	N/A	N/A	$20,800	$20,800
Total Benefits	$242,596	$57,244	$57,244	$78,044	$100,678
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$2,685	$2,685	$2,685	$2,685
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$20,800	$20,800	$20,800	$20,800
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$23,485	$23,485	$23,485	$23,485
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$221,796	N/A	N/A
Subtotal	N/A	N/A	$221,796	N/A	N/A
Participant Costs					
Incremental Capital Costs	$31,184	N/A	N/A	$31,184	$31,184
Incremental O&M Costs	$6,351	N/A	N/A	$6,351	$6,351
Subtotal	$37,535	N/A	N/A	$37,535	$37,535
Total Costs	$37,535	$23,485	$245,281	$61,020	$61,020
Net Benefit (Cost)	$205,062	$33,759	($188,038)	$17,024	$39,659
Benefit/Cost Ratio	6.46	2.44	0.23	1.28	1.65

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	100.00%
Gross Load Factor at Customer	E	76.98%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$1,417

Program Summary per Participant		
Gross kW Saved at Customer	I	0.55 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.60 kW
Gross Annual kWh Saved at Customer	(B x E x I)	3,702 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	4,041 kWh

Program Summary All Participants		
Total Participants	J	51
Total Budget	K	**$23,485**
Gross kW Saved at Customer	(J x I)	28 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**31 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	188,797 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**206,110 kWh**
Societal Net Benefits	(J x I x H)	**$39,659**
Utility Program Cost per kWh Lifetime		**$0.0114**
Utility Program Cost per kW at Gen		**$765**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Water Heater Rebate**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$106,994
Incentive Costs =	$95,550
16) Total Utility Project Costs =	$202,544
17) Direct Participant Costs ($/Part.) =	$352
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	14.5
21) Avg. Dth/Part. Saved =	3.23
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	1,071
24) Total Annual Dth Saved =	3,461
25) Incentive/Participant =	$89.22

Cost Summary	**2020**
Utility Cost per Participant =	$189
Cost per Participant per Dth =	$167.49
Lifetime Energy Reduction (Dth)	50,175
Societal Cost per Dth	$9.65

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($295,632)	0.45
Utility Cost Test	$39,247	1.19
Societal Test	($131,975)	0.73
Participant Test	$178,167	1.47

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Water Heater Rebate**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$54,883
Incentive Costs =	$124,305
16) Total Utility Project Costs =	$179,188
17) Direct Participant Costs ($/Part.) =	$439
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	17.1
21) Avg. Dth/Part. Saved =	4.44
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	938
24) Total Annual Dth Saved =	4,161
25) Incentive/Participant =	$132.52

Cost Summary	**2020**
Utility Cost per Participant =	$191
Cost per Participant per Dth =	$142.02
Lifetime Energy Reduction (Dth)	71,019
Societal Cost per Dth	$6.57

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($305,806)	0.52
Utility Cost Test	$149,697	1.84
Societal Test	$41,166	1.09
Participant Test	$376,401	1.91

RESIDENTIAL DEMAND RESPONSE — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$14,042,464	$14,042,464	$14,042,464	$14,042,464
T & D	N/A	$8,781,659	$8,781,659	$8,781,659	$8,781,659
Marginal Energy	N/A	$768,202	$768,202	$768,202	$768,202
Environmental Externality	N/A	N/A	N/A	N/A	$190,164
Subtotal	N/A	$23,592,325	$23,592,325	$23,592,325	$23,782,489
Participant Benefits					
Bill Reduction - Electric	$1,745,560	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,803,400	N/A	N/A	$1,803,400	$1,803,400
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$3,548,960	N/A	N/A	$1,803,400	$1,803,400
Total Benefits	$3,548,960	$23,592,325	$23,592,325	$25,395,725	$25,585,889
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$6,099,802	$6,099,802	$6,099,802	$6,099,802
Advertising & Promotion	N/A	$500,000	$500,000	$500,000	$500,000
Measurement & Verification	N/A	$200,000	$200,000	$200,000	$200,000
Rebates	N/A	$1,803,400	$1,803,400	$1,803,400	$1,803,400
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$8,603,202	$8,603,202	$8,603,202	$8,603,202
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,745,560	N/A	N/A
Subtotal	N/A	N/A	$1,745,560	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,894,720	N/A	N/A	$1,894,720	$1,894,720
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,894,720	N/A	N/A	$1,894,720	$1,894,720
Total Costs	$1,894,720	$8,603,202	$10,348,762	$10,497,922	$10,497,922
Net Benefit (Cost)	$1,654,240	$14,989,123	$13,243,563	$14,897,803	$15,087,967
Benefit/Cost Ratio	1.87	2.74	2.28	2.42	2.44

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	10.1 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	40.48%
Gross Load Factor at Customer	E	0.35%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$292

Program Summary per Participant		
Gross kW Saved at Customer	I	1.30 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.58 kW
Gross Annual kWh Saved at Customer	(B x E x I)	40 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	43 kWh

Program Summary All Participants		
Total Participants	J	39,665
Total Budget	K	**$8,603,202**
Gross kW Saved at Customer	(J x I)	51,718 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**22,957 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,580,470 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,725,403 kWh**
Societal Net Benefits	(J x I x H)	**$15,087,967**

Utility Program Cost per kWh Lifetime	**$0.4958**
Utility Program Cost per kW at Gen	**$375**

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 ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$8,218,311	$8,218,311	$8,218,311	$8,218,311
T & D	N/A	$5,152,732	$5,152,732	$5,152,732	$5,152,732
Marginal Energy	N/A	$73,776	$73,776	$73,776	$73,776
Environmental Externality	N/A	N/A	N/A	N/A	$20,220
Subtotal	N/A	$13,444,818	$13,444,818	$13,444,818	$13,465,039
Participant Benefits					
Bill Reduction - Electric	$197,439	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$771,421	N/A	N/A	$771,421	$771,421
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$968,860	N/A	N/A	$771,421	$771,421
Total Benefits	$968,860	$13,444,818	$13,444,818	$14,216,239	$14,236,460
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$8,256,945	$8,256,945	$8,256,945	$8,256,945
Advertising & Promotion	N/A	$529,559	$529,559	$529,559	$529,559
Measurement & Verification	N/A	$186,250	$186,250	$186,250	$186,250
Rebates	N/A	$771,421	$771,421	$771,421	$771,421
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$9,744,176	$9,744,176	$9,744,176	$9,744,176
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$197,439	N/A	N/A
Subtotal	N/A	N/A	$197,439	N/A	N/A
Participant Costs					
Incremental Capital Costs	$51,131	N/A	N/A	$51,131	$51,131
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$51,131	N/A	N/A	$51,131	$51,131
Total Costs	$51,131	$9,744,176	$9,941,614	$9,795,307	$9,795,307
Net Benefit (Cost)	$917,728	$3,700,643	$3,503,204	$4,420,932	$4,441,153
Benefit/Cost Ratio	18.95	1.38	1.35	1.45	1.45

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	11.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	28.58%
Gross Load Factor at Customer	E	0.03%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$74

Program Summary per Participant		
Gross kW Saved at Customer	I	1.99 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.62 kW
Gross Annual kWh Saved at Customer	(B x E x I)	5 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	6 kWh

Program Summary All Participants		
Total Participants	J	30,247
Total Budget	K	**$9,744,176**
Gross kW Saved at Customer	(J x I)	60,125 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**18,840 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	152,934 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**166,959 kWh**
Societal Net Benefits	(J x I x H)	**$4,441,153**

Utility Program Cost per kWh Lifetime	**$5.0178**
Utility Program Cost per kW at Gen	**$517**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Residential Demand Response**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$0
Incentive Costs =	$74,600
16) Total Utility Project Costs =	$74,600
17) Direct Participant Costs ($/Part.) =	$53
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	10.0
21) Avg. Dth/Part. Saved =	6.98
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	6,150
24) Total Annual Dth Saved =	42,952
25) Incentive/Participant =	$12.13

Cost Summary	2020
Utility Cost per Participant =	$12
Cost per Participant per Dth =	$9.30
Lifetime Energy Reduction (Dth)	429,516
Societal Cost per Dth	$0.76

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($858,809)	0.72
Utility Cost Test	$2,230,723	#DIV/0!
Societal Test	$2,589,025	8.97
Participant Test	$3,468,760	11.68

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Residential Demand Response**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$62,232
Incentive Costs =	$72,092
16) Total Utility Project Costs =	$134,324
17) Direct Participant Costs ($/Part.) =	$193
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	10.0
21) Avg. Dth/Part. Saved =	10.69
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	206
24) Total Annual Dth Saved =	2,198
25) Incentive/Participant =	$350.47

Cost Summary	2020
Utility Cost per Participant =	$653
Cost per Participant per Dth =	$79.15
Lifetime Energy Reduction (Dth)	21,980
Societal Cost per Dth	$4.63

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($178,272)	0.39
Utility Cost Test	($20,169)	0.85
Societal Test	$47,240	1.46
Participant Test	$226,584	6.72

LOW INCOME SEGMENT TOTAL — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$374,662	$374,662	$374,662	$374,662
T & D	N/A	$237,243	$237,243	$237,243	$237,243
Marginal Energy	N/A	$1,542,840	$1,542,840	$1,542,840	$1,542,840
Environmental Externality	N/A	N/A	N/A	N/A	$554,514
Subtotal	N/A	$2,154,745	$2,154,745	$2,154,745	$2,709,259
Participant Benefits					
Bill Reduction - Electric	$5,980,571	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,419,785	N/A	N/A	$1,419,785	$1,419,785
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$7,400,356	N/A	N/A	$1,419,785	$1,419,785
Total Benefits	$7,400,356	$2,154,745	$2,154,745	$3,574,530	$4,129,044
Costs					
Utility Project Costs					
Customer Services	N/A	$458,914	$458,914	$458,914	$458,914
Project Administration	N/A	$443,680	$443,680	$443,680	$443,680
Advertising & Promotion	N/A	$150,051	$150,051	$150,051	$150,051
Measurement & Verification	N/A	$17,914	$17,914	$17,914	$17,914
Rebates	N/A	$1,419,785	$1,419,785	$1,419,785	$1,419,785
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$2,490,344	$2,490,344	$2,490,344	$2,490,344
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$5,980,571	N/A	N/A
Subtotal	N/A	N/A	$5,980,571	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,465,204	N/A	N/A	$1,465,204	$1,465,204
Incremental O&M Costs	$24,795	N/A	N/A	$24,795	$24,795
Subtotal	$1,489,999	N/A	N/A	$1,489,999	$1,489,999
Total Costs	$1,489,999	$2,490,344	$8,470,915	$3,980,343	$3,980,343
Net Benefit (Cost)	$5,910,357	($335,599)	($6,316,170)	($405,813)	$148,701
Benefit/Cost Ratio	4.97	0.87	0.25	0.90	1.04

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	18.8 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	18.28%
Gross Load Factor at Customer	E	16.27%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$68

Program Summary per Participant

Gross kW Saved at Customer	I	0.38 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.08 kW
Gross Annual kWh Saved at Customer	(B x E x I)	540 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	589 kWh

Program Summary All Participants

Total Participants	J	5,804
Total Budget	K	**$2,490,344**
Gross kW Saved at Customer	(J x I)	2,197 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**440 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	3,132,546 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**3,419,810 kWh**
Societal Net Benefits	(J x I x H)	**$148,701**
Utility Program Cost per kWh Lifetime		**$0.0387**
Utility Program Cost per kW at Gen		**$5,654**

LOW INCOME SEGMENT TOTAL — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$142,528	$142,528	$142,528	$142,528
T & D	N/A	$90,136	$90,136	$90,136	$90,136
Marginal Energy	N/A	$702,467	$702,467	$702,467	$702,467
Environmental Externality	N/A	N/A	N/A	N/A	$255,975
Subtotal	N/A	$935,131	$935,131	$935,131	$1,191,106
Participant Benefits					
Bill Reduction - Electric	$2,769,856	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$1,095,423	N/A	N/A	$1,095,423	$1,095,423
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$1,904	N/A	N/A	$1,904	$1,904
Subtotal	$3,867,182	N/A	N/A	$1,097,327	$1,097,327
Total Benefits	$3,867,182	$935,131	$935,131	$2,032,458	$2,288,432
Costs					
Utility Project Costs					
Customer Services	N/A	$81,087	$81,087	$81,087	$81,087
Project Administration	N/A	$356,290	$356,290	$356,290	$356,290
Advertising & Promotion	N/A	$153,772	$153,772	$153,772	$153,772
Measurement & Verification	N/A	$9,796	$9,796	$9,796	$9,796
Rebates	N/A	$1,095,423	$1,095,423	$1,095,423	$1,095,423
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,696,367	$1,696,367	$1,696,367	$1,696,367
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,769,856	N/A	N/A
Subtotal	N/A	N/A	$2,769,856	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,083,852	N/A	N/A	$1,083,852	$1,083,852
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,083,852	N/A	N/A	$1,083,852	$1,083,852
Total Costs	$1,083,852	$1,696,367	$4,466,223	$2,780,220	$2,780,220
Net Benefit (Cost)	$2,783,330	($761,236)	($3,531,092)	($747,762)	($491,787)
Benefit/Cost Ratio	3.57	0.55	0.21	0.73	0.82

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	19.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	19.47%
Gross Load Factor at Customer	E	13.94%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	($431)

Program Summary per Participant

Gross kW Saved at Customer	I	0.40 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.09 kW
Gross Annual kWh Saved at Customer	(B x E x I)	487 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	532 kWh

Program Summary All Participants

Total Participants	J	2,860
Total Budget	K	**$1,696,367**
Gross kW Saved at Customer	(J x I)	1,142 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**244 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,394,131 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,521,977 kWh**
Societal Net Benefits	(J x I x H)	**($491,787)**
Utility Program Cost per kWh Lifetime		**$0.0580**
Utility Program Cost per kW at Gen		**$6,956**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Low Income Segment Total**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$609,590
Incentive Costs =	$1,291,728
16) Total Utility Project Costs =	$1,901,318
17) Direct Participant Costs ($/Part.) =	$629
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$21
Escalation Rate =	2.16%
20) Project Life (Years) =	11.9
21) Avg. Dth/Part. Saved =	7.16
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	2,054
24) Total Annual Dth Saved =	14,697
25) Incentive/Participant =	$628.95

Cost Summary	2020
Utility Cost per Participant =	$926
Cost per Participant per Dth =	$217.26
Lifetime Energy Reduction (Dth)	174,273
Societal Cost per Dth	$10.91

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($2,234,491)	0.28
Utility Cost Test	($1,035,915)	0.46
Societal Test	($313,665)	0.84
Participant Test	$1,955,237	2.51

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Low Income Segment Total**

Input Data

	2020
1) Retail Rate ($/Dth) =	$6.46
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$327,585
Incentive Costs =	$900,795
16) Total Utility Project Costs =	$1,228,380
17) Direct Participant Costs ($/Part.) =	$1,770
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$13
Escalation Rate =	2.16%
20) Project Life (Years) =	14.3
21) Avg. Dth/Part. Saved =	10.84
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	503
24) Total Annual Dth Saved =	5,454
25) Incentive/Participant =	$1,790.85

Cost Summary	2020
Utility Cost per Participant =	$2,442
Cost per Participant per Dth =	$388.46
Lifetime Energy Reduction (Dth)	78,025
Societal Cost per Dth	$15.61

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($1,371,770)	0.21
Utility Cost Test	($855,931)	0.30
Societal Test	($610,457)	0.50
Participant Test	$786,446	1.88

HOME ENERGY SAVINGS PROGRAM — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$90,355	$90,355	$90,355	$90,355
T & D	N/A	$57,030	$57,030	$57,030	$57,030
Marginal Energy	N/A	$413,332	$413,332	$413,332	$413,332
Environmental Externality	N/A	N/A	N/A	N/A	$146,798
Subtotal	N/A	$560,716	$560,716	$560,716	$707,514
Participant Benefits					
Bill Reduction - Electric	$1,570,853	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$815,697	N/A	N/A	$815,697	$815,697
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$2,386,550	N/A	N/A	$815,697	$815,697
Total Benefits	$2,386,550	$560,716	$560,716	$1,376,413	$1,523,211
Costs					
Utility Project Costs					
Customer Services	N/A	$161,600	$161,600	$161,600	$161,600
Project Administration	N/A	$215,439	$215,439	$215,439	$215,439
Advertising & Promotion	N/A	$146,614	$146,614	$146,614	$146,614
Measurement & Verification	N/A	$9,801	$9,801	$9,801	$9,801
Rebates	N/A	$815,697	$815,697	$815,697	$815,697
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$1,349,151	$1,349,151	$1,349,151	$1,349,151
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,570,853	N/A	N/A
Subtotal	N/A	N/A	$1,570,853	N/A	N/A
Participant Costs					
Incremental Capital Costs	$861,115	N/A	N/A	$861,115	$861,115
Incremental O&M Costs	$24,795	N/A	N/A	$24,795	$24,795
Subtotal	$885,911	N/A	N/A	$885,911	$885,911
Total Costs	$885,911	$1,349,151	$2,920,004	$2,235,062	$2,235,062
Net Benefit (Cost)	$1,500,640	($788,435)	($2,359,288)	($858,648)	($711,850)
Benefit/Cost Ratio	2.69	0.42	0.19	0.62	0.68

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	17.9 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	33.06%
Gross Load Factor at Customer	E	28.95%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	($2,155)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.15 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.06 kW
Gross Annual kWh Saved at Customer	(B x E x I)	393 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	429 kWh

Program Summary All Participants		
Total Participants	J	2,132
Total Budget	K	**$1,349,151**
Gross kW Saved at Customer	(J x I)	330 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**120 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	837,700 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**914,519 kWh**
Societal Net Benefits	(J x I x H)	**($711,850)**

Utility Program Cost per kWh Lifetime	**$0.0822**
Utility Program Cost per kW at Gen	**$11,268**

HOME ENERGY SAVINGS PROGRAM — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$56,636	$56,636	$56,636	$56,636
T & D	N/A	$35,731	$35,731	$35,731	$35,731
Marginal Energy	N/A	$398,716	$398,716	$398,716	$398,716
Environmental Externality	N/A	N/A	N/A	N/A	$146,108
Subtotal	N/A	$491,084	$491,084	$491,084	$637,192
Participant Benefits					
Bill Reduction - Electric	$1,581,211	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$625,011	N/A	N/A	$625,011	$625,011
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$2,206,222	N/A	N/A	$625,011	$625,011
Total Benefits	$2,206,222	$491,084	$491,084	$1,116,095	$1,262,203
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$232,929	$232,929	$232,929	$232,929
Advertising & Promotion	N/A	$127,500	$127,500	$127,500	$127,500
Measurement & Verification	N/A	$9,796	$9,796	$9,796	$9,796
Rebates	N/A	$625,011	$625,011	$625,011	$625,011
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$995,236	$995,236	$995,236	$995,236
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,581,211	N/A	N/A
Subtotal	N/A	N/A	$1,581,211	N/A	N/A
Participant Costs					
Incremental Capital Costs	$592,362	N/A	N/A	$592,362	$592,362
Incremental O&M Costs	$23,005	N/A	N/A	$23,005	$23,005
Subtotal	$615,368	N/A	N/A	$615,368	$615,368
Total Costs	$615,368	$995,236	$2,576,447	$1,610,604	$1,610,604
Net Benefit (Cost)	$1,590,854	($504,152)	($2,085,363)	($494,509)	($348,401)
Benefit/Cost Ratio	3.59	0.49	0.19	0.69	0.78

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	19.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	20.30%
Gross Load Factor at Customer	E	14.11%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	($539)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.44 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.10 kW
Gross Annual kWh Saved at Customer	(B x E x I)	543 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	592 kWh

Program Summary All Participants		
Total Participants	J	1,471
Total Budget	K	**$995,236**
Gross kW Saved at Customer	(J x I)	646 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**144 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	798,259 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**871,462 kWh**
Societal Net Benefits	(J x I x H)	**($348,401)**

Utility Program Cost per kWh Lifetime	**$0.0593**
Utility Program Cost per kW at Gen	**$6,921**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **Home Energy Savings Program**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$196,613
Incentive Costs =	$1,291,728
16) Total Utility Project Costs =	$1,488,341
17) Direct Participant Costs ($/Part.) =	$2,333
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	16.1
21) Avg. Dth/Part. Saved =	8.88
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	554
24) Total Annual Dth Saved =	4,919
25) Incentive/Participant =	$2,332.50

Cost Summary	**2020**
Utility Cost per Participant =	$2,688
Cost per Participant per Dth =	$565.12
Lifetime Energy Reduction (Dth)	79,309
Societal Cost per Dth	$18.77

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($1,630,796)	0.18
Utility Cost Test	($1,118,319)	0.25
Societal Test	($922,969)	0.38
Participant Test	$738,952	1.57

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **Home Energy Savings Program**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$240,579
Incentive Costs =	$900,795
16) Total Utility Project Costs =	$1,141,375
17) Direct Participant Costs ($/Part.) =	$3,648
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$0
Escalation Rate =	2.16%
20) Project Life (Years) =	15.8
21) Avg. Dth/Part. Saved =	16.97
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	244
24) Total Annual Dth Saved =	4,141
25) Incentive/Participant =	$3,691.78

Cost Summary	2020
Utility Cost per Participant =	$4,678
Cost per Participant per Dth =	$490.58
Lifetime Energy Reduction (Dth)	65,275
Societal Cost per Dth	$17.32

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($1,259,159)	0.20
Utility Cost Test	($835,434)	0.27
Societal Test	($666,382)	0.41
Participant Test	$617,469	1.69

LI HOME ENERGY SQUAD — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$175,580	$175,580	$175,580	$175,580
T & D	N/A	$111,399	$111,399	$111,399	$111,399
Marginal Energy	N/A	$663,008	$663,008	$663,008	$663,008
Environmental Externality	N/A	N/A	N/A	N/A	$244,162
Subtotal	N/A	$949,987	$949,987	$949,987	$1,194,149
Participant Benefits					
Bill Reduction - Electric	$2,653,437	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$2,653,437	N/A	N/A	$0	$0
Total Benefits	$2,653,437	$949,987	$949,987	$949,987	$1,194,149
Costs					
Utility Project Costs					
Customer Services	N/A	$247,314	$247,314	$247,314	$247,314
Project Administration	N/A	$77,361	$77,361	$77,361	$77,361
Advertising & Promotion	N/A	$3,000	$3,000	$3,000	$3,000
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$327,675	$327,675	$327,675	$327,675
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$2,653,437	N/A	N/A
Subtotal	N/A	N/A	$2,653,437	N/A	N/A
Participant Costs					
Incremental Capital Costs	$0	N/A	N/A	$0	$0
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$0	N/A	N/A	$0	$0
Total Costs	$0	$327,675	$2,981,112	$327,675	$327,675
Net Benefit (Cost)	$2,653,437	$622,312	($2,031,124)	$622,312	$866,474
Benefit/Cost Ratio	INF	2.90	0.32	2.90	3.64

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	19.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	13.38%
Gross Load Factor at Customer	E	12.01%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$661

Program Summary per Participant		
Gross kW Saved at Customer	I	0.69 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.10 kW
Gross Annual kWh Saved at Customer	(B x E x I)	726 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	793 kWh

Program Summary All Participants		
Total Participants	J	1,900
Total Budget	K	**$327,675**
Gross kW Saved at Customer	(J x I)	1,312 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**192 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	1,380,092 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**1,506,651 kWh**
Societal Net Benefits	(J x I x H)	**$866,474**

Utility Program Cost per kWh Lifetime	**$0.0111**
Utility Program Cost per kW at Gen	**$1,702**

LI 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 ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$61,665	$61,665	$61,665	$61,665
T & D	N/A	$39,124	$39,124	$39,124	$39,124
Marginal Energy	N/A	$214,854	$214,854	$214,854	$214,854
Environmental Externality	N/A	N/A	N/A	N/A	$79,123
Subtotal	N/A	$315,644	$315,644	$315,644	$394,767
Participant Benefits					
Bill Reduction - Electric	$859,872	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$0	N/A	N/A	$0	$0
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$24,909	N/A	N/A	$24,909	$24,909
Subtotal	$884,780	N/A	N/A	$24,909	$24,909
Total Benefits	$884,780	$315,644	$315,644	$340,552	$419,676
Costs					
Utility Project Costs					
Customer Services	N/A	$81,087	$81,087	$81,087	$81,087
Project Administration	N/A	$52,186	$52,186	$52,186	$52,186
Advertising & Promotion	N/A	$26,272	$26,272	$26,272	$26,272
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$0	$0	$0	$0
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$159,545	$159,545	$159,545	$159,545
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$859,872	N/A	N/A
Subtotal	N/A	N/A	$859,872	N/A	N/A
Participant Costs					
Incremental Capital Costs	$21,078	N/A	N/A	$21,078	$21,078
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$21,078	N/A	N/A	$21,078	$21,078
Total Costs	$21,078	$159,545	$1,019,416	$180,623	$180,623
Net Benefit (Cost)	$863,702	$156,099	($703,773)	$159,929	$239,053
Benefit/Cost Ratio	41.98	1.98	0.31	1.89	2.32

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	19.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	15.16%
Gross Load Factor at Customer	E	11.85%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$588

Program Summary per Participant		
Gross kW Saved at Customer	I	0.80 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.13 kW
Gross Annual kWh Saved at Customer	(B x E x I)	833 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	909 kWh

Program Summary All Participants		
Total Participants	J	507
Total Budget	K	**$159,545**
Gross kW Saved at Customer	(J x I)	407 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**68 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	422,296 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**461,022 kWh**
Societal Net Benefits	(J x I x H)	**$239,053**
Utility Program Cost per kWh Lifetime		**$0.0177**
Utility Program Cost per kW at Gen		**$2,360**

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **GOAL**

Company: **Xcel Energy**
Project: **LI Home Energy Squad**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020
Administrative & Operating Costs =	$412,977
Incentive Costs =	$0
16) Total Utility Project Costs =	$412,977
17) Direct Participant Costs ($/Part.) =	$0
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$29
Escalation Rate =	2.16%
20) Project Life (Years) =	9.7
21) Avg. Dth/Part. Saved =	6.52
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	1,500
24) Total Annual Dth Saved =	9,777
25) Incentive/Participant =	$0.00

Cost Summary	2020
Utility Cost per Participant =	$275
Cost per Participant per Dth =	$42.24
Lifetime Energy Reduction (Dth)	94,964
Societal Cost per Dth	$4.35

Test Results	2020 NPV	2020 B/C
Ratepayer Impact Measure Test	($603,694)	0.45
Utility Cost Test	$82,404	1.20
Societal Test	$609,304	2.48
Participant Test	$1,216,285	#DIV/0!

Conservation Improvement Program (CIP) BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis **ACTUAL**

Company: **Xcel Energy**
Project: **LI Home Energy Squad**

Input Data

	2020
1) Retail Rate ($/Dth) =	$7.08
Escalation Rate =	4.00%
2) Non-Gas Fuel Retail Rate ($/Fuel Unit) =	$0.000
Escalation Rate =	3.22%
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh
3) Commodity Cost ($/Dth) =	$4.27
Escalation Rate =	4.00%
4) Demand Cost ($/Unit/Yr) =	$80.24
Escalation Rate =	4.00%
5) Peak Reduction Factor =	1.00%
6) Variable O&M ($/Dth) =	$0.0408
Escalation Rate =	4.00%
7) Non-Gas Fuel Cost ($/Fuel Unit) =	$0.02153
Escalation Rate =	3.22%
8) Non-Gas Fuel Loss Factor	5.28%
9) Gas Environmental Damage Factor =	$0.3800
Escalation Rate =	2.16%
10) Non Gas Fuel Enviro. Damage Factor ($/Unit) =	$0.0232
Escalation Rate =	2.16%
11) Participant Discount Rate =	2.55%
12) Utility Discount Rate =	7.42%
13) Societal Discount Rate =	2.55%
14) General Input Data Year =	2016
15a) Project Analysis Year 1 =	2017
15b) Project Analysis Year 2 =	2018
15c) Project Analysis Year 3 =	2019
15d) Project Analysis Year 4 =	2020

	2020
Administrative & Operating Costs =	$87,005
Incentive Costs =	$0
16) Total Utility Project Costs =	$87,005
17) Direct Participant Costs ($/Part.) =	$0
18) Participant Non-Energy Costs (Annual $/Part.) =	$0
Escalation Rate =	2.16%
19) Participant Non-Energy Savings (Annual $/Part) =	$25
Escalation Rate =	2.16%
20) Project Life (Years) =	9.7
21) Avg. Dth/Part. Saved =	5.07
22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
23) Number of Participants =	259
24) Total Annual Dth Saved =	1,313
25) Incentive/Participant =	$0.00

Cost Summary	**2020**
Utility Cost per Participant =	$336
Cost per Participant per Dth =	$66.28
Lifetime Energy Reduction (Dth)	12,750
Societal Cost per Dth	$6.82

Test Results	**2020 NPV**	**2020 B/C**
Ratepayer Impact Measure Test	($112,611)	0.37
Utility Cost Test	($20,497)	0.76
Societal Test	$55,925	1.64
Participant Test	$168,977	#DIV/0!

MULTI-FAMILY ENERGY SAVINGS PROGRAM — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$108,728	$108,728	$108,728	$108,728
T & D	N/A	$68,814	$68,814	$68,814	$68,814
Marginal Energy	N/A	$466,500	$466,500	$466,500	$466,500
Environmental Externality	N/A	N/A	N/A	N/A	$163,554
Subtotal	N/A	$644,042	$644,042	$644,042	$807,596
Participant Benefits					
Bill Reduction - Electric	$1,756,281	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$604,088	N/A	N/A	$604,088	$604,088
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$2,360,369	N/A	N/A	$604,088	$604,088
Total Benefits	$2,360,369	$644,042	$644,042	$1,248,130	$1,411,684
Costs					
Utility Project Costs					
Customer Services	N/A	$50,000	$50,000	$50,000	$50,000
Project Administration	N/A	$150,880	$150,880	$150,880	$150,880
Advertising & Promotion	N/A	$437	$437	$437	$437
Measurement & Verification	N/A	$8,113	$8,113	$8,113	$8,113
Rebates	N/A	$604,088	$604,088	$604,088	$604,088
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$813,518	$813,518	$813,518	$813,518
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$1,756,281	N/A	N/A
Subtotal	N/A	N/A	$1,756,281	N/A	N/A
Participant Costs					
Incremental Capital Costs	$604,088	N/A	N/A	$604,088	$604,088
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$604,088	N/A	N/A	$604,088	$604,088
Total Costs	$604,088	$813,518	$2,569,799	$1,417,606	$1,417,606
Net Benefit (Cost)	$1,756,281	($169,476)	($1,925,758)	($169,477)	($5,923)
Benefit/Cost Ratio	3.91	0.79	0.25	0.88	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	18.6 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	21.07%
Gross Load Factor at Customer	E	18.81%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	($11)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.31 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.07 kW
Gross Annual kWh Saved at Customer	(B x E x I)	516 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	564 kWh

Program Summary All Participants		
Total Participants	J	1,772
Total Budget	K	**$813,518**
Gross kW Saved at Customer	(J x I)	555 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**128 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	914,754 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**998,639 kWh**
Societal Net Benefits	(J x I x H)	**($5,923)**

Utility Program Cost per kWh Lifetime	**$0.0438**
Utility Program Cost per kW at Gen	**$6,341**

MULTI-FAMILY ENERGY SAVINGS PROGRAM — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$24,227	$24,227	$24,227	$24,227
T & D	N/A	$15,281	$15,281	$15,281	$15,281
Marginal Energy	N/A	$88,896	$88,896	$88,896	$88,896
Environmental Externality	N/A	N/A	N/A	N/A	$30,743
Subtotal	N/A	$128,404	$128,404	$128,404	$159,147
Participant Benefits					
Bill Reduction - Electric	$328,773	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$470,412	N/A	N/A	$470,412	$470,412
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$799,185	N/A	N/A	$470,412	$470,412
Total Benefits	$799,185	$128,404	$128,404	$598,815	$629,559
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$71,175	$71,175	$71,175	$71,175
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$470,412	$470,412	$470,412	$470,412
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$541,586	$541,586	$541,586	$541,586
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$328,773	N/A	N/A
Subtotal	N/A	N/A	$328,773	N/A	N/A
Participant Costs					
Incremental Capital Costs	$470,412	N/A	N/A	$470,412	$470,412
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$470,412	N/A	N/A	$470,412	$470,412
Total Costs	$470,412	$541,586	$870,360	$1,011,998	$1,011,998
Net Benefit (Cost)	$328,773	($413,183)	($741,956)	($413,183)	($382,439)
Benefit/Cost Ratio	1.70	0.24	0.15	0.59	0.62

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	18.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	33.18%
Gross Load Factor at Customer	E	22.20%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	($4,284)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.10 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.04 kW
Gross Annual kWh Saved at Customer	(B x E x I)	197 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	215 kWh

Program Summary All Participants		
Total Participants	J	882
Total Budget	K	**$541,586**
Gross kW Saved at Customer	(J x I)	89 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**32 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	173,576 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**189,494 kWh**
Societal Net Benefits	(J x I x H)	**($382,439)**

Utility Program Cost per kWh Lifetime	**$0.1563**
Utility Program Cost per kW at Gen	**$16,678**

RESEARCH, EVALUATIONS & PILOTS SEGMENT TOTAL — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$77,170	$77,170	$77,170	$77,170
T & D	N/A	$47,759	$47,759	$47,759	$47,759
Marginal Energy	N/A	$548,640	$548,640	$548,640	$548,640
Environmental Externality	N/A	N/A	N/A	N/A	$187,533
Subtotal	N/A	$673,568	$673,568	$673,568	$861,101
Participant Benefits					
Bill Reduction - Electric	$944,563	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$117,770	N/A	N/A	$117,770	$117,770
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$3,563,456	N/A	N/A	$16,093	$16,093
Subtotal	$4,625,789	N/A	N/A	$133,863	$133,863
Total Benefits	$4,625,789	$673,568	$673,568	$807,431	$994,964
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$192,250	$192,250	$192,250	$192,250
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$117,770	$117,770	$117,770	$117,770
Other	N/A	$16,560	$16,560	$16,560	$16,560
Subtotal	N/A	$326,580	$326,580	$326,580	$326,580
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$944,563	N/A	N/A
Subtotal	N/A	N/A	$944,563	N/A	N/A
Participant Costs					
Incremental Capital Costs	$204,691	N/A	N/A	$204,691	$204,691
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$204,691	N/A	N/A	$204,691	$204,691
Total Costs	$204,691	$326,580	$1,271,143	$531,271	$531,271
Net Benefit (Cost)	$4,421,099	$346,988	($597,575)	$276,161	$463,693
Benefit/Cost Ratio	22.60	2.06	0.53	1.52	1.87

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	5.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	51.08%
Gross Load Factor at Customer	E	74.12%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$1,097

Program Summary per Participant		
Gross kW Saved at Customer	I	9.39 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	5.16 kW
Gross Annual kWh Saved at Customer	(B x E x I)	60,993 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	65,303 kWh

Program Summary All Participants		
Total Participants	J	45
Total Budget	K	**$326,580**
Gross kW Saved at Customer	(J x I)	423 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**232 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,744,702 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,938,653 kWh**
Societal Net Benefits	(J x I x H)	**$463,693**
Utility Program Cost per kWh Lifetime		**$0.0209**
Utility Program Cost per kW at Gen		**$1,407**

RESEARCH, EVALUATIONS & PILOTS SEGMENT TOTAL — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$187,166	$187,166	$187,166	$187,166
T & D	N/A	$116,647	$116,647	$116,647	$116,647
Marginal Energy	N/A	$2,710,487	$2,710,487	$2,710,487	$2,710,487
Environmental Externality	N/A	N/A	N/A	N/A	$951,195
Subtotal	N/A	$3,014,299	$3,014,299	$3,014,299	$3,965,494
Participant Benefits					
Bill Reduction - Electric	$8,529,348	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$854,184	N/A	N/A	$854,184	$854,184
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$9,383,531	N/A	N/A	$854,184	$854,184
Total Benefits	$9,383,531	$3,014,299	$3,014,299	$3,868,483	$4,819,677
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$2,298,895	$2,298,895	$2,298,895	$2,298,895
Advertising & Promotion	N/A	$5,750	$5,750	$5,750	$5,750
Measurement & Verification	N/A	$461,806	$461,806	$461,806	$461,806
Rebates	N/A	$854,184	$854,184	$854,184	$854,184
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$3,620,634	$3,620,634	$3,620,634	$3,620,634
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$8,529,348	N/A	N/A
Subtotal	N/A	N/A	$8,529,348	N/A	N/A
Participant Costs					
Incremental Capital Costs	$3,033,847	N/A	N/A	$3,033,847	$3,033,847
Incremental O&M Costs	$18,322	N/A	N/A	$18,322	$18,322
Subtotal	$3,052,169	N/A	N/A	$3,052,169	$3,052,169
Total Costs	$3,052,169	$3,620,634	$12,149,982	$6,672,804	$6,672,804
Net Benefit (Cost)	$6,331,362	($606,335)	($9,135,683)	($2,804,321)	($1,853,126)
Benefit/Cost Ratio	3.07	0.83	0.25	0.58	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	9.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	8.55%
Gross Load Factor at Customer	E	5.88%
Transmission Loss Factor (Energy)	F	7.8238%
Transmission Loss Factor (Demand)	G	8.7287%
Societal Net Benefit (Cost)	H	($108)

Program Summary per Participant		
Gross kW Saved at Customer	I	0.36 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.03 kW
Gross Annual kWh Saved at Customer	(B x E x I)	187 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	203 kWh

Program Summary All Participants		
Total Participants	J	47,203
Total Budget	K	**$3,620,634**
Gross kW Saved at Customer	(J x I)	17,161 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,607 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	8,833,398 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**9,583,165 kWh**
Societal Net Benefits	(J x I x H)	**($1,853,126)**
Utility Program Cost per kWh Lifetime		**$0.0403**
Utility Program Cost per kW at Gen		**$2,253**

ENERGY STAR RETAIL PRODUCTS — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$717,502	$717,502	$717,502	$717,502
T & D	N/A	$446,933	$446,933	$446,933	$446,933
Marginal Energy	N/A	$1,419,989	$1,419,989	$1,419,989	$1,419,989
Environmental Externality	N/A	N/A	N/A	N/A	$495,000
Subtotal	N/A	$2,584,424	$2,584,424	$2,584,424	$3,079,424
Participant Benefits					
Bill Reduction - Electric	$4,875,264	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$542,875	N/A	N/A	$542,875	$542,875
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$5,418,139	N/A	N/A	$542,875	$542,875
Total Benefits	$5,418,139	$2,584,424	$2,584,424	$3,127,299	$3,622,299
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$131,605	$131,605	$131,605	$131,605
Advertising & Promotion	N/A	$27,072	$27,072	$27,072	$27,072
Measurement & Verification	N/A	$5,414	$5,414	$5,414	$5,414
Rebates	N/A	$542,875	$542,875	$542,875	$542,875
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$706,966	$706,966	$706,966	$706,966
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$4,875,264	N/A	N/A
Subtotal	N/A	N/A	$4,875,264	N/A	N/A
Participant Costs					
Incremental Capital Costs	$1,845,000	N/A	N/A	$1,845,000	$1,845,000
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$1,845,000	N/A	N/A	$1,845,000	$1,845,000
Total Costs	$1,845,000	$706,966	$5,582,230	$2,551,966	$2,551,966
Net Benefit (Cost)	$3,573,139	$1,877,457	($2,997,806)	$575,332	$1,070,333
Benefit/Cost Ratio	2.94	3.66	0.46	1.23	1.42

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	11.4 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	15.34%
Gross Load Factor at Customer	E	5.38%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$134

Program Summary per Participant		
Gross kW Saved at Customer	I	0.21 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.04 kW
Gross Annual kWh Saved at Customer	(B x E x I)	99 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	108 kWh

Program Summary All Participants		
Total Participants	J	38,156
Total Budget	K	**$706,966**
Gross kW Saved at Customer	(J x I)	7,999 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,345 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	3,768,015 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**4,113,554 kWh**
Societal Net Benefits	(J x I x H)	**$1,070,333**

Utility Program Cost per kWh Lifetime	**$0.0150**
Utility Program Cost per kW at Gen	**$526**

ENERGY STAR RETAIL PRODUCTS — 2020 — ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$94,569	$94,569	$94,569	$94,569
T & D	N/A	$59,334	$59,334	$59,334	$59,334
Marginal Energy	N/A	$2,196,668	$2,196,668	$2,196,668	$2,196,668
Environmental Externality	N/A	N/A	N/A	N/A	$776,102
Subtotal	N/A	$2,350,571	$2,350,571	$2,350,571	$3,126,673
Participant Benefits					
Bill Reduction - Electric	$7,649,011	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$751,987	N/A	N/A	$751,987	$751,987
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$8,400,997	N/A	N/A	$751,987	$751,987
Total Benefits	$8,400,997	$2,350,571	$2,350,571	$3,102,557	$3,878,659
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$141,697	$141,697	$141,697	$141,697
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$751,987	$751,987	$751,987	$751,987
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$893,684	$893,684	$893,684	$893,684
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$7,649,011	N/A	N/A
Subtotal	N/A	N/A	$7,649,011	N/A	N/A
Participant Costs					
Incremental Capital Costs	$2,610,572	N/A	N/A	$2,610,572	$2,610,572
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$2,610,572	N/A	N/A	$2,610,572	$2,610,572
Total Costs	$2,610,572	$893,684	$8,542,694	$3,504,255	$3,504,255
Net Benefit (Cost)	$5,790,426	$1,456,887	($6,192,124)	($401,698)	$374,404
Benefit/Cost Ratio	3.22	2.63	0.28	0.89	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	11.2 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	7.42%
Gross Load Factor at Customer	E	4.14%
Transmission Loss Factor (Energy)	F	8.4000%
Transmission Loss Factor (Demand)	G	8.8000%
Societal Net Benefit (Cost)	H	$23

Program Summary per Participant		
Gross kW Saved at Customer	I	0.35 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	0.03 kW
Gross Annual kWh Saved at Customer	(B x E x I)	127 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	138 kWh

Program Summary All Participants		
Total Participants	J	47,173
Total Budget	K	**$893,684**
Gross kW Saved at Customer	(J x I)	16,468 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**1,340 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	5,968,151 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**6,515,449 kWh**
Societal Net Benefits	(J x I x H)	**$374,404**

Utility Program Cost per kWh Lifetime	**$0.0123**
Utility Program Cost per kW at Gen	**$667**

ENERGY INFORMATION SYSTEMS — 2020 ELECTRIC — GOAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$77,170	$77,170	$77,170	$77,170
T & D	N/A	$47,759	$47,759	$47,759	$47,759
Marginal Energy	N/A	$548,640	$548,640	$548,640	$548,640
Environmental Externality	N/A	N/A	N/A	N/A	$187,533
Subtotal	N/A	$673,568	$673,568	$673,568	$861,101
Participant Benefits					
Bill Reduction - Electric	$944,563	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$117,770	N/A	N/A	$117,770	$117,770
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$3,563,456	N/A	N/A	$16,093	$16,093
Subtotal	$4,625,789	N/A	N/A	$133,863	$133,863
Total Benefits	$4,625,789	$673,568	$673,568	$807,431	$994,964
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$192,250	$192,250	$192,250	$192,250
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$117,770	$117,770	$117,770	$117,770
Other	N/A	$16,560	$16,560	$16,560	$16,560
Subtotal	N/A	$326,580	$326,580	$326,580	$326,580
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$944,563	N/A	N/A
Subtotal	N/A	N/A	$944,563	N/A	N/A
Participant Costs					
Incremental Capital Costs	$204,691	N/A	N/A	$204,691	$204,691
Incremental O&M Costs	$0	N/A	N/A	$0	$0
Subtotal	$204,691	N/A	N/A	$204,691	$204,691
Total Costs	$204,691	$326,580	$1,271,143	$531,271	$531,271
Net Benefit (Cost)	$4,421,099	$346,988	($597,575)	$276,161	$463,693
Benefit/Cost Ratio	22.60	2.06	0.53	1.52	1.87

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	5.3 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	51.08%
Gross Load Factor at Customer	E	74.12%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$1,097

Program Summary per Participant		
Gross kW Saved at Customer	I	9.39 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	5.16 kW
Gross Annual kWh Saved at Customer	(B x E x I)	60,993 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	65,303 kWh

Program Summary All Participants		
Total Participants	J	45
Total Budget	K	**$326,580**
Gross kW Saved at Customer	(J x I)	423 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**232 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,744,702 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**2,938,653 kWh**
Societal Net Benefits	(J x I x H)	**$463,693**

Utility Program Cost per kWh Lifetime	**$0.0209**
Utility Program Cost per kW at Gen	**$1,407**

ENERGY INFORMATION SYSTEMS — 2020 ELECTRIC — ACTUAL

2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$92,597	$92,597	$92,597	$92,597
T & D	N/A	$57,313	$57,313	$57,313	$57,313
Marginal Energy	N/A	$513,819	$513,819	$513,819	$513,819
Environmental Externality	N/A	N/A	N/A	N/A	$175,093
Subtotal	N/A	$663,729	$663,729	$663,729	$838,821
Participant Benefits					
Bill Reduction - Electric	$880,337	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$89,397	N/A	N/A	$89,397	$89,397
Incremental Capital Savings	$0	N/A	N/A	$0	$0
Incremental O&M Savings	$0	N/A	N/A	$0	$0
Subtotal	$969,734	N/A	N/A	$89,397	$89,397
Total Benefits	$969,734	$663,729	$663,729	$753,126	$928,218
Costs					
Utility Project Costs					
Customer Services	N/A	$0	$0	$0	$0
Project Administration	N/A	$336,672	$336,672	$336,672	$336,672
Advertising & Promotion	N/A	$0	$0	$0	$0
Measurement & Verification	N/A	$0	$0	$0	$0
Rebates	N/A	$89,397	$89,397	$89,397	$89,397
Other	N/A	$0	$0	$0	$0
Subtotal	N/A	$426,069	$426,069	$426,069	$426,069
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$880,337	N/A	N/A
Subtotal	N/A	N/A	$880,337	N/A	N/A
Participant Costs					
Incremental Capital Costs	$423,276	N/A	N/A	$423,276	$423,276
Incremental O&M Costs	$18,322	N/A	N/A	$18,322	$18,322
Subtotal	$441,598	N/A	N/A	$441,598	$441,598
Total Costs	$441,598	$426,069	$1,306,406	$867,666	$867,666
Net Benefit (Cost)	$528,136	$237,660	($642,677)	($114,541)	$60,552
Benefit/Cost Ratio	2.20	1.56	0.51	0.87	1.07

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	5.5 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	35.89%
Gross Load Factor at Customer	E	47.19%
Transmission Loss Factor (Energy)	F	6.6000%
Transmission Loss Factor (Demand)	G	7.0000%
Societal Net Benefit (Cost)	H	$87

Program Summary per Participant		
Gross kW Saved at Customer	I	23.10 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	8.92 kW
Gross Annual kWh Saved at Customer	(B x E x I)	95,508 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	102,257 kWh

Program Summary All Participants		
Total Participants	J	30
Total Budget	K	**$426,069**
Gross kW Saved at Customer	(J x I)	693 kW
Net coincident kW Saved at Generator	**(I x D) / (1 - G) x J**	**267 kW**
Gross Annual kWh Saved at Customer	(B x E x I) x J	2,865,247 kWh
Net Annual kWh Saved at Generator	**((B x E x I) / (1 - F)) x J**	**3,067,716 kWh**
Societal Net Benefits	(J x I x H)	**$60,552**
Utility Program Cost per kWh Lifetime		**$0.0253**
Utility Program Cost per kW at Gen		**$1,593**

➢ One-Stop Efficiency Shop Program — Actual for 2020

Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test ($Total)	Utility Test ($Total)	Rate Impact Test ($Total)	Total Resource Test ($Total)	Societal Test ($Total)
Benefits					
Avoided Revenue Requirements					
Generation	N/A	$ 7,758,310	$ 7,758,310	$ 7,758,310	$ 7,758,310
T & D	N/A	$ 4,729,806	$ 4,729,806	$ 4,729,806	$ 4,729,806
Marginal Energy	N/A	$ 20,592,883	$ 20,592,883	$ 20,592,883	$ 20,592,883
Environmental Externality	N/A	N/A	N/A	N/A	$ 7,208,079
Subtotal	N/A	$ 33,080,999	$ 33,080,999	$ 33,080,999	$ 40,289,078
Participant Benefits					
Bill Reduction - Electric	$ 51,357,770	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	$ 7,702,947	N/A	N/A	$ 7,702,947	$ 7,702,947
Incremental Capital Savings	$ -	N/A	N/A	$ -	$ -
Incremental O&M Savings	$ -	N/A	N/A	$ -	$ -
Subtotal	$ 59,060,717	N/A	N/A	$ 7,702,947	$ 7,702,947
Total Benefits	$ 59,060,717	$ 33,080,999	$ 33,080,999	$ 40,783,945	$ 47,992,025
Costs					
Utility Project Costs					
Project Administration	N/A	$ 5,479,239	$ 5,479,239	$ 5,479,239	$ 5,479,239
Utility Administration	N/A	$ 284,725	$ 284,725	$ 284,725	$ 284,725
Advertising & Promotion	N/A	$ -	$ -	$ -	$ -
Measurement and Verification	N/A	$ -	$ -	$ -	$ -
Rebates	N/A	$ 7,702,947	$ 7,702,947	$ 7,702,947	$ 7,702,947
Other	N/A	$ -	$ -	$ -	$ -
Subtotal	N/A	$ 13,466,911	$ 13,466,911	$ 13,466,911	$ 13,466,911
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	$ 51,357,770	N/A	N/A
Subtotal	N/A	N/A	$ 51,357,770	N/A	N/A
Participant Costs					
Incremental Capital Costs	$ 14,070,236	N/A	N/A	$ 14,070,236	$ 14,070,236
Incremental O&M Costs	$ 1,481,385	N/A	N/A	$ 1,481,385	$ 1,481,385
Subtotal	$ 15,551,621	N/A	N/A	$ 15,551,621	$ 15,551,621
Total Costs	$ 15,551,621	$ 13,466,911	$ 64,824,681	$ 29,018,532	$ 29,018,532
Net Benefit (Cost)	$43,509,096	$19,614,088	($31,743,682)	$11,765,413	$18,973,493
Benefit/Cost Ratio	3.80	2.46	0.51	1.41	1.65

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

➢ One-Stop Efficiency Shop Program — Actual for 2020

Input Summary and Totals

Program ''Inputs'' per Customer kW		
Lifetime (Weighted on Generator kWh)	A	17.00 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	78.54%
Gross Load Factor at Customer	E	45.40%
Transmission Loss Factor (Energy)	F	6.600%
Transmission Loss Factor (Demand)	G	7.000%
Societal Net Benefit (Cost)	H	$1,521

Program Summary per Participant		
Gross kW Saved at Customer	I	7.05 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G)	5.96 kW
Gross Annual kWh Saved at Customer	(B x E x I)	28,052 kWh
Net Annual kWh Saved at Generator	(B x E x I) / (1 - F)	30,034 kWh

Program Summary All Participants		
Total Participants	J	1,769
Total Budget	K	$ 13,466,911
Gross kW Saved at Customer	(J x I)	12,476 kW
Net coincident kW Saved at Generator	(I x D) / (1 - G) x J	10,537 kW
Gross Annual kWh Saved at Customer	(B x E x I) x J	49,624,060 kWh
Net Annual kWh Saved at Generator	((B x E x I) / (1 - F)) x J	53,130,685 kWh
Societal Net Benefits	(J x I x H)	$18,973,493

Utility Program Cost per kWh Lifetime	$0.0149
Utility Program Cost per kW at Gen	$1,278.07

Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)	Measure Lifetime (years)	Rebate Amount ($)	Average Baseline Product Cost ($)	Incremental Cost of Efficient Product ($)	Assumed Energy Cost ($/kWh)	Rebate as a % of Incremental Cost (%)	Increm't Cost Payback Period w/o Rebate (yrs)	Increm't Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved ($/kWh)	Rebated Lifetime cost /Cust kWh Saved ($/kWh)	Customer kW Savings (kW)	Generator Peak kW Savings (kW)	Non-Energy O&M Savings ($)	Coincidence Factor (%)	2020 Participants (-)	2020 Units (-)	NTG (%)	Installation Rate (%)	Realization Rate (kW) (%)	Realization Rate (kWh) (%)	2020 NET Gen kW (kW)	2020 NET Gen kWh (kWh)	2020 Rebate ($)	2020 Incremental Costs ($)
TOTAL																															
Business																															
Business New Construction																															
Average EDA Project - 2020	More Efficient than Code Building	152,055	4,086	Code-Compliant Building	256,295	4,024	20	$57,814	$0	$195,880	$0.06	30%	8.1	5.7	410,042	$0.141	$0.007	104.2	87.3	-$213.09	78%	107	107	100%	100%	100%	100%	9,338	46,974,846	6,186,117	20,959,202
Average EEB Project - 2020	More Efficient than Code Building	42,216	3,025	Code-Compliant Building	54,722	3,117	20	$5,510	$0	$17,579	$0.06	31%	6.9	4.8	42,897	$0.128	$0.006	12.5	10.0	-$121.69	75%	150	150	100%	100%	100%	100%	1,507	6,889,315	826,517	2,636,879
Commercial Efficiency																															
Average project results from 2015 history	0	1,691,153	5,913	New updated systems	1,691,259	5,913	17	$43	$0	$149	$0.07	29%	3.9	2.7	524	$0.083	$0.005	0.1	0.1	$1.83	73%	53,970	53,970	100%	100%	99.8%	99.7%	4,476	30,183,305	2,340,929	8,063,738
Study Cost Allocations	0	0	0	0	0	0	0	$138,750	$0	$138,750	$0.07	100%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Phase 2 Customer Contribution	0	0	0	0	0	0	0	$0	$0	$7,500	$0.07	0%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Behavioral Changes	Behavior changes that reduce energy use	2,962,572	8,760	No change in behavior	3,024,892	8,760	1	$0	$0	$0	$0.06	0%	0.0	0.0	545,921	$0.000	$0.000	62.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Behavioral Changes	Behavior changes that reduce energy use	-1,975,048	8,760	No change in behavior	-2,016,594	8,760	0	$0	$0	$0	$0.06	0%	0.0	0.0	-383,947	$0.000	#DIV/0!	-41.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Commercial Refrigeration Efficiency																															
Condenser or Evaporator Coil Cleaning	After Tune-Up	597	8,760	Before Tune-Up	630	8,760	1	$25	$0	$25	$0.08	100%	1.1	0.0	293	$0.085	$0.085	0.0	0.0	$0.00	100%	125	125	100%	100%	102.9%	102.5%	5	40,196	3,125	3,125
Sink Aerator -restroom, elec water heating (per aerator)	.6 gallons per minute restroom faucet aerator	83	8,760	2.2 gallons per minute faucet	327	8,758	10	$7	$0	$7	$0.11	100%	0.0	0.0	2,138	$0.003	$0.000	0.2	0.0	$63.85	2%	8	8	100%	100%	102.9%	102.5%	0	18,768	54	54
Sink Aerator -kitchen, elec water heating (per aerator)	1.5 gallons per minute kitchen faucet aerator	95	8,760	2.2 gallons per minute faucet	131	8,795	10	$7	$0	$7	$0.11	100%	0.2	0.0	320	$0.021	$0.002	0.0	0.0	$6.94	0%	1	1	100%	100%	102.9%	102.5%	0	351	7	7
CHW Pre-Rinse Sprayer - electric water heating	1.28 gallons per minute sprayer	208	8,760	1.60 gallons per minute sprayer	296	8,767	5	$45	$0	$45	$0.11	100%	0.5	0.0	773	$0.058	$0.012	0.1	0.0	$16.77	3%	5	5	100%	100%	102.9%	102.5%	0	4,242	225	225
LED Refrigerated Case Lighting - Retrofit Screw Base	LED Screw Base	20	5,124	Incandescent screw base	117	5,125	5	$24	$0	$24	$0.08	100%	0.6	0.0	498	$0.048	$0.010	0.1	0.1	$0.00	100%	51	51	100%	100%	100.1%	100.2%	5	27,242	1,224	1,224
ECM Motors - Medium Temp Display Case	ECM Motor	24	8,672	Shaded Pole Motor	71	8,673	15	$40	$0	$141	$0.07	28%	5.1	3.8	414	$0.097	$0.006	0.0	0.1	$0.00	99%	825	825	100%	100%	102.9%	102.5%	43	374,893	33,000	116,086
ECM Motors - Low Temp Display Case	ECM Motor	28	8,672	Shaded Pole Motor	84	8,673	15	$40	$0	$141	$0.07	28%	4.3	3.1	489	$0.082	$0.005	0.1	0.1	$0.00	99%	217	217	100%	100%	102.9%	102.5%	13	116,475	8,680	30,534
ECM Motors - Medium Temp Walk-in, Evap fan <= 15" Diameter	ECM Motor	44	8,585	Shaded Pole Motor	137	8,586	15	$70	$0	$269	$0.07	26%	5.1	3.8	793	$0.088	$0.006	0.1	0.1	$0.00	98%	193	193	100%	100%	102.9%	102.5%	19	167,943	13,510	51,919
ECM Motors - Low Temp Walk-in, Evap fan <= 15" Diameter	ECM Motor	52	8,585	Shaded Pole Motor	161	8,590	15	$70	$0	$269	$0.07	26%	4.3	3.2	937	$0.075	$0.005	0.1	0.1	$0.00	98%	40	40	100%	100%	102.9%	102.5%	5	41,113	2,800	10,760
ECM Motors - Medium Temp Walk-in, Evap fan > 15" Diameter	ECM Motor	68	8,585	Shaded Pole Motor	138	8,585	15	$70	$0	$269	$0.07	26%	6.6	4.9	605	$0.116	$0.008	0.1	0.0	$0.00	0%	0	0	100%	100%	102.9%	102.5%	0	0	0	0
ECM Motors - Low Temp Walk-in, Evap fan > 15" Diameter	ECM Motor	80	8,585	Shaded Pole Motor	163	8,585	15	$70	$0	$269	$0.07	26%	5.6	4.2	715	$0.098	$0.007	0.1	0.1	$0.00	98%	4	4	100%	100%	102.9%	102.5%	0	3,138	280	1,076
Anti-Sweat Heater Controls, Medium Temperature Case	Anti-Sweat Heater Controls	12	8,760	Anti-Sweat Heaters running constantly	1,375	8,761	12	$750	$0	$2,250	$0.07	33%	2.8	1.9	11,936	$0.063	$0.005	1.4	1.3	$0.00	90%	4	4	100%	100%	102.9%	102.5%	5	52,397	3,000	9,000
Anti-Sweat Heater Controls, Low Temperature Case	Anti-Sweat Heater Controls	24	8,760	Anti-Sweat Heaters running constantly	5,849	8,760	12	$2,100	$0	$6,300	$0.07	33%	1.8	1.2	51,026	$0.041	$0.003	5.8	5.6	$0.00	90%	5	5	100%	100%	102.9%	102.5%	29	279,985	10,500	31,500
No Heat Case Doors (Cooler)	No Heat Case Doors	0	8,760	Anti-Sweat Heaters running constantly	713	8,763	10	$450	$0	$2,400	$0.07	19%	5.7	4.7	6,248	$0.072	$0.007	0.7	0.8	$0.00	100%	1	1	100%	100%	102.9%	102.5%	1	6,857	450	2,400
No Heat Case Doors (Freezer)	No Heat Case Doors	0	8,760	Anti-Sweat Heaters running constantly	1,989	8,760	10	$1,642	$0	$4,516	$0.07	36%	3.9	2.5	17,423	$0.094	$0.009	2.0	2.1	$0.00	100%	19	19	100%	100%	107.0%	102.7%	43	364,130	31,200	85,800
Evaporative Motor Fan Controller (EMFC) (Cooler)	Evaporative motor fan control on commercial medium temp walk-in	4	3,262	No motor fan controls on commercial medium temp walk-in	137	3,262	15	$35	$0	$351	$0.07	10%	12.1	10.9	432	$0.081	$0.005	0.1	0.0	$0.00	0%	0	0	100%	100%	102.9%	102.5%	0	0	0	0
Evaporative Motor Fan Controller (EFMC) (Freezer)	Evaporative motor fan control on low temp walk-in	5	1,717	No motor fan controls on commercial low temp walk-in	161	1,717	15	$35	$0	$351	$0.07	10%	19.6	17.6	268	$0.130	$0.009	0.2	0.0	$0.00	0%	0	0	100%	100%	102.9%	102.5%	0	0	0	0
Night Curtains for Reach-In Cases (per linear foot)	Night Curtains on Cases	120	1,825	Open Reach-In Cases	2,879	1,125	4	$757	$0	$1,589	$0.07	48%	7.9	4.1	3,021	$0.250	$0.063	2.8	0.0	-$119.33	0%	46	46	100%	100%	102.9%	102.5%	0	152,529	34,800	73,080
Medium-temp Enclosed Reach-In Case (per linear foot)	Medium-temp Reach-In Cases with Doors	21	8,760	Medium-temp Open Reach-In Cases	1,162	8,761	15	$721	$0	$7,181	$0.07	10%	10.7	9.7	10,001	$0.072	$0.005	1.1	1.2	$0.00	100%	36	36	100%	100%	102.9%	102.5%	45	395,108	25,970	258,507
Retrofit of open multi-deck cooler cases with solid glass doors (per linear foot of case)	Closed Case with Doors	12	8,760	Open Case with No Doors	71	8,760	12	$50	$0	$237	$0.07	21%	6.9	5.4	515	$0.097	$0.008	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Retrofit of open multi-deck freezer cases with solid glass doors (per linear foot of case)	Closed Case with Doors	39	8,760	Open Case with No Doors	216	8,760	12	$75	$0	$343	$0.07	22%	3.3	2.6	1,558	$0.048	$0.004	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
LED Refrigerated Case Lighting	LED Strip lighting	51	8,760	T8 or T12 Fluorescent	124	6,508	20	$42	$0	$164	$0.07	26%	6.8	5.1	358	$0.118	$0.006	0.1	0.1	$0.00	81%	397	397	100%	100%	100.1%	100.2%	25	152,575	16,819	65,009
Demand Controlled Ventilation - Electric Only or Combo Customer	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	11,766	3,307	Commercial kitchen ventilation hoods without Demand Controlled Ventilation with 8.65 HP Motor	19,597	3,307	20	$865	$0	$16,019	$0.07	5%	9.2	8.7	25,896	$0.033	$0.002	7.8	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Misc Custom Measures	Efficiency systems and practices	18,369	3,000	Existing systems and practices	25,863	4,117	10	$2,997	$0	$15,617	$0.07	19%	4.5	3.7	51,371	$0.058	$0.006	7.5	6.1	$0.00	76%	7	7	100%	100%	100%	100%	0	385,011	20,981	109,322
Cooling Efficiency																															
DX Units	DX unit size 8.20 tons, 12.60 EER, 15.06 SEER	8,108	1,529	DX unit size 8.20 tons, 10.90 EER, 12.00 SEER	8,925	1,490	20	$897	$7,847	$1,797	$0.07	50%	29.7	14.9	904	$0.992	$0.050	0.8	0.8	$0.00	90%	1,018	1,018	100%	100%	100.0%	100.0%	804	984,995	912,798	1,829,695
RTU Economizer Control with Demand Control Ventilation	RTU with Demand Control	1,207	498	RTU with Standard Economizer	2,135	498	15	$239	$0	$1,500	$0.07	16%	48.5	40.8	462	$0.517	$0.034	0.9	0.9	$0.00	90%	35	35	100%	100%	100.0%	100.0%	31	17,306	8,357	52,500
Water-source Heat Pumps	WSHP unit size 1.94 tons, 13.91 EER, 15.45 SEER	1,678	921	WSHP unit size 1.94 tons, 12.00 EER, 13.33 SEER	1,989	903	20	$185	$2,010	$428	$0.07	43%	25.5	14.5	250	$0.739	$0.037	0.3	0.3	$0.00	90%	359	359	100%	100%	100.0%	100.0%	108	96,284	66,454	153,513
PTAC Units	PTAC unit size 0.74 tons, 11.78 EER, 13.86 SEER	752	1,013	PTAC unit size 0.74 tons, 11.14 EER, 13.11 SEER	821	981	20	$45	$1,232	$173	$0.07	26%	59.2	43.7	44	$1.038	$0.052	0.1	0.1	$0.00	90%	131	131	100%	100%	100.0%	100.0%	9	6,109	5,921	22,617
Scroll/Screw Chiller	Chiller size 109 tons, 0.71 FLV kW/ton, 0.53 IPLV	75,933	1,092	Chiller size 109 tons, 0.77 FLV kW/ton, 0.62 IPLV	92,016	1,140	20	$5,648	$41,416	$23,775	$0.07	24%	16.2	12.3	21,943	$0.257	$0.013	16.1	15.6	$0.00	90%	1	1	100%	100%	100.0%	100.0%	16	23,494	5,648	23,775
Centrifugal Chiller	Chiller size 341.04 tons, 0.58 FLV kW/ton, 0.42 IPLV	192,860	5,978	Chiller size 341.04 tons, 0.62 FLV kW/ton, 0.58 IPLV	196,749	5,972	20	$3,739	$144,784	$10,760	$0.07	35%	7.3	4.8	22,030	$0.170	$0.008	3.9	3.8	$0.00	90%	4	4	100%	100%	100.0%	100.0%	15	94,346	14,955	43,040
Air Cooled Chillers	Chiller size 124.73 tons, 10.43 EER, 16.04 IPLV	142,617	2,422	Chiller size 124.73 tons, 9.56 EER, 12.58 IPLV	170,943	2,239	20	$10,371	$66,720	$28,806	$0.07	36%	11.5	7.4	37,295	$0.278	$0.014	28.3	27.4	$0.00	90%	26	26	100%	100%	100.0%	100.0%	713	1,038,191	269,653	748,953
Cooling Studies	Customer has Study	0	0	No Study	0	0	0	$10,000	$0	$14,501	$0.07	69%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Recommissioning Studies	Efficient equipment as identified in a recommissioning study	0	0	Existing equipment	0	0	0	$10,081	$0	$12,526	$0.07	80%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Chiller VFD Retrofit	VFD Chiller size 855 tons, 0.63 FLV kW/ton, 0.38 IPLV	326,610	1,021	Const Speed Chiller size 855 tons, 0.62 FLV kW/ton, 0.37 IPLV	396,157	1,064	15	$10,432	$138,359	$40,253	$0.07	26%	6.8	5.1	87,837	$0.119	$0.008	69.5	-9.8	$0.00	-13%	3	3	100%	100%	100.0%	100.0%	-29	282,133	31,296	120,758
Custom Cooling Projects	New Equipment	89,775	3,722	Existing or New Inefficient	106,648	4,407	18	$6,749	$7,961	$43,078	$0.07	16%	4.7	4.0	135,932	$0.050	$0.003	16.9	5.1	$0.00	28%	2	2	100%	100%	100%	100%	10	291,075	13,498	86,156
ERV Install on RTU/AHU for reduced cooling load	73.5% Sensible Effectiveness Heat Recovery on 11193 CFM OA (Cooling Mode)	9,608	338	No heat recovery on 11193 CFM OA	188,968	118	15	$3,208	$0	$1,038	$0.07	309%	0.8	-1.7	19,009	$0.169	$0.011	179.4	173.6	$0.00	90%	6	6	100%	100%	100.0%	100.0%	1,041	122,113	19,248	6,226
Mini-Split Heat Pump	MSHP size 1.2 tons, 21.27 SEER, 15.40 HSPF	1,088	1,265	MSHP size 1.2 tons, 14 SEER, 8.2 HSPF	2,034	1,042	18	$254	$3,440	$961	$0.07	26%	19.3	14.2	744	$0.342	$0.019	0.9	0.9	$0.00	90%	38	38	100%	100%	100.0%	100.0%	35	30,277	9,660	36,511
Mini-Split AC - Data Center	MSHP size 1.2 tons, 21.27 SEER	1,088	5,236	MSHP size 1.2 tons, 14 SEER	1,647	5,236	18	$108	$3,440	$512	$0.07	21%	2.6	2.1	2,926	$0.037	$0.002	0.6	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
ECM Motors - Medium Temp Display Case	ECM Motor	24	8,672	Shaded Pole Motor	71	8,673	15	$40	$0	$141	$0.07	28%	5.1	3.8	414	$0.097	$0.006	0.0	0.1	$0.00	99%	72	72	100%	100%	100.0%	100.0%	4	31,919	2,880	10,131
ECM Motors - Low Temp Display Case	ECM Motor	28	8,672	Shaded Pole Motor	84	8,673	15	$40	$0	$141	$0.07	28%	4.3	3.1	489	$0.082	$0.005	0.1	0.1	$0.00	99%	263	263	100%	100%	100.0%	100.0%	16	137,723	10,520	37,007
ECM Motors - Medium Temp Walk-in, Evap fan <= 15" Diameter	ECM Motor	44	8,585	Shaded Pole Motor	137	8,593	15	$70	$0	$269	$0.07	26%	5.1	3.7	793	$0.088	$0.006	0.1	0.1	$0.00	98%	4	4	100%	100%	100.0%	100.0%	0	3,396	280	1,076
ECM Motors - Low Temp Walk-in, Evap fan <= 15" Diameter	ECM Motor	52	8,585	Shaded Pole Motor	161	8,591	15	$70	$0	$269	$0.07	26%	4.3	3.2	937	$0.075	$0.005	0.1	0.1	$0.00	98%	3	3	100%	100%	100.0%	100.0%	0	3,009	210	807
ECM Motors - Medium Temp Walk-in, Evap fan > 15" Diameter	ECM Motor	68	8,585	Shaded Pole Motor	138	8,585	15	$70	$0	$269	$0.07	26%	6.6	4.9	605	$0.116	$0.008	0.1	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
ECM Motors - Low Temp Walk-in, Evap fan > 15" Diameter	ECM Motor	80	8,585	Shaded Pole Motor	163	8,585	15	$70	$0	$269	$0.07	26%	5.6	4.2	714	$0.098	$0.007	0.1	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Anti-Sweat Heater Controls	Anti-Sweat Heater Controls	18	8,760	Anti-Sweat Heaters running constantly	21,903	8,760	12	$7,890	$0	$23,670	$0.07	33%	1.8	1.2	191,711	$0.041	$0.003	21.9	21.2	$0.00	90%	2	2	100%	100%	100.0%	100.0%	42	410,515	15,780	47,340
Energy Efficient Case Doors	No heat Case Doors	0	8,760	Anti-Sweat Heaters running constantly	1,858	8,758	10	$1,325	$0	$5,388	$0.07	25%	4.9	3.7	16,269	$0.081	$0.008	1.9	2.0	$0.00	100%	2	2	100%	100%	100.0%	100.0%	4	34,836	2,650	10,775
Advanced Digital Economizer Control (per ton) - Placeholder	0	0	0	0	0	0	0	$0	$0	$0	$0.07	0%	0.0	0.0	0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Demand Control Ventilation (per ton) - Placeholder	0	0	0	0	0	0	0	$0	$0	$0	$0.07	0%	0.0	0.0	0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
PMSM - Medium Temp Display Case	Permanent Magnet Sychronous Motor (PMSM)	22	8,672	Shaded Pole Motor	72	8,672	15	$40	$0	$93	$0.07	43%	3.2	1.9	430	$0.093	$0.006	0.0	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
PMSM - Low Temp Display Case	Permanent Magnet Sychronous Motor (PMSM)	26	8,672	Shaded Pole Motor	84	8,672	15	$40	$0	$93	$0.07	43%	2.7	1.8	507	$0.079	$0.005	0.1	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Medium Temp Reach-In Case with Doors	Medium-temp Enclosed Reach-In Cases (per linear foot)	21	8,760	Medium-temp Open Reach-In Cases	4,768	8,761	15	$3,000	$0	$29,412	$0.07	10%	10.6	9.5	41,590	$0.072	$0.005	4.7	5.1	$0.00	100%	7	7	100%	100%	100.0%	100.0%	36	311,703	21,000	205,887
Evaporative Motor Fan Controller (EMFC) (Cooler)	Evaporative Motor Fan Controller (EMFC) (Cooler)	4	3,329	No motor fan controls on commercial medium temp walk-in	140	3,329	15	$35	$0	$351	$0.07	10%	11.7	10.5	450	$0.078	$0.005	0.1	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Evaporative Motor Fan Controller (EFMC) (Freezer)	Evaporative Motor Fan Controller (EFMC) (Freezer)	5	1,717	No motor fan controls on commercial low temp walk-in	165	1,717	15	$35	$0	$351	$0.07	10%	19.2	17.3	274	$0.128	$0.009	0.2	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Custom Efficiency																															
Custom Efficiency Electric	High Efficiency Product/system	38,087	4,643	Less Efficient Product/Systems	116,213	4,590	19	$22,999	$49,905	$212,182	$0.07	11%	8.1	7.2	356,553	$0.065	$0.003	78.1	70.8	$11,560.48	84%	23	23	100%	100%	100%	100%	1,627	8,780,224	528,984	4,880,187
Custom Studies Electric	0	0	0	0	0	0	0	$9,808	$0	$19,069	$0.07	51%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Data Center Efficiency																															
Data Center Efficiency Study	0	0	0	0	0	0	0	$16,301	$0	$21,735	$0.07	75%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Data Center Measures	Historical Averages from past custom projects	385,537	7,312	Historical Averages from past custom projects	387,170	7,317	11	$367	$255,991	$1,813	$0.07	23%	1.7	1.3	13,967	$0.026	$0.002	1.6	0.4	-$0.18	21%	239	239	100%	100%	100.0%	99.9%	87	3,570,672	87,690	385,509
Retrofit - EC Plug Fan In-Unit	EC Plug Fan	2,151	8,760	Forward-curved Centrifugal Fan with AC motor	2,711	8,662	10	$1,200	$0	$2,787	$0.07	43%	9.0	5.1	4,634	$0.259	$0.026	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Retrofit - EC Plug Fans Below-Floor	EC Plug Fan	1,867	8,760	Forward-curved Centrifugal Fan with AC motor	2,794	8,603	10	$1,200	$0	$2,787	$0.07	43%	5.4	3.1	7,681	$0.156	$0.016	0.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
New- EC Plug Fans In-Unit	EC Plug Fan	2,151	8,760	Forward-curved Centrifugal Fan with AC motor	3,198	8,668	20	$1,400	$0	$3,400	$0.07	41%	5.7	3.4	8,879	$0.158	$0.008	1.0	1.1	$0.00	100%	14	14	100%	100%	100%	100%	16	133,090	19,600	47,600
New - EC Plug Fans Below-Floor	EC Plug Fan	1,867	8,760	Forward-curved Centrifugal Fan with AC motor	2,735	8,671	20	$700	$0	$1,700	$0.07	41%	3.5	2.0	7,357	$0.095	$0.005	0.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
New Construction - Whole Facility	Highly efficient data center	3,944,444	8,700	Standard efficiency new data center	4,000,000	8,700	11	$29,034	$0	$96,780	$0.07	30%	3.0	2.1	483,333	$0.060	$0.005	55.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Chilled Water Systems Waterside Economizer	Chilled water system with waterside economizer	32,412	8,760	Chilled water system without economizer	53,000	8,760	20	$21,200	$0	$65,571	$0.07	32%	5.0	3.4	180,351	$0.118	$0.006	20.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Zero & Thin Client Installations	Server & software at data center along with thin-client or zero-client device replaces desktop CPU (VM Ware w/ Wyse thin-client system, Pano-Logic zero-client system); meeting Energy Star 6.0 specification	13	7,311	Desktop computers meeting ENERGY STAR 3.0 specifications	28	7,311	10	$10	$600	$117	$0.07	9%	14.1	12.9	111	$0.090	$0.009	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Efficiency Controls																															
Efficiency Controls - Electric	New Digital Controls System	27,741	6,901	Non Digital or Obsolete Digital System	47,849	7,000	15	$9,809	$0	$44,660	$0.06	22%	5.3	4.1	143,492	$0.068	$0.005	20.1	6.3	$1,369.68	29%	22	22	100%	100%	100%	100%	138	3,379,907	215,795	982,512
Efficiency Controls - Study Allocation	Study Allocation	0	0	0	0	0	0	$2,511	$0	$3,835	$0.06	65%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0

Fluid System Optimization																															
Non-Custom Opportunities identified in an FSO study, i.e. recommissioning type adjustments, leaks, waste and demand reduction, study driven retrofit and projects	Optimized System	141,503	7,779	Non-Optimized System	144,432	7,756	5	$0	$0	$541	$0.07	0%	0.4	0.4	19,331	$0.000	$0.000	2.9	2.8	$0.00	88%	1	1	100%	100%	102.9%	102.5%	3	21,214	0	541
Compressed Air Efficiency Study	Leaks & Waste Found and Repaired	142,361	7,189	Existing System with Leaks & Waste that have not been repaired	148,521	7,186	5	$5,210	$0	$6,894	$0.07	76%	2.3	0.6	43,932	$0.119	$0.024	6.2	6.3	$0.00	96%	39	39	100%	100%	100%	100%	247	1,834,422	203,180	268,850
Custom compressed air, pump, fan, blower, vacuum and hydraulic opportunities	New Equipment	113,561	6,257	Old or less efficient systems or equipment	146,472	6,247	20	$12,553	$0	$68,510	$0.07	18%	5.0	4.0	204,430	$0.061	$0.003	32.9	29.4	$828.22	83%	18	18	100%	100%	102.9%	102.5%	544	4,038,256	225,957	1,233,194
Cycling Dryers	New Cycling Dryer	2,359	7,188	New Non-Cycling Dryer	3,371	7,276	20	$1,003	$7,374	$1,414	$0.07	71%	2.8	0.8	7,572	$0.132	$0.007	1.0	1.1	$0.00	100%	31	31	100%	100%	102.9%	102.5%	35	257,589	31,098	43,848
Dewpoint Controls	Purge Control for Heatless Desiccant Dryers	72,549	7,123	No Purge Control for Heatless Desiccant Dryers	79,896	7,107	15	$1,500	$0	$3,337	$0.07	45%	1.0	0.5	51,056	$0.029	$0.002	7.3	7.9	$0.00	100%	3	3	100%	100%	102.9%	102.5%	24	168,092	4,500	10,010
Mist Eliminators	New Mist Eliminator Filter	81,776	7,321	New General Purpose Filter	83,093	7,323	20	$2,109	$1,351	$4,370	$0.07	48%	6.6	3.4	9,772	$0.216	$0.011	1.3	1.4	$66.00	100%	12	12	100%	100%	102.9%	102.5%	17	128,686	25,305	52,439
No Air Loss Drain	New No-Air Loss Drains	0	6,996	New Electronic Solenoid/Timed Drains	517	6,996	13	$200	$125	$448	$0.07	45%	1.8	1.0	3,617	$0.055	$0.004	0.5	0.4	$0.00	68%	67	67	100%	100%	102.9%	102.5%	26	265,950	13,400	30,016
VFD Air Compressor New	New VFD Compressor	14,011	2,999	New Modulation or load no-load with less than or equal to 2gal of storage per CFM of Capacity	20,563	3,110	20	$2,841	$10,768	$5,781	$0.07	49%	3.9	2.0	21,931	$0.130	$0.006	6.6	6.3	$0.00	89%	22	22	100%	100%	102.9%	102.5%	142	529,479	62,500	127,183
VFD Air Compressor Upgrade	New VFD Compressor	14,181	3,039	Existing Modulation or load no-load with less than or equal to 2gal of storage per CFM of Capacity	19,046	2,993	20	$4,964	$0	$14,815	$0.07	34%	15.8	10.5	13,902	$0.357	$0.018	4.9	4.6	$0.00	89%	14	14	100%	100%	102.9%	102.5%	67	213,583	69,500	207,414
VFD Compressor HP Reduction	New VFD Compressor of lesser HP than Baseline Unit	22,490	3,528	Existing Modulation or load no-load with less than or equal to 2gal of storage per CFM of Capacity	30,283	3,465	20	$5,333	$0	$17,010	$0.07	31%	9.8	6.7	25,591	$0.208	$0.010	7.8	7.4	$0.00	89%	3	3	100%	100%	102.9%	102.5%	23	84,253	16,000	51,029
Demand-side compressed air, pump, fan, blower, vacuum and hydraulic studies	Study Completed	148,277	0	No Study Completed	148,339	0	5	$9,089	$0	$9,089	$0.07	100%			0	$0.000	$0.000	0.1	0.0	$0.00	0%	0	0	100%	100%	102.9%	102.5%	0	0	0	0
Constant Speed Motor Controller	Motor with Voltage Controller	4,849	4,849	Motor without Voltage Controller	5,717	4,878	20	$345	$0	$1,188	$0.08	29%	3.6	2.6	4,376	$0.079	$0.004	0.9	0.0	$0.00	0%	0	0	100%	100%	97.1%	95.4%	0	0	0	0
New Motor Enhanced	NEMA Premium +1% Efficient Motor	3,074	6,135	NEMA Premium	3,126	6,135	20	$40	$797	$181	$0.08	22%	7.5	5.9	319	$0.125	$0.006	0.1	0.0	$0.00	0%	0	0	100%	100%	97.1%	95.4%	0	0	0	0
Upgrade Motor	NEMA Premium Efficient Motor	15,650	4,806	EPACT Efficient Motor	15,950	4,806	20	$926	$0	$2,362	$0.08	39%	21.8	13.2	1,440	$0.643	$0.032	0.3	0.0	$0.00	0%	0	0	100%	100%	97.1%	95.4%	0	0	0	0
Upgrade Motor Enhanced	NEMA Premium +1% Efficient Motor	5,447	5,243	EPACT Efficient Motor	5,663	5,243	20	$498	$0	$1,407	$0.08	35%	16.4	10.6	1,136	$0.438	$0.022	0.2	0.0	$0.00	0%	0	0	100%	100%	97.1%	95.4%	0	0	0	0
Variable Frequency Drive	Equipment coupled with an adjustable	7,699	4,643	Equipment without an ASD/VFD	11,443	4,643	15	$1,531	$0	$5,393	$0.08	28%	4.1	2.9	17,385	$0.088	$0.006	3.7	0.0	$0.00	0%	0	0	100%	100%	97.1%	95.4%	0	0	0	0
Food Service																															
Commercial Dishwasher - Under Counter, Electric Only or Combo Customer	ENERGY STAR qualified unit	1,190	6,570	Conventional unit as defined by ENERGY STAR	1,695	6,569	10	$250	$4,925	$128	$0.07	196%	0.6	-0.6	3,315	$0.075	$0.008	0.5	0.5	$26.51	85%	7	7	100%	100%	100%	100%	3	24,844	1,750	894
Commercial Dishwasher - Door Type, Electric Only or Combo Customer	ENERGY STAR qualified unit	3,552	6,570	Conventional unit as defined by ENERGY STAR	5,225	6,570	15	$226	$6,729	$621	$0.07	36%	0.8	0.5	10,987	$0.021	$0.001	1.7	1.5	$178.41	85%	16	16	100%	100%	100%	100%	24	182,330	3,500	9,623
Hot Food Holding Cabinet	ENERGY STAR qualified unit	261	5,475	Conventional unit as defined by ENERGY STAR	640	5,475	12	$400	$2,069	$1,713	$0.07	23%	12.3	9.5	2,075	$0.193	$0.016	0.4	0.3	$0.00	86%	5	5	100%	100%	100%	100%	2	11,108	2,000	8,565
Demand Controlled Ventilation - Electric Only or Combo Customer	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	11,766	3,307	Commercial kitchen ventilation hoods without Demand Controlled Ventilation with 8.65 HP Motor	14,589	3,307	20	$560	$0	$1,662	$0.07	34%	2.7	1.8	9,336	$0.060	$0.003	2.8	1.5	$0.00	49%	36	36	100%	100%	100%	100%	54	360,333	20,200	59,931
Heating Efficiency																															
EC Fan Motor on New Commercial Furnace	ECM Furnace Fan	405	4,321	Non-ECM Fan	1,288	4,407	18	$176	$236	$373	$0.11	47%	0.9	0.5	3,927	$0.045	$0.002	0.9	0.9	-$17.33	100%	120	120	100%	100%	100.0%	100.0%	114	504,520	21,100	44,732
EC Fan Motor on Existing Commercial Furnace	ECM Furnace Fan	541	4,519	Non-ECM Fan	1,926	4,519	7	$300	$0	$636	$0.11	47%	0.9	0.5	6,258	$0.048	$0.007	1.4	1.5	-$32.38	100%	1	1	100%	100%	100.0%	100.0%	1	6,700	300	636
Infrared	Infrared heater	0	1,848	Non-condensing standard forced-air unit heater	1,140	1,848	15	$71	$1,179	$167	$0.11	43%	0.7	0.4	2,108	$0.034	$0.002	1.1	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Lighting Efficiency																															
Low Wattage T8 4' lamps, <=28W	T8 25W and 28W Lamps	31	5,335	T8 32W Lamps	36	5,022	5	$1	$0	$2	$0.07	25%	2.0	1.5	14	$0.036	$0.007	0.0	0.0	-$0.07	81%	600	600	100%	100%	100.1%	100.2%	2	8,902	300	1,200
T8 to T8 Lighting Optimization	Fluorescent T8 Fixture with Less Lamps (3 2 1)	63	5,335	Fluorescent T8 Fixture with Most Lamps (4 3 2)	113	5,335	20	$12	$0	$43	$0.07	28%	2.2	1.6	269	$0.045	$0.002	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
High Bay Fluorescents replacing 150, 175, 250W HID	High Bay Fluorescents With Electronic Ballasts Replacing 250W HID	184	5,335	250W HID Fixture or Smaller	357	5,335	20	$35	$0	$164	$0.07	21%	2.4	1.9	924	$0.038	$0.002	0.2	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
High Bay Fluorescents replacing 320, 350, 400W HID	High Bay Fluorescents With Electronic Ballasts Replacing 400W HID	328	5,335	310 to 400 W HID Fixture	508	5,335	20	$50	$0	$215	$0.07	23%	3.1	2.3	962	$0.052	$0.003	0.2	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
High Bay Fluorescents replacing 750W HID	High Bay Fluorescents With Electronic Ballasts Replacing 750W HID	564	5,335	750 W HID Fixture	1,039	5,335	20	$80	$0	$392	$0.07	20%	2.1	1.7	2,533	$0.032	$0.002	0.5	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
High Bay Fluorescents replacing 1000W HID	High Bay Fluorescents With Electronic Ballasts Replacing 1000W HID	762	5,335	1000 W HID Fixture	1,352	5,335	20	$100	$0	$430	$0.07	23%	1.9	1.4	3,143	$0.032	$0.002	0.6	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Fluorescent Parking Garage, 2 and 3 lamp replacing 150 - 175W HID systems	High Efficiency Fluorescent T8 or T5 Systems	109	8,760	150 or 175W HID Fixture	192	8,760	20	$50	$0	$169	$0.07	30%	3.2	2.3	722	$0.069	$0.003	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Fluorescent Parking Garage, Low Wattage T8 lamps <=28W	T8 25W and 28W Lamps	25	8,760	T8 32W Lamps	30	8,760	4	$1	$0	$4	$0.07	13%	1.2	1.1	45	$0.011	$0.003	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
CFL, Pin Based - <=19W	Pin Based CFL	20	5,335	Incandescent	49	5,335	20	$2	$0	$9	$0.07	22%	0.8	0.6	154	$0.013	$0.001	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
CFL, Pin Based - 19-32W	Pin Based CFL	44	5,335	Incandescent	97	5,335	20	$3	$0	$9	$0.07	32%	0.4	0.3	286	$0.010	$0.001	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
CFL, Pin Based - 33-100W	Pin Based CFL	37	5,335	Incandescent	92	5,335	20	$4	$0	$12	$0.07	32%	0.6	0.4	295	$0.014	$0.001	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
CFL, 2-foot Low Wattage - 25 - 28W	PL 25W CFL	33	5,335	PL 40W CFL	50	5,335	5	$1	$0	$12	$0.07	4%	1.8	1.7	90	$0.006	$0.001	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Wall mount occupancy sensor - 50 - 300W Controlled Laod	Lighting Fixture with Occupancy Sensor	87	5,335	Lighting Fixture with Manual Switch	125	5,335	8	$15	$0	$55	$0.07	27%	3.8	2.7	200	$0.075	$0.009	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Wall mount occupancy sensor - 300W+ Controlled Load	Lighting Fixture with Occupancy Sensor	447	5,335	Lighting Fixture with Manual Switch	638	5,335	8	$25	$0	$55	$0.07	45%	0.7	0.4	1,021	$0.024	$0.003	0.2	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Ceiling mount occupancy sensor - 50 - 300W Controlled Laod	Lighting Fixture with Occupancy Sensor	87	5,335	Lighting Fixture with Manual Switch	125	5,335	8	$30	$0	$125	$0.07	24%	8.6	6.5	200	$0.150	$0.019	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Ceiling mount occupancy sensor - 300W+ Controlled Load	Lighting Fixture with Occupancy Sensor	447	5,335	Lighting Fixture with Manual Switch	638	5,335	8	$40	$0	$125	$0.07	32%	1.7	1.1	1,021	$0.039	$0.005	0.2	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Photocell	Lighting Fixture with Photocell	170	5,335	Lighting Fixture with Manual Switch	572	4,371	8	$116	$0	$710	$0.07	16%	6.1	5.1	1,590	$0.073	$0.009	0.4	0.3	-$0.61	69%	6	6	100%	100%	100.1%	100.2%	2	10,232	698	4,257
Stairwell Fixture with Integral Occupancy Sensor	Stairwell Lighting Fixture with Occupancy Sensor	7	5,335	Stairwell Lighting Fixture	57	7,256	14	$35	$0	$171	$0.07	21%	6.2	4.9	375	$0.094	$0.007	0.1	0.1	-$2.04	100%	214	214	100%	100%	100.1%	100.2%	12	86,175	7,550	36,521
Exit sign retrofit and replacement	LED/LEC Exit	1	7,602	Incandescent	43	7,330	20	$25	$0	$83	$0.07	30%	3.8	2.6	303	$0.083	$0.004	0.0	0.0	-$1.61	100%	1,074	1,074	100%	100%	100.1%	100.2%	48	348,935	26,850	89,517
LED Interior Fixture, <= 25 Watts	LED Downlight Luminaire	21	5,335	Incandescent Luminaire	102	4,520	20	$34	$0	$71	$0.07	48%	2.8	1.5	350	$0.098	$0.005	0.1	0.1	-$1.87	72%	2,501	2,501	100%	100%	100.1%	100.2%	157	938,114	85,794	178,644
LED Interior Fixture - 25W - 50W	LED Downlight Luminaire	47	5,335	Incandescent Luminaire	134	4,778	20	$49	$0	$151	$0.07	32%	5.3	3.6	388	$0.126	$0.006	0.1	0.1	-$2.06	84%	1,073	1,073	100%	100%	100.1%	100.2%	84	446,093	52,275	162,432
LED Refrigerated Case Lighting	LED Strip lighting	51	8,760	T8 or T12 Fluorescent	137	8,297	20	$45	$0	$164	$0.07	27%	3.3	2.4	687	$0.065	$0.003	0.1	0.1	$0.00	97%	470	470	100%	100%	100.1%	100.2%	42	346,167	21,026	76,963
LED Pedestrian Signals -9" (Walk/Don't Walk)	LED Pedestrian Signals -9" (Walk/Don't Walk)	8	4,380	Incandescent Pedestrian Signals - Large	69	4,380	20	$30	$0	$80	$0.07	38%	4.1	2.6	267	$0.112	$0.006	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Pedestrian Signals -12" (Walk/Don't Walk)	LED Pedestrian Signals -12" (Walk/Don't Walk)	10	4,380	Incandescent Pedestrian Signals - Large	116	4,380	20	$40	$0	$110	$0.07	36%	3.2	2.1	464	$0.086	$0.004	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Traffic Balls and Arrows - 8" Red	LED Traffic Balls and Arrows 8" Red	8	4,380	Incandescent Traffic Balls and Arrows 8" Red	69	4,380	20	$25	$0	$70	$0.07	36%	3.6	2.3	267	$0.094	$0.005	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Traffic Balls and Arrows - 12" Red	LED Traffic Balls and Arrows 12" Red	11	4,380	Incandescent Traffic Balls and Arrows 12" Red	135	4,380	20	$25	$0	$90	$0.07	28%	2.3	1.6	543	$0.046	$0.002	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Traffic Balls and Arrows - 8" Green	LED Traffic Balls and Arrows 8" Green	8	4,380	Incandescent Traffic Balls and Arrows 8" Green	69	4,380	20	$32	$0	$70	$0.07	46%	3.6	1.9	267	$0.120	$0.006	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Traffic Balls and Arrows - 12" Green	LED Traffic Balls and Arrows 12" Green	11	4,380	Incandescent Traffic Balls and Arrows 12" Green	135	4,380	20	$32	$0	$90	$0.07	36%	2.3	1.5	543	$0.059	$0.003	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Traffic Arrows - 12" Red	LED Traffic Arrows 12" Red	11	4,380	Incandescent Traffic Arrows 12" Red	135	4,380	20	$50	$0	$90	$0.07	56%	2.3	1.0	543	$0.092	$0.005	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Parking Garage lighting - 25W - 60W	LED Parking Garage Fixture	41	8,760	HID - HPS, MH, MV, PSMH	189	8,760	20	$121	$0	$353	$0.07	34%	3.7	2.4	1,295	$0.094	$0.005	0.1	0.2	$0.00	100%	491	491	100%	100%	100.1%	100.2%	78	682,230	59,565	173,128
LED Parking Garage lighting - 61W - 83W	LED Parking Garage Fixture	71	8,760	HID - HPS, MH, MV, PSMH	232	8,760	20	$103	$0	$287	$0.07	36%	2.8	1.8	1,412	$0.073	$0.004	0.2	0.2	$0.00	100%	103	103	100%	100%	100.1%	100.2%	18	156,029	10,563	29,513
Integral Occupancy Sensor - 1 per fixture and installed as a manufacturer option	Lighting Fixture with Integral Occupancy Sensor	35	5,335	Lighting Fixture with Manual Switch	2,642	3,798	8	$415	$0	$5,065	$0.07	8%	7.0	6.5	9,845	$0.042	$0.005	2.6	2.0	-$5.29	70%	64	64	100%	100%	100.1%	100.2%	126	675,860	26,571	324,163
Integral Photo Sensor – 1 per fixture and installed as a manufacturer option	Lighting Fixture with Integral Photo Sensor	33	5,335	Lighting Fixture with Manual Switch	51	5,335	8	$8	$0	$13	$0.07	64%	1.8	0.6	95	$0.084	$0.011	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Integral Occupancy & Photo Sensor – 1 per fixture and installed as a manufacturer option	Lighting Fixture with Integral Photo and Occupancy Sensor	31	5,335	Lighting Fixture with Manual Switch	5,917	4,631	8	$2,134	$0	$8,677	$0	25%	4.4	3.3	27,240	$0.078	$0.010	5.9	4.8	-$14.41	76%	8	8	100%	100%	100.1%	100.2%	39	233,750	17,069	69,416
LED High-Bay Luminaires - 75 - 94W	LED High Bay 75-94W	105	5,335	HID Fixture <= 250W or Fluorescent	349	4,416	20	$50	$0	$242	$0	21%	3.4	2.7	979	$0.051	$0.003	0.2	0.2	-$5.26	72%	21	21	100%	100%	100.1%	100.2%	36	22,044	15,000	72,012
LED High-Bay Luminaires - 95 - 189W	LED High Bay 95-189W	177	5,335	HID Fixture <= 250W or Fluorescent	398	4,925	20	$135	$0	$282	$0.07	48%	3.8	2.0	1,016	$0.133	$0.007	0.2	0.2	-$4.63	78%	3,070	3,070	100%	100%	100.1%	100.2%	568	3,344,679	414,113	864,310
LED High-Bay Luminaires - 190 - 290W	LED High Bay 190-290W	297	5,335	HID Fixture <= 400W or Fluorescent	575	4,963	20	$149	$0	$550	$0.07	27%	5.9	4.3	1,270	$0.118	$0.006	0.3	0.2	-$6.74	79%	1,743	1,743	100%	100%	100.1%	100.2%	414	2,375,155	260,363	958,029
LED High-Bay Luminaires - 291 - 464W	LED High Bay 291-464W	454	5,335	HID Fixture <= 750W or Fluorescent	1,068	5,530	20	$194	$0	$801	$0.07	24%	3.1	2.4	3,484	$0.056	$0.003	0.6	0.6	-$7.90	93%	171	171	100%	100%	100.1%	100.2%	105	639,127	33,250	136,914
LED High-Bay Luminaires - 465 - 625W	LED High Bay 465-625W	671	5,335	HID Fixture <= 1000W or Fluorescent	1,334	5,335	20	$250	$0	$1,541	$0.07	16%	6.0	5.0	3,537	$0.071	$0.004	0.7	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Retrofit Kits for LED High-Bay Luminaires - 75 - 94W	LED High Bay Retrofit Kit 75-94W	105	5,335	HID Fixture <= 250W or Fluorescent	260	5,017	20	$50	$0	$242	$0.07	21%	4.5	3.5	743	$0.067	$0.003	0.2	0.1	-$3.96	90%	26	26	100%	100%	100.1%	100.2%	6	20,708	1,500	12,002
Retrofit Kits for LED High-Bay Luminaires - 95 - 189W	LED High Bay Retrofit Kit 95-189W	177	5,335	HID Fixture <= 250W or Fluorescent	340	5,099	20	$40	$0	$288	$0.07	14%	5.0	4.3	789	$0.051	$0.003	0.2	0.2	-$4.20	90%	4,795	4,795	100%	100%	100.1%	100.2%	757	4,060,650	191,800	1,379,647
Retrofit Kits for LED High-Bay Luminaires - 190 - 290W	LED High Bay Retrofit Kit 190-290W	295	5,335	HID Fixture <= 400W or Fluorescent	574	4,597	20	$50	$0	$23	$0.07	216%	0.3	-0.3	1,067	$0.047	$0.002	0.3	0.2	-$5.69	66%	7	7	100%	100%	100.1%	100.2%	1	8,010	350	162
Retrofit Kits for LED High-Bay Luminaires - 291 - 464W	LED High Bay Retrofit Kit 291-464W	454	5,335	HID Fixture <= 750W or Fluorescent	1,027	5,335	20	$80	$0	$569	$0.07	14%	2.5	2.2	3,060	$0.026	$0.001	0.6	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Retrofit Kits for LED High-Bay Luminaires - 465 - 625W	LED High Bay Retrofit Kit 465-625W	671	5,335	HID Fixture <= 1000W or Fluorescent	1,334	5,335	20	$160	$0	$783	$0.07	21%	3.0	2.3	3,537	$0.045	$0.002	0.7	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0

LED Tube Type A 2 foot	LED 2 Foot Tube Instafit	21	5,335	Fluorescent Lamps	32	4,741	8	$2	$6	$6	$0.07	33%	1.9	1.3	43	$0.046	$0.006	0.0	0.0	-$0.23	73%	2,621	2,621	100%	100%	100.1%	100.2%	24	121,927	5,231	15,952
LED Tube Type C 2 foot	LED 2 Foot Tube External Driver Retrofit Kits	11	5,335	Fluorescent Lamps	20	4,828	8	$3	$0	$17	$0.07	18%	6.4	5.3	36	$0.085	$0.010	0.0	0.0	-$0.19	74%	1,398	1,398	100%	100%	100.1%	100.2%	10	53,902	4,273	23,605
LED Tube Type A 4 foot	LED 4 Foot Tube Instafit	22	5,335	Fluorescent Lamps	45	4,718	8	$2	$3	$7	$0.07	28%	1.0	0.7	95	$0.021	$0.003	0.0	0.0	-$0.51	75%	68,630	68,630	100%	100%	100.1%	100.2%	1,266	6,996,510	135,045	477,178
LED Tube Type C 4 foot	LED 4 Foot Tube External Driver Retrofit Kits	22	5,335	Fluorescent Lamps	42	4,458	8	$5	$0	$25	$0.07	20%	5.1	4.1	66	$0.075	$0.009	0.0	0.0	-$0.35	70%	31,747	31,747	100%	100%	100.1%	100.2%	462	2,258,157	158,500	784,599
LED Street lighting - 30-44W	LED Street Light Fixture	37	4,903	70W HPS Street Light Fixture	86	4,903	20	$30	$0	$395	$0.07	8%	22.5	20.8	240	$0.125	$0.006	0.0	0.0	$0.00	0%	307	307	100%	100%	100.1%	100.2%	0	79,115	9,210	121,210
LED Street lighting - 45-55W	LED Street Light Fixture	50	4,903	100W HPS Street Light Fixture	131	4,903	20	$40	$0	$411	$0.07	10%	14.1	12.7	399	$0.100	$0.005	0.1	0.0	$0.00	0%	596	596	100%	100%	100.1%	100.2%	0	255,010	23,840	245,029
LED Street lighting - 56-79W	LED Street Light Fixture	75	4,903	150W HID Fixture	193	4,903	20	$50	$0	$455	$0.07	11%	10.8	9.6	579	$0.086	$0.004	0.1	0.0	$0.00	0%	272	272	100%	100%	100.1%	100.2%	0	168,801	13,600	123,725
LED Street lighting - 80-109W	LED Street Light Fixture	104	4,903	175W HID Fixture	221	4,903	20	$60	$0	$246	$0.07	25%	5.9	4.4	574	$0.105	$0.005	0.1	0.0	$0.00	0%	110	110	100%	100%	100.1%	100.2%	0	67,686	6,650	27,023
LED Street lighting - 110-139W	LED Street Light Fixture	125	4,903	250W HID Fixture	295	4,903	20	$100	$0	$555	$0.07	18%	9.1	7.5	834	$0.120	$0.006	0.2	0.0	$0.00	0%	221	221	100%	100%	100.1%	100.2%	0	197,596	22,100	122,644
LED Street lighting - 140-209W	LED Street Light Fixture	164	4,903	400W HID Fixture	450	4,903	20	$125	$0	$626	$0.07	20%	6.1	4.9	1,404	$0.089	$0.004	0.3	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Area lighting - 45-65W	LED Street Light Fixture	60	4,903	150W MH Fixture	186	4,903	20	$35	$0	$320	$0.07	11%	7.1	6.3	618	$0.057	$0.003	0.1	0.0	$0.00	0%	368	368	100%	100%	100.1%	100.2%	0	243,878	12,946	117,851
LED Area lighting - 66-89W	LED Street Light Fixture	78	4,903	175W MH Fixture	235	4,903	20	$34	$0	$329	$0.07	10%	5.8	5.2	773	$0.044	$0.002	0.2	0.0	$0.00	0%	85	85	100%	100%	100.1%	100.2%	0	70,513	2,923	27,987
LED Area lighting - 90-119W	LED Street Light Fixture	105	4,903	250W MH Fixture	330	4,903	20	$41	$0	$388	$0.07	11%	4.8	4.3	1,104	$0.037	$0.002	0.2	0.0	$0.00	0%	444	444	100%	100%	100.1%	100.2%	0	525,777	18,090	172,068
LED Area lighting - 120-140W	LED Street Light Fixture	130	4,903	400W MH Fixture	329	4,903	20	$50	$0	$451	$0.07	11%	6.3	5.6	974	$0.051	$0.003	0.2	0.0	$0.00	0%	98	98	100%	100%	100.1%	100.2%	0	102,439	4,900	44,156
LED Troffer Fixture 1X4	LED Troffer Fixture	45	5,335	Fluorescent Fixture	90	4,800	20	$50	$0	$159	$0.07	31%	11.6	7.9	188	$0.265	$0.013	0.0	0.0	-$1.01	75%	10	10	100%	100%	100.1%	100.2%	0	2,021	500	1,590
LED Troffer Fixture 2X2	LED Troffer Fixture	39	5,335	Fluorescent Fixture	78	4,757	20	$50	$0	$100	$0.07	50%	8.5	4.2	162	$0.310	$0.015	0.0	0.0	-$0.86	74%	1,986	1,986	100%	100%	100.1%	100.2%	61	344,090	99,300	198,444
LED Troffer Fixture 2X4	LED Troffer Fixture	63	5,335	Fluorescent Fixture	140	4,689	20	$50	$0	$87	$0.07	57%	3.7	1.6	321	$0.156	$0.008	0.1	0.1	-$1.71	74%	4,799	4,799	100%	100%	100.1%	100.2%	297	1,653,623	239,950	417,993
LED Troffer Retrofit Kit 1X4	LED Troffer Fixture - Retrofit Kit	34	5,335	Fluorescent Fixture	72	5,335	20	$30	$0	$106	$0.07	28%	7.2	5.1	203	$0.148	$0.007	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Troffer Retrofit Kit 2X2	LED Troffer Fixture - Retrofit Kit	37	5,335	Fluorescent Fixture	71	5,335	20	$30	$0	$165	$0.07	18%	12.5	10.2	180	$0.167	$0.008	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Troffer Retrofit Kit 2X4	LED Troffer Fixture - Retrofit Kit	58	5,335	Fluorescent Fixture	124	4,476	20	$30	$0	$153	$0.07	19%	8.5	6.9	246	$0.121	$0.006	0.1	0.0	-$0.13	70%	36,159	36,159	100%	100%	100.1%	100.2%	1,797	9,544,088	1,079,100	5,543,844
LED Exterior Wall Pack - <= 25W	LED Wall Pack Fixture	18	4,903	HID Wall Pack Fixture	110	4,903	20	$15	$0	$222	$0.07	7%	6.7	6.3	452	$0.033	$0.002	0.1	0.0	$0.00	0%	318	318	100%	100%	100.1%	100.2%	0	154,086	4,759	70,641
LED Exterior Wall Pack - 26W - 60W	LED Wall Pack Fixture	44	4,903	HID Wall Pack Fixture	194	4,903	20	$30	$0	$222	$0.07	14%	4.1	3.6	735	$0.041	$0.002	0.1	0.0	$0.00	0%	1,008	1,008	100%	100%	100.1%	100.2%	0	794,490	30,735	224,026
LED Exterior Wall Pack - 61W - 150W	LED Wall Pack Fixture	101	4,903	HID Wall Pack Fixture	345	4,903	20	$52	$0	$353	$0.07	15%	4.0	3.5	1,196	$0.043	$0.002	0.2	0.0	$0.00	0%	524	524	100%	100%	100.1%	100.2%	0	671,998	27,113	185,022
LED Parking Garage Wall Pack <= 25W	LED Parking Garage Fixture	18	8,760	HID Wall Pack Fixture	99	8,760	20	$35	$0	$279	$0.07	13%	5.4	4.7	710	$0.049	$0.002	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Parking Garage Wall Pack - 26W - 60W	LED Parking Garage Fixture	44	8,760	HID Wall Pack Fixture	190	8,760	20	$60	$0	$370	$0.07	16%	3.9	3.3	1,283	$0.047	$0.002	0.1	0.2	$0.00	100%	35	35	100%	100%	100.1%	100.2%	6	48,156	2,100	12,946
LED Parking Garage Wall Pack - 61W - 150W	LED Parking Garage Fixture	94	8,760	HID Wall Pack Fixture	405	8,760	20	$75	$0	$447	$0.07	17%	2.2	1.9	2,729	$0.027	$0.001	0.3	0.3	$0.00	100%	8	8	100%	100%	100.1%	100.2%	3	23,416	600	3,578
LED Outdoor Canopy lighting - 25W - 60W	LED	40	4,903	Metal Halide	137	4,903	20	$20	$0	$225	$0.07	9%	6.5	5.9	477	$0.042	$0.002	0.1	0.0	$0.00	0%	232	232	100%	100%	100.1%	100.2%	0	118,607	4,625	52,258
LED Outdoor Canopy lighting - 61W - 150W	LED	103	4,903	Metal Halide	381	4,903	20	$25	$0	$324	$0.07	8%	3.3	3.0	1,359	$0.018	$0.001	0.3	0.0	$0.00	0%	47	47	100%	100%	100.1%	100.2%	0	68,524	1,175	15,239
LED Interior Lamp - A Lamps	LED lamp	11	5,649	Halogen, Incandescent, or CFL Lamp	31	5,179	5	$4	$4	$1	$0.07	270%	0.2	-0.3	95	$0.039	$0.008	0.0	0.0	$0.00	82%	61,095	61,095	100%	100%	100.1%	100.2%	1,047	6,234,249	226,809	83,892
LED Interior Lamp - PAR20, R20	LED lamp	8	5,649	Halogen, Incandescent, or CFL Lamp	36	5,075	5	$4	$6	$4	$0.07	116%	0.4	-0.1	135	$0.031	$0.006	0.0	0.0	$0.00	82%	1,090	1,090	100%	100%	100.1%	100.2%	26	157,485	4,487	3,878
LED Interior Lamp - PAR30	LED lamp	13	5,649	Halogen, Incandescent, or CFL Lamp	58	5,070	5	$5	$8	$5	$0.07	102%	0.3	0.0	224	$0.023	$0.004	0.0	0.0	$0.00	82%	5,660	5,660	100%	100%	100.1%	100.2%	228	1,358,254	29,338	28,789
LED Interior Lamp - BR30	LED lamp	11	5,649	Halogen, Incandescent, or CFL Lamp	46	5,084	5	$5	$8	-$1	$0.07	-488%	-0.1	-0.5	173	$0.030	$0.006	0.0	0.0	$0.00	82%	3,808	3,808	100%	100%	100.1%	100.2%	119	707,999	20,087	-4,114
LED Interior Lamp - PAR38	LED lamp	17	5,649	Halogen, Incandescent, or CFL Lamp	77	5,072	5	$10	$6	$10	$0.07	105%	0.4	0.0	295	$0.034	$0.006	0.1	0.1	$0.00	82%	6,647	6,647	100%	100%	100.1%	100.2%	353	2,104,330	67,489	64,255
LED Interior Lamp - BR40	LED lamp	15	5,649	Halogen, Incandescent, or CFL Lamp	78	5,054	5	$6	$4	$6	$0.07	114%	0.3	0.0	306	$0.021	$0.004	0.1	0.1	$0.00	82%	856	856	100%	100%	100.1%	100.2%	47	280,544	5,550	4,852
LED Interior Lamp - PAR16	LED lamp	7	5,649	Halogen, Incandescent, or CFL Lamp	29	5,079	5	$3	$10	-$3	$0.07	-121%	-0.4	-0.8	109	$0.031	$0.006	0.0	0.0	$0.00	82%	220	220	100%	100%	100.1%	100.2%	4	25,707	746	-614
LED Interior Lamp - MR16	LED lamp	6	5,649	Halogen, Incandescent, or CFL Lamp	46	5,007	5	$5	$4	$7	$0.07	70%	0.5	0.1	197	$0.026	$0.005	0.0	0.0	$0.00	82%	6,678	6,678	100%	100%	100.1%	100.2%	237	1,408,775	33,797	47,945
LED Interior Lamp - GU10	LED lamp	6	5,649	Halogen, Incandescent, or CFL Lamp	19	5,649	5	$10	$2	$13	$0.07	79%	2.5	0.5	70	$0.142	$0.026	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Interior Lamp - Decorative (B, BA, Candle)	LED lamp	5	5,649	Halogen, Incandescent, or CFL Lamp	45	4,989	4	$4	$1	$6	$0.07	74%	0.4	0.1	197	$0.022	$0.005	0.0	0.0	$0.00	82%	4,226	4,226	100%	100%	100.1%	100.2%	150	890,898	17,997	24,273
LED Interior Screw In Fixture Retrofit	LED lamp	15	5,649	Halogen, Incandescent, or CFL Fixture	39	5,192	6	$9	$15	$8	$0.07	122%	0.9	-0.2	118	$0.078	$0.013	0.0	0.0	$0.00	82%	4,596	4,596	100%	100%	100.1%	100.2%	98	582,277	42,419	34,871
Fluorescent Low Wattage T8 4' lamps	T8 25W and 28W Lamps	31	5,335	T8 32W Lamps	37	5,335	5	$1	$2	$4	$0.07	13%	1.6	1.4	34	$0.015	$0.003	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Fluorescent High Bay - <= 300W	New Construction High Bay Fluorescents Less Than 300W	323	5,335	400W Metal Halide	568	5,335	20	$10	$179	$93	$0.07	11%	1.0	0.9	1,306	$0.008	$0.000	0.2	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Fluorescent High Bay - <= 610W	New Construction High Bay Fluorescents Less Than 610W	596	5,335	750W Metal Halide	1,059	5,335	20	$15	$270	$134	$0.07	11%	0.7	0.7	2,467	$0.006	$0.000	0.5	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Fluorescent High Bay - <= 900W	New Construction High Bay Fluorescents Less Than 900W	762	5,335	1000W Metal Halide	1,345	5,335	20	$20	$360	$159	$0.07	13%	0.7	0.6	3,110	$0.006	$0.000	0.6	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
CFL, Pin Based - <=19W	Pin Based CFL	20	5,335	Incandescent	49	5,335	20	$2	$40	$9	$0.07	22%	0.8	0.6	154	$0.013	$0.001	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
CFL, Pin Based - 19-32W	Pin Based CFL	44	5,335	Incandescent	97	5,335	20	$2	$40	$12	$0.07	16%	0.6	0.5	286	$0.007	$0.000	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
CFL, Pin Based - 33-100W	Pin Based CFL	37	5,335	Incandescent	92	5,335	20	$2	$41	$12	$0.07	16%	0.6	0.5	295	$0.007	$0.000	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
CFL, 2-foot Low Wattage - 25 - 28W	PL 25W CFL	33	5,335	PL 40W CFL	50	5,335	5	$1	$11	$12	$0.07	4%	1.9	1.8	90	$0.006	$0.001	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Interior Fixture <= 25 Watts	LED Downlight Luminaire	21	5,335	Incandescent Luminaire	70	4,001	20	$24	$27	$40	$0.07	60%	3.2	1.3	169	$0.142	$0.007	0.0	0.0	-$0.90	50%	18,033	18,033	100%	100%	100.1%	100.2%	475	3,275,269	432,481	722,598
LED Interior Fixture - 25W - 50W	LED Downlight Luminaire	47	5,335	Incandescent Luminaire	207	4,151	20	$36	$40	$160	$0.07	23%	3.6	2.8	607	$0.060	$0.003	0.2	0.1	-$3.25	70%	1,342	1,342	100%	100%	100.1%	100.2%	162	873,853	48,520	214,965
LED Refrigerated Case Lighting	LED Strip lighting	51	8,760	T8 or T12 Fluorescent	128	6,334	20	$35	$19	$125	$0.07	28%	4.8	3.4	361	$0.097	$0.005	0.1	0.1	$0.00	83%	40	40	100%	100%	100.1%	100.2%	3	15,504	1,400	5,016
LED Parking Garage lighting 25W - 60W	LED Parking Garage Fixture	44	8,760	CMH	189	8,760	20	$25	$252	$172	$0.07	15%	1.9	1.6	1,271	$0.020	$0.001	0.1	0.2	$0.00	100%	183	183	100%	100%	100.1%	100.2%	29	249,505	4,575	31,520
LED Parking Garage lighting 61W - 83W	LED Parking Garage Fixture	72	8,760	HID Fixture	282	8,760	20	$35	$290	$120	$0.07	29%	0.9	0.6	1,840	$0.019	$0.001	0.2	0.2	$0.00	100%	133	133	100%	100%	100.1%	100.2%	30	262,444	4,655	16,012
LED High-Bay Luminaires - 75 - 94W	LED High Bay New Construction 75-94W	105	5,335	HPS Fixture <= 150W	235	4,611	20	$37	$184	$61	$0.07	61%	1.6	0.6	522	$0.072	$0.004	0.1	0.1	-$2.37	80%	157	157	100%	100%	100.1%	100.2%	12	87,858	4,000	23,998
LED High-Bay Luminaires - 95 - 189W	LED High Bay New Construction 95-189W	177	5,335	HPS Fixture <= 250W	324	4,862	20	$124	$206	$198	$0.07	63%	4.3	1.6	629	$0.198	$0.010	0.1	0.1	-$3.09	79%	2,128	2,128	100%	100%	100.1%	100.2%	265	1,436,500	264,813	420,617
LED High-Bay Luminaires - 190 - 290W	LED High Bay New Construction 190-290W	299	5,335	HPS Fixture <= 400W	573	4,864	20	$140	$263	$347	$0.07	40%	4.0	2.4	1,193	$0.117	$0.006	0.3	0.2	-$6.29	77%	809	809	100%	100%	100.1%	100.2%	184	1,035,372	113,260	280,774
LED High-Bay Luminaires - 291 - 464W	LED High Bay New Construction 291-464W	470	5,335	HPS Fixture <= 750W	1,095	4,811	20	$165	$374	$239	$0.07	69%	1.2	0.4	2,760	$0.060	$0.003	0.6	0.5	-$15.40	80%	437	437	100%	100%	100.1%	100.2%	234	1,293,536	72,105	104,574
LED High-Bay Luminaires - 465 - 625W	LED High Bay New Construction 465-625W	675	5,335	HPS Fixture <= 1000W	1,210	5,405	20	$175	$450	$1,169	$0.07	15%	5.4	4.6	2,938	$0.060	$0.003	0.5	0.5	-$17.39	88%	121	121	100%	100%	100.1%	100.2%	61	381,264	21,175	141,463
LED Street lighting - 30-44W	LED Street Light Fixture	37	4,903	70W HID Street Light Fixture	90	4,903	20	$15	$235	$160	$0.07	9%	8.5	7.7	258	$0.058	$0.003	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Street lighting - 45-55W	LED Street Light Fixture	50	4,903	100W HPS Street Light Fixture	129	4,903	20	$25	$240	$247	$0.07	10%	8.7	7.8	387	$0.065	$0.003	0.1	0.0	$0.00	0%	33	33	100%	100%	100.1%	100.2%	0	13,712	825	8,145
LED Street lighting - 56-79W	LED Street Light Fixture	75	4,903	150W HID Street Light Fixture	182	4,903	20	$35	$248	$217	$0.07	16%	5.7	4.8	522	$0.067	$0.003	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Street lighting - 80-109W	LED Street Light Fixture	105	4,903	175W HID Street Light Fixture	222	4,903	20	$55	$255	$259	$0.07	21%	6.2	4.9	574	$0.096	$0.005	0.1	0.0	$0.00	0%	13	13	100%	100%	100.1%	100.2%	0	8,000	715	3,371
LED Street lighting - 110-139W	LED Street Light Fixture	136	4,903	250W HID Street Light Fixture	288	4,903	20	$65	$258	$317	$0.07	21%	5.8	4.6	743	$0.087	$0.004	0.2	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Street lighting - 140-209W	LED Street Light Fixture	164	4,903	400W HID Street Light Fixture	450	4,903	20	$85	$280	$346	$0.07	25%	3.4	2.5	1,404	$0.061	$0.003	0.3	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Area lighting - 45-65W	LED Parking Area Fixture	55	4,903	150W MH Fixture	132	4,903	20	$35	$222	$285	$0.07	12%	10.4	9.1	376	$0.093	$0.005	0.1	0.0	$0.00	0%	21	21	100%	100%	100.1%	100.2%	0	8,477	735	5,977
LED Area lighting - 66-89W	LED Parking Area Fixture	78	4,903	175W MH Fixture	209	4,903	20	$32	$290	$281	$0.07	11%	6.0	5.3	647	$0.050	$0.002	0.1	0.0	$0.00	0%	109	109	100%	100%	100.1%	100.2%	0	75,622	3,509	30,650
LED Area lighting - 90-119W	LED Parking Area Fixture	105	4,903	250W MH Fixture	293	4,903	20	$40	$290	$375	$0.07	11%	5.6	5.0	925	$0.043	$0.002	0.2	0.0	$0.00	0%	30	30	100%	100%	100.1%	100.2%	0	29,757	1,200	11,265
LED Area lighting - 120-140W	LED Parking Area Fixture	130	4,903	400W MH Fixture	455	4,903	20	$48	$298	$391	$0.07	12%	3.4	2.9	1,594	$0.030	$0.002	0.3	0.0	$0.00	0%	90	90	100%	100%	100.1%	100.2%	0	153,922	4,350	35,154
LED Troffer Fixture 1X4	LED Troffer Fixture	45	5,335	Fluorescent Fixture	91	5,335	20	$30	$50	$173	$0.07	17%	9.6	8.0	245	$0.122	$0.006	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Troffer Fixture 2X2	LED Troffer Fixture	39	5,335	Fluorescent Fixture	73	4,678	20	$30	$40	$121	$0.07	25%	12.1	9.1	136	$0.220	$0.011	0.0	0.0	-$0.73	83%	26	26	100%	100%	100.1%	100.2%	1	3,804	780	3,141
LED Troffer Fixture 2X4	LED Troffer Fixture	63	5,335	Fluorescent Fixture	108	4,624	20	$30	$56	$94	$0.07	32%	7.9	5.4	163	$0.183	$0.009	0.0	0.0	-$0.10	73%	13,218	13,218	100%	100%	100.1%	100.2%	463	2,305,966	392,445	1,244,350
LED Exterior Wall Pack - <= 25W	LED Wall Pack Fixture	19	4,903	HID Wall Pack Fixture	75	4,903	20	$12	$223	$43	$0.07	28%	2.2	1.6	274	$0.044	$0.002	0.1	0.0	$0.00	0%	416	416	100%	100%	100.1%	100.2%	0	122,221	5,014	17,925
LED Exterior Wall Pack - 26W - 60W	LED Wall Pack Fixture	48	4,903	HID Wall Pack Fixture	175	4,903	20	$29	$264	$31	$0.07	94%	0.7	0.0	620	$0.047	$0.002	0.1	0.0	$0.00	0%	352	352	100%	100%	100.1%	100.2%	0	233,975	10,178	10,877
LED Exterior Wall Pack - 61W - 150W	LED Wall Pack Fixture	104	4,903	HID Wall Pack Fixture	384	4,903	20	$48	$298	$170	$0.07	28%	1.7	1.2	1,374	$0.035	$0.002	0.3	0.0	$0.00	0%	217	217	100%	100%	100.1%	100.2%	0	319,729	10,388	36,985
LED Parking Garage Wall Pack <= 25W	LED Parking Garage Fixture	17	8,760	HID Wall Pack Fixture	92	8,760	20	$15	$198	$77	$0.07	19%	1.6	1.3	660	$0.023	$0.001	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Parking Garage Wall Pack - 26W - 60W	LED Parking Garage Fixture	43	8,760	HID Wall Pack Fixture	255	8,760	20	$30	$234	$166	$0.07	18%	1.2	1.0	1,857	$0.016	$0.001	0.2	0.2	$0.00	100%	44	44	100%	100%	100.1%	100.2%	10	87,650	1,320	7,297
LED Parking Garage Wall Pack - 61W - 150W	LED Parking Garage Fixture	106	8,760	HID Wall Pack Fixture	421	8,760	20	$50	$294	$319	$0.07	16%	1.6	1.3	2,762	$0.018	$0.001	0.3	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Outdoor Canopy - 25W - 60W	LED	40	4,903	Metal Halide	203	4,903	20	$18	$206	$151	$0.07	12%	2.6	2.3	800	$0.023	$0.001	0.2	0.0	$0.00	0%	36	36	100%	100%	100.1%	100.2%	0	30,882	660	5,419
LED Outdoor Canopy - 61W - 150W	LED	103	4,903	Metal Halide	433	4,903	20	$25	$262	$59	$0.07	43%	0.5	0.3	1,619	$0.015	$0.001	0.3	0.0	$0.00	0%	55	55	100%	100%	100.1%	100.2%	0	95,503	1,375	3,228
LED Linear Ambient <=35W	LED Ambient Fixture <=35W	31	5,335	Fluorescent Ambient Fixture	63	4,461	20	$14	$0	$127	$0.07	11%	14.6	13.1	119	$0.114	$0.006	0.0	0.0	-$0.63	68%	912	912	100%	100%	100.1%	100.2%	7	116,072	1,500	15,642
LED Linear Ambient 36-60W	LED Ambient Fixture 36-60W	59	5,335	Fluorescent Ambient Fixture	133	4,371	20	$20	$0	$178	$0.07	11%	9.2	8.1	266	$0.075	$0.004	0.1	0.1	-$1.41	66%	1,042	1,042	100%	100%	100.1%	100.2%	8	296,784	2,000	22,107
LED Linear Ambient 61-100W	LED Ambient Fixture 61-100W	98	5,335	Fluorescent Ambient Fixture	158	4,486	20	$25	$0	$235	$0.07	11%	17.3	15.4	186	$0.133	$0.007	0.1	0.0	-$1.00	44%	240	240	100%	100%	100.1%	100.2%	9	47,942	2,500	30,775
Lighting Control System	Automated Lighting Controls Systems	78,412	2,613	Manually Switched System	92,006	2,901	15	$8,834	$0	$34,673	$0.07	25%	7.7	5.7	62,015	$0.142	$0.009	13.6	12.2	-$31.63	83%	37	37	100%	100%	100%	100%	451	2,456,706	326,851	1,282,888
Custom Lighting & Recommissioning	Engineering Study	0	0	Existing Overlit Lighting System	0	0	0	$52,585	$0	$142,104	$0.07	37%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Custom Lighting	Custom Lighting Solution	99,000	4,558	Existing Overlit Lighting System	119,745	4,740	16	$7,482	$0	$47,844	$0.07	16%	5.6	4.7	116,362	$0.064	$0.004	20.7	17.7	-$330.65	79%	70	70	100%	100%	100%	100%	1,236	8,720,956	523,749	3,349,081
Lighting Redesign Studies	Redesign Lighting Solution Study	0	0	Existing Overlit Lighting System	0	0	0	$12,038	$0	$17,949	$0.07	67%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Lighting Redesign Implementation	Redesign Lighting Solution Installed	81,354	7,834	Existing Overlit Lighting System	125,000	7,834	20	$17,459	$0	$86,652	$0.07	20%	3.5	2.8	341,943	$0.051	$0.003	43.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
LED High-Bay Luminaires with Fluorescent Baseline - 95 - 189W	LED High Bay 95-189W	142	5,335	High Bay Flourecent Fixture	254	5,038	20	$135	$0	$317	$0.07	43%	8.3	4.8	521	$0.259	$0.013	0.1	0.1	-$2.69	80%	11,367	11,367	100%	100%	100.1%	100.2%	1,096	6,349,008	1,534,545	3,602,397
LED High-Bay Luminaires with Fluorescent Baseline - 190 - 290W	LED High Bay 190-290W	283	5,335	High Bay Flourecent Fixture	450	5,056	20	$147	$0	$545	$0.07	27%	9.7	7.1	766	$0.193	$0.010	0.2	0.1	-$4.24	82%	889	889	100%	100%	100.1%	100.2%	131	730,146	131,063	484,247
LED High-Bay Luminaires with Fluorescent Baseline - 291 - 464W	LED High Bay 291-464W	428	5,335	High Bay Fluorecent Fixture	644	5,118	20	$197	$0	$636	$0.07	31%	8.6	5.9	1,016	$0.194	$0.010	0.2	0.2	-$4.31	75%	408	408	100%	100%	100.1%	100.2%	71	444,724	80,450	259,650
LED High-Bay Luminaires with Fluorescent Baseline - 465 - 625W	LED High Bay 465-625W	671	5,335	High Bay Fluorecent Fixture	988	5,335	20	$150	$0	$1,543	$0.07	10%	12.5	11.3	1,688	$0.089	$0.004	0.3	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Area Lighting - 141-199W	LED Parking Area Fixture	170	4,903	750W MH Fixture	528	4,903	20	$66	$0	$529	$0.07	12%	4.1	3.6	1,757	$0.037	$0.002	0.4	0.0	$0.00	0%	801	801	100%	100%	100.1%	100.2%	0	1,509,837	52,530	423,571
LED Area Lighting - 200-550W	LED Parking Area Fixture	375	4,903	1000W MH Fixture	1,138	4,903	20	$89	$0	$989	$0.07	9%	3.6	3.3	3,741	$0.024	$0.001	0.8	0.0	$0.00	0%	1,482	1,482	100%	100%	100.1%	100.2%	0	5,947,040	131,220	1,465,061
LED Screw-in Lamps - 30 - 39W (70W HID replacement lamp)	LED High Bay Replacement Lamp	72	5,335	<=70W HID Fixture	192	4,532	8	$24	$8	$72	$0.07	34%	2.0	1.3	487	$0.050	$0.006	0.1	0.1	-$2.64	75%	75	75	100%	100%	100.1%	100.2%	7	39,161	1,830	5,367
LED Screw-in Lamps - 40 - 49W (100W HID replacement lamp)	LED High Bay Replacement Lamp	87	5,335	<=100W HID Fixture	155	5,335	8	$40	$10	$126	$0.07	32%	4.7	3.2	364	$0.110	$0.014	0.1	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Screw-in Lamps - 50 - 79W (175W HID replacement lamp)	LED High Bay Replacement Lamp	124	5,335	<=175W HID Fixture	365	4,511	8	$50	$11	$120	$0.07	42%	1.7	1.0	984	$0.051	$0.006	0.2	0.2	-$2.65	84%	95	95	100%	100%	100.1%	100.2%	21	100,281	4,750	11,374
LED Screw-in Lamps - 80 -119W (250W HID replacement lamp)	LED High Bay Replacement Lamp	180	5,335	<=250W HID Fixture	415	4,663	8	$58	$10	$197	$0.07	30%	2.8	1.9	976	$0.060	$0.007	0.2	0.2	-$4.28	74%	46	46	100%	100%	100.1%	100.2%	9	48,145	2,685	9,067
LED Screw-in Lamps - 120 - 144W (320W HID replacement lamp)	LED High Bay Replacement Lamp	227	5,335	<=320W HID Fixture	380	4,780	8	$56	$14	$192	$0.07	29%	4.3	3.1	606	$0.093	$0.011	0.2	0.1	-$3.23	70%	4	4	100%	100%	100.1%	100.2%	0	2,599	225	770
LED Screw-in Lamps - 145 - 230W (400W HID replacement lamp)	LED High Bay Replacement Lamp	303	5,335	<=400W HID Fixture	746	5,398	8	$75	$10	$224	$0.07	33%	1.3	0.8	2,410	$0.031	$0.004	0.4	0.4	-$13.82	74%	229	229	100%	100%	100.1%	100.2%	81	591,907	17,175	51,323
LED PL/G based CFL Replacement lamp (Type A)	LED Plug In Lamp	21	5,335	CFL lamp	46	5,335	8	$7	$1	$20	$0.07	35%	2.0	1.3	136	$0.051	$0.006	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
Type B LED PL/G based CFL Replacement lamp	Type B LED Plug In Lamp	18	5,335	CFL lamp	42	4,341	8	$6	$1	$8	$0.07	82%	1.2	0.2	88	$0.073	$0.009	0.0	0.0	-$0.47	68%	10,257	10,257	100%	100%	100.1%	100.2%	12	963,134	3,500	20,220
LED Interior Fixture <= 25W (CFL baseline)	LED Downlight Fixture	25	5,336	CFL fixture	62	4,572	20	$24	$0	$47	$0.07	51%	4.3	2.1	151	$0.160	$0.008	0.0	0.0	-$0.81	73%	5,467	5,467	100%	100%	100.1%	100.2%	160	885,073	131,800	257,435
LED Interior Fixture - 26-50W (CFL baseline)	LED Downlight Fixture	40	5,336	CFL fixture	73	5,447	20	$30	$0	$163	$0.07	19%	12.2	9.9	183	$0.166	$0.008	0.0	0.0	-$1.04	79%	814	814	100%	100%	100.1%	100.2%	23	160,009	24,728	132,818
LED Tube Type A 4 foot T5	LED 4 Foot Tube Instafit	28	5,335	T5 Fluorescent Lamps	60	5,335	8	$2	$2	$14	$0.07	15%	1.1	0.9	171	$0.012	$0.001	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Tube Type C 4 foot T5	LED 4 Foot Tube External Driver Retrofit Kits	26	5,335	T5 Fluorescent Lamps	57	5,335	20	$5	$0	$25	$0.07	20%	2.1	1.7	163	$0.031	$0.002	0.0	0.0	$0.00	0%	0	0	100%	100%	100.1%	100.2%	0	0	0	0
LED Tube Type B 4 foot T5	LED 4 Foot Tube Internal Driver Retrofit Kits	29	5,335	T5 Fluorescent Lamps	47	4,818	8	$3	$2	$16	$0.07	18%	3.0	2.4	75	$0.040	$0.005	0.0	0.0	-$0.40	73%	133,952	133,952	100%	100%	100.1%	100.2%	1,951	10,759,757	397,345	2,167,436
LED Linear Ambient <=35W	LED Ambient Fixture <=35W	32	5,335	Flourescent Ambient Fixture	76	4,866	20	$19	$30	$150	$0.07	13%	10.3	9.0	199	$0.095	$0.005	0.0	0.0	-$1.07	80%	2,340	2,340	100%	100%	100.1%	100.2%	89	499,805	44,405	350,276
LED Linear Ambient 36-60W	LED Ambient Fixture 36-60W	57	5,335	Flourescent Ambient Fixture	160	5,794	20	$38	$36	$254	$0.07	15%	5.6	4.8	623	$0.060	$0.003	0.1	0.1	-$3.21	89%	2,316	2,316	100%	100%	100.1%	100.2%	227	1,548,868	86,973	589,026
LED Linear Ambient 61-100W	LED Ambient Fixture 61-100W	92	5,335	Flourescent Ambient Fixture	177	4,926	20	$24	$43	$206	$0.07	12%	7.5	6.6	378	$0.065	$0.003	0.1	0.1	-$1.75	80%	2,520	2,520	100%	100%	100.1%	100.2%	183	1,022,001	61,563	518,995
Recommissioning Study Allocation	Existing building with measures as identified in Recommissioning study	0	0	Existing Building	0	0	0	$4,530	$0	$7,246	$0.07	63%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0

Motor Efficiency																															
New Motor Enhanced	NEMA Premium +1% Efficient Motor	3,074	6,135	NEMA Premium	3,126	6,135	20	$40	$797	$181	$0.08	22%	7.5	5.9	319	$0.125	$0.006	0.1	0.0	$0.00	0%	0	0	100%	100%	97.1%	95.4%	0	0	0	0
Upgrade Motor	NEMA Premium Efficient Motor	15,650	4,806	EPACT Efficient Motor	15,826	4,806	20	$688	$0	$1,855	$0.08	37%	29.2	18.4	841	$0.818	$0.041	0.2	0.1	$0.00	78%	93	93	100%	100%	97.1%	95.4%	13	79,922	63,975	172,548
Upgrade Motor Enhanced	NEMA Premium +1% Efficient Motor	5,447	5,243	EPACT Efficient Motor	5,543	5,231	20	$325	$0	$979	$0.08	33%	29.8	19.9	435	$0.747	$0.037	0.1	0.1	$0.00	78%	1	1	100%	100%	97.1%	95.4%	0	444	325	979
Variable Frequency Drive	Equipment coupled with an eHVAC/VFD	7,699	4,643	Equipment without an ASD/VFD	11,699	4,489	15	$1,653	$0	$5,773	$0.08	29%	4.6	3.3	16,779	$0.098	$0.007	4.0	3.4	$0.00	78%	701	701	100%	100%	97.1%	95.4%	2,284	12,013,733	1,158,450	4,046,982
CSMC	Motor with Voltage Controller	4,849	4,849	Motor without Voltage Controller	5,717	4,878	20	$345	$0	$1,188	$0.08	29%	3.6	2.6	4,376	$0.079	$0.004	0.9	0.0	$0.00	0%	0	0	100%	100%	97.1%	95.4%	0	0	0	0
VFD on Well Pump	VFD Well Pump	60,222	2,653	Throttled Well Pump	74,353	2,743	15	$4,712	$0	$15,458	$0.08	30%	4.6	3.2	44,174	$0.107	$0.007	14.1	5.8	$0.00	38%	17	17	100%	100%	97.1%	95.4%	95	767,044	80,100	262,785
Study	Motor Study	0	0	No Study	0	0	7	$10,000	$0	$20,000	$0.08	50%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Recommissioning Study	Efficient equipment as identified in a recommissioning study	0	0	Existing equipment	0	0	0	$32,980	$0	$56,547	$0.08	58%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Custom	New Equipment	47,392	4,549	Existing or New Inefficient	146,744	3,419	16	$26,801	$0	$60,352	$0.08	44%	2.8	1.8	286,147	$0.094	$0.006	99.4	25.4	$1,352.00	24%	4	4	100%	100%	100%	100%	102	1,225,468	107,202	241,406
Tier 1 Constant to Constant 1-5 HP Pump	Efficient non-vertical turbine pump with an average HP of 3.57 and a PEI of 0.93	2,101	4,278	1	2,259	4,278	20	$107	$0	$180	$0.07	60%	3.6	1.4	676	$0.159	$0.008	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Constant 1-5 HP Pump	Efficient vertical turbine pump with an average HP of 3.57 and a PEI of 0.93	2,862	4,278	1	3,077	4,278	20	$107	$0	$180	$0.07	60%	2.6	1.1	922	$0.117	$0.006	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Constant 7.5-30 HP Pump	Efficient non-vertical turbine pump with an average HP of 16.0 and a PEI of 0.93	9,425	4,278	1	10,134	4,278	20	$177	$0	$298	$0.07	59%	1.3	0.5	3,035	$0.058	$0.003	0.7	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Constant 7.5-30 HP Pump	Efficient vertical turbine pump with an average HP of 16.0 and a PEI of 0.93	12,840	4,278	1	13,806	4,278	20	$177	$0	$298	$0.07	59%	1.0	0.4	4,134	$0.043	$0.002	1.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Constant 40-75 HP Pump	Efficient non-vertical turbine pump with an average HP of 54.3 and a PEI of 0.93	31,912	4,278	1	34,314	4,278	20	$272	$0	$454	$0.07	60%	0.6	0.2	10,276	$0.026	$0.001	2.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Constant 40-75 HP Pump	Efficient vertical turbine pump with an average HP of 54.3 and a PEI of 0.93	43,474	4,278	1	46,746	4,278	20	$272	$0	$454	$0.07	60%	0.4	0.2	13,999	$0.019	$0.001	3.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Constant 100-200 HP Pump	Efficient non-vertical turbine pump with an average HP of 132. and a PEI of 0.93	77,761	4,278	1	83,614	4,278	20	$331	$0	$613	$0.07	54%	0.3	0.2	25,039	$0.013	$0.001	5.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Constant 100-200 HP Pump	Efficient vertical turbine pump with an average HP of 132. and a PEI of 0.93	105,933	4,278	1	113,907	4,278	20	$331	$0	$613	$0.07	54%	0.2	0.1	34,111	$0.010	$0.000	8.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Variable to Variable 1-5 HP Pump	Efficient non-vertical turbine pump with an average HP of 3.57 and a PEI of 0.47	1,466	4,278	1	1,696	4,278	20	$107	$0	$180	$0.07	60%	2.5	1.0	983	$0.109	$0.005	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Variable to Variable 1-5 HP Pump	Efficient vertical turbine pump with an average HP of 3.57 and a PEI of 0.47	1,944	4,278	1	2,606	4,278	20	$107	$0	$180	$0.07	60%	0.9	0.3	2,831	$0.038	$0.002	0.7	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Variable to Variable 7.5-30 HP Pump	Efficient non-vertical turbine pump with an average HP of 16.0 and a PEI of 0.47	6,579	4,278	1	8,263	4,425	20	$563	$0	$1,041	$0.07	54%	1.7	0.8	8,421	$0.067	$0.003	1.7	1.4	$0.00	78%	2	2	100%	100%	100%	100%	3	18,031	1,125	2,082
Tier 1 Variable to Variable 7.5-30 HP Pump	Efficient vertical turbine pump with an average HP of 16.0 and a PEI of 0.47	8,722	4,278	1	11,135	4,278	20	$177	$0	$298	$0.07	59%	0.4	0.2	10,321	$0.017	$0.001	2.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Variable to Variable 40-75 HP Pump	Efficient non-vertical turbine pump with an average HP of 54.3 and a PEI of 0.47	22,276	4,278	1	23,733	4,278	20	$272	$0	$454	$0.07	60%	1.0	0.4	6,234	$0.044	$0.002	1.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Variable to Variable 40-75 HP Pump	Efficient vertical turbine pump with an average HP of 54.3 and a PEI of 0.47	29,532	4,278	1	37,701	4,278	20	$272	$0	$454	$0.07	60%	0.2	0.1	34,945	$0.008	$0.000	8.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Variable to Variable 100-200 HP Pump	Efficient non-vertical turbine pump with an average HP of 132. and a PEI of 0.47	54,280	4,278	1	57,831	4,278	20	$331	$0	$613	$0.07	54%	0.5	0.2	15,191	$0.022	$0.001	3.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Variable to Variable 100-200 HP Pump	Efficient vertical turbine pump with an average HP of 132. and a PEI of 0.47	71,962	4,278	1	91,866	4,278	20	$331	$0	$613	$0.07	54%	0.1	0.0	85,151	$0.004	$0.000	19.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Variable 1-5 HP Pump	Efficient non-vertical turbine pump with an average HP of 3.57 and a PEI of 0.47	1,466	4,278	1	2,259	4,278	20	$591	$0	$1,477	$0.07	40%	5.9	3.5	3,390	$0.174	$0.009	0.8	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Variable 1-5 HP Pump	Efficient vertical turbine pump with an average HP of 3.57 and a PEI of 0.47	1,944	4,278	1	3,077	4,278	20	$591	$0	$1,477	$0.07	40%	4.1	2.5	4,848	$0.122	$0.006	1.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Variable 7.5-30 HP Pump	Efficient non-vertical turbine pump with an average HP of 16.0 and a PEI of 0.47	6,579	4,278	1	10,134	4,278	20	$1,204	$0	$2,229	$0.07	54%	2.0	0.9	15,210	$0.079	$0.004	3.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Variable 7.5-30 HP Pump	Efficient vertical turbine pump with an average HP of 16.0 and a PEI of 0.47	8,722	4,278	1	13,806	4,278	20	$1,204	$0	$2,229	$0.07	54%	1.4	0.6	21,749	$0.055	$0.003	5.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Variable 40-75 HP Pump	Efficient non-vertical turbine pump with an average HP of 54.3 and a PEI of 0.47	22,276	4,278	1	34,314	4,278	20	$3,208	$0	$5,358	$0.07	60%	1.4	0.6	51,500	$0.062	$0.003	12.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Variable 40-75 HP Pump	Efficient vertical turbine pump with an average HP of 54.3 and a PEI of 0.47	29,532	4,278	1	46,746	4,278	20	$3,208	$0	$5,358	$0.07	60%	1.0	0.4	73,640	$0.044	$0.002	17.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Variable 100-200 HP Pump	Efficient non-vertical turbine pump with an average HP of 132. and a PEI of 0.47	54,280	4,278	1	83,614	4,278	20	$8,758	$0	$11,442	$0.07	59%	1.2	0.5	125,490	$0.054	$0.003	29.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 1 Constant to Variable 100-200 HP Pump	Efficient vertical turbine pump with an average HP of 132. and a PEI of 0.47	71,962	4,278	1	113,907	4,278	20	$8,758	$0	$11,442	$0.07	59%	0.9	0.4	179,441	$0.038	$0.002	41.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Constant 1-5 HP Pump	Efficient non-vertical turbine pump with an average HP of 3.57 and a PEI of 0.855	1,931	4,278	1	2,259	4,278	20	$197	$0	$449	$0.07	44%	4.3	2.4	1,401	$0.141	$0.007	0.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Constant 1-5 HP Pump	Efficient vertical turbine pump with an average HP of 3.57 and a PEI of 0.855	2,631	4,278	1	3,077	4,278	20	$197	$0	$449	$0.07	44%	3.2	1.8	1,909	$0.103	$0.005	0.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Constant 7.5-30 HP Pump	Efficient non-vertical turbine pump with an average HP of 16.0 and a PEI of 0.855	8,665	4,278	1	10,134	4,278	20	$442	$0	$739	$0.07	60%	1.8	0.6	6,286	$0.070	$0.004	1.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Constant 7.5-30 HP Pump	Efficient vertical turbine pump with an average HP of 16.0 and a PEI of 0.855	11,804	4,278	1	13,806	4,278	20	$442	$0	$739	$0.07	60%	1.2	0.5	8,564	$0.052	$0.003	2.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Constant 40-75 HP Pump	Efficient non-vertical turbine pump with an average HP of 54.3 and a PEI of 0.855	29,339	4,278	1	34,314	4,278	20	$653	$0	$1,124	$0.07	58%	0.7	0.3	21,285	$0.031	$0.002	5.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Constant 40-75 HP Pump	Efficient vertical turbine pump with an average HP of 54.3 and a PEI of 0.855	39,968	4,278	1	46,746	4,278	20	$653	$0	$1,124	$0.07	58%	0.5	0.2	28,997	$0.023	$0.001	6.8	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Constant 100-200 HP Pump	Efficient non-vertical turbine pump with an average HP of 132. and a PEI of 0.855	71,490	4,278	1	83,614	4,278	20	$861	$0	$1,512	$0.07	57%	0.4	0.2	51,867	$0.017	$0.001	12.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Constant 100-200 HP Pump	Efficient vertical turbine pump with an average HP of 132. and a PEI of 0.855	97,390	4,278	1	113,907	4,278	20	$861	$0	$1,512	$0.07	57%	0.3	0.1	70,658	$0.012	$0.001	16.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Variable to Variable 1-5 HP Pump	Efficient non-vertical turbine pump with an average HP of 3.57 and a PEI of 0.415	1,295	4,278	1	1,696	4,278	20	$197	$0	$449	$0.07	44%	3.5	2.0	1,717	$0.115	$0.006	0.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Variable to Variable 1-5 HP Pump	Efficient vertical turbine pump with an average HP of 3.57 and a PEI of 0.415	1,717	4,278	1	2,606	4,278	20	$197	$0	$449	$0.07	44%	1.8	0.9	3,804	$0.052	$0.003	0.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Variable to Variable 7.5-30 HP Pump	Efficient non-vertical turbine pump with an average HP of 16.0 and a PEI of 0.415	5,809	4,278	1	7,009	4,278	20	$442	$0	$739	$0.07	60%	1.9	0.8	5,135	$0.086	$0.004	1.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Variable to Variable 7.5-30 HP Pump	Efficient vertical turbine pump with an average HP of 16.0 and a PEI of 0.415	7,701	4,278	1	11,135	4,278	20	$442	$0	$739	$0.07	60%	0.7	0.3	14,687	$0.030	$0.002	3.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Variable to Variable 40-75 HP Pump	Efficient non-vertical turbine pump with an average HP of 54.3 and a PEI of 0.415	19,669	4,278	1	23,733	4,278	20	$653	$0	$1,124	$0.07	58%	0.9	0.4	17,386	$0.038	$0.002	4.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Variable to Variable 40-75 HP Pump	Efficient vertical turbine pump with an average HP of 54.3 and a PEI of 0.415	26,076	4,278	1	37,701	4,278	20	$653	$0	$1,124	$0.07	58%	0.3	0.1	49,729	$0.013	$0.001	11.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Variable to Variable 100-200 HP Pump	Efficient non-vertical turbine pump with an average HP of 132. and a PEI of 0.415	47,928	4,278	1	57,831	4,278	20	$861	$0	$1,512	$0.07	57%	0.5	0.2	42,365	$0.020	$0.001	9.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Variable to Variable 100-200 HP Pump	Efficient vertical turbine pump with an average HP of 132. and a PEI of 0.415	63,541	4,278	1	91,866	4,278	20	$861	$0	$1,512	$0.07	57%	0.2	0.1	121,176	$0.007	$0.000	28.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Variable 1-5 HP Pump	Efficient non-vertical turbine pump with an average HP of 3.57 and a PEI of 0.47	1,466	4,278	1	2,259	4,278	20	$591	$0	$1,477	$0.07	40%	5.9	3.5	3,390	$0.174	$0.009	0.8	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Variable 1-5 HP Pump	Efficient vertical turbine pump with an average HP of 3.57 and a PEI of 0.47	1,944	4,278	1	3,077	4,278	20	$591	$0	$1,477	$0.07	40%	4.1	2.5	4,848	$0.122	$0.006	1.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Variable 7.5-30 HP Pump	Efficient non-vertical turbine pump with an average HP of 16.0 and a PEI of 0.47	6,579	4,278	1	10,134	4,278	20	$1,204	$0	$2,229	$0.07	54%	2.0	0.9	15,210	$0.079	$0.004	3.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Variable 7.5-30 HP Pump	Efficient vertical turbine pump with an average HP of 16.0 and a PEI of 0.47	8,722	4,278	1	13,806	4,278	20	$1,204	$0	$2,229	$0.07	54%	1.4	0.6	21,749	$0.055	$0.003	5.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Variable 40-75 HP Pump	Efficient non-vertical turbine pump with an average HP of 54.3 and a PEI of 0.47	22,276	4,278	1	34,314	4,278	20	$3,208	$0	$5,358	$0.07	60%	1.4	0.6	51,500	$0.062	$0.003	12.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Variable 40-75 HP Pump	Efficient vertical turbine pump with an average HP of 54.3 and a PEI of 0.47	29,532	4,278	1	46,746	4,278	20	$3,208	$0	$5,358	$0.07	60%	1.0	0.4	73,640	$0.044	$0.002	17.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Variable 100-200 HP Pump	Efficient non-vertical turbine pump with an average HP of 132. and a PEI of 0.47	54,280	4,278	1	83,614	4,278	20	$8,758	$0	$11,442	$0.07	59%	1.2	0.5	125,490	$0.054	$0.003	29.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Tier 2 Constant to Variable 100-200 HP Pump	Efficient vertical turbine pump with an average HP of 132. and a PEI of 0.47	71,962	4,278	1	113,907	4,278	20	$8,758	$0	$11,442	$0.07	59%	0.9	0.4	179,441	$0.038	$0.002	41.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Constant 1-5 HP Pump	Efficient non-vertical turbine pump with an average HP of 3.57 and a PEI of 0.93	2,101	4,278	1	2,259	4,278	20	$107	$0	$180	$0.07	60%	3.6	1.4	676	$0.159	$0.008	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Constant 1-5 HP Pump	Efficient vertical turbine pump with an average HP of 3.57 and a PEI of 0.93	2,862	4,278	1	3,077	4,278	20	$107	$0	$180	$0.07	60%	2.6	1.1	922	$0.117	$0.006	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Constant 7.5-30 HP Pump	Efficient non-vertical turbine pump with an average HP of 16.0 and a PEI of 0.93	9,425	4,278	1	10,134	4,278	20	$177	$0	$298	$0.07	59%	1.3	0.5	3,035	$0.058	$0.003	0.7	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Constant 7.5-30 HP Pump	Efficient vertical turbine pump with an average HP of 16.0 and a PEI of 0.93	12,840	4,278	1	13,806	4,278	20	$177	$0	$298	$0.07	59%	1.0	0.4	4,134	$0.043	$0.002	1.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0

Clean Water Pump - Tier 1 Constant to Constant 40-75 HP Pump	Efficient non-vertical turbine pump with an average HP of 54.3 and a PEI of 0.93	31,912	4,278	1	34,314	4,278	20	$272	$0	$454	$0.07	60%	0.6	0.2	10,276	$0.026	$0.001	2.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Constant 40-75 HP Pump	Efficient vertical turbine pump with an average HP of 54.3 and a PEI of 0.93	43,474	4,278	1	46,746	4,278	20	$272	$0	$454	$0.07	60%	0.4	0.2	13,999	$0.019	$0.001	3.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Constant 100-200 HP Pump	Efficient non-vertical turbine pump with an average HP of 132. and a PEI of 0.93	77,761	4,278	1	83,614	4,278	20	$331	$0	$613	$0.07	54%	0.3	0.2	25,039	$0.013	$0.001	5.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Constant 100-200 HP Pump	Efficient vertical turbine pump with an average HP of 132. and a PEI of 0.93	105,933	4,278	1	113,907	4,278	20	$331	$0	$613	$0.07	54%	0.2	0.1	34,111	$0.010	$0.000	8.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Variable to Variable 1-5 HP Pump	Efficient non-vertical turbine pump with an average HP of 3.57 and a PEI of 0.47	1,466	4,278	1	1,696	4,278	20	$107	$0	$180	$0.07	60%	2.5	1.0	983	$0.109	$0.005	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Variable to Variable 1-5 HP Pump	Efficient vertical turbine pump with an average HP of 3.57 and a PEI of 0.47	1,944	4,278	1	2,606	4,278	20	$107	$0	$180	$0.07	60%	0.9	0.3	2,831	$0.038	$0.002	0.7	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Variable to Variable 7.5-30 HP Pump	Efficient non-vertical turbine pump with an average HP of 16.0 and a PEI of 0.47	6,579	4,278	1	7,009	4,278	20	$177	$0	$298	$0.07	59%	2.2	0.9	1,841	$0.096	$0.005	0.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Variable to Variable 7.5-30 HP Pump	Efficient vertical turbine pump with an average HP of 16.0 and a PEI of 0.47	8,722	4,278	1	11,135	4,278	20	$177	$0	$298	$0.07	59%	0.4	0.2	10,321	$0.017	$0.001	2.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Variable to Variable 40-75 HP Pump	Efficient non-vertical turbine pump with an average HP of 54.3 and a PEI of 0.47	22,276	4,278	1	23,733	4,278	20	$272	$0	$454	$0.07	60%	1.0	0.4	6,234	$0.044	$0.002	1.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Variable to Variable 40-75 HP Pump	Efficient vertical turbine pump with an average HP of 54.3 and a PEI of 0.47	29,532	4,278	1	37,701	4,278	20	$272	$0	$454	$0.07	60%	0.2	0.1	34,945	$0.008	$0.000	8.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Variable to Variable 100-200 HP Pump	Efficient non-vertical turbine pump with an average HP of 132. and a PEI of 0.47	54,280	4,278	1	57,831	4,278	20	$331	$0	$613	$0.07	54%	0.5	0.2	15,191	$0.022	$0.001	3.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Variable to Variable 100-200 HP Pump	Efficient vertical turbine pump with an average HP of 132. and a PEI of 0.47	71,962	4,278	1	91,866	4,278	20	$331	$0	$613	$0.07	54%	0.1	0.0	85,151	$0.004	$0.000	19.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Variable 1-5 HP Pump	Efficient non-vertical turbine pump with an average HP of 3.57 and a PEI of 0.47	1,466	4,278	1	2,259	4,278	20	$591	$0	$1,477	$0.07	40%	5.9	3.5	3,390	$0.174	$0.009	0.8	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Variable 1-5 HP Pump	Efficient vertical turbine pump with an average HP of 3.57 and a PEI of 0.47	1,944	4,278	1	3,077	4,278	20	$591	$0	$1,477	$0.07	40%	4.1	2.5	4,848	$0.122	$0.006	1.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Variable 7.5-30 HP Pump	Efficient non-vertical turbine pump with an average HP of 16.0 and a PEI of 0.47	6,579	4,278	1	10,134	4,278	20	$1,204	$0	$2,229	$0.07	54%	2.0	0.9	15,210	$0.079	$0.004	3.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Variable 7.5-30 HP Pump	Efficient vertical turbine pump with an average HP of 16.0 and a PEI of 0.47	8,722	4,278	1	13,806	4,278	20	$1,204	$0	$2,229	$0.07	54%	1.4	0.6	21,749	$0.055	$0.003	5.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Variable 40-75 HP Pump	Efficient non-vertical turbine pump with an average HP of 54.3 and a PEI of 0.47	22,276	4,278	1	34,314	4,278	20	$3,208	$0	$5,358	$0.07	60%	1.4	0.6	51,500	$0.062	$0.003	12.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Variable 40-75 HP Pump	Efficient vertical turbine pump with an average HP of 54.3 and a PEI of 0.47	29,532	4,278	1	46,746	4,278	20	$3,208	$0	$5,358	$0.07	60%	1.0	0.4	73,640	$0.044	$0.002	17.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Variable 100-200 HP Pump	Efficient non-vertical turbine pump with an average HP of 132. and a PEI of 0.47	54,280	4,278	1	83,614	4,278	20	$6,758	$0	$11,442	$0.07	59%	1.2	0.5	125,490	$0.054	$0.003	29.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 1 Constant to Variable 100-200 HP Pump	Efficient vertical turbine pump with an average HP of 132. and a PEI of 0.47	71,962	4,278	1	113,907	4,278	20	$6,758	$0	$11,442	$0.07	59%	0.9	0.4	179,441	$0.038	$0.002	41.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Constant 1-5 HP Pump	Efficient non-vertical turbine pump with an average HP of 3.57 and a PEI of 0.855	1,931	4,278	1	2,259	4,278	20	$197	$0	$449	$0.07	44%	4.3	2.4	1,401	$0.141	$0.007	0.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Constant 1-5 HP Pump	Efficient vertical turbine pump with an average HP of 3.57 and a PEI of 0.855	2,631	4,278	1	3,077	4,278	20	$197	$0	$449	$0.07	44%	3.2	1.8	1,909	$0.103	$0.005	0.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Constant 7.5-30 HP Pump	Efficient non-vertical turbine pump with an average HP of 16.0 and a PEI of 0.855	8,665	4,278	1	10,134	4,278	20	$442	$0	$739	$0.07	60%	1.6	0.6	6,286	$0.070	$0.004	1.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Constant 7.5-30 HP Pump	Efficient vertical turbine pump with an average HP of 16.0 and a PEI of 0.855	11,804	4,278	1	13,806	4,278	20	$442	$0	$739	$0.07	60%	1.2	0.5	8,564	$0.052	$0.003	2.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Constant 40-75 HP Pump	Efficient non-vertical turbine pump with an average HP of 54.3 and a PEI of 0.855	29,339	4,278	1	34,314	4,278	20	$653	$0	$1,124	$0.07	58%	0.7	0.3	21,285	$0.031	$0.002	5.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Constant 40-75 HP Pump	Efficient vertical turbine pump with an average HP of 54.3 and a PEI of 0.855	39,968	4,278	1	46,746	4,278	20	$653	$0	$1,124	$0.07	58%	0.5	0.2	28,997	$0.023	$0.001	6.8	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Constant 100-200 HP Pump	Efficient non-vertical turbine pump with an average HP of 132. and a PEI of 0.855	71,490	4,278	1	83,614	4,278	20	$861	$0	$1,512	$0.07	57%	0.4	0.2	51,867	$0.017	$0.001	12.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Constant 100-200 HP Pump	Efficient vertical turbine pump with an average HP of 132. and a PEI of 0.855	97,390	4,278	1	113,907	4,278	20	$861	$0	$1,512	$0.07	57%	0.3	0.1	70,658	$0.012	$0.001	16.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Variable to Variable 1-5 HP Pump	Efficient non-vertical turbine pump with an average HP of 3.57 and a PEI of 0.415	1,295	4,278	1	1,696	4,278	20	$197	$0	$449	$0.07	44%	3.5	2.0	1,717	$0.115	$0.006	0.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Variable to Variable 1-5 HP Pump	Efficient vertical turbine pump with an average HP of 3.57 and a PEI of 0.415	1,717	4,278	1	2,606	4,278	20	$197	$0	$449	$0.07	44%	1.6	0.9	3,804	$0.052	$0.003	0.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Variable to Variable 7.5-30 HP Pump	Efficient non-vertical turbine pump with an average HP of 16.0 and a PEI of 0.415	5,809	4,278	1	7,009	4,278	20	$442	$0	$739	$0.07	60%	1.9	0.8	5,135	$0.086	$0.004	1.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Variable to Variable 7.5-30 HP Pump	Efficient vertical turbine pump with an average HP of 16.0 and a PEI of 0.415	7,701	4,278	1	11,135	4,278	20	$442	$0	$739	$0.07	60%	0.7	0.3	14,687	$0.030	$0.002	3.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Variable to Variable 40-75 HP Pump	Efficient non-vertical turbine pump with an average HP of 54.3 and a PEI of 0.415	19,669	4,278	1	23,733	4,278	20	$653	$0	$1,124	$0.07	58%	0.9	0.4	17,386	$0.038	$0.002	4.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Variable to Variable 40-75 HP Pump	Efficient vertical turbine pump with an average HP of 54.3 and a PEI of 0.415	26,076	4,278	1	37,701	4,278	20	$653	$0	$1,124	$0.07	58%	0.3	0.1	49,729	$0.013	$0.001	11.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Variable to Variable 100-200 HP Pump	Efficient non-vertical turbine pump with an average HP of 132. and a PEI of 0.415	47,928	4,278	1	57,831	4,278	20	$861	$0	$1,512	$0.07	57%	0.5	0.2	42,365	$0.020	$0.001	9.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Variable to Variable 100-200 HP Pump	Efficient vertical turbine pump with an average HP of 132. and a PEI of 0.415	63,541	4,278	1	91,866	4,278	20	$861	$0	$1,512	$0.07	57%	0.2	0.1	121,176	$0.007	$0.000	28.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Variable 1-5 HP Pump	Efficient non-vertical turbine pump with an average HP of 3.57 and a PEI of 0.47	1,466	4,278	1	2,259	4,278	20	$591	$0	$1,477	$0.07	40%	5.9	3.5	3,390	$0.174	$0.009	0.8	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Variable 1-5 HP Pump	Efficient vertical turbine pump with an average HP of 3.57 and a PEI of 0.47	1,944	4,278	1	3,077	4,278	20	$591	$0	$1,477	$0.07	40%	4.1	2.5	4,848	$0.122	$0.006	1.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Variable 7.5-30 HP Pump	Efficient non-vertical turbine pump with an average HP of 16.0 and a PEI of 0.47	6,579	4,278	1	10,134	4,278	20	$1,204	$0	$2,229	$0.07	54%	2.0	0.9	15,210	$0.079	$0.004	3.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Variable 7.5-30 HP Pump	Efficient vertical turbine pump with an average HP of 16.0 and a PEI of 0.47	8,722	4,278	1	13,806	4,278	20	$1,204	$0	$2,229	$0.07	54%	1.4	0.6	21,749	$0.055	$0.003	5.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Variable 40-75 HP Pump	Efficient non-vertical turbine pump with an average HP of 54.3 and a PEI of 0.47	22,276	4,278	1	34,314	4,278	20	$3,208	$0	$5,358	$0.07	60%	1.4	0.6	51,500	$0.062	$0.003	12.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Variable 40-75 HP Pump	Efficient vertical turbine pump with an average HP of 54.3 and a PEI of 0.47	29,532	4,278	1	46,746	4,278	20	$3,208	$0	$5,358	$0.07	60%	1.0	0.4	73,640	$0.044	$0.002	17.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Variable 100-200 HP Pump	Efficient non-vertical turbine pump with an average HP of 132. and a PEI of 0.47	54,280	4,278	1	83,614	4,278	20	$6,758	$0	$11,442	$0.07	59%	1.2	0.5	125,490	$0.054	$0.003	29.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clean Water Pump - Tier 2 Constant to Variable 100-200 HP Pump	Efficient vertical turbine pump with an average HP of 132. and a PEI of 0.47	71,962	4,278	1	113,907	4,278	20	$6,758	$0	$11,442	$0.07	59%	0.9	0.4	179,441	$0.038	$0.002	41.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
1 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$200	$0	$369	$0.00	54%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
1.5 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$200	$0	$518	$0.00	39%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
2 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$200	$0	$568	$0.00	35%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
3 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$200	$0	$642	$0.00	31%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
5 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$300	$0	$642	$0.00	47%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
7.5 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$375	$0	$805	$0.00	47%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
10 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$500	$0	$876	$0.00	57%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
15 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$625	$0	$932	$0.00	67%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
20 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$800	$0	$899	$0.00	89%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
25 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$1,000	$0	$1,058	$0.00	95%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
30 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$1,200	$0	$1,137	$0.00	106%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
40 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$1,500	$0	$1,319	$0.00	114%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
50 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$1,750	$0	$1,372	$0.00	128%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
60 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$2,000	$0	$1,375	$0.00	145%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
75 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$2,500	$0	$1,802	$0.00	139%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
100 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$3,000	$0	$2,012	$0.00	149%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
125 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$3,500	$0	$1,717	$0.00	204%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
150 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$3,500	$0	$2,173	$0.00	161%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
200 HP Efficient Fan	Efficient Fan with Qualifying FEI	0	0	Fan with Baseline FEI	0	0	20	$4,000	$0	$2,855	$0.00	140%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
1 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$600	$0	$2,525	$0.00	24%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
1.5 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$600	$0	$2,910	$0.00	21%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0

2 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$600	$0	$3,251	$0.00	18%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
3 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$600	$0	$3,815	$0.00	17%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
5 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$900	$0	$4,236	$0.00	21%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
7.5 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$1,125	$0	$4,873	$0.00	23%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
10 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$1,500	$0	$5,454	$0.00	28%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
15 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$1,875	$0	$6,061	$0.00	31%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
20 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$2,400	$0	$6,580	$0.00	36%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
25 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$3,000	$0	$7,338	$0.00	41%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
30 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$3,600	$0	$7,595	$0.00	47%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
40 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$4,500	$0	$8,414	$0.00	53%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
50 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$5,250	$0	$9,096	$0.00	58%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
60 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$6,000	$0	$9,491	$0.00	63%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
75 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$7,500	$0	$10,637	$0.00	71%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
100 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$9,000	$0	$11,651	$0.00	77%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
125 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$10,500	$0	$12,203	$0.00	86%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
150 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$10,500	$0	$13,264	$0.00	79%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
200 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI	0	0	Constant Speed Fan with Baseline FEI	0	0	15	$12,000	$0	$15,364	$0.00	78%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Multi Family Building Efficiency																															
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in electric DHW heater	1.5 GPM Showerhead	103	8,760	2.5 GPM Showerhead	172	8,760	10	$6	$0	$6	$0.12	100%	0.1	0.0	604	$0.010	$0.001	0.1	0.0	$39.46	64%	68	68	100%	100%	100%	100%	3	43,939	423	423
Provide Energy Efficient Kitchen Aerator - 1.5 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	24	8,760	2.2 GPM Kitchen Faucet Aerator	35	8,760	10	$0	$0	$0	$0.12	0%	0.0	0.0	98	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	7	8,760	2.2 GPM Bathroom Faucet Aerator	15	8,760	10	$0	$0	$0	$0.12	0%	0.0	0.0	73	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Provide Energy Efficient Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	3	8,760	2.2 GPM Bathroom Faucet Aerator	15	8,758	10	$4	$0	$4	$0.12	100%	0.3	0.0	103	$0.039	$0.004	0.0	0.0	$6.73	124%	56	56	100%	100%	100%	100%	1	6,169	224	224
Water Heater Blanket on Electric Water Heater	Add commercial Insulation wrap R8 around Water Heater Tank	41	8,760	No External Insulation on water heater	69	8,760	7	$0	$0	$0	$0.12	0%	0.0	0.0	245	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Replace screw-in incandescents within tenant units with LEDs	LED Bulbs	9	642	Average EISA Standard halogen A-Style Bulb	55	642	16	$0	$0	$0	$0.12	0%	0.0	0.0	29	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Replace screw-in incandescents in common areas with screw-in LEDs	LED Bulbs	9	4,243	Average EISA Standard halogen A-Style Bulb	49	4,338	6	$5	$0	$5	$0.07	100%	0.4	0.0	174	$0.030	$0.005	0.0	0.0	-$0.96	73%	539	539	100%	100%	100%	100%	17	100,556	2,781	2,781
Exit sign retrofit and replacement	LED/LEC Exit	1	7,602	Incandescent	44	7,602	20	$0	$0	$0	$0.07	0%	0.0	0.0	321	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Holistic efficiency projects totaling either 15%, 20%, or 25% whole-building savings	Average Performance Building	10,315	8,760	Average existing multifamily building after Direct Install measures completed	11,398	8,760	20	$2,491	$17,578	$2,366	$0.07	105%	3.7	-0.2	9,486	$0.263	$0.013	1.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in electric DHW heater	1.5 GPM Showerhead	103	8,760	2.5 GPM Showerhead	172	8,760	10	$6	$0	$6	$0.12	100%	0.1	0.0	604	$0.009	$0.001	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in electric DHW heater	1.5 GPM Showerhead	103	8,760	2.5 GPM Showerhead	172	8,760	10	$16	$0	$16	$0.12	100%	0.2	0.0	604	$0.027	$0.003	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Provide Energy Efficient Kitchen Aerator - 1.5 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	24	8,760	2.2 GPM Kitchen Faucet Aerator	35	8,760	10	$3	$0	$3	$0.12	100%	0.2	0.0	98	$0.029	$0.003	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	7	8,760	2.2 GPM Bathroom Faucet Aerator	15	8,760	10	$1	$0	$1	$0.12	100%	0.2	0.0	73	$0.020	$0.002	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Provide Energy Efficient Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	3	8,760	2.2 GPM Bathroom Faucet Aerator	15	8,760	10	$4	$0	$4	$0.12	100%	0.3	0.0	103	$0.039	$0.004	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
In Unit LEDs	LED Bulbs	9	986	Existing Halogen/Incandescent	1,725,312	986	20	$0	$0	$227,473	#REF!	0%			1,701,136	$0.000	$0.000	1,725.3	245.9	$0.00	13%	1	1	100%	100%	100%	100%	246	1,821,345	0	227,473
Replace screw-in incandescents within tenant units with LEDs	LED Bulbs	9	642	Average EISA Standard halogen A-Style Bulb	55	642	16	$5	$0	$5	$0.12	100%	1.6	0.0	29	$0.187	$0.012	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Replace screw-in incandescents in common areas with screw-in LEDs	LED Bulbs	9	4,243	Average EISA Standard halogen A-Style Bulb	29	4,676	6	$5	$0	$5	$0.07	100%	0.7	0.0	96	$0.051	$0.009	0.0	0.0	-$0.53	72%	255	255	100%	100%	100%	100%	4	26,216	1,245	1,245
In Unit LEDs - CFL Baseline	LED Bulbs	8	986	Existing CFL	7,076	986	20	$0	$0	$6,041	#REF!	0%			6,967	$0.000	$0.000	7.1	1.0	$0.00	13%	1	1	100%	100%	100%	100%	1	7,459	0	6,041
Replace screw-in incandescents in common areas with screw-in LEDs	LED Bulbs	9	4,243	Existing CFL	16	4,243	6	$5	$0	$5	#REF!	100%			27	$0.207	$0.035	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Water Heater Setback	Building hot water system with setback	13,355	8,760	Building hot water system without setback	13,912	8,760	2	$0	$0	$0	$0.12	0%	0.0	0.0	4,875	$0.000	$0.000	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Power Strip	Tier 1 Advanced Power Strip	45	6,588	Standard Power Strip	55	6,588	7	$18	$0	$18	$0.12	100%	2.2	0.0	69	$0.260	$0.037	0.0	0.0	$0.00	83%	4,684	4,684	100%	100%	100%	100%	45	347,791	84,300	84,300
Renter Kit 9W LED	9W LED	9	909	EISA Standard Bulb	43	909	17	$0	$0	$0	$0.12	0%	0.0	0.0	31	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	55%	100%	100%	0	0	0	0
Renter Kit 11W LED	11W LED	11	909	EISA Standard Bulb	53	909	17	$0	$0	$0	$0.12	0%	0.0	0.0	38	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	55%	100%	100%	0	0	0	0
Renter Kit Showerhead	1.5 GPM Showerhead	103	8,760	2.5 GPM Showerhead	172	8,760	10	$0	$0	$0	$0.12	0%	0.0	0.0	604	$0.000	$0.000	0.1	0.0	$0.00	0%	0	0	100%	35%	100%	100%	0	0	0	0
Renter Kit Kitchen Aerator	1.5 GPM Kitchen Faucet Aerator	24	8,760	2.2 GPM Kitchen Faucet Aerator	35	8,760	10	$0	$0	$0	$0.12	0%	0.0	0.0	98	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	30%	100%	100%	0	0	0	0
Renter Kit Bathroom Aerator	1.0 GPM Bathroom Faucet Aerator	7	8,760	2.2 GPM Bathroom Faucet Aerator	15	8,760	10	$0	$0	$0	$0.12	0%	0.0	0.0	73	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	25%	100%	100%	0	0	0	0
Custom Lighting Projects	LED Lighting	11	3,000	Low Efficient Option	714	6,610	17	$900	$2	$1,721	$0.07	52%	5.0	2.4	4,687	$0.192	$0.012	0.7	0.3	-$8.56	44%	9	9	100%	100%	100%	100%	3	45,166	8,103	15,491
Prescriptive Lighting Equipment	LED Lighting	17	4,297	Low Efficient Option	44	3,777	10	$11	$6	$39	$0.07	27%	5.8	4.2	92	$0.115	$0.012	0.0	0.0	-$0.32	23%	928	928	100%	100%	7%	29%	0	26,901	9,820	36,127
Prescriptive Cooling Equipment	Efficient Cooling Equipment	8,766	665	Inefficient Equipment	10,104	665	20	$761	$6,324	$2,254	$0.08	34%	32.1	21.3	890	$0.855	$0.043	1.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Prescriptive Motors & Drives Equipment	Efficient Motors & Drives	1,439	4,727	Inefficient Motors	1,564	4,727	19	$231	$0	$975	$0.07	24%	22.4	17.1	591	$0.392	$0.021	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Custom Electric	Efficient Equipment	1,864	3,069	Inefficient Equipment	10,149	4,593	19	$7,779	$0	$17,813	$0.12	44%	3.7	2.1	40,839	$0.190	$0.010	8.3	5.2	-$103.63	58%	10	10	100%	100%	100%	100%	52	437,245	77,792	178,126
Custom Combo	Efficient Equipment	1,476	5,162	Inefficient Equipment	1,845	5,162	19	$104	$0	$848	$0.12	12%	3.8	3.3	1,905	$0.055	$0.003	0.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	10	0	2,861	23,262
Carryover Projects	Efficient Equipment	27,677	4,697	Inefficient Equipment	34,597	4,697	19	$7,991	$0	$17,929	$0.12	45%	4.7	2.8	32,498	$0.246	$0.013	6.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Process Efficiency																															
Custom	Optimized System	1,027,147	6,022	Old or less efficient systems or equipment	1,055,975	6,040	19	$9,960	$0	$324,882	$0.07	3%	22.8	22.1	192,945	$0.052	$0.003	28.8	25.4	$51,249.17	82%	41	41	100%	100%	100%	100%	1,040	8,469,733	408,355	13,320,148
Lighting	Optimized System	139	5,042	0	197	5,243	16	$30	$10	$104	$0.07	29%	4.3	3.0	333	$0.090	$0.005	0.1	0.1	-$1.44	86%	47,893	47,893	100%	100%	97.2%	96.4%	2,499	16,486,576	1,433,539	4,984,034
Motors	Optimized System	8,003	4,696	Old or less efficient systems or equipment	11,791	4,958	15	$1,703	$2	$5,346	$0.08	32%	3.4	2.3	20,878	$0.082	$0.005	3.8	3.2	$0.00	78%	181	181	100%	100%	100%	100%	575	4,046,015	308,255	967,627
Implementation of ECO's found in studies	Post-Recommissioned Building	290,028	5,900	Pre-Recommissioned Building	316,623	6,077	7	$9,000	$0	$15,877	$0.06	57%	1.3	0.5	212,831	$0.042	$0.006	26.6	17.9	$1,317.12	63%	31	31	100%	100%	100%	100%	556	7,063,984	279,002	492,174
Cooling	More efficient cooling equipment	8,890	1,976	Code-minimum equipment	23,389	9,413	19	$6,788	$7,017	$6,910	$0.08	98%	0.5	0.0	202,597	$0.034	$0.002	14.5	14.0	$0.00	90%	49	49	100%	100%	100%	100%	688	10,628,768	332,607	338,580
Compressed Air and FSO Measures	Optimized System	53,197	5,896	Non-Optimized System	54,444	5,937	17	$1,335	$2,901	$1,555	$0.07	86%	2.4	0.3	9,569	$0.139	$0.008	1.2	1.2	$11.54	93%	56	56	100%	100%	100%	100%	70	573,751	74,739	87,065
Energy Design Assistance	More Efficient than Code Building	147,974	4,659	Code-Compliant Building	270,810	4,379	20	$64,101	$0	$159,642	$0.07	40%	4.5	2.7	496,495	$0.129	$0.006	122.8	119.8	-$109.01	91%	14	14	100%	100%	100%	100%	1,677	7,442,112	897,417	2,234,994
Behavioral Changes	Behavior changes that reduce energy use	2,962,572	8,760	No change in behavior	3,024,892	8,760	1	$0	$0	$0	$0.06	0%	0.0	0.0	545,921	$0.000	$0.000	62.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Behavioral Changes	Behavior changes that reduce energy use	-1,975,048	8,760	No change in behavior	-2,016,594	8,760	1	$0	$0	$0	$0.06	0%	0.0	0.0	-363,947	$0.000	$0.000	-41.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Phase 2 new customer contribution	0	0	0	0	0	0	0	$0	$0	$6,000	$0.07	0%	0.0	0.0	0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
System Optimization and Annual Achievement Bonuses	0	0	0	0	0	0	0	$46,133	$0	$0	$0.07	0%	0.0	0.0	0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Incentives to Trade Partners	0	0	0	0	0	0	0	$2,061	$0	$0	$0.07	0%	0.0	0.0	0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Recommissioning																															
Recommissioning Implementation	Post-Recommissioned Building	290,028	5,900	Pre-Recommissioned Building	319,373	6,028	7	$3,438	$0	$11,878	$0.06	29%	0.9	0.7	213,760	$0.016	$0.002	29.3	8.9	$3,665.60	28%	14	14	100%	100%	100%	100%	125	3,204,112	48,138	166,297
Recommissioning Studies	Study Cost and Rebate	0	0	0	0	0	0	$8,053	$0	$12,108	$0.06	67%	0.0	0.0	0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
BOC Program Attributable Savings	Energy Use After Class	319,343	8,760	Energy Usage Before Class	322,254	8,760	5	$318	$0	$646	$0.06	49%	0.4	0.2	25,498	$0.012	$0.002	2.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Refrigeration Recommissioning	Optimized Refrigeration Systems	0	0	Existing Refrigeration Systems - Not Tuned or Optimized	0	0	0	$0	$0	$0	$0.06	0%	0.0	0.0	0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Self Direct																															
Average Project	New Equipment	828,135	2,876	Old or less efficient systems or equipment	1,009,894	3,859	17	$151,473	$0	$571,939	$0.08	26%	4.8	3.5	1,514,732	$0.100	$0.006	181.8	195.4	$0.00	100%	1	1	100%	100%	100%	100%	195	1,621,769	151,473	571,939
Turn Key																															
Identification + On site audit	Identification of opportunities	0	0	0	0	0	0	$1,735	$0	$2,275	$0.08	76%	0.0	0.0	0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Implementation	High Eff Project	29,500	4,393	Lower Efficient Product or System	29,568	4,391	16	$28	$0	$128	$0.08	22%	6.5	5.0	249	$0.114	$0.007	0.1	0.1	$10.76	78%	39,248	39,248	100%	100%	99.7%	99.5%	2,216	10,425,894	1,115,123	5,005,324
Building Tune Up Implementation	Implemented Recommissioning Measures	98,408	6,138	Existing systems	107,120	6,138	7	$2,681	$0	$12,244	$0.06	22%	3.2	2.5	65,746	$0.041	$0.006	10.7	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Electric Rate Savings																															
The Electric Rate Savings Program is offered to any business customer who can reduce their electric loads during control periods by at least 50 kW. In return for reducing their electric loads, they receive a monthly discount on their demand charges	Utility Load Control for control period	150,000	18	No Control	69,186,000	18	5	$0	$0	$0	$0.11	0%	0.0	0.0	1,221,942	$0.000	$0.000	69,036.0	35,260.3	$0.00	48%	1	1	100%	100%	100%	100%	35,260	1,308,289	0	0
Saver's Switch For Business																															
Commercial AC Switch Single Stage - MN	Utility Load Control for control period with smart switch	0	0	No Control, No Switch	3,836,555	1	15	$0	$0	$0	$0.11	0%	0.0	0.0	2,117	$0.000	$0.000	3,836.6	920.4	$0.00	22%	1	1	100%	100%	100%	100%	920	2,267	0	0
Commercial AC Switch Multi Stage - MN	Utility Load Control for control period with smart switch	0	0	No Control, No Switch	3,812,006	0	15	$0	$0	$0	$0.11	0%	0.0	0.0	1,493	$0.000	$0.000	3,812.0	665.7	$0.00	16%	1	1	100%	100%	100%	100%	666	1,599	0	0
Business Smart Thermostat	New Installation of DR Capable Smart Thermostat	3,763	7	Non communicating thermostat	5,844	7	5	$255	$0	$255	$0.11	100%	165.9	0.0	14	$18,839	$3,768	2.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	2,349	0	267,750	267,750
Business Smart Thermostat	Existing Dispatchable Device	3,763	7	Non communicating thermostat	5,844	7	5	$100	$0	$100	$0.11	100%	65.1	0.0	14	$7,388	$1,478	2.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	336	0	15,000	15,000
Install Energy Star certified smart thermostat - AC & GAS	Energy Star Certified Thermostat	5,844	654	Manual or programmable thermostat	6,422	654	10	$23	$0	$23	$0.08	100%	0.8	0.0	378	$0.061	$0.006	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	16,491	16,491
Install Energy Star certified smart thermostat - AC ONLY	Energy Star Certified Thermostat	5,844	654	Manual or programmable thermostat	6,422	654	10	$95	$0	$95	$0.08	100%	3.3	0.0	378	$0.251	$0.025	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	5,320	5,320
Install Energy Star certified smart thermostat - AC & ELEC HEAT	Energy Star Certified Thermostat	5,844	1,576	Manual or programmable thermostat	6,422	1,576	10	$95	$0	$95	$0.08	100%	1.4	0.0	911	$0.104	$0.010	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	2,280	2,280
Peak Partner Rewards																															
Customer reduction of their electrical load by an agreed upon amount when the electric grid experiences peak demand periods.	Participation in program	0	6	No participation in program	1,121,667	1	1	$0	$0	$0	$16.25	0%	0.0	0.0	1,039	$0.000	$0.000	1,121.7	1,206.1	$0.00	100%	3	3	100%	100%	100%	100%	3,618	3,338	0	0
Customer reduction of their electrical load by an agreed upon amount when the electric grid experiences peak demand periods.	Participation in program	0	6	No participation in program	885,294	6	1	$28,418	$0	$0	$16.25	0%	0.0	0.0	5,312	$5.350	$5.350	885.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0

Residential																																
Energy Efficient Showerhead																																
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in electric DHW heater	1.5 GPM Showerhead	87	8,760	2.5 GPM Showerhead	146	8,760	10	$3	$0	$3	$0.11	100%	0.1	0.0	510	$0.006	$0.001	0.1	0.0	$0.00	0%	0	0	100%	60%	100%	100%	0	0	0	0
Provide new 1.5 gpm showerhead for second shower to replace existing 2.5 gpm showerhead in electric DHW heater	1.5 GPM Showerhead	59	8,760	2.5 GPM Showerhead	98	8,760	10	$3	$0	$3	$0.11	100%	0.1	0.0	343	$0.009	$0.001	0.0	0.0	$0.00	0%	0	0	100%	50%	100%	100%	0	0	0	0
Provide Energy Efficient Kitchen Aerator - 1.5 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	18	8,760	2.2 GPM Kitchen Faucet Aerator	26	8,760	10	$2	$0	$2	$0.11	100%	0.2	0.0	74	$0.020	$0.002	0.0	0.0	$0.00	0%	0	0	100%	40%	100%	100%	0	0	0	0
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	6	8,760	2.2 GPM Bathroom Faucet Aerator	13	8,760	10	$0	$0	$0	$0.11	100%	0.1	0.0	64	$0.007	$0.001	0.0	0.0	$0.00	0%	0	0	100%	40%	100%	100%	0	0	0	0
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM for second faucet to replace existing 2.2 gpm aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	6	8,760	2.2 GPM Bathroom Faucet Aerator	13	8,760	10	$0	$0	$0	$0.11	100%	0.1	0.0	64	$0.007	$0.001	0.0	0.0	$0.00	0%	0	0	100%	30%	100%	100%	0	0	0	0
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in electric DHW heater	1.5 GPM Showerhead	87	8,760	2.5 GPM Showerhead	146	8,760	10	$3	$0	$3	$0.11	100%	0.1	0.0	510	$0.006	$0.001	0.1	0.0	$0.00	0%	0	0	100%	60%	100%	100%	0	0	0	0
Provide new 1.5 gpm showerhead for second shower to replace existing 2.5 gpm showerhead in electric DHW heater	1.5 GPM Showerhead	59	8,760	2.5 GPM Showerhead	98	8,760	10	$3	$0	$3	$0.11	100%	0.1	0.0	343	$0.009	$0.001	0.0	0.0	$0.00	0%	0	0	100%	50%	100%	100%	0	0	0	0
Provide Energy Efficient Kitchen Aerator - 1.5 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	18	8,760	2.2 GPM Kitchen Faucet Aerator	26	8,760	10	$2	$0	$2	$0.11	100%	0.2	0.0	74	$0.021	$0.002	0.0	0.0	$0.00	0%	0	0	100%	40%	100%	100%	0	0	0	0
Provide Energy Efficient Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	3	8,760	2.2 GPM Bathroom Faucet Aerator	13	8,760	10	$2	$0	$2	$0.11	100%	0.2	0.0	91	$0.018	$0.002	0.0	0.0	$0.00	0%	0	0	100%	40%	100%	100%	0	0	0	0
Provide Energy Efficient Bath Faucet Aerator - 0.5 GPM for second faucet to replace existing 2.2 gpm aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	3	8,760	2.2 GPM Bathroom Faucet Aerator	13	8,760	10	$2	$0	$2	$0.11	100%	0.2	0.0	91	$0.018	$0.002	0.0	0.0	$0.00	0%	0	0	100%	30%	100%	100%	0	0	0	0
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in electric DHW heater	1.5 GPM Showerhead	87	8,760	2.5 GPM Showerhead	146	8,760	10	$3	$0	$3	$0.11	100%	0.1	0.0	510	$0.006	$0.001	0.1	0.0	$33.39	64%	3,771	3,771	100%	60%	100%	100%	92	1,260,658	12,254	12,265
Provide new 1.5 gpm showerhead for second shower to replace existing 2.5 gpm showerhead in electric DHW heater	1.5 GPM Showerhead	59	8,760	2.5 GPM Showerhead	98	8,758	10	$3	$0	$3	$0.11	100%	0.1	0.0	343	$0.009	$0.001	0.0	0.0	$22.45	64%	976	976	100%	50%	100%	100%	13	182,882	3,173	3,177
Provide Energy Efficient Kitchen Aerator - 1.5 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	18	8,760	2.2 GPM Kitchen Faucet Aerator	26	8,766	10	$2	$0	$2	$0.11	100%	0.2	0.0	74	$0.022	$0.002	0.0	0.0	$4.17	124%	997	997	100%	40%	100%	100%	5	32,161	1,636	1,636
Provide Energy Efficient Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	3	8,760	2.2 GPM Bathroom Faucet Aerator	10	8,760	10	$1	$0	$1	$0.11	100%	0.1	0.0	64	$0.008	$0.001	0.0	0.0	$4.19	124%	1,003	1,003	100%	40%	100%	100%	4	28,045	521	521
Provide Energy Efficient Bath Faucet Aerator - 0.5 GPM for second faucet to replace existing 2.2 gpm aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	3	8,760	2.2 GPM Bathroom Faucet Aerator	10	8,762	10	$1	$0	$1	$0.11	100%	0.1	0.0	64	$0.008	$0.001	0.0	0.0	$4.19	124%	969	969	100%	30%	100%	100%	3	20,315	504	504
Enerov Feedback Residential																																
Rollup: Online Group Savings	Treatment	809	8,426	Control	811	8,426	1	$0	$0	$0	$0.11	0%	0.0	0.0	19	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Rollup: Existing Participant 2017 Savings	Treatment	1,215	4,108	Control	1,267	4,106	1	$0	$0	$0	$0.11	0%	0.0	0.0	212	$0.000	$0.000	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Rollup: New Participant 2017 Savings	Treatment	1,073	4,156	Control	1,098	4,155	1	$0	$0	$0	$0.11	0%	0.0	0.0	105	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Rollup: Existing Participant 2018 Savings	Treatment	1,116	4,120	Control	1,166	4,119	1	$0	$0	$0	$0.11	0%	0.0	0.0	204	$0.000	$0.000	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Rollup: New Participant 2018 Savings	Treatment	1,028	4,170	Control	1,053	4,169	1	$0	$0	$0	$0.11	0%	0.0	0.0	104	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Rollup: Existing Participant 2019 Savings	Treatment	1,055	4,121	Control	1,120	4,137	1	$0	$0	$0	$0.11	0%	0.0	0.0	286	$0.000	$0.000	0.1	0.1	$0.00	106%	165,627	165,627	100%	100%	100%	100%	12,594	51,760,167	0	0
Rollup: New Participant 2019 Savings	Treatment	974	4,164	Control	1,015	4,171	1	$0	$0	$0	$0.11	0%	0.0	0.0	175	$0.000	$0.000	0.0	0.0	$0.00	99%	30,204	30,204	100%	100%	100%	100%	1,327	5,784,321	0	0
Behavioral Adjustment-Online Group Savings	Treatment	-539	8,426	Control	-541	8,426	0	$0	$0	$0	$0.11	0%	0.0	0.0	-13	$0.000	#DIV/0!	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Behavioral Adjustments Rollup: Existing Participants 2017 Savings	Treatment	-810	4,108	Control	-845	4,106	0	$0	$0	$0	$0.11	0%	0.0	0.0	-141	$0.000	#DIV/0!	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Behavioral Adjustments Rollup: New Participant 2017 Savings	Treatment	-715	4,156	Control	-732	4,155	0	$0	$0	$0	$0.11	0%	0.0	0.0	-70	$0.000	#DIV/0!	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Behavioral Adjustments Rollup: Existing Participants 2018 Savings	Treatment	-744	4,120	Control	-777	4,119	0	$0	$0	$0	$0.11	0%	0.0	0.0	-136	$0.000	#DIV/0!	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Behavioral Adjustments Rollup: New Participant 2018 Savings	Treatment	-685	4,170	Control	-702	4,169	0	$0	$0	$0	$0.11	0%	0.0	0.0	-69	$0.000	#DIV/0!	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Behavioral Adjustments Rollup: Existing Participants 2019 Savings	Treatment	-703	4,121	Control	-747	4,137	0	$0	$0	$0	$0.11	0%	0.0	0.0	-191	$0.000	#DIV/0!	0.0	-0.1	$0.00	106%	165,627	165,627	100%	100%	100%	100%	-8,396	-34,506,778	0	0
Behavioral Adjustments Rollup: New Participant 2019 Savings	Treatment	-649	4,164	Control	-676	4,171	0	$0	$0	$0	$0.11	0%	0.0	0.0	-117	$0.000	#DIV/0!	0.0	0.0	$0.00	99%	30,204	30,204	100%	100%	100%	100%	-885	-3,856,214	0	0
Efficient New Home Construction																																
Low Income Envelope Improvements - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 1773 and Average 12.7% Better Than Code	12,586	678	Reference Home Based upon Local Code	12,686	678	20	$34	$0	$80	$0.12	42%	10.0	5.8	68	$0.494	$0.025	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
10% to 15% improvement over local code - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 3630 and Average 13.1% Better Than Code	43,695	269	Reference Home Based upon Local Code	45,613	460	20	$256	$0	$1,105	$0.12	23%	1.0	0.8	9,181	$0.028	$0.001	1.7	1.6	$0.00	82%	20	20	100%	100%	100%	100%	32	204,370	5,212	22,533
15% to 20% improvement over local code - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 3834 and Average 17.4% Better Than Code	35,432	339	Reference Home Based upon Local Code	37,735	634	20	$518	$0	$2,310	$0.12	22%	1.6	1.3	11,905	$0.044	$0.002	2.3	2.1	$0.00	84%	56	56	100%	100%	100%	100%	118	727,679	29,013	129,342
20% to 25% improvement over local code - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 4439 and Average 21.3% Better Than Code	22,868	564	Reference Home Based upon Local Code	25,313	1,016	20	$1,017	$0	$3,684	$0.12	28%	2.4	1.8	12,813	$0.079	$0.004	2.4	2.3	$0.00	84%	81	81	100%	100%	100%	100%	184	1,134,709	82,472	298,851
25% to 30% improvement over local code - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 5711 and Average 25.9% Better Than Code	45,217	349	Reference Home Based upon Local Code	47,672	598	20	$1,228	$0	$5,506	$0.12	22%	3.7	2.8	12,736	$0.096	$0.005	2.5	2.2	$0.00	81%	16	16	100%	100%	100%	100%	34	216,905	19,152	85,891
30% to 35% improvement over local code - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 5613 and Average 32.7% Better Than Code	6,876	2,660	Reference Home Based upon Local Code	7,539	2,902	20	$1,488	$0	$6,927	$0.12	21%	16.4	12.8	3,588	$0.415	$0.021	0.7	0.6	$0.00	80%	5	5	100%	100%	100%	100%	3	20,369	7,740	36,020
35% and greater improvement over local code - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 4362 and Average 35.8% Better Than Code	4,393	2,419	Reference Home Based upon Local Code	11,108	3,347	20	$1,965	$0	$10,841	$0.12	18%	3.5	2.8	26,548	$0.074	$0.004	6.7	3.4	$0.00	46%	1	1	100%	100%	100%	100%	2	19,129	1,297	7,155
10% to 15% improvement over local code - Electric Only Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 3630 and Average 8.1% Better Than Code	20,147	620	Reference Home Based upon Local Code	20,350	666	20	$100	$0	$138	$0.12	73%	1.1	0.3	1,058	$0.095	$0.005	0.2	0.2	$0.00	87%	226	226	100%	100%	100%	100%	44	260,944	22,600	31,103
15% to 20% improvement over local code - Electric Only Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 3834 and Average 13.2% Better Than Code	21,509	565	Reference Home Based upon Local Code	21,781	618	20	$100	$0	$251	$0.12	40%	1.6	1.0	1,304	$0.077	$0.004	0.3	0.3	$0.00	89%	485	485	100%	100%	100%	100%	128	690,342	48,500	121,591
20% to 25% improvement over local code - Electric Only Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 4439 and Average 17.5% Better Than Code	20,709	613	Reference Home Based upon Local Code	21,060	679	20	$100	$0	$450	$0.12	22%	2.4	1.9	1,596	$0.063	$0.003	0.4	0.3	$0.00	83%	602	602	100%	100%	100%	100%	193	1,048,781	60,200	270,798
25% to 30% improvement over local code - Electric Only Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 5711 and Average 21.3% Better Than Code	45,217	349	Reference Home Based upon Local Code	45,621	388	20	$100	$0	$714	$0.12	14%	3.1	2.7	1,954	$0.051	$0.003	0.4	0.4	$0.00	83%	150	150	100%	100%	100%	100%	55	319,915	15,000	107,070
30% to 35% improvement over local code - Electric Only Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 5613 and Average 25.9% Better Than Code	6,876	2,660	Reference Home Based upon Local Code	7,432	2,747	20	$100	$0	$3,245	$0.12	3%	12.9	12.5	2,126	$0.047	$0.002	0.6	0.5	$0.00	84%	21	21	100%	100%	100%	100%	11	48,734	2,100	68,143
35% and greater improvement over local code - Electric Only Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 4362 and Average 32.7% Better Than Code	4,393	2,419	Reference Home Based upon Local Code	9,622	2,402	20	$100	$0	$4,374	$0.12	2%	3.0	2.9	12,484	$0.008	$0.000	5.2	0.8	$0.00	13%	4	4	100%	100%	100%	100%	3	54,515	400	17,496
Energy Star Clothes Washer - Combo Customers w/ Electric DHW	Energy Star Clothes Washer	370	295	Standard Clothes Washer	477	296	11	$10	$677	$30	$0.12	33%	7.9	5.3	32	$0.313	$0.028	0.1	0.0	$10.00	4%	54	54	100%	100%	100%	100%	0	1,886	540	1,620
Energy Star Clothes Washer - Electric Only Customers w/ Electric DHW	Energy Star Clothes Washer	370	295	Standard Clothes Washer	477	296	11	$10	$677	$30	$0.12	33%	7.9	5.3	32	$0.313	$0.028	0.1	0.0	$10.00	4%	39	39	100%	100%	100%	100%	0	1,362	390	1,170
Energy Star Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Clothes Washer	111	295	Standard Clothes Washer	174	292	11	$10	$677	$30	$0.12	33%	13.8	9.2	18	$0.542	$0.049	0.1	0.0	$9.85	5%	71	71	100%	100%	100%	100%	0	1,408	699	2,096
Energy Star Clothes Washer - Electric Only Customers w/ Gas DHW	Energy Star Clothes Washer	111	295	Standard Clothes Washer	132	295	11	$10	$677	$10	$0.12	103%	13.1	-0.3	6	$1.582	$0.144	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Energy Star Refrigerator	Top Mounted Freezer w/ Auto Defrost Energy Star refrigerator 22.0 CI	66	5,592	Top Mounted Freezer w/ Auto Defrost Standard refrigerator 22.0 CI	73	5,618	18	$15	$663	$26	$0.12	58%	5.4	2.3	41	$0.366	$0.020	0.0	0.0	$0.00	71%	1,105	1,105	100%	100%	100%	100%	6	49,460	16,575	28,774
Energy Star Ration Fan	Energy Star Ration Fan - Radonaway RP145	17	8,760	Energy Star Ration Fan - Radonaway RP145	48	8,760	10	$10	$139	-$4	$0.12	-250%	-0.1	-0.4	273	$0.037	$0.004	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Residential Heating																																
EC Fan Motor on Retrofit Residential Furnace with AC	ECM Furnace Fan	357	2,542	Non-ECM Fan	569	2,542	7	$100	$236	$212	$0.11	47%	3.6	1.9	539	$0.186	$0.027	0.2	0.1	-$9.50	63%	56	56	100%	100%	100.2%	99.7%	8	32,853	5,600	11,872
EC Fan Motor on Retrofit Residential Furnace no AC	ECM Furnace Fan	298	2,133	Non-ECM Fan	501	2,133	7	$100	$236	$212	$0.11	47%	4.5	2.4	433	$0.231	$0.033	0.2	0.1	-$9.50	27%	19	19	100%	100%	100.2%	99.7%	1	8,954	1,900	4,028
EC Fan Motor on new Residential Furnace with AC	ECM Furnace Fan	390	3,556	Non-ECM Fan	579	3,556	18	$100	$236	$212	$0.11	47%	2.9	1.5	672	$0.149	$0.008	0.2	0.1	-$14.06	71%	18,790	18,790	100%	100%	100.2%	99.7%	2,766	13,743,598	1,879,100	3,983,503
EC Fan Motor on new Residential Furnace no AC	ECM Furnace Fan	301	2,783	Non-ECM Fan	504	2,783	18	$100	$236	$212	$0.11	47%	3.4	1.8	565	$0.177	$0.010	0.2	0.1	-$14.06	27%	362	362	100%	100%	100.2%	99.7%	22	222,616	36,200	76,744

Home Energy Squad																																
NEC Energy Squad Service 2017	weighted average Energy Efficient measures by participant	63	955	weighted average Baseline measures by participant	104	955	7	$0	$0	$3	$0.12	0%	0.6	0.6	40	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
NEC Energy Squad Service 2018	weighted average Energy Efficient measures by participant	63	955	weighted average Baseline measures by participant	104	955	6	$0	$0	$3	$0.12	0%	0.6	0.6	40	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
NEC Energy Squad Service 2019	weighted average Energy Efficient measures by participant	63	955	weighted average Baseline measures by participant	104	955	5	$0	$0	$3	$0.12	0%	0.6	0.6	40	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
NEC - TV peripherals turned off with Timer	TV peripherals turned off with Timer (replacing power strip)	2	4,420	Power used in "standby" mode while equipment is unused	28	4,420	5	$0	$0	$20	$0.12	0%	1.5	1.5	115	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Install Second Programmable Thermostat	Second T-state w/ Auto setup by 1 F for cooling assume 3 ton AC, 10 SEER	1,504	442	Base modeled home w/ 10 SEER AC and no setup temp	1,565	449	10	$0	$0	$30	$0.12	0%	6.8	6.8	38	$0.000	$0.000	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
CEE Energy Squad Service 2017	weighted average Energy Efficient measures by participant	83	973	weighted average Baseline measures by participant	125	973	7	$0	$0	$0	$0.12	0%	0.1	0.1	41	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
NEC Energy Squad Service 2020	Weighted average energy efficient measures by participant	61	1,054	Weighted average baseline measures by participant	102	1,054	20	$0	$0	$0	$0.12	0%	0.1	0.1	43	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
CEE Energy Squad Service 2020	Weighted average energy efficient measures by participant	80	1,184	Weighted average baseline measures by participant	2,806,184	1,006	19	$0	$0	$146,509	$0.12	0%	0.4	0.4	2,823,900	$0.000	$0.000	2,806.1	462.4	$6,560.76	15%	1	1	100%	100%	100%	100%	462	3,082,860	0	146,509
CEE - TV peripherals turned off with Timer	TV peripherals turned off with Timer (replacing power strip)	2	4,420	Power used in "standby" mode while equipment is unused	28	4,420	5	$0	$0	$20	$0.12	0%	1.5	1.5	115	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
CEE - Install Second Programmable Thermostat	Second T-state w/ Auto setup by 1 F for cooling assume 3 ton AC, 10 SEER	1,504	442	Base modeled home w/ 10 SEER AC and no setup temp	1,565	449	10	$0	$0	$9	$0.12	0%	2.0	2.0	38	$0.000	$0.000	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
≤ 50 pints/day dehumidifier	ENERGY STAR Dehumidifier - low capacity	389	1,620	Standard efficiency dehumidifier (Current Federal Standard)	519	1,620	12	$0	$224	$25	$0.11	0%	1.1	1.1	211	$0.000	$0.000	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
>50 pints/day dehumidifier	ENERGY STAR Dehumidifier - high capacity	647	1,620	Standard efficiency dehumidifier (Current Federal Standard)	757	1,620	12	$0	$220	$23	$0.11	0%	1.2	1.2	178	$0.000	$0.000	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Home Lighting																																
Average CFL	Average CFL	15	854	Average EISA Standard Halogen A-Style Bulb	48	854	7	$1	$1	$1	$0.11	119%	0.3	-0.1	29	$0.044	$0.006	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average CFL	Average CFL	15	5,649	Average EISA Standard Halogen A-Style Bulb	48	5,649	2	$1	$1	$1	$0.11	119%	0.1	0.0	189	$0.007	$0.004	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average LED Bulb	Average LED Bulb	10	909	Average EISA Standard Halogen A-Style Bulb	48	909	7	$3	$2	$7	$0.11	38%	1.9	1.2	34	$0.080	$0.011	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average LED Bulb	Average LED Bulb	10	5,649	Average EISA Standard Halogen A-Style Bulb	48	5,649	3	$3	$2	$7	$0.11	38%	0.3	0.2	213	$0.013	$0.004	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average Value LED Bulb	Average Value LED Bulb	10	909	Average EISA Standard Halogen A-Style Bulb	43	909	7	$2	$1	$2	$0.11	68%	0.7	0.2	30	$0.049	$0.007	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average Value LED Bulb	Average Value LED Bulb	10	5,649	Average EISA Standard Halogen A-Style Bulb	43	5,649	2	$2	$1	$2	$0.11	68%	0.1	0.0	188	$0.008	$0.005	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average CFL	Average CFL	15	854	Average EISA Standard Halogen A-Style Bulb	48	854	6	$1	$1	$1	$0.11	119%	0.3	-0.1	29	$0.044	$0.007	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average CFL	Average CFL	15	5,649	Average EISA Standard Halogen A-Style Bulb	48	5,649	2	$1	$1	$1	$0.11	119%	0.1	0.0	189	$0.007	$0.004	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average LED Bulb	Average LED Bulb	10	909	Average EISA Standard Halogen A-Style Bulb	48	909	6	$3	$2	$6	$0.11	44%	1.7	0.9	34	$0.080	$0.013	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average LED Bulb	Average LED Bulb	10	5,649	Average EISA Standard Halogen A-Style Bulb	48	5,649	3	$3	$2	$6	$0.11	44%	0.3	0.2	213	$0.013	$0.004	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average Value LED Bulb	Average Value LED Bulb	10	909	Average EISA Standard Halogen A-Style Bulb	43	909	6	$2	$1	$2	$0.11	80%	0.6	0.1	30	$0.049	$0.008	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average Value LED Bulb	Average Value LED Bulb	10	5,649	Average EISA Standard Halogen A-Style Bulb	43	5,649	2	$2	$1	$2	$0.11	80%	0.1	0.0	188	$0.008	$0.005	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
LED Bulb - A-Line	LED Bulb Purchase - A-Line	10	986	Average EISA Standard Halogen A-Style Bulb	45	948	20	$1	$1	$1	$0.11	102%	0.4	0.0	33	$0.043	$0.002	0.0	0.0	$0.00	10%	3,735,833	3,735,833	100%	99%	100%	100%	14,028	134,659,438	5,368,472	5,265,401
LED Bulb - A-Line	LED Bulb Purchase - A-Line	10	5,649	Average EISA Standard Halogen A-Style Bulb	46	5,649	3	$2	$1	$1	$0.11	105%	0.1	0.0	204	$0.007	$0.003	0.0	0.0	$0.00	82%	188,492	188,492	100%	100%	99%	99%	5,979	40,965,794	284,534	270,107
LED Bulb - Specialty	LED Bulb Purchase - Specialty	10	986	Average EISA Standard Halogen A-Style Bulb	59	933	20	$2	$2	$2	$0.11	72%	0.4	0.1	45	$0.034	$0.002	0.0	0.0	$0.00	9%	538,527	538,527	100%	99%	100%	100%	2,500	28,071,127	810,903	1,127,880
LED Bulb - Specialty	LED Bulb Purchase - Specialty	10	5,649	Average EISA Standard Halogen A-Style Bulb	59	5,650	5	$2	$2	$2	$0.11	72%	0.1	0.0	274	$0.005	$0.001	0.0	0.0	$0.00	82%	34,322	34,322	100%	100%	99%	99%	1,459	9,995,647	51,655	71,841
LED Tubes (Linear Lamps)	LED Linear Tube	15	986	Fluorescent Lamp	1,015	18	20	$0	$2	$3	$0.11	0%	6.8	6.8	4	$0.000	$0.000	1.0	0.0	$0.00	0%	1	1	100%	99%	100%	100%	0	4	0	3
LED Tubes (Linear Lamps)	LED Linear Tube	15	5,649	Fluorescent Lamp	26	6,182	9	$2	$10	$12	$0.11	16%	1.4	1.2	79	$0.025	$0.003	0.0	0.0	$0.00	100%	87	87	100%	100%	100%	100%	1	7,351	174	1,076
Whole Home Efficiency																																
EC Fan Motor on new Residential Furnace with AC	ECM Furnace Fan	390	3,556	Non-ECM Fan	579	3,556	18	$125	$236	$212	$0.11	59%	2.9	1.2	672	$0.186	$0.010	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
EC Fan Motor on new Residential Furnace no AC	ECM Furnace Fan	301	2,783	Non-ECM Fan	504	2,783	18	$125	$236	$212	$0.11	59%	3.4	1.4	565	$0.221	$0.012	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
EC Fan Motor on Retrofit Residential Furnace with AC	ECM Furnace Fan	357	2,542	Non-ECM Fan	546	2,893	7	$125	$236	$212	$0.11	59%	2.9	1.2	672	$0.186	$0.027	0.2	0.1	-$14.06	71%	8	8	100%	100%	100%	100%	1	5,869	1,000	1,696
EC Fan Motor on Retrofit Residential Furnace no AC	ECM Furnace Fan	298	2,133	Non-ECM Fan	501	2,133	7	$125	$236	$212	$0.11	59%	4.5	1.8	433	$0.289	$0.041	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Installation of new AC 15 SEER 2.5 tons	Non - Quality Installation of 15 SEER 2.5 tons	2,479	435	Non-Quality Installation of 13 SEER (Baseline and Model) 2.5 tons	2,732	456	15	$200	$1,057	$461	$0.11	43%	25.2	14.3	166	$1.205	$0.080	0.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Installation of new AC 16 SEER 2.5 tons	Non - Quality Installation of 16 SEER 2.5 tons	2,380	425	Non-Quality Installation of 13 SEER (Baseline and Model) 2.5 tons	2,732	456	15	$300	$1,057	$691	$0.11	43%	26.9	15.2	233	$1.286	$0.086	0.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Provide Quality Installation of new AC 13 - 14.5 SEER 2.5 tons	Quality Installation of 13 - 14.5 SEER 2.5 tons	2,318	421	Non-Quality Installation of 2.5 Ton AC 13 - 14.5 SEER 2.5 tons	2,549	442	15	$175	$0	$202	$0.11	87%	12.2	1.6	151	$1.159	$0.077	0.2	0.2	$0.00	90%	2	2	100%	100%	100%	100%	0	330	350	404
Provide Quality Installation of new AC 15 SEER 2.5 tons	Quality Installation of 15 SEER 2.5 tons	2,195	409	Non-Quality Installation of 2.5 Ton AC 15 SEER 2.5 tons	2,479	435	15	$175	$0	$121	$0.11	144%	6.1	-2.7	180	$0.971	$0.065	0.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Provide Quality Installation of new AC 16 SEER 2.5 tons	Quality Installation of 16 SEER 2.5 tons	2,109	399	Non-Quality Installation of 2.5 Ton AC 16 SEER 2.5 tons	2,642	448	15	$475	$0	$680	$0.11	70%	18.1	5.5	341	$1.393	$0.093	0.5	0.5	$0.00	90%	3	3	100%	100%	100%	100%	2	1,117	1,425	2,041
Energy Star Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Clothes Washer	111	295	Standard Clothes Washer	132	295	11	$2	$677	$7	$0.11	33%	9.9	6.6	6	$0.363	$0.033	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Refrigerator Replacement	Top Mounted Freezer w/ Auto Defrost Energy Star refrigerator ??? ft^3	66	5,592	Top Mounted Freezer w/ Auto Defrost Standard refrigerator ??? ft^3	73	5,618	18	$15	$663	$26	$0.11	58%	5.8	2.4	41	$0.366	$0.020	0.0	0.0	$0.00	71%	2	2	100%	100%	100%	100%	0	90	30	52
Attic Insulation in Gas Heated Homes With Cooling - Combo Customer	Home with additional insulation	3,880	490	Home with R20 or less existing insulation	4,580	490	20	$302	$0	$1,880	$0.11	16%	49.9	41.9	343	$0.881	$0.044	0.7	0.8	$0.00	100%	4	4	100%	100%	100%	100%	3	1,410	1,138	7,089
Wall Insulation in Gas Heated Homes With Cooling - Combo Customer	R-11 insulation	3,682	490	Baseline assumes R-0 in wall cavities as existing level	6,708	490	20	$254	$0	$1,708	$0.11	15%	10.5	8.9	1,482	$0.171	$0.009	3.0	3.3	$0.00	100%	4	4	100%	100%	100%	100%	13	6,100	957	6,441
Air Sealing T2 - 25% - Gas Heated Homes With Cooling - Combo Customer	Home with Tier 2 Air Sealing - Assumes 27% reduction	7,787	490	Existing Home Without Air Sealing	8,555	490	10	$147	$0	$749	$0.11	20%	18.1	14.5	377	$0.391	$0.039	0.8	0.8	$0.00	100%	2	2	100%	100%	100%	100%	2	938	336	1,707
Air Sealing T3 - 30% - Gas Heated Homes With Cooling - Combo Customer	Home with Tier 3 Air Sealing - assumes 42% reduction	7,524	490	Existing Home Without Air Sealing	9,989	490	10	$193	$0	$764	$0.11	25%	5.8	4.3	1,208	$0.160	$0.016	2.5	2.7	$0.00	100%	1	1	100%	100%	100%	100%	3	1,583	231	917
Programmable Thermostat (Install and Program)	New T-stat w/ Auto setup by 1.2 F for cooling assume 3 ton AC, 10 SEER	3,008	442	Base modeled home w/ 10 SEER AC and no setup temp	3,516	467	10	$10	$0	$31	$0.11	31%	0.9	0.6	313	$0.031	$0.003	0.5	0.4	$0.00	77%	1	1	100%	100%	100%	100%	0	328	9	30
Energy Efficient Showerhead in home with electric DHW (Direct Install)	1.5 GPM Showerhead	87	8,760	2.5 GPM Showerhead	146	8,760	10	$4	$0	$4	$0.11	100%	0.1	0.0	510	$0.007	$0.001	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Energy Efficient Bathroom Aerator in home with electric DHW (Direct Install)	1.5 GPM Kitchen Faucet Aerator	18	8,760	2.2 GPM Kitchen Faucet Aerator	26	8,760	10	$1	$0	$1	$0.11	100%	0.1	0.0	74	$0.014	$0.001	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Energy Efficient Kitchen Aerator in home with electric DHW (Direct Install)	1.0 GPM Bathroom Faucet Aerator	6	8,760	2.2 GPM Bathroom Faucet Aerator	13	8,760	10	$2	$0	$2	$0.11	100%	0.3	0.0	64	$0.031	$0.003	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Energy Efficient Bathroom Aerator in home with electric DHW (Direct Install)	0.5 GPM Bathroom Faucet Aerator	3	8,760	2.2 GPM Bathroom Faucet Aerator	13	8,760	10	$1	$0	$1	$0.11	100%	0.1	0.0	91	$0.011	$0.001	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Water heater blankets (direct install)	Add commercial insulation wrap R8 around Water Heater Tank	40	8,760	No External Insulation on water heater	69	8,760	7	$23	$0	$23	$0.11	100%	0.8	0.0	254	$0.092	$0.014	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average Value LED Bulb - 2017 (Direct Install)	Average Value LED Bulb	10	909	Average EISA Standard Halogen A-Style Bulb	43	909	7	$3	$0	$3	$0.11	100%	0.8	0.0	30	$0.091	$0.013	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average Value LED Bulb - 2018 (Direct Install)	Average Value LED Bulb	10	909	Average EISA Standard Halogen A-Style Bulb	43	909	6	$3	$0	$3	$0.11	100%	0.8	0.0	30	$0.091	$0.015	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Average Value LED Bulb - 2019 (Direct Install)	Average Value LED Bulb	10	909	Average EISA Standard Halogen A-Style Bulb	1,803	909	5	$0	$0	$118	$0.11	0%	0.7	0.7	1,630	$0.000	$0.000	1.8	0.2	$0.00	8%	1	1	100%	100%	100%	100%	1	1,779	0	118
Mini-Split Heat Pump	MSHP size 1.2 tons, 21.27 SEER, 10.50 HSPF	1,088	1,216	MSHP size 1.2 tons, 14 SEER, 8.2 HSPF	1,829	1,000	18	$200	$3,440	$563	$0.11	36%	10.1	6.5	507	$0.394	$0.022	0.7	0.7	$0.00	90%	1	1	100%	100%	100%	100%	1	553	200	563
≤ 50 pints/day dehumidifier	ENERGY STAR Dehumidifier - low capacity	389	1,620	Standard efficiency dehumidifier (Current Federal Standard)	519	1,620	12	$25	$224	$50	$0.11	50%	2.2	1.1	211	$0.119	$0.010	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
>50 pints/day dehumidifier	ENERGY STAR Dehumidifier - high capacity	647	1,620	Standard efficiency dehumidifier (Current Federal Standard)	757	1,620	12	$25	$220	$48	$0.11	52%	2.5	1.2	178	$0.140	$0.012	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & Electric Resistance Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,021	385	Minimum Efficiency Electric Water Heater	4,593	909	10	$450	$959	$611	$0.11	74%	2.1	0.6	2,627	$0.171	$0.017	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & ASHP Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,029	402	Minimum Efficiency Electric Water Heater	4,593	1,107	10	$450	$959	$611	$0.11	74%	1.6	0.4	3,463	$0.130	$0.013	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & Natural Gas Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,029	402	Minimum Efficiency Electric Water Heater	4,593	1,265	10	$450	$959	$611	$0.11	74%	1.3	0.3	4,187	$0.107	$0.011	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	3	0	2,250	3,057
Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & Electric Resistance Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,018	379	Minimum Efficiency Electric Water Heater	4,500	914	10	$450	$959	$611	$0.11	74%	2.1	0.8	2,588	$0.174	$0.017	0.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & ASHP Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,021	386	Minimum Efficiency Electric Water Heater	4,500	1,116	10	$450	$959	$611	$0.11	74%	1.8	0.4	3,471	$0.130	$0.013	0.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & Natural Gas Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,018	380	Minimum Efficiency Electric Water Heater	4,500	1,277	10	$450	$959	$611	$0.11	74%	1.3	0.3	4,221	$0.107	$0.011	0.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & Electric Resistance Heat (30-50 Gallon) + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater	4,021	385	Minimum Efficiency Electric Water Heater	4,593	909	10	$550	$959	$611	$0.11	90%	2.1	0.2	2,627	$0.209	$0.021	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & ASHP Heat (30-50 Gallon) + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater	4,029	402	Minimum Efficiency Electric Water Heater	4,593	1,107	10	$550	$959	$611	$0.11	90%	1.6	0.2	3,463	$0.159	$0.016	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & Natural Gas Heat (30-50 Gallon) + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater	4,029	402	Minimum Efficiency Electric Water Heater	4,593	1,265	10	$550	$959	$611	$0.11	90%	1.3	0.1	4,187	$0.131	$0.013	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	3	0	2,750	3,057
Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & Electric Resistance Heat (30-50 Gallon) + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater	4,018	379	Minimum Efficiency Electric Water Heater	4,500	914	10	$550	$959	$611	$0.11	90%	2.1	0.2	2,588	$0.213	$0.021	0.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & ASHP Heat (30-50 Gallon) + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater	4,021	386	Minimum Efficiency Electric Water Heater	4,500	1,116	10	$550	$959	$611	$0.11	90%	1.6	0.2	3,471	$0.158	$0.016	0.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & Natural Gas Heat (30-50 Gallon) + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater	4,018	380	Minimum Efficiency Electric Water Heater	4,500	1,277	10	$550	$959	$611	$0.11	90%	1.3	0.1	4,221	$0.130	$0.013	0.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0

Insulation Rebate																															
Electric Heat Homes Without Cooling	Home with additional insulation	5,936	1,261	Home with R20 or less existing Insulation	8,000	1,261	20	$297	$0	$2,077	$0.11	14%	7.3	6.2	2,602	$0.114	$0.006	2.1	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Electric Heat Homes With Cooling	Home with additional insulation	6,687	1,751	Home with R20 or less existing Insulation	7,341	1,644	20	$194	$0	$1,216	$0.11	16%	30.8	25.9	359	$0.539	$0.027	0.7	0.7	$0.00	95%	188	188	100%	100%	100.0%	100.0%	129	73,878	36,498	229,084
Gas Heat Homes With Cooling, Combo Customer	Home with additional insulation	3,880	490	Home with R20 or less existing Insulation	4,000	490	20	$292	$0	$1,966	$0.11	15%	304.8	259.6	59	$4.971	$0.249	0.1	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Electric Heat Homes Without Cooling	R-11 insulation	392	1,261	Baseline assumes R-0 in wall cavities as existing level	8,000	1,261	20	$276	$0	$3,935	$0.11	7%	3.7	3.5	9,594	$0.029	$0.001	7.6	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Electric Heat Homes With Cooling	R-11 insulation	-665	1,751	Baseline assumes R-0 in wall cavities as existing level	2,402	219	20	$238	$0	$2,209	$0.11	11%	11.9	10.6	1,690	$0.141	$0.007	3.1	3.2	$0.00	96%	15	15	100%	100%	100.0%	100.0%	48	27,529	3,545	32,964
Gas Heat Homes With Cooling, Combo Customer	R-11 insulation	3,682	490	Baseline assumes R-0 in wall cavities as existing level	4,000	490	20	$253	$0	$1,865	$0.11	14%	108.8	94.0	156	$1.623	$0.081	0.3	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Electric Heat Homes Without Cooling	Home with Tier 2 Air Sealing	3,481	1,261	Existing Home Without Air Sealing	8,000	1,261	10	$131	$0	$2,338	$0.11	6%	3.7	3.5	5,699	$0.023	$0.002	4.5	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Electric Heat Homes With Cooling	Home with Tier 2 Air Sealing	4,980	1,751	Existing Home Without Air Sealing	6,116	1,541	10	$97	$0	$545	$0.11	18%	7.0	5.8	705	$0.138	$0.014	1.1	1.1	$0.00	90%	197	197	100%	100%	100.0%	100.0%	220	151,869	19,182	107,534
Gas Heat Homes With Cooling, Combo Customer	Home with Tier 2 Air Sealing	3,781	490	Existing Home Without Air Sealing	4,000	490	10	$143	$0	$874	$0.11	16%	74.1	62.0	107	$1.330	$0.133	0.2	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Gas Heat Homes with Cooling, Electric-Only Customer	Home with additional insulation	3,880	490	Home with R20 or less existing Insulation	4,000	490	20	$40	$0	$1,966	$0.11	2%	304.8	298.6	59	$0.682	$0.034	0.1	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Gas Heat Homes with Cooling, Electric-Only Customer	R-11 insulation	3,682	490	Baseline assumes R-0 in wall cavities as existing level	4,000	490	20	$35	$0	$1,865	$0.11	2%	108.8	106.7	156	$0.224	$0.011	0.3	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Gas Heat Homes with Cooling, Electric-Only Customer	Home with Tier 2 Air Sealing	3,781	490	Existing Home Without Air Sealing	4,000	490	10	$25	$0	$874	$0.11	3%	74.1	72.0	107	$0.233	$0.023	0.2	0.0	$0.00	0%	0	0	100%	100%	100.0%	100.0%	0	0	0	0
Refrigerator Recycling																															
Remove refrigerator from service and recycle	removal of refrigerator	0	0	existing secondary unit - age mostly >10 years	124	5,588	9	$49	$0	$0	$0.12	0%	0.0	0.0	695	$0.070	$0.008	0.1	0.1	$0.00	64%	4,454	4,454	100%	100%	100%	100%	387	3,379,386	217,240	0
Remove freezer from service and recycle	removal of freezer	0	0	existing freezer unit - age mostly >10 years	131	5,585	6	$49	$0	$0	$0.12	0%	0.0	0.0	733	$0.066	$0.011	0.1	0.1	$0.00	64%	969	969	100%	100%	100%	100%	89	775,479	47,010	0
Room AC Recycling	removal of room ac	0	0	Existing 10,000 BTUh Room Air Conditioner	15,620	484	3	$0	$0	$0	$0.12	0%	0.0	0.0	7,567	$0.000	$0.000	15.6	15.4	$0.00	90%	1	1	100%	100%	100%	100%	15	8,261	0	0
Dehumidifier Recycling	removal of dehumidifier	0	0	Existing dehumidifier	46,992	2,163	5	$0	$0	$0	$0.12	0%	0.0	0.0	101,640	$0.000	$0.000	47.0	51.5	$0.00	100%	1	1	100%	100%	100%	100%	52	110,961	0	0
Residential Cooling																															
Installation of new AC 15 SEER 2.5 tons	Non - Quality Installation of 15 SEER 2.5 tons	2,439	412	Non-Quality Installation of 13 SEER (Baseline and Model) 2.5 tons	3,014	456	15	$350	$1,057	$573	$0.11	61%	14.1	5.5	370	$0.946	$0.063	0.6	0.6	$0.00	90%	2,815	2,815	100%	100%	99.2%	99.4%	1,584	1,130,375	985,600	1,612,149
Installation of new AC 16 SEER 2.5 tons	Non - Quality Installation of 16 SEER 2.5 tons	2,344	402	Non-Quality Installation of 13 SEER (Baseline and Model) 2.5 tons	2,980	453	15	$450	$1,057	$767	$0.11	59%	17.1	7.1	409	$1.100	$0.073	0.6	0.6	$0.00	90%	6,110	6,110	100%	100%	99.2%	99.4%	3,804	2,711,534	2,749,500	4,688,938
Provide Quality Installation of new AC 13 - 14.5 SEER 2.5 tons	Quality Installation of 13 - 14.5 SEER 2.5 tons	2,576	386	Non-Quality Installation of 13 - 14.5 SEER 2.5 tons	2,869	411	15	$156	$0	$182	$0.11	86%	9.0	1.3	185	$0.843	$0.056	0.3	0.3	$0.00	90%	9,703	9,703	100%	100%	99.2%	99.4%	2,785	1,944,989	1,510,800	1,764,350
Provide Quality Installation of new AC 15 SEER 2.5 tons	Quality Installation of 15 SEER 2.5 tons	2,439	375	Non-Quality Installation of 15 SEER 2.5 tons	2,439	412	15	$150	$0	$117	$0.11	128%	11.8	-3.3	90	$1.659	$0.111	0.0	0.0	$0.00	0%	0	0	100%	100%	99.2%	99.4%	0	0	0	0
Provide Quality Installation of new AC 16 SEER 2.5 tons	Quality Installation of 16 SEER 2.5 tons	2,344	366	Non-Quality Installation of 16 SEER 2.5 tons	2,344	402	15	$150	$0	$117	$0.11	128%	12.5	-3.5	85	$1.769	$0.118	0.0	0.0	$0.00	0%	0	0	100%	100%	99.2%	99.4%	0	0	0	0
Installation of new AC 15 SEER 2.5 tons	Non - Quality Installation of 15 SEER 2.5 tons	2,479	435	Non-Quality Installation of 13 SEER (Baseline and Model) 2.5 tons	2,779	499	15	$350	$1,057	$604	$0.11	58%	17.8	7.5	308	$1.135	$0.076	0.3	0.3	$0.00	90%	8	8	100%	100%	99.2%	99.4%	2	2,677	2,800	4,836
Installation of new AC 16 SEER 2.5 tons	Non - Quality Installation of 16 SEER 2.5 tons	2,380	425	Non-Quality Installation of 13 SEER (Baseline and Model) 2.5 tons	2,788	486	15	$450	$1,057	$842	$0.11	53%	22.3	10.4	343	$1.313	$0.088	0.4	0.4	$0.00	90%	20	20	100%	100%	99.2%	99.4%	8	7,439	9,000	16,833
Provide Quality Installation of new AC 13 - 14.5 SEER 2.5 tons	Quality Installation of 13 - 14.5 SEER 2.5 tons	2,318	421	Non-Quality Installation of 2.5 Ton AC 13 - 14.5 SEER 2.5 tons	2,347	455	15	$150	$0	$117	$0.11	128%	11.5	-3.3	92	$1.622	$0.108	0.0	0.0	$0.00	0%	35	35	100%	100%	99.2%	99.4%	0	3,512	5,250	4,093
Provide Quality Installation of new AC 15 SEER 2.5 tons	Quality Installation of 15 SEER 2.5 tons	2,195	409	Non-Quality Installation of 2.5 Ton AC 15 SEER 2.5 tons	2,479	435	15	$150	$0	$121	$0.11	124%	6.1	-1.4	180	$0.832	$0.055	0.3	0.0	$0.00	0%	0	0	100%	100%	99.2%	99.4%	0	0	0	0
Provide Quality Installation of new AC 16 SEER 2.5 tons	Quality Installation of 16 SEER 2.5 tons	2,109	399	Non-Quality Installation of 2.5 Ton AC 16 SEER 2.5 tons	2,380	425	15	$150	$0	$98	$0.11	152%	5.3	-2.8	169	$0.888	$0.059	0.3	0.0	$0.00	0%	0	0	100%	100%	99.2%	99.4%	0	0	0	0
Installation of new ASHP 15 SEER ASHP 2.5 Tons	Non - Quality Installation of 15 SEER ASHP 2.5 Tons	2,439	412	Non-Quality Installation of 14 SEER (Baseline) ASHP 2.5 Tons	2,860	449	15	$350	$1,944	$502	$0.11	70%	16.4	4.9	279	$1.255	$0.084	0.4	0.4	$0.00	90%	27	27	100%	100%	99.2%	99.4%	11	8,169	9,450	13,544
Installation of new ASHP 16 SEER ASHP 2.5 Tons	Non - Quality Installation of 16 SEER ASHP 2.5 Tons	2,344	402	Non-Quality Installation of 14 SEER (Baseline) ASHP 2.5 Tons	2,882	452	15	$450	$1,944	$1,069	$0.11	42%	26.9	15.6	362	$1.244	$0.083	0.5	0.5	$0.00	90%	95	95	100%	100%	99.2%	99.4%	50	37,300	42,750	101,568
Provide Quality Installation of new ASHP 14 SEER (Baseline) ASHP 2.5 Tons	Quality Installation of 14 SEER (Baseline) ASHP 2.5 Tons	2,551	384	Non-Quality Installation of 14 SEER (Baseline) ASHP 2.5 Tons	2,859	408	15	$150	$0	$105	$0.11	142%	5.1	-2.2	188	$0.798	$0.053	0.3	0.3	$0.00	90%	109	109	100%	100%	99.2%	99.4%	33	22,236	16,350	11,479
Provide Quality Installation of new ASHP 15 SEER ASHP 2.5 Tons	Quality Installation of 15 SEER ASHP 2.5 Tons	2,439	375	Non-Quality Installation of 15 SEER ASHP 2.5 Tons	2,439	412	15	$150	$0	$117	$0.11	128%	11.8	-3.3	90	$1.659	$0.111	0.0	0.0	$0.00	0%	0	0	100%	100%	99.2%	99.4%	0	0	0	0
Provide Quality Installation of new ASHP 16 SEER ASHP 2.5 Tons	Quality Installation of 16 SEER ASHP 2.5 Tons	2,344	366	Non-Quality Installation of 15 SEER ASHP 2.5 Tons	2,344	402	15	$150	$0	$117	$0.11	128%	12.5	-3.5	85	$1.769	$0.118	0.0	0.0	$0.00	0%	0	0	100%	100%	99.2%	99.4%	0	0	0	0
Installation of new ASHP 15 SEER ASHP 2.5 Tons	Non - Quality Installation of ASHP 15 SEER ASHP 2.5 Tons	2,479	435	Non-Quality Installation of ASHP 14 SEER (Baseline) ASHP 2.5 Tons	3,479	405	15	$350	$1,944	$665	$0.11	53%	18.2	8.6	332	$1.054	$0.070	1.0	0.2	$0.00	16%	1	1	100%	100%	99.2%	99.4%	0	360	350	665
Installation of new ASHP 16 SEER ASHP 2.5 Tons	Non - Quality Installation of ASHP 16 SEER ASHP 2.5 Tons	2,380	425	Non-Quality Installation of ASHP 14 SEER (Baseline) ASHP 2.5 Tons	2,651	458	15	$450	$1,944	$903	$0.11	50%	40.5	20.3	203	$2.222	$0.148	0.3	0.3	$0.00	90%	2	2	100%	100%	99.2%	99.4%	1	439	900	1,806
Provide Quality Installation of new ASHP 14 SEER (Baseline) ASHP 2.5 Tons	Quality Installation of 2.5 Ton ASHP 14 SEER (Baseline) ASHP 2.5 Tons	2,296	419	Non-Quality Installation of 2.5 Ton ASHP 14 SEER (Baseline) ASHP 2.5 Tons	2,546	418	15	$150	$0	$117	$0.11	128%	10.5	-3.0	102	$1.478	$0.099	0.3	0.0	$0.00	0%	4	4	100%	100%	99.2%	99.4%	0	441	600	468
Provide Quality Installation of new ASHP 15 SEER ASHP 2.5 Tons	Quality Installation of 2.5 Ton ASHP 15 SEER ASHP 2.5 Tons	2,195	409	Non-Quality Installation of 2.5 Ton ASHP 15 SEER ASHP 2.5 Tons	2,479	435	15	$150	$0	$75	$0.11	200%	3.8	-3.8	180	$0.832	$0.055	0.3	0.0	$0.00	0%	0	0	100%	100%	99.2%	99.4%	0	0	0	0
Provide Quality Installation of new ASHP 16 SEER ASHP 2.5 Tons	Quality Installation of 2.5 Ton ASHP 16 SEER ASHP 2.5 Tons	2,109	399	Non-Quality Installation of 2.5 Ton ASHP 16 SEER ASHP 2.5 Tons	2,380	425	15	$150	$0	$75	$0.11	200%	4.0	-4.0	169	$0.888	$0.059	0.3	0.0	$0.00	0%	0	0	100%	100%	99.2%	99.4%	0	0	0	0
Installation of High Efficiency GSHP equipment New/Existing Home	Quality Installation of 2 Ton, closed loop, 14.1 EER GSHP	1,702	414	Non-Quality Installation of 2 Ton 13 SEER	3,990	420	20	$663	$846	$2,784	$0.11	24%	26.0	19.8	972	$0.682	$0.034	2.3	2.3	$0.00	90%	45	45	100%	100%	99.2%	99.4%	101	47,465	29,850	125,265
Mini-Split Heat Pump	MSHP size 1.1 tons, 21.87 SEER, 13.47 EER, 10.50 HSPF	1,025	1,121	MSHP size 1.1 tons, 14 SEER, 8.57 EER, 8.2 HSPF	1,866	941	18	$200	$3,465	$720	$0.11	28%	10.8	7.8	606	$0.330	$0.018	0.8	0.8	$0.00	90%	752	752	100%	100%	99.2%	99.4%	619	494,783	150,600	541,548
School Education Kits																															
9 Watt LED Bulbs - 2017	High efficiency LED lighting (2 at 9W)	18	909	Incandescent light bulb	86	909	7	$6	$0	$6	$0.11	100%	0.9	0.0	62	$0.103	$0.015	0.1	0.0	$0.00	0%	0	0	100%	55%	100%	100%	0	0	0	0
11 Watt LED Bulbs - 2017	High efficiency LED lighting (2 at 11W)	22	909	Incandescent light bulb	106	909	7	$10	$0	$10	$0.11	100%	1.1	0.0	76	$0.126	$0.018	0.1	0.0	$0.00	0%	0	0	100%	55%	100%	100%	0	0	0	0
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with Unknown DHW heater - 2017	1.5 GPM Showerhead	87	8,760	2.5 GPM Showerhead	146	8,760	10	$3	$0	$3	$0.11	100%	0.1	0.0	510	$0.006	$0.001	0.1	0.0	$0.00	0%	0	0	100%	35%	100%	100%	0	0	0	0
Provide Energy Efficient Kitchen Aerator - 1.5 GPM to replace existing 2.2 gpm aerator in home with Unknown DHW heater - 2017	1.5 GPM Kitchen Faucet Aerator	18	8,760	2.2 GPM Kitchen Faucet Aerator	26	8,760	10	$1	$0	$1	$0.11	100%	0.1	0.0	74	$0.016	$0.002	0.0	0.0	$0.00	0%	0	0	100%	30%	100%	100%	0	0	0	0
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 gpm aerator in home with Unknown DHW heater - 2017	1.0 GPM Bathroom Faucet Aerator	6	8,760	2.2 GPM Bathroom Faucet Aerator	13	8,760	10	$0	$0	$0	$0.11	100%	0.1	0.0	64	$0.008	$0.001	0.0	0.0	$0.00	0%	0	0	100%	25%	100%	100%	0	0	0	0
9 Watt LED Bulbs - 2018	High efficiency LED lighting (2 at 9W)	18	909	Incandescent light bulb	86	909	6	$6	$0	$6	$0.11	100%	0.9	0.0	62	$0.103	$0.017	0.1	0.0	$0.00	0%	0	0	100%	55%	100%	100%	0	0	0	0
11 Watt LED Bulbs - 2018	High efficiency LED lighting (2 at 11W)	22	909	Incandescent light bulb	106	909	6	$10	$0	$10	$0.11	100%	1.1	0.0	76	$0.126	$0.021	0.1	0.0	$0.00	0%	0	0	100%	55%	100%	100%	0	0	0	0
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with Unknown DHW heater - 2018	1.5 GPM Showerhead	87	8,760	2.5 GPM Showerhead	146	8,760	10	$3	$0	$3	$0.11	100%	0.1	0.0	510	$0.007	$0.001	0.1	0.0	$0.00	0%	0	0	100%	35%	100%	100%	0	0	0	0
Provide Energy Efficient Kitchen Aerator - 1.5 GPM to replace existing 2.2 gpm aerator in home with Unknown DHW heater - 2018	1.5 GPM Kitchen Faucet Aerator	18	8,760	2.2 GPM Kitchen Faucet Aerator	26	8,760	10	$1	$0	$1	$0.11	100%	0.2	0.0	74	$0.017	$0.002	0.0	0.0	$0.00	0%	0	0	100%	30%	100%	100%	0	0	0	0
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 gpm aerator in home with Unknown DHW heater - 2018	1.0 GPM Bathroom Faucet Aerator	6	8,760	2.2 GPM Bathroom Faucet Aerator	13	8,760	10	$0	$0	$0	$0.11	100%	0.1	0.0	64	$0.008	$0.001	0.0	0.0	$0.00	0%	0	0	100%	25%	100%	100%	0	0	0	0
Replace incandescent lamps with LEDs	LED: 2 x 9W	18	986	1Federal Maximum Wattage Bulb	86	986	20	$6	$0	$6	$0.12	100%	0.8	0.0	67	$0.095	$0.005	0.1	0.0	$0.00	0%	0	0	100%	92%	100%	100%	0	0	0	0
Replace incandescent lamps with LEDs	LED: 2 x 11 W	22	986	1Federal Maximum Wattage Bulb	106	986	20	$10	$0	$10	$0.12	100%	1.0	0.0	83	$0.116	$0.006	0.1	0.0	$0.00	0%	0	0	100%	92%	100%	100%	0	0	0	0
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with Unknown DHW heater - 2019	1.5 GPM Showerhead	87	8,760	2.5 GPM Showerhead	100	8,760	10	$1	$0	$1	$0.11	100%	0.1	0.0	106	$0.006	$0.001	0.0	0.0	$6.95	64%	17,240	17,240	100%	46.2%	100%	100%	68	923,955	11,571	11,571
Provide Energy Efficient Kitchen Aerator - 1.5 GPM to replace existing 2.2 gpm aerator in home with Unknown DHW heater - 2019	1.5 GPM Kitchen Faucet Aerator	18	8,760	2.2 GPM Kitchen Faucet Aerator	20	8,760	10	$0	$0	$0	$0.11	100%	0.1	0.0	15	$0.016	$0.002	0.0	0.0	$0.87	124%	17,240	17,240	100%	37.2%	100%	100%	15	107,597	4,362	4,362
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 gpm aerator in home with Unknown DHW heater - 2019	1.0 GPM Bathroom Faucet Aerator	6	8,760	2.2 GPM Bathroom Faucet Aerator	8	8,760	10	$0	$0	$0	$0.11	100%	0.1	0.0	13	$0.008	$0.001	0.0	0.0	$0.87	124%	17,240	17,240	100%	40.0%	100%	100%	14	100,196	1,738	1,738
9 Watt LED Bulbs - 2020 Electric Only kit	LED: 2 x 9W	18	986	1Federal Maximum Wattage Bulb	86	925	20	$6	$0	$6	$0.12	100%	0.9	0.0	62	$0.103	$0.005	0.1	0.0	$0.00	8%	29,909	29,909	100%	93.0%	100%	100%	130	1,876,990	95,700	95,700
11 Watt LED Bulbs - 2020 Electric Only kit	LED: 2 x 11 W	22	986	1Federal Maximum Wattage Bulb	106	925	20	$10	$0	$10	$0.12	100%	1.1	0.0	76	$0.126	$0.006	0.1	0.0	$0.00	8%	29,909	29,909	100%	92.6%	100%	100%	160	2,308,665	144,300	144,300

Water Heater Rebate																																
Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & Electric Resistance Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,021	385	Minimum Efficiency Electric Water Heater	4,593	909	10	$400	$959	$611	$0.11	65%	2.1	0.7	2,627	$0.152	$0.015	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	1	0	800	1,223
Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & ASHP Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,029	402	Minimum Efficiency Electric Water Heater	4,593	1,107	10	$400	$959	$611	$0.11	65%	1.8	0.8	3,463	$0.116	$0.012	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	1	0	400	611
Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & Natural Gas Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,029	402	Minimum Efficiency Electric Water Heater	4,593	1,265	10	$400	$959	$611	$0.11	65%	1.3	0.5	4,187	$0.096	$0.010	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	17	0	10,800	16,509
Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & Electric Resistance Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,018	379	Minimum Efficiency Electric Water Heater	4,500	914	10	$400	$959	$611	$0.11	65%	2.1	0.7	2,588	$0.155	$0.015	0.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	1	0	400	611
Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & ASHP Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,021	386	Minimum Efficiency Electric Water Heater	4,500	1,116	10	$400	$959	$611	$0.11	65%	1.6	0.6	3,471	$0.115	$0.012	0.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	1	0	400	611
Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & Natural Gas Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,018	380	Minimum Efficiency Electric Water Heater	4,570	1,139	10	$400	$959	$611	$0.11	65%	1.5	0.5	3,679	$0.109	$0.011	0.6	0.6	-$13.97	100%	42	42	100%	100%	100%	100%	1	168,691	400	611
Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & Electric Resistance Heat (30-50 Gallon) + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater	4,021	385	Minimum Efficiency Electric Water Heater	4,593	909	10	$500	$959	$611	$0.11	82%	2.1	0.4	2,627	$0.190	$0.019	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	1	0	1,000	1,223
Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & ASHP Heat (30-50 Gallon) + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater	4,029	402	Minimum Efficiency Electric Water Heater	4,593	1,107	10	$500	$959	$611	$0.11	82%	1.8	0.3	3,463	$0.144	$0.014	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	1	0	500	611
Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & Natural Gas Heat (30-50 Gallon) + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater	4,029	402	Minimum Efficiency Electric Water Heater	4,593	1,265	10	$500	$959	$611	$0.11	82%	1.3	0.2	4,187	$0.119	$0.012	0.6	0.0	$0.00	0%	0	0	100%	100%	100%	100%	17	0	13,500	16,509
Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & Electric Resistance Heat (30-50 Gallon) + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater	4,018	379	Minimum Efficiency Electric Water Heater	4,500	914	10	$500	$959	$611	$0.11	82%	2.1	0.4	2,588	$0.193	$0.019	0.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	1	0	500	611
Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & ASHP Heat (30-50 Gallon) + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater	4,021	386	Minimum Efficiency Electric Water Heater	4,500	1,116	10	$500	$959	$611	$0.11	82%	1.6	0.3	3,471	$0.144	$0.014	0.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	1	0	500	611
Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & Natural Gas Heat (30-50 Gallon) + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater	4,018	380	Minimum Efficiency Electric Water Heater	4,556	1,171	10	$500	$959	$611	$0.11	82%	1.5	0.3	3,808	$0.131	$0.013	0.5	0.6	-$21.72	100%	9	9	100%	100%	100%	100%	1	37,419	500	611
Residential Demand Response																																
Residential Smart Thermostat	Utility Load Control for control period with Tier II or III thermostat	0	1	Existing standard manual or Non Utilized Tier I Thermostat	2,402	1	10	$125	$0	$215	$0.11	58%	1059.4	443.5	2	$69.926	$6.993	2.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Residential Smart Thermostat	Utility Load Control for control period with Tier II or III thermostat	0	1	Existing standard manual or Non Utilized Tier I Thermostat	2,402	1	10	$225	$0	$225	$0.11	100%	1108.7	0.0	2	$125.866	$12.587	2.4	0.0	$0.00	0%	0	0	100%	100%	100%	100%	7,775	0	1,406,250	1,406,250
Residential Smart Thermostat	Utility Load Control for control period with Tier II or III thermostat	0	1	Existing standard manual or Non Utilized Tier I Thermostat	436	442	10	$50	$0	$109	$0.11	46%	5.0	2.7	193	$0.259	$0.026	0.4	0.4	$0.00	76%	19	19	100%	100%	100%	100%	4,665	4,066	281,250	0
MN - Residential AC Switch	Utility Load Control for control period with smart switch	0	0	No control, no switch	59,884,262	1	15	$0	$0	$0	$0.11	0%	0.0	0.0	49,862	$0.000	$0.000	59,884.3	18,670.9	$0.00	28%	1	1	100%	100%	100%	100%	7,493	54,434	0	0
MN - Residential WH Switch	Utility Load Control for control period with smart switch	0	0	No control, no switch	40,500	1	15	$0	$0	$0	$0.11	0%	0.0	0.0	27	$0.000	$0.000	40.5	2.0	$0.00	4%	1	1	100%	100%	100%	100%	5	29	0	0
Direct Install Smart Thermostat EE - AC & Gas Heating - Electric only & Combo	Average Single Family House with EnergyStar Smart Thermostat	2,707	442	Average Single Family House with Standard Thermostat	3,008	442	10	$0	$0	$0	$0.10	0%	0.0	0.0	133	$0.000	$0.000	0.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	1,563	0	0	0
Direct Install Smart Thermostat EE - AC & Electric Heating	Average Single Family House with EnergyStar Smart Thermostat	2,707	4,068	Average Single Family House with Standard Thermostat	3,008	4,250	10	$0	$0	$0	$0.11	0%	0.0	0.0	1,770	$0.000	$0.000	0.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	4	0	0	0
BYOT EE - AC & Gas Heating - Electric Only Customer	Average Single Family House with EnergyStar Smart Thermostat	2,707	442	Average Single Family House with Standard Thermostat	3,008	442	10	$50	$0	$215	$0.10	23%	15.7	12.1	133	$0.376	$0.038	0.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	397	0	79,250	340,775
BYOT EE - AC & Gas Heating - Combo Customer	Average Single Family House with EnergyStar Smart Thermostat	2,707	442	Average Single Family House with Standard Thermostat	3,008	442	10	$19	$0	$81	$0.10	23%	5.9	4.5	133	$0.141	$0.014	0.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	439	0	32,900	141,470
BYOT EE - AC & Electric Heating	Average Single Family House with EnergyStar Smart Thermostat	2,707	4,068	Average Single Family House with Standard Thermostat	3,008	4,250	10	$50	$0	$215	$0.11	23%	1.1	0.8	1,770	$0.028	$0.003	0.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	4	0	750	3,225
Demand response capability on new heat pump water heater (CTA 2045)	Heat Pump Water Heater w/ DR Management	0	0	No management of water heater time of use	4,500	1	15	$100	$0	$100	$0.11	100%	263.0	0.0	3	$29.861	$1.991	4.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	74	0	1,500	1,500
Demand response capability on grid enabled electric resistance water heater (CTA 2045)	Electric Resistance Water Heater w/ DR Management	0	0	No management of water heater time of use	4,500	1	15	$100	$0	$100	$0.11	100%	263.0	0.0	3	$29.861	$1.991	4.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	74	0	1,500	1,500
Demand response capability on existing electric resistance water heater equipped with demand response capable retrofit device (DR switch w/ Non-CTA 2045)	Electric Resistance Water Heater w/ DR Management	0	0	No management of water heater time of use	4,500	1	15	$0	$0	$0	$0.11	0%	0.0	0.0	3	$0.000	$0.000	4.5	0.0	$0.00	0%	0	0	100%	100%	100%	100%	49	0	0	0
eco+	Smart thermostat with eco+	2,353	442	Smart thermostat without eco+	2,402	442	10	$0	$0	$0	$0.11	0%	0.0	0.0	22	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	415	0	0	0
Install Energy Star certified smart thermostat - AC ONLY	Average Single Family House with EnergyStar Smart Thermostat	2,707	442	Average Single Family House with Standard Thermostat	3,007	454	10	$50	$50	$78	$0.10	64%	4.5	1.6	169	$0.297	$0.030	0.3	0.3	$0.00	76%	365	365	100%	100%	100%	100%	91	67,148	18,250	28,446
Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	2,707	442	Average Single Family House with Standard Thermostat	3,495	446	10	$49	$19	$198	$0.10	25%	5.3	4.0	364	$0.136	$0.014	0.8	0.7	$0.00	76%	104	104	100%	100%	100%	100%	68	41,281	5,145	20,579
Install Energy Star certified smart thermostat - AC & ELEC nEAT	Average Single Family House with EnergyStar Smart Thermostat	2,707	4,068	Average Single Family House with Standard Thermostat	3,008	4,250	10	$50	$50	$200	$0.11	25%	1.0	0.8	1,770	$0.028	$0.003	0.3	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0

Low Income																																
Home Energy Savings Program																																
Refrigerator Replacements	Top Mounted Freezer w/ Auto Defrost Energy Star refrigerator 22.0 CF	66	5,592	Top Mounted Freezer w/ Auto Defrost Refrigerator 22.0 CF > 15 years old	115	5,594	18	$709	$0	$709	$0.11	100%	23.6	0.0	274	$2.592	$0.144	0.0	0.0	$0.00	64%	277	277	100%	100%	100%	100%	9	82,723	196,395	196,395
Freezer Replacement	Energy Star standard freezer	57	5,592	Existing unit vintage > 15 years old	125	5,591	18	$358	$0	$358	$0.11	100%	8.5	0.0	384	$0.932	$0.052	0.1	0.0	$0.00	64%	171	171	100%	100%	100%	100%	8	71,609	61,160	61,160
Refrigerator Recycling	Removal of second refrigerator	0	0	Existing primary unit - age mostly >15 years	203	5,592	8	$47	$0	$47	$0.11	100%	0.4	0.0	1,133	$0.041	$0.005	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Freezer Recycling	Removal of freezer	0	0	Existing primary unit - age mostly >15 years	206	5,592	6	$43	$0	$43	$0.11	100%	0.3	0.0	1,155	$0.037	$0.006	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Window Air Conditioner Replacement	Energy Star 10,000 Btu/hr 10.8 EER Window AC Unit	885	662	Standard 10,000 Btu/hr 9.8 EER Window AC Unit	917	662	9	$478	$0	$478	$0.11	100%	207.1	0.0	21	$22.773	$2.530	0.0	0.0	$0.00	90%	460	460	100%	100%	100.3%	101.3%	15	10,678	219,985	219,985
Window Air Conditioner Recycling	Removal of Standard 10,000 Btu/hr 9.8 EER Window AC Unit	0	662	Standard 10,000 Btu/hr 9.8 EER Window AC Unit	917	662	5	$63	$0	$63	$0.11	100%	0.9	0.0	607	$0.103	$0.023	0.9	0.0	$0.00	0%	0	0	100%	100%	100.3%	101.6%	0	0	0	0
EC Fan Motor on New Residential Furnace without AC	ECM Furnace Fan	301	2,783	Non-ECM Fan	494	2,994	18	$530	$0	$530	$0.11	100%	7.5	0.0	641	$0.826	$0.046	0.2	0.1	-$14.06	58%	129	129	100%	100%	100.2%	99.7%	16	90,045	68,370	68,370
Attic Insulation - Gas Heated & Electrically Cooled Home	Insulate the attic to R-48 & perform Bypass air sealing	32,685	490	Existing home with average attic area of 823 sq. ft. and R-17 insulation	39,122	490	20	$2,515	$0	$2,515	$0.11	100%	7.2	0.0	3,157	$0.797	$0.040	6.4	7.1	$0.00	100%	1	1	100%	100%	100.3%	101.6%	6	2,942	2,112	2,112
Attic Insulation - Electrically Heated & Non-Cooled Home	Insulate the attic to R-48 & perform Bypass air sealing	31,626	1,261	Existing home with average attic area of 823 sq. ft. and R-17 insulation	32,770	1,261	20	$1,524	$0	$1,524	$0.11	100%	9.6	0.0	1,443	$1.056	$0.053	1.1	0.0	$0.00	0%	0	0	100%	100%	100.3%	101.6%	0	0	0	0
Attic Insulation - Electrically Heated & Cooled Home	Insulate the attic to R-48 & perform Bypass air sealing	31,922	1,751	Existing home with average attic area of 823 sq. ft. and R-17 insulation	32,770	1,751	20	$1,524	$0	$1,524	$0.11	100%	9.3	0.0	1,484	$1.027	$0.051	0.8	0.0	$0.00	0%	0	0	100%	100%	100.3%	101.6%	0	0	0	0
Air Sealing - Gas Heated & Electrically Cooled Home	Perform Bypass air sealing along with Attic Insulation	32,624	490	Existing home with average home size of 1406 sq. ft.	34,427	490	10	$443	$0	$443	$0.11	100%	4.5	0.0	883	$0.501	$0.050	1.8	2.0	$0.00	100%	4	4	100%	100%	100.3%	101.6%	7	3,704	1,673	1,673
Air Sealing - Electrically Heated & Non-Cooled Home	Perform Bypass air sealing along with Attic Insulation	30,480	1,261	Existing home with average home size of 1406 sq. ft.	31,626	1,261	10	$880	$0	$880	$0.11	100%	5.5	0.0	1,445	$0.609	$0.061	1.1	0.0	$0.00	0%	0	0	100%	100%	100.3%	101.6%	0	0	0	0
Air Sealing - Electrically Heated & Cooled Home	Perform Bypass air sealing along with Attic Insulation	31,080	1,751	Existing home with average home size of 1406 sq. ft.	31,922	1,751	10	$880	$0	$880	$0.11	100%	5.4	0.0	1,475	$0.597	$0.060	0.8	0.0	$0.00	0%	0	0	100%	100%	100.3%	101.6%	0	0	0	0
Wall Insulation - Gas Heated and Electrically Cooled Home	Add Insulation to Walls (R-11 added)	32,580	490	Existing Home with empty wall cavity (assume structure insulation value)	38,314	490	20	$2,341	$0	$2,341	$0.11	100%	7.5	0.0	2,811	$0.833	$0.042	5.7	6.3	$0.00	100%	1	1	100%	100%	100.3%	101.6%	5	2,245	1,686	1,686
Wall Insulation - Electrically Heated and Non-Cooled Home	Add Insulation to Walls (R-11 added)	30,208	1,261	Existing Home with empty wall cavity (assume structure insulation value)	32,770	1,261	20	$1,295	$0	$1,295	$0.11	100%	3.6	0.0	3,230	$0.401	$0.020	2.6	0.0	$0.00	0%	0	0	100%	100%	100.3%	101.6%	0	0	0	0
Wall Insulation - Electrically Heated and Cooled Home	Add Insulation to Walls (R-11 added)	30,872	1,751	Existing Home with empty wall cavity (assume structure insulation value)	32,770	1,751	20	$1,295	$0	$1,295	$0.11	100%	3.5	0.0	3,324	$0.390	$0.019	1.9	0.0	$0.00	0%	0	0	100%	100%	100.3%	101.6%	0	0	0	0
LEDs - 2017	Average LED Bulb	10	909	Average EISA Standard Halogen A-Style Bulb	48	909	7	$3	$0	$3	$0.11	100%	0.9	0.0	34	$0.099	$0.014	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
LEDs - 2018	Average LED Bulb	10	909	Average EISA Standard Halogen A-Style Bulb	48	909	6	$3	$0	$3	$0.11	100%	0.9	0.0	34	$0.101	$0.016	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
LED Bulbs	Average LED Bulb	10	986	Removed Lamp	483	985	20	$34	$0	$34		100%			466	$0.074	$0.004	0.5	0.1	$0.00	13%	1,193	1,193	100%	100%	100%	100%	8	607,517	40,981	40,981
LED Bulbs - CFL Baseline	Average LED Bulb	8	986	Removed Lamp	12	986	20	$4	$0	$4		100%			4	$1.003	$0.050	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
LI Home Energy Squad																																
Total Energy Squad Service 2017	Weighted Average of 2017 LI Squad Services	63	965	Existing Home	104	965	7	$0	$0	$0	$0.11	0%	0.0	0.0	39	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Total Energy Squad Service 2018	Weighted Average of 2018 LI Squad Services	63	965	Existing Home	104	965	6	$0	$0	$0	$0.11	0%	0.0	0.0	39	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Total LI Energy Squad Service 2020	Weighted Average of 2019 LI Squad Services	9	1,052	Existing Home	406,756	1,038	20	$0	$0	$21,078	$0.11	0%	0.5	0.5	422,296	$0.000	$0.000	406.7	67.6	$1,858.89	15%	1	1	100%	100%	100%	100%	68	461,022	0	21,078
Multi-Family Energy Savings Program																																
Refrigerator Replacement with new Energy Star Refrigerator	Top Mounted Freezer w/ Auto Defrost Energy Star refrigerator 22.0 CF	66	5,592	Top Mounted Freezer w/ Auto Defrost Refrigerator 22.0 CF > 15 years old	111	5,592	18	$685	$0	$685	$0.11	100%	24.9	0.0	250	$2.737	$0.152	0.0	0.0	$0.00	64%	422	422	100%	100%	100%	100%	13	115,333	289,142	289,142
Freezer Replacement with new Energy Star Freezer	Energy Star standard freezer	57	5,592	Existing unit vintage > 15 years old	150	5,579	18	$308	$0	$308	$0.11	100%	5.4	0.0	520	$0.593	$0.033	0.1	0.1	$0.00	64%	4	4	100%	100%	100%	100%	0	2,269	1,232	1,232
Refrigerator Removal and Recycling	Removal of second refrigerator	0	0	Existing primary unit - age mostly >15 years	203	5,592	8	$33	$0	$33	$0.11	100%	0.3	0.0	1,133	$0.029	$0.004	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Freezer Removal and Recycling	Removal of freezer	0	0	Existing primary unit - age mostly >15 years	206	5,592	6	$33	$0	$33	$0.11	100%	0.3	0.0	1,155	$0.029	$0.005	0.2	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Window Air Conditioner Replacement with Energy Star 10,000 Btu/hr 10.8 EER Window AC Unit	Energy Star 10,000 Btu/hr 10.8 EER Window AC Unit	885	662	Standard 10,000 Btu/hr 9.8 EER Window AC Unit	917	663	9	$578	$0	$578	$0.11	100%	248.6	0.0	22	$26.282	$2.920	0.0	0.0	$0.00	91%	300	300	100%	100%	100%	100%	10	7,207	173,460	173,460
Window Air Conditioner Removal and Recycling of Standard 10,000 Btu/hr 9.8 EER Window AC Unit	Removal of Standard 10,000 Btu/hr 9.8 EER Window AC Unit	0	0	Standard 10,000 Btu/hr 9.8 EER Window AC Unit	917	662	5	$41	$0	$41	$0.11	100%	0.6	0.0	607	$0.067	$0.015	0.9	0.9	$0.00	90%	1	1	100%	100%	100%	100%	1	663	41	41
Value LED Bulbs - 2017	Average LED Bulb	10	909	Average EISA Standard Halogen A-Style Bulb	48	909	7	$5	$0	$5	$0.11	100%	1.4	0.0	34	$0.151	$0.021	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
LED Bulbs	Average LED Bulb	10	986	Removed Lamp	169	986	20	$17	$0	$17	$0.12	100%	0.9	0.0	157	$0.111	$0.006	0.2	0.0	$0.00	13%	374	374	100%	100%	100%	100%	9	64,023	6,537	6,537
LED Bulbs - CFL Baseline	CFL	8	986	Removed Lamp	12	986	20	$5	$0	$5	$0.12	100%	11.3	0.0	4	$1.328	$0.066	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Research, Evaluation & Pilots																																
Energy Star Retail Products																																
Freezers B	ENERGY STAR ®	50	5,592	Industry Standard	56	5,592	11	$15	$0	$0	$0.11	0%	0.0	0.0	31	$0.480	$0.044	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Freezers A	ENERGY STAR v5 +5%	48	5,592	Industry Standard	56	5,592	11	$20	$0	$0	$0.11	0%	0.0	0.0	45	$0.441	$0.040	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Room Air Conditioners	ENERGY STAR ®	848	662	Industry Standard	966	662	9	$10	$0	$114	$0.10	9%	14.2	13.0	78	$0.128	$0.014	0.1	0.1	$0.00	90%	6,139	6,139	100%	100%	100%	100%	0	524,853	0	0
Refrigerators A	ENERGY STAR Most Efficient 2019	83	5,592	Industry Standard	96	5,592	14	$15	$0	$20	$0.11	75%	2.4	0.6	75	$0.200	$0.014	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Clothes Washer A	ENERGY STAR Most Efficient 2019	1,199	296	Industry Standard	1,903	295	11	$20	$0	$50	$0.11	40%	2.2	1.3	208	$0.096	$0.009	0.7	0.0	$0.00	3%	21,909	21,909	100%	100%	100%	100%	0	4,972,449	0	0
Electric Clothes Dryers A	ENERGY STAR Most Efficient 2019	1,965	283	Industry Standard	3,032	283	12	$40	$0	$206	$0.11	19%	6.2	5.0	302	$0.132	$0.011	1.1	0.0	$0.00	2%	127	127	100%	100%	100%	100%	0	41,864	0	0
Gas Clothes Dryers A	ENERGY STAR ®	121	283	Industry Standard	149	283	12	$5	$0	$26	$0.11	19%	30.2	24.8	8	$0.614	$0.051	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Sound Bars A	ENERGY STAR ® + 50%	3	8,760	Industry Standard	10	8,760	7	$15	$0	$0	$0.11	0%	0.0	0.0	66	$0.227	$0.032	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Air Cleaners A	ENERGY STAR ®	54	5,840	Industry Standard	91	5,840	9	$20	$0	$56	$0.11	36%	2.4	1.5	214	$0.094	$0.010	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Freezers B	ENERGY STAR ®	50	5,592	Industry Standard	59	5,478	11	$15	$0	$10	$0.11	148%	2.2	-1.1	42	$0.358	$0.033	0.0	0.0	$0.00	55%	3,790	3,790	100%	100%	100%	100%	13	173,403	59,985	0
Freezers A	ENERGY STAR v5 +5%	48	5,592	Industry Standard	76	5,302	11	$20	$0	$10	$0.11	198%	0.7	-0.7	136	$0.147	$0.013	0.0	0.0	$0.00	55%	310	310	100%	100%	100%	100%	0	46,112	800	0
Room Air Conditioners	ENERGY STAR ®	848	662	Industry Standard	922	662	9	$10	$0	$50	$0.10	20%	10.0	8.0	49	$0.205	$0.023	0.1	0.0	$0.00	0%	0	0	100%	100%	100%	100%	986	0	135,690	678,450
Refrigerators A	ENERGY STAR Most Efficient 2019	83	5,592	Industry Standard	91	5,592	14	$15	$0	$50	$0.11	30%	9.8	6.9	47	$0.322	$0.023	0.0	0.0	$0.00	64%	14,898	14,898	100%	100%	100%	100%	122	756,769	194,760	259,680
Clothes Washer A	ENERGY STAR Most Efficient 2019	1,199	295	Industry Standard	2,098	295	11	$20	$0	$120	$0.11	17%	4.1	3.4	265	$0.075	$0.007	0.9	0.0	$0.00	0%	0	0	100%	100%	100%	100%	223	0	150,920	905,520
Electric Clothes Dryers A	ENERGY STAR Most Efficient 2019	1,965	283	Industry Standard	2,717	283	12	$40	$0	$75	$0.11	53%	3.2	1.5	213	$0.188	$0.016	0.8	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	720	1,350
Energy Information Systems																																
Energy Information System	New Energy Information System	0	0	No EIS	0	0	5	$9,720	$0	$32,400	$0.08	30%			0	$0.000	$0.000	0.0	0.0	$0.00	0%	0	0	100%	100%	100%	100%	0	0	0	0
Behavioral and Operational Measures	Efficient behavior/operations	853,920	8,760	Less efficient behavior/operations	967,922	8,206	1	$6,497	$0	$0	$0.06	0%	0.0	0.0	462,399	$0.014	$0.014	114.0	19.1	$0.00	16%	7	7	100%	100%	100%	100%	133	3,465,516	45,481	0
Behavioral and Operational Measures Adjustment	Efficient behavior/operations	-683,136	8,760	Less efficient behavior/operations	-1,215,145	6,701	0	$0	$0	$0	$0.06	0%	0.0	0.0	-2,157,861	$0.000	#DIV/0!	-532.0	-88.9	$0.00	16%	1	1	100%	100%	100%	100%	-89	-2,310,344	0	0
Retrocommissioning Measures	Optimized Building Systems	1,293,826	5,900	Non-optimized Building Systems	1,293,890	5,900	7	$12	$0	$63	$0.06	20%	4.0	3.2	267	$0.046	$0.007	0.1	0.0	-$0.46	49%	6,701	6,701	100%	100%	100%	100%	223	1,912,544	82,824	423,276

Natural Gas Measure Description	High Efficiency Product Description / Rating	Efficient Product Consumption	Baseline Product Description / Rating	Baseline Product Consumption	Life of Product (years)	Rebate Amount	Average Baseline Product Cost	Incremental Cost of Efficient Product	Assumed Energy Cost ($/Dth)	Rebate as a % of Incremental Cost	Increm'l Cost Period w/o Rebate	Increm'l Cost Payback Period w/ Rebate	Annual Customer Dth Savings	Rebated cost /Cust Dth Saved	Rebated Lifetime cost /Cust Dth Saved	Non-Fuel O&M Savings	Electric or Natural Gas O&M Savings	Participants 2020	Units 2020	Installation Rate (%)	Realization Rate (%)	2020 NET Dth (Dth)	2020 Rebate Budget ($)	2020 Incremental Cost ($)
		Dth/yr		Dth/yr	yr	$	$	$	$	%	Years	Years	Dth	$	$	$	$							
TOTAL																								
Business																								
Business New Construction																								
Average EDA Project - 2020	More Efficient than Code Building	3,759	Code-Compliant Building	6,017	20	$14,391	$0	$162,821	$8.67	9%	8.3	7.6	2,259	$6,371	$0.319	$3,860.445	$0.000	33	33	100.0%	100.0%	74,538	474,906	5,373,104
Average EEB Project - 2020	More Efficient than Code Building	1,292	Code-Compliant Building	1,481	20	$2,052	$0	$9,058	$8.67	23%	5.5	4.3	188	$10.895	$0.545	-$16.962	$0.000	20	20	100.0%	100.8%	3,798	41,036	181,169
Commercial Efficiency																	$0.000							
Custom Gas Project	New Equipment	23,938	Less Efficient Product/Systems	24,888	15		$0		$8.67								$0.000			100.0%	100.0%			
Phase 2 Customer Contribution	0	0	0	74	15	$186	$0	$1,680	$8.67	11%	2.6	2.3	74	$2.524	$0.168	$5.719	$0.000	570	570	100.0%	100.0%	42,063	106,154	957,351
Behavioral Changes	Behavior changes that reduce energy use	19,771	No change in behavior	20,812	1		$0		$8.67								$0.000			100.0%	100.0%			
Behavioral Changes	Behavior changes that reduce energy use	-13,181	No change in behavior	-13,875	0		$0		$8.67								$0.000			100.0%	100.0%			
Commercial Refrigeration Efficiency					0		$0		$8.67								$0.000							
Faucet Aerator (Restroom), gas water heating	.5 gallons per minute restroom faucet aerator	3	2.2 gallons per minute faucet	11	10		$0		$8.67								$0.000			100.0%	100.0%			
Faucet Aerator (Kitchen), gas water heating	1.5 gallons per minute kitchen faucet aerator	3	2.2 gallons per minute faucet	5	10	$7	$0	$7	$9.12	100%	0.4	0.0	2	$3.350	$0.335	$10.130	$0.000	1	1	100.0%	100.0%	2	7	7
CHW Pre-Rinse Sprayer - gas water heating	1.28 gallons per minute sprayer	8	1.60 gallons per minute sprayer	11	5	$45	$0	$45	$9.12	100%	1.5	0.0	3	$14.063	$2.813	$16.770	$0.000	2	2	100.0%	100.0%	6	90	90
Retrofit of open multi-deck cooler cases with solid glass doors (per linear foot of case)	Closed Case with Doors	1	Open Case with No Doors	8	12		$0		$9.12								$0.000			100.0%	100.0%			
Retrofit of open multi-deck freezer cases with solid glass doors (per linear foot of case)	Closed Case with Doors	2	Open Case with No Doors	10	12		$0		$9.12								$0.000			100.0%	100.0%			
Demand Controlled Ventilation - Gas Only or Combo Customer	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	4,267	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	4,320	20	$313	$0	$2,189	$9.12	14%	4.5	3.9	53	$5.905	$0.295	$0.000	$0.000	5	5	100.0%	100.0%	265	1,563	10,944
Cooling Efficiency																	$0.000							
ERV Install on RTU/AHU for reduced heating load	72% Sensible Effectiveness Heat Recovery on 11193 CFM OA (Heating Mode)	874	No heat recovery on 11193 CFM OA	1,719	15	$4,504	$0	$15,523	$8.67	29%	2.1	1.5	845	$5.331	$0.355	$0.000	$0.000	2	2	100.0%	100.0%	1,690	9,008	31,046
Custom Efficiency																	$0.000							
Custom Efficiency Gas	High Efficiency Product/system	22,566	Less Efficient Product/Systems	22,846	19	$1,397	$52,436	$28,683	$8.67	5%	11.9	11.3	279	$5.002	$0.257	$977.500	$0.000	2	2	100.0%	100.0%	558	2,793	57,366
Custom Studies Gas	0	0	0	0	0		$0		$9.12								$0.000			100.0%	100.0%			
Efficiency Controls																	$0.000							
Efficiency Controls - Gas	New Digital Controls System	10,000	Non Digital or Obsolete Digital System	11,186	15	$8,222	$0	$72,660	$8.67	11%	7.1	6.3	1,186	$6.933	$0.462	$3,874.000	$0.000	6	6	100.0%	100.0%	7,116	49,333	435,961
Efficiency Controls - Study Allocation	Study Allocation	0	0	0	0		$0		$8.67								$0.000			100.0%	100.0%			
Foodservice Equipment																	$0.000							
Convection Oven	Convection Oven	70	Deck Oven	172	11	$500	$7,870	$2,029	$8.67	25%	2.3	1.7	102	$4.879	$0.444	$0.000	$0.000	31	31	100.0%	100.0%	3,177	15,500	62,886
Convevor Oven	Convevor Oven	269	Pizza Deck Oven	454	11		$25,000		$8.67								$0.000			100.0%	100.0%			
Combi-Oven	Combination Oven	62	Steamer	210	11	$1,000	$20,828	$4,451	$8.67	22%	3.5	2.7	148	$6.761	$0.615	$0.000	$0.000	8	8	100.0%	100.0%	1,183	8,000	35,607
Rotisserie Oven	Rotisserie Oven - Infrared	71	Open Flame Rotisserie Oven	126	11		$15,500		$8.67								$0.000			100.0%	100.0%			
Rotating Rack Oven	Rotating Rack Oven	331	Deck Oven	486	11	$500	$18,530	$2,708	$8.67	18%	2.0	1.6	155	$3.222	$0.293	$0.000	$0.000	4	4	100.0%	100.0%	621	2,000	10,833
Commercial Gas Fryer	High Effficiency Unit	99	Standard Efficiency Unit	146	11	$250	$3,630	$1,858	$8.67	13%	4.6	4.0	47	$5.351	$0.486	$0.000	$0.000	49	49	100.0%	100.0%	2,289	12,250	91,037
Upright Broiler	Upright Broiler	105	Standard Radiant Broiler	149	11	$600	$12,587	$1,782	$8.67	34%	4.7	3.1	44	$13.730	$1.248	$0.000	$0.000	2	2	100.0%	100.0%	87	1,200	3,564
High Efficiency Charbroiler	High Efficiency Charbroiler	73	Standard Charbroiler	237	11	$300	$1,800	$4,719	$8.67	6%	3.3	3.1	164	$1.832	$0.167	$0.000	$0.000	1	1	100.0%	100.0%	164	300	4,719
High Efficiency Salamander Broiler	High Efficiency Salamander Broiler	17	Standard Salamander Broiler	61	11	$150	$5,002	$1,863	$8.67	8%	4.9	4.5	44	$3.394	$0.309	$0.000	$0.000	1	1	100.0%	100.0%	44	150	1,863
Pasta Cooker	Pasta Cooker	1,551	Gas Ranoe	1,689	11		$2,317		$8.67								$0.000			100.0%	100.0%			
Commercial Dishwasher - Under Counter, Gas Only or Combo Customer	ENERGY STAR qualified unit	19	Conventional unit as defined by ENERGY STAR	26	10	$188	$4,960	$50	$8.67	379%	0.8	-2.4	7	$27.778	$2.778	$10.275	$0.000	2	2	100.0%	100.0%	14	375	99
Commercial Dishwasher - Door Type, Gas Only or Combo Customer	ENERGY STAR qualified unit	80	Conventional unit as defined by ENERGY STAR	115	15	$179	$6,900	$468	$8.67	38%	1.6	1.0	35	$5.136	$0.342	$98.300	$0.000	4	4	100.0%	100.0%	122	625	1,638
Demand Controlled Ventilation - Gas Only or Combo Customer	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	4,267	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	4,448	20	$1,064	$0	$7,451	$8.67	14%	4.8	4.1	180	$5.908	$0.295	$0.000	$0.000	9	9	100.0%	100.0%	1,611	9,520	66,682
Heating Efficiency																	$0.000							
Hot Water Boiler - Non Condensing -Plan A	85% Efficient Boiler	1,810	80% Efficient Boiler	1,896	20	$2,168	$8,412	$3,785	$8.67	57%	5.1	2.2	86	$25.287	$1.264	$0.000	$0.000	39	39	100.0%	102.0%	3,410	84,543	147,600
Hot Water Boiler - Condensing - Plan A	>=88% Efficient Boiler	1,926	80% Efficient Boiler	2,157	20	$6,841	$8,637	$13,882	$6.81	49%	8.8	4.5	232	$29.535	$1.477	$0.000	$0.000	11	11	100.0%	102.0%	2,599	75,250	152,700
Hot Water Boiler - Condensing - Plan B	>=88% Efficient Boiler	456	78% Efficient Boiler	618	20	$5,579	$0	$10,771	$6.81	52%	9.7	4.7	162	$34.342	$1.717	$0.000	$0.000	33	33	100.0%	102.0%	5,468	184,095	355,446
Low Pressure Steam Boiler - Total	84% Efficient Boiler	3,340	80% Efficient Boiler	3,355	20	$390	$18,757	$3,168	$8.67	12%	24.7	21.7	15	$26.351	$1.318	$0.000	$0.000	1	1	100.0%	102.0%	15	390	3,168
High Pressure Steam Boiler - Total	83% Efficient Boiler	3,340	80% Efficient Boiler	3,348	20	$316	$20,633	$3,168	$8.67	10%	48.7	43.9	8	$42.133	$2.107	$0.000	$0.000	1	1	100.0%	102.0%	8	316	3,168
Commercial Water Heaters - Total	96% Efficient Storage or 95% Efficient Tankless Water Heater	484	80% Efficient Storage Water Heater	556	15	$425	$7,657	$3,232	$8.67	13%	5.2	4.5	72	$5.936	$0.396	-$92.857	$0.000	56	56	100.0%	102.0%	4,092	23,815	181,014
90% Efficient Furnaces	90% Efficient Furnaces	76	78% Eff Furnace	88	18		$1,866		$8.67								$0.000			100.0%	102.0%			
92% Efficient Furnaces	92% Efficient Furnaces	76	78% Eff Furnace	91	18	$200	$1,866	$1,342	$8.67	15%	10.8	9.2	14	$13.998	$0.778	$0.000	$0.000	17	17	100.0%	102.0%	248	3,400	22,812
94% Efficient Furnaces	94% Efficient Furnaces	76	78% Eff Furnace	93	18	$250	$1,866	$1,429	$8.67	17%	9.7	8.0	17	$14.689	$0.816	$0.000	$0.000	20	20	100.0%	102.0%	347	5,000	28,590
96% Efficient Furnaces	96% Efficient Furnaces	76	78% Eff Furnace	94	18	$300	$1,866	$1,517	$8.67	20%	9.8	7.8	18	$16.759	$0.931	$0.000	$0.000	107	107	100.0%	102.0%	1,954	32,100	162,326
Non-Condensing Power Vent (83% efficiency)	Non-condensing power vent unit heater	272	Non-condensing standard forced-air unit heater	280	20	$113	$1,179	$303	$8.67	37%	4.3	2.7	8	$13.776	$0.689	$0.000	$0.000	6	6	100.0%	102.0%	50	675	1,816
Condensing (>90% efficiency)	Condensing power vent unit heater	251	Non-condensing standard forced-air unit heater	296	20	$1,300	$1,179	$2,351	$8.67	55%	6.0	2.7	45	$28.873	$1.444	$0.000	$0.000	8	8	100.0%	102.0%	367	10,400	18,812
Infrared	Infrared heater	247	Non-condensing standard forced-air unit heater	267	15	$144	$1,179	$253	$8.67	57%	1.5	0.6	20	$7.196	$0.480	$0.000	$0.000	8	8	100.0%	102.0%	163	1,150	2,027
Custom Boiler - Total	Various	33,226	Various	34,951	18		$222,537		$8.67								$0.000			100.0%	100.0%			
Boiler Tune up - Total	Boiler Tune-up - 2% additive improvement in efficiency, Boiler now at 80% efficiency for non-condensing; 0.8% additive improvement in efficiency, Boiler now at 88% average annual operating efficiency for condensing.	5,401	Existing boiler Poorly functioning at 78% efficiency for non-condensing, 98.2% for condensing.	5,463	2	$108	$0	$453	$8.67	24%	0.8	0.6	63	$1.731	$0.866	$0.000	$0.000	452	452	100.0%	102.0%	28,833	48,936	204,760
Outdoor Air Reset - Total	83% Efficient Boiler	1,044	80% Efficient existing boiler	1,076	20	$200	$0	$965	$8.67	21%	3.4	2.7	32	$6.192	$0.310	$0.000	$0.000	15	15	100.0%	102.0%	494	3,000	14,479
Stack Dampers - Total	81% Efficient Boiler	10,745	80% Efficient existing boiler	10,749	12	$78	$0	$311	$8.67	25%	9.6	7.2	4	$20.716	$1.726	$0.000	$0.000	27	27	100.0%	102.0%	103	2,099	8,394
Modulating Burners - Total	83% Efficient Boiler	5,595	80% Efficient existing boiler	5,805	20		$0		$8.67								$0.000			100.0%	102.0%			
Turbulators - Totals	83% Efficient Boiler	2,005	80% Efficient existing boiler	2,080	20		$0		$8.67								$0.000			100.0%	102.0%			
O2 Trim Control - Totals	82% Efficient Boiler	20,018	80% Efficient existing boiler	20,518	20		$0		$8.67								$0.000			100.0%	102.0%			
Steam Traps - Total	New Steam Traps	1,596	Existing Boiler, malfunctioning steam traps	1,640	5	$30	$0	$369	$8.67	8%	1.0	0.9	45	$0.674	$0.135	$0.000	$0.000	356	356	100.0%	102.0%	16,174	10,680	131,213
Pipe Insulation - Total	100 ft of pipe with new insulation	10	100 ft of pipe with no or old insulation	41	13	$2,598	$0	$5,145	$8.67	50%	19.4	9.6	31	$84.914	$6.532	$0.000	$0.000	11	11	100.0%	102.0%	343	28,574	56,591
Heating System Optimization Study - Total	implement recommended measures	21,177	Existing system	21,880	7		$0		$8.67								$0.000			100.0%	102.0%			
Recommissioning Study Allocation	Efficient equipment as identified in a recommissioning study	0	Existing equipment	0	0		$0		$8.67								$0.000			100.0%	102.0%			
Ozone Washer Extractor	New ozone laundry system(Venturi Injection or Bubble Diffusion) is added-on to new or existing commercial washing machine using hot water heated with natural gas	55	new or existing commercial washing machine using hot water heated with natural gas	397	10	$7,880	$0	$15,500	$8.67	51%	5.2	2.6	342	$23.032	$2.303	$1,800.930	$0.000	3	3	100.0%	102.0%	1,047	23,640	46,500
HVLS Destratification Fan	HVLS Destratification Fan, 14 ft to <26 ft	0	No destratification fan	88	15		$0		$6.81								$0.000			100.0%	102.0%			

Multi Family Building Efficiency																	$0.000						
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in natural gas DHW unit home	1.5 GPM Showerhead	4	2.5 GPM Showerhead	6	10	$6	$0	$6	$8.67	100%	0.3	0.0	3	$2.474	$0.247	$39.464	$0.000	1,149	1,149	100.0%	100.0%	2,958	7,318	7,318
Provide Energy Efficient Kitchen Aerator - 1.5 GPM to replace existing 2.2 gpm aerator in home with natural gas DHW heater	1.5 GPM Kitchen Faucet Aerator	1	2.2 GPM Kitchen Faucet Aerator	1	10	$3	$0	$3	$8.67	100%	0.8	0.0	0	$6.854	$0.685	$5.399	$0.000	249	249	100.0%	100.0%	104	712	712
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 gpm aerator in home with natural gas DHW heater	1.0 GPM Bathroom Faucet Aerator	0	2.2 GPM Bathroom Faucet Aerator	1	10		$0		$8.67								$0.000			100.0%	100.0%			
Provide Energy Efficient Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 gpm aerator in home with natural gas DHW heater	0.5 GPM Bathroom Faucet Aerator	0	2.2 GPM Bathroom Faucet Aerator	1	10	$4	$0	$4	$8.67	100%	1.1	0.0	0	$9.108	$0.911	$6.730	$0.000	1,466	1,466	100.0%	100.0%	644	5,864	5,864
Water Heater Blanket on Gas Water Heater	Add commercial Insulation wrap R8 around Water Heater Tank	2	No External Insulation on water heater	3	7		$0		$8.67								$0.000			100.0%	100.0%			
Holistic efficiency projects totaling either 15%, 20%, or 25% whole-building savings	Average Performance Building	901	Average existing multifamily building after Direct Install measures completed	996	20		$14,333		$8.67								$0.000			100.0%	100.0%			
Water Heater Setback	Building hot water system with setback	622	Building hot water system without setback	1,004	2	$0	$0	$0	$8.67	#DIV/0!	0.0	0.0	381	$0.000	$0.000	$0.000	$0.000	1	1	100.0%	100.0%	381	0	0
Weatherstripping	Weatherstrip 1 Door to achieve leakage rate or 0.18 cfm/linear feet of crack	1	Door with leakage rate of 0.68 cfm/linear feet of crack	1	10	$30	$0	$30	$8.67	100%	6.6	0.0	1	$57.422	$5.742	$0.000	$0.000	49	49	100.0%	100.0%	26	1,470	1,470
Renter Kit Showerhead	1.5 GPM Showerhead	4	2.5 GPM Showerhead	6	10		$0		$8.67								$0.000			35.0%	100.0%			
Renter Kit Kitchen Aerator	1.5 GPM Kitchen Faucet Aerator	1	2.2 GPM Kitchen Faucet Aerator	1	10		$0		$8.67								$0.000			30.0%	100.0%			
Renter Kit Bathroom Aerator	1.0 GPM Bathroom Faucet Aerator	0	2.2 GPM Bathroom Faucet Aerator	1	10		$0		$8.67								$0.000			25.0%	100.0%			
Renter Kit Window Film	Window w/ Window Film	0	Untreated Window	0	1		$0		$8.67								$0.000			100.0%	100.0%			
Prescriptive Heating Equipment	Efficient Heating Equipment	2,002	Inefficient Heating Equipment	2,089	10	$2,028	$719	$4,514	$8.67	45%	6.0	3.3	87	$23.267	$2.254	$0.000	$0.000	7	7	100.0%	101.6%	620	14,195	31,601
Custom Gas	Efficient Equipment	100	Inefficient Equipment	239	19	$2,595	$0	$3,786	$8.67	69%	3.1	1.0	139	$18.651	$0.982	$0.000	$0.000	2	2	100.0%	100.0%	278	5,191	7,572
Custom Combo	Efficient Equipment	163	Inefficient Equipment	203	19		$0		$8.67								$0.000			100.0%	100.0%			
Carryover Projects	Efficient Equipment	502	Inefficient Equipment	628	19		$0		$8.67								$0.000			100.0%	100.0%			
Process Efficiency																	$0.000							
Custom	New System	40,630	Old System	66,048	4	$91,941	$0	$513,983	$8.67	18%	2.3	1.9	25,418	$3.617	$1.028	$33,395.600	$0.000	10	10	100.0%	100.0%	254,184	919,413	5,139,832
Commercial Heating	New System	743	Old System	808	10	$38	$1,450	$467	$8.67	8%	0.8	0.8	65	$0.585	$0.060	$0.000	$0.000	366	366	100.0%	100.0%	23,651	13,843	170,850
Recommissioning	Optimized Building Systems	11,790	Existing Building System - Not Tuned or Optimized	12,205	7	$2,075	$0	$10,123	$8.67	20%	2.8	2.2	415	$5.000	$0.714	$0.000	$0.000	1	1	100.0%	100.0%	415	2,075	10,123
Recommissioning																	$0.000							
Recommissioning Implementation	Post-Recommissioned Building	11,790	Pre-Recommissioned Building	15,468	7	$545	$0	$12,828	$8.67	4%	0.4	0.4	3,678	$0.148	$0.021	$4,481.410	$0.000	1	1	100.0%	100.0%	3,678	545	12,828
Recommissioning Studies	Study Cost and Rebate	0	0	0	0		$0		$8.67								$0.000			100.0%	100.0%			
BOC Program Attributable Savings	After BOC Training	12,931	Before BOC Training	13,100	5		$0		$8.67								$0.000			100.0%	100.0%			
Turn Key Services																	$0.000							
Identification ~ On site audit	Perform Study + Low Cost No Cost	0	0	0	0		$0		$8.67								$0.000			100.0%	100.0%			
Implementation	High Eff Project	5,000	Less Efficient System	5,020	13	$264	$0	$602	$9.12	44%	3.2	1.8	20	$12.968	$1.031	$1.960	$0.000	326	326	100.0%	100.0%	6,647	86,194	196,156
Building Tune-up Implementation	Implemented Recommisioning measures	6,892	Existing systems	7,657	7		$0		$8.67								$0.000			100.0%	100.0%			

Residential																	$0.000						
Energy Efficient Showerhead																	$0.000						
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in natural gas DHW unit home	1.5 GPM Showerhead	3	2.5 GPM Showerhead	5	10	$3	$0	$3	$9.12	100%	0.2	0.0	2	$1.493	$0.149	$33.384	$0.000	27,769	27,769	60.0%	100.0%	36,272	90,237	90,328
Provide new 1.5 gpm showerhead for second shower to replace existing 2.5 gpm showerhead in natural gas DHW unit home	1.5 GPM Showerhead	2	2.5 GPM Showerhead	4	10	$3	$0	$3	$9.12	100%	0.2	0.0	1	$2.218	$0.222	$22.444	$0.000	7,241	7,241	50.0%	100.0%	5,304	23,527	23,558
Provide Energy Efficient Kitchen Aerator - 1.5 GPM to replace existing 2.2 gpm aerator in home with natural gas DHW heater	1.5 GPM Kitchen Faucet Aerator	1	2.2 GPM Kitchen Faucet Aerator	1	10	$2	$0	$2	$9.12	100%	0.6	0.0	0	$5.217	$0.522	$4.172	$0.000	7,425	7,425	40.0%	100.0%	934	12,176	12,175
Provide Energy Efficient Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	0	2.2 GPM Bathroom Faucet Aerator	1	10	$1	$0	$1	$9.12	100%	0.2	0.0	0	$1.901	$0.190	$4.188	$0.000	7,467	7,467	40.0%	100.0%	817	3,883	3,883
Provide Energy Efficient Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 gpm aerator in home with electric DHW heater	1.0 GPM Bathroom Faucet Aerator	0	2.2 GPM Bathroom Faucet Aerator	1	10	$1	$0	$1	$9.12	100%	0.2	0.0	0	$1.900	$0.190	$4.189	$0.000	7,220	7,220	30.0%	100.0%	593	3,755	3,754
Energy Feedback Residential																	$0.000						
Rollup: Existing Particioant 2020 Savings	Treatment	850	Control	852	1	$0	$0	$0	$9.12	#DIV/0!	0.0	0.0	1	$0.000	$0.000	$0.000	$0.000	114,744	114,744	100.0%	100.0%	129,406	0	0
Behavioral Adjustments Rollup: Existing Participants 2020 Savings	Treatment	-567	Control	-568	0	$0	$0	$0	$9.12	#DIV/0!	0.0	0.0	-1	$0.000	#DIV/0!	$0.000	$0.000	114,744	114,744	100.0%	100.0%	-86,271	0	0
Efficient New Home Construction																	$0.000						
Low Income Envelope Improvements - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 1773 and Average 12.7% Better Than Code	62	Reference Home Based upon Local Code	74	20		$0		$9.12								$0.000			100.0%	100.0%			
10% to 15% improvement over local code - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 3630 and Average 13.1% Better Than Code	110	Reference Home Based upon Local Code	124	20	$251	$0	$1,085	$9.12	23%	8.6	6.6	14	$18.100	$0.905	$0.000	$0.000	150	150	100.0%	100.0%	2,074	37,539	162,269
15% to 20% improvement over local code - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 3834 and Average 17.4% Better Than Code	108	Reference Home Based upon Local Code	132	20	$498	$0	$2,219	$9.12	22%	10.1	7.8	24	$20.569	$1.028	$0.000	$0.000	453	453	100.0%	100.0%	10,962	225,487	1,005,245
20% to 25% improvement over local code - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 4439 and Average 21.3% Better Than Code	115	Reference Home Based upon Local Code	153	20	$998	$0	$3,615	$9.12	28%	10.4	7.5	38	$26.204	$1.310	$0.000	$0.000	595	595	100.0%	100.0%	22,650	593,528	2,150,769
25% to 30% improvement over local code - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 5711 and Average 25.9% Better Than Code	132	Reference Home Based upon Local Code	186	20	$1,196	$0	$5,363	$9.12	22%	10.9	8.4	54	$22.100	$1.105	$0.000	$0.000	104	104	100.0%	100.0%	5,649	124,848	559,912
30% to 35% improvement over local code - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 5613 and Average 32.7% Better Than Code	79	Reference Home Based upon Local Code	199	20	$1,513	$0	$7,039	$9.12	21%	6.4	5.1	120	$12.611	$0.631	$0.000	$0.000	5	5	100.0%	100.0%	576	7,260	33,786
35% and greater improvement over local code - Combo Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 4362 and Average 35.8% Better Than Code	90	Reference Home Based upon Local Code	175	20	$2,010	$0	$11,085	$9.12	18%	14.3	11.7	85	$23.668	$1.183	$0.000	$0.000	2	2	100.0%	100.0%	199	4,703	25,938
Low Income Envelope Improvements - Gas Only Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 1773 and Average 12.7% Better Than Code	62	Reference Home Based upon Local Code	74	20		$0		$9.12								$0.000			100.0%	100.0%			
10% to 15% improvement over local code - Gas Only Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 3630 and Average 13.1% Better Than Code	110	Reference Home Based upon Local Code	122	20	$250	$0	$917	$9.12	27%	8.4	6.1	12	$20.896	$1.045	$0.000	$0.000	50	50	100.0%	100.0%	598	12,500	45,829
15% to 20% improvement over local code - Gas Only Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 3834 and Average 17.4% Better Than Code	108	Reference Home Based upon Local Code	129	20	$500	$0	$1,948	$9.12	26%	9.9	7.3	22	$23.097	$1.155	$0.000	$0.000	132	132	100.0%	100.0%	2,858	66,000	257,148
20% to 25% improvement over local code - Gas Only Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 4439 and Average 21.3% Better Than Code	115	Reference Home Based upon Local Code	146	20	$1,000	$0	$2,982	$9.12	34%	10.4	6.9	31	$31.793	$1.590	$0.000	$0.000	194	194	100.0%	100.0%	6,102	194,000	578,485
25% to 30% improvement over local code - Gas Only Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 5711 and Average 25.9% Better Than Code	132	Reference Home Based upon Local Code	181	20	$1,200	$0	$4,470	$9.12	27%	10.0	7.3	49	$24.490	$1.224	$0.000	$0.000	32	32	100.0%	100.0%	1,568	38,400	143,055
30% to 35% improvement over local code - Gas Only Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 5613 and Average 32.7% Better Than Code	79	Reference Home Based upon Local Code	137	20	$1,500	$0	$3,621	$9.12	41%	6.9	4.1	57	$26.224	$1.311	$0.000	$0.000	2	2	100.0%	100.0%	114	3,000	7,242
35% and greater improvement over local code - Gas Only Customers	Energy Efficient Home Based Upon REMRate model by House Rater with Average Size 4362 and Average 35.8% Better Than Code	90	Reference Home Based upon Local Code	121	20	$2,000	$0	$5,233	$9.12	38%	18.2	11.2	32	$63.291	$3.165	$0.000	$0.000	1	1	100.0%	100.0%	32	2,000	5,233
Energy Star Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Clothes Washer	0	Standard Clothes Washer	0	11	$10	$677	$30	$9.12	33%	22.2	14.8	0	$67.500	$6.136	$9.926	$0.000	146	146	100.0%	100.0%	22	1,451	4,354
Energy Star Clothes Washer - Gas Only Customers w/ Gas DHW	Energy Star Clothes Washer	0	Standard Clothes Washer	0	11	$10	$677	$20	$9.12	49%	22.2	11.2	0	$100.000	$9.091	$6.750	$0.000	55	55	100.0%	100.0%	6	550	1,114
Residential Heating																	$0.000						
95% Efficient Furnace in New Home	95% Efficient Furnace	68	90% Efficient Furnace	72	18	$100	$957	$165	$9.12	61%	5.4	2.1	3	$29.928	$1.663	$0.000	$0.000	58	58	100.0%	100.0%	194	5,800	9,566
96% Efficient Furnace in New Home	96% Efficient Furnace	68	90% Efficient Furnace	72	18	$147	$957	$379	$9	$0	9.6	5.9	4	$34.166	$1.898	$0.000	$0.000	53	53	100.0%	100.0%	228	7,800	20,079
97% Efficient Furnace in New Home	97% Efficient Furnace	67	90% Efficient Furnace	74	18	$200	$957	$477	$9.12	42%	6.9	4.0	8	$26.403	$1.467	$0.000	$0.000	4	4	100.0%	100.0%	30	800	1,907
95% Efficient Furnace in Existing Home	95% Efficient Furnace	89	80% Efficient Furnace	104	18	$202	$1,030	$740	$9.12	27%	5.3	3.9	15	$13.299	$0.739	$0.000	$0.000	363	363	100.0%	100.0%	5,504	73,200	268,483
96% Efficient Furnace in Existing Home	96% Efficient Furnace	88	80% Efficient Furnace	105	18	$300	$1,030	$950	$9.12	32%	5.9	4.0	18	$16.932	$0.941	$0.000	$0.000	6,364	6,364	100.0%	100.0%	112,778	1,909,500	6,047,391
97% Efficient Furnace in Existing Home	97% Efficient Furnace	87	80% Efficient Furnace	107	18	$400	$1,030	$1,048	$9.12	38%	5.7	3.5	20	$19.795	$1.100	$0.000	$0.000	1,568	1,568	100.0%	100.0%	31,685	627,200	1,643,640
84% Efficient Boiler	84% Efficient Boiler	127	82% Efficient Boiler	130	20	$100	$685	$1,446	$9.12	7%	47.5	44.2	3	$29.948	$1.497	$0.000	$0.000	429	429	100.0%	100.0%	1,432	42,900	620,197
90% Efficient Boiler	90% Efficient Boiler	118	82% Efficient Boiler	142	20	$300	$685	$2,379	$9.12	13%	10.6	9.3	25	$12.178	$0.609	$0.000	$0.000	23	23	100.0%	100.0%	567	6,900	54,720
95% Efficient Boiler	95% Efficient Boiler	110	82% Efficient Boiler	134	20	$400	$685	$3,001	$9.12	13%	13.9	12.1	24	$16.913	$0.846	$0.000	$0.000	425	425	100.0%	100.0%	10,051	170,000	1,275,604
Home Energy Squad																	$0.000						
NEC Energy Squad Service 2017	weighted average Energy Efficient Gas measures by participant	9	weighted average Baseline Gas measures by participant	10	10		$0		$9.12								$0.000			100.0%	100.0%			
NEC Energy Squad Service 2018	weighted average Energy Efficient Gas measures by participant	9	weighted average Baseline Gas measures by participant	10	10		$0		$9.12								$0.000			100.0%	100.0%			
NEC Energy Squad Service 2019	weighted average Energy Efficient Gas measures by participant	9	weighted average Baseline Gas measures by participant	10	10		$0		$9.12								$0.000			100.0%	100.0%			
CEE Energy Squad Service 2020	weighted average Energy Efficient Gas measures by participant	9	weighted average Baseline Gas measures by participant	3,759	10	$0	$0	$1,650	$9.12	0%	0.0	0.0	3,750	$0.000	$0.000	$18,435.980	$0.000	1	1	100.0%	100.0%	3,750	0	1,650
Weatherstrip 1 additional door	Weatherstrip 1 additional Door to achieve leakage rate or 0.18 cfm/linear feet of crack	1	Additional Door with leakage rate of 0.68 cfm/linear feet of crack	3	10		$0		$9.12								$0.000			100.0%	100.0%			
Install Second Programmable Thermostat	Install second T-stat and Auto setback thermostat by 2.6 F for heating	44	Existing non-programmable thermostat	46	10		$0		$9.12								$0.000			100.0%	100.0%			

Whole Home Efficiency																	$0.000							
Attic Insulation - Gas Heated Homes Without Cooling	Home with additional insulation	49	Home with R20 or less existing Insulation	54	20	$300	$0	$2,238	$9.12	13%	49.1	42.5	5	$60.000	$3.000	$0.000	$0.000	1	1	100.0%	100.0%	5	300	2,238
Attic Insulation - Gas Heat Homes With Cooling, Combo Customer	Home with additional insulation	51	Home with R20 or less existing Insulation	59	20	$292	$0	$1,822	$9.12	16%	25.8	21.6	8	$37.702	$1.885	$0.000	$0.000	25	25	100.0%	100.0%	196	7,378	45,970
Attic Insulation - Gas Heat Homes With Cooling, Gas Only Customer	Home with additional insulation	48	Home with R20 or less existing Insulation	60	20		$0		$9.12								$0.000			100.0%	100.0%			
Wall Insulation - Gas Heat Homes Without Cooling	R-11 insulation	23	Baseline assumes R-0 in wall cavities as existing level	63	20	$300	$0	$3,355	$9.12	9%	9.1	8.3	41	$7.407	$0.370	$0.000	$0.000	2	2	100.0%	100.0%	81	600	6,709
Wall Insulation - Gas Heat Homes With Cooling, Combo Customer	R-11 insulation	36	Baseline assumes R-0 in wall cavities as existing level	70	20	$246	$0	$1,656	$9.12	15%	5.4	4.6	34	$7.324	$0.366	$0.000	$0.000	25	25	100.0%	100.0%	847	6,205	41,769
Wall Insulation - Gas Heat Homes With Cooling, Gas Only Customer	R-11 insulation	31	Baseline assumes R-0 in wall cavities as existing level	60	20		$0		$9.12								$0.000			100.0%	100.0%			
Air Sealing T2 - 25% reduction - Gas Heat Homes Without Cooling	Home with Tier 2 Air Sealing - Average 27% reduction	45	Existing Home Without Air Sealing	60	10		$0		$9.12								$0.000			100.0%	100.0%			
Air Sealing T2 - 25% reduction - Gas Heat Homes With Cooling, Combo Customer	Home with Tier 2 Air Sealing - Average 27% reduction	45	Existing Home Without Air Sealing	63	10	$151	$0	$765	$9.12	20%	4.5	3.6	19	$8.084	$0.808	$0.000	$0.000	10	10	100.0%	100.0%	181	1,464	7,434
Air Sealing T2 - 25% reduction - Gas Heat Homes With Cooling, Gas Only Customer	Home with Tier 2 Air Sealing - Average 27% reduction	45	Existing Home Without Air Sealing	60	10		$0		$9.12								$0.000			100.0%	100.0%			
Air Sealing T3 - 30% reduction - Gas Heat Homes Without Cooling	Home with Tier 3 Air Sealing - average 42% reduction	26	Existing Home Without Air Sealing	60	10		$0		$9.12								$0.000			100.0%	100.0%			
Air Sealing T3 - 30% reduction - Gas Heat Homes With Cooling, Combo Customer	Home with Tier 3 Air Sealing - average 42% reduction	26	Existing Home Without Air Sealing	55	10	$201	$0	$796	$9.12	25%	3.0	2.3	29	$7.000	$0.700	$0.000	$0.000	11	11	100.0%	100.0%	310	2,169	8,598
Air Sealing T3 - 30% reduction - Gas Heat Homes With Cooling, Gas Only Customer	Home with Tier 3 Air Sealing - average 42% reduction	26	Existing Home Without Air Sealing	67	10	$200	$0	$750	$9.12	27%	2.0	1.5	41	$4.878	$0.488	$0.000	$0.000	1	1	100.0%	100.0%	41	200	750
Tank-Type Water Heater - High Draw Pattern (30-50 Gallon)	High Efficiency Tank-Type Water Heater	25	Minimum Efficiency Tank-Type Water Heater	27	13	$100	$950	$269	$9.12	37%	19.7	12.4	2	$66.667	$5.128	$0.000	$0.000	15	15	100.0%	100.0%	23	1,500	4,036
Tank-Type Water Heater - Medium Draw Pattern (30-50 Gallon)	High Efficiency Tank-Tvoe Water Heater	23	Minimum Efficiency Tank-Tvoe Water Heater	26	13	$100	$870	$127	$9.12	79%	5.2	1.1	3	$37.037	$2.849	$0.000	$0.000	1	1	100.0%	100.0%	3	100	127
Tankless Water Heater - High Draw Pattern	High Efficiency Tankless Water Heater	17	Minimum Efficiency Tank-Type Water Heater	26	20		$1,071		$9.12								$0.000			100.0%	100.0%			
Tankless Water Heater - Medium Draw Pattern	High Efficiency Tankless Water Heater	17	Minimum Efficiency Tank-Tvoe Water Heater	28	20		$975		$9.12								$0.000			100.0%	100.0%			
95% Efficient Furnace in Existing Home	95% Efficient Furnace	89	80% Efficient Furnace	106	18		$1,030		$9.12								$0.000			100.0%	100.0%			
96% Efficient Furnace in Existing Home	96% Efficient Furnace	88	80% Efficient Furnace	102	18	$325	$1,030	$950	$9.12	34%	7.2	4.8	14	$22.554	$1.253	$0.000	$0.000	10	10	100.0%	100.0%	144	3,250	9,503
97% Efficient Furnace in Existing Home	97% Efficient Furnace	87	80% Efficient Furnace	103	18	$425	$1,030	$1,048	$9.12	41%	7.1	4.2	16	$26.398	$1.467	$0.000	$0.000	1	1	100.0%	100.0%	16	425	1,048
84% Efficient Boiler	84% Efficient Boiler	127	82% Efficient Boiler	130	20		$685		$9.12								$0.000			100.0%	100.0%			
90% Efficient Boiler	90% Efficient Boiler	118	82% Efficient Boiler	130	20		$685		$9.12								$0.000			100.0%	100.0%			
95% Efficient Boiler	95% Efficient Boiler	110	82% Efficient Boiler	147	20	$400	$685	$3,001	$9.12	13%	8.8	7.7	37	$10.753	$0.538	$0.000	$0.000	1	1	100.0%	100.0%	37	400	3,001
Programmable Thermostat (Install and Program)	New T-state w/ Auto setback by 2.6 F for heating	87	Existing non-programmable thermostat	95	10	$10	$0	$32	$9.12	31%	0.5	0.3	7	$1.389	$0.139	$0.000	$0.000	3	3	100.0%	100.0%	22	31	98
Energy Star Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Clothes Washer	0	Standard Clothes Washer	0	11		$677		$9.12								$0.000			100.0%	100.0%			
Energy Efficient Showerhead (Direct Install)	1.5 GPM Showerhead	3	2.5 GPM Showerhead	5	10	$0	$0	$4	$9.12	0%	0.2	0.2	2	$0.000	$0.000	$33.390	$0.000	1	1	100.0%	100.0%	2	0	4
Energy Efficient Bathroom Aerator (Direct Install	1.5 GPM Kitchen Faucet Aerator	1	2.2 GPM Kitchen Faucet Aerator	1	10		$0		$9.12								$0.000			100.0%	100.0%			
Energy Efficient Kitchen Aerator (Direct Install)	1.0 GPM Bathroom Faucet Aerator	0	2.2 GPM Bathroom Faucet Aerator	1	10		$0		$9.12								$0.000			100.0%	100.0%			
Energy Efficient Bathroom Aerator (Direct Install	0.5 GPM Bathroom Faucet Aerator	0	2.2 GPM Bathroom Faucet Aerator	1	10		$0		$9.12								$0.000			100.0%	100.0%			
Water Heater Blanket	Add commercial Insulation wrap R8 around Water Heater Tank	2	No External Insulation on water heater	3	7		$0		$9.12								$0.000			100.0%	100.0%			
Gas Water Heater Setback	setback WH setpoint to 120 F	2	Existing WH at setpoint of 130 F	3	8		$0		$9.12								$0.000			100.0%	100.0%			
Insulation Rebate																	$0.000							
Gas Heat Homes Without Cooling	Home with additional insulation	49	Home with R20 or less existing Insulation	60	20		$0		$9.12								$0.000			100.0%	100.0%			
Gas Heat Homes With Cooling, Combo Customer	Home with additional insulation	51	Home with R20 or less existing Insulation	62	20	$292	$0	$1,799	$9.12	16%	17.6	14.7	11	$26.043	$1.302	$0.000	$0.000	786	786	100.0%	100.0%	8,810	229,441	1,413,793
Gas Heat Homes With Cooling, Gas Only Customer	Home with additional insulation	48	Home with R20 or less existing Insulation	60	20		$0		$9.12								$0.000			100.0%	100.0%			
Gas Heat Homes Without Cooling	R-11 insulation	23	Baseline assumes R-0 in wall cavities as existing level	60	20		$0		$9.12								$0.000			100.0%	100.0%			
Gas Heat Homes With Cooling, Combo Customer	R-11 insulation	36	Baseline assumes R-0 in wall cavities as existing level	83	20	$292	$0	$2,807	$9.12	10%	6.7	6.0	46	$6.313	$0.316	$0.000	$0.000	75	75	100.0%	100.0%	3,468	21,892	210,762
Gas Heat Homes With Cooling, Gas Only Customer	R-11 insulation	31	Baseline assumes R-0 in wall cavities as existing level	60	20		$0		$9.12								$0.000			100.0%	100.0%			
Gas Heat Homes Without Cooling	Home with Tier 2 Air Sealing	38	Existing Home Without Air Sealing	60	10		$0		$9.12								$0.000			100.0%	100.0%			
Gas Heat Homes With Cooling, Combo Customer	Home with Tier 2 Air Sealing	37	Existing Home Without Air Sealing	64	10	$142	$0	$804	$9.12	18%	3.3	2.8	26	$5.360	$0.536	$0.000	$0.000	836	836	100.0%	100.0%	22,078	118,351	672,397
Gas Heat Homes With Cooling, Gas Only Customer	Home with Tier 2 Air Sealing	37	Existing Home Without Air Sealing	60	10		$0		$9.12								$0.000			100.0%	100.0%			
School Education Kits																	$0.000							
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with Unknown DHW heater - 2017	1.5 GPM Showerhead	3	Federal Maximum Standard flow rate 2.5 GPM	5	10		$0		$9.12								$0.000			35.0%	100.0%			
Provide Energy Efficient Kitchen Aerator - 1.5 GPM to replace existing 2.2 gpm aerator in home with Unknown DHW heater - 2017	1.5 GPM Kitchen Faucet Aerator	1	Federal Maximum Standard flow rate 2.2 GPM	1	10		$0		$9.12								$0.000			30.0%	100.0%			
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 gpm aerator in home with Unknown DHW heater - 2017	1.0 GPM Bathroom Faucet Aerator	0	Federal Maximum Standard flow rate 2.2 GPM	1	10		$0		$9.12								$0.000			25.0%	100.0%			
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with Unknown DHW heater - 2018	1.5 GPM Showerhead	3	Federal Maximum Standard flow rate 2.5 GPM	5	10		$0		$9.12								$0.000			35.0%	100.0%			
Provide Energy Efficient Kitchen Aerator - 1.5 GPM to replace existing 2.2 gpm aerator in home with Unknown DHW heater - 2018	1.5 GPM Kitchen Faucet Aerator	1	Federal Maximum Standard flow rate 2.2 GPM	1	10		$0		$9.12								$0.000			30.0%	100.0%			
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 gpm aerator in home with Unknown DHW heater - 2018	1.0 GPM Bathroom Faucet Aerator	0	Federal Maximum Standard flow rate 2.2 GPM	1	10		$0		$9.12								$0.000			25.0%	100.0%			
Provide new 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with Unknown DHW heater - 2019	1.5 GPM Showerhead	3	Federal Maximum Standard flow rate 2.5 GPM	5	10	$3	$0	$3	$9.12	100%	0.2	0.0	2	$1.481	$0.148	$33.386	$0.000	12,669	12,669	46.2%	100.0%	12,742	40,845	40,845
Provide Energy Efficient Kitchen Aerator - 1.5 GPM to replace existing 2.2 gpm aerator in home with Unknown DHW heater - 2019	1.5 GPM Kitchen Faucet Aerator	1	Federal Maximum Standard flow rate 2.2 GPM	1	10	$1	$0	$1	$9.12	100%	0.4	0.0	0	$3.860	$0.386	$4.172	$0.000	12,669	12,669	37.2%	100.0%	1,484	15,398	15,398
Provide Energy Efficient Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 gpm aerator in home with Unknown DHW heater - 2019	1.0 GPM Bathroom Faucet Aerator	0	Federal Maximum Standard flow rate 2.2 GPM	1	10	$0	$0	$0	$9.12	100%	0.2	0.0	0	$1.773	$0.177	$4.189	$0.000	12,669	12,669	40.0%	100.0%	1,382	6,133	6,133
Water Heater Rebate																	$0.000							
Tank-Type Water Heater - High Draw Pattern (30-50 Gallon)	High Efficiency Tank-Type Water Heater	25	Minimum Efficiency Tank-Type Water Heater	28	13	$75	$950	$330	$9.12	23%	15.0	11.6	2	$31.091	$2.392	$0.000	$0.000	514	514	100.0%	96.5%	1,197	38,550	169,729
Tank-Type Water Heater - Medium Draw Pattern (30-50 Gallon)	High Efficiency Tank-Tvoe Water Heater	23	Minimum Efficiency Tank-Tvoe Water Heater	27	13	$75	$870	$126	$9.12	60%	3.6	1.4	4	$19.367	$1.490	$0.000	$0.000	146	146	100.0%	96.5%	546	10,950	18,380
Tankless Water Heater - High Draw Pattern	High Efficiency Tankless Water Heater	17	Minimum Efficiency Tank-Type Water Heater	26	20	$250	$1,071	$862	$9.12	29%	11.1	7.9	9	$29.297	$1.465	$0.000	$0.000	228	228	100.0%	96.5%	1,878	57,000	196,518
Tankless Water Heater - Medium Draw Pattern	High Efficiency Tankless Water Heater	17	Minimum Efficiency Tank-Type Water Heater	28	20	$250	$975	$542	$9.12	46%	5.3	2.9	11	$22.294	$1.115	$0.000	$0.000	50	50	100.0%	96.5%	541	12,500	27,100
Residential Demand Response					0		$0		$8.67								$0.000							
Direct Install Smart Thermostat EE - Gas Heating Combo Customer	Average Single Family House with EnergyStar Smart Thermostat	80	Average Single Family House with Standard Thermostat	91	10	$50	$0	$201	$9.12	25%	2.0	1.5	11	$4.636	$0.464	$0.000	$0.000	10	10	100.0%	100.0%	105	487	1,947
Direct Install Smart Thermostat EE - Gas Heating Gas Only Customer	Average Single Family House with EnergyStar Smart Thermostat	80	Average Single Family House with Standard Thermostat	87	10		$0		$9.12								$0.000			100.0%	100.0%			
BYOT EE - Gas Heating Combo Customer	Average Single Family House with EnergyStar Smart Thermostat	80	Average Single Family House with Standard Thermostat	87	10		$0		$9.12								$0.000			100.0%	100.0%			
BYOT EE - Gas Heating Gas Only Customer	Average Single Family House with EnergyStar Smart Thermostat	80	Average Single Family House with Standard Thermostat	87	10		$0		$9.12								$0.000			100.0%	100.0%			

Low Income																$0.000							
Home Energy Savings Program																$0.000							
Attic Insulation and Bypass Air Sealing - Gas Heated & Non-Cooled Home	Insulate the attic to R-48 & perform Bypass air sealing	64	Existing home with average attic area of 823 sq. ft. and R-17 insulation	71	20	$2,277	$0	$2,277	$9.12	100%	34.5	0.0	7	$314.414	$15.721	$0.000	$0.000	39	39	100.0%	100.0%	283	88,822	88,822
Attic Insulation and Bypass Air Sealing - Gas Heated & Electrically Cooled Home	Insulate the attic to R-48 & perform Bypass air sealing	64	Existing home with average attic area of 823 sq. ft. and R-17 insulation	73	20	$3,260	$0	$3,260	$9.12	100%	36.6	0.0	10	$333.996	$16.700	$0.000	$0.000	41	41	100.0%	100.0%	402	134,166	134,166
Air Sealing - Gas Heated & Non-Cooled Home	Perform Bypass air sealing along with Attic Insulation	57	Existing home with average home size of 1406 sq. ft.	75	10	$316	$0	$316	$9.12	100%	2.0	0.0	18	$17.798	$1.780	$0.000	$0.000	39	39	100.0%	100.0%	693	12,334	12,334
Air Sealing - Gas Heated & Electrically Cooled Home	Perform Bypass air sealing along with Attic Insulation	57	Existing home with average home size of 1406 sq. ft.	76	10	$458	$0	$458	$9.12	100%	2.7	0.0	18	$24.805	$2.480	$0.000	$0.000	38	38	100.0%	100.0%	706	17,515	17,515
Wall Insulation - Gas Heated and Non-Cooled Home	R-11 insulation	56	Existing home with average attic area of 823 sq. ft. and R-17 insulation	88	20	$2,373	$0	$2,373	$9.12	100%	8.1	0.0	32	$73.984	$3.699	$0.000	$0.000	16	16	100.0%	100.0%	513	37,969	37,969
Wall Insulation - Gas Heated and Electrically Cooled Home	R-11 insulation	56	Existing home with average attic area of 823 sq. ft. and R-17 insulation	93	20	$2,354	$0	$2,354	$9.12	100%	7.0	0.0	37	$63.513	$3.176	$0.000	$0.000	8	8	100.0%	100.0%	307	19,492	19,492
Tank-Type Water Heater - High Draw Pattern (30-50 Gallon)	High Efficiency Tank-Type Water Heater	25	Minimum Efficiency Tank-Type Water Heater	27	13	$1,846	$0	$1,846	$9.12	100%	118.0	0.0	2	$1,075.826	$82.756	$0.000	$0.000	141	141	100.0%	100.0%	242	260,350	260,350
New 84% boiler (SF)	84% Efficient Boiler	127	82% Efficient Boiler	130	20	$5,053	$0	$5,053	$9.12	100%	171.3	0.0	3	$1,561.824	$78.091	$0.000	$0.000	20	20	100.0%	100.0%	65	101,050	101,050
Replace Furnace AFUE 80 to 95 (SF)	95% Efficient Furnace	89	80% Efficient Furnace	103	18	$3,310	$0	$3,310	$9.12	100%	25.7	0.0	14	$234.672	$13.037	$0.000	$0.000	66	66	100.0%	100.0%	931	218,480	218,480
LI Home Energy Squad																$0.000							
Total LI Energy Squad Service 2020	Weighted Average of 2020 LI Squad Services	14	Existing Home	1,326	10	$0	$0	$0	$9.12	#DIV/0!	0.0	0.0	1,313	$0.000	$0.000	$6,487.300	$0.000	1	1	100.0%	100.0%	1,313	0	0