

# 2022 STATUS REPORT AND ASSOCIATED COMPLIANCE FILINGS

MINNESOTA ELECTRIC & NATURAL GAS  
CONSERVATION IMPROVEMENT PROGRAM  
DOCKET NO. E,G002/CIP-20-473







414 Nicollet Mall  
Minneapolis, MN 55401

March 31, 2023

—Via Electronic Filing—

Michelle Gransee  
Deputy Commissioner  
Minnesota Department of Commerce  
85 7<sup>th</sup> Place East, Suite 500  
St. Paul, MN 55101-2198

RE: 2022 Status Report & Associated Compliance Filings  
Minnesota Electric and Natural Gas Conservation Improvement Program  
Docket No. E,G002/CIP-20-473

Dear Deputy Commissioner Gransee:

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 2022 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 2022 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-20-473. 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 Angela Smelser at [angela.r.smelser@xcelenergy.com](mailto:angela.r.smelser@xcelenergy.com) or 612-370-3447.

SINCERELY,

/s/

NICK MARK  
MANAGER  
DEMAND SIDE MANAGEMENT AND RENEWABLE OPERATIONS

Enclosures  
c: Service Lists

## **OVERVIEW OF COMPLIANCE REPORTS**

Northern States Power Company doing business as Xcel Energy submits its 2022 Conservation Improvement Program (CIP) Status Report and associated compliance reports. The purpose of this filing is to report 2022 CIP project activity, to request approval to allocate the 2022 Financial Incentive to our CIP Tracker, to update CIP Tracker activity from January 1, 2022 through December 31, 2022, to request approval of the CIP Tracker balance, and to request approval of the Company's proposed Conservation Cost Recovery Adjustment.

This filing is an aggregation of four compliance reports for 2022. The filing is divided into six sections consisting of the following compliance reports and their corresponding attachments:

- Section 1. Compliance Report;
- Section 2. 2022 CIP Status Report;
- Section 3. 2022 Conservation Cost Recovery Report;
- Section 4. 2022 CIP Adjustment Rate Report;
- Section 5. 2022 CIP Financial Incentive Calculations; and
- Section 6. Attachments.

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## **SECTION 1:**

### **2022 COMPLIANCE REPORT**

Northern States Power Company, doing business as Xcel Energy submits this 2022 Compliance Report in compliance with the Minnesota Department of Commerce Rules and the Commissioner's Decisions. This report covers the 2022 CIP year, January 1 through December 31. This section 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, 2020 Decision and subsequent Decisions in this docket.

## **EXECUTIVE SUMMARY**

Northern States Power Company, doing business as Xcel Energy, respectfully submits the following comprehensive report of its electric and natural gas CIP achievements for 2022. This report addresses overall CIP achievements including participation, expenditures, energy conserved, and demand reduced by each segment and program 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**

For more than a decade, the Company has surpassed the energy savings targets established in Minnesota Statute 216B.241. In 2022, we once again met and exceeded these targets by achieving nearly 648 GWh of electric savings or 2.33% of sales. Our natural gas achievement also surpassed the state's energy savings goal for natural gas in 2022; achieving over 920,504 Dth of total natural gas savings, which is 1.2% of sales.

Although these savings achievements exceed the statutory minimum goals, they fell slightly short of the more ambitious energy savings goals approved by the Deputy Commissioner for Xcel Energy. Electric and gas energy savings were 89 percent and 92 percent (respectively) of the approved goals.

The Company's residential programs were an area of strength in 2022, where increased participation in Home Energy Insights, Home Lighting, and Residential Heating and Cooling led to energy savings in excess of goal for the segment in both electricity and natural gas. In the business sector, several holistic programs saw strong savings levels (including Business New Construction, Commercial Efficiency and Process Efficiency), but overall achievement was challenged by a variety of factors. Disrupted supply chains continue to affect installation schedules and lead times for certain equipment increased by several months or more. Additionally, tight labor markets, inflation, and growing macroeconomic uncertainty all combined to limit business customers' investments in energy efficiency. Overall, the business sector achieved 72 percent of its electric savings goal and 79 percent of its gas goal. Although the Company's spending for low-income programs achieved the minimum levels established by statute, energy savings for the low-income sector were well below expectations. Low-income electric savings were 78 percent of goal while gas savings were only 29 percent of goal. Early in 2023, the Company received the results of a comprehensive evaluation of low-income segment programming, which it expects to use to inform changes to the programs in its June 1, 2023 Triennial filing. More

discussion of 2022 program activity in the Low-Income Segment is provided in the Status Report section of this filing.

In 2022, the Company spent a total of \$124 million to achieve these savings results, including \$104 million on electric programs and approximately \$20 million on natural gas programs. Electric spending was 78 percent, and gas spending was 93 percent, of the approved regulatory budget.

Despite challenges in 2022, the Company’s CIP portfolio remains highly cost effective, driving nearly \$500 million in societal net benefits (\$426 million electric and \$70 million gas). The electric programs will result in more than \$240 million and the natural gas programs will provide more than \$34 million in avoided revenue requirements, as measured by the utility cost test.

The Company’s 2022 CIP achievements are summarized in Table 1.

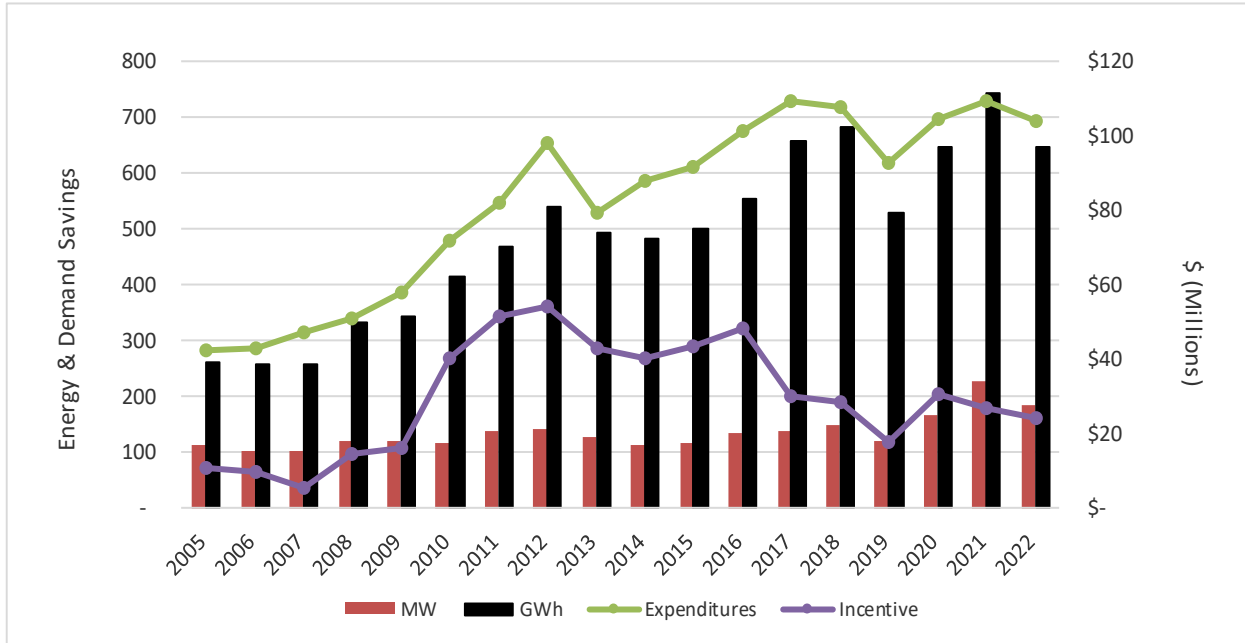
**Table 1: 2022 CIP Expenditures and Energy Savings**

2022	Expenditures (\$)	Energy Savings (kWh or Dth)	Demand Savings (kW)
<b>Total Electric CIP</b>	\$104,265,717	647,675,810	183,922
<b>Total Natural Gas CIP</b>	\$19,857,191	920,504	
<b>Total Expenditures</b>	\$124,122,907		

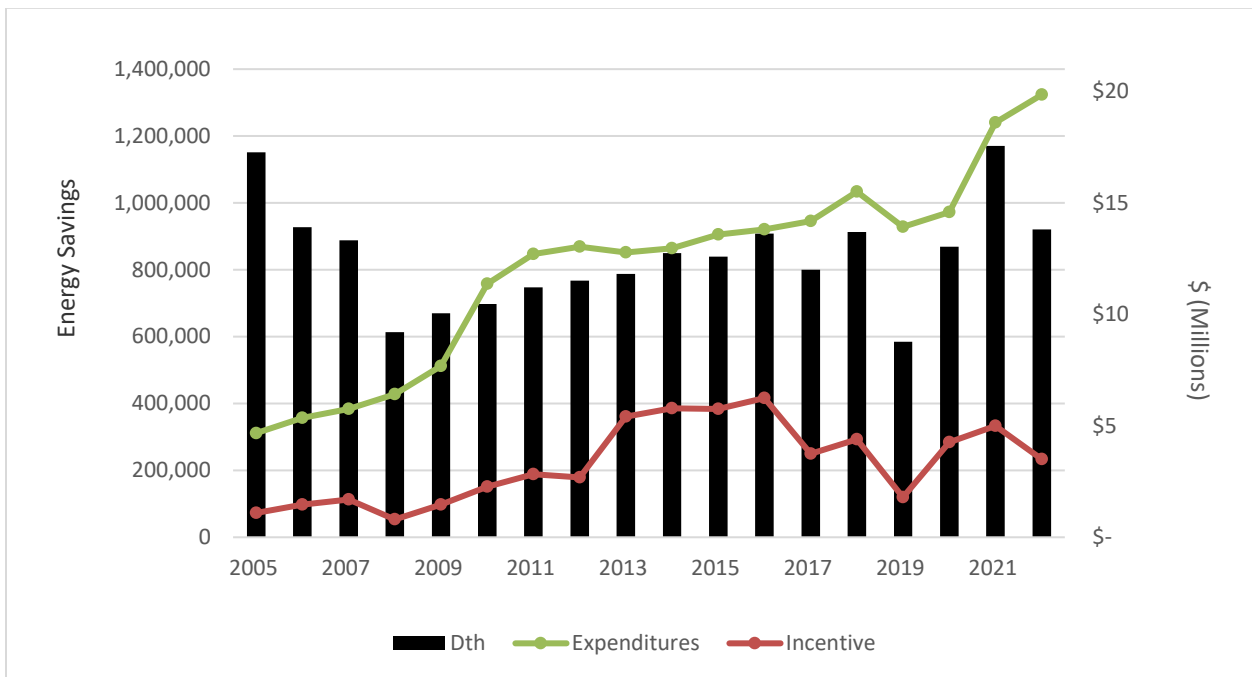
The Company’s cumulative achievements, since 1992, are nearly 12,220 GWh of annual electric energy saved, 20.2 million Dth of natural gas saved, and more than \$7.54 billion in utility net benefits achieved, with total spending of \$2.2 billion. Figures 1 and 2 highlight total achievements and spending for electric and natural gas programs from 2005 to 2022.



**Figure 1: Xcel Energy's 2005-2022 Electric CIP Achievements**



**Figure 2: Xcel Energy's 2005-2021 Natural Gas CIP Achievements**



**Table 2: Xcel Energy's Electric and Natural Gas Targets 2022**

	Electric Participants	Electric Budget	DR Gen kW	EE Gen kW	Generator kWh	Electric Utility	Electric Societal	Gas Participants	Gas Budget	Dth Savings	Gas Utility	Gas Societal
<b>Regulatory Name</b>												
Business Energy Assessments	241	\$1,928,206	3	1,307	14,781,467	2.39	1.40	15	\$243,216	10,667	3.34	4.22
Business New Construction	287	\$10,603,395	243	13,294	54,617,918	3.37	1.51	131	\$926,427	87,555	7.93	1.69
Commercial AC Control	4,950	\$3,400,130	5,947	0	581,034	0.89	1.00	150	\$37,680	1,155	1.34	1.93
Commercial Efficiency	535	\$4,472,445	1,866	5,379	48,149,679	4.91	1.85	71	\$342,238	43,150	9.94	4.25
Commercial Streamlined Assessment	312	\$1,836,494	8	2,490	13,315,960	4.29	1.80	39	\$137,292	9,161	5.06	4.14
Compressed Air Efficiency	272	\$1,346,855	302	1,532	11,074,432	2.92	1.87	0	\$0	0	N/A	0.00
Custom Efficiency	30	\$990,288	0	681	4,852,951	2.49	4.29	7	\$145,973	15,389	8.55	6.48
Data Center Efficiency	43	\$452,806	280	295	6,062,423	5.61	1.64	0	\$0	0	N/A	0.00
Efficiency Controls	64	\$738,433	286	145	10,795,807	4.26	1.62	15	\$69,460	12,016	11.21	2.06
Electric Rate Savings	36	\$567,283	6,433	0	12,688	3.30	3.45	0	\$0	0	N/A	0.00
Energy Information Systems	42	\$769,470	0	539	4,962,424	2.17	1.71	6	\$39,054	5,816	5.62	4.66
Foodservice Equipment	69	\$55,667	5	86	592,926	5.24	3.38	142	\$113,449	11,672	5.96	2.69
HVAC+R	3,681	\$4,682,526	77	5,673	28,791,116	3.20	2.07	1,023	\$1,351,553	100,846	4.06	2.85
Lighting	15,832	\$13,806,704	0	22,283	146,979,329	4.75	1.76	0	\$0	0	N/A	0.00
Multi-Family Building Efficiency	7,569	\$1,644,242	74	617	3,990,789	1.09	1.16	2,523	\$664,109	22,886	1.61	3.32
Non-Profit Energy Savings Program	104	\$732,877	10	259	1,402,223	0.83	0.87	24	\$305,324	6,354	1.10	1.26
Peak Partner Rewards	45	\$1,940,051	43,331	0	256,069	1.39	2.05	0	\$0	0	N/A	0.00
Process Efficiency	371	\$7,129,371	1,399	12,612	73,399,890	5.26	3.89	47	\$1,069,838	227,111	11.29	4.39
Self-Direct	0	\$5,150	0	0	0	N/A	0.00	0	\$1,920	0	N/A	0.00
<b>Business Segment EE and DR Total</b>	<b>34,483</b>	<b>\$57,102,393</b>	<b>60,263</b>	<b>67,192</b>	<b>424,619,124</b>	<b>3.72</b>	<b>2.18</b>	<b>4,193</b>	<b>\$5,447,532</b>	<b>553,779</b>	<b>6.28</b>	<b>3.01</b>
Business Education	13,000	\$197,000	0	0	0	N/A	0.00	1,500	\$25,000	0	N/A	0.00
Empower Facilities	0	\$497,492	0	0	0	N/A	0.00	0	\$26,184	0	N/A	0.00
Energy Benchmarking	0	\$121,959	0	0	0	N/A	0.00	0	\$30,490	0	N/A	0.00
Small Business Lamp Recycling	57,000	\$43,863	0	0	0	N/A	0.00	0	\$0	0	N/A	0.00
<b>Business Segment with Indirect Participants</b>	<b>104,483</b>	<b>\$57,962,707</b>	<b>60,263</b>	<b>67,192</b>	<b>424,619,124</b>	<b>3.66</b>	<b>2.17</b>	<b>5,693</b>	<b>\$5,529,206</b>	<b>553,779</b>	<b>6.18</b>	<b>3.00</b>
Efficient New Homes Construction	5,759	\$1,001,518	1	1,827	4,344,002	3.52	1.59	3,494	\$1,610,512	47,520	2.43	1.18
Energy Efficient Showerhead	5,840	\$34,625	0	66	810,168	6.21	36.91	49,400	\$267,614	26,781	4.39	38.04
Home Energy Insights	230,000	\$1,429,827	0	5,492	21,643,697	1.75	2.45	129,000	\$170,602	45,678	2.50	3.70
Home Energy Squad	9,149	\$2,272,320	950	1,546	8,818,627	2.13	2.73	3,362	\$755,624	21,136	1.22	6.57
Home Lighting	224,476	\$5,634,631	0	21,534	156,826,897	11.76	8.02	0	\$0	0	N/A	0.00
Insulation Rebate Program	1,381	\$91,546	25	231	221,301	3.00	1.02	996	\$247,485	19,689	4.62	1.20
Refrigerator Recycling	10,200	\$1,254,912	124	895	6,485,616	1.24	0.83	0	\$0	0	N/A	0.00
Residential Demand Response	31,515	\$9,413,511	20,247	1,000	528,467	1.31	1.49	14,650	\$311,144	29,999	4.23	4.30
Residential Heating and Cooling	18,510	\$4,815,298	123	7,775	8,678,584	2.35	1.29	19,540	\$2,962,941	120,130	3.12	1.73
School Education Kits	39,500	\$1,564,721	0	2,680	10,720,881	3.43	4.27	19,000	\$456,741	88,264	8.43	29.50
Whole Home Efficiency	234	\$43,536	7	37	111,932	1.54	1.05	212	\$123,218	3,164	1.81	1.12
<b>Residential Segment EE and DR Total</b>	<b>576,564</b>	<b>\$27,556,444</b>	<b>21,476</b>	<b>43,083</b>	<b>219,190,172</b>	<b>3.93</b>	<b>3.32</b>	<b>239,654</b>	<b>\$6,905,882</b>	<b>402,361</b>	<b>3.22</b>	<b>3.07</b>
Consumer Education	477,000	\$783,000	0	0	0	N/A	0.00	375,000	\$522,000	0	N/A	0.00
Home Energy Audit	3,200	\$696,911	0	0	0	N/A	0.00	2,600	\$576,189	0	N/A	0.00
Residential Lamp Recycling	513,000	\$383,319	0	0	0	N/A	0.00	0	\$0	0	N/A	0.00
Workforce Development	51	\$1,409,300	0	0	0	N/A	0.00	9	\$248,700	0	N/A	0.00
<b>Residential Segment with Indirect Participants</b>	<b>1,569,815</b>	<b>\$30,828,974</b>	<b>21,476</b>	<b>43,083</b>	<b>219,190,172</b>	<b>3.51</b>	<b>3.11</b>	<b>617,263</b>	<b>\$8,252,771</b>	<b>402,361</b>	<b>2.69</b>	<b>2.89</b>
Affordable Efficient New Home Construction	216	\$204,551	1	56	351,115	0.97	0.94	129	\$657,064	16,298	2.10	2.12
Home Energy Savings Program	4,060	\$2,254,946	47	181	1,008,489	0.22	0.64	807	\$2,789,946	9,297	0.20	0.73
Low Income Home Energy Squad	1,793	\$705,510	364	338	1,225,616	1.06	1.63	788	\$354,271	5,966	0.74	4.27
Multi-Family Energy Savings Program	3,966	\$1,920,680	0	226	605,880	0.15	0.61	0	\$0	0	N/A	0.00
<b>Low Income Segment Total</b>	<b>10,035</b>	<b>\$5,085,687</b>	<b>412</b>	<b>801</b>	<b>3,191,101</b>	<b>0.34</b>	<b>0.75</b>	<b>1,724</b>	<b>\$3,801,280</b>	<b>31,561</b>	<b>0.58</b>	<b>1.23</b>
Advertising & Promotion	0	\$6,310,688	0	0	0	N/A	0.00	0	\$1,564,418	0	N/A	0.00
Application Development & Maintenance	0	\$3,860,250	0	0	0	N/A	0.00	0	\$625,656	0	N/A	0.00
CIP Training	0	\$312,435	0	0	0	N/A	0.00	0	\$103,023	0	N/A	0.00
Partners in Energy	0	\$889,919	0	0	0	N/A	0.00	0	\$231,901	0	N/A	0.00
Regulatory Affairs	0	\$539,303	0	0	0	N/A	0.00	0	\$150,454	0	N/A	0.00
<b>Planning Segment Total</b>	<b>0</b>	<b>\$11,912,594</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>N/A</b>	<b>0.00</b>	<b>0</b>	<b>\$2,675,452</b>	<b>0</b>	<b>N/A</b>	<b>0.00</b>
Codes and Standards	0	\$80,000	0	0	0	N/A	0.00	0	\$20,000	0	N/A	0.00
Market Research	0	\$1,232,147	0	0	0	N/A	0.00	0	\$263,897	0	N/A	0.00
Product Development	0	\$5,204,376	0	0	0	N/A	0.00	0	\$146,068	0	N/A	0.00
<b>Research, Evaluations, &amp; Pilots Segment Total</b>	<b>0</b>	<b>\$6,516,523</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>N/A</b>	<b>0.00</b>	<b>0</b>	<b>\$429,965</b>	<b>0</b>	<b>N/A</b>	<b>0.00</b>
<b>Portfolio Total</b>	<b>1,684,334</b>	<b>\$112,306,486</b>	<b>82,152</b>	<b>111,076</b>	<b>647,000,397</b>	<b>2.87</b>	<b>2.16</b>	<b>624,679</b>	<b>\$20,688,674</b>	<b>987,701</b>	<b>2.83</b>	<b>2.57</b>
Energychange	0	\$530,100	0	0	0	N/A	0.00	0	\$58,900	0	N/A	0.00
Energy Smart	105	\$508,830	0	0	0	N/A	0.00	8	\$30,555	0	N/A	0.00
One-Stop Shop	2,742	\$18,789,160	0	14,767	80,035,589	2.06	1.45	155	\$100,915	7,750	3.37	5.87
Trillion Btu	0	\$174,600	0	0	0	N/A	0.00	0	\$19,400	0	N/A	0.00
<b>Anticipated Alternative Filings Total</b>	<b>2,847</b>	<b>\$20,002,690</b>	<b>0</b>	<b>14,767</b>	<b>80,035,589</b>	<b>1.93</b>	<b>2.85</b>	<b>163</b>	<b>\$209,770</b>	<b>7,750</b>	<b>0.00</b>	<b>0.06</b>
Assessments	0	\$1,974,981	0	0	0	N/A	0.00	0	\$345,600	0	N/A	0.00
Electric Utility Infrastructure	0	\$0	0	0	0	N/A	N/A	0	\$0	0	N/A	0.00
<b>Portfolio Total w Alternative Filings</b>	<b>1,687,181</b>	<b>\$134,284,157</b>	<b>82,152</b>	<b>125,843</b>	<b>727,035,986</b>	<b>2.69</b>	<b>2.19</b>	<b>624,842</b>	<b>\$21,244,044</b>	<b>995,451</b>	<b>2.76</b>	<b>2.55</b>

**Table 3: Xcel Energy's Electric and Natural Gas Achievements 2022**

Regulatory Name	Electric Participants	Electric Spend	DR Gen kW	EE Gen kW	Generator kWh	Electric Utility	Electric Societal	Gas Participants	Gas Spend	Dth Savings	Gas Utility	Gas Societal
Business Energy Assessments	26	\$574,576	0	31	821,095	0.15	0.55	3	\$68,384	0	N/A	0.57
Business New Construction	161	\$11,154,901	0	13,768	71,230,552	3.86	5.86	53	\$1,311,762	122,543	7.85	1.78
Commercial AC Control	1,551	\$1,620,837	2,059	1,639	131,247	1.37	1.25	1	\$0	347	#DIV/0!	5.68
Commercial Efficiency	300	\$2,680,970	0	3,770	21,612,976	3.77	1.74	19	\$241,437	25,951	2.37	1.89
Commercial Streamlined Assessment	202	\$1,818,581	1	1,533	6,993,260	1.99	1.80	22	\$90,101	7,360	4.48	2.28
Compressed Air Efficiency	142	\$762,073	0	753	5,257,058	3.12	2.44	0	\$0	0	N/A	0.00
Custom Efficiency	38	\$951,123	0	471	5,046,305	1.71	4.33	19	\$210,826	23,425	6.89	2.21
Data Center Efficiency	3	\$79,974	0	33	319,292	2.04	1.57	0	\$0	0	N/A	0.00
Efficiency Controls	22	\$522,799	0	367	8,128,275	5.53	2.87	6	\$55,963	7,447	8.62	1.41
Electric Rate Savings	47	\$374,803	27,030	0	53,243	24.71	25.83	0	\$0	0	N/A	0.00
Energy Information Systems	49	\$660,028	0	860	6,623,498	3.41	1.82	0	\$22,792	0	N/A	0.00
Foodservice Equipment	16	\$43,497	0	43	292,650	3.21	2.73	22	\$88,451	5,576	3.91	2.32
HVAC+R	1,125	\$4,112,630	0	4,641	19,982,029	2.65	1.67	435	\$1,536,406	138,603	3.61	1.87
Lighting	3,084	\$8,189,039	0	13,089	81,567,704	4.33	1.69	0	\$0	0	N/A	0.00
Multi-Family Building Efficiency	23,570	\$1,703,149	0	452	3,768,177	0.94	1.18	5,868	\$595,765	7,095	0.63	2.75
Non-Profit Energy Savings Program	0	\$2,975	0	0	0	N/A	0.00	0	\$3,728	0	N/A	0.00
Peak Partner Rewards	37	\$464,673	9,556	0	1,478	1.50	1.96	0	\$0	0	N/A	0.00
Process Efficiency	347	\$7,655,060	0	11,319	72,437,310	4.45	3.54	35	\$475,978	99,790	9.11	4.23
Self-Direct	3	\$115,118	0	130	962,792	4.19	2.50	0	\$0	0	N/A	0.00
<b>Business Segment EE and DR Total</b>	<b>30,723</b>	<b>\$43,486,804</b>	<b>38,647</b>	<b>52,900</b>	<b>305,228,942</b>	<b>3.70</b>	<b>2.87</b>	<b>6,483</b>	<b>\$4,701,593</b>	<b>438,136</b>	<b>5.07</b>	<b>2.09</b>
Business Education	13,300	\$222,519	0	0	0	N/A	0.00	2,087	\$39,468	0	N/A	0.00
Empower Facilities	0	\$355,323	0	0	0	N/A	0.00	0	\$25,450	0	N/A	0.00
Energy Benchmarking	506	\$134,256	0	0	0	N/A	0.00	0	\$30,550	0	N/A	0.00
Small Business Lamp Recycling	59,152	\$54,965	0	0	0	N/A	0.00	0	\$0	0	N/A	0.00
<b>Business Segment with Indirect Participants</b>	<b>103,681</b>	<b>\$44,253,867</b>	<b>38,647</b>	<b>52,900</b>	<b>305,228,942</b>	<b>3.64</b>	<b>2.85</b>	<b>8,570</b>	<b>\$4,797,061</b>	<b>438,136</b>	<b>4.97</b>	<b>2.09</b>
Efficient New Homes Construction	3,737	\$1,105,644	0	1,400	6,015,947	3.55	1.36	2,380	\$2,435,483	63,631	2.21	1.31
Energy Efficient Showerhead	788	\$66,048	0	16	192,381	0.77	9.50	2,793	\$37,521	6,142	7.18	77.71
Home Energy Insights	633,219	\$1,520,297	0	4,109	19,174,288	1.35	1.93	225,389	\$154,752	69,215	0.61	0.90
Home Energy Squad	3,126	\$745,348	0	365	2,476,988	1.75	2.34	1,185	\$264,634	4,902	0.81	3.53
Home Lighting	363,713	\$8,618,383	0	33,620	248,059,214	12.82	10.29	0	\$0	0	N/A	0.00
Insulation Rebate Program	712	\$77,956	0	170	190,047	2.38	0.67	611	\$307,868	17,179	2.99	0.70
Refrigerator Recycling	4,337	\$758,816	0	615	4,633,972	1.35	2.10	0	\$0	0	N/A	0.00
Residential Demand Response	30,538	\$7,592,746	26,789	507	284,335	2.22	2.11	823	\$25,970	4,532	7.65	3.77
Residential Heating and Cooling	21,608	\$6,186,240	0	13,058	7,846,229	2.74	1.44	13,505	\$4,028,885	234,697	4.50	2.43
School Education Kits	36,882	\$1,375,793	0	3,000	9,857,946	3.84	6.04	19,786	\$431,793	63,155	6.42	46.74
Whole Home Efficiency	64	\$40,949	0	40	92,037	1.64	1.12	61	\$73,887	4,189	4.04	1.57
<b>Residential Segment EE and DR Total</b>	<b>1,098,724</b>	<b>\$28,088,221</b>	<b>26,789</b>	<b>56,899</b>	<b>298,823,384</b>	<b>5.63</b>	<b>4.33</b>	<b>266,533</b>	<b>\$7,760,794</b>	<b>467,643</b>	<b>3.64</b>	<b>2.91</b>
Consumer Education	524,215	\$943,169	0	0	0	N/A	0.00	405,216	\$586,065	0	N/A	0.00
Home Energy Audit	4,329	\$673,525	0	0	0	N/A	0.00	1,947	\$538,940	0	N/A	0.00
Residential Lamp Recycling	335,194	\$250,879	0	0	0	N/A	-0.22	0	\$0	0	N/A	0.00
Workforce Development	0	\$1,286,306	0	0	0	N/A	0.00	0	\$397,805	0	N/A	0.00
<b>Residential Segment with Indirect Participants</b>	<b>1,962,462</b>	<b>\$31,242,100</b>	<b>26,789</b>	<b>56,899</b>	<b>298,823,384</b>	<b>5.06</b>	<b>4.09</b>	<b>673,696</b>	<b>\$9,283,604</b>	<b>467,643</b>	<b>3.05</b>	<b>2.75</b>
Affordable Efficient New Home Construction	16	\$271,960	0	8	103,094	0.18	0.69	1	\$14,051	27	0.16	0.60
Home Energy Savings Program	2,206	\$1,852,053	0	215	1,149,511	0.29	0.66	377	\$2,648,464	7,955	0.21	0.63
Low Income Home Energy Squad	649	\$168,258	0	68	431,767	1.24	1.90	249	\$82,636	1,184	0.63	2.57
Multi-Family Energy Savings Program	2,541	\$1,610,327	0	168	820,180	0.23	0.61	0	\$0	0	N/A	0.00
<b>Low Income Segment Total</b>	<b>5,412</b>	<b>\$3,902,598</b>	<b>0</b>	<b>459</b>	<b>2,504,552</b>	<b>0.30</b>	<b>0.68</b>	<b>627</b>	<b>\$2,745,150</b>	<b>9,165</b>	<b>0.22</b>	<b>0.67</b>
Advertising & Promotion	0	\$5,064,420	0	0	0	N/A	0.00	0	\$1,228,516	0	N/A	0.00
Application Development & Maintenance	0	\$694,294	0	0	0	N/A	0.00	0	\$175,284	0	N/A	0.00
CIP Training	0	\$169,917	0	0	0	N/A	0.00	0	\$62,328	0	N/A	0.00
Partners in Energy	0	\$804,148	0	0	0	N/A	0.00	0	\$146,992	0	N/A	0.00
Regulatory Affairs	0	\$498,394	0	0	0	N/A	0.00	0	\$153,615	0	N/A	0.00
<b>Planning Segment Total</b>	<b>0</b>	<b>\$7,231,172</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>N/A</b>	<b>0.00</b>	<b>0</b>	<b>\$1,766,736</b>	<b>0</b>	<b>N/A</b>	<b>0.00</b>
Codes and Standards	0	\$0	0	0	0	N/A	N/A	0	\$0	0	N/A	0.00
Market Research	0	\$1,149,805	0	0	0	N/A	0.00	0	\$429,197	0	N/A	0.00
Product Development	0	\$3,508,459	0	0	0	N/A	0.00	0	\$165,795	0	N/A	0.00
<b>Research, Evaluations, &amp; Pilots Segment Total</b>	<b>0</b>	<b>\$4,658,264</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>N/A</b>	<b>0.00</b>	<b>0</b>	<b>\$594,992</b>	<b>0</b>	<b>N/A</b>	<b>0.00</b>
<b>Portfolio Total</b>	<b>2,071,555</b>	<b>\$91,288,001</b>	<b>65,436</b>	<b>110,258</b>	<b>606,556,879</b>	<b>3.51</b>	<b>2.96</b>	<b>682,893</b>	<b>\$19,187,542</b>	<b>914,944</b>	<b>2.75</b>	<b>2.21</b>
Energychange	0	\$446,592	0	0	0	N/A	0.00	0	\$127,992	0	N/A	0.00
Energy Smart	105	\$500,153	0	0	0	N/A	0.00	8	\$22,910	0	N/A	0.00
One-Stop Shop	1,621	\$9,956,044	0	8,228	41,118,931	2.09	1.51	56	\$199,467	5,560	1.82	3.64
Trillion Btu	0	\$135,071	0	0	0	N/A	0.00	0	\$16,681	0	N/A	0.00
<b>Anticipated Alternative Filings Total</b>	<b>1,726</b>	<b>\$11,037,859</b>	<b>0</b>	<b>8,228</b>	<b>41,118,931</b>	<b>1.90</b>	<b>3.03</b>	<b>64</b>	<b>\$367,051</b>	<b>5,560</b>	<b>0.65</b>	<b>0.76</b>
Assessments	0	\$1,939,856	0	0	0	N/A	0.00	0	\$302,597	0	N/A	0.00
Electric Utility Infrastructure	0	\$0	0	0	0	N/A	N/A	0	\$0	0	N/A	0.00
<b>Portfolio Total w Alternative Filings</b>	<b>2,073,281</b>	<b>\$104,265,717</b>	<b>65,436</b>	<b>118,486</b>	<b>647,675,810</b>	<b>3.27</b>	<b>2.94</b>	<b>683,000</b>	<b>\$19,857,191</b>	<b>920,504</b>	<b>2.67</b>	<b>2.19</b>



## COMPLIANCE REPORT

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

#### **Achievements as a Percentage of Sales (Minn. Stat. § 216B.421, subd. 1c)**

The table below shows our achievements as a percent of our 2017-2019 weather-normalized retail sales, adjusted for exempt customers.

**Table 4: Achievements as Percent of Sales**

Year	Electric			Natural Gas		
	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
2022	647,676	27,807,302	2.33%	920,504	76,465,185	1.20%

#### **Carry-Forward Provision (Minn. Stat. §216B.241, subd. 1c)**

The Carry-Forward Provision 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 percent electric savings goal<sup>1</sup>, we meet the eligibility guidelines for use of the carry-forward provision. However, the Company is not using any carried-forward savings from previous years for our 2022 achievement.

#### **R&D Spending Cap (Minn. Stat. § 216B.421, subd. 1e)**

Minn. Stat. § 216B.241, subd. 2(e) allows public utilities to spend up to ten percent of total CIP spending on research and development projects that meet the definition of energy conservation improvements. Prior to 2021, the maximum was 10 percent of the minimum spending requirement.<sup>2</sup> The table below demonstrates compliance with the R&D spending cap by comparing actual R&D spending to the approved R&D

<sup>1</sup> The Energy Conservation and Optimization Act of 2021 updated the minimum target to 1.75 percent; the Company will file its first Triennial under that requirement in 2022.

<sup>2</sup> Prior to passage of the Energy Conservation and Optimization (ECO) Act of 2021, utilities were required to spend a certain minimum percentage of their gross revenues on CIP; ECO removed this minimum spending requirement.

budget in the Deputy Commissioner’s November 25, 2020 Decision and the annual maximum allowed by current statute (10% of spending).

CIP Research and Development identifies, assesses, and develops new load management and energy efficiency products and services. This work allows the Company to identify and promote promising new energy saving opportunities for its customers. Consistent with the Deputy Commissioner’s Decision, a narrative summary of R&D activities and the corresponding dollar amounts is provided in the Product Development section of this report.

**Table 5: Research & Development Spending Cap**

	<b>Annual Spending Allowance (10% of actual 2022 spend)</b>	<b>Approved Budget</b>	<b>Actual Spending</b>	<b>Variance to Allowance</b>
<b>Electric</b>	\$10,426,572	\$ 5,204,376	\$ 3,508,459	\$ (6,918,113)
<b>Natural Gas</b>	\$ 1,985,719	\$ 146,068	\$ 165,795	\$ (1,819,924)
<b>Total</b>	\$12,412,291	\$ 5,350,444	\$ 3,674,254	\$ (8,738,037)

**Facilities Energy Efficiency (Minn. Stat. § 216B.241, subd. 1f)**

Statute requires all utilities to include in their conservation plans programs that facilitate professional engineering verification to qualify a building as ENERGY STAR-labeled, Leadership in Energy and Environmental Design (LEED) certified, or Green Globes-certified. The Company’s Business New Construction and Commercial Streamlined Assessment programs continue to satisfy this requirement.

**Low-Income Spending Requirement (Minn. Stat. § 216B.241, subd. 7a)**

Minn. Stat. §216B.241 requires utilities to spend at least one percent of their residential natural gas gross operating revenues (GOR) on low-income gas programs and 0.4 percent of their residential electric GOR on low-income electric programs, unless otherwise approved by the Commissioner.<sup>3</sup>

The table below shows a comparison of the actual low-income spending to the minimum spending requirement. After the initial 2021-2023 plan was filed and approved, the Company filed modifications that increased budgets within the Low-

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<sup>3</sup> ECO adjusted the minimum spending for low-income programs. While other portions of ECO will be implemented in the Company’s 2024-2026 Triennial Plan, the increase in low-income spending included specific language regarding when it would take effect. The percentages given here thus match the new requirements of ECO that were in effect in 2022.

Income segment.<sup>4</sup> The approved budgets below reflect those modifications as approved by the Deputy Commissioner.

**Table 6: Low Income Spending Requirement**

	<b>Electric</b>	<b>Natural Gas</b>	<b>Total</b>
<b>Minimum Spending Requirement</b>	\$ 4,767,230	\$ 2,834,971	\$ 7,602,201
<b>Approved Low-Income Budget<sup>5</sup></b>	\$ 5,085,687	\$ 3,801,281	\$ 8,886,968
<b>2022 Spending (Dedicated Segment)</b>	\$ 3,902,598	\$ 2,745,150	\$ 6,647,748
<b>Home Lighting - Foodbank</b>	\$ 1,052,420	-	\$ 1,052,420
<b>LI Multi-Family Building Efficiency (LI MFBE)</b>	\$ 357,661	\$ 113,195	\$ 470,857
<b>Total LI Spending</b>	\$ 5,312,680	\$ 2,858,345	\$ 8,171,025
<b>% of Minimum Spending Requirement</b>	111%	101%	107%
<b>% of Approved Budget</b>	104%	75%	92%

In alignment with hybrid low-income program requirements established in the Deputy Commissioner’s November 25, 2020 Decision<sup>6</sup> the Company has included a portion of the spending under two market rate programs in the table above. In the Home Lighting program, a portion of spending was used to provide high-efficiency light bulbs for free distribution to food bank customers. Inclusion of this spending based on the hybrid program guidance was discussed with Department Staff via courtesy notification in 2022. In addition, spending in the Multifamily Building Efficiency program to support upgrades in buildings identified as meeting low-income multifamily eligibility criteria has also been included.

The Low-Income Segment section provides greater detail on low-income program achievements and results. Table 7 provides spending and energy savings information for low-income spending in hybrid programs outside the dedicated Low-Income Segment.

<sup>4</sup> The most significant modification approved by the Deputy Commissioner on January 31, 2022. Other modifications are cited in the “Program Modification & Courtesy Notification” section of this Status Report.

<sup>5</sup> Approved Budget matches the January 22, 2021 compliance filing update plus approved program modifications filed under this docket.

<sup>6</sup> Decision, “Xcel Energy’s 2021-2023 Conservation Improvement Program Triennial Plan”, Minnesota Department of Commerce, Docket No. E,G002/CIP-20-473, November 25, 2020, pg.12-14.



**Table 7: 2022 Hybrid Program Achievement**

Program	Electric			Natural Gas		
	Participants	Electric Savings (kWh)	Actual Spend	Participants	Natural Gas Savings (Dth)	Actual Spend
<b>Home Lighting (Foodbank Distribution)</b>	258,168	37,330,376	\$1,052,420	-	-	-
<b>LI MFBE</b>	3,138	777,127	\$357,661	1,090	1,348	\$113,195
<b>Total</b>	261,306	38,107,503	\$1,410,081	1,090	1,348	\$113,195

**Pre-weatherization Measures (Minn. Stat. § 216B.241, subd. 7f)**

Statute allows utilities to spend up to 15 percent of their total low-income spending on pre-weatherization measures. In 2022, the Company spent \$349,424 on pre-weatherization measures or four percent of our low-income spending.

**Assessments (Minn. Stat. § 216B.241, subd. 8)**

Please see Assessments Segment for further details regarding assessments made under this subdivision.

**SB2030 Standards (Minn. Stat. § 216B.241, subd. 9e)**

All utilities are required to develop CIP projects to support attainment of SB2030 standards. The Business New Construction program supports the Sustainable Building 2030 performance standard in various ways. This includes providing design assistance (including the strategic planting of trees and shrubs around buildings)<sup>7</sup>, verification of equipment installation, and financial incentives for incorporating energy efficient design components.

Additionally, projects that qualify for the Energy Design Assistance program receive whole-building energy modeling and each project includes a comparison to the SB2030 standard.

**Lighting Use and Recycling Programs (Minn. Stat. § 216B.241, subd. 5)**

Utilities are required to invest in projects that encourage the use of energy efficient lighting and reclamation or recycling of spent fluorescent and high intensity discharge lamps. The Company met this requirement through its business and residential lighting and lamp recycling programs.

<sup>7</sup> Per the statute, “A utility's design assistance program must consider the strategic planting of trees and shrubs around buildings as an energy conservation strategy for the designed project.”

**Employee Expenses (Minn. Stat. § 216B.16, subd. 1)**

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 2022, the Company had a total of \$312,264 in employee expenses related to CIP. These expenses represent about 0.25 percent of our total CIP spending for 2022, which is below the Department’s recommended cap of 0.50 percent of total annual budget for expenses.

**Table 8: Miscellaneous Expenses**

	Employee Expenses	Total CIP Spending	% of Total Spending
<b>Electric</b>	\$273,826	\$104,265,717	0.26%
<b>Natural Gas</b>	\$ 38,437	\$ 19,857,191	0.19%
<b>Total</b>	\$312,264	\$124,122,907	0.25%

**Table 9: Summary of 2022 Employee Expenses**

Employee Expense Category	Electric Amount	Natural Gas Amount	Total
Airfare	\$33,064	\$6,008	\$39,071
Car Rental	\$853	\$11	\$864
Taxi/bus	\$4,103	\$419	\$4,522
Mileage	\$23,643	\$3,529	\$27,172
Conferences/Seminars/Training	\$100,260	\$11,095	\$111,355
Hotel	\$40,810	\$7,131	\$47,941
Business Meals- Employees Only	\$22,024	\$5,954	\$27,979
Business Meals- Including Non-Employees	\$19,010	\$2,341	\$21,351
Parking	\$4,586	\$688	\$5,275
Personal Communication	\$10,589	\$1,247	\$11,836
Other Employee Expenses	\$14,884	\$14	\$14,898
<b>Total</b>	<b>\$273,826</b>	<b>\$38,437</b>	<b>\$312,264</b>

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. We report these expenses at the level of detail available from a query of our accounting system.

**Distributed Energy Resources Spending Cap (Minn. Stat. §216B.2411)**

Utilities may spend up to five percent of their total energy conservation improvement spending on distributed generation projects. In 2022, the Company did not have any distributed energy resources spending in CIP.

## **PROGRAM MODIFICATIONS & COURTESY NOTIFICATIONS**

Xcel Energy provides the following information regarding the formal and informal modifications to our 2022 Conservation Improvement Program that were made and approved in 2022 or went into effect in 2022.<sup>8</sup>

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%.

### **Formal Modifications**

#### Business Lighting Efficiency

In its July 22, 2022 Formal Modification, the Company proposed to increase its program budget and savings goals to add several new measures to the business lighting program including:

- New horticulture LED grow lighting measures;
- The addition of four luminaire level lighting control (LLLC) measures;
- The addition of LLLC to Network Lighting Controls;
- Revisions to the lighting control assumptions; and
- The addition of a three-foot LED linear Tube.

The Deputy Commissioner approved our request on September 22, 2022.

#### Empower Facilities

The Company requested to add a new indirect impact program called Empower Facilities to the business segment of its CIP portfolio on May 6, 2022. The program aims to support current direct impact business programs by reducing the barriers for customers and offering a comprehensive approach to managing their energy needs. The Deputy Commissioner approved our request on August 11, 2022. This program

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<sup>8</sup> The Deputy Commissioner requires utilities to include in their annual status reports a description of all program modifications and changes not requiring Deputy Commissioner approval in order to keep the Department and other interested parties informed of their activities. In the Matter of Xcel Energy's 2020 Conservation Improvement Program Triennial Plan, Docket No. E,G002/CIP-16-115, et al., Deputy Commissioner Decision, p. 41 (Nov. 26, 2020).

was launched in October 2022 and we present further details on the program within our 2022 Status Report.

### HVAC&R Solutions

The Company proposed to add several new measures to the HVAC&R program in its July 22, 2022 formal modification. Specifically, the proposal was to:

- Add a generalized mini-split heat pump measure that can be applied to different space types,
- Add a direct expansion air-cooled condensing units measure for cases where refrigerant circuits are replaced without alteration to HVAC fans,
- Add switched reluctance motors and non-fractional electronically commutated (ECMS) measures as prescriptive measures based on the Company's experience with a substantial number of these as custom measures, and
- Adjust costs for Upgrade Motor and Enhanced Motor measures to scale costs based on the efficiency of the installed motor, rather than a fixed cost.

The Deputy Commissioner approved our request on September 22, 2022.

### Low-Income Spending Requirement

As a result of the Energy Conservation and Optimization Act, the Company submitted its proposal to increase low-income spending for both 2022 and 2023 on November 1, 2021. These changes were approved by the Deputy Commissioner on January 31, 2022. This approval approved increased program goals, increased marketing and outreach spending and updated equipment costs, additional dehumidifier replacement and recycling and renter kits measures, and clarification of eligibility for heat pump water heaters. These changes took effect in February of 2022.

### Multi-Program Adjustment

The Company submitted a modification to adjust eight programs on October 28, 2022: Home Energy Squad, Home Energy Savings, Multifamily Energy Savings, Low-Income Home Energy Squad, Residential Heating and Cooling, Whole Home Efficiency, Residential Demand Response and HVAC+R.

These changes were to add a behavior demand response option to Residential Demand Response and to update measures for dehumidifiers and air conditioners/heat pumps as a result of changes to the Technical Reference Manual or code. These changes were approved on January 18, 2023 and will only impact programs in the 2023 program year.

### Residential Heating and Cooling Program

The Company inadvertently included in its 2021-2023 CIP Plan a measure for the installation of a residential ground source heat pump into an existing home, utilizing a baseline comparison of an existing gas furnace heating system. This measure is a case of a fuel switching measure, which is currently not allowed under CIP guidelines. The Company proposed to remove this measure to ensure the program remains consistent with current guidelines. The Deputy Commissioner approved on January 31, 2022 and retroactive changes were made.

### School Education Kits

The Company requested the following measures be added to the School Education Kits program on November 17, 2021.

- 5 Watt Candle LED bulb
- 6 Watt Globe LED bulb
- 15 Watt LED bulb
- 8 Watt Reflector LED bulb
- 4 Watt, 8 Watt, and 14 Watt – Three-way LED bulb

The Deputy Commissioner approved on January 31, 2022.

The Company requested to make the following changes to the School Education Kits program in its July 22, 2022 formal modification: (1) Phase out 15W LED bulbs and replace with 13W LED bulbs and (2) Claim savings from nightlights, which have been included in the kits, going forward. The Deputy Commissioner approved our request on September 22, 2022.

### **Courtesy Notifications**

#### Affordable Efficient New Home Construction

Affordable Efficient New Home Construction relaxed its location requirements. For-profit builders working in concert with public affordable housing agencies (or similar) are exempt from location requirements. The Company submitted this courtesy notification on April 5 and received notice by the Department on April 8.

#### Business Lighting

The Lighting Efficiency program offers LED lamp discounts to customers in the Midstream Lighting program through participating distributors. To motivate customers to choose high-efficiency LED lamp options, the Company plans added lamp measures to the downstream Retrofit and New Construction Prescriptive Rebate products. These changes will capture sales from online or non-participating

distributors. The Company submitted this courtesy notification on June 7 and received notice by the Department on June 21.

#### Food Bank Lighting Distribution

The Company has distributed LEDs to food banks through our Home Lighting program since the COVID pandemic in 2020, our courtesy notification requested that the Company include this spending towards our low-income spending requirement. The Company submitted this courtesy notification on November 4 and received notice by the Department on November 10.

#### Home Energy Insights

The Company submitted a courtesy notification on August 1 letting the Department know that High Bill Alerts were launched on July 25, 2022, after a delay in the original launch plan. We received notice by the Department on August 2.

#### Commercial Efficiency

The Company has seen a rising number of Mid-Sized Commercial Customers who want to participate in the Commercial Efficiency program. To accommodate this interest, the Company lowered the participation threshold and admit customers with at least 0.3 GWh or 2,000 Dth of conservation potential. The Company submitted this courtesy notification on September 15 and received notice by the Department on September 15.

#### Residential Demand Response

The Company notified the Department of the addition of Nest Thermostats to the Bring-your-own thermostat option as part of AC Rewards. The notification was submitted on October 12 and we received notice by the Department on October 22.

#### HVAC+R

The program only allowed customers that use at least 10 GWh and/or 100,000 Dth per year to bundle custom energy efficiency projects together into a single project. Combining the projects together like this allows them to be evaluated with a single cost benefit test which streamlines the project timeline. The current policy creates barriers to small and medium sized customers who are trying to implement more holistic energy solutions, so the Company removed this minimum use requirement for HVAC+R custom projects. The Company submitted this courtesy notification on November 17 and received notice by the Department on November 29.

### Multi-Family Building Efficiency

The Company notified the Department on July 26 through a courtesy notification that the Multi-Family Building Efficiency program began to offer Trade Incentives to enrolled Trade Partners starting in mid-August.

The Company notified increased bonuses for Low-Income participants up to 200 percent of the cost of equipment on December 8 and received notice by the Department on December 10.



## LOW-INCOME AND MULTI-FAMILY COMPLIANCE

### Low-Income and Renter Participation

In the November 25, 2020 Decision the Deputy Commissioner required utilities to clearly report the following metrics in their annual status reports:

- the estimate of anticipated and actual low-income residential customer participation levels for each program,
- the estimate of anticipated and actual residential rental customer participation levels for each program,
- for programs that make use of the low-income multifamily policy guidance, the number of buildings and units served by market-rate versus affordable housing through the program.

The Multi-Family Energy Savings Program (MESP) and Multi-Family Building Efficiency (MFBE) Programs make use of the low-income multifamily policy guidance. The MESP program only serves income-qualified properties, therefore, 100 percent of the participants are income-qualified. The MFBE program serves both income-qualified and market rate customers. The Company reports on number of buildings and associated units of these programs in Table 10 below.

**Table 10: Number of Units/Buildings  
Market-rate versus Affordable Housing**

	<b>Multi-Family Building Efficiency (Market Rate)</b>	<b>Multi-Family Energy Savings Program (Affordable Housing)</b>
<b># of Buildings</b>	615	133
<b># of Units</b>	23,570	1,476

These remaining metrics are shown in Tables 11 through 14.

**Table 11: Electric Program Low-Income Participation**

2022	Anticipated			Actual		
	Participants	Low-Income Participants	Percent of Participation	Participants	Low-Income Participants	Percent of Participation
<b><u>Business Segment</u></b>						
Multi-Family Building Efficiency	7,569	6,502	86%	23,570	3,138	13.3%
<b><u>Residential Segment</u></b>						
Efficient New Home Construction	5,759	22	0.4%	3,737	6	0.2%
Energy Efficient Showerhead	5,840	510	8.7%	788	5	0.6%
Home Energy Insights	230,000	8,973	3.9%	633,219	Unable to track	
Home Energy Squad	9,149	184	2.0%	3,126	3	0.1%
Home Lighting	224,476	1,336	0.6%	363,713	Unable to track	
Insulation Rebate	1,381	36	2.6%	712	0	0.0%
Refrigerator Recycling	10,800	226	2.1%	4,337	25	0.6%
Residential Demand Response	31,515	1,524	4.8%	30,538	145	0.5%
Residential Heating and Cooling	18,510	282	1.5%	21,608	27	0.1%
School Education Kits	39,500	15,129	38.3%	36,882	Unable to track	
Whole Home Efficiency	234	17	7.1%	64	0	0.0%
Consumer Education	477,000	52,470	11.0%	524,215	Unable to track	
Home Energy Audit	3,200	121	3.8%	4,329	36	0.8%
Residential Lamp Recycling	513,000	3,053	0.6%	335,194	Unable to track	
<b><u>Low Income Segment</u></b>						
Affordable Efficient New Home Construction	216	216	100%	16	16	100.0%
Home Energy Savings Program	4,060	4,060	100%	2,206	2,206	100.0%
Low Income Home Energy Squad	1,793	1,793	100%	649	649	100.0%
Multi-Family Energy Savings Program	3,966	3,966	100%	1,476	1,476	100.0%
<b>Total</b>	<b>1,587,968</b>	<b>100,419</b>	<b>6%</b>	<b>1,990,379</b>		

**Table 12: Natural Gas Program Low-Income Participation**

2022	Anticipated			Actual		
	Participants	Low-Income Participants	Percent of Participation	Participants	Low-Income Participants	Percent of Participation
<b><u>Business Segment</u></b>						
Multi-Family Building Efficiency	2,523	2,302	91.3%	5,868	1,090	18.6%
<b><u>Residential Segment</u></b>						
Efficient New Home Construction	3,494	15	0.4%	2,380	3	0.1%
Energy Efficient Showerhead	49,400	2,467	5.0%	2,793	8	0.3%
Home Energy Insights	129,000	6,035	4.7%	225,389	Unable to track	
Home Energy Squad	3,362	46	1.4%	1,185	1	0.1%
Home Lighting	-	-	-	-	-	-
Insulation Rebate	996	25	2.5%	611	0	0.0%
Refrigerator Recycling	-	-	-	-	-	-
Residential Demand Response	14,650	0	0.0%	823	5	0.6%
Residential Heating and Cooling	19,540	411	2.1%	13,505	41	0.3%
School Education Kits	19,000	7,277	38.3%	19,786	Unable to track	
Whole Home Efficiency	212	15	6.9%	61	0	0.0%
Consumer Education	375,000	41,250	11.0%	405,216	Unable to track	
Home Energy Audit	2,600	128	4.9%	1,947	24	1.2%
Residential Lamp Recycling	-	-	-	-	-	-
<b><u>Low Income Segment</u></b>						
Affordable Efficient New Home Construction	65	65	100.0%	1	1	100%
Home Energy Savings Program	340	340	100.0%	377	377	100%
Low Income Home Energy Squad	672	672	100.0%	249	249	100%
Multi-Family Energy Savings Program						
<b>Total</b>	<b>620,854</b>	<b>61,048</b>	<b>10%</b>	<b>680,191</b>		

**Table 13: Electric Program Renter Participation**

2022	Anticipated			Actual		
	Participants	Renter Participants	Percent of Participation	Participants	Renter Participants	Percent of Participation
<b><u>Business Segment</u></b>				-	-	-
Multi-Family Building Efficiency	7,569	6,502	85.9%	23,570	22,636	96.0%
<b><u>Residential Segment</u></b>						
Efficient New Home Construction	5,759	0	0.0%	3,737	111	3.0%
Energy Efficient Showerhead	5,840	204	3.5%	788	86	10.9%
Home Energy Insights	230,000	104,986	45.6%	633,219	Unable to track	
Home Energy Squad	9,149	750	8.2%	3,126	91	2.9%
Home Lighting	224,476	48,711	21.7%	363,713	Unable to track	
Insulation Rebate	1,381	25	1.8%	712	16	2.2%
Refrigerator Recycling	10,800	265	2.5%	4,337	139	3.2%
Residential Demand Response	31,515	849	2.7%	30,538	704	2.3%
Residential Heating and Cooling	18,510	270	1.5%	21,608	433	2.0%
School Education Kits	39,500	8,572	21.7%	36,882	Unable to track	
Whole Home Efficiency	234	0	0.0%	64	1	1.6%
Consumer Education	477,000	52,470	11.0%	524,215	Unable to track	
Home Energy Audit	3,200	92	2.9%	4,329	163	3.8%
Residential Lamp Recycling	513,000	111,321	21.7%	335,194	Unable to track	
<b><u>Low Income Segment</u></b>						
Affordable Efficient New Home Construction	216	216	100.0%	16	14	87.5%
Home Energy Savings Program	4,060	4,060	100.0%	2,206	315	14.3%
Low Income Home Energy Squad	1,793	1,793	100.0%	649	53	8.2%
Multi-Family Energy Savings Program	3,966	3,966	100.0%	1,476	1,476	100.0%
<b>Total</b>	<b>1,587,968</b>	<b>345,052</b>	<b>22%</b>	<b>1,990,379</b>		

**Table 14: Natural Gas Program Renter Participation**

2022	Anticipated			Actual		
	Participants	Renter Participants	Percent of Participation	Participants	Renter Participants	Percent of Participation
<b><u>Business Segment</u></b>						
Multi-Family Building Efficiency	2,523	2,302	91.3%	5,868	5,377	91.6%
<b><u>Residential Segment</u></b>						
Efficient New Home Construction	3,494	0	0.0%	2,380	70	2.9%
Energy Efficient Showerhead	49,400	901	1.8%	2,793	153	5.5%
Home Energy Insights	129,000	59,371	46.0%	225,389	Unable to track	
Home Energy Squad	3,362	76	2.3%	1,185	35	3.0%
Home Lighting	-	-	-	-	-	-
Insulation Rebate	996	22	2.2%	611	9	1.5%
Refrigerator Recycling	-	-	-	-	-	-
Residential Demand Response	14,650	0	0.0%	823	19	2.3%
Residential Heating and Cooling	19,540	256	1.3%	13,505	229	1.7%
School Education Kits	19,000	4,123	21.7%	19,786	Unable to track	
Whole Home Efficiency	-	-	-	-	-	-
Consumer Education	375,000	41,250	11.0%	405,216	Unable to track	
Home Energy Audit	2,600	73	2.8%	1,947	67	3.4%
Residential Lamp Recycling	-	-	-	-	-	-
<b><u>Low Income Segment</u></b>		0				
Affordable Efficient New Home Construction	65	0	0.0%	1	0	0.0%
Home Energy Savings Program	340	9	2.5%	377	16	4.2%
Low Income Home Energy Squad	672	70	10.4%	249	25	10.0%
Multi-Family Energy Savings Program	-	-	-	-	-	-
<b>Total</b>	<b>620,642</b>	<b>108,453</b>	<b>17%</b>	<b>680,130</b>		

## Low-Income Spending and Energy Savings

In the November 25, 2020 Decision the Deputy Commissioner required utilities to clearly report: (1) the planned and actual low-income spending and energy savings for each program, including dedicated low-income programs; and (2) for programs that make use of the low-income multifamily policy guidance, the anticipated and actual spending and energy savings achieved for the program, and from market-rate versus affordable housing participants, through the program.

The anticipated and actual low-income spending and energy savings for each program in the Company's low-income segment is shown in Tables 2 and 3 in the Executive Summary. The MESP program only serves income-qualified properties, therefore, 100 percent of the spending and energy savings is associated with income-qualified customers. The MFBE program serves both income-qualified and market rate customers, but its budget and savings goals (in Table 2) were assumed to be entirely from market-rate participants. Table 14 shows the actual spending and energy savings from market-rate versus affordable multifamily housing participants from the MESP and MFBE programs.

**Table 15: Market-Rate versus Affordable Multi-Family Energy Savings**

Project	Electric			Natural Gas	
	Spend	EE Gen kW	Generator kWh	Spend	Dth
<b>Affordable</b>					
Multi-Family Building Efficiency	\$357,661	95	777,127	\$113,195	1,348
Multi-Family Energy Savings Program	\$351,247	168	820,180	\$0	0
<b>Affordable Total</b>	<b>\$708,909</b>	<b>263</b>	<b>1,597,307</b>	<b>\$113,195</b>	<b>1,348</b>
<b>Market-Rate</b>					
Multi-Family Building Efficiency	\$1,345,488	357	2,991,051	\$482,570	5,747
Multi-Family Energy Savings Program	\$0	0	0	\$0	0
<b>Market-Rate Total</b>	<b>\$1,345,488</b>	<b>357</b>	<b>2,991,051</b>	<b>\$482,570</b>	<b>5,747</b>
<b>MULTIFAMILY TOTAL</b>	<b>\$2,054,397</b>	<b>620</b>	<b>4,588,358</b>	<b>\$595,765</b>	<b>7,095</b>
Affordable as Percent of Multifamily Total	34.5%	42.4%	34.8%	19.0%	19.0%

## Multi-Family Incentives

In the November 25, 2020 Decision the Deputy Commissioner required utilities to clearly report for programs that make use of the low-income multifamily policy guidance, the cumulative number and amount of incentives by measure type for market-rate versus affordable housing delivered through the program (e.g. total number and total value of incentives for boilers installed in market-rate and in affordable housing buildings through a multifamily program).

The MFBE incentives by measure type for market-rate versus affordable housing multifamily housing participants are shown in the below table.

**Table 16: Multi-Family Housing Participants**

	Number of Measures		Incentives	
	Market Rate	Low-Income	Market Rate	Low-Income
AC Tune-ups	0	3	\$0	\$4,339
Boiler Tune-up	49	6	\$78,338	\$3,330
Building Envelope	0	5	\$0	\$3,144
Condensing Hot Water Boiler	1	0	\$390	\$0
Domestic Hot Water Upgrades	2	2	\$1,557	\$816
ECM Circulator Pumps	8	0	\$585	\$0
Furnace Upgrades	0	1	\$0	\$3,360
HVAC Insulation	0	1	\$0	\$3,826
Common Area Lighting	29	11	\$36,352	\$28,238
Low-Flow Aerators	0	3	\$0	\$615
Efficiency Controls	4	1	\$1,628	\$1
<b>Total</b>	<b>93</b>	<b>33</b>	<b>\$118,850</b>	<b>\$47,669</b>

## **OTHER REGULATORY REQUIREMENTS**

### **Compliance with Measurement and Verification (“M&V”) Protocols**

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. In the November 25, 2020 Decision the Deputy Commissioner instructed the Company to continue to follow the Protocols. 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 the qualifying projects to the Department.

### **2022 Influenced Savings Projects**

There is one influenced savings project to report for 2022. 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 payback period failed. For such projects, Xcel Energy denies the customer any rebate for their efficiency measure, but claims Influenced Savings 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 influenced savings project in 2022. Table 17 summarizes the programs affected by these projects and the associated savings. To maintain customer anonymity, the projects will be referred using their random opportunity identification number (OID) number. As required for Influenced Savings, this project 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 0.01% of total electric savings.

**Table 17: Summary of Influenced Savings Projects**

<b>Project OID</b>	<b>Program</b>	<b>Customer kW</b>	<b>Customer kWh</b>	<b>Dth</b>
OID3393993	Custom Efficiency	79.99	332,772	0

**Influenced Project Savings Descriptions**

The 2022 Influenced Savings Project summary trackers comprise the following page.

**2022 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	
<b>Note: Please make sure there is no customer-identifying info in history</b>	
Date	Description
5/10/2018	Application received
5/30/2018	Pre- Approval
6/5/2018	Earliest Invoice
6/22/2020	Date Completed

### Health and Safety Issues (Deputy Commissioner February 22, 2021 Decision)

In the December 2020 Home Energy Savings Program (HESP) modification, the Company proposed to allocate 15 percent of the program rebate budget to fund necessary actions to remove barriers for energy-efficiency improvements. In our reply to stakeholder comments filed on January 19, 2021<sup>9</sup>, we agreed to include information on the type of health and safety measures funded in our status report. Table 18 provides a summary of the measures funded through HESP.

**Table 18: Health and Safety Projects Funded through HESP**

H&S Measure	Number of Buildings	Number of Units	Implementation Funds	Type of Efficiency Project Enabled
Asbestos Removal	3	3	\$11,345	HVAC
Exhaust Fan	94	95	\$148,490	Insulation
Misc. <sup>10</sup>	24	24	\$7,977	HVAC/Insulation
Knob & Tube	7	7	\$40,575	Insulation
Vermiculite Removal	15	15	\$90,130	Insulation
Electrical Other	16	18	\$13,726	Insulation
HVAC Exhaust/Ventilation	59	60	\$29,656	HVAC/Insulation
HVAC Plumbing	9	10	\$4,755	HVAC
Moisture Mitigation	10	11	\$2,770	Insulation
<b>Total</b>			<b>\$349,424</b>	

In comments filed on January 19, 2021 reviewers asked Xcel Energy to track health and safety issues that acted as barriers to participation in the MESP and MFBE programs. In 2022, there was no spending for health and safety dollars in the MESP and MFBE programs. According to our implementers, health and safety issues have not acted as a barrier to participation for 5+ buildings in either program.

### Dehumidification (Deputy Commissioner's Jan. 19, 2023 Decision)

The Company submitted a program modification for dehumidification measures on October 28, 2022. The modification adjusted the base measure (a 50-pint dehumidifier to a 20-pint dehumidifier). This adjustment changed how the Company was forecasting achievement for 2023. Additionally, the modification requested an adjustment to the tiers utilized for dehumidifiers when claiming actual savings.<sup>11</sup> In

<sup>9</sup> <https://www.edockets.state.mn.us/edockets/searchDocuments.do?method=showPoup&documentId={20381B77-0000-C11D-8E85-F2BA82B322BF}&documentTitle=20211-169952-01>

<sup>10</sup> The miscellaneous category may include the addition of flammable vapor sensors for a water heater, rodent removal, and other uncommon health and safety issues.

<sup>11</sup> This adjustment aligned the measure to the Technical Reference Manual.

the January 19, 2023 Decision, the Deputy Commissioner required the Company to work with Department Staff to ensure that the resources and savings reporting for dehumidifiers are reasonable and as accurate as possible and to describe the context and factors associated with these measures. In further discussion, Department Staff requested that the Company: (1) report the savings for dehumidifiers that were delivered in 2022, (2) provide an explanation that the vendor installed the most appropriately sized model, and (3) explain that there was a delay in making the modification but that the modification was approved and implemented for 2023.<sup>12</sup>

**Table 19: 2022 Dehumidification Measures**

<b>Program Name</b>	<b>Measure Type</b>	<b>Number of Measures</b>	<b>kW Savings</b>	<b>kWh Savings</b>
<b>Home Energy Savings Program</b>	ES Dehumidifier - High Capacity > 50 to <= 200	1	0.06	124
	ES Dehumidifier - Low Capacity <= 25	1	0.05	101
	ES Dehumidifier - Low Capacity > 25 to <= 50	16	1.02	1,981
<b>Low Income Home Energy Squad</b>	ES Dehumidifier - Low Capacity > 25 to <= 50	28	1.79	3,444
<b>Low Income Multi-Family</b>	ES Dehumidifier - High Capacity > 50 to <= 200	2	0.13	247
	ES Dehumidifier - Low Capacity <= 25	2	0.12	227
	ES Dehumidifier - Low Capacity > 25 to <= 50	3	0.17	317
<b>Total</b>		<b>53</b>	<b>3.34</b>	<b>6,441</b>

The Company believes that our vendors are both presenting and installing appropriately sized equipment. This is essentially why we requested the modification, because most buildings in the program had units smaller than 50-pint, so our forecast of achievable savings was overstated.

Finally, the Company does not believe there was “a delay in requesting a modification” as the request was to adjust our future forecast while further adjusting the tiers to match the Technical Reference Manual for 2023. This change is in process for projects being completed in 2023.

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<sup>12</sup> The Company requested clarification from Department Staff via email and received a response on March 13, 2023.

## EVALUATIONS OF PRODUCT IMPACT MEASUREMENT METHODS

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, financial incentive mechanism filing. This information, suggested by the Department of Public Service (now the Division of Energy Resources), was required to provide a sound basis for Xcel Energy's DSM Financial Incentive. In 1999, 2010, 2012, 2016, and again in 2020, the Commission modified Xcel Energy's financial incentive mechanism 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;
- Effects of free-ridership, free-drivership, and spillover;
- Emerging policy or customer preferences that may significantly change the role or scope of a program or group of programs within the portfolio

The Company's process and/or impact analysis efforts since 2017 are shown in the table on the following page.

**Table 20: Xcel Energy’s Process and/or Impact Analysis Efforts Since 2017**

Product	Type	Status
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 <sup>13</sup>	Completed in 2020
Compressed Air Efficiency	Process and Impact Evaluation	Completed in 2021
Commercial Efficiency/Process Efficiency (combined)	Process and Impact Evaluation	Completed in 2021
Low Income Segment	Process Evaluation	Completed in 2022
Home Energy Insights	Process Evaluation	Completed in 2022
Home Energy Squad	Process and Impact Evaluation	Completed in 2022
Lighting Efficiency	Process and Impact Evaluation	Completed in 2022

Several program evaluations included a modified impact component that examined qualitative indicators of free ridership and/or spillover. These included: 2018 Multi-Family Building Efficiency and Water Heater Rebates, 2019 Saver’s Switch/Saver’s Switch for Business, and 2020 AC Rewards evaluations.

Following is a summary of current energy savings calculation methods and M&V practices. For products where technical assumptions have changed due to evaluation

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<sup>13</sup> 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.

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 Measurement and Verification Practices**

In 2022, our prescriptive, custom, and product-specific M&V inspection processes aligned with the processes described on pages 117-122 of our 2021-2023 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. 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 in Docket No. E,G999/CIP-06-1591.

**SECTION 2:  
2022 STATUS REPORT  
DOCKET NO. E,G002/CIP-20-473**

Northern States Power Company, doing business as Xcel Energy submits this Status Report on its Conservation Improvement Program (CIP) in compliance with the Minnesota Department of Commerce Rules and the Commissioner's Decisions. This report covers the 2022 CIP year, January 1 through December 31.

In compliance with Minn. R. 7690.0550, this Status Report includes the cost-effectiveness of the overall Xcel Energy CIP Plan based on 2022 actual performance, as calculated from the utility, participant, ratepayer, and societal perspectives. The results are listed by segment and by program.

**PORTFOLIO SUMMARY**

The 2022 CIP Status Report compares the actual achievements accomplished by Xcel Energy in 2022 to the forecasts that were approved in the 2021-2023 Triennial Plan. These comparisons focus on generator kWh and kW saved, 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 2022, the electric and natural gas portfolios both achieved significant energy savings but fell short of their approved savings goals. The Company achieved nearly 648 GWh of electric savings, 184 MW of demand reduction, and 920,504 Dth of natural gas savings, while spending \$104 million on its electric programs and \$20 million on its natural gas programs.

The following tables show final results of the portfolio as well as final segment-level cost-effectiveness. Cost-effectiveness at the program level is reported in Attachment C.



## Portfolio Summary of Achievements

**Table 21: 2022 Portfolio Results**

Portfolio	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
<b>Budget</b>	\$ 134,338,158	\$104,265,717	78%	\$21,244,045	\$19,857,191	93%
<b>Generator kW</b>	207,995	183,922	88%	-	-	-
<b>kWh or Dth Saved</b>	727,035,984	647,675,810	89%	995,451	920,504	92%
<b>Participation</b>	1,687,188	2,073,281	123%	624,845	683,000	109%

**Table 22: Electric Cost-Effectiveness Results**

Segment	Societal Test	Utility Cost Test	Participant Test	Ratepayer Impact Test
<b>Business</b>	2.85	3.64	6.47	0.35
<b>Residential</b>	4.09	5.06	20.81	0.28
<b>Low-Income</b>	0.68	0.14	2.49	0.14
<b>Total</b>	2.94	3.27	10.22	0.31

**Table 23: Natural Gas Cost-Effectiveness Results**

Segment	Societal Test	Utility Cost Test	Participant Test	Ratepayer Impact Test
<b>Business</b>	2.09	4.97	1.99	0.66
<b>Residential</b>	2.75	3.05	3.58	0.56
<b>Low-Income</b>	0.67	0.22	1.52	0.17
<b>Total</b>	2.19	2.67	2.76	0.56

## BUSINESS SEGMENT

Xcel Energy's Business Segment encourages business customers to save energy by upgrading their equipment or systems to lower their energy needs resulting in a reduction to both carbon emissions and the customer's energy bill.

The Business Segment offers a variety of programs and rebates for customers, including:

- Prescriptive equipment rebate programs that lower the cost for customers to purchase and install energy-efficient equipment;
- Custom rebates that address equipment or process improvements not included in the prescriptive area;
- 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 events that increase customer and trade awareness of conservation options, leading to future participation in programs.

**Table 24: 2022 Business Segment Results**

<b>Business Segment</b>	<b>Electric Target</b>	<b>Electric Actual</b>	<b>% of Electric Target</b>	<b>Natural Gas Target</b>	<b>Natural Gas Actual</b>	<b>% of Natural Gas Target</b>
<b>Budget</b>	\$58,016,707	\$44,253,867	76%	\$5,529,206	\$4,797,061	87%
<b>Generator kW</b>	127,455	91,547	72%	-	-	-
<b>kWh or Dth Saved</b>	424,619,124	305,228,942	72%	553,779	438,136	79%
<b>Participation</b>	104,491	103,680	99%	5,695	8,570	150%

## **BUSINESS SEGMENT – DIRECT PROGRAMS**

### **Business Energy Assessment**

The Business Energy Assessment program offers study funding and electric and natural gas implementation rebates to commercial and industrial customers who improve their building performance through an energy assessment. Free implementation services are also offered to facilitate customer action on energy-saving opportunities identified in the studies. Several assessment options are available to fit the needs of different types of commercial and industrial customers including Industrial Streamlined Assessments, Building Assessments, and Targeted Building Assessments. Rebates to offset the cost of Building Operator Certification training are also available through the program.

The program is primarily marketed through our account managers, energy efficiency specialists, and approved study providers.

#### 2022 Achievement

The product officially launched in 2022 and began conducting customer assessments and implementations.

As a result of our summer program launch, the program did not meet filed electric or gas savings targets. Electric and gas spending remained under budget and in-line with program achievement and activity. Significant delays related to the finalization of third-party study provider contracts led to an official program launch date in July of 2022 directly leading to achievement shortcomings.

While the implementation performance is well short of filed targets, 2022 outputs were in-line with assumptions given the shortened program year. Assessment-based programs carry longer implementation lead times than prescriptive and custom end-use offerings as the project process begins with a whole-building identification service that prioritizes all potential implementation opportunities for the customer. The Company is confident that the strong assessment pipeline established in 2022 will assist in fulfilling the program's achievement expectations in 2023 and beyond.

### **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 three offerings: Energy Design Assistance (EDA) is an integrated design approach that uses energy modeling to identify whole building energy savings opportunities and provides customized rebates; Energy Efficient Buildings (EEB) is

typically for smaller, less complicated projects that utilize our existing custom and prescriptive rebates to develop a project-specific rebate offering for the customer; and Community Code Support is designed to improve code compliance via training and support for city code officials.

The Community Code Support program does not provide rebates and the program is currently offered to three cities. We anticipate broadening the scope of the program in 2024 and therefore, we are not currently soliciting additional participants.

The EDA and EEB components of Business New Construction are 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 consultants regularly communicate with this target audience. Xcel Energy account managers and Business Solutions Center representatives also promote the program to customers.

#### 2022 Achievement

The Business New Construction program significantly exceeded its electric and gas savings targets. The program pipeline was not affected by the pandemic since results were mainly driven from projects that were well underway when the pandemic hit.

However, the current outlook shows increasing difficulty to maintain this level of program achievement going forward for a variety of reasons.

- The construction wave is expected to slow down due to economic uncertainties, limited labor resources and supply chain challenges.
- Rent control measures approved in Minneapolis and St. Paul have developers reevaluating projects planned for those communities.
- While lighting and lighting control measures currently make up a significant portion of the program's achievement, lighting energy savings are expected to decline in future years, and energy savings from other end uses will be more difficult and costly to achieve.

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 help to businesses in mid-June 2020 by offering special rebates on equipment. These rebates were up to double the usual amount to help replace equipment that was damaged or destroyed. We also offered free energy consulting services. Although originally planned to end in mid-2021, enrollment in this offer was extended to December 31, 2021. One project under the program was completed in

2022 under these special rebate options and a handful of projects are still under construction with completions expected through 2024.

### **Commercial AC Control**

Commercial AC control consists of two offerings – Saver’s Switch for Business® and AC Rewards for Business. Both aim to reduce peak electric loads by controlling HVAC Cooling load.

Saver’s Switch for Business® is a prescriptive load management product 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, and account managers.

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 can override a control event.

### 2022 Achievement

Saver’s Switch for Business® fell short of its targets in 2022. With fewer switches than anticipated installed in the field, the program costs were also below expectations.

AC Rewards for Business increased enrollments in 2022 from previous years but fell short of its forecasts due to a challenging recruiting and enrollment environment for new participants. With fewer thermostats than anticipated installed, the program costs were also below expectations. The Company will continue to engage with the customer target segment and anticipates increased volumes in 2023 with changes to marketing and recruitment efforts, stronger involvement from its Business Solutions Center, and more streamlined back-end enrollment processes. AC Rewards for Business is still a new offering utilizing smart technology and we are still testing and learning from various marketing and advertising strategies. The Company streamlined marketing and advertising between Saver’s Switch for Business and AC Rewards for Business in 2022 to make it easier for customers to choose which offering is best for them and to drive participation.

### **Commercial Efficiency**

The Commercial Efficiency program is a strategic energy management approach to creating persistent savings and continuous improvement. The program helps

customers identify energy efficiency opportunities and implement long-term solutions to reduce energy costs. In addition to capital equipment improvements for energy efficiency and demand response opportunities, the program stresses system-level operational changes as well as cultural changes from customers' senior management, mid-management, and other personnel. The program was targeted to large commercial customers that have at least 1 GWh or 4,000 Dth of conservation potential and offers customized resources to develop a holistic, sustainable energy management plan. In 2022, the program reduced the minimum savings potential to participate from 1 GWh or 4,000 Dth to 300,000 kilowatt hours (kWh) or 2,000 Dth. This enables mid-sized customers the opportunity to participate.<sup>14</sup>

This program provides funding for studies to identify and scope energy efficiency opportunities. Rebates are available to customers who implement qualifying energy efficiency recommendations. This program is marketed by Xcel Energy's account managers.

#### 2022 Achievement

In 2022, the program did not reach its electric and gas targets. Spending for both electric and natural gas was less than forecasted.

The Commercial Efficiency program claims savings for completed projects that begin 2-3 years prior to being completed. Therefore, the program continues to have challenges meeting our triennial goals due to the pandemic and how commercial customers were affected – especially, schools, colleges and universities and retail outlets. The Company continued to work across key segments to engage customers and identify potential solutions to increase participation.

#### **Commercial Streamlined Assessment**

The Commercial Streamlined Assessment program provides business customers with on-site audits to identify electric and 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. We promote the program through the Company's account managers, energy efficiency specialists and advertising.

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<sup>14</sup> Courtesy Notification submitted to the Department September 15.

### 2022 Achievement

The program did not meet electric or gas savings targets. Electric and gas spending remained under budget and in-line with program achievement. While the savings goals were not met, the program exceeded filed participation expectations due to a record number of completed assessments. The surge in enrolled participants, which can be credited to the program prospecting efforts outlined below, have created a healthy achievement outlook for future program years but did not drive significant achievement in 2022 due to the long lead times associated with this program.

The Commercial Streamlined Assessments program served as the utility connection for three local communities that launched Energy Assessment Ordinances in 2022. The ordinances, which specifically targeted buildings that indicated an opportunity to improve energy performance, resulted in more than 50 whole-building assessments that have been completed and shared with the customers.

The program also launched a collaboration with CenterPoint Energy to combine documentation with their like-minded assessment offering, enabling a dual-fuel assessment experience for customers that qualify. The partnership kicked off informally in January of 2022 and led to more than 30 joint assessments.

### **Compressed Air Efficiency**

The Compressed Air Efficiency program offers prescriptive and custom electric rebates as well as study funding to customers who make improvements in their compressed air systems. The program encourages repair and redesign of existing systems by offering rebates for measures that include cycling dryers, purge controls, mist eliminators, new VFD compressors, no loss air drains and supply side studies.

The program is available to electric commercial and industrial customers within the Company's service area. The primary participants are mid-sized business customers with demand of more than 100 kW and/or operate in energy intensive industries.

### 2022 Achievement

The program did not meet its filed target due to ongoing customer financial constraints, elongated equipment timelines resulting from supply chain issues and industry turnover. Higher equipment prices and much longer wait times to receive equipment were common issues which caused many customers to delay these capital-intensive projects. Program expenditures aligned with performance.

Our Compressed Air studies continues to be a driving factor for implementation of energy efficiency projects for compressed air technologies in the Compressed Air program and other holistic programs such as Process Efficiency. As these studies

require in-person analysis a revived effort to meet in-person with industry professionals to encourage relationship building and program education occurred in 2022. These efforts included program staff attending conferences to increase exposure to new market trends and meeting with trade partners for training and collaboration.

### **Custom Efficiency**

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

#### 2022 Achievement

The Custom Efficiency product met both its electric and gas savings targets, bolstered by recommissioning-like savings approved under the custom program before the launch of the Business Energy Assessments program. Spending was aligned with this savings achievement; meeting the electric spend and the natural gas spend targets. Larger projects with more significant electric savings potential planned for completion in 2022 were delayed, canceled, or reduced in scope due to inflated costs and the tight labor market. The Company continues to work across key channels, including trade, to engage customers and identify potential solutions to increase participation. This includes work to equip internal teams to better identify and submit custom projects likely to pass the societal test. These efforts improved engagement earlier in the custom process to better support customers as they plan energy efficiency improvements.

### **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 focused program is tailored to the specialized needs of this unique segment. Data Center Efficiency 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.

#### 2022 Achievement

The Data Center Efficiency program did not meet the savings goal, and program spending was less than planned. 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. Given the nature of the highly tailored offering and unusually long sales cycles, achievement fell below our stated goal. Additionally, difficulty acquiring equipment within initial expected timelines caused some projects to be pushed into future years.

### **Efficiency Controls**

The Efficiency Controls program offers custom electric and gas rebates to businesses that install automated control systems resulting in energy savings and load shifting. 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 active trade partner relationships, account managers, and energy advisors.

### 2022 Achievement

The program fell short of its electric and gas targets, and program spending aligned with program achievement. Achieving significant energy savings continues to be challenging, especially during peak customer usage times. Traditional systems seldom yield demand savings and are expensive relative to their energy savings. Many controls applications fail the cost-effectiveness test due to a variety of factors, especially the continued high vacancy rate in commercial real estate. Adding controls systems are not a budget priority although there may be future opportunity in air quality or partial vacancy control strategies.

The Efficiency Controls product team has been reviewing ways to improve the product's cost-effectiveness. Initially, the team conducted significant analysis to determine the pattern and trends as to why projects are passing/failing. Next, the team met with trade partners to gather feedback on program offerings and process improvements. These findings and discussions led to additional explorative efforts to improve participation and streamline program processes. As a result of customer and engineering feedback, the Company is actively pursuing the following efforts:

- Adding more prescriptive measures beyond DCV and Economizers.
- Adding a pre-cooling component as a requirement for all controls projects to aid in passing projects. An exercise led by engineering further reviewed projects with a cooling component and those without to observe the difference in passing rate. This requirement would be an easy addition to the custom model and contribute to more passing projects.
- Applying a standard reduction in customer's project costs to account for non-energy embedded project adders such as security, fire and safety systems. This

would result in a more accurate cost-benefit analysis and decrease application wait times for trade partners and customers.

The Company will inform the Department of any changes it plans to implement through courtesy notification or formal modification request, as appropriate.

### **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.

#### 2022 Achievement

ERS customers participated in both a Real Power test on August 11, 2022, and a MISO emergency event on December 23, 2022. The Real Power test was performed in anticipation of no MISO emergency events being called in 2022. The MISO emergency event on December 23, 2022, was the second ever MISO-initiated ERS winter event, with the first dispatched on January 30, 2019.

ERS came in under budget in 2022 and exceeded forecasted targets.

### **Energy Information Systems**

The Energy Information Systems (EIS) program offers consulting resources to identify and implement an EIS and uncover energy efficient opportunities that include a variety of behavioral, operational, and capital investment measures. The EIS and consultation:

- Designs and implements web-based systems to visualize and analyze real-time energy data across the customer's facility;
- Works with the customer's facility operations staff to inform and expand knowledge of the EIS, data analysis and complex data functions;
- Identifies and implements energy-saving measures, including low- or no-cost behavioral and operational measures;
- Measures pre- and post-implementation conditions to verify savings;
- And refines and shares data analysis for the continuous improvement of energy performance.

The engagement for customers is three years. For new enrollees needing an EIS, the system is rebated and support for the installation and interpretation of the analytical system is provided. The most prominent marketing strategy has been Account Managers who identify customers who are most likely to invest, utilize and benefit from an EIS.

### 2022 Achievement

The program exceeded the regulated electric target. The Company attributes this success to the Company's and the customers' dedication to in-depth studies. Also, the customers responded to incentives by reserving capital for energy efficiency upgrades. EIS spent 85 percent of its electric budget despite exceeding the savings target. There were no natural gas projects in 2022. Natural gas spending was attributed to costs for recruitment and conducting non-passing studies.

### **Foodservice Equipment**

The Foodservice Equipment program offers prescriptive electric and gas rebates to commercial businesses that purchase and install qualifying energy efficient foodservice equipment. The main objective of the program is to influence energy savings by incentivizing customers to purchase higher efficiency equipment. The program is primarily marketed to small and large commercial customers through the Company's account managers, Business Solutions Center representatives, energy efficiency specialists and trade partners. From March to December 2022, the Company offered a bonus rebate allowing customers to earn an extra 50 percent when purchasing qualifying electric equipment. The bonus led to an uplift in participation in the program. The Company also offers a trade incentive to stimulate greater interest in the program.

### 2022 Achievement

The Foodservice Equipment program fell short of its savings and spend target for both electric and gas. Although, our rebate bonus provided an opportunity to increase program participation, the continuous economic challenges within the foodservice industry decreased demand for new equipment.

### **HVAC+R Solutions**

The HVAC+R Solutions program combined the Heating Efficiency, Motors & Drive Efficiency, Cooling Efficiency and Refrigeration into one cohesive program. In total, the HVAC+R program combines all four products and technologies into one program that offers electric and gas rebates to customers for both prescriptive and custom products.

The program is marketed through multiple channels including the Company's account managers, energy efficiency specialists, and the trade partner networks. Clean water pumps, fan energy index, DX units less than 20 tons, and motors are marketed through a group of registered distributors and trade partners that sell qualifying equipment.

To increase program awareness and participation, the program leverages various activities such as in-person meetings with customers and trade partners, utility bill inserts, email and hard copy campaigns, e-newsletters, customer and trade partner case studies, and customer and trade partner bonuses.

In September a CIP program modification was approved adding new motors and cooling rebates to the HVAC+R program and clarifying incremental costs for motors rebates.<sup>15</sup> Under the cooling technology, a Mini-Split Heat Pump measure added a cooling-only option, and a prescriptive rebate was added for Direct Expansion Air-cooled Condensing Units (ACCU), DX ACCU > 11.3 tons. The motors and drives technology moved two measures from custom to prescriptive: Switched Reluctance motors, 1- 20 horsepower (hp) and Non-fractional Electronically Commutative Motors (ECMs), 1 – 10 hp. A sliding scale was implemented for incremental costs for Upgrade and Enhanced Motors measures to improve the cost-effectiveness of the equipment, as well as the net benefits associated with each motor measure type. With this change, the Company is updating its motor costs to scale based on the efficiency of the installed motor, rather than being a fixed cost.

### 2022 Achievement

The electric portion of the program fell short of its savings target in 2022. Program participation and savings targets were increased because of the September program modification; however the added measures did not launch in 2022. Additionally, the VFD rebate bonus that launched this year was affected by supply chain issues. These issues most dramatically affected units from 25 hp to 125 hp in size; the majority of commercial customers use VFDs in this size range.

The gas portion of the program exceeded its gas savings goal by 37 percent. The overall program spending for gas exceeded the filed budget by 14 percent due to the customer and trade incentive bonuses offered in 2022.

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<sup>15</sup> Decision, *In the Matter of Xcel Energy's Program Modification Request Filed July 22, 2022*, Department of Commerce, September 22, 2022.

## **Lighting Efficiency**

The Lighting Efficiency program offers rebates to motivate business customers to purchase and install energy-efficient LED lighting. There are five rebate categories (products) available with the Lighting program:

- Fixture replacements for retrofit projects with prescriptive rebate amounts
- Fixture replacements for new construction projects with prescribed rebate amounts
- Instant rebate discounts on lamps/bulbs with screw-in or pin bases at lighting distributors
- Custom analyses for fixtures that do not fit into the other categories
- Study funding for customers who need to determine proper lighting levels for a facility

Lighting manufacturers reported a profound slowdown in lighting projects due to a downturn in the economy. This was reflected in program participation, which was down 22 percent relative to 2021. Customers are uneasy about investing in significant capital projects. Distributors also reported equipment back orders, shipping delays, and staffing shortages.

In addition to issues related to the economy, the Company experienced increased saturation of LED lighting. The Company implemented a Lighting program evaluation in 2022 to determine the impacts; recommendations from the study are listed in this document. The Company will heed the suggestions and look to improve the program as the market shifts.

To help to overcome the market challenges, the Company promoted the program by offering limited-time bonus rebates on fixtures and lamps to drive the purchase of energy-efficient lighting. Advertising and promotion were used to support the bonus rebates and drive customers to purchase LEDs. Marketing efforts also focused on developing and maintaining relationships with lighting trade partners. Trade partners continue to play a critical role in educating and motivating customers to purchase energy-efficient products. Communications focused on influencing trade partners to inform customers of the benefits of energy-efficient lighting.

The Company also implemented segmented marketing targeted at customers that received fluorescent rebates in years past. The Lighting, HVAC-R, and Food Service program managers combined efforts to develop a marketing campaign targeting mutual customers. In addition, the Company created a social media campaign to support bonus rebates. Also, the Company collaborated with Minnesota Council for

Non-Profits to offer a lamp giveaway to small non-profit customers that were likely to have diminished resources during this challenging economic time.

To encourage more customer participation, the Company added screw-in lamp rebates to the Retrofit Prescriptive product and continued to provide the same rebates in the Instant Rebate product. This effort created multiple pathways for customers to participate and added convenience.

The Company also modified cost and lifetime assumptions for lighting controls due to updated market research. Additionally, the Company incorporated new measures for the emerging luminaire level lighting control technology to offer rebates to customers that pursue lighting fixtures with integrated controls and networking capability. A CIP Modification was approved in September to add new measures in horticulture lighting, lighting controls (luminaire level lighting), and a 3-foot tube rebate to round out the linear tube category.<sup>16</sup>

### 2022 Achievement

The Company fell short of its target. A slowdown in sales has occurred due to market uncertainty and inflation. The economy, staffing shortages, supply chain issues, increases in labor prices and market saturation are some of the known issues that contributed to the shortfall. The Prescriptive Retrofit category had the largest gap in performance from previous years. In addition to issues related to the economy, the Company experienced increased saturation of LED lighting which the Company is reviewing as part of the final Lighting Program Evaluation. The spending was less than the filed budget and aligned with achieved savings.

### **Multi-Family Building Efficiency**

The Multi-Family Building Efficiency (MFBE) program is a holistic approach for 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. MFBE is focused on the entire multi-family building, including resident spaces and common areas. Rebate levels are increased for properties that serve the low-income market.

The program is marketed through a variety of venues, which include Minnesota Multi Housing Association advertising, direct mail, search engine marketing, email, and

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<sup>16</sup> Id.

event marketing. Additional interest in the program is driven through various stakeholder groups and communities.

In 2022, we initiated trade incentives of 10 percent of rebates paid to end customers offered to contractors who installed HVAC measures.<sup>17</sup>

### 2022 Achievement

The program came in slightly below filed electric budget and under energy savings targets as the implementer experienced diminished opportunities for direct installations and building owners were resistant to installing new equipment due to higher equipment costs, uncertainty in the economy and high interest rates. MFBE also competed for participation with other programs that offered increased rebate bonuses to overcome economic barriers in the market.

Natural gas savings were also short of targeted savings and spending. The primary driver of reduced gas savings was a lower number of water-related measure direct installations. This was a result of buildings either already having efficient aerators and showerheads or participants refusing to participate in that portion of the program. Additionally, there was a decline of boiler tune-ups, replacements, and other gas measure rebates.

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

### **Non-Profit Energy Savings Program**

The Non-Profit Energy Savings program serves qualifying non-profits organized and operated primarily to serve low-to-middle-income customers and communities – shelters, safe houses, treatment centers, community food and housing, individual, family, emergency, and other relief services. The program offers free education, facility assessments, direct installation of energy efficient measures, and rebates for larger system upgrades.

The Non-Profit Energy Savings program is a new program proposed in December 2020 and approved in April 2021<sup>18</sup> with the intention of providing additional benefits to customers whose lives and livelihoods have been disproportionately affected by COVID-19 and civil unrest. The Non-Profit Energy Savings program is a new

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<sup>17</sup> Courtesy Notification, July 26.

<sup>18</sup> Decision, In the Matter of Xcel Energy's CIP Modification Request Filed December 23, 2020, Department of Commerce, April 20, 2021.

program in the Company's Business Segment. While the program was approved as a program in the Company's Business Segment, the Company believes it directly benefits low-income communities by reducing operating costs for non-profits and allowing them to direct more resources to their income-qualified customers and communities.

The program was under development in 2022 and will be launched in the market in 2023. The Company identified multiple third-party program implementation prospects in 2022. A Scope of Work was drafted outlining how implementers could work with the Company to help with recruitment, facility assessments, direct measure installation, trade partner relations, project management, grant applications and marketing efforts to non-profits.

The Company's account management, community relations and program management staff have had conversations with several program prospects and potential implementers. Non-profits that did not meet the program guidelines of primarily serving low-income customers and communities and were referred to other CIP programs such as Commercial Streamlined Assessment and EnerChange.

#### 2022 Achievement

The program incurred development and labor expense but had no committed opportunities in 2022. Staffing transitions at the Company delayed the preparation and issuing of an RFP to secure a vendor to deliver the program. A request for information was sent out in December of 2022 and an RFP was issued in January 2023.

#### **Peak Partner Rewards**

The Peak Partner Rewards program is offered to business customer that can reduce their electric loads during control periods by at least 25 kW between June and September. With Peak Partner Rewards, customers can receive bill credits on their electric bill for agreeing to reduce electric usage during periods of peak energy demand. Customers will receive an additional performance-based bill credit when they reduce their electric usage by their agreed upon amount or more during control periods. The Peak Partner Rewards program is promoted directly through Xcel Energy's account management and Business Solutions Center team.

#### 2022 Achievement

The Peak Partner Rewards program did not reach its target and program spending was in line with achievement. Despite lower-than-expected participation in 2022, there continues to be promising engagement with potential customers. The customer communications plans have increased engagement and help provide feedback. During



the 2022 control season, the Company dispatched one event for the program in September. The Company will continue to evaluate the product's results to understand customer interest and participant experience, and how to better forecast the product's future growth.

### **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.

#### 2022 Achievement

In 2022, the program fell short of both its electric and gas savings targets as customers continued to face challenges with global supply chain constraints and staffing shortages. While electric spending slightly exceeded its target, it was still in line with overall cost per kWh saved. Natural gas program spending did not exceed its target and was in line with achievement.

While the program came very close to achieving its electric energy target, 2022 proved to be a challenging year. The Company continued to work across key segments to engage customers and identify potential solutions to increase participation. This included monthly account manager/customer updates, adding additional Field Sales Engineers to assist customers with submitting custom projects, and communicating bonus rebates offered by end-use programs. These efforts drove a significant increase in electric and gas savings in the final months of 2022.

### **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 for their project(s). Some customers prefer to use their in-house experience and resources, while others may choose an energy service company or other energy partner to assist them with their efforts. Customers who implement and commission qualifying projects can receive rebates based upon the amount of energy savings achieved.

#### 2022 Achievement

Three electric savings projects that had no natural gas savings contributions occurred this year. These projects, which were affected by the COVID-19 pandemic, came to fruition after multiple years of delay.

## **BUSINESS SEGMENT – INDIRECT PROGRAMS**

### **Business Education**

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

#### 2022 Results

With in-person events returning in 2022, the Business Education program exceeded participation targets while also coming in over budget. The Company was able to return to in-person events such as local business summits and expos targeting key business decision-makers and facility managers. These opportunities allowed for greater business and relationship development. The Company also explored new tactics to educate businesses about energy and money-saving offerings through print and digital opportunities with the Star Tribune and the Pioneer Press. A mixture of face-to-face event opportunities, along with print and digital advertising, will continue to be important in engaging with business customers in 2023.

### **Energy Benchmarking**

The Energy Benchmarking program offers a streamlined and consistent approach to access aggregated whole building energy data. The service relies upon the U.S. Environmental Protection Agency's ENERGY STAR Portfolio Manager to assist customers in benchmarking buildings.

The program is primarily marketed to those customers falling under a municipal or state benchmarking ordinance, such as Minneapolis' Commercial Building Energy Benchmarking and Transparency ordinance. This ordinance currently covers commercial and multifamily buildings 50,000 square feet and greater. Several other cities in Minnesota such as Edina, St. Paul, St. Louis Park and Bloomington have similar ordinances that plan to add new square footage requirements each year. Additionally, the Energy Benchmarking program encompasses the newly created Rental Usage Reporting program, which stemmed from the Minneapolis Time of Rent Ordinance that went into effect in September 2021. This program allows building owners and their authorized agents to obtain utility cost estimates at a dollar/square foot and dollar/bedroom level for their prospective tenants. As a result of continuously expanding and new ordinances, the Company expects program participation to expand continually over the next several years.

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

The Company made effective improvements to customer satisfaction by increasing stakeholder engagement and improved customer inquiry response times in 2022. Upgrades were made to the Company's software platform that is utilized to send automated aggregated energy usage data to ENERGY STAR Portfolio Manager that focused on faster processing times and increased data accuracy. The Energy Benchmarking Team also made enhancements to the Company's Rental Usage Portal, which allowed customers to be better informed on the status of their data request and made processing for the Energy Benchmarking team more streamlined. The Community Energy Reporting team made additional enhancements to its business systems, which contributed to a significant increase in data accuracy and stakeholder satisfaction which were reflected in the 2022 Community Energy Reports.

### 2022 Results

The program exceeded the filed natural gas and electric budgets. This overage in spending was caused by increased participation with new and expanded local benchmarking ordinances, in conjunction with extended reporting deadlines which strained the Company's resources. The addition of the Rental Usage Reporting program has also added increased workload to the Energy Benchmarking team which has necessitated the need for additional staff and labor hours. The Community Energy Reporting team has made technology investments to streamline and automate the process of gathering data for the Community Energy Reports which additionally contributed to added costs in 2022.

### **Empower Facilities**

Empower Facilities is designed to support the Company's current direct impact business programs by reducing barriers for customers and offering a comprehensive approach to managing their energy needs. This turnkey service assesses energy

consumption, current equipment and future plans. From this, a list of recommendations is provided from which the customer can choose the scope of their project. Then proposals for costs and services based on different scope options are created. These proposals are provided at no cost to the customer.

The customer may then choose to continue to work with the program, contracting for implementation services and/or ongoing support, under an agreed scope and financial arrangement or they may choose to implement projects independently.

Implementation services contracted for could include support in identifying qualified trade partners and equipment providers or working with the customer’s preferred partners and providers. The program also aids in preparation and submission of any applicable rebate paperwork associated with direct impact CIP programs, and identification of additional projects. Empower Facilities was a CIP modification approval issued August 11, 2022. The program was launched in October 2022.<sup>19</sup>

2022 Results

The program successfully engaged several industrial customers, confirming interest in the product. Due to the long sales cycle, no customer contracts were signed in 2022. Spend was less than budgeted due to a fourth quarter launch.

Additional Information

On August 11, 2022 the Department issued a Decision on Xcel Energy’s Empower Facilities Program Proposal that included an order that the Company report additional program performance metrics for the 2022 CIP Status Report. These metrics are provided below.

**Table 25: Participation Breakdown**

	<b>Assessment &amp; Proposals</b>	<b>Contracted for Implementation Services</b>	<b>Total Participants</b>
Empower Facilities	1	0	0

Since no contracts were signed in 2022, there were no non-CIP programs that benefited from the Empower Facilities program to-date. Additionally, there were no associated customer payments returned to the CIP tracker.

**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

<sup>19</sup> Decision, *In the Matter of Xcel Energy’s CIP Modification Request: Empower Facilities Program*, Department of Commerce, August 11, 2022.

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](http://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 Xcel Energy Home Lighting website.

### 2022 Results

The program exceeded its participation goal and budget slightly as more bulbs were recycled than expected.

## RESIDENTIAL SEGMENT

The Residential Segment provides cost-effective, direct, and indirect impact energy efficiency and demand response 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.

**Table 26: 2022 Residential Segment Results**

Residential Segment	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
<b>Budget</b>	\$30,828,975	\$31,242,100	101%	\$8,252,771	\$9,283,604	112%
<b>Generator kW</b>	64,561	83,688	130%	-	-	-
<b>kWh or Dth Saved</b>	219,190,171	298,823,384	136%	402,361	467,643	116%
<b>Participation</b>	1,569,815	1,962,462	125%	617,263	673,696	109%

### RESIDENTIAL SEGMENT – DIRECT 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.

#### 2022 Achievement

The program exceeded both the natural gas and electric customer participation targets. This results from a continued strong construction market. Electric and natural gas savings figures also exceeded filed goals proportionally to participation. While builders have continued to build homes that exceed the energy code, the average performance better than baseline has marginally declined.

#### Energy Efficient Showerheads

The Energy Efficient Showerheads program is designed to offer year-round natural gas and electric savings to customers. The program has delivered reliable and cost-effective natural gas and electric savings since 2009. Residential natural gas and combination natural gas and electric customers are eligible to receive a free kit containing energy-efficient showerheads and aerators to help reduce their energy and water use costs.

These residential customers receive a direct mail or email offer for a 1.5 gallon per minute (GPM) showerhead, a 1.5 GPM kitchen aerator, and a 1.0 GPM bathroom aerator. Customers accept the offer by mailing in a business reply card, signing up via an online portal, or calling the vendor's toll-free number prior to the promotion's deadline. Following sign-up, customers are mailed a showerhead kit free of charge. Recognizing that many customers have more than one shower and one-bathroom sink in their home, participants are offered the choice of a one- or two- bathroom kit to retrofit their current configuration, which also includes a kitchen faucet aerator. The two-bathroom kits are available at a small cost to customers while the one-bathroom kit remains free. Customers are provided with education, instructions for installing the units and thread sealing tape. Participants are later surveyed to determine the installation rates of each unit.

### 2022 Achievement

Email and direct mail promotions were the primary communication drivers to promote the showerhead kits. Marketing campaigns, such as email, resulted in lower-than-expected participation throughout most of 2022. Therefore, for both commodities, the program did not achieve targets. Direct mail, completed in Q4, provided the most effective means of communication for the product. Spend was over budget for electric saving and significantly under budget for natural gas.

### **Home Energy Insights**

Home Energy Insights is a free service offered to residential customers designed to help them save energy and money. The report compares a customer's energy consumption to similar nearby households for benchmarking an individual household's performance. The program provides personalized tips to demonstrate how much customers can save by changing their behavior. Participants receive free monthly emails or quarterly printed reports. Customers also can log on to the My Energy website where they can take a home energy assessment, customize an action plan, and get energy efficiency tips. To administer the program, the Company works with a third-party company that helps utilities meet their efficiency goals through effective customer engagement.

The program's energy savings are derived by comparing the energy usage of a control group to a treatment group. The treatment group receives reports with tips and suggestions along with alerts, based on their actions, to speed up the adoption of energy saving opportunities. The control groups improve energy consumption more organically based on both Xcel Energy and other external influences. While equipment improvements provide longer and less volatile energy savings, behavioral savings require consistent support to the customer through reminders to act on energy savings tips. The goal of report delivery and improvement, alerts and the tools

in the web portal is to improve the quality of the energy efficiency behavioral recommendations and the customer experience towards increase energy savings. Generally, realized energy savings increase gradually over time as behavior is affected by treatment, then begin a long slow decline as the control group efficiency catches up. Product savings are measured and reported to the Company each month by the third-party implementer.

In 2022, the Company began claiming savings for High Bill Alerts (HBA). The HBA offering is designed to notify customers of high energy consumption in a timely manner so that they may take actions to keep their bills low.

#### 2022 Achievement

In 2022, the program exceeded filed gas savings goal but did not achieve the electric savings goal. Budgets are typically allocated to third party implementation which includes reports and mailing, marketing, and data analytics. The program was minimally over budget on the electric side and slightly under budget on the gas side.

### **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 usage. 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.

#### 2022 Achievement

The program increased participation from the prior year but did not achieve its electric or natural gas savings targets. Electric and gas spending also were below filed budgets. The shortfall in savings and spend are primarily due to rebuilding the program and hiring technical staff after disruptions caused by the pandemic. The tight labor market provided challenges to the third-party vendor. The number of in-home visits were lower than targeted as hiring staff to grow capacity was a challenge. 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.

### **Home Lighting**

The Home Lighting and 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 inserts and point-of-purchase displays. In 2022, the Company continued to feature our discounted bulbs periodically on retailer endcaps, which increases visibility of the program.

### 2022 Achievement

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

The Company continued to have a presence at community events throughout the year. Community events give us an opportunity to drive one-on-one engagements with our customers and allows us to promote the benefits of LEDs via LED giveaways at these events. The Company continued to offer a deep discount promotion on LED multi-packs in select stores during the year, which continues to be well received by customers.

The Company also focused efforts on giving away free four-packs of LEDs at food banks/shelves within our territory. This continues to be an effective way to reach our income qualified customers to help them save energy and money. Spending through the program to support these efforts is included toward the Company's total low-income spending reported elsewhere in this filing, consistent with the Department's guidance regarding spending through "hybrid" programs.

### **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 has completed a utility-approved training course, 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 provides information on the program. To increase awareness and maintain costs, the program leverages various electronic channels, cross-marketing with other residential programs and social media outlets.

### 2022 Achievement

The Insulation Rebate program did not meet its natural gas savings target or its electric savings target. The shortfall is due to lower than anticipated participation in all customer types. Program spending was in line with achievement.

### **Refrigerator Recycling**

The Refrigerator and Freezer Recycling product is designed to decrease the number of inefficient refrigerators, freezers, air conditioners, and dehumidifiers in the Company's service territory in an environmentally safe and compliant manner and, by doing so, achieve electric energy savings and peak demand reduction. Customers receive an incentive plus free pickup and disposal of their operable, inefficient refrigerator and freezer. 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 inserts, and online/social media efforts.

### 2022 Achievement

The product fell short of its participation and electric savings targets. The product experienced a larger number of newer units being recycled which the Company cannot currently claim savings for and resulted in an impact to participation and savings. Product spending was under-budget primarily due to efficient use of the marketing budget and lower administrative and rebate spend commensurate with participation. Implementation costs increased in 2022 due to inflation and the rapid rise of fuel costs; however, the product was still cost-effective. To increase product awareness in a cost-effective manner, the Company cross-promoted the product with Home Energy Squad and Home Energy Reports. The product also had a very successful email campaign that boosted participation and energy savings a considerable amount.

### **Residential Demand Response**

Xcel Energy offers three residential demand response products: Saver's Switch®, AC Rewards and Smart Water Heaters. The AC Rewards program also captures the energy efficiency component, Thermostat Optimization, simplifying the customer experience. All products target central air conditioners or electric water heaters 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 2022 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 gas heating or electric service customers who have central air conditioning.

The Smart Water Heating program is a new offering in the Triennial. The product will offer customers with qualifying heat pump water heaters bill savings in exchange for allowing the utility to adjust settings on the water heater.

### 2022 Achievement

Saver's Switch was slightly under its target for the year. A majority of the deployed units were replacements of outdated switches in the field. The Company anticipates continuing the trend of robust volumes of switch upgrades.

The AC Rewards product saw strong participation in 2022, especially through the Bring Your Own Thermostat (BYOT) channel. The Company implemented new partnerships with additional device manufacturers which provided additional energy savings at lower cost than anticipated.

Thermostat Optimization did not achieve its savings targets; spending was in line with achievement. The Company continued email marketing campaigns coinciding with manufacturer price reductions throughout the year most notably including Memorial Day and Labor Day weekends, Black Friday/Cyber Monday and again during the December holiday shopping season. This proved to provide an attractive price point for customers and resulted in significant increased participation. Additionally, the online delivery channel had continued success and saw increased engagement with the pre-enrollment functionality that makes it easier for customers to purchase a

qualifying device and enroll in the AC Rewards program at the time of checkout to help increase participation.

The Company continues to have a delay the launch of our Smart Water Heater program. The Company is hopeful the program will launch in t2023 as supply chain difficulties begin to alleviate with the communication modules used to adjust water heating settings.

### **Residential Heating and Cooling**

The Residential Heating and Cooling program offer prescriptive rebates to electric and natural gas customers in single-family homes that purchase new high efficiency cooling, heating, or water heating equipment. For centrally ducted air conditioners or heat pumps, this equipment must be installed using Quality Installation standards. Quality Installation specifications are based on the Air Conditioning Contractors of America Standard 5 which dictates proper sizing, airflow, duct sealing, and refrigeration charge.

The program gives flexibility to customers by offering incentives for air conditioners, heat pumps, furnaces, water heaters, and smart thermostats. 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 trade relationships.

### 2022 Achievement

For the 2022 program year, the program fell short of the electric savings target and over the electric spending target. However, on the natural gas side the energy savings were nearly double our target and spending was in alignment with this increase. The Company continues to have a strong network of participating trade partners.

### **School Education Kits**

The School Education Kits program offers a multi-component kit that combines classroom activities and in-home projects for students and their parents to teach them about energy and water conservation. The curriculum is designed for 5<sup>th</sup> and 6<sup>th</sup> grade students or secondary students. The kits include energy saving and water conservation measures that students implement at home with their families, including LED bulbs, a high-efficiency showerhead, and faucet aerators. The program offers gas and electric savings, supports state education standards, and educates the next generation of energy consumers on how to be energy efficient. Additional low-cost incentives are offered to encourage students to return their Home Energy Worksheets, which help ensure installation of the provided measures and help determine installation rates. Program delivery, teacher training, marketing outreach are implemented by the third-

party program vendor. Marketing outreach consists of email and direct mail to teachers at eligible schools.

Two CIP modifications were approved by the Department for the School Education Kits. These include adding additional bulbs and adding nightlights to the kits.<sup>20,21</sup>

### 2022 Achievement

This program exceeded its filed targets for electric savings and underachieved its gas savings in 2022. The program ended the year slightly under its filed electric and gas budgets. The partnership with CenterPoint Energy continued and allowed the program to reach new customers who receive electric service from Xcel Energy and gas service from CenterPoint Energy. This partnership contributed to the program's electric savings achievement, as did strong installation rates of LED bulbs and water conservation measures.

### **Whole Home Efficiency**

Whole Home Efficiency is a comprehensive “whole home” retrofit program available to 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 electric and natural gas rebates to customers who implement multiple insulation measures. It also offers bonuses to prescriptive rebates for measures installed along with building envelope improvements. Participants have one year to implement required measures and have the option of receiving some free direct install measures during final inspection, provided the measures are not already installed.

In 2022, the Company added a cap to the insulation rebates for Whole Home Efficiency based on the project cost.

### 2022 Achievement

The program exceeded its participation targets in 2022. The Program exceeded its natural gas savings targets which were proportionally higher than spend, resulting from lower than estimated administrative costs. Electric savings did not achieve its target, but savings were proportionally higher than spend, also resulting from lower than forecast administrative costs.

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<sup>20</sup> Decision, *In the Matter of Xcel Energy's Program Modification Request Filed November 17, 2021*, Department of Commerce, January 31, 2022.

<sup>21</sup> Decision, *In the Matter of Xcel Energy's Program Modification Request Filed July 22, 2022*, Department of Commerce, September 22, 2022.

Better gas achievement is attributable to better recruitment and targeting for the program. Homes with more savings potential were shepherded through the program and drove the savings increase. Electric savings not meeting target is attributable to few electric-specific measures in the program with the majority of savings coming from building envelope measures.

## **RESIDENTIAL SEGMENT – INDIRECT 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 sponsored community events with opportunities to engage customers face-to-face, larger sponsorships that provide highly visible in-person and digital messaging opportunities (such as events and sports games), social media, email, website advertising and newsletter outreach with the intention of empowering customers to act and participate in programs to help them save energy and money.

### 2022 Results

It was a busy year for the Consumer Education program. With events back to normal in 2022, post-pandemic, the Company saw a great increase in the number of events attended, and participation with customers in turn exceeded program participation targets. The program ended the year over budget due to the Company's focus on continuing to prioritize customer engagement opportunities combined with events coming back in full force post-pandemic.

The Company was able to get back to its primary form of engagement and participation – activating at over 83 community events. Sponsoring highly attended local events (e.g., Minneapolis Home & Garden Show, Twin Cities Pride Festival, Open Streets) is a great opportunity to engage with customers face-to-face. The Program funds the creation of engaging and educational event assets such as the energy-efficiency tiny house, on-site signage, event collateral and giveaways that deliver energy-saving messaging. The Program also sponsors a few key annual partnerships (e.g., Como Zoo, MN State Fair, St. Paul Saints) that allow for year-round and seasonal messaging to a large customer base in the form of sports promotions, digital messaging, static signage and more. These unique customer engagement opportunities provide the Company with valuable ways to drive energy and money-saving educational messaging that support the Company's residential DSM programs and resources. Additionally, the Program supported a monthly

customized digital e-blast (through Apogee, a third-party provider) targeted at customers with information about their bills and ways they can save energy and money.

The program will continue to find unique ways to connect with customers and educate them on the energy and money-saving tools and resources Xcel Energy offers.

### **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 residential CIP programs, the Home Energy Audit program is cross promoted with other programs. This marketing strategy helps minimize promotional and advertising costs.

#### 2022 Results

In 2022, the program exceeded electric participation targets, but fell short of its natural gas participation target. Spending was under its electric and natural gas budgets. The Company had a higher-than-expected number of customers in our electric only service territory but continued to have challenges serving more participants as a result of the labor market that is just now beginning to recover.

### **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](http://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 Xcel Energy Home Lighting website.

#### 2022 Results

The program did not meet its participation targets and was under budget; likely as a result of the continued phasing out of CFL bulbs being sold in stores and in homes.

## **CIP Workforce Development & Education**

The CIP Workforce Development & Education program aims to recruit, educate, train, place and retain workers who are historically and currently underrepresented in the energy efficiency sector, specifically individuals from Black, Indigenous, and People of Color communities and women. The program gives priority to applicants residing in Minneapolis's Green Zones and Saint Paul's ACP50 areas. Trainees can learn through "hands-on" experiences performing residential energy audits, installing low-cost energy savings products, and insulating homes. The homes selected for the hands-on training are primarily in income-qualified communities, leading to direct energy savings for income-qualified customers. The program also offers a CIP scholarship fund to support income-qualified participants pursuing energy efficiency-related education at two- and four-year institutions.

Workforce Development is a new CIP program proposed in December 2020 and approved in April 2021<sup>22</sup> with the intention of providing additional benefits to customers whose lives and livelihoods have been disproportionately affected by COVID-19 and civil unrest. Center for Energy and Environment (CEE) implements the program while the Company funds and delivers the offering. Although the program was approved as an indirect program, the Company believes the program provides direct benefits to income-qualified communities and customers and intends to demonstrate the direct benefits through tracking participation and results.

Initial 2022 results included workforce training in Green Zone areas of Minneapolis and St. Paul that were highly accessible by public transportation and central to the communities. The first cohort was held in North Minneapolis on a corridor frequented by North Minneapolis residents and easily accessible by public transportation. For the second cohort, the training was held in St. Paul in the Hamline-Midway neighborhood and easily accessible by the Green Line.

Thirty participants completed the Xcel Energy-funded five-week Home Energy Career Training program and 30 percent identified as women. Two-thirds of participants resided in the Green Zones of Minneapolis or ACP50 Zones of St. Paul. Analysis of the participants who graduated from the training indicate 87 percent identified as Black, Indigenous, or People of Color. The most represented racial/ethnic backgrounds identified were Black (50 percent) and Asian (17 percent). Six percent identified as Mexican or Latino and 6 percent identified as multi-racial. Native American, American Indian, or Alaska Native accounted for 9 percent of the racial make-up of the group.

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<sup>22</sup> Decision, In the Matter of Xcel Energy's CIP Modification Request Filed December 23, 2020, Department of Commerce, April 20, 2021.



Overall, seven trainees have been hired by CEE as energy auditors and energy counselors working on income-qualified households throughout the Twin Cities. One graduate has gone on to Xcel Energy's Energy Careers Academy and another graduate has gone on to Dunwoody and is enrolled in their P2C scholarship program that supports students from historically underrepresented communities in higher education.

Six colleges received CIP Workforce Development Scholarships totaling \$400,000. Scholarships were awarded to students in both two- and four-year programs pursuing Science, Technology, Engineering and Mathematics (STEM) fields. While the intent was to offer these scholarships to students pursuing energy efficiency careers, there were a limited number of schools who provided scholarships to STEM and non-STEM students who were not pursuing energy efficiency related fields. Schools have been informed of the importance of this requirement. The scholarship review process has been modified to ensure that students are pursuing the targeted fields of study and intend to explore careers related to energy efficiency.

On average about sixty percent of scholarship recipients self-identified as people of color. Two thirds of students receiving scholarships qualified as low income. Fields of study being pursued by the students included: electrical engineering, integrated engineering mechanical engineering, computer science, electrical construction and maintenance, HVAC systems servicing, construction project management, computer science and biology.

As part of the April 29, 2021 Department Decision, the Commissioner requested several additional details as part of our annual reporting process. In compliance with this Decision, the Company provides Attachment B including additional metrics as requested.

### 2022 Results

The program spent slightly over the budget expected for both the Workforce Development program and for the scholarships. The first five-week paid training cohort took place on the first quarter of 2022 and the second took place in the Summer of 2022. Costs associated with partner development and communication, recruitment, classroom curriculum, hands-on classroom and field training, certifications, equipment, training props, transportation and wrap-around services were realized as planned in 2022. The Company partnered with six local colleges and trade schools to launch the CIP Scholarship Fund in 2022.

## LOW-INCOME SEGMENT

The Low-Income Segment program portfolio supports income-qualified customers by promoting energy savings that results in minimizing the impact utility bills have on their households while promoting improved comfort and performance from their appliances, HVAC and lighting. The portfolio includes four primary programs:

1. Home Energy Savings program offers energy audits, heating, air conditioning and water heater replacements, insulation, LED lighting, energy-efficient appliances as well as additional conservation, health and safety improvements, all free of charge. The program prioritizes improvements to higher energy users, seniors, families with children and people with disabilities.
2. Multi-Family Energy Savings program provides electric home energy efficiency measures in addition to educating tenants about energy conservation.
3. Affordable Efficient New Home Construction program is a new offering designed to help local builders construct energy-efficient affordable homes for people and communities in need.
4. Low Income Home Energy Squad performs a high-level assessment of each participant’s home prior to installing energy-saving measures during one visit. This identifies potential opportunities for further support of these customers through the Home Energy Savings program.

In 2022 the Company’s work in the low-income segment expanded from 2021 with additional households being reached and new services added to broaden the markets served. In addition to the four dedicated programs listed above, spending under “hybrid” programs that directly benefitted low-income households is included in the total spending for purposes of compliance with the statutory minimum low-income spending requirement (see the Compliance section of this filing). This section of the report discusses only the dedicated low-income programs listed above.

**Table 28: 2022 Low-Income Program Results**

Low Income Segment	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
<b>Budget</b>	\$5,085,687	\$3,902,598	77%	\$3,801,281	\$2,745,150	65%
<b>Generator kW</b>	1,212	459	38%	-	-	-
<b>kWh or Dth Saved</b>	3,191,100	2,504,552	78%	31,561	9,165	37%
<b>Participation</b>	10,035	5,412	54%	1,724	627	24%

Activity for this segment increased significantly over 2021. Part of this success was a result of the Energy Conservation and Optimization Act (ECO). Passed in May of 2021, ECO increased the Company's low-income spending requirement. With this opportunity, the Company filed to increase both savings targets and budgets for both 2022 and 2023. The Department approved these adjustments in January 31, 2022.<sup>23</sup> We provide further detail regarding how each of the programs were able to use increased outreach and program changes to support achievement in 2022.

Although natural gas savings achievement grew only slightly compared to 2021, electric savings achievement increased 38 percent. Much of the growth in electric spending and savings occurred as a result of the growing support and market acceptance of heat pump technology, which supported the replacement of electric resistance heating with more efficient heat pump systems. The ability to fund health and safety measures was an important resource in removing barriers to program participation, allowing energy efficiency measures to be installed where needed. Despite these positive developments, both electric and gas savings were well short of the segment's goals; the Company is committed to continuing to improve the energy savings support it provides through this program segment.

Like other program segments, Low-Income Segment participation, savings and spending continued to be affected by supply chain disruptions delaying deliveries, price increases for energy-efficient equipment being passed on to program implementers, and staffing shortages limiting our ability to provide Low Income Home Energy Squad visits. This not only results in higher delivery cost per participant but requires aligning promotional and outreach activity with our ability to provide services. Economic uncertainty made building owners and property managers reluctant to invest in rental units in 2022. In addition, program awareness continues to be a barrier to participation.

The Company will continue to incorporate the preliminary findings from our Low-Income Customer Segment portfolio study into our program offerings as they become available. We expect to investigate not only new measures and simplifying program participation, but also new avenues to reach customers through expansion of our offerings and improving our marketing and outreach. The Company will also continue to explore how to best serve this segment of the market through the development and delivery of our CIP Workforce Development and Education program.

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<sup>23</sup> Decision, *In the Matter of Xcel Energy's Program Modification Request Filed November 17, 2021*, Department of Commerce, January 31, 2022.

## **Affordable Efficient New Home Construction**

The Affordable Efficient New Home Construction program was introduced in 2021. The program helps local affordable housing builders and qualified market-rate builders construct energy efficient, affordable homes for residential customers. It provides incentives for installing a suite of advanced energy efficiency measures. Incentives are based on the sum of the incremental cost of the advanced measures plus incentives for the market-rate Efficient New Home Construction program using the same savings calculations. This program hopes to expand the supply of affordable, high-performance homes to people and communities in need.

In 2022, Affordable Efficient New Home Construction relaxed its location requirements. For-profit builders working in concert with public affordable housing agencies (or similar) are exempt from location requirements.

### 2022 Results

In 2022, sixteen homes participated in the program. Fourteen of these homes were part of an income qualified development in Northfield, and fifteen participating homes were all-electric. All participating homes were attributed to affordable housing builders, none to market-rate builders.

Due to the high number of all-electric participating homes, the program exceeded its electric budget. Electric savings, gas savings, and gas spend did not meet targets. Participation from affordable housing builders has not materialized in the way the Company forecast. The Company will be reaching out to known eligible builders to begin to identify roadblocks to participation.

## **Home Energy Savings**

The Home Energy Savings program (HESP) offers home energy assessments and educational 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 make their energy bills more manageable. HESP is marketed through various channels that include the Company's partner vendors, low-income service providers and traditional communications channels. The program is also marketed through community events and support from Xcel Energy's call centers.

As a result of the Department's January 21, 2022 Decision, spending increased for program outreach and included making a special effort to target customers using electric resistance heating to offer air source heat pumps (ASHP) as a more efficient alternative. Equipment costs were updated to align with market pricing, and dehumidifier replacement, recycling measures and renter kits were added to the program measures.

In 2022, HVAC equipment availability improved compared to 2021, though some disruptions persisted, and prices of equipment continued to increase. Limited contractor labor for insulation and sporadic equipment availability resulted in service delays for some participants.

Direct mail and search engine marketing outreach provided additional visibility for the program. Additionally, one of the implementers improved their website and expanded efforts to leverage relationships with social service agencies serving income qualified customers. The Company initiated two pilot projects that are expected to help inform the value of emerging measures in serving the income qualified market including cold climate heat pumps and energy efficient storm windows.

### 2022 Results

The program exceeded its modified electric savings target thanks in part to increased conservation promotion and loosening of efficient equipment shortages. Higher pricing, which had been approved in 2021, also enabled the Company to better engage wholesalers and suppliers to complete program work within the metro. However, the program fell short of natural gas savings targets, in part due to lack of participation in gas measure installations in the west metro and greater Minnesota. There was some feedback from agencies providing services in greater Minnesota that the approved pricing for measures in that area was still low. The Company encouraged implementers to bring pricing requests forward for approval and to provide information so pricing could be evaluated for possible contract modifications. That market information and pricing negotiations are expected to occur in early 2023.

Health and Safety measures continue to enable implementers in the east metro to install additional energy efficient equipment. This increased implementation costs but helped increase participation and energy savings, especially in the east metro. The ECO Act enabled the Company to expand the outreach, increase qualifying health and safety measures and increase electric energy savings achievement while improving net benefits.

### **Low-Income Home Energy Squad**

Low-Income Home Energy Squad is a direct install program provided at no cost 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 inserts, the web and cross-promotion with other Xcel Energy Low-Income programs.

As a result of the Department's January 21, 2022 Decision, the Low-Income Home Energy Squad was enabled to improve outreach and expand the measures offered. These measures included dehumidifiers as well as free smart thermostats.

In 2022, the Company focused its promotion budget on an effort to improve interest in the program and increase the number of home visits. This included adding information related to free in-home visits for low-income customers into additional outreach and education channels including flyers, email and advertising. Materials were also translated to improve outreach to diverse customers.

While customer interest in the program continues to grow, the program has had challenges with having enough labor to serve this growing market. Our vendors, however, have reported improvement in the labor market in the later part of 2022, and have seen an increase in labor in the later part of 2022. Some of the new employees came from an Xcel Energy funded CIP Workforce Development program. The Company expects the combination of increased promotional efforts as well as improvements to the labor market to support greater participation in 2023.

### 2022 Results

The program did not achieve its electric or natural gas savings targets, resulting in lower than anticipated spending for the year. However, electric achievement and spending were higher in 2022 than 2021. Participation was lower than filed due to labor shortages limiting the Company's ability to provide services in a timely fashion to meet the volume of demand in the market. The Company will continue to work with the vendor partner to resolve this labor shortage.

### **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 with additional support from Xcel Energy and targets building owners or property managers. 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.

As a result of the Departments January 21, 2022 Decision, the program increased marketing budgets, equipment costs and added dehumidifier replacement and recycling, and renter kits. Increased promotional efforts included a direct mail campaign which generated a substantial number of leads including an increase in interest from outstate Minnesota. One of the goals was to help identify low income electrically heated buildings and offer mini split heat pumps as an alternative cooling and supplemental heating option. That effort along with some increased appliance availability at year end, helped significantly increase achievement and drove spend for this program.

While the program began to see an increase in availability of appliances, we acknowledge there was limited availability for the majority of 2022. This prevented our implementer from completing installations of refrigerators and air conditioning units in 2022.

#### 2022 Results

Program achievement levels ended the year significantly higher than last year, yet under modified electric targets and budget In 2022, the program underspent the filed budget due to equipment shortages. The supply of energy efficient appliances, especially refrigerators and window and through-the-wall air conditioners, was somewhat limited as some models were back-ordered. Although these shortages were less impactful towards the end of the year, they continued to delay smaller orders as equipment suppliers prioritized larger shipments.

## 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 and therefore generate no energy savings.

**Table 28: 2022 Planning Segment Results**

Planning Segment	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
<b>Advertising &amp; Promotion</b>	\$6,310,688	\$5,064,420	80%	\$1,564,418	\$1,228,516	79%
<b>Application Development &amp; Maintenance</b>	\$3,860,250	\$694,294	18%	\$625,656	\$175,284	28%
<b>CIP Training</b>	\$312,435	\$169,917	54%	\$103,023	\$62,328	60%
<b>Partners in Energy</b>	\$889,919	\$804,148	90%	\$231,901	\$146,992	63%
<b>Regulatory Affairs</b>	\$539,303	\$498,394	92%	\$150,454	\$153,615	102%
<b>Total</b>	\$11,912,594	\$7,231,172	61%	\$2,675,452	\$1,766,736	66%

### Advertising and Promotion

The Advertising and Promotion budget provides the opportunity to create awareness and motivate residential and business customers to seek energy conservation offerings.

In 2022, business and residential advertising continued to play an essential part in building awareness and motivating customers to pursue energy efficiency opportunities. 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 played a large part in reaching the goal of educating customers. Community partnerships created outreach opportunities providing mutually beneficial and longstanding relationships. This year the Company developed a strategy to reach Black, Indigenous, People of Color (BIPOC) owned businesses and communities to build awareness of the Company's incentives and products.

### 2022 Results

The Company underspent the budget for 2022.



## **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.

### 2022 Results

The Company underspent its ADM budget as a result of using internal labor to perform many longer-term planning initiatives as well as reviewing the number of software licenses to ensure ADM dollars were spent appropriately. Investments in software purchases were 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. The past year the Company's technologies teams recognized it was imperative to put together an action plan and strategies to produce a long-term road map on how to implement the many changes associated with the ECO bill. For these reasons the funds for the ADM budgets for both fuels were underspent during this planning phase.

## **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 to 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.

### 2022 Results

In 2022, the Company encouraged employee travel to external in-person conferences and meetings to increase internal personnel knowledge on current and future industry changes. Of the many technologies or subjects that employees attended last year, conferences and seminars on electric fuel switching or EFS were particularly important to the Company and internal staff as we prepare for the 2024 to 2026 filing and implementation of ECO.

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.

### **Partners in Energy**

Partners in Energy works with communities served by the Company to support them in reaching their unique energy goals. The framework for the program is to provide resources to assist them in developing community-driven energy action plans and provide tools and resources for the initial launch and implementation of that plan. This incorporates providing support for driving incremental energy savings in a community. This often includes leveraging programs and rebates offered by the Company as well as educational materials and enhancing outreach opportunities with Company resources. Additional services are delivered to all participating communities to support networking and deeper learning about issues relevant to community-level energy management, energy planning, new technologies, marketing, and program delivery. These resources are delivered through in-person events, webinars, newsletters, and an online portal.

The program is primarily marketed to local government entities through direct outreach and word of mouth promotion. In addition to supporting new communities, we continue to see strong participation from communities who extend their initial term of implementation support. This enables the program to continue to work with these engaged communities on driving additional energy savings to achieve their long-term goals. We are also seeing a growing number of past participants interested in updating their energy plans to reflect the current trends and opportunities.

Topics incorporated into program delivery to the communities include broader energy topics such as renewables, electric vehicles, and customer service options, but these are not funded through the Conservation Improvement Program.

### 2022 Results

The program was under budget for 2022. This was driven by:

- Continued virtual delivery program elements. Throughout the pandemic we continued to offer Partners in Energy and developed tools for delivering elements of the program virtually. In 2022, we did see a shift back to many in-person workshops and events, but the Company was able to leverage past learnings to deliver components of the program online at a lower cost. Through the pandemic, communities also became more adept at delivering education and outreach online and through social media. We continue to use

these channels to provide a cost-effective means to distribute messaging to a large audience.

- Fewer communities entering the program than anticipated. We did see additional communities enter the program this year but not at the level expected. The volume of communities revising their plans or extending their implementation support was higher than expected, but the cost per community of these activities on average are lower.

### **Regulatory Affairs**

Regulatory Affairs manages all DSM regulatory filings, directs and prepares cost-benefit analyses, provides results of energy conservation achievements, manages electric and 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.

### 2022 Results

In 2022 Regulatory Affairs spending was under budget for electric and slightly over the natural gas budget.

## 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 2022.

**Table 29: 2022 Research, Evaluations, & Pilot Segment**

Research, Evaluations, & Pilots Segment	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
Codes and Standards	\$80,000	\$0	0%	\$20,000	\$0	0%
Market Research	\$1,232,147	\$1,149,805	93%	\$263,897	\$429,197	163%
Product Development	\$5,204,376	\$3,508,459	67%	\$146,068	\$165,795	114%
<b>Total</b>	<b>\$6,516,523</b>	<b>\$4,658,264</b>	<b>71%</b>	<b>\$429,965</b>	<b>\$594,992</b>	<b>138%</b>

### Codes and Standards

The Codes and Standards budget within the Research, Evaluations, and Pilots Segment was intended for a pilot market transformation program that the Company expected to be filed during the 2021-2023 triennium.

The Company identified and engaged with other utilities on a collaborative program development project in 2022. Since the effort was not classified as program delivery, the expenses for code program development are included in Product Development and not in Codes and Standards.

### 2022 Achievements

The Company did not use the Research, Evaluations, and Pilots Segment budget allocated for Codes and Standards support in 2022.

### Market Research

DSM Market Research conducts surveys and studies to understand customer needs that relate to DSM conservation efforts. In 2022, the Company conducted the following general research projects:

- Maintain a Xcel Energy-specific residential customer segmentation model (\$94,849);
- Support a Product Experience Survey that monitors customer satisfaction by surveying most participants after a rebate has been processed or program participation has completed (no external costs).

- Subscribe to E Source Consultative services and research (\$84,496);
- Purchase updated Dun & Bradstreet business customer classification information (\$68,147);
- Conduct a Home Use Study (\$15,163); and,
- Continue Residential Campaign Effectiveness Tracking research (\$39,600).

Market Research funds are also used to procure third-party services for comprehensive, process, and impact evaluations on individual programs. In 2022, the Company conducted research on the following programs (\$1,009,210):

- Home Energy Insights
- Home Energy Squad
- Lighting Efficiency
- Low Income Segment (continued from 2021)

In addition, the Company conducted a modified evaluation of the Community Code Support activities embedded within Business New Construction (\$78,868). Further costs include project labor and internal overhead.

### 2022 Achievements

In 2022, the Market Research program spending was under budget for electric and substantially over budget for natural gas. The primary driver of this was delays in the year one research for the Low-Income segment evaluation that caused a significant share of costs that had been expected to occur in 2021 to fall in 2022.

### **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.

The Company provides a narrative summary of its product development activities, and the corresponding dollar amounts for each activity as part of the Company's annual status report as required by the Deputy Commissioner's November 24, 2020 Decision in Docket No. G,E002/CIP-20-473.

2022 successes include:

- Additional measures into our Business Lighting Efficiency, HVAC+R, Home Energy Savings and Residential Heating and Cooling programs;
- Addition of Critical Peak Pricing into the CIP portfolio for 2023;
- Additional measures into our HVAC&R Solutions program;
- Pilot and support development of “Energy Action Days” a new residential demand response program; and
- Implementation of High Bill Alerts.

The table below is a record of product development spending to support development efforts.

**Table 30: Product Development Spending**

<b>Project Name</b>	<b>Description</b>	<b>Electric Spending</b>	<b>Natural Gas Spending</b>
Railroad Island Heat Pump Study	The Railroad Island Heat Pump Study in St. Paul was to add heat pump mini splits to previously unconditioned spaces converted to living spaces that had baseboard heating	\$32,847	
Remote Analytics Analysis	Remote Analytics analyzed meter data to develop measure recommendations for commercial customers.	\$10,560	
Building Codes	Building Codes designed a delivery method to work with various market actors to increase code adoption.	\$66,826	
Energy Action Days	Energy Action Days is a behavioral demand response program where customers are notified of event days on the prior day and given tips and encouragement to save energy.	\$1,026,640	
Commercial Indoor Air Quality	Commercial Indoor Air Quality studied the impacts of the COVID pandemic on building operations.	\$30,799	
Air Source Heat Pump Studies	Air Source Heat Pump Studies investigated the performance of space and water heating in MN's climate.	\$104,375	
Carbon Reporting	Carbon Reporting gathered customer feedback on a software prototype.	\$32,500	
Electric Heat Affordable Rental Program Pilot (EHARP)	Electric Heat Affordable Rental Program Pilot (EHARP) assists low-income renters who currently heat with electric resistance heating to install more efficient electric heating systems.	\$10,000	
Time of Rent Tool	Time of Rent tool was developed as a method for building owners and property managers to inform potential tenants of their expected electric bill.	\$114,300	\$12,700
Distributed Energy Resource Management System Requirements	Distributed Energy Resource Management System Requirements are necessary to acquire a new software system for demand management.	\$66,171	
Implementation of High Bill Alerts	High Bill Alerts development completed the software required to identify customers with high bills, automatically notify them via email, and make them aware of existing resources to help save energy.	\$33,507	\$33,507
Labor	Expenses related to administration.	\$1,589,727	\$46,503
Employee Expenses		\$26,888	\$1,393
R&D Process and Tool Support		\$184,857	\$6,654
R&D Data Subscriptions and Dues		\$86,470	\$1,250
Misc.		\$125,499	\$2,038
<b>Total</b>		<b>\$3,508,459</b>	<b>\$165,795</b>

### 2022 Achievements

In 2022, Product Development remained under its electric target due to lower than anticipated costs for research, outside services and association dues. Our natural gas budget was exceeded in 2022 due to an analysis for Heat Pumps that was expected to have hit in 2023 but was completed early.



## ALTERNATIVE FILINGS

The Company has four alternative CIP programs that third parties have been operating within our portfolio for several years. These programs were approved by the Deputy Commissioner in his November 24, 2020 Decision.

Alternative filings generally are used to publicize and promote Xcel Energy CIP programs to specific customer segments that the program administrator has a strong relationship with and to support specific needs of that customer segment. Like indirect programs offered by utilities, such as energy audits and customer education programs, these alternative CIP programs drive participation in the utility programs that have direct energy savings. Since these programs are proposed and managed by third-parties, additional questions and requests regarding achievement should be directed to individual parties.

**Table 31: Alternative Filing Results**

Alternative Filings Segment	Electric Budget	Electric Actual	% of Electric Budget	Natural Gas Budget	Natural Gas Actual	% of Natural Gas Budget
<b>EnerChange</b>	\$530,100	\$446,592	84%	\$58,900	\$127,992	217%
<b>Energy Smart</b>	\$508,830	\$500,153	98%	\$30,555	\$22,910	75%
<b>One-Stop Shop</b>	\$18,789,160	\$9,956,044	53%	\$100,915	\$199,467	198%
<b>Trillion BTU</b>	\$174,600	\$135,071	77%	\$19,400	\$16,681	86%
<b>Total</b>	<b>\$20,002,690</b>	<b>\$11,037,859</b>	<b>55%</b>	<b>\$209,770</b>	<b>\$367,051</b>	<b>175%</b>

### **EnerChange**

The EnerChange program was proposed for inclusion in the Company's 2021-2023 Triennial plan by the National Initiative by Consumers of Energy (EnerChange) in Docket No. E,G002/CIP-20-483. EnerChange is an indirect impact program that provides nonprofit organizations with facility evaluations. These evaluations identify conservation project opportunities, review applicable electric and natural gas utility rebates availability, provide customer assistance to drive implementation of measures and help with implementation financing. EnerChange leverages referrals, networking, associations, organizations, community outreach and social media to market the program.

## **Energy Smart**

The Energy Smart program was proposed for inclusion in the Company's 2021-2023 Triennial Plan by the Minnesota Waste Wise Foundation, a nonprofit affiliate of the Minnesota Chamber of Commerce, in Docket No. G7033, E7031/CIP-20-481.

Energy Smart is an indirect impact energy efficiency assistance program. 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 several 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.

## **One-Stop Efficiency Shop®**

The One-Stop Efficiency Shop (One-Stop) is a full-service lighting and rooftop unit rebate program designed to save energy in the hard-to-serve small business sector. Developed and implemented by Center for Energy and Environment, One-Stop targets small businesses with a 400-kW demand or less and is structured to address the specific needs of this sector 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.

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 provides a focused, hands-on approach to better address the needs of Xcel Energy's small business customers. One-Stop's lighting and HVAC technical experts offer unbiased recommendations tailored to meet program participants' specific financial needs, as well as the specific requirements of their space. This combination of program services brings education, financial resources, and minimal time commitment directly to the business owner.

## 2022 Results

The One-Stop Efficiency Shop program is the only Alternative CIP program in our portfolio that achieves energy savings towards our energy savings requirements. In 2022, One-Stop did not meet its energy savings, demand savings, or participation targets. The targets for the 2021-2023 triennium are challenging and the highest ever filed for the program. In addition, they were filed before the ramifications of the COVID-19 pandemic and subsequent economic impacts were fully understood. The pandemic significantly impacted the viability of many small businesses as well as the overall economy and those effects are still being navigated by business owners and the trades that serve them. High inflation; increased interest rates; business owners deprioritizing energy efficiency and hesitating to invest in major capital projects; extended timelines for decision-making around energy efficiency upgrades; trade labor shortages; and major supply chain disruptions all contributed to One-Stop's inability to meet its filed targets in 2022. One-Stop did offer bonus rebates in 2022 to encourage higher participation rates.

One-Stop's spending was within the forecasted budget and the program remained cost-effective in 2022. Center for Energy and Environment worked closely with Xcel Energy to track program metrics over the course of the year.

## **Trillion BTU**

The Trillion BTU program was proposed for inclusion in the Company's 2021-2023 Triennial plan by the St. Paul Port Authority in Docket No. E7030/CIP-20-485. Trillion BTU is an indirect program aimed at increasing participation in the Company's existing commercial and industrial energy efficiency programs. The program leverages funding awarded to the St. Paul Port Authority through resources from economic development agencies and municipalities in Xcel Energy's electric and natural 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 St. Paul Port Authority.

## 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 the Department and the Public Utilities Commission filing review.

### Attachment 32: 2022 Assessment Results

Assessments Segment	Electric Target	Electric Actual	% of Electric Target	Natural Gas Target	Natural Gas Actual	% of Natural Gas Target
<b>Budget</b>	\$1,974,981	\$1,939,856	98%	\$354,600	\$302,597	85%

#### 2022 Results

Assessments from our regulators were slightly below the filed electric budget and approximately 85 percent of the filed gas budget.

## **SECTION 3: 2022 CONSERVATION COST RECOVERY REPORT**

### **REFERENCE DOCKET NO. E002/GR-92-1185**

Northern States Power Company, doing business as Xcel Energy, submits this Conservation Improvement Program (CIP) Cost Recovery Report.

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 2022 spending and cost recovery, as well as the electric tax and rate base factors and calculation of the cost of capital.

#### **Electric Achievements**

In 2022, Xcel Energy spent \$104,265,717<sup>24</sup> on its electric CIP efforts. These expenditures provided an overall reduction of nearly 648 GWh. The Company requests recovery of \$104,265,717 in CIP expenditures, as well as recovery of \$24,271,202 in financial incentives earned for our 2022 electric CIP performance for total electric recovery of \$128,536,919.

#### **Natural Gas Achievements**

Xcel Energy conserved 920,504 Dth through its 2022 natural gas CIP at a cost of \$19,857,191. The Company requests recovery of \$19,857,191<sup>25</sup> in CIP expenditures, as well as \$3,578,029 in financial incentive earned for our 2022 natural gas CIP performance for total natural gas recovery of \$23,435,220.

The tables on the following pages include:

- Xcel Energy's 2022 electric (Table 33) and natural gas (Table 34) CIP Trackers, which document monthly CIP expenditures and recovered costs;
- Summary of the electric tax and rate base factors (Table 35) used in the electric CIP Tracker; and
- Calculation of the Cost of Capital (Table 36) provides the tax factors and capital structure used to determine cost recovery and return on rate base in the electric CIP Trackers.

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<sup>24</sup> Total includes a reduction of \$71,242 from actual electric spend based on the Center for Energy and Environment One Stop correction, as approved in August 31, 2022 Order (Docket No. E002/M-22-158).

<sup>25</sup> Total includes an increase of \$71,242 from actual gas spend based on the Center for Energy and Environment One Stop correction, as approved in August 31, 2022 Order (Docket No. E002/M-22-160).

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

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Annual</u>
<u>EXPENSES</u>	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	
1. Balance	(353,912)	(10,096,669)	(18,009,185)	(26,475,331)	(32,992,597)	(40,768,569)	(48,450,465)	(59,430,406)	(41,479,398)	(46,783,312)	(47,073,018)	(46,312,586)	
1a. Other Adjustments	(71,421)					71,421							
2. CIP Program Expenditures	6,360,126	6,292,797	6,629,988	6,685,437	6,806,697	8,347,025	7,719,950	8,731,652	10,180,518	8,749,606	9,624,384	18,137,537	104,265,717
3. 2021 Performance Incentive								26,888,142					26,888,142
4. Total Expenses + Incentive (Line 1 + 2 + 3)	5,934,793	(3,803,872)	(11,379,197)	(19,789,894)	(26,185,900)	(32,350,123)	(40,730,515)	(23,810,612)	(31,298,880)	(38,033,706)	(37,448,635)	(28,175,049)	
<u>RECOVERY</u>													
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)	7,536,422	6,667,261	7,076,717	6,177,521	6,818,102	7,523,633	8,734,671	8,270,346	7,235,601	6,590,629	6,462,489	7,196,774	86,290,168
7. CIP Adjustment Factor Rate (\$/MWh)	3.521	3.521	3.521	3.521	3.521	3.521	3.521	3.521	3.521	1.108	1.108	1.108	
8. CIP Adjustment Factor Recovery (Factor times Sales)	8,469,755	7,492,954	7,953,119	6,942,564	7,662,477	8,455,382	9,816,398	9,294,571	8,131,679	2,330,806	2,285,489	2,545,173	81,380,368
9. Sub-Balance (Line 4 - 6 - 8)	(10,071,385)	(17,964,087)	(26,409,033)	(32,909,979)	(40,666,479)	(48,329,139)	(59,281,584)	(41,375,528)	(46,666,160)	(46,955,141)	(46,196,613)	(37,916,996)	
10. Accum Deferred Tax (Line 9 * 28.742%)	(2,894,718)	(5,163,238)	(7,590,484)	(9,458,986)	(11,688,359)	(13,890,761)	(17,038,713)	(11,892,154)	(13,412,788)	(13,495,847)	(13,277,831)	(10,898,103)	
	0	0	0	0	0	0	0	0	0	0	0	0	
11. Net Investment (Line 9 - 10)	(7,176,667)	(12,800,849)	(18,818,549)	(23,450,993)	(28,978,120)	(34,438,378)	(42,242,871)	(29,483,374)	(33,253,372)	(33,459,294)	(32,918,782)	(27,018,893)	
12. Carrying Charge (Line 11 * Carrying Charge Rate)	(25,283)	(45,097)	(66,298)	(82,618)	(102,090)	(121,326)	(148,822)	(103,870)	(117,152)	(117,877)	(115,973)	(95,188)	(1,141,593)
13. End of Month Balance (Line 9 + 12)	(10,096,669)	(18,009,185)	(26,475,331)	(32,992,597)	(40,768,569)	(48,450,465)	(59,430,406)	(41,479,398)	(46,783,312)	(47,073,018)	(46,312,586)	(38,012,183)	

**Table 33: 2022 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 (\$)**  
**2022 Actual**

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
<u>EXPENSES</u>	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	
1. Balance	\$ (347,477)	(\$3,598,155)	(\$6,514,683)	(\$8,646,144)	(\$9,656,522)	(\$9,525,839)	(\$8,961,497)	(\$8,275,033)	(\$2,257,091)	(\$1,308,509)	(\$1,156,560)	(\$2,333,813)	<b>(\$347,477)</b>
1a. Other Adjustments	71,421					(\$71,421)							
1b. Adj. Beginning Balance	(276,056)	(3,598,155)	(6,514,683)	(8,646,144)	(9,656,522)	(9,597,260)	(8,961,497)	(8,275,033)	(2,257,091)	(1,308,509)	(1,156,560)	(2,303,213)	
2. CIP Program Expenditures	1,716,617	1,505,879	1,424,553	1,462,690	1,381,048	1,444,375	1,378,590	1,668,660	1,758,186	1,630,961	1,526,680	2,928,352	19,826,591
3. 2021 Performance Incentive								5,013,004					5,013,004
4. <b>Total Expenses</b> (Line 1b. + 2 + 3)	<b>1,440,561</b>	<b>(2,092,276)</b>	<b>(5,090,130)</b>	<b>(7,183,454)</b>	<b>(8,275,474)</b>	<b>(8,152,885)</b>	<b>(7,582,906)</b>	<b>(1,593,369)</b>	<b>(498,905)</b>	<b>322,452</b>	<b>370,120</b>	<b>625,139</b>	<b>24,492,118</b>
<u>RECOVERY</u>													
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	782,741	686,582	551,649	383,196	193,162	124,569	106,549	102,884	125,677	236,884	433,044	679,015	4,405,952
7. CIP Adjustment Factor Rate (\$/Dth)	0.28472	0.28472	0.28472	0.28472	0.28472	0.28472	0.28472	0.28472	0.28472	0.27456	0.27456	0.27456	
8. CIP Adjustment Factor Recovery	4,253,091	3,730,602	2,997,433	2,082,130	1,049,565	676,858	578,944	559,028	682,878	1,241,201	2,269,018	3,557,829	23,678,576
9. <b>Total Recovery</b> (Line 6 + 8)	<b>5,035,831</b>	<b>4,417,184</b>	<b>3,549,082</b>	<b>2,465,326</b>	<b>1,242,728</b>	<b>801,427</b>	<b>685,493</b>	<b>661,912</b>	<b>808,555</b>	<b>1,478,085</b>	<b>2,702,062</b>	<b>4,236,843</b>	<b>28,084,528</b>
10. Rate Refund	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Sub-Balance (Line 4-9+10)	(3,595,270)	(6,509,460)	(8,639,212)	(9,648,780)	(9,518,202)	(8,954,312)	(8,268,399)	(2,255,281)	(1,307,460)	(1,155,633)	(2,331,942)	(3,611,705)	
12. Accum Deferred Tax (Line 11 * 28.742%)	(1,033,353)	(1,870,949)	(2,483,082)	(2,773,252)	(2,735,722)	(2,573,648)	(2,376,503)	(648,213)	(375,790)	(332,152)	(670,247)	(1,038,076)	(18,910,988)
13. Net Investment (Line 11-12)	(2,561,918)	(4,638,511)	(6,156,130)	(6,875,528)	(6,782,480)	(6,380,664)	(5,891,896)	(1,607,068)	(931,670)	(823,481)	(1,661,695)	(2,573,629)	(46,884,669)
14. Carrying Charge (a) (Line 13 * Carrying Charge Rate)	(2,884,719)	(5,222,964)	(6,931,802)	(7,741,844)	(7,637,073)	(7,184,627)	(6,634,275)	(1,809,559)	(1,049,060)	(927,240)	(1,871,069)	(2,897,906)	(52,792.14)
15. <b>End of Month Balance</b> (Line 11+14)	<b>(3,598,155)</b>	<b>(6,514,683)</b>	<b>(8,646,144)</b>	<b>(9,656,522)</b>	<b>(9,525,839)</b>	<b>(8,961,497)</b>	<b>(8,275,033)</b>	<b>(2,257,091)</b>	<b>(1,308,509)</b>	<b>(1,156,560)</b>	<b>(2,333,813)</b>	<b>(3,614,603)</b>	

Table 34: 2022 Gas CIP Tracker (DSM Cost Recovery)

**Table 35: 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) beginning January 1, 2019.

<u>Variables</u>	<u>2021</u>	<u>Tax Rates</u>	<u>2021</u>
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 36: Calculation of the 2022 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 (2021 Electric CIP Tracker) and 18 (Summary of Electric Tax and Rate Base Factors).

Capital Structure	Capitalization	Cost of Capital	Weighted Average
	2021 Test Yr	2021 Test Yr	2021 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 =	$\{ROI - (WTD \text{ Cost Debt} \times \text{Tax Rate})\} / (1 - \text{Tax Rate})$		8.92%
Tax Factor =	Rate Base Factor - ROI		1.92%
Monthly Carrying Charge Rate Calculation			
Annual Revenue Requirements Factor =	$\{ROI - (WTD \text{ Cost Debt} \times \text{Tax Rate})\} / (1 - \text{Tax Rate})$		8.92%
Monthly Revenue Requirements Factor =	$\{(1 + \text{short term debt}) \text{ to the } 1/12 \text{ Power}\} - 1$		0.3523%
CCRC Tracker Rate (\$/MWh)		\$	3.133

**SECTION 4:  
2022 ELECTRIC AND NATURAL GAS  
CIP ADJUSTMENT RATE REPORT**

Northern States Power Company, doing business as Xcel Energy, submits this Conservation Improvement Program (CIP) Electric and Natural Gas 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 \$0.001108 per customer kWh was approved by the Commission on August 31, 2022 in Docket No. E002/M-22-158. This rate was implemented on October 1, 2022 and is designed to reduce the electric CIP Tracker balance to \$0 by September 30, 2023. The current natural gas CIP Adjustment Factor of \$0.027456 per therm was approved by the Commission on August 31, 2022 in Docket No. G002/M-22-160 and implemented on October 1, 2022. It was also designed to reduce the natural gas CIP Tracker to \$0 by September 30, 2023.

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

- Recovery of \$24,271,202 for our 2022 electric DSM financial incentives;
- Recovery of \$3,578,029 for our 2022 natural gas DSM financial incentive;
- A change in the electric CIP Adjustment Factor from \$0.001108 to \$0.002629 per kWh effective the first billing cycle beginning October 1, 2023 through September 30, 2024; and
- A change in the natural gas CIP Adjustment Factor from \$0.027456 per therm to \$0.032534 per therm effective the first billing cycle beginning October 1, 2023 through September 30, 2024.

## Proposed Electric CIP Adjustment Factor for Period October 2023 Through September 2024

Xcel Energy requests a new electric CIP Adjustment Factor of \$0.002629 per customer kWh to be effective with the first billing cycle of October 2023 and to remain in effect through the September 2024 billing period. This proposed factor is calculated to reduce the electric CIP Tracker balance to \$0 by the end of September 2024. It is based on the forecasted September 2024 unrecovered balance in the Company's electric CIP Tracker account. This forecasted balance is based on the forecasted October 2023 beginning balance, October 2023 through September 2024 approved and projected expenditures, forecasted 2023 incentives and forecasted CCRC recovery at the current CCRC rate. The inputs and calculation are shown below.

Forecasted beginning balance (Oct 2023)	-\$9,056,077
Approved expenditures (Oct 2023 - Sept 2024)	\$141,827,520
Forecasted 2023 incentive	\$22,045,827
Less forecasted CCRC recovery (Oct 2023 - Sept 2024)	\$84,017,002
Forecasted October 2024 beginning of month balance	\$70,800,268

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, 2023 (in order to implement the rate change by October 1), the Company will continue to apply the current CIP Adjustment of \$0.001108 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 2024 Electric CIP Tracker Balance	\$70,800,268
(2) Forecasted Electric Sales (MWh)– Oct 2023 through Sept 2024 <sup>26</sup>	26,816,790
<hr/>	
(3) Recalculated Electric CIP Adjustment Rate = (1)/(2)	\$2.640/MWh
	<b>\$0.002640/kWh</b>

Our above forecasted balance does not include carrying charges. To include carrying charges, we used the CIP Trackers to calculate the optimal rate of \$2.629 per MWh, which results in a \$17,551 end-of-month balance for September 2024. This is the positive balance closest to zero that we can model, given the digit limitations in our billing system. The projected 2023 and 2024 electric CIP Trackers are shown in Table 37 and Table 38.

<sup>26</sup> Forecasted sales exclude the customers exempted from electric CIP charges.

**Proposed Natural Gas CIP Adjustment Factor for Period October 2023 Through September 2024**

Xcel Energy requests a new natural gas CIP Adjustment Factor of \$0.032534 per therm to be effective with the first billing cycle of October 2023 and remaining in effect through the September 2024 billing period. The proposed factor is based on the forecasted October 1, 2024 unrecovered balance in the Company’s natural gas CIP Tracker account. The forecasted balance is based on the forecasted October 2023 beginning balance, October 2023 through September 2024 approved and projected expenditures, forecasted 2022 incentive and forecasted CCRC recovery at the current CCRC rate. The inputs and calculation are shown below.

Forecasted beginning balance (Oct 2023)	\$306,760
Program Budget (Oct 2023 - Sept 2024)	\$25,377,289
Forecasted 2023 incentive	\$4,115,951
Less forecasted CCRC recovery (Oct 2023 - Sept 2024)	\$4,127,088
Forecasted October 2024 beginning of month balance	\$25,672,912

As 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, 2023 (in order to implement the rate change by October 1), the Company will continue to apply the current CIP Adjustment Factor of \$0.027456 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 2024 Natural Gas CIP Tracker Balance	\$25,672,912
(2) Forecasted Gas Sales <sup>27</sup> – October 2023 through September 2024	78,761,227
<hr/>	
(3) Recalculated Gas CIP Adjustment Rate = (1)/(2)	\$0.32596/ dth
	<b>\$0.032596/ therm</b>

Our above forecasted balance does not include carrying charges. To include carrying charges, we used the CIP Trackers to calculate the optimal rate of \$0.032534 per therm, which results in a \$85 end-of-month balance for September 2024. This is the positive balance closest to zero that we can model, given the digit limitations in our billing system. The projected 2023 and 2024 natural gas CIP Trackers are shown in Table 39 and Table 40.

<sup>27</sup> 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  
 2023 Forecast

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Annual</u>
<u>EXPENSES</u>	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	
1. Balance	(38,012,183)	(39,415,156)	(39,517,107)	(39,625,102)	(38,592,263)	(38,362,727)	(37,025,060)	(38,188,512)	(37,648,783)	(9,056,077)	(9,766,203)	(8,752,755)	2,772,801
2. CIP Program Expenditures	8,647,574	8,556,028	9,014,492	9,089,884	9,254,756	11,349,069	10,496,464	11,872,030	13,841,987	11,896,441	13,085,835	24,722,963	141,827,520
3. 2022 Performance Incentive									24,271,202				24,271,202
4. Total Expenses + Incentive (Line 1b + 2 + 3)	(29,364,610)	(30,859,127)	(30,502,615)	(30,535,218)	(29,337,507)	(27,013,658)	(26,528,597)	(26,316,483)	464,405	2,840,364	3,319,633	15,970,207	168,871,524
<u>RECOVERY</u>													
5. CCRC Rate (\$/MWh)	3.13	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)	7,351,835	6,322,900	6,665,851	5,880,676	6,596,331	7,327,339	8,543,011	8,301,987	7,016,416	6,841,332	6,552,260	7,179,664	84,579,603
7. CIP Adjustment Factor Rate (\$/MWh)	1.108	1.108	1.108	1.108	1.108	1.108	1.108	1.108	1.108	2.629	2.629	2.629	
8. CIP Adjustment Factor Recovery (Factor times Sales)	2,600,011	2,236,123	2,357,409	2,079,728	2,332,823	2,591,347	3,021,276	2,936,036	2,481,388	5,740,779	5,498,210	6,024,685	39,899,816
9. Sub-Balance (Line 4 - 6 - 8)	(39,316,455)	(39,418,150)	(39,525,875)	(38,495,623)	(38,266,662)	(36,932,345)	(38,092,883)	(37,554,506)	(9,033,399)	(9,741,747)	(8,730,837)	2,765,858	
10. Accum Deferred Tax (Line 9 * 28.742%)	(11,300,335)	(11,329,565)	(11,360,527)	(11,064,412)	(10,998,604)	(10,615,095)	(10,948,656)	(10,793,916)	(2,596,380)	(2,799,973)	(2,509,417)	794,963	
11. Net Investment (Line 9 - 10)	(28,016,120)	(28,088,585)	(28,165,348)	(27,431,211)	(27,268,058)	(26,317,250)	(27,144,227)	(26,760,590)	(6,437,019)	(6,941,774)	(6,221,420)	1,970,895	
12. Carrying Charge (Line 11 * Carrying Charge Rate)	(98,701)	(98,956)	(99,227)	(96,640)	(96,065)	(92,716)	(95,629)	(94,278)	(22,678)	(24,456)	(21,918)	6,943	(834,319)
13. End of Month Balance (Line 9 + 12)	(39,415,156)	(39,517,107)	(39,625,102)	(38,592,263)	(38,362,727)	(37,025,060)	(38,188,512)	(37,648,783)	(9,056,077)	(9,766,203)	(8,752,755)	2,772,801	

Table 37: 2023 Electric CIP Tracker Forecast, With Cost Recovery in 2023

**Northern States Power Company, a Minnesota corporation**  
**State of Minnesota- Electric Utility**  
**DSM Cost Recovery & Incentive Mechanism - Total**  
**2024 Forecast**

		<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>
		Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
	<u>EXPENSES</u>									
1.	Balance	2,772,801	(1,928,764)	(5,354,225)	(8,514,212)	(10,088,242)	(12,841,866)	(14,881,269)	(19,890,308)	(23,137,382)
2.	CIP Program Expenditures	8,647,574	8,556,028	9,014,492	9,089,884	9,254,756	11,349,069	10,496,464	11,872,030	13,841,987
3.	2023 Performance Incentive									22,045,827
4.	Total Expenses + Incentive (Line 1 + 2 + 3)	11,420,375	6,627,264	3,660,267	575,672	(833,486)	(1,492,797)	(4,384,805)	(8,018,279)	12,750,431
	<u>RECOVERY</u>									
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)	7,255,765	6,507,462	6,608,095	5,784,605	6,511,889	7,259,516	8,403,800	8,189,279	6,923,334
7.	CIP Adjustment Factor Rate (\$/MWh)	2.629	2.629	2.629	2.629	2.629	2.629	2.629	2.629	2.629
8.	CIP Adjustment Factor Recovery (Factor times Sales)	6,088,544	5,460,619	5,545,063	4,854,046	5,464,333	6,091,691	7,051,896	6,871,885	5,809,590
9.	Sub-Balance (Line 4 - 6 - 8)	(1,923,934)	(5,340,817)	(8,492,891)	(10,062,979)	(12,809,708)	(14,844,004)	(19,840,500)	(23,079,443)	17,508
10.	Accum Deferred Tax (Line 9 * 28.742%)	(552,977)	(1,535,058)	(2,441,027)	(2,892,302)	(3,681,766)	(4,266,464)	(5,702,557)	(6,633,493)	5,032
11.	Net Investment (Line 9 - 10)	(1,370,957)	(3,805,759)	(6,051,864)	(7,170,678)	(9,127,942)	(10,577,540)	(14,137,944)	(16,445,949)	12,476
12.	Carrying Charge (Line 11 * Carrying Charge Rate)	(4,830)	(13,408)	(21,321)	(25,262)	(32,158)	(37,265)	(49,808)	(57,939)	44
13.	End of Month Balance (Line 9 + 12)	(1,928,764)	(5,354,225)	(8,514,212)	(10,088,242)	(12,841,866)	(14,881,269)	(19,890,308)	(23,137,382)	17,551

Table 38: 2024 Electric CIP Tracker Forecast, With Cost Recovery in 2024

Northern States Power Company, a Minnesota corporation  
State of Minnesota - Gas Utility  
DSM Cost Recovery and Incentive Mechanism  
Tracker and Balance (\$)   
2023

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sept</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>	<u>Total</u>
<u>EXPENSES</u>	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	
1. Beginning Balance	(3,614,603)	(5,977,122)	(7,794,901)	(9,133,851)	(9,055,429)	(8,320,638)	(7,228,832)	(6,121,274)	(4,695,639)	306,760	512,073	(723,223)	
2. CIP Program Expenditures	2,197,205	1,927,468	1,823,374	1,872,188	1,767,689	1,848,746	1,764,544	2,135,822	2,250,411	2,087,569	1,954,093	3,748,180	25,377,289
3. 2022 Performance Incentive									3,578,029				3,578,029
4. <b>Total Expenses</b> (Line 1b + 2 + 3)	<b>(1,417,398)</b>	<b>(4,049,654)</b>	<b>(5,971,526)</b>	<b>(7,261,664)</b>	<b>(7,287,740)</b>	<b>(6,471,892)</b>	<b>(5,464,288)</b>	<b>(3,985,451)</b>	<b>1,132,802</b>	<b>2,394,329</b>	<b>2,466,166</b>	<b>3,024,957</b>	
<u>RECOVERY</u>													
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	729,993	599,228	505,634	286,313	164,468	120,382	104,505	113,214	132,424	261,163	442,351	644,023	4,103,696
7. CIP Adjustment Factor Rate (\$/Dth)	0.27456	0.27456	0.27456	0.27456	0.27456	0.27456	0.27456	0.27456	0.27456	0.32534	0.32534	0.32534	
8. CIP Adjustment Factor Recovery	3,824,939	3,139,770	2,649,368	1,500,192	861,760	630,762	547,573	593,208	693,863	1,621,504	2,746,458	3,998,594	22,807,992
9. <b>Total Recovery</b> (Line 6 + 8)	<b>4,554,932</b>	<b>3,738,997</b>	<b>3,155,002</b>	<b>1,786,505</b>	<b>1,026,228</b>	<b>751,144</b>	<b>652,078</b>	<b>706,423</b>	<b>826,287</b>	<b>1,882,667</b>	<b>3,188,809</b>	<b>4,642,616</b>	
10. Rate Refund	0	0	0	0	0	0	0	0	0	0	0	0	0
11. Sub-Balance (Line 4-9)	(5,972,330)	(7,788,651)	(9,126,528)	(9,048,169)	(8,313,967)	(7,223,036)	(6,116,366)	(4,691,874)	306,514	511,662	(722,643)	(1,617,659)	
12. Accum Deferred Tax (Line 11 * 28.742%)	(1,716,567)	(2,238,614)	(2,623,147)	(2,600,625)	(2,389,601)	(2,076,045)	(1,757,966)	(1,348,538)	88,098	147,062	(207,702)	(464,948)	(17,188,592)
13. Net Investment (Line 11-12)	(4,255,763)	(5,550,037)	(6,503,382)	(6,447,544)	(5,924,367)	(5,146,991)	(4,358,400)	(3,343,336)	218,416	364,600	(514,941)	(1,152,711)	(42,614,456)
14. Carrying Charge (a) (Line 13 * Carrying Charge Rate)	(4,792)	(6,249)	(7,323)	(7,260)	(6,671)	(5,796)	(4,908)	(3,765)	246	411	(580)	(1,298)	(47,984)
15. <b>End of Month Balance</b> (Line 11+14)	<b>(5,977,122)</b>	<b>(7,794,901)</b>	<b>(9,133,851)</b>	<b>(9,055,429)</b>	<b>(8,320,638)</b>	<b>(7,228,832)</b>	<b>(6,121,274)</b>	<b>(4,695,639)</b>	<b>306,760</b>	<b>512,073</b>	<b>(723,223)</b>	<b>(1,618,957)</b>	

Table 39: 2023 Gas CIP Tracker Forecast, With Cost Recovery in 2023

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

**DSM Cost Recovery and Incentive Mechanism  
Tracker and Balance (\$)  
2024 Forecast**

	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sept</u>
<u>EXPENSES</u>	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
1. Balance	(\$1,618,957)	(\$4,690,023)	(\$7,241,305)	(\$9,076,722)	(\$9,276,907)	(\$8,702,340)	(\$7,729,381)	(\$6,724,459)	(\$5,410,671)
2. CIP Program Expenditures	2,197,205	1,927,468	1,823,374	1,872,188	1,767,689	1,848,746	1,764,544	2,135,822	2,250,411
3. 2023 Performance Incentive									4,115,951
<b>4. Total Expenses</b> (Line 1 + 2 + 3)	<b>578,248</b>	<b>(2,762,555)</b>	<b>(5,417,931)</b>	<b>(7,204,535)</b>	<b>(7,509,218)</b>	<b>(6,853,594)</b>	<b>(5,964,837)</b>	<b>(4,588,636)</b>	<b>955,691</b>
<u>RECOVERY</u>									
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	730,292	620,486	506,537	286,447	164,542	120,629	104,627	113,431	132,561
7. CIP Adjustment Factor Rate (\$/Dth)	0.32534	0.32534	0.32534	0.32534	0.32534	0.32534	0.32534	0.32534	0.32534
8. CIP Adjustment Factor Recovery	4,534,219	3,852,459	3,144,977	1,778,488	1,021,603	748,961	649,604	704,267	823,045
<b>9. Total Recovery</b> (Line 6 + 8)	<b>5,264,511</b>	<b>4,472,944</b>	<b>3,651,514</b>	<b>2,064,935</b>	<b>1,186,144</b>	<b>869,590</b>	<b>754,231</b>	<b>817,697</b>	<b>955,606</b>
10. Rate Refund	0	0	0	0	0	0	0	0	0
11. Sub-Balance (Line 4-9)	(4,686,263)	(7,235,499)	(9,069,445)	(9,269,470)	(8,695,363)	(7,723,184)	(6,719,067)	(5,406,334)	85
12. Accum Deferred Tax (Line 11 * 28.742%)	(1,346,926)	(2,079,627)	(2,606,740)	(2,664,231)	(2,499,221)	(2,219,798)	(1,931,194)	(1,553,888)	24
13. Net Investment (Line 11-12)	(3,339,337)	(5,155,872)	(6,462,705)	(6,605,239)	(6,196,142)	(5,503,386)	(4,787,873)	(3,852,445)	60
14. Carrying Charge (a) (Line 13 * Carrying Charge Rate)	(3,760)	(5,806)	(7,277)	(7,437)	(6,977)	(6,197)	(5,391)	(4,338)	0
<b>15. End of Month Balance</b> (Line 11+14)	<b>(4,690,023)</b>	<b>(7,241,305)</b>	<b>(9,076,722)</b>	<b>(9,276,907)</b>	<b>(8,702,340)</b>	<b>(7,729,381)</b>	<b>(6,724,459)</b>	<b>(5,410,671)</b>	<b>85</b>

**Table 40: 2024 Gas CIP Tracker Forecast, With Cost Recovery in 2024**



## **SECTION 5: 2022 CIP FINANCIAL INCENTIVE CALCULATIONS**

Northern States Power Company, doing business as Xcel Energy, submits this Conservation Improvement Program (CIP) Electric and Natural Gas CIP Incentive Calculation and Cost-Effectiveness & Performance Mechanism Report as required by Docket No. 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. The Commission's Order issued on December 9, 2020 extended the Shared Savings Incentive Mechanism through 2021-2023 Plan years and raised the CIP expenditure cap for utilities that exceed energy savings goals. The currently approved incentive mechanism has the following parameters:

- Electric utilities' incentive starts at energy savings of 1% of retail sales; 10% of net benefits is awarded at energy savings of 1.7% of retail sales and above.
- Gas utilities' incentive starts at energy savings of 0.7% of retail sales; 10% of net benefits is awarded at energy savings of 1.2% of retail sales and above.
- Net Benefits Cap remains at 10%.
- Gas utilities may exceed the 30% CIP Expenditures Cap, up to a maximum of 35%, if they meet or exceed energy savings equaling 1.2% of retail sales.
- Electric utilities may exceed the 30% CIP Expenditures Cap, up to a maximum of 35%, if they meet or exceed energy savings equaling 2% of retail sales.
- Utilities use their specific CIP Utility Discount Rate approved in Docket Nos. E999/CIP-18-783 (electric utilities) and G999/CIP-18-782 (gas utilities) for calculating net benefits for the Shared Savings incentive.

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.

Xcel Energy's 2022 CIP portfolio achieved electric energy savings of nearly 648 GWh which will provide net benefits of \$243 million to Xcel Energy electric customers. The Company also achieved natural gas savings of 920,504 Dth, which will provide Xcel Energy customers with net benefits of \$36 million. As a result of these achievements, we request approval of a 2022 CIP electric financial incentive of \$24,271,202 and a 2022 CIP natural gas financial incentive of \$3,578,029.

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 Attachment C: Cost-Effectiveness Analyses included in this filing.

**NORTHERN STATES POWER COMPANY  
A MINNESOTA CORPORATION  
2022 ELECTRIC 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 2021, the Company achieved electric energy savings of 647,675,810 kWh at the generator at a cost of \$104,265,717. As a result, we respectfully request approval of our CIP electric financial incentive in the amount of \$24,271,202.

**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 2021-2022 filings, we elected to include the One Stop Shop program administered by the Center for Energy and the Environment (CEE).<sup>28</sup> 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)	27,807,301,870
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Incentive Mechanism

Max Percent of Net Benefits Awarded	10.0%
Max Percent Expenditures Awarded (up to 2% achievement)	30.0%
Max Percent Expenditures Awarded (more than, equal to 2% achievement)	35.0%
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 2022 Achievements

Actual Spending for Incentive <sup>29</sup>	\$101,315,467
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<sup>28</sup> Docket No. E,G999/CI-08-133 and Docket No. E,G002/CI-10-81.

<sup>29</sup> Portfolio Subtotal spend plus CEE One-Stop Shop spend.

Actual Energy Savings (kWh) <sup>30</sup>	647,675,810
Net Benefits Achieved <sup>31</sup>	\$242,712,020

## 2022 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 =

$$\frac{\text{Actual Energy Savings (kWh)} / \text{3-year Weather Normalized Sales Average (kWh)}}{=} \\ 647,675,810 / 27,807,301,870 \\ = \mathbf{2.33\%}$$

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% =

$$= 10.0\% - 0.75\% \times 0^{32} / 0.1\% \\ = \mathbf{10.0\%}$$

Expenditures Award Cap (for >=2.0%) achievement =  
Max Percent Expenditures Awarded x Actual Spend for Incentive =

$$35\% \times \$101,315,467 \\ = \mathbf{\$35,460,414}$$

Incentive Awarded =  
Net Benefits Achieved x Percent of Net Benefits Awarded =

$$\$242,712,020 \times 10.0\% \\ = \mathbf{\$24,271,202}$$

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<sup>30</sup> Portfolio Subtotal energy savings plus CEE One-Stop Shop energy savings.

<sup>31</sup> 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.

<sup>32</sup> % of Sales Achievement is greater than Net Benefits Cap Achievement Level. Therefore, no adjustment is made to the Percent of Net Benefits Awarded.

## **2022 Electric Incentive Request**

Based on the above calculation, Xcel Energy respectfully requests approval of a CIP financial incentive of \$24,271,202 for its 2022 electric achievements.

**NORTHERN STATES POWER COMPANY  
A MINNESOTA CORPORATION  
2022 NATURAL GAS INCENTIVE CALCULATION**

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 2022, Xcel Energy achieved energy savings of 920,504 Dth at a cost of \$19,857,191. As a result, we respectfully request approval of our financial incentive in the amount of \$3,578,029.

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 2021-2023 filing, we elected to include the One Stop Shop program administered by the Center for Energy and the Environment (CEE).<sup>33</sup> The indirect impact third party programs—Enerchange, Energy Intelligence, Energy Smart, and Trillion Btu—are not included in the calculation of the incentive.<sup>34</sup>

Model Year Inputs

3-yr Weather Normalized Sales Average (Dth)	76,465,185
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Incentive Mechanism

Max Percent of Net Benefits Awarded	10.0%
Max Percent Expenditures Awarded (up to 1.2% achievement)	30.0%
Max Percent Expenditures Awarded (more than, equal to 1.2% achievement)	35.0%
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 2022 Achievements

Actual Spending for Incentive <sup>35</sup>	\$19,315,588
Actual Energy Savings (Dth)	920,504
Net Benefits Achieved <sup>36</sup>	\$35,780,290

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<sup>33</sup> Docket No. E,G999/CI-08-133 and Docket No. E,G002/CI-10-81.

<sup>34</sup> Docket No. E,G999/CI-08-133 and Docket No. G002/M-16-108.

<sup>35</sup> Portfolio Subtotal energy savings plus CEE One-Stop Shop energy savings.

<sup>36</sup> 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.

## 2022 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 =

$$\frac{\text{Actual Energy Savings (Dth)} / \text{3-year Weather Normalized Sales Average (Dth)}}{920,452 / 76,465,185} = \\ = \mathbf{1.20\%}$$

Percent of Net Benefits Awarded =

$$\text{Max Percent of Net Benefits Awarded} - \text{Increase in Net Benefits Awarded Per 0.1\%} \\ \text{Increase in Achievement Level} \times (\% \text{ of Sales Achievement Level less than Net} \\ \text{Benefits Cap Achievement Level}) / 0.1\% = \\ 10.0\% - 0.75\% \times 0^{37} / 0.1\% = \\ = \mathbf{10\%}$$

Expenditures Award Cap (for  $\geq 1.2\%$ ) achievement =

Max Percent Expenditures Awarded x Actual Spend for Incentive =

$$35\% \times \$19,387,010 \\ = \mathbf{\$6,760,456}$$

Incentive Awarded =

Net Benefits Achieved x Percent of Net Benefits Awarded =

$$\mathbf{\$35,780,290} \times 10\% \\ = \mathbf{\$3,578,029}$$

## 2022 Natural Gas Incentive Request

Based on the above calculation, Xcel Energy respectfully requests approval of a CIP financial incentive of \$3,578,029 for its 2022 natural gas achievements.

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<sup>37</sup> Percent of Sales Achievement is greater than Net Benefits Cap Achievement Level. Therefore, no adjustment is made to the Percent of Net Benefits Awarded.

## **SECTION 6: ATTACHMENTS**

Attachment A: Compliance Matrix

Attachment B: Workforce and Development Report

Attachment C: Cost Effectiveness Analyses

Attachment D: Detailed Technical Assumptions



## ATTACHMENT A: COMPLIANCE MATRIX

Xcel Energy is committed to complying fully with all applicable statutes, rules and decisions by the Department of Commerce. We believe our Status Report reflects appropriate implementation of all requirements. We have prepared a matrix reflecting our inventory of requirements to be met in this Application and cross-referenced to the portion of the Plan that fulfills each compliance item.

### STATUTES, RULES, AND ORDER

Rules, Statute or Order	Subdivision or Order Point	Required Information	2022 Status Report
§216B.241	Subd. 1c (b)	<b>Achievement as a % of Sales.</b> A public utility providing electric service has an annual energy-savings goal equivalent to 1.75 percent of gross annual retail energy sales unless modified by the commissioner under paragraph.	<b>Section 1: Compliance Report</b>
§216B.241	Subd. 1c (c)	<b>Achievement as a % of Sales &amp; Carry Forward Provisions.</b> A public utility providing natural gas service has an annual energy-savings goal equivalent to one percent of gross annual retail energy sales, which cannot be lowered by the commissioner. The savings goals must be calculated based on the most recent three-year weather-normalized average. A public utility providing electric service may elect to carry forward energy savings in excess of 1.75 percent for a year to the succeeding three calendar years, except that savings from electric utility infrastructure projects allowed under paragraph (d) may be carried forward for five years. A public utility providing natural gas service may elect to carry forward energy savings in excess of one percent for a year to the succeeding three calendar years. A particular energy savings can only be used to meet one year's goal.	<b>Section 1: Compliance Report</b>
§216B.241	Subd. 1c (g)	<b>Efficient Fuel Switching.</b> Notwithstanding any provision to the contrary, until July 1, 2026, spending by a public utility subject to this section on efficient fuel-switching improvements to meet energy savings goals under this section must not exceed 0.35 percent per year, averaged over three years of the public utility's gross annual retail energy sales.	<b>N/A</b>
§216B.241	Subd. 2e	<b>R&amp;D Spending.</b> Each public utility subject to this subdivision may spend and invest annually up to ten percent of the total amount spent and invested on energy conservation improvements under this section by the public utility on research and development projects that meet the definition of energy conservation improvement.	<b>Section 1: Compliance Report</b>
§216B.241	Subd. 1f (c)	<b>Facilities Energy Efficiency.</b> The commissioner shall require that utilities include in their conservation improvement plans programs that facilitate professional engineering verification to qualify a building as Energy Star-labeled, Leadership in Energy and Environmental Design (LEED) certified, or Green Globes-certified.	<b>Section 1: Compliance Report</b>

Rules, Statute or Order	Subdivision or Order Point	Required Information	2022 Status Report
§216B.241	Subd. 5a	<p><b>Qualifying solar energy project.</b></p> <p>(a) A utility or association may include in its conservation plan programs for the installation of qualifying solar energy projects as defined by section <a href="#">216B.2411</a> to the extent of the spending allowed for generation projects by section <a href="#">216B.2411</a>. The cost-effectiveness of a qualifying solar energy project may be determined by a different standard than for other energy conservation improvements under this section if the commissioner determines it is in the public interest to do so to encourage solar energy projects. Energy savings from qualifying solar energy projects may not be counted toward the minimum energy-savings goal of at least one percent for energy conservation improvements required under subdivision 1c, but may, if the conservation plan is approved:</p> <ol style="list-style-type: none"> <li>(1) be counted toward energy savings above that minimum percentage; and</li> <li>(2) be eligible for a performance incentive under section <a href="#">216B.16, subdivision 6c</a>, or <a href="#">216B.241, subdivision 2c</a>, that is distinct from the incentive for energy conservation and is based on the competitiveness and cost-effectiveness of solar projects in relation to other potential solar projects available to the utility.</li> </ol> <p>(b) Qualifying solar energy projects may not be considered when establishing demand-side management targets under section <a href="#">216B.2422</a>, <a href="#">216B.243</a>, or any other section of this chapter</p>	N/A – The Company does not include solar as part of our CIP portfolio.
§216B.241	Subd. 7a	<p><b>Low-Income Spending.</b> The commissioner shall ensure that each public utility subject to subdivision 1c provides energy conservation and efficient fuel-switching programs to low-income households. When approving spending and energy-savings goals for low-income programs, the commissioner shall consider historic spending and participation levels, energy savings achieved by low-income programs, and the number of low-income persons residing in the utility's service territory. Beginning January 1, 2022, a public utility furnishing gas service must spend at least one percent of its most recent three-year average gross operating revenue from residential customers in the state on low-income programs. A public utility that furnishes electric service must spend at least 0.4 percent of its gross operating revenue from residential customers in the state on low-income programs. Beginning in 2024, a public utility that furnishes electric service must spend 0.6 percent of the public utility's gross operating revenue from residential customers in the state on low-income programs.</p>	Section 1: Compliance Report
§216B.241	Subd. 7f	<p><b>Prewetherization.</b> Up to 15 percent of a public utility's spending on low-income programs may be spent on preweatherization measures. A public utility is prohibited from claiming energy savings from preweatherization measures toward the public utility's energy savings goal</p>	Section 1: Compliance Report

Rules, Statute or Order	Subdivision or Order Point	Required Information	2022 Status Report
§216B.241	Subd. 8	<p><b>Assessments.</b> The commission or department may assess public utilities subject to this section to carry out the purposes of subdivisions 1d, 1e, and 1f. An assessment under this subdivision must be proportionate to a public utility's gross operating revenue from sales of gas or electric service within Minnesota during the last calendar year, as applicable. Assessments made under this subdivision are not subject to the cap on assessments provided by section <a href="#">216B.62</a>, or any other law.</p>	Section 1: Compliance Report
§216B.241	Subd. 9e	<p><b>SB2030.</b> The commissioner shall require utilities to develop and implement conservation improvement programs that are expressly designed to achieve energy efficiency goals consistent with the Sustainable Building 2030 performance standards. These programs must include offerings of design assistance and modeling, financial incentives, and the verification of the proper installation of energy-efficient design components in new and substantially reconstructed buildings. A utility's design assistance program must consider the strategic planting of trees and shrubs around buildings as an energy conservation strategy for the designed project. A utility making an expenditure under its conservation improvement program that results in a building meeting the Sustainable Building 2030 performance standards may claim the energy savings toward its energy-savings goal established in subdivision 1c.</p>	Section 1: Compliance Report
§216B.241	Subd. 11a	<p><b>Efficient Fuel Switching.</b> A public utility providing electric service at retail may include in the plan required under subdivision 2 programs to implement efficient fuel-switching improvements or combinations of energy conservation improvements, fuel-switching improvements, and load management. For each program, the public utility must provide a proposed budget, an analysis of the program's cost-effectiveness, and estimated net energy and demand savings.</p>	N/A
§216B.241	Subd. 11d	<p><b>Efficient Fuel Switching.</b> A fuel-switching improvement is deemed efficient if, applying the technical criteria established under section <a href="#">216B.241, subdivision 1d</a>, paragraph (e), the improvement meets the following criteria, relative to the fuel that is being displaced:</p> <ul style="list-style-type: none"> <li>(1) results in a net reduction in the amount of source energy consumed for a particular use, measured on a fuel-neutral basis;</li> <li>(2) results in a net reduction of statewide greenhouse gas emissions as defined in section <a href="#">216H.01, subdivision 2</a>, over the lifetime of the improvement. For an efficient fuel-switching improvement installed by an electric utility, the reduction in emissions must be measured based on the hourly emission profile of the electric utility, using the hourly emissions profile in the most recent resource plan approved by the commission under section <a href="#">216B.2422</a>;</li> </ul>	N/A

Rules, Statute or Order	Subdivision or Order Point	Required Information	2022 Status Report
		<p>(3) is cost-effective, considering the costs and benefits from the perspective of the utility, participants, and society; and</p> <p>(4) is installed and operated in a manner that improves the utility's system load factor.</p>	
§216B.241	Subd. 12 (a-b)	<p><b>Efficient Fuel Switching.</b> (a) As part of a public utility's plan filed under subdivision 2, a public utility that provides natural gas service to Minnesota retail customers may propose one or more programs to install electric technologies that reduce the consumption of natural gas by the utility's retail customers as an energy conservation improvement. The commissioner may approve a proposed program if the commissioner, applying the technical criteria developed under section <a href="#">216B.241, subdivision 1d</a>, paragraph (e), determines that:</p> <p>(1) the electric technology to be installed meets the criteria established under section <a href="#">216B.241, subdivision 11</a>, paragraph (d), clauses (1) and (2); and</p> <p>(2) the program is cost-effective, considering the costs and benefits to ratepayers, the utility, participants, and society.</p> <p>(b) If a program is approved by the commission under this subdivision, the public utility may count the program's energy savings toward its energy savings goal under section <a href="#">216B.241, subdivision 1c</a>. Notwithstanding section <a href="#">216B.2402, subdivision 4</a>, efficient fuel-switching achieved through programs approved under this subdivision is energy conservation.</p>	N/A
§216B.241	Subd. 13	<p><b>Load Management.</b> A public utility may include in the utility's plan required under subdivision 2 programs to implement load management activities, or combinations of energy conservation improvements, fuel-switching improvements, and load management activities. For each program the public utility must provide a proposed budget, cost-effectiveness analysis, and estimated net energy and demand savings.</p> <p>(b) The commissioner may approve a proposed program if the commissioner determines the program is cost-effective, considering the costs and benefits to ratepayers, the utility, participants, and society.</p>	N/A
§216B.241	Subd. 14h	<p><b>Transformation.</b> Upon approval, each public utility with over 30,000 customers must participate in ETA and contribute to the approved budget of the program by depositing annually in the energy and conservation account under subdivision 2a an amount that is proportional to the utility's gross operating revenue from sales of gas or electric service in Minnesota, excluding revenues from large customer facilities exempted under subdivision 1a. A participating utility</p>	N/A – Invoices began in 2023 and are not applicable to 2022

Rules, Statute or Order	Subdivision or Order Point	Required Information	2022 Status Report
		must not be required to contribute more than the following percentages of the utility's spending approved by the commission in the plan filed under subdivision 2: (1) two percent in the program's initial two years; (2) 3.5 percent in the program's third and fourth years; and (3) five percent thereafter.	
§216B.16	Subd. 17	<b>Employee Expenses.</b> Amended by Minn. Laws 2010, Chp. 328, requires utilities to report general travel, entertainment, and employee related costs. Staff recommended that travel, entertainment, and employee-related expenses associated with CIP be reviewed as part of the general expenditure review process associated with CIP status reports. Staff further recommended that these costs be capped at 0.5% of total annual CIP expenses	<b>Section 1: Compliance Report</b>
§216B.2411	Subd. 1a	<b>Distributed Energy Resource Spending Cap:</b> Any municipality or rural electric association providing electric service and subject to section <a href="#">216B.241</a> may, and each public utility may, use five percent of the total amount to be spent on energy conservation improvements under section <a href="#">216B.241</a> , on:	<b>Section 1: Compliance Report</b>
<b>Minnesota Rules</b>	Part 7690.0550	Utilities must file the following data for each <b>program</b> : <ul style="list-style-type: none"> <li>• the approved participation goal, and the actual participants served during the previous calendar year;</li> <li>• the estimate of (1) low-income and (2) renter residential customer participation levels as anticipated in the approved biennial conservation improvement program filing, and the utility's estimates of low-income and renter participation actually achieved, if applicable;</li> <li>• the approved budget, and the actual expenditures;</li> <li>• the approved energy and demand savings goals and the actual savings achieved for the previous year; and</li> <li>the cost-effectiveness of the program based on the results of previous years and the actual expenditures, as calculated from the utility, participant, ratepayer, and societal perspectives.</li> </ul>	<b>Section 1: Executive Summary Tables 2&amp;3</b>  <b>Section 2: 2022 Status Report Portfolio Results</b>
<b>Minnesota Rules</b>	7690.1200, subpart 1A	Requires electric utilities to calculate the required spending level by using the gross operating revenues in the year preceding the calendar year in which the filing is submitted and defines gross operating revenues as the total Minnesota jurisdictional assessable operating revenue as reported in each electric utility's Minnesota jurisdictional report on page E-30, Sales and Degree Days Data, Total Sales to Ultimate Consumer, line (B) Total Revenue Corresponding to Sales. Xcel's Minnesota electric jurisdictional report for 2019 is located in docket no E,G999/PR-20-4.	<b>Section 1: Compliance Report</b>
<b>Minnesota Rules</b>	7690.0550	Requires that utilities report the cost-effectiveness of programs as calculated from the Societal, Utility, Participant, and Ratepayer perspectives. The Department is focused on ensuring that CIP is cost-effective according to the Societal Test.	<b>Section 2: Portfolio Results</b>

Rules, Statute or Order	Subdivision or Order Point	Required Information	2022 Status Report
<b>Docket No. E002/M-90-1159</b>			
<b>January 3, 1992 Order</b>		Requires a performance measurement evaluation to accompany Northern States Power Company, a Minnesota corporation's, financial incentive mechanism filing.	<b>Section 1: Compliance Report</b>
<b>Docket No. E,G002/CIP-20-473</b>			
<b>November 25, 2020 Decision</b>	1f	Provision requiring programs to promote the use of efficient lighting and support the collection of spent lamps.	<b>Section 1: Compliance Report</b>
<b>November 25, 2020 Decision</b>	2d	The Deputy Commissioner requires the Company to include a narrative summary of its R&D activities and the corresponding dollar amounts for each R&D activity as part of the Company's annual Status Reports.	<b>Section 1: Compliance Report</b>
<b>November 25, 2020 Decision</b>	3	The Deputy Commissioner approves the Company's budgets and goals at the segment-level, requiring the Company to be accountable for achieving segment-level goals. The Company must also report energy savings, spending, participation, and cost-effectiveness results at the program, segment, and portfolio-level in its annual status reports so that individual program performance can be monitored	<b>Section 2: 2022 Status Report</b>
<b>November 25, 2020 Decision</b>	4	Due to ongoing interest by the Department and interested parties in understanding utility investments to support low-income customers and under-resourced communities, the Deputy Commissioner requires that utilities clearly report the following metrics in their annual status reports: a. the estimate of anticipated and actual low-income residential customer participation levels for each program as required in Minnesota Rules 7690.0550, b. the estimate of anticipated and actual residential rental customer participation levels for each program as required in Minnesota Rules 7690.0550, c. the planned and actual low-income spending and energy savings for each program, including dedicated low-income programs, as required in Minnesota Rules 7690.0550, d. for programs that make use of the low-income multifamily policy guidance, the anticipated and actual spending and energy savings achieved for the program, and from market-rate versus affordable housing participants, through the program, e. for programs that make use of the low-income multifamily policy guidance, the number of buildings and units served by market-rate versus affordable housing through the program, and f. for programs that make use of the low-income multifamily policy guidance, the cumulative number and amount of incentives by measure type for market-rate versus affordable housing delivered through the program (e.g. total number and total value of incentives for boilers installed in market-rate and in affordable housing buildings through a multifamily program).	<b>Section 1: Executive Summary Tables 2&amp;3</b> <b>Section 1: Compliance Report</b>

<b>Rules, Statute or Order</b>	<b>Subdivision or Order Point</b>	<b>Required Information</b>	<b>2022 Status Report</b>
<b>November 25, 2020 Decision</b>	N/A – Explanation of Hybrid low-income	For the purpose of determining whether a utility’s planned low-income spending meets the low-income spending requirement, the Department reviews spending for dedicated low-income programs. The Department will also include the planned spending in “hybrid programs” when the utility: • proposes a reasonable low-income spending goal within the program, • develops an acceptable method to identify the low-income portion of total program spending, and • tracks and clearly reports the low-income and non-low-income portions of the program spending in annual status reports.	<b>Section 1: Compliance Report</b>
<b>November 25, 2020 Decision</b>	8	The Deputy Commissioner reminds the utilities that the Measurement and Verification (M&V) Protocols for Large Customer CIP Projects require utilities to provide Staff with both an M&V plan (pre-M&V) and an M&V report (post-M&V) for individual custom CIP projects with estimated annual savings greater than 1,000,000 kilowatt-hours (kWh) of electricity or 20,000 thousand cubic feet (MCF) of natural gas. The M&V plan must be delivered to Staff as soon as possible after baseline data collection is complete and before implementation of the measure(s).	<b>Section 1: Compliance Report</b>
<b>November 25, 2020 Decision</b>	9a	Allowing the utilities to exceed annual budget, savings, and participation goals for all direct impact segments so long as the additional spending does not result in the segment becoming non-cost effective from the Societal perspective. Utilities are required to notify the Department via a Courtesy Notification of circumstances where the utility expects to exceed any segment goal by 25%.	<b>N/A – No requests made in 2022</b>
<b>November 25, 2020 Decision</b>	9c	Requiring the utilities to email CIP Staff a Courtesy Notification summarizing any program changes that do not fall under the parameters of the formal plan modification process outlined in Minnesota Rules, and then work with Staff to determine whether it merits a formal modification.	<b>Section 1: Compliance Report</b>
<b>November 25, 2020 Decision</b>	9d	Requiring the utilities to include in their annual status reports a description of all program modifications and changes not requiring Deputy Commissioner approval in order to keep the Department and other interested parties informed of their activities.	<b>Section 1: Compliance Report</b>
<b>April 29, 2021 Decision</b>		The Deputy Commissioner requires that as part of the AENHC program Xcel track and include in its annual CIP Status Report the number of buildings and units built by each type of developer.	<b>Section 2: 2022 Status Report</b>
<b>April 29, 2021 Decision</b>		Given the relative magnitude of the CIP-WDE program’s budget, the uniqueness of the program design, and the interest from stakeholders, the Deputy Commissioner requires that prior to the Company submitting its annual CIP Status Report, Xcel work with Staff to develop a template and system for reporting on the metrics listed in information request #12 that will be meaningful to the Department and interested parties, will be presented clearly, and will not compromise data privacy.	<b>Attachment B</b>

Rules, Statute or Order	Subdivision or Order Point	Required Information	2022 Status Report
<b>August 11, 2022 Department Decision</b>	Empower Facilities Modification	Include in annual Status Reports: (1) A breakdown of participation by number of participants that (1) received only assessment and project proposals and (2) contracted for implementation services and/or ongoing support. (2) A list of non-CIP programs that benefited from the Empower Facilities program. (3) A summary of the fees reported in the CIP tracker as associated with the Empower Facilities program. (4) A summary of the total costs billed to customers for Empower Facilities and the percentage of these costs reported in the CIP Tracker.	<b>Section 2: 2022 Status Report</b>
<b>January 19 2023 – CIP Modification Decision</b>		Please work with Staff as the 2022 Status Report is prepared to ensure that the resources and savings reporting for dehumidifiers are reasonable and as accurate as possible and to describe the context and factors associated with this measure	<b>Section 1: Compliance Report</b>
<b>January 19 2023 – CIP Modification Decision (CPP)</b>		The Deputy Commissioner also requires Xcel to clearly report the amount of any M&V expenses and describe any M&V activities associated with the CPP Pilot program in the Market Research program section of its annual Status Report.	<b>N/A – Program begins in 2023</b>



## **Attachment B: CIP Workforce Development and Education Program (CIP-WDE)**

The CIP-WDE creates numerous energy efficiency career pathways for unemployed and underemployed people living in historically underserved communities, Black, Indigenous, people of color, and women residing in Green Zones of Minneapolis and Areas of Concentrated Poverty (ACP) 50 zones of St. Paul. The CIP-WDE program is provided by Xcel Energy and delivered by Center for Energy and Environment (CEE). The program provides services to the low-income market through multiple avenues. Since its launch in 2021, 100% of graduates have reported having a household income that is at or below 60% of the Area Median Income and 62% of internship graduates have gone on to become employed in the energy efficiency sector, many providing services to the low-income market. As shown through these results, CIP-WDE is accomplishing its mission in training and employing historically underserved communities in the energy efficiency sector, while providing additional resources to provide that market service.

### **CIP-WDE Program overview**

Once participants are recruited, they attend an introductory five-week paid Home Energy Career Training. This focuses on topics related to residential energy efficiency, including energy auditing, air sealing/insulation, and HVAC work. Stipends of \$500 per week are paid to each participant along with weekly transportation bus or gas cards. Participants learn a theory and practice of home energy, including basic building science and the relationships between the building envelope, heating systems, cooling systems, air infiltration, insulation, mechanical ventilation, and other home systems. Participants can earn the Building Performance Institute's (BPI's) Building Science Principles Certificate of Knowledge. Participants receive hands-on air sealing and insulation training. Additional topics cover low- and no-cost energy solutions, job-site safety guidelines, basic math for home insulation, and workplace readiness.

The combination of these topics provides a solid base in home energy efficiency that can be used for several clean energy career pathways, but particularly the internship pathways offered through the program's next phase. Following the introductory five-week course, participants have an opportunity to continue their training through a paid 16-week internship position. The internships directly follow the Home Energy Career Training. This program currently offers two internship pathways, including Home Insulation/Air Sealing and Energy Auditing. There are internship positions for roughly 30% of the participants who successfully complete the Home Energy Career Training.

During the first two weeks of the internship, trainees from both pathways train on props and homes as part of CEE's program portfolio. For the following six to eight weeks, trainees are placed with the Home Energy Squad, partner employer weatherization agencies, such as CAPRW and SRC, or insulation contractor companies. This gives employers and trainees the opportunity to work side by side before hiring starts. It also gives trainees a glimpse into different workplace cultures and procedures. Once per week during these internships, participants meet with the training staff to recap what they have learned that week and prepare to test for credentials. There is also ongoing training on career readiness topics such as writing effective resumes, best practices for interviewing, and conflict resolution. For those participants not pursuing internships, we facilitate referrals to other clean energy training programs. One such training program is the City of Minneapolis Health Department's Green Careers Program. This is a five-day training program that prepares participants to sit for the NABCEP Solar Associate exam. Participation in adjacent programs following the initial training course is tracked for up to two years after they have graduated from the Home Energy Career Training program.

### **Employer Partners**

The program leverages relationships with employers to connect participants directly to insulation and energy auditor careers. This provides ongoing opportunities for participants to meet with employer partners and build a bridge to employment. This is done in many ways, including guest speakers from employers and mock interviews, as well as direct placement for training with insulation companies and weatherization agencies. The program partners with Low Income Weatherization agencies including Sustainable Resource Center (SRC) and Community Action Partnership of Ramsey and Washington Counties (CAPRW) to host trainees and provide opportunities for them to learn about the weatherization audit process. These companies advance trainees' knowledge to better understand the landscape of weatherization work, at the same time benefiting themselves and their staff in pursuing potential hires and enhancing the quality of work done in low-income homes. Throughout the 16-week internship, trainees spend over 500 hours working on homes and 100% of those visits are low-income.

### **CIP-WDE Program Results**

CIP-WDE sought to train participants in the communities where they reside. For this reason, the program held our workforce training in Green Zone areas of Minneapolis and St. Paul that were highly accessible by public transportation and central to the communities. Due to the strategic location selection, two-thirds of participants reside in the Green Zones of Minneapolis or ACP50 Zones of St. Paul.

Another indicator of success has been the racial demographic and income of participants. Of the participants who graduated from the training, 87% identified as Black, Indigenous, or People of Color (Figure 4). The most represented racial/ethnic backgrounds identified were Black (50%) and Asian (17%). Six percent identified as Mexican or Latino and 6% identified as multi-racial. Native American, American Indian, or Alaska Native accounted for 9% of the racial make-up of the group. Over 60% of those who identified as Native American, American Indian, or Alaska Native identified with an additional race or ethnicity.

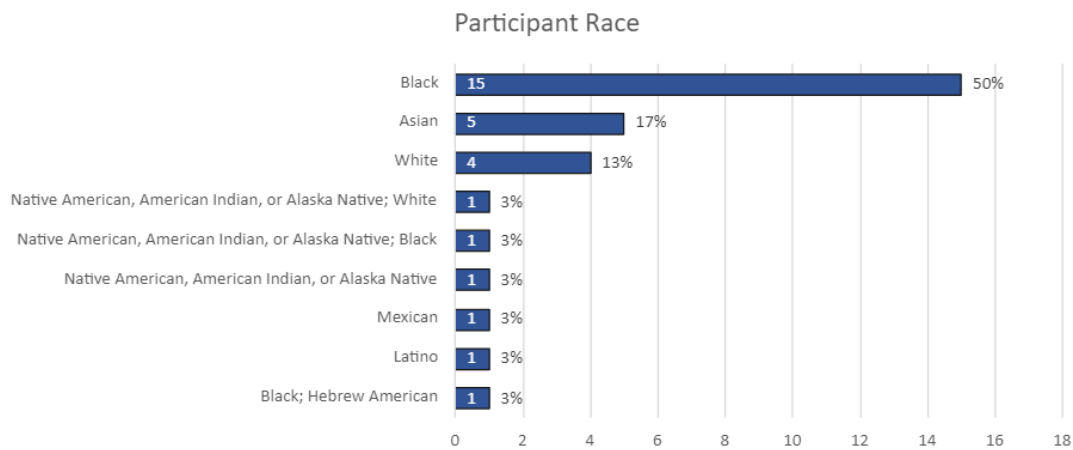


Figure 4. “What is your race?” Responses from graduates for Home Energy Career Training.

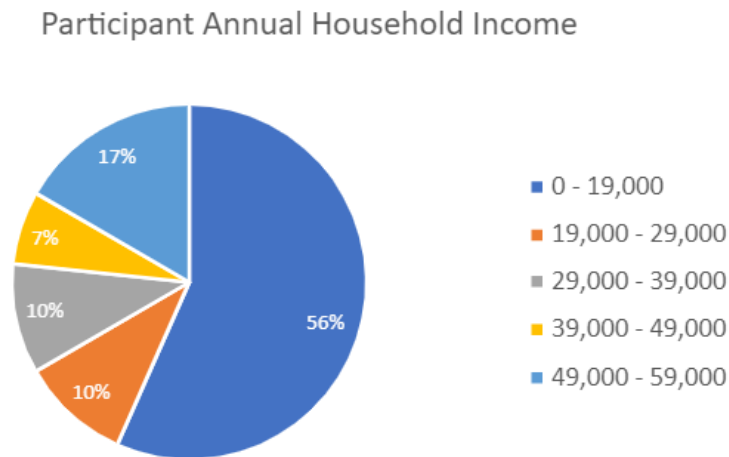


Figure 5. “What is your annual household income?” Responses from graduates of Home Energy Career Training.

In addition to the data already shared regarding the program meeting the targeted racial demographic and income goals, gender demographics have also been on track.

Of the 30 participants who completed the Xcel Energy-funded five-week Home Energy Career Training program this year, 30% of them identified as women. Overall, seven trainees have been hired as energy auditors and energy counselors working on income-qualified households throughout the Twin Cities. One graduate has gone on to Xcel Energy's Energy Careers Academy and another graduate has gone on to Dunwoody and is enrolled in their P2C scholarship program that supports students from historically underrepresented communities in higher education.

### **Community-Based Partnerships**

In addition to our early partners like Hmong American Partnership and EMERGE, the program added partners based on their interest in and connection to priority participant communities. One such partnership is with CAPI, a community-based nonprofit located in Minneapolis. With historical ties firmly rooted with immigrant and refugee communities, CAPI has extensive experience serving Minneapolis residents with limited English or math proficiency, low educational attainment, and other barriers resulting from poverty, unstable housing, and structural racism. In addition to supporting participants for this program CAPI has leveraged outside funding to promote additional support for green job development.

### **Barriers**

Many program participants face multiple barriers to employment including issues related to workplace readiness and housing. One of the most significant barriers to employment in this sector is transportation. For residential energy efficiency jobs, it is essential for workers to have access to reliable transportation, particularly their own vehicle and driver's license. Many residential insulation contractors' shops are in the outer metro region, making it difficult for those without a reliable form of transportation to get to daily. A lack of reliable transportation, access to a Driver's License, or fines that need to be paid to have a license reinstated are all reasons trainees may face challenges getting to and from a jobsite.

CEE has pursued and received additional funding to address high transportation needs not fully anticipated in the original program design. This will help retain trainees at a higher rate in the internship program. Additional efforts are made to minimize necessary travel by participants. Housing instability has been a barrier to attendance for some trainees. In working with CAPI's Housing Navigator, we have been able to address this barrier more effectively.

### **Wraparound Services**

Funding for wraparound services is mostly provided by partner organizations, with a small portion available from the main Xcel Energy funding stream. This allows the program to heavily leverage existing resources to provide services. During both the

five-week training and the internship, workforce partners provide participants with case management services to ensure they have what they need to participate each day: transportation, technology, adequate childcare, etc. They also provide training in workplace readiness to help participants present themselves to future employers and prepare for their next job.

### **Conclusion**

In summary, the CIP-WDE program has not only increased the number of low-income, BIPOC, and female workers in the energy efficiency sector, it has also equipped these graduates to bring their knowledge back to their communities, impacting income-qualified households Xcel Energy serves. P. This program has been highly successful in reaching the goal of equitably growing the energy efficiency workforce to expand services to low-income customers and communities in the Twin Cities metro.

In compliance with the Department of Commerce’s April 29, 2021 Decision in Docket No. G,E002/CIP-473, we provide the details below.

**Table 1: 2022 Participation Details**

<b>Metric</b>	<b>2022 Results</b>
# of persons employed when recruited for training	8
# of persons unemployed when recruited for training	22
# of trainees who are minorities (identify as BIPOC and/or Women)	29
# of trainees who have requested ADA accommodations	0
# of trainees who are economically disadvantaged (meeting 60% SMI as self-reported)	30
What is the number of persons who have registered for the training vs. the number who come?	46 registered vs 35 attended
Number of trainees who have dropped out without completing training.	5
Information on trainees that have been placed in training-related jobs	See Table 2
Total number of trainees who have completed training	30
Employers where trainees have been placed, the occupation(s) of the trainee(s), their wage rates, and the number of placements to-date	See Table 3
Average wages and benefits for trainees that have completed the training program.	\$21

### **Major Curriculum Goals**

The major curriculum goals for CIP-WDE include a) to learn the value of home energy efficiency, understanding the house as a system, and the foundations of building science b) to be prepared for an internship in Energy Auditing or Insulation Installation c) to apply career readiness skills to meet professional goals, progress in a career, and secure long-term employment in the energy efficiency sector.

### **Curriculum Topics, including training provider(s), and delivery method**

Curriculum topics include the thermodynamics of heat, air, and moisture flow; mechanical systems; home energy auditing; home insulation and air sealing; and career readiness, such as resume writing, best practices for interviewing, and workplace professionalism. The classroom training was provided by CEE, and various guest speakers through daily lectures, hands on activities, and a curriculum specific textbook. Trainees receive on the job training at auditing and insulation employers.

**What are major steps and milestones in the program? How many trainees in each step and milestone?**

There are several steps and milestones within the program. The first step is completing the paid classroom training and obtaining the BSP certificate. Thirty participants completed the training and twenty-nine of the thirty earned the BSP certificate. The next major milestone is entering into the 16-week paid Internship. From the classroom training, fifteen were selected for the Internship, with eight trainees completing the internship. Seven total trainees have gone on to be employed in the sector. Refer to Table 3 below for more information.

Four of the trainees are working as Energy Auditors and are in the process of taking the BPI Building Analyst Technician field exam. Due to recent changes in the BPI field exam process, the proctor has needed time to prepare the trainees for the new testing requirements and ensure houses where field exams are taking place are up to code. We anticipate four graduates will have earned their Building Analyst Technician certification by Q2 of 2023.

**Using general categories, provide reasons that trainees did not complete the training when CEE is able to contact the trainee.**

General categories for reasons why trainees did not complete the classroom training or the internship: a) Trainee was not ready to re-enter the workforce due to significant challenges related to housing and mental health b) Trainee was unable to commit to internship due to other employment c) Trainee did not want to pursue a career in insulation installation or energy auditing.

**Types of certifications, degrees, or diplomas that the trainees are expected to obtain.**

The Building Science Principles certificate is obtained through the Home Energy Career Training five-week program and is administered by the Building Performance Institute (BPI). Trainees are expected to obtain additional BPI credentials through the completion of the internship. Those in the Auditor internship track can earn the Building Analyst Technician (BA-T) certification and those in the Insulation route have the opportunity to earn the Air Leakage Control Installer (ALCI) certification.

**Table 2: 2022 Trainees (Placed in Training Related Jobs)**

	Occupation	Wage Rates	Benefits
Graduate 1	Energy Auditor	\$20.00	Yes
Graduate 2	Energy Auditor	\$20.00	Yes
Graduate 3	Energy Auditor	\$20.00	Yes
Graduate 4	Energy Auditor	\$20.00	Yes
Graduate 5	Energy Auditor	\$20.00	Offered
Graduate 6	Energy Counselor	\$18.50	Yes
Graduate 7	Energy Counselor	\$18.50	Offered

**Table 3: 2022 Trainees (Employment)**

	Occupation	Wage Rates	Benefits
Graduate 8	Store Associate	\$12.00	No
Graduate 9	Process Technician	\$23.50	No
Graduate 10	Manager	\$23.00	No
Graduate 11	Assistant Manager	\$21.00	No
Graduate 12	Security Officer	\$17.50	Yes
Graduate 13	Assistant Manager	\$23.70	No
Graduate 14	Maintenance Mechanic	\$22.60	No
Graduate 15	Security Officer	\$25.00	No
Graduate 16	Realtor	\$22.00	No
Graduate 17	Delivery Driver	\$24.00	No
Graduate 18	Co-Founder	\$25.00	No
Gradate 19	Security Officer	\$18.00	No

*Note: 8 graduates are currently unemployed, and were unable to contact 3 other graduates*



## Attachment C: Cost-Effectiveness Analyses

**PORTFOLIO TOTAL**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$104,144,807	\$104,144,807	\$104,144,807	\$121,309,549
T & D	N/A	\$15,332,819	\$15,332,819	\$15,332,819	\$17,859,033
Marginal Energy	N/A	\$202,934,250	\$202,934,250	\$202,934,250	\$251,557,074
Environmental Externality	N/A	N/A	N/A	N/A	\$43,330,707
Subtotal	N/A	\$322,411,876	\$322,411,876	\$322,411,876	\$434,056,362
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$1,005,773,816	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$50,028,161	N/A	N/A	\$50,028,161	\$50,028,161
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$13,500
Incremental O&M Savings	\$98,718,955	N/A	N/A	\$98,800,002	\$120,832,654
Subtotal	\$1,154,520,932	N/A	N/A	\$148,828,162	\$170,874,315
<b>Total Benefits</b>	<b>\$1,154,520,932</b>	<b>\$322,411,876</b>	<b>\$322,411,876</b>	<b>\$471,240,039</b>	<b>\$604,930,677</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$4,464,916	\$4,464,916	\$4,464,916	\$4,464,916
Project Administration	N/A	\$46,381,882	\$46,381,882	\$46,381,882	\$46,381,882
Advertising & Promotion	N/A	\$9,031,942	\$9,031,942	\$9,031,942	\$9,031,942
Measurement & Verification	N/A	\$2,045,674	\$2,045,674	\$2,045,674	\$2,045,674
Rebates	N/A	\$50,028,161	\$50,028,161	\$50,028,161	\$50,028,161
Other	N/A	\$353,911	\$353,911	\$353,911	\$353,911
Subtotal	N/A	\$112,306,486	\$112,306,486	\$112,306,486	\$112,306,486
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$1,005,773,816	N/A	N/A
Subtotal	N/A	N/A	\$1,005,773,816	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$161,133,903	N/A	N/A	\$161,133,903	\$160,578,469
Incremental O&M Costs	\$6,230,666	N/A	N/A	\$6,230,666	\$7,577,759
Subtotal	\$167,364,569	N/A	N/A	\$167,364,569	\$168,156,228
<b>Total Costs</b>	<b>\$167,364,569</b>	<b>\$112,306,486</b>	<b>\$1,118,080,302</b>	<b>\$279,671,055</b>	<b>\$280,462,714</b>
<b>Net Benefit (Cost)</b>	<b>\$987,156,363</b>	<b>\$210,105,391</b>	<b>(\$795,668,425)</b>	<b>\$191,568,984</b>	<b>\$324,467,963</b>
<b>Benefit/Cost Ratio</b>	<b>6.90</b>	<b>2.87</b>	<b>0.29</b>	<b>1.68</b>	<b>2.16</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.7 years
T & D Loss Factor (Energy)	7.01%
T & D Loss Factor (Demand)	8.66%
Net coincident kW Saved at Generator	0.11 kW
Gross Annual kWh Saved at Customer	361 kWh
Net Annual kWh Saved at Generator	384 kWh

Program Summary All Participants

Total Participants	<b>1,684,334</b>
<b>Total Budget</b>	<b>\$112,306,486</b>
<b>Net coincident kW Saved at Generator</b>	<b>193,227 kW</b>
Gross Annual kWh Saved at Customer	607,418,639 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>647,000,397 kWh</b>

Utility Program Cost per kWh Lifetime

**\$0.0111**

Utility Program Cost per kW at Gen

**\$581**

**PORTFOLIO TOTAL**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$108,292,927	\$108,292,927	\$108,292,927	\$127,137,862
T & D	N/A	\$19,370,603	\$19,370,603	\$19,370,603	\$22,797,046
Marginal Energy	N/A	\$192,652,386	\$192,652,386	\$192,652,386	\$240,435,506
Environmental Externality	N/A	N/A	N/A	N/A	\$41,817,194
Subtotal	N/A	\$320,315,916	\$320,315,916	\$320,315,916	\$432,187,608
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$951,171,733	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$47,565,358	N/A	N/A	\$47,565,358	\$47,565,358
Incremental Capital Savings	\$3,214	N/A	N/A	\$3,214	\$3,214
Incremental O&M Savings	\$102,522,575	N/A	N/A	\$102,522,575	\$127,841,203
Subtotal	\$1,101,262,880	N/A	N/A	\$150,091,147	\$175,409,776
<b>Total Benefits</b>	<b>\$1,101,262,880</b>	<b>\$320,315,916</b>	<b>\$320,315,916</b>	<b>\$470,407,064</b>	<b>\$607,597,383</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$1,525,064	\$1,525,064	\$1,525,064	\$1,525,064
Project Administration	N/A	\$30,754,720	\$30,754,720	\$30,754,720	\$30,754,720
Advertising & Promotion	N/A	\$5,373,308	\$5,373,308	\$5,373,308	\$5,373,308
Measurement & Verification	N/A	\$1,476,152	\$1,476,152	\$1,476,152	\$1,476,152
Rebates	N/A	\$47,565,358	\$47,565,358	\$47,565,358	\$47,565,358
Other	N/A	\$4,593,400	\$4,593,400	\$4,593,400	\$4,593,400
Subtotal	N/A	\$91,288,001	\$91,288,001	\$91,288,001	\$91,288,001
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$951,171,733	N/A	N/A
Subtotal	N/A	N/A	\$951,171,733	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$109,860,605	N/A	N/A	\$109,860,605	\$109,860,605
Incremental O&M Costs	\$3,185,310	N/A	N/A	\$3,185,310	\$3,901,140
Subtotal	\$113,045,915	N/A	N/A	\$113,045,915	\$113,761,745
<b>Total Costs</b>	<b>\$113,045,915</b>	<b>\$91,288,001</b>	<b>\$1,042,459,734</b>	<b>\$204,333,917</b>	<b>\$205,049,746</b>
<b>Net Benefit (Cost)</b>	<b>\$988,216,965</b>	<b>\$229,027,915</b>	<b>(\$722,143,818)</b>	<b>\$266,073,147</b>	<b>\$402,547,637</b>
<b>Benefit/Cost Ratio</b>	<b>9.74</b>	<b>3.51</b>	<b>0.31</b>	<b>2.30</b>	<b>2.96</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	16.0 years
T & D Loss Factor (Energy)	7.19%
T & D Loss Factor (Demand)	8.85%
Net coincident kW Saved at Generator	0.08 kW
Gross Annual kWh Saved at Customer	275 kWh
Net Annual kWh Saved at Generator	293 kWh

Program Summary All Participants

Total Participants	2,071,555
<b>Total Budget</b>	<b>\$91,288,001</b>
<b>Net coincident kW Saved at Generator</b>	<b>175,694 kW</b>
Gross Annual kWh Saved at Customer	569,564,867 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>606,556,879 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0094

Utility Program Cost per kW at Gen

\$520





**BUSINESS SEGMENT WITH INDIRECT PARTICIPANTS**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$62,310,342	\$62,310,342	\$62,310,342	\$73,287,966
T & D	N/A	\$9,705,384	\$9,705,384	\$9,705,384	\$11,615,762
Marginal Energy	N/A	\$140,396,321	\$140,396,321	\$140,396,321	\$173,685,892
Environmental Externality	N/A	N/A	N/A	N/A	\$29,164,038
Subtotal	N/A	\$212,412,046	\$212,412,046	\$212,412,046	\$287,753,658
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$616,598,585	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$34,038,013	N/A	N/A	\$34,038,013	\$34,038,013
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$93,889,386	N/A	N/A	\$93,970,432	\$115,377,130
Subtotal	\$744,525,984	N/A	N/A	\$128,008,446	\$149,415,143
<b>Total Benefits</b>	<b>\$744,525,984</b>	<b>\$212,412,046</b>	<b>\$212,412,046</b>	<b>\$340,420,491</b>	<b>\$437,168,800</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$3,607,751	\$3,607,751	\$3,607,751	\$3,607,751
Project Administration	N/A	\$18,370,613	\$18,370,613	\$18,370,613	\$18,370,613
Advertising & Promotion	N/A	\$957,310	\$957,310	\$957,310	\$957,310
Measurement & Verification	N/A	\$1,022,100	\$1,022,100	\$1,022,100	\$1,022,100
Rebates	N/A	\$34,038,013	\$34,038,013	\$34,038,013	\$34,038,013
Other	N/A	(\$33,080)	(\$33,080)	(\$33,080)	(\$33,080)
Subtotal	N/A	\$57,962,707	\$57,962,707	\$57,962,707	\$57,962,707
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$616,598,585	N/A	N/A
Subtotal	N/A	N/A	\$616,598,585	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$135,955,664	N/A	N/A	\$135,955,664	\$135,907,646
Incremental O&M Costs	\$6,224,680	N/A	N/A	\$6,224,680	\$7,571,038
Subtotal	\$142,180,344	N/A	N/A	\$142,180,344	\$143,478,685
<b>Total Costs</b>	<b>\$142,180,344</b>	<b>\$57,962,707</b>	<b>\$674,561,291</b>	<b>\$200,143,051</b>	<b>\$201,441,392</b>
<b>Net Benefit (Cost)</b>	<b>\$602,345,640</b>	<b>\$154,449,339</b>	<b>(\$462,149,246)</b>	<b>\$140,277,440</b>	<b>\$235,727,409</b>
<b>Benefit/Cost Ratio</b>	<b>5.24</b>	<b>3.66</b>	<b>0.31</b>	<b>1.70</b>	<b>2.17</b>

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

**2022 ELECTRIC**
**GOAL**

Input Summary and Totals

**Program "Inputs" per Customer kW and per Participant**

Lifetime (Weighted on Generator kWh)	16.4 years
T & D Loss Factor (Energy)	6.66%
T & D Loss Factor (Demand)	8.07%
Net coincident kW Saved at Generator	1.22 kW
Gross Annual kWh Saved at Customer	3,794 kWh
Net Annual kWh Saved at Generator	4,064 kWh

**Program Summary All Participants**

Total Participants	<b>104,483</b>
<b>Total Budget</b>	<b>\$57,962,707</b>
<b>Net coincident kW Saved at Generator</b>	<b>127,455 kW</b>
Gross Annual kWh Saved at Customer	396,435,173 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>424,619,124 kWh</b>

**Utility Program Cost per kWh Lifetime**
**\$0.0083**
**Utility Program Cost per kW at Gen**
**\$455**

**BUSINESS SEGMENT WITH INDIRECT PARTICIPANTS**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$51,668,857	\$51,668,857	\$51,668,857	\$60,423,748
T & D	N/A	\$9,236,413	\$9,236,413	\$9,236,413	\$10,828,484
Marginal Energy	N/A	\$100,060,041	\$100,060,041	\$100,060,041	\$124,378,094
Environmental Externality	N/A	N/A	N/A	N/A	\$21,236,859
Subtotal	N/A	\$160,965,311	\$160,965,311	\$160,965,311	\$216,867,186
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$415,887,831	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$28,350,155	N/A	N/A	\$28,350,155	\$28,350,155
Incremental Capital Savings	\$3,214	N/A	N/A	\$3,214	\$3,214
Incremental O&M Savings	\$97,652,344	N/A	N/A	\$97,652,344	\$122,338,967
Subtotal	\$541,893,544	N/A	N/A	\$126,005,713	\$150,692,336
<b>Total Benefits</b>	<b>\$541,893,544</b>	<b>\$160,965,311</b>	<b>\$160,965,311</b>	<b>\$286,971,024</b>	<b>\$367,559,522</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$1,041,163	\$1,041,163	\$1,041,163	\$1,041,163
Project Administration	N/A	\$12,927,034	\$12,927,034	\$12,927,034	\$12,927,034
Advertising & Promotion	N/A	\$307,590	\$307,590	\$307,590	\$307,590
Measurement & Verification	N/A	\$541,981	\$541,981	\$541,981	\$541,981
Rebates	N/A	\$28,350,155	\$28,350,155	\$28,350,155	\$28,350,155
Other	N/A	\$1,085,945	\$1,085,945	\$1,085,945	\$1,085,945
Subtotal	N/A	\$44,253,867	\$44,253,867	\$44,253,867	\$44,253,867
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$415,887,831	N/A	N/A
Subtotal	N/A	N/A	\$415,887,831	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$80,606,516	N/A	N/A	\$80,606,516	\$80,606,516
Incremental O&M Costs	\$3,180,821	N/A	N/A	\$3,180,821	\$3,896,073
Subtotal	\$83,787,337	N/A	N/A	\$83,787,337	\$84,502,589
<b>Total Costs</b>	<b>\$83,787,337</b>	<b>\$44,253,867</b>	<b>\$460,141,698</b>	<b>\$128,041,204</b>	<b>\$128,756,456</b>
<b>Net Benefit (Cost)</b>	<b>\$458,106,207</b>	<b>\$116,711,444</b>	<b>(\$299,176,386)</b>	<b>\$158,929,820</b>	<b>\$238,803,066</b>
<b>Benefit/Cost Ratio</b>	<b>6.47</b>	<b>3.64</b>	<b>0.35</b>	<b>2.24</b>	<b>2.85</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	16.4 years
T & D Loss Factor (Energy)	6.66%
T & D Loss Factor (Demand)	8.07%
Net coincident kW Saved at Generator	0.88 kW
Gross Annual kWh Saved at Customer	2,749 kWh
Net Annual kWh Saved at Generator	2,944 kWh

Program Summary All Participants

Total Participants	<b>103,681</b>
<b>Total Budget</b>	<b>\$44,253,867</b>
<b>Net coincident kW Saved at Generator</b>	<b>91,547 kW</b>
Gross Annual kWh Saved at Customer	285,029,737 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>305,228,942 kWh</b>

Utility Program Cost per kWh Lifetime

**\$0.0088**

Utility Program Cost per kW at Gen

**\$483**







**BUSINESS SEGMENT EE AND DR TOTAL**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$62,310,342	\$62,310,342	\$62,310,342	\$73,287,966
T & D	N/A	\$9,705,384	\$9,705,384	\$9,705,384	\$11,615,762
Marginal Energy	N/A	\$140,396,321	\$140,396,321	\$140,396,321	\$173,685,892
Environmental Externality	N/A	N/A	N/A	N/A	\$29,164,038
Subtotal	N/A	\$212,412,046	\$212,412,046	\$212,412,046	\$287,753,658
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$616,598,585	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$34,038,013	N/A	N/A	\$34,038,013	\$34,038,013
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$93,889,386	N/A	N/A	\$93,970,432	\$115,377,130
Subtotal	\$744,525,984	N/A	N/A	\$128,008,446	\$149,415,143
<b>Total Benefits</b>	<b>\$744,525,984</b>	<b>\$212,412,046</b>	<b>\$212,412,046</b>	<b>\$340,420,491</b>	<b>\$437,168,800</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$3,607,751	\$3,607,751	\$3,607,751	\$3,607,751
Project Administration	N/A	\$17,633,229	\$17,633,229	\$17,633,229	\$17,633,229
Advertising & Promotion	N/A	\$801,300	\$801,300	\$801,300	\$801,300
Measurement & Verification	N/A	\$1,022,100	\$1,022,100	\$1,022,100	\$1,022,100
Rebates	N/A	\$34,038,013	\$34,038,013	\$34,038,013	\$34,038,013
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$57,102,393	\$57,102,393	\$57,102,393	\$57,102,393
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$616,598,585	N/A	N/A
Subtotal	N/A	N/A	\$616,598,585	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$135,955,664	N/A	N/A	\$135,955,664	\$135,907,646
Incremental O&M Costs	\$6,224,680	N/A	N/A	\$6,224,680	\$7,571,038
Subtotal	\$142,180,344	N/A	N/A	\$142,180,344	\$143,478,685
<b>Total Costs</b>	<b>\$142,180,344</b>	<b>\$57,102,393</b>	<b>\$673,700,978</b>	<b>\$199,282,737</b>	<b>\$200,581,078</b>
<b>Net Benefit (Cost)</b>	<b>\$602,345,640</b>	<b>\$155,309,653</b>	<b>(\$461,288,932)</b>	<b>\$141,137,754</b>	<b>\$236,587,723</b>
<b>Benefit/Cost Ratio</b>	<b>5.24</b>	<b>3.72</b>	<b>0.32</b>	<b>1.71</b>	<b>2.18</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	16.4 years
T & D Loss Factor (Energy)	6.66%
T & D Loss Factor (Demand)	8.07%
Net coincident kW Saved at Generator	3.70 kW
Gross Annual kWh Saved at Customer	11,496 kWh
Net Annual kWh Saved at Generator	12,314 kWh

Program Summary All Participants

Total Participants	<b>34,483</b>
<b>Total Budget</b>	<b>\$57,102,393</b>
<b>Net coincident kW Saved at Generator</b>	<b>127,455 kW</b>
Gross Annual kWh Saved at Customer	396,435,173 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>424,619,124 kWh</b>

Utility Program Cost per kWh Lifetime

**\$0.0082**

Utility Program Cost per kW at Gen

**\$448**

**BUSINESS SEGMENT EE AND DR TOTAL**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$51,668,857	\$51,668,857	\$51,668,857	\$60,423,748
T & D	N/A	\$9,236,413	\$9,236,413	\$9,236,413	\$10,828,484
Marginal Energy	N/A	\$100,060,041	\$100,060,041	\$100,060,041	\$124,378,094
Environmental Externality	N/A	N/A	N/A	N/A	\$21,236,859
Subtotal	N/A	\$160,965,311	\$160,965,311	\$160,965,311	\$216,867,186
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$415,887,831	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$28,350,155	N/A	N/A	\$28,350,155	\$28,350,155
Incremental Capital Savings	\$3,214	N/A	N/A	\$3,214	\$3,214
Incremental O&M Savings	\$97,652,344	N/A	N/A	\$97,652,344	\$122,338,967
Subtotal	\$541,893,544	N/A	N/A	\$126,005,713	\$150,692,336
<b>Total Benefits</b>	<b>\$541,893,544</b>	<b>\$160,965,311</b>	<b>\$160,965,311</b>	<b>\$286,971,024</b>	<b>\$367,559,522</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$1,041,163	\$1,041,163	\$1,041,163	\$1,041,163
Project Administration	N/A	\$12,301,533	\$12,301,533	\$12,301,533	\$12,301,533
Advertising & Promotion	N/A	\$166,028	\$166,028	\$166,028	\$166,028
Measurement & Verification	N/A	\$541,981	\$541,981	\$541,981	\$541,981
Rebates	N/A	\$28,350,155	\$28,350,155	\$28,350,155	\$28,350,155
Other	N/A	\$1,085,945	\$1,085,945	\$1,085,945	\$1,085,945
Subtotal	N/A	\$43,486,804	\$43,486,804	\$43,486,804	\$43,486,804
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$415,887,831	N/A	N/A
Subtotal	N/A	N/A	\$415,887,831	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$80,606,516	N/A	N/A	\$80,606,516	\$80,606,516
Incremental O&M Costs	\$3,180,821	N/A	N/A	\$3,180,821	\$3,896,073
Subtotal	\$83,787,337	N/A	N/A	\$83,787,337	\$84,502,589
<b>Total Costs</b>	<b>\$83,787,337</b>	<b>\$43,486,804</b>	<b>\$459,374,635</b>	<b>\$127,274,141</b>	<b>\$127,989,393</b>
<b>Net Benefit (Cost)</b>	<b>\$458,106,207</b>	<b>\$117,478,507</b>	<b>(\$298,409,324)</b>	<b>\$159,696,883</b>	<b>\$239,570,129</b>
<b>Benefit/Cost Ratio</b>	<b>6.47</b>	<b>3.70</b>	<b>0.35</b>	<b>2.25</b>	<b>2.87</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	16.4 years
T & D Loss Factor (Energy)	6.66%
T & D Loss Factor (Demand)	8.07%
Net coincident kW Saved at Generator	2.98 kW
Gross Annual kWh Saved at Customer	9,277 kWh
Net Annual kWh Saved at Generator	9,935 kWh

Program Summary All Participants

Total Participants	30,723
<b>Total Budget</b>	<b>\$43,486,804</b>
<b>Net coincident kW Saved at Generator</b>	<b>91,547 kW</b>
Gross Annual kWh Saved at Customer	285,029,737 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>305,228,942 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0087

Utility Program Cost per kW at Gen

\$475





**BUSINESS ENERGY ASSESSMENTS**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$920,640	\$920,640	\$920,640	\$1,068,841
T & D	N/A	\$164,195	\$164,195	\$164,195	\$190,963
Marginal Energy	N/A	\$3,530,049	\$3,530,049	\$3,530,049	\$4,153,986
Environmental Externality	N/A	N/A	N/A	N/A	\$792,260
Subtotal	N/A	\$4,614,884	\$4,614,884	\$4,614,884	\$6,206,051
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$15,151,201	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$967,448	N/A	N/A	\$967,448	\$967,448
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$82,246	N/A	N/A	\$163,292	\$187,344
Subtotal	\$16,200,895	N/A	N/A	\$1,130,740	\$1,154,791
<b>Total Benefits</b>	<b>\$16,200,895</b>	<b>\$4,614,884</b>	<b>\$4,614,884</b>	<b>\$5,745,624</b>	<b>\$7,360,842</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$412,000	\$412,000	\$412,000	\$412,000
Project Administration	N/A	\$528,758	\$528,758	\$528,758	\$528,758
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0
Measurement & Verification	N/A	\$20,000	\$20,000	\$20,000	\$20,000
Rebates	N/A	\$967,448	\$967,448	\$967,448	\$967,448
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,928,206	\$1,928,206	\$1,928,206	\$1,928,206
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$15,151,201	N/A	N/A
Subtotal	N/A	N/A	\$15,151,201	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$3,198,375	N/A	N/A	\$3,198,375	\$3,198,310
Incremental O&M Costs	\$110,339	N/A	N/A	\$110,339	\$131,454
Subtotal	\$3,308,714	N/A	N/A	\$3,308,714	\$3,329,764
<b>Total Costs</b>	<b>\$3,308,714</b>	<b>\$1,928,206</b>	<b>\$17,079,407</b>	<b>\$5,236,919</b>	<b>\$5,257,970</b>
<b>Net Benefit (Cost)</b>	<b>\$12,892,181</b>	<b>\$2,686,678</b>	<b>(\$12,464,523)</b>	<b>\$508,704</b>	<b>\$2,102,872</b>
<b>Benefit/Cost Ratio</b>	<b>4.90</b>	<b>2.39</b>	<b>0.27</b>	<b>1.10</b>	<b>1.40</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	12.1 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	5.44 kW
Gross Annual kWh Saved at Customer	57,255 kWh
Net Annual kWh Saved at Generator	61,334 kWh

Program Summary All Participants

Total Participants	241
<b>Total Budget</b>	<b>\$1,928,206</b>
<b>Net coincident kW Saved at Generator</b>	<b>1,310 kW</b>
Gross Annual kWh Saved at Customer	13,798,500 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>14,781,467 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0108</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$1,472</b>

**BUSINESS ENERGY ASSESSMENTS**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$9,143	\$9,143	\$9,143	\$9,558
T & D	N/A	\$1,608	\$1,608	\$1,608	\$1,681
Marginal Energy	N/A	\$77,118	\$77,118	\$77,118	\$81,424
Environmental Externality	N/A	N/A	N/A	N/A	\$26,075
Subtotal	N/A	\$87,869	\$87,869	\$87,869	\$118,737
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$307,799	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$197,657	N/A	N/A	\$197,657	\$197,657
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$505,457	N/A	N/A	\$197,657	\$197,657
<b>Total Benefits</b>	<b>\$505,457</b>	<b>\$87,869</b>	<b>\$87,869</b>	<b>\$285,526</b>	<b>\$316,395</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$150,113	\$150,113	\$150,113	\$150,113
Advertising & Promotion	N/A	\$15	\$15	\$15	\$15
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$197,657	\$197,657	\$197,657	\$197,657
Other	N/A	\$226,790	\$226,790	\$226,790	\$226,790
Subtotal	N/A	\$574,576	\$574,576	\$574,576	\$574,576
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$307,799	N/A	N/A
Subtotal	N/A	N/A	\$307,799	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$4,080	N/A	N/A	\$4,080	\$4,080
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$4,080	N/A	N/A	\$4,080	\$4,080
<b>Total Costs</b>	<b>\$4,080</b>	<b>\$574,576</b>	<b>\$882,375</b>	<b>\$578,656</b>	<b>\$578,656</b>
<b>Net Benefit (Cost)</b>	<b>\$501,377</b>	<b>(\$486,708)</b>	<b>(\$794,507)</b>	<b>(\$293,130)</b>	<b>(\$262,261)</b>
<b>Benefit/Cost Ratio</b>	<b>123.88</b>	<b>0.15</b>	<b>0.10</b>	<b>0.49</b>	<b>0.55</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

<b>Program "Inputs" per Customer kW and per Participant</b>	
Lifetime (Weighted on Generator kWh)	5.0 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	1.21 kW
Gross Annual kWh Saved at Customer	29,480 kWh
Net Annual kWh Saved at Generator	31,581 kWh

**Program Summary All Participants**

Total Participants	26
<b>Total Budget</b>	<b>\$574,576</b>
<b>Net coincident kW Saved at Generator</b>	<b>31 kW</b>
Gross Annual kWh Saved at Customer	766,492 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>821,095 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.1400</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$18,295</b>







**BUSINESS NEW CONSTRUCTION**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$11,885,977	\$11,885,977	\$11,885,977	\$14,390,550
T & D	N/A	\$2,128,336	\$2,128,336	\$2,128,336	\$2,584,713
Marginal Energy	N/A	\$21,764,533	\$21,764,533	\$21,764,533	\$27,611,812
Environmental Externality	N/A	N/A	N/A	N/A	\$4,336,009
Subtotal	N/A	\$35,778,846	\$35,778,846	\$35,778,846	\$48,923,083
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$94,746,702	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$7,009,565	N/A	N/A	\$7,009,565	\$7,009,565
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$101,756,267	N/A	N/A	\$7,009,565	\$7,009,565
<b>Total Benefits</b>	<b>\$101,756,267</b>	<b>\$35,778,846</b>	<b>\$35,778,846</b>	<b>\$42,788,411</b>	<b>\$55,932,648</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$1,582,759	\$1,582,759	\$1,582,759	\$1,582,759
Project Administration	N/A	\$1,367,121	\$1,367,121	\$1,367,121	\$1,367,121
Advertising & Promotion	N/A	\$18,950	\$18,950	\$18,950	\$18,950
Measurement & Verification	N/A	\$625,000	\$625,000	\$625,000	\$625,000
Rebates	N/A	\$7,009,565	\$7,009,565	\$7,009,565	\$7,009,565
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$10,603,395	\$10,603,395	\$10,603,395	\$10,603,395
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$94,746,702	N/A	N/A
Subtotal	N/A	N/A	\$94,746,702	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$26,073,841	N/A	N/A	\$26,073,841	\$26,038,546
Incremental O&M Costs	\$324,751	N/A	N/A	\$324,751	\$403,949
Subtotal	\$26,398,591	N/A	N/A	\$26,398,591	\$26,442,495
<b>Total Costs</b>	<b>\$26,398,591</b>	<b>\$10,603,395</b>	<b>\$105,350,097</b>	<b>\$37,001,986</b>	<b>\$37,045,890</b>
<b>Net Benefit (Cost)</b>	<b>\$75,357,676</b>	<b>\$25,175,451</b>	<b>(\$69,571,251)</b>	<b>\$5,786,425</b>	<b>\$18,886,758</b>
<b>Benefit/Cost Ratio</b>	<b>3.85</b>	<b>3.37</b>	<b>0.34</b>	<b>1.16</b>	<b>1.51</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	19.4 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.08%
Net coincident kW Saved at Generator	47.17 kW
Gross Annual kWh Saved at Customer	177,650 kWh
Net Annual kWh Saved at Generator	190,306 kWh

Program Summary All Participants

Total Participants	287
<b>Total Budget</b>	<b>\$10,603,395</b>
<b>Net coincident kW Saved at Generator</b>	<b>13,537 kW</b>
Gross Annual kWh Saved at Customer	50,985,690 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>54,617,918 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0100

Utility Program Cost per kW at Gen

\$783

**BUSINESS NEW CONSTRUCTION**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$12,553,797	\$12,553,797	\$12,553,797	\$15,273,822
T & D	N/A	\$2,257,943	\$2,257,943	\$2,257,943	\$2,754,366
Marginal Energy	N/A	\$28,220,067	\$28,220,067	\$28,220,067	\$35,778,323
Environmental Externality	N/A	N/A	N/A	N/A	\$5,626,961
Subtotal	N/A	\$43,031,807	\$43,031,807	\$43,031,807	\$59,433,472
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$115,028,779	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$8,221,423	N/A	N/A	\$8,221,423	\$8,221,423
Incremental Capital Savings	\$503	N/A	N/A	\$503	\$503
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$123,250,705	N/A	N/A	\$8,221,926	\$8,221,926
<b>Total Benefits</b>	<b>\$123,250,705</b>	<b>\$43,031,807</b>	<b>\$43,031,807</b>	<b>\$51,253,733</b>	<b>\$67,655,398</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$1,012,664	\$1,012,664	\$1,012,664	\$1,012,664
Project Administration	N/A	\$931,340	\$931,340	\$931,340	\$931,340
Advertising & Promotion	N/A	\$23,851	\$23,851	\$23,851	\$23,851
Measurement & Verification	N/A	\$377,126	\$377,126	\$377,126	\$377,126
Rebates	N/A	\$8,221,423	\$8,221,423	\$8,221,423	\$8,221,423
Other	N/A	\$588,497	\$588,497	\$588,497	\$588,497
Subtotal	N/A	\$11,154,901	\$11,154,901	\$11,154,901	\$11,154,901
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$115,028,779	N/A	N/A
Subtotal	N/A	N/A	\$115,028,779	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$0	N/A	N/A	\$0	\$0
Incremental O&M Costs	\$312,456	N/A	N/A	\$312,456	\$396,409
Subtotal	\$312,456	N/A	N/A	\$312,456	\$396,409
<b>Total Costs</b>	<b>\$312,456</b>	<b>\$11,154,901</b>	<b>\$126,183,680</b>	<b>\$11,467,356</b>	<b>\$11,551,310</b>
<b>Net Benefit (Cost)</b>	<b>\$122,938,249</b>	<b>\$31,876,906</b>	<b>(\$83,151,873)</b>	<b>\$39,786,376</b>	<b>\$56,104,089</b>
<b>Benefit/Cost Ratio</b>	<b>394.46</b>	<b>3.86</b>	<b>0.34</b>	<b>4.47</b>	<b>5.86</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	18.4 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	85.52 kW
Gross Annual kWh Saved at Customer	413,004 kWh
Net Annual kWh Saved at Generator	442,426 kWh

Program Summary All Participants

Total Participants	161
<b>Total Budget</b>	<b>\$11,154,901</b>
<b>Net coincident kW Saved at Generator</b>	<b>13,768 kW</b>
Gross Annual kWh Saved at Customer	66,493,720 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>71,230,552 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0085

Utility Program Cost per kW at Gen

\$810





**COMMERCIAL AC CONTROL**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$2,898,665	\$2,898,665	\$2,898,665	\$3,251,670
T & D	N/A	\$0	\$0	\$0	\$0
Marginal Energy	N/A	\$123,634	\$123,634	\$123,634	\$138,151
Environmental Externality	N/A	N/A	N/A	N/A	\$26,066
Subtotal	N/A	\$3,022,299	\$3,022,299	\$3,022,299	\$3,415,887
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$7,363,378	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$485,275	N/A	N/A	\$485,275	\$485,275
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$7,848,653	N/A	N/A	\$485,275	\$485,275
<b>Total Benefits</b>	<b>\$7,848,653</b>	<b>\$3,022,299</b>	<b>\$3,022,299</b>	<b>\$3,507,574</b>	<b>\$3,901,162</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$2,514,855	\$2,514,855	\$2,514,855	\$2,514,855
Advertising & Promotion	N/A	\$200,000	\$200,000	\$200,000	\$200,000
Measurement & Verification	N/A	\$200,000	\$200,000	\$200,000	\$200,000
Rebates	N/A	\$485,275	\$485,275	\$485,275	\$485,275
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$3,400,130	\$3,400,130	\$3,400,130	\$3,400,130
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$7,363,378	N/A	N/A
Subtotal	N/A	N/A	\$7,363,378	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$490,001	N/A	N/A	\$490,001	\$488,657
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$490,001	N/A	N/A	\$490,001	\$488,657
<b>Total Costs</b>	<b>\$490,001</b>	<b>\$3,400,130</b>	<b>\$10,763,508</b>	<b>\$3,890,132</b>	<b>\$3,888,787</b>
<b>Net Benefit (Cost)</b>	<b>\$7,358,652</b>	<b>(\$377,831)</b>	<b>(\$7,741,209)</b>	<b>(\$382,557)</b>	<b>\$12,376</b>
<b>Benefit/Cost Ratio</b>	<b>16.02</b>	<b>0.89</b>	<b>0.28</b>	<b>0.90</b>	<b>1.00</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	9.8 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	1.20 kW
Gross Annual kWh Saved at Customer	110 kWh
Net Annual kWh Saved at Generator	117 kWh

Program Summary All Participants

Total Participants	4,950
<b>Total Budget</b>	<b>\$3,400,130</b>
<b>Net coincident kW Saved at Generator</b>	<b>5,947 kW</b>
Gross Annual kWh Saved at Customer	542,395 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>581,034 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.5950</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$572</b>

**COMMERCIAL AC CONTROL**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$1,862,627	\$1,862,627	\$1,862,627	\$2,092,219
T & D	N/A	\$331,006	\$331,006	\$331,006	\$372,342
Marginal Energy	N/A	\$31,592	\$31,592	\$31,592	\$35,323
Environmental Externality	N/A	N/A	N/A	N/A	\$5,885
Subtotal	N/A	\$2,225,225	\$2,225,225	\$2,225,225	\$2,505,768
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$155,694	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	\$155,694	N/A	N/A	\$0	\$0
<b>Total Benefits</b>	<b>\$155,694</b>	<b>\$2,225,225</b>	<b>\$2,225,225</b>	<b>\$2,225,225</b>	<b>\$2,505,768</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$1,480,175	\$1,480,175	\$1,480,175	\$1,480,175
Advertising & Promotion	N/A	\$92,158	\$92,158	\$92,158	\$92,158
Measurement & Verification	N/A	\$48,504	\$48,504	\$48,504	\$48,504
Rebates	N/A	\$0	\$0	\$0	\$0
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,620,837	\$1,620,837	\$1,620,837	\$1,620,837
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$155,694	N/A	N/A
Subtotal	N/A	N/A	\$155,694	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$390,044	N/A	N/A	\$390,044	\$390,044
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$390,044	N/A	N/A	\$390,044	\$390,044
<b>Total Costs</b>	<b>\$390,044</b>	<b>\$1,620,837</b>	<b>\$1,776,531</b>	<b>\$2,010,881</b>	<b>\$2,010,881</b>
<b>Net Benefit (Cost)</b>	<b>(\$234,350)</b>	<b>\$604,388</b>	<b>\$448,694</b>	<b>\$214,344</b>	<b>\$494,888</b>
<b>Benefit/Cost Ratio</b>	<b>0.40</b>	<b>1.37</b>	<b>1.25</b>	<b>1.11</b>	<b>1.25</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	9.6 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	2.38 kW
Gross Annual kWh Saved at Customer	79 kWh
Net Annual kWh Saved at Generator	85 kWh

Program Summary All Participants

Total Participants	1,551
<b>Total Budget</b>	<b>\$1,620,837</b>
<b>Net coincident kW Saved at Generator</b>	<b>3,698 kW</b>
Gross Annual kWh Saved at Customer	122,519 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>131,247 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$1.2892</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$438</b>







**COMMERCIAL EFFICIENCY**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$4,965,831	\$4,965,831	\$4,965,831	\$5,909,420
T & D	N/A	\$829,151	\$829,151	\$829,151	\$998,259
Marginal Energy	N/A	\$16,175,464	\$16,175,464	\$16,175,464	\$20,056,740
Environmental Externality	N/A	N/A	N/A	N/A	\$3,352,287
Subtotal	N/A	\$21,970,446	\$21,970,446	\$21,970,446	\$30,316,706
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$70,297,227	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$3,360,818	N/A	N/A	\$3,360,818	\$3,360,818
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$1,032,143	N/A	N/A	\$1,032,143	\$1,260,979
Subtotal	\$74,690,188	N/A	N/A	\$4,392,961	\$4,621,798
<b>Total Benefits</b>	<b>\$74,690,188</b>	<b>\$21,970,446</b>	<b>\$21,970,446</b>	<b>\$26,363,408</b>	<b>\$34,938,504</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$354,950	\$354,950	\$354,950	\$354,950
Project Administration	N/A	\$716,677	\$716,677	\$716,677	\$716,677
Advertising & Promotion	N/A	\$25,000	\$25,000	\$25,000	\$25,000
Measurement & Verification	N/A	\$15,000	\$15,000	\$15,000	\$15,000
Rebates	N/A	\$3,360,818	\$3,360,818	\$3,360,818	\$3,360,818
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$4,472,445	\$4,472,445	\$4,472,445	\$4,472,445
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$70,297,227	N/A	N/A
Subtotal	N/A	N/A	\$70,297,227	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$13,737,618	N/A	N/A	\$13,737,618	\$13,735,517
Incremental O&M Costs	\$505,760	N/A	N/A	\$505,760	\$634,626
Subtotal	\$14,243,378	N/A	N/A	\$14,243,378	\$14,370,143
<b>Total Costs</b>	<b>\$14,243,378</b>	<b>\$4,472,445</b>	<b>\$74,769,672</b>	<b>\$18,715,823</b>	<b>\$18,842,589</b>
<b>Net Benefit (Cost)</b>	<b>\$60,446,810</b>	<b>\$17,498,001</b>	<b>(\$52,799,225)</b>	<b>\$7,647,585</b>	<b>\$16,095,915</b>
<b>Benefit/Cost Ratio</b>	<b>5.24</b>	<b>4.91</b>	<b>0.29</b>	<b>1.41</b>	<b>1.85</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	16.6 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	13.54 kW
Gross Annual kWh Saved at Customer	84,014 kWh
Net Annual kWh Saved at Generator	89,999 kWh

Program Summary All Participants

Total Participants	535
<b>Total Budget</b>	<b>\$4,472,445</b>
<b>Net coincident kW Saved at Generator</b>	<b>7,245 kW</b>
Gross Annual kWh Saved at Customer	44,947,725 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>48,149,679 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0056</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$617</b>

**COMMERCIAL EFFICIENCY**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$2,810,612	\$2,810,612	\$2,810,612	\$3,304,397
T & D	N/A	\$502,905	\$502,905	\$502,905	\$592,527
Marginal Energy	N/A	\$6,802,979	\$6,802,979	\$6,802,979	\$8,287,794
Environmental Externality	N/A	N/A	N/A	N/A	\$1,420,505
Subtotal	N/A	\$10,116,497	\$10,116,497	\$10,116,497	\$13,605,223
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$27,679,646	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$1,898,523	N/A	N/A	\$1,898,523	\$1,898,523
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$43,465	N/A	N/A	\$43,465	\$51,791
Subtotal	\$29,621,634	N/A	N/A	\$1,941,988	\$1,950,314
<b>Total Benefits</b>	<b>\$29,621,634</b>	<b>\$10,116,497</b>	<b>\$10,116,497</b>	<b>\$12,058,485</b>	<b>\$15,555,538</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$767,366	\$767,366	\$767,366	\$767,366
Advertising & Promotion	N/A	\$100	\$100	\$100	\$100
Measurement & Verification	N/A	\$4,858	\$4,858	\$4,858	\$4,858
Rebates	N/A	\$1,898,523	\$1,898,523	\$1,898,523	\$1,898,523
Other	N/A	\$10,124	\$10,124	\$10,124	\$10,124
Subtotal	N/A	\$2,680,970	\$2,680,970	\$2,680,970	\$2,680,970
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$27,679,646	N/A	N/A
Subtotal	N/A	N/A	\$27,679,646	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$5,755,287	N/A	N/A	\$5,755,287	\$5,755,287
Incremental O&M Costs	\$396,182	N/A	N/A	\$396,182	\$479,213
Subtotal	\$6,151,469	N/A	N/A	\$6,151,469	\$6,234,500
<b>Total Costs</b>	<b>\$6,151,469</b>	<b>\$2,680,970</b>	<b>\$30,360,616</b>	<b>\$8,832,439</b>	<b>\$8,915,470</b>
<b>Net Benefit (Cost)</b>	<b>\$23,470,165</b>	<b>\$7,435,526</b>	<b>(\$20,244,120)</b>	<b>\$3,226,045</b>	<b>\$6,640,067</b>
<b>Benefit/Cost Ratio</b>	<b>4.82</b>	<b>3.77</b>	<b>0.33</b>	<b>1.37</b>	<b>1.74</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.7 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	12.57 kW
Gross Annual kWh Saved at Customer	67,252 kWh
Net Annual kWh Saved at Generator	72,043 kWh

Program Summary All Participants

Total Participants	<b>300</b>
<b>Total Budget</b>	<b>\$2,680,970</b>
<b>Net coincident kW Saved at Generator</b>	<b>3,770 kW</b>
Gross Annual kWh Saved at Customer	20,175,713 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>21,612,976 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0079</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$711</b>





**COMMERCIAL STREAMLINED ASSESSMENT**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$2,230,738	\$2,230,738	\$2,230,738	\$2,704,697
T & D	N/A	\$400,547	\$400,547	\$400,547	\$486,969
Marginal Energy	N/A	\$5,249,411	\$5,249,411	\$5,249,411	\$6,655,644
Environmental Externality	N/A	N/A	N/A	N/A	\$1,049,948
Subtotal	N/A	\$7,880,696	\$7,880,696	\$7,880,696	\$10,897,257
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$22,929,502	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$1,263,591	N/A	N/A	\$1,263,591	\$1,263,591
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$4,886	N/A	N/A	\$4,886	\$5,579
Subtotal	\$24,197,979	N/A	N/A	\$1,268,477	\$1,269,170
<b>Total Benefits</b>	<b>\$24,197,979</b>	<b>\$7,880,696</b>	<b>\$7,880,696</b>	<b>\$9,149,174</b>	<b>\$12,166,427</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$350,000	\$350,000	\$350,000	\$350,000
Project Administration	N/A	\$221,703	\$221,703	\$221,703	\$221,703
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0
Measurement & Verification	N/A	\$1,200	\$1,200	\$1,200	\$1,200
Rebates	N/A	\$1,263,591	\$1,263,591	\$1,263,591	\$1,263,591
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,836,494	\$1,836,494	\$1,836,494	\$1,836,494
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$22,929,502	N/A	N/A
Subtotal	N/A	N/A	\$22,929,502	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$4,015,205	N/A	N/A	\$4,015,205	\$4,015,205
Incremental O&M Costs	\$721,719	N/A	N/A	\$721,719	\$905,612
Subtotal	\$4,736,924	N/A	N/A	\$4,736,924	\$4,920,816
<b>Total Costs</b>	<b>\$4,736,924</b>	<b>\$1,836,494</b>	<b>\$24,765,996</b>	<b>\$6,573,418</b>	<b>\$6,757,310</b>
<b>Net Benefit (Cost)</b>	<b>\$19,461,056</b>	<b>\$6,044,202</b>	<b>(\$16,885,300)</b>	<b>\$2,575,756</b>	<b>\$5,409,117</b>
<b>Benefit/Cost Ratio</b>	<b>5.11</b>	<b>4.29</b>	<b>0.32</b>	<b>1.39</b>	<b>1.80</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	19.3 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	8.01 kW
Gross Annual kWh Saved at Customer	39,841 kWh
Net Annual kWh Saved at Generator	42,679 kWh

Program Summary All Participants

Total Participants	312
<b>Total Budget</b>	<b>\$1,836,494</b>
<b>Net coincident kW Saved at Generator</b>	<b>2,498 kW</b>
Gross Annual kWh Saved at Customer	12,430,449 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>13,315,960 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0072</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$735</b>

**COMMERCIAL STREAMLINED ASSESSMENT**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$1,163,060	\$1,163,060	\$1,163,060	\$1,378,511
T & D	N/A	\$208,353	\$208,353	\$208,353	\$247,544
Marginal Energy	N/A	\$2,244,484	\$2,244,484	\$2,244,484	\$2,761,609
Environmental Externality	N/A	N/A	N/A	N/A	\$458,867
Subtotal	N/A	\$3,615,897	\$3,615,897	\$3,615,897	\$4,846,531
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$8,743,427	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$1,074,948	N/A	N/A	\$1,074,948	\$1,074,948
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$2,853,097	N/A	N/A	\$2,853,097	\$3,578,945
Subtotal	\$12,671,471	N/A	N/A	\$3,928,044	\$4,653,892
<b>Total Benefits</b>	<b>\$12,671,471</b>	<b>\$3,615,897</b>	<b>\$3,615,897</b>	<b>\$7,543,941</b>	<b>\$9,500,423</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$737,862	\$737,862	\$737,862	\$737,862
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0
Measurement & Verification	N/A	\$980	\$980	\$980	\$980
Rebates	N/A	\$1,074,948	\$1,074,948	\$1,074,948	\$1,074,948
Other	N/A	\$4,791	\$4,791	\$4,791	\$4,791
Subtotal	N/A	\$1,818,581	\$1,818,581	\$1,818,581	\$1,818,581
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$8,743,427	N/A	N/A
Subtotal	N/A	N/A	\$8,743,427	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$3,321,805	N/A	N/A	\$3,321,805	\$3,321,805
Incremental O&M Costs	\$119,905	N/A	N/A	\$119,905	\$142,430
Subtotal	\$3,441,711	N/A	N/A	\$3,441,711	\$3,464,235
<b>Total Costs</b>	<b>\$3,441,711</b>	<b>\$1,818,581</b>	<b>\$10,562,008</b>	<b>\$5,260,291</b>	<b>\$5,282,816</b>
<b>Net Benefit (Cost)</b>	<b>\$9,229,761</b>	<b>\$1,797,316</b>	<b>(\$6,946,111)</b>	<b>\$2,283,650</b>	<b>\$4,217,607</b>
<b>Benefit/Cost Ratio</b>	<b>3.68</b>	<b>1.99</b>	<b>0.34</b>	<b>1.43</b>	<b>1.80</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.5 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	7.60 kW
Gross Annual kWh Saved at Customer	32,318 kWh
Net Annual kWh Saved at Generator	34,620 kWh

Program Summary All Participants

Total Participants	202
<b>Total Budget</b>	<b>\$1,818,581</b>
<b>Net coincident kW Saved at Generator</b>	<b>1,534 kW</b>
Gross Annual kWh Saved at Customer	6,528,208 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>6,993,260 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0167

Utility Program Cost per kW at Gen

\$1,185







**COMPRESSED AIR EFFICIENCY**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$1,051,381	\$1,051,381	\$1,051,381	\$1,241,677
T & D	N/A	\$184,951	\$184,951	\$184,951	\$219,596
Marginal Energy	N/A	\$2,702,591	\$2,702,591	\$2,702,591	\$3,306,372
Environmental Externality	N/A	N/A	N/A	N/A	\$630,348
Subtotal	N/A	\$3,938,923	\$3,938,923	\$3,938,923	\$5,397,993
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$11,452,414	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$962,643	N/A	N/A	\$962,643	\$962,643
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$76,617	N/A	N/A	\$76,617	\$90,569
Subtotal	\$12,491,675	N/A	N/A	\$1,039,260	\$1,053,212
<b>Total Benefits</b>	<b>\$12,491,675</b>	<b>\$3,938,923</b>	<b>\$3,938,923</b>	<b>\$4,978,184</b>	<b>\$6,451,205</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$2,100	\$2,100	\$2,100	\$2,100
Project Administration	N/A	\$340,862	\$340,862	\$340,862	\$340,862
Advertising & Promotion	N/A	\$24,750	\$24,750	\$24,750	\$24,750
Measurement & Verification	N/A	\$16,500	\$16,500	\$16,500	\$16,500
Rebates	N/A	\$962,643	\$962,643	\$962,643	\$962,643
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,346,855	\$1,346,855	\$1,346,855	\$1,346,855
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$11,452,414	N/A	N/A
Subtotal	N/A	N/A	\$11,452,414	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$2,101,765	N/A	N/A	\$2,101,765	\$2,101,765
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$2,101,765	N/A	N/A	\$2,101,765	\$2,101,765
<b>Total Costs</b>	<b>\$2,101,765</b>	<b>\$1,346,855</b>	<b>\$12,799,269</b>	<b>\$3,448,620</b>	<b>\$3,448,620</b>
<b>Net Benefit (Cost)</b>	<b>\$10,389,910</b>	<b>\$2,592,068</b>	<b>(\$8,860,346)</b>	<b>\$1,529,563</b>	<b>\$3,002,585</b>
<b>Benefit/Cost Ratio</b>	<b>5.94</b>	<b>2.92</b>	<b>0.31</b>	<b>1.44</b>	<b>1.87</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	12.7 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	6.74 kW
Gross Annual kWh Saved at Customer	38,007 kWh
Net Annual kWh Saved at Generator	40,715 kWh

Program Summary All Participants

Total Participants	272
<b>Total Budget</b>	<b>\$1,346,855</b>
<b>Net coincident kW Saved at Generator</b>	<b>1,834 kW</b>
Gross Annual kWh Saved at Customer	10,337,982 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>11,074,432 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0096</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$734</b>

**COMPRESSED AIR EFFICIENCY**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$583,367	\$583,367	\$583,367	\$701,376
T & D	N/A	\$104,729	\$104,729	\$104,729	\$126,251
Marginal Energy	N/A	\$1,685,823	\$1,685,823	\$1,685,823	\$2,110,754
Environmental Externality	N/A	N/A	N/A	N/A	\$357,744
Subtotal	N/A	\$2,373,919	\$2,373,919	\$2,373,919	\$3,296,125
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$6,768,349	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$463,556	N/A	N/A	\$463,556	\$463,556
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$10,145	N/A	N/A	\$10,145	\$12,088
Subtotal	\$7,242,050	N/A	N/A	\$473,701	\$475,644
<b>Total Benefits</b>	<b>\$7,242,050</b>	<b>\$2,373,919</b>	<b>\$2,373,919</b>	<b>\$2,847,620</b>	<b>\$3,771,769</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$259,602	\$259,602	\$259,602	\$259,602
Advertising & Promotion	N/A	\$9	\$9	\$9	\$9
Measurement & Verification	N/A	\$8,094	\$8,094	\$8,094	\$8,094
Rebates	N/A	\$463,556	\$463,556	\$463,556	\$463,556
Other	N/A	\$30,812	\$30,812	\$30,812	\$30,812
Subtotal	N/A	\$762,073	\$762,073	\$762,073	\$762,073
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$6,768,349	N/A	N/A
Subtotal	N/A	N/A	\$6,768,349	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$784,909	N/A	N/A	\$784,909	\$784,909
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$784,909	N/A	N/A	\$784,909	\$784,909
<b>Total Costs</b>	<b>\$784,909</b>	<b>\$762,073</b>	<b>\$7,530,422</b>	<b>\$1,546,981</b>	<b>\$1,546,981</b>
<b>Net Benefit (Cost)</b>	<b>\$6,457,141</b>	<b>\$1,611,846</b>	<b>(\$5,156,502)</b>	<b>\$1,300,639</b>	<b>\$2,224,787</b>
<b>Benefit/Cost Ratio</b>	<b>9.23</b>	<b>3.12</b>	<b>0.32</b>	<b>1.84</b>	<b>2.44</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	16.0 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	5.30 kW
Gross Annual kWh Saved at Customer	34,560 kWh
Net Annual kWh Saved at Generator	37,022 kWh

Program Summary All Participants

Total Participants	142
<b>Total Budget</b>	<b>\$762,073</b>
<b>Net coincident kW Saved at Generator</b>	<b>753 kW</b>
Gross Annual kWh Saved at Customer	4,907,464 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>5,257,058 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0091

Utility Program Cost per kW at Gen

\$1,013

**CUSTOM EFFICIENCY**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$585,374	\$585,374	\$585,374	\$700,535
T & D	N/A	\$105,026	\$105,026	\$105,026	\$125,957
Marginal Energy	N/A	\$1,778,104	\$1,778,104	\$1,778,104	\$2,203,544
Environmental Externality	N/A	N/A	N/A	N/A	\$363,046
Subtotal	N/A	\$2,468,504	\$2,468,504	\$2,468,504	\$3,393,082
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$7,763,564	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$376,695	N/A	N/A	\$376,695	\$376,695
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$28,477,662	N/A	N/A	\$28,477,662	\$35,005,578
Subtotal	\$36,617,922	N/A	N/A	\$28,854,357	\$35,382,273
<b>Total Benefits</b>	<b>\$36,617,922</b>	<b>\$2,468,504</b>	<b>\$2,468,504</b>	<b>\$31,322,862</b>	<b>\$38,775,355</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$603,533	\$603,533	\$603,533	\$603,533
Advertising & Promotion	N/A	\$60	\$60	\$60	\$60
Measurement & Verification	N/A	\$10,000	\$10,000	\$10,000	\$10,000
Rebates	N/A	\$376,695	\$376,695	\$376,695	\$376,695
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$990,288	\$990,288	\$990,288	\$990,288
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$7,763,564	N/A	N/A
Subtotal	N/A	N/A	\$7,763,564	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$8,041,001	N/A	N/A	\$8,041,001	\$8,041,001
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$8,041,001	N/A	N/A	\$8,041,001	\$8,041,001
<b>Total Costs</b>	<b>\$8,041,001</b>	<b>\$990,288</b>	<b>\$8,753,853</b>	<b>\$9,031,289</b>	<b>\$9,031,289</b>
<b>Net Benefit (Cost)</b>	<b>\$28,576,921</b>	<b>\$1,478,216</b>	<b>(\$6,285,348)</b>	<b>\$22,291,572</b>	<b>\$29,744,066</b>
<b>Benefit/Cost Ratio</b>	<b>4.55</b>	<b>2.49</b>	<b>0.28</b>	<b>3.47</b>	<b>4.29</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	18.0 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	22.71 kW
Gross Annual kWh Saved at Customer	151,008 kWh
Net Annual kWh Saved at Generator	161,765 kWh

Program Summary All Participants

Total Participants	<b>30</b>
<b>Total Budget</b>	<b>\$990,288</b>
<b>Net coincident kW Saved at Generator</b>	<b>681 kW</b>
Gross Annual kWh Saved at Customer	4,530,230 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>4,852,951 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0113</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$1,454</b>

**CUSTOM EFFICIENCY**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$356,263	\$356,263	\$356,263	\$420,652
T & D	N/A	\$63,787	\$63,787	\$63,787	\$75,480
Marginal Energy	N/A	\$1,206,274	\$1,206,274	\$1,206,274	\$1,513,577
Environmental Externality	N/A	N/A	N/A	N/A	\$286,394
Subtotal	N/A	\$1,626,324	\$1,626,324	\$1,626,324	\$2,296,104
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$5,376,629	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$449,450	N/A	N/A	\$449,450	\$449,450
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$13,370,514	N/A	N/A	\$13,370,514	\$16,713,647
Subtotal	\$19,196,593	N/A	N/A	\$13,819,964	\$17,163,097
<b>Total Benefits</b>	<b>\$19,196,593</b>	<b>\$1,626,324</b>	<b>\$1,626,324</b>	<b>\$15,446,288</b>	<b>\$19,459,201</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$473,880	\$473,880	\$473,880	\$473,880
Advertising & Promotion	N/A	\$166	\$166	\$166	\$166
Measurement & Verification	N/A	\$7,654	\$7,654	\$7,654	\$7,654
Rebates	N/A	\$449,450	\$449,450	\$449,450	\$449,450
Other	N/A	\$19,972	\$19,972	\$19,972	\$19,972
Subtotal	N/A	\$951,123	\$951,123	\$951,123	\$951,123
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$5,376,629	N/A	N/A
Subtotal	N/A	N/A	\$5,376,629	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$3,537,815	N/A	N/A	\$3,537,815	\$3,537,815
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$3,537,815	N/A	N/A	\$3,537,815	\$3,537,815
<b>Total Costs</b>	<b>\$3,537,815</b>	<b>\$951,123</b>	<b>\$6,327,752</b>	<b>\$4,488,938</b>	<b>\$4,488,938</b>
<b>Net Benefit (Cost)</b>	<b>\$15,658,778</b>	<b>\$675,201</b>	<b>(\$4,701,428)</b>	<b>\$10,957,350</b>	<b>\$14,970,263</b>
<b>Benefit/Cost Ratio</b>	<b>5.43</b>	<b>1.71</b>	<b>0.26</b>	<b>3.44</b>	<b>4.33</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	12.8 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	12.40 kW
Gross Annual kWh Saved at Customer	123,966 kWh
Net Annual kWh Saved at Generator	132,798 kWh

Program Summary All Participants

Total Participants	38
<b>Total Budget</b>	<b>\$951,123</b>
<b>Net coincident kW Saved at Generator</b>	<b>471 kW</b>
Gross Annual kWh Saved at Customer	4,710,726 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>5,046,305 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0147</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$2,018</b>





**DATA CENTER EFFICIENCY**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$259,143	\$259,143	\$259,143	\$305,168
T & D	N/A	\$43,343	\$43,343	\$43,343	\$51,708
Marginal Energy	N/A	\$2,237,574	\$2,237,574	\$2,237,574	\$2,808,338
Environmental Externality	N/A	N/A	N/A	N/A	\$460,655
Subtotal	N/A	\$2,540,059	\$2,540,059	\$2,540,059	\$3,625,869
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$9,605,691	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$306,454	N/A	N/A	\$306,454	\$306,454
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$737,589	N/A	N/A	\$737,589	\$875,684
Subtotal	\$10,649,734	N/A	N/A	\$1,044,043	\$1,182,138
<b>Total Benefits</b>	<b>\$10,649,734</b>	<b>\$2,540,059</b>	<b>\$2,540,059</b>	<b>\$3,584,103</b>	<b>\$4,808,007</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$2,470	\$2,470	\$2,470	\$2,470
Project Administration	N/A	\$119,882	\$119,882	\$119,882	\$119,882
Advertising & Promotion	N/A	\$21,000	\$21,000	\$21,000	\$21,000
Measurement & Verification	N/A	\$3,000	\$3,000	\$3,000	\$3,000
Rebates	N/A	\$306,454	\$306,454	\$306,454	\$306,454
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$452,806	\$452,806	\$452,806	\$452,806
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$9,605,691	N/A	N/A
Subtotal	N/A	N/A	\$9,605,691	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$2,480,142	N/A	N/A	\$2,480,142	\$2,480,142
Incremental O&M Costs	\$3,995	N/A	N/A	\$3,995	\$5,012
Subtotal	\$2,484,137	N/A	N/A	\$2,484,137	\$2,485,155
<b>Total Costs</b>	<b>\$2,484,137</b>	<b>\$452,806</b>	<b>\$10,058,497</b>	<b>\$2,936,943</b>	<b>\$2,937,960</b>
<b>Net Benefit (Cost)</b>	<b>\$8,165,598</b>	<b>\$2,087,254</b>	<b>(\$7,518,438)</b>	<b>\$647,160</b>	<b>\$1,870,046</b>
<b>Benefit/Cost Ratio</b>	<b>4.29</b>	<b>5.61</b>	<b>0.25</b>	<b>1.22</b>	<b>1.64</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	18.5 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	13.36 kW
Gross Annual kWh Saved at Customer	131,611 kWh
Net Annual kWh Saved at Generator	140,987 kWh

Program Summary All Participants

Total Participants	43
<b>Total Budget</b>	<b>\$452,806</b>
<b>Net coincident kW Saved at Generator</b>	<b>575 kW</b>
Gross Annual kWh Saved at Customer	5,659,272 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>6,062,423 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0040</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$788</b>



**DATA CENTER EFFICIENCY**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$30,520	\$30,520	\$30,520	\$37,247
T & D	N/A	\$5,492	\$5,492	\$5,492	\$6,720
Marginal Energy	N/A	\$126,954	\$126,954	\$126,954	\$162,044
Environmental Externality	N/A	N/A	N/A	N/A	\$26,051
Subtotal	N/A	\$162,965	\$162,965	\$162,965	\$232,063
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$506,884	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$15,474	N/A	N/A	\$15,474	\$15,474
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$522,358	N/A	N/A	\$15,474	\$15,474
<b>Total Benefits</b>	<b>\$522,358</b>	<b>\$162,965</b>	<b>\$162,965</b>	<b>\$178,439</b>	<b>\$247,537</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$63,486	\$63,486	\$63,486	\$63,486
Advertising & Promotion	N/A	\$34	\$34	\$34	\$34
Measurement & Verification	N/A	\$980	\$980	\$980	\$980
Rebates	N/A	\$15,474	\$15,474	\$15,474	\$15,474
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$79,974	\$79,974	\$79,974	\$79,974
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$506,884	N/A	N/A
Subtotal	N/A	N/A	\$506,884	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$69,077	N/A	N/A	\$69,077	\$69,077
Incremental O&M Costs	\$7,053	N/A	N/A	\$7,053	\$8,851
Subtotal	\$76,130	N/A	N/A	\$76,130	\$77,929
<b>Total Costs</b>	<b>\$76,130</b>	<b>\$79,974</b>	<b>\$586,858</b>	<b>\$156,104</b>	<b>\$157,903</b>
<b>Net Benefit (Cost)</b>	<b>\$446,228</b>	<b>\$82,991</b>	<b>(\$423,893)</b>	<b>\$22,336</b>	<b>\$89,634</b>
<b>Benefit/Cost Ratio</b>	<b>6.86</b>	<b>2.04</b>	<b>0.28</b>	<b>1.14</b>	<b>1.57</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	20.0 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	10.97 kW
Gross Annual kWh Saved at Customer	99,353 kWh
Net Annual kWh Saved at Generator	106,431 kWh

Program Summary All Participants

Total Participants	3
<b>Total Budget</b>	<b>\$79,974</b>
<b>Net coincident kW Saved at Generator</b>	<b>33 kW</b>
Gross Annual kWh Saved at Customer	298,059 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>319,292 kWh</b>

Utility Program Cost per kWh Lifetime

**\$0.0125**

Utility Program Cost per kW at Gen

**\$2,429**

**EFFICIENCY CONTROLS**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$128,600	\$128,600	\$128,600	\$146,517
T & D	N/A	\$19,412	\$19,412	\$19,412	\$22,578
Marginal Energy	N/A	\$2,998,996	\$2,998,996	\$2,998,996	\$3,577,543
Environmental Externality	N/A	N/A	N/A	N/A	\$675,767
Subtotal	N/A	\$3,147,008	\$3,147,008	\$3,147,008	\$4,422,405
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$12,790,446	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$502,808	N/A	N/A	\$502,808	\$502,808
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$1,058,879	N/A	N/A	\$1,058,879	\$1,261,515
Subtotal	\$14,352,134	N/A	N/A	\$1,561,687	\$1,764,322
<b>Total Benefits</b>	<b>\$14,352,134</b>	<b>\$3,147,008</b>	<b>\$3,147,008</b>	<b>\$4,708,695</b>	<b>\$6,186,727</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$230,625	\$230,625	\$230,625	\$230,625
Advertising & Promotion	N/A	\$5,000	\$5,000	\$5,000	\$5,000
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$502,808	\$502,808	\$502,808	\$502,808
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$738,433	\$738,433	\$738,433	\$738,433
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$12,790,446	N/A	N/A
Subtotal	N/A	N/A	\$12,790,446	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$3,085,893	N/A	N/A	\$3,085,893	\$3,085,893
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$3,085,893	N/A	N/A	\$3,085,893	\$3,085,893
<b>Total Costs</b>	<b>\$3,085,893</b>	<b>\$738,433</b>	<b>\$13,528,879</b>	<b>\$3,824,326</b>	<b>\$3,824,326</b>
<b>Net Benefit (Cost)</b>	<b>\$11,266,240</b>	<b>\$2,408,575</b>	<b>(\$10,381,871)</b>	<b>\$884,369</b>	<b>\$2,362,401</b>
<b>Benefit/Cost Ratio</b>	<b>4.65</b>	<b>4.26</b>	<b>0.23</b>	<b>1.23</b>	<b>1.62</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.0 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	6.73 kW
Gross Annual kWh Saved at Customer	157,467 kWh
Net Annual kWh Saved at Generator	168,684 kWh

Program Summary All Participants

Total Participants	<b>64</b>
<b>Total Budget</b>	<b>\$738,433</b>
<b>Net coincident kW Saved at Generator</b>	<b>431 kW</b>
Gross Annual kWh Saved at Customer	10,077,886 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>10,795,807 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0046</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$1,713</b>

**EFFICIENCY CONTROLS**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$274,957	\$274,957	\$274,957	\$319,318
T & D	N/A	\$49,114	\$49,114	\$49,114	\$57,122
Marginal Energy	N/A	\$2,568,246	\$2,568,246	\$2,568,246	\$3,053,996
Environmental Externality	N/A	N/A	N/A	N/A	\$508,850
Subtotal	N/A	\$2,892,317	\$2,892,317	\$2,892,317	\$3,939,285
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$8,993,345	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$317,264	N/A	N/A	\$317,264	\$317,264
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$1,471,549	N/A	N/A	\$1,471,549	\$1,753,436
Subtotal	\$10,782,159	N/A	N/A	\$1,788,814	\$2,070,700
<b>Total Benefits</b>	<b>\$10,782,159</b>	<b>\$2,892,317</b>	<b>\$2,892,317</b>	<b>\$4,681,131</b>	<b>\$6,009,985</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$196,745	\$196,745	\$196,745	\$196,745
Advertising & Promotion	N/A	\$20	\$20	\$20	\$20
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$317,264	\$317,264	\$317,264	\$317,264
Other	N/A	\$8,770	\$8,770	\$8,770	\$8,770
Subtotal	N/A	\$522,799	\$522,799	\$522,799	\$522,799
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$8,993,345	N/A	N/A
Subtotal	N/A	N/A	\$8,993,345	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$1,570,116	N/A	N/A	\$1,570,116	\$1,570,116
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$1,570,116	N/A	N/A	\$1,570,116	\$1,570,116
<b>Total Costs</b>	<b>\$1,570,116</b>	<b>\$522,799</b>	<b>\$9,516,144</b>	<b>\$2,092,915</b>	<b>\$2,092,915</b>
<b>Net Benefit (Cost)</b>	<b>\$9,212,043</b>	<b>\$2,369,518</b>	<b>(\$6,623,827)</b>	<b>\$2,588,216</b>	<b>\$3,917,071</b>
<b>Benefit/Cost Ratio</b>	<b>6.87</b>	<b>5.53</b>	<b>0.30</b>	<b>2.24</b>	<b>2.87</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.0 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	16.70 kW
Gross Annual kWh Saved at Customer	344,898 kWh
Net Annual kWh Saved at Generator	369,467 kWh

Program Summary All Participants

Total Participants	22
<b>Total Budget</b>	<b>\$522,799</b>
<b>Net coincident kW Saved at Generator</b>	<b>367 kW</b>
Gross Annual kWh Saved at Customer	7,587,745 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>8,128,275 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0043</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$1,423</b>





**ELECTRIC RATE SAVINGS**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$1,872,772	\$1,872,772	\$1,872,772	\$1,957,671
T & D	N/A	\$0	\$0	\$0	\$0
Marginal Energy	N/A	\$1,606	\$1,606	\$1,606	\$1,695
Environmental Externality	N/A	N/A	N/A	N/A	\$403
Subtotal	N/A	\$1,874,378	\$1,874,378	\$1,874,378	\$1,959,769
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$8,571	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	\$8,571	N/A	N/A	\$0	\$0
<b>Total Benefits</b>	<b>\$8,571</b>	<b>\$1,874,378</b>	<b>\$1,874,378</b>	<b>\$1,874,378</b>	<b>\$1,959,769</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$567,283	\$567,283	\$567,283	\$567,283
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	\$567,283	\$567,283	\$567,283	\$567,283
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$8,571	N/A	N/A
Subtotal	N/A	N/A	\$8,571	N/A	N/A
<b>Participant Costs</b>					
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
<b>Total Costs</b>	<b>\$0</b>	<b>\$567,283</b>	<b>\$575,854</b>	<b>\$567,283</b>	<b>\$567,283</b>
<b>Net Benefit (Cost)</b>	<b>\$8,571</b>	<b>\$1,307,095</b>	<b>\$1,298,523</b>	<b>\$1,307,095</b>	<b>\$1,392,486</b>
<b>Benefit/Cost Ratio</b>	<b>INF</b>	<b>3.30</b>	<b>3.25</b>	<b>3.30</b>	<b>3.45</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	5.0 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	178.69 kW
Gross Annual kWh Saved at Customer	329 kWh
Net Annual kWh Saved at Generator	352 kWh

Program Summary All Participants

Total Participants	36
<b>Total Budget</b>	<b>\$567,283</b>
<b>Net coincident kW Saved at Generator</b>	<b>6,433 kW</b>
Gross Annual kWh Saved at Customer	11,844 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>12,688 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$8.9422</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$88</b>

**ELECTRIC RATE SAVINGS**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$7,869,202	\$7,869,202	\$7,869,202	\$8,225,940
T & D	N/A	\$1,383,708	\$1,383,708	\$1,383,708	\$1,446,667
Marginal Energy	N/A	\$6,738	\$6,738	\$6,738	\$7,112
Environmental Externality	N/A	N/A	N/A	N/A	\$1,691
Subtotal	N/A	\$9,259,648	\$9,259,648	\$9,259,648	\$9,681,410
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$33,576	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	\$33,576	N/A	N/A	\$0	\$0
<b>Total Benefits</b>	<b>\$33,576</b>	<b>\$9,259,648</b>	<b>\$9,259,648</b>	<b>\$9,259,648</b>	<b>\$9,681,410</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$374,761	\$374,761	\$374,761	\$374,761
Advertising & Promotion	N/A	\$42	\$42	\$42	\$42
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	\$374,803	\$374,803	\$374,803	\$374,803
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$33,576	N/A	N/A
Subtotal	N/A	N/A	\$33,576	N/A	N/A
<b>Participant Costs</b>					
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
<b>Total Costs</b>	<b>\$0</b>	<b>\$374,803</b>	<b>\$408,378</b>	<b>\$374,803</b>	<b>\$374,803</b>
<b>Net Benefit (Cost)</b>	<b>\$33,576</b>	<b>\$8,884,845</b>	<b>\$8,851,270</b>	<b>\$8,884,845</b>	<b>\$9,306,607</b>
<b>Benefit/Cost Ratio</b>	<b>INF</b>	<b>24.71</b>	<b>22.67</b>	<b>24.71</b>	<b>25.83</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	5.0 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	575.11 kW
Gross Annual kWh Saved at Customer	1,057 kWh
Net Annual kWh Saved at Generator	1,133 kWh

Program Summary All Participants

Total Participants	47
<b>Total Budget</b>	<b>\$374,803</b>
<b>Net coincident kW Saved at Generator</b>	<b>27,030 kW</b>
Gross Annual kWh Saved at Customer	49,702 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>53,243 kWh</b>

Utility Program Cost per kWh Lifetime

\$1.4079

Utility Program Cost per kW at Gen

\$14

**ENERGY INFORMATION SYSTEMS**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$391,889	\$391,889	\$391,889	\$460,561
T & D	N/A	\$70,118	\$70,118	\$70,118	\$82,568
Marginal Energy	N/A	\$1,204,683	\$1,204,683	\$1,204,683	\$1,448,768
Environmental Externality	N/A	N/A	N/A	N/A	\$276,018
Subtotal	N/A	\$1,666,690	\$1,666,690	\$1,666,690	\$2,267,914
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$5,183,076	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$265,352	N/A	N/A	\$265,352	\$265,352
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$31,632	N/A	N/A	\$31,632	\$36,344
Subtotal	\$5,480,060	N/A	N/A	\$296,984	\$301,697
<b>Total Benefits</b>	<b>\$5,480,060</b>	<b>\$1,666,690</b>	<b>\$1,666,690</b>	<b>\$1,963,674</b>	<b>\$2,569,611</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$493,117	\$493,117	\$493,117	\$493,117
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0
Measurement & Verification	N/A	\$11,000	\$11,000	\$11,000	\$11,000
Rebates	N/A	\$265,352	\$265,352	\$265,352	\$265,352
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$769,470	\$769,470	\$769,470	\$769,470
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$5,183,076	N/A	N/A
Subtotal	N/A	N/A	\$5,183,076	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$688,372	N/A	N/A	\$688,372	\$686,794
Incremental O&M Costs	\$37,119	N/A	N/A	\$37,119	\$46,577
Subtotal	\$725,491	N/A	N/A	\$725,491	\$733,371
<b>Total Costs</b>	<b>\$725,491</b>	<b>\$769,470</b>	<b>\$5,952,546</b>	<b>\$1,494,960</b>	<b>\$1,502,840</b>
<b>Net Benefit (Cost)</b>	<b>\$4,754,569</b>	<b>\$897,221</b>	<b>(\$4,285,855)</b>	<b>\$468,714</b>	<b>\$1,066,770</b>
<b>Benefit/Cost Ratio</b>	<b>7.55</b>	<b>2.17</b>	<b>0.28</b>	<b>1.31</b>	<b>1.71</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	12.7 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	12.83 kW
Gross Annual kWh Saved at Customer	110,296 kWh
Net Annual kWh Saved at Generator	118,153 kWh

Program Summary All Participants

Total Participants	42
<b>Total Budget</b>	<b>\$769,470</b>
<b>Net coincident kW Saved at Generator</b>	<b>539 kW</b>
Gross Annual kWh Saved at Customer	4,632,423 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>4,962,424 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0122</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$1,428</b>



**ENERGY INFORMATION SYSTEMS**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$498,467	\$498,467	\$498,467	\$573,675
T & D	N/A	\$88,902	\$88,902	\$88,902	\$102,515
Marginal Energy	N/A	\$1,661,253	\$1,661,253	\$1,661,253	\$1,988,497
Environmental Externality	N/A	N/A	N/A	N/A	\$368,028
Subtotal	N/A	\$2,248,622	\$2,248,622	\$2,248,622	\$3,032,715
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$7,167,423	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$242,637	N/A	N/A	\$242,637	\$242,637
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$7,410,060	N/A	N/A	\$242,637	\$242,637
<b>Total Benefits</b>	<b>\$7,410,060</b>	<b>\$2,248,622</b>	<b>\$2,248,622</b>	<b>\$2,491,259</b>	<b>\$3,275,352</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$416,563	\$416,563	\$416,563	\$416,563
Advertising & Promotion	N/A	\$19	\$19	\$19	\$19
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$242,637	\$242,637	\$242,637	\$242,637
Other	N/A	\$808	\$808	\$808	\$808
Subtotal	N/A	\$660,028	\$660,028	\$660,028	\$660,028
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$7,167,423	N/A	N/A
Subtotal	N/A	N/A	\$7,167,423	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$1,048,856	N/A	N/A	\$1,048,856	\$1,048,856
Incremental O&M Costs	\$75,460	N/A	N/A	\$75,460	\$87,938
Subtotal	\$1,124,316	N/A	N/A	\$1,124,316	\$1,136,794
<b>Total Costs</b>	<b>\$1,124,316</b>	<b>\$660,028</b>	<b>\$7,827,450</b>	<b>\$1,784,343</b>	<b>\$1,796,822</b>
<b>Net Benefit (Cost)</b>	<b>\$6,285,744</b>	<b>\$1,588,594</b>	<b>(\$5,578,829)</b>	<b>\$706,915</b>	<b>\$1,478,530</b>
<b>Benefit/Cost Ratio</b>	<b>6.59</b>	<b>3.41</b>	<b>0.29</b>	<b>1.40</b>	<b>1.82</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	12.9 years
T & D Loss Factor (Energy)	6.67%
T & D Loss Factor (Demand)	8.12%
Net coincident kW Saved at Generator	17.56 kW
Gross Annual kWh Saved at Customer	126,151 kWh
Net Annual kWh Saved at Generator	135,173 kWh

Program Summary All Participants

Total Participants	49
<b>Total Budget</b>	<b>\$660,028</b>
<b>Net coincident kW Saved at Generator</b>	<b>860 kW</b>
Gross Annual kWh Saved at Customer	6,181,398 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>6,623,498 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0078</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$767</b>





**FOODSERVICE EQUIPMENT**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$76,706	\$76,706	\$76,706	\$91,973
T & D	N/A	\$13,225	\$13,225	\$13,225	\$15,931
Marginal Energy	N/A	\$202,044	\$202,044	\$202,044	\$252,368
Environmental Externality	N/A	N/A	N/A	N/A	\$43,512
Subtotal	N/A	\$291,975	\$291,975	\$291,975	\$403,783
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$857,234	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$21,110	N/A	N/A	\$21,110	\$21,110
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$51,501	N/A	N/A	\$51,501	\$60,742
Subtotal	\$929,845	N/A	N/A	\$72,611	\$81,852
<b>Total Benefits</b>	<b>\$929,845</b>	<b>\$291,975</b>	<b>\$291,975</b>	<b>\$364,586</b>	<b>\$485,636</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$21,557	\$21,557	\$21,557	\$21,557
Advertising & Promotion	N/A	\$10,600	\$10,600	\$10,600	\$10,600
Measurement & Verification	N/A	\$2,400	\$2,400	\$2,400	\$2,400
Rebates	N/A	\$21,110	\$21,110	\$21,110	\$21,110
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$55,667	\$55,667	\$55,667	\$55,667
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$857,234	N/A	N/A
Subtotal	N/A	N/A	\$857,234	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$95,493	N/A	N/A	\$95,493	\$88,112
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$95,493	N/A	N/A	\$95,493	\$88,112
<b>Total Costs</b>	<b>\$95,493</b>	<b>\$55,667</b>	<b>\$912,901</b>	<b>\$151,160</b>	<b>\$143,780</b>
<b>Net Benefit (Cost)</b>	<b>\$834,352</b>	<b>\$236,308</b>	<b>(\$620,926)</b>	<b>\$213,426</b>	<b>\$341,856</b>
<b>Benefit/Cost Ratio</b>	<b>9.74</b>	<b>5.24</b>	<b>0.32</b>	<b>2.41</b>	<b>3.38</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	17.9 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	1.32 kW
Gross Annual kWh Saved at Customer	8,022 kWh
Net Annual kWh Saved at Generator	8,593 kWh

Program Summary All Participants

Total Participants	69
<b>Total Budget</b>	<b>\$55,667</b>
<b>Net coincident kW Saved at Generator</b>	<b>91 kW</b>
Gross Annual kWh Saved at Customer	553,496 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>592,926 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0053

Utility Program Cost per kW at Gen

\$609

**FOODSERVICE EQUIPMENT**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$35,774	\$35,774	\$35,774	\$42,917
T & D	N/A	\$6,421	\$6,421	\$6,421	\$7,722
Marginal Energy	N/A	\$97,595	\$97,595	\$97,595	\$121,739
Environmental Externality	N/A	N/A	N/A	N/A	\$21,020
Subtotal	N/A	\$139,789	\$139,789	\$139,789	\$193,399
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$382,995	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$13,113	N/A	N/A	\$13,113	\$13,113
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$16,957	N/A	N/A	\$16,957	\$19,744
Subtotal	\$413,064	N/A	N/A	\$50,070	\$32,856
<b>Total Benefits</b>	<b>\$413,064</b>	<b>\$139,789</b>	<b>\$139,789</b>	<b>\$169,859</b>	<b>\$226,255</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$24,949	\$24,949	\$24,949	\$24,949
Advertising & Promotion	N/A	\$4,577	\$4,577	\$4,577	\$4,577
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$13,113	\$13,113	\$13,113	\$13,113
Other	N/A	\$859	\$859	\$859	\$859
Subtotal	N/A	\$43,497	\$43,497	\$43,497	\$43,497
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$382,995	N/A	N/A
Subtotal	N/A	N/A	\$382,995	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$39,369	N/A	N/A	\$39,369	\$39,369
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$39,369	N/A	N/A	\$39,369	\$39,369
<b>Total Costs</b>	<b>\$39,369</b>	<b>\$43,497</b>	<b>\$426,491</b>	<b>\$82,865</b>	<b>\$82,865</b>
<b>Net Benefit (Cost)</b>	<b>\$373,696</b>	<b>\$96,293</b>	<b>(\$286,702)</b>	<b>\$86,994</b>	<b>\$143,390</b>
<b>Benefit/Cost Ratio</b>	<b>10.49</b>	<b>3.21</b>	<b>0.33</b>	<b>2.05</b>	<b>2.73</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	17.5 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	2.66 kW
Gross Annual kWh Saved at Customer	17,074 kWh
Net Annual kWh Saved at Generator	18,291 kWh

Program Summary All Participants

Total Participants	16
<b>Total Budget</b>	<b>\$43,497</b>
<b>Net coincident kW Saved at Generator</b>	<b>43 kW</b>
Gross Annual kWh Saved at Customer	273,189 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>292,650 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0085</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$1,022</b>





**HVAC+R**

**2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$4,730,853	\$4,730,853	\$4,730,853	\$5,627,005
T & D	N/A	\$839,566	\$839,566	\$839,566	\$1,001,130
Marginal Energy	N/A	\$9,434,007	\$9,434,007	\$9,434,007	\$11,447,170
Environmental Externality	N/A	N/A	N/A	N/A	\$1,927,015
Subtotal	N/A	\$15,004,426	\$15,004,426	\$15,004,426	\$20,002,319
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$41,900,538	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$2,817,857	N/A	N/A	\$2,817,857	\$2,817,857
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$611,841	N/A	N/A	\$611,841	\$735,936
Subtotal	\$45,330,236	N/A	N/A	\$3,429,698	\$3,553,792
<b>Total Benefits</b>	<b>\$45,330,236</b>	<b>\$15,004,426</b>	<b>\$15,004,426</b>	<b>\$18,434,124</b>	<b>\$23,556,111</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$1,646,670	\$1,646,670	\$1,646,670	\$1,646,670
Advertising & Promotion	N/A	\$166,000	\$166,000	\$166,000	\$166,000
Measurement & Verification	N/A	\$52,000	\$52,000	\$52,000	\$52,000
Rebates	N/A	\$2,817,857	\$2,817,857	\$2,817,857	\$2,817,857
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$4,682,526	\$4,682,526	\$4,682,526	\$4,682,526
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$41,900,538	N/A	N/A
Subtotal	N/A	N/A	\$41,900,538	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$6,688,255	N/A	N/A	\$6,688,255	\$6,688,001
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$6,688,255	N/A	N/A	\$6,688,255	\$6,688,001
<b>Total Costs</b>	<b>\$6,688,255</b>	<b>\$4,682,526</b>	<b>\$46,583,064</b>	<b>\$11,370,782</b>	<b>\$11,370,528</b>
<b>Net Benefit (Cost)</b>	<b>\$38,641,981</b>	<b>\$10,321,900</b>	<b>(\$31,578,638)</b>	<b>\$7,063,343</b>	<b>\$12,185,584</b>
<b>Benefit/Cost Ratio</b>	<b>6.78</b>	<b>3.20</b>	<b>0.32</b>	<b>1.62</b>	<b>2.07</b>

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

**2022 ELECTRIC**

**GOAL**

**Input Summary and Totals**

**Program "Inputs" per Customer kW and per Participant**

Lifetime (Weighted on Generator kWh)	16.1 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	1.56 kW
Gross Annual kWh Saved at Customer	7,301 kWh
Net Annual kWh Saved at Generator	7,822 kWh

**Program Summary All Participants**

Total Participants	3,681
<b>Total Budget</b>	<b>\$4,682,526</b>
<b>Net coincident kW Saved at Generator</b>	<b>5,750 kW</b>
Gross Annual kWh Saved at Customer	26,876,507 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>28,791,116 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0101</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$814</b>



<b>HVAC+R</b>					
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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$3,779,905	\$3,779,905	\$3,779,905	\$4,483,476
T & D	N/A	\$677,278	\$677,278	\$677,278	\$805,013
Marginal Energy	N/A	\$6,442,867	\$6,442,867	\$6,442,867	\$7,783,467
Environmental Externality	N/A	N/A	N/A	N/A	\$1,315,579
Subtotal	N/A	\$10,900,049	\$10,900,049	\$10,900,049	\$14,387,535
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$26,817,719	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$2,845,504	N/A	N/A	\$2,845,504	\$2,845,504
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$29,663,223	N/A	N/A	\$2,845,504	\$2,845,504
<b>Total Benefits</b>	<b>\$29,663,223</b>	<b>\$10,900,049</b>	<b>\$10,900,049</b>	<b>\$13,745,553</b>	<b>\$17,233,039</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$1,041,070	\$1,041,070	\$1,041,070	\$1,041,070
Advertising & Promotion	N/A	\$40,013	\$40,013	\$40,013	\$40,013
Measurement & Verification	N/A	\$38,293	\$38,293	\$38,293	\$38,293
Rebates	N/A	\$2,845,504	\$2,845,504	\$2,845,504	\$2,845,504
Other	N/A	\$147,749	\$147,749	\$147,749	\$147,749
Subtotal	N/A	\$4,112,630	\$4,112,630	\$4,112,630	\$4,112,630
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$26,817,719	N/A	N/A
Subtotal	N/A	N/A	\$26,817,719	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$6,224,072	N/A	N/A	\$6,224,072	\$6,224,072
Incremental O&M Costs	\$205	N/A	N/A	\$205	\$252
Subtotal	\$6,224,276	N/A	N/A	\$6,224,276	\$6,224,323
<b>Total Costs</b>	<b>\$6,224,276</b>	<b>\$4,112,630</b>	<b>\$30,930,348</b>	<b>\$10,336,906</b>	<b>\$10,336,953</b>
<b>Net Benefit (Cost)</b>	<b>\$23,438,946</b>	<b>\$6,787,420</b>	<b>(\$20,030,299)</b>	<b>\$3,408,647</b>	<b>\$6,896,086</b>
<b>Benefit/Cost Ratio</b>	<b>4.77</b>	<b>2.65</b>	<b>0.35</b>	<b>1.33</b>	<b>1.67</b>

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

<b>2022 ELECTRIC</b>		<b>ACTUAL</b>
<b>Input Summary and Totals</b>		
<b>Program "Inputs" per Customer kW and per Participant</b>		
Lifetime (Weighted on Generator kWh)		15.8 years
T & D Loss Factor (Energy)		6.65%
T & D Loss Factor (Demand)		8.06%
Net coincident kW Saved at Generator		4.13 kW
Gross Annual kWh Saved at Customer		16,581 kWh
Net Annual kWh Saved at Generator		17,762 kWh
<b>Program Summary All Participants</b>		
Total Participants		1,125
<b>Total Budget</b>		<b>\$4,112,630</b>
<b>Net coincident kW Saved at Generator</b>		<b>4,641 kW</b>
Gross Annual kWh Saved at Customer		18,653,224 kWh
<b>Net Annual kWh Saved at Generator</b>		<b>19,982,029 kWh</b>
<b>Utility Program Cost per kWh Lifetime</b>		
		<b>\$0.0130</b>
<b>Utility Program Cost per kW at Gen</b>		
		<b>\$886</b>





**LIGHTING**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$16,327,324	\$16,327,324	\$16,327,324	\$19,349,741
T & D	N/A	\$2,924,831	\$2,924,831	\$2,924,831	\$3,474,596
Marginal Energy	N/A	\$46,333,630	\$46,333,630	\$46,333,630	\$57,332,273
Environmental Externality	N/A	N/A	N/A	N/A	\$9,754,622
Subtotal	N/A	\$65,585,785	\$65,585,785	\$65,585,785	\$89,911,233
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$197,053,549	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$9,274,025	N/A	N/A	\$9,274,025	\$9,274,025
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$206,327,574	N/A	N/A	\$9,274,025	\$9,274,025
<b>Total Benefits</b>	<b>\$206,327,574</b>	<b>\$65,585,785</b>	<b>\$65,585,785</b>	<b>\$74,859,810</b>	<b>\$99,185,258</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$4,257,679	\$4,257,679	\$4,257,679	\$4,257,679
Advertising & Promotion	N/A	\$250,000	\$250,000	\$250,000	\$250,000
Measurement & Verification	N/A	\$25,000	\$25,000	\$25,000	\$25,000
Rebates	N/A	\$9,274,025	\$9,274,025	\$9,274,025	\$9,274,025
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$13,806,704	\$13,806,704	\$13,806,704	\$13,806,704
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$197,053,549	N/A	N/A
Subtotal	N/A	N/A	\$197,053,549	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$38,253,452	N/A	N/A	\$38,253,452	\$38,253,452
Incremental O&M Costs	\$3,657,131	N/A	N/A	\$3,657,131	\$4,413,843
Subtotal	\$41,910,584	N/A	N/A	\$41,910,584	\$42,667,296
<b>Total Costs</b>	<b>\$41,910,584</b>	<b>\$13,806,704</b>	<b>\$210,860,253</b>	<b>\$55,717,287</b>	<b>\$56,473,999</b>
<b>Net Benefit (Cost)</b>	<b>\$164,416,991</b>	<b>\$51,779,081</b>	<b>(\$145,274,468)</b>	<b>\$19,142,522</b>	<b>\$42,711,258</b>
<b>Benefit/Cost Ratio</b>	<b>4.92</b>	<b>4.75</b>	<b>0.31</b>	<b>1.34</b>	<b>1.76</b>

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

2022 **ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.7 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	1.41 kW
Gross Annual kWh Saved at Customer	8,666 kWh
Net Annual kWh Saved at Generator	9,284 kWh

Program Summary All Participants

Total Participants	15,832
<b>Total Budget</b>	<b>\$13,806,704</b>
<b>Net coincident kW Saved at Generator</b>	<b>22,283 kW</b>
Gross Annual kWh Saved at Customer	137,205,204 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>146,979,329 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0060</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$620</b>

**LIGHTING**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$9,357,437	\$9,357,437	\$9,357,437	\$11,095,105
T & D	N/A	\$1,676,323	\$1,676,323	\$1,676,323	\$1,992,724
Marginal Energy	N/A	\$24,430,990	\$24,430,990	\$24,430,990	\$30,253,798
Environmental Externality	N/A	N/A	N/A	N/A	\$5,281,584
Subtotal	N/A	\$35,464,749	\$35,464,749	\$35,464,749	\$48,623,211
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$96,107,136	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$6,147,340	N/A	N/A	\$6,147,340	\$6,147,340
Incremental Capital Savings	\$2,711	N/A	N/A	\$2,711	\$2,711
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$102,257,187	N/A	N/A	\$6,150,051	\$6,150,051
<b>Total Benefits</b>	<b>\$102,257,187</b>	<b>\$35,464,749</b>	<b>\$35,464,749</b>	<b>\$41,614,800</b>	<b>\$54,773,262</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$1,993,032	\$1,993,032	\$1,993,032	\$1,993,032
Advertising & Promotion	N/A	\$4,146	\$4,146	\$4,146	\$4,146
Measurement & Verification	N/A	\$42,633	\$42,633	\$42,633	\$42,633
Rebates	N/A	\$6,147,340	\$6,147,340	\$6,147,340	\$6,147,340
Other	N/A	\$1,888	\$1,888	\$1,888	\$1,888
Subtotal	N/A	\$8,189,039	\$8,189,039	\$8,189,039	\$8,189,039
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$96,107,136	N/A	N/A
Subtotal	N/A	N/A	\$96,107,136	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$22,099,808	N/A	N/A	\$22,099,808	\$22,099,808
Incremental O&M Costs	\$1,753,837	N/A	N/A	\$1,753,837	\$2,142,438
Subtotal	\$23,853,645	N/A	N/A	\$23,853,645	\$24,242,246
<b>Total Costs</b>	<b>\$23,853,645</b>	<b>\$8,189,039</b>	<b>\$104,296,175</b>	<b>\$32,042,684</b>	<b>\$32,431,285</b>
<b>Net Benefit (Cost)</b>	<b>\$78,403,542</b>	<b>\$27,275,710</b>	<b>(\$68,831,425)</b>	<b>\$9,572,116</b>	<b>\$22,341,977</b>
<b>Benefit/Cost Ratio</b>	<b>4.29</b>	<b>4.33</b>	<b>0.34</b>	<b>1.30</b>	<b>1.69</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.0 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	4.24 kW
Gross Annual kWh Saved at Customer	24,690 kWh
Net Annual kWh Saved at Generator	26,449 kWh

Program Summary All Participants

Total Participants	3,084
<b>Total Budget</b>	<b>\$8,189,039</b>
<b>Net coincident kW Saved at Generator</b>	<b>13,089 kW</b>
Gross Annual kWh Saved at Customer	76,143,452 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>81,567,704 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0067

Utility Program Cost per kW at Gen

\$626

**MULTI-FAMILY BUILDING EFFICIENCY**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$508,761	\$508,761	\$508,761	\$600,880
T & D	N/A	\$81,179	\$81,179	\$81,179	\$96,303
Marginal Energy	N/A	\$1,207,149	\$1,207,149	\$1,207,149	\$1,484,927
Environmental Externality	N/A	N/A	N/A	N/A	\$261,126
Subtotal	N/A	\$1,797,088	\$1,797,088	\$1,797,088	\$2,443,237
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$7,548,491	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$659,378	N/A	N/A	\$659,378	\$659,378
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$138,690	N/A	N/A	\$138,690	\$156,666
Subtotal	\$8,346,559	N/A	N/A	\$798,068	\$816,044
<b>Total Benefits</b>	<b>\$8,346,559</b>	<b>\$1,797,088</b>	<b>\$1,797,088</b>	<b>\$2,595,156</b>	<b>\$3,259,281</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$973,525	\$973,525	\$973,525	\$973,525
Advertising & Promotion	N/A	\$11,340	\$11,340	\$11,340	\$11,340
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$659,378	\$659,378	\$659,378	\$659,378
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,644,242	\$1,644,242	\$1,644,242	\$1,644,242
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$7,548,491	N/A	N/A
Subtotal	N/A	N/A	\$7,548,491	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$1,170,560	N/A	N/A	\$1,170,560	\$1,170,560
Incremental O&M Costs	\$1,806	N/A	N/A	\$1,806	\$2,243
Subtotal	\$1,172,366	N/A	N/A	\$1,172,366	\$1,172,803
<b>Total Costs</b>	<b>\$1,172,366</b>	<b>\$1,644,242</b>	<b>\$9,192,733</b>	<b>\$2,816,609</b>	<b>\$2,817,046</b>
<b>Net Benefit (Cost)</b>	<b>\$7,174,193</b>	<b>\$152,846</b>	<b>(\$7,395,645)</b>	<b>(\$221,452)</b>	<b>\$442,236</b>
<b>Benefit/Cost Ratio</b>	<b>7.12</b>	<b>1.09</b>	<b>0.20</b>	<b>0.92</b>	<b>1.16</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.1 years
T & D Loss Factor (Energy)	7.35%
T & D Loss Factor (Demand)	8.75%
Net coincident kW Saved at Generator	0.09 kW
Gross Annual kWh Saved at Customer	500 kWh
Net Annual kWh Saved at Generator	527 kWh

Program Summary All Participants

Total Participants	7,569
<b>Total Budget</b>	<b>\$1,644,242</b>
<b>Net coincident kW Saved at Generator</b>	<b>691 kW</b>
Gross Annual kWh Saved at Customer	3,784,048 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>3,990,789 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0273</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$2,380</b>

**MULTI-FAMILY BUILDING EFFICIENCY**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$343,048	\$343,048	\$343,048	\$410,665
T & D	N/A	\$61,545	\$61,545	\$61,545	\$73,870
Marginal Energy	N/A	\$1,188,868	\$1,188,868	\$1,188,868	\$1,497,415
Environmental Externality	N/A	N/A	N/A	N/A	\$257,189
Subtotal	N/A	\$1,593,461	\$1,593,461	\$1,593,461	\$2,239,139
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$6,363,082	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$567,768	N/A	N/A	\$567,768	\$567,768
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$100,412	N/A	N/A	\$100,412	\$113,439
Subtotal	\$7,031,261	N/A	N/A	\$668,179	\$681,207
<b>Total Benefits</b>	<b>\$7,031,261</b>	<b>\$1,593,461</b>	<b>\$1,593,461</b>	<b>\$2,261,641</b>	<b>\$2,920,346</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$1,134,551	\$1,134,551	\$1,134,551	\$1,134,551
Advertising & Promotion	N/A	\$831	\$831	\$831	\$831
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$567,768	\$567,768	\$567,768	\$567,768
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,703,149	\$1,703,149	\$1,703,149	\$1,703,149
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$6,363,082	N/A	N/A
Subtotal	N/A	N/A	\$6,363,082	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$733,834	N/A	N/A	\$733,834	\$733,834
Incremental O&M Costs	\$29,222	N/A	N/A	\$29,222	\$34,873
Subtotal	\$763,056	N/A	N/A	\$763,056	\$768,707
<b>Total Costs</b>	<b>\$763,056</b>	<b>\$1,703,149</b>	<b>\$8,066,231</b>	<b>\$2,466,205</b>	<b>\$2,471,856</b>
<b>Net Benefit (Cost)</b>	<b>\$6,268,205</b>	<b>(\$109,688)</b>	<b>(\$6,472,769)</b>	<b>(\$204,564)</b>	<b>\$448,490</b>
<b>Benefit/Cost Ratio</b>	<b>9.21</b>	<b>0.94</b>	<b>0.20</b>	<b>0.92</b>	<b>1.18</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.9 years
T & D Loss Factor (Energy)	7.56%
T & D Loss Factor (Demand)	9.35%
Net coincident kW Saved at Generator	0.02 kW
Gross Annual kWh Saved at Customer	153 kWh
Net Annual kWh Saved at Generator	160 kWh

Program Summary All Participants

Total Participants	23,570
<b>Total Budget</b>	<b>\$1,703,149</b>
<b>Net coincident kW Saved at Generator</b>	<b>452 kW</b>
Gross Annual kWh Saved at Customer	3,617,751 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>3,768,177 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0284</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$3,768</b>

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

Input Data		2022	
1) Retail Rate (\$/Dth) =	\$5.43	Administrative & Operating Costs =	\$434,769
Escalation Rate =	4.69%	Incentive Costs =	\$229,340
2) Non-Gas Fuel Retail Rate (\$/Fuel Unit) =	\$0.000	16) Total Utility Project Costs =	\$664,109
Escalation Rate =	4.69%	17) Direct Participant Costs (\$/Part.) =	\$265
Non-Gas Fuel Units (ie. kWh, Gallons, etc) =	kWh	18) Participant Non-Energy Costs (Annual \$/Part.) =	\$0
3) Commodity Cost (\$/Dth) =	\$3.25	Escalation Rate =	2.30%
Escalation Rate =	4.69%	19) Participant Non-Energy Savings (Annual \$/Part.) =	\$979
4) Demand Cost (\$/Unit/Yr) =	\$82.36	Escalation Rate =	2.30%
Escalation Rate =	4.69%	20) Project Life (Years) =	10.7
5) Peak Reduction Factor =	1.00%	21) Avg. Dth/Part. Saved =	9.07
6) Variable O&M (\$/Dth) =	\$0.0411	22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
Escalation Rate =	4.69%	22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
7) Non-Gas Fuel Cost (\$/Fuel Unit) =	\$0.00000	23) Number of Participants =	2,523
Escalation Rate =	3.59%	24) Total Annual Dth Saved =	22,886
8) Non-Gas Fuel Loss Factor	0.00%	25) Incentive/Participant =	\$90.90
9) Gas Environmental Damage Factor =	\$2.0700		
Escalation Rate =	2.30%		
10) Non Gas Fuel Enviro. Damage Factor (\$/Unit) =	\$0.0000		
Escalation Rate =	2.30%		
11) Participant Discount Rate =	6.38%		
12) MN CIP Utility Discount Rate =	5.34%		
13) Societal Discount Rate =	3.02%		
14) General Input Data Year =	2020		
15a) Project Analysis Year 1 =	2021		
15b) Project Analysis Year 2 =	2022		
15c) Project Analysis Year 3 =	2023		

Cost Summary	2022	Test Results	2022 NPV	2022 B/C
Utility Cost per Participant =	\$263	Ratepayer Impact Measure Test	(\$1,045,917)	0.51
Cost per Participant per Dth =	\$58.18	Utility Cost Test	\$404,242	1.61
Lifetime Energy Reduction (Dth)	244,914	Societal Test	\$3,086,144	3.32
Societal Cost per Dth	\$5.44	Participant Test	\$3,425,140	6.13





**NON-PROFIT ENERGY SAVINGS PROGRAM**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$191,613	\$191,613	\$191,613	\$227,047
T & D	N/A	\$33,050	\$33,050	\$33,050	\$39,287
Marginal Energy	N/A	\$386,820	\$386,820	\$386,820	\$474,017
Environmental Externality	N/A	N/A	N/A	N/A	\$87,164
Subtotal	N/A	\$611,483	\$611,483	\$611,483	\$827,515
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$2,376,081	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$172,765	N/A	N/A	\$172,765	\$172,765
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$26,653	N/A	N/A	\$26,653	\$30,107
Subtotal	\$2,575,498	N/A	N/A	\$199,417	\$202,872
<b>Total Benefits</b>	<b>\$2,575,498</b>	<b>\$611,483</b>	<b>\$611,483</b>	<b>\$810,900</b>	<b>\$1,030,386</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$54,847	\$54,847	\$54,847	\$54,847
Project Administration	N/A	\$486,665	\$486,665	\$486,665	\$486,665
Advertising & Promotion	N/A	\$18,600	\$18,600	\$18,600	\$18,600
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$172,765	\$172,765	\$172,765	\$172,765
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$732,877	\$732,877	\$732,877	\$732,877
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$2,376,081	N/A	N/A
Subtotal	N/A	N/A	\$2,376,081	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$452,934	N/A	N/A	\$452,934	\$452,934
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$452,934	N/A	N/A	\$452,934	\$452,934
<b>Total Costs</b>	<b>\$452,934</b>	<b>\$732,877</b>	<b>\$3,108,957</b>	<b>\$1,185,811</b>	<b>\$1,185,811</b>
<b>Net Benefit (Cost)</b>	<b>\$2,122,564</b>	<b>(\$121,394)</b>	<b>(\$2,497,475)</b>	<b>(\$374,911)</b>	<b>(\$155,424)</b>
<b>Benefit/Cost Ratio</b>	<b>5.69</b>	<b>0.83</b>	<b>0.20</b>	<b>0.68</b>	<b>0.87</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	14.1 years
T & D Loss Factor (Energy)	7.04%
T & D Loss Factor (Demand)	8.40%
Net coincident kW Saved at Generator	2.58 kW
Gross Annual kWh Saved at Customer	12,503 kWh
Net Annual kWh Saved at Generator	13,448 kWh

Program Summary All Participants

Total Participants	<b>104</b>
<b>Total Budget</b>	<b>\$732,877</b>
<b>Net coincident kW Saved at Generator</b>	<b>269 kW</b>
Gross Annual kWh Saved at Customer	1,303,685 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>1,402,223 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0372</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$2,729</b>

**NON-PROFIT ENERGY SAVINGS PROGRAM**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
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
<b>Participant Benefits</b>					
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
<b>Total Benefits</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$2,975	\$2,975	\$2,975	\$2,975
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	\$2,975	\$2,975	\$2,975	\$2,975
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$0	N/A	N/A
Subtotal	N/A	N/A	\$0	N/A	N/A
<b>Participant Costs</b>					
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
<b>Total Costs</b>	<b>\$0</b>	<b>\$2,975</b>	<b>\$2,975</b>	<b>\$2,975</b>	<b>\$2,975</b>
<b>Net Benefit (Cost)</b>	<b>\$0</b>	<b>(\$2,975)</b>	<b>(\$2,975)</b>	<b>(\$2,975)</b>	<b>(\$2,975)</b>
<b>Benefit/Cost Ratio</b>	<b>INF</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
Net coincident kW Saved at Generator	#DIV/0!
Gross Annual kWh Saved at Customer	#DIV/0!
Net Annual kWh Saved at Generator	#DIV/0!

Program Summary All Participants

Total Participants	0
<b>Total Budget</b>	<b>\$2,975</b>
<b>Net coincident kW Saved at Generator</b>	<b>#DIV/0!</b>
Gross Annual kWh Saved at Customer	#DIV/0!
<b>Net Annual kWh Saved at Generator</b>	<b>#DIV/0!</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>#DIV/0!</b>
<b>Utility Program Cost per kW at Gen</b>	<b>#DIV/0!</b>





**PEAK PARTNER REWARDS**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$2,689,988	\$2,689,988	\$2,689,988	\$2,689,988
T & D	N/A	\$0	\$0	\$0	\$0
Marginal Energy	N/A	\$5,204	\$5,204	\$5,204	\$5,204
Environmental Externality	N/A	N/A	N/A	N/A	\$4,321
Subtotal	N/A	\$2,695,192	\$2,695,192	\$2,695,192	\$2,699,513
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$35,101	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$1,278,810	N/A	N/A	\$1,278,810	\$1,278,810
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$1,313,911	N/A	N/A	\$1,278,810	\$1,278,810
<b>Total Benefits</b>	<b>\$1,313,911</b>	<b>\$2,695,192</b>	<b>\$2,695,192</b>	<b>\$3,974,002</b>	<b>\$3,978,323</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$43,050	\$43,050	\$43,050	\$43,050
Project Administration	N/A	\$568,191	\$568,191	\$568,191	\$568,191
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	\$1,278,810	\$1,278,810	\$1,278,810	\$1,278,810
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,940,051	\$1,940,051	\$1,940,051	\$1,940,051
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$35,101	N/A	N/A
Subtotal	N/A	N/A	\$35,101	N/A	N/A
<b>Participant Costs</b>					
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
<b>Total Costs</b>	<b>\$0</b>	<b>\$1,940,051</b>	<b>\$1,975,151</b>	<b>\$1,940,051</b>	<b>\$1,940,051</b>
<b>Net Benefit (Cost)</b>	<b>\$1,313,911</b>	<b>\$755,142</b>	<b>\$720,041</b>	<b>\$2,033,952</b>	<b>\$2,038,273</b>
<b>Benefit/Cost Ratio</b>	<b>INF</b>	<b>1.39</b>	<b>1.36</b>	<b>2.05</b>	<b>2.05</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	1.0 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	962.90 kW
Gross Annual kWh Saved at Customer	5,312 kWh
Net Annual kWh Saved at Generator	5,690 kWh

Program Summary All Participants

Total Participants	45
<b>Total Budget</b>	<b>\$1,940,051</b>
<b>Net coincident kW Saved at Generator</b>	<b>43,331 kW</b>
Gross Annual kWh Saved at Customer	239,040 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>256,069 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$7.5763</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$45</b>

**PEAK PARTNER REWARDS**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$593,255	\$593,255	\$593,255	\$593,255
T & D	N/A	\$103,590	\$103,590	\$103,590	\$103,590
Marginal Energy	N/A	\$30	\$30	\$30	\$30
Environmental Externality	N/A	N/A	N/A	N/A	\$25
Subtotal	N/A	\$696,875	\$696,875	\$696,875	\$696,900
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$189	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$212,824	N/A	N/A	\$212,824	\$212,824
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$213,013	N/A	N/A	\$212,824	\$212,824
<b>Total Benefits</b>	<b>\$213,013</b>	<b>\$696,875</b>	<b>\$696,875</b>	<b>\$909,699</b>	<b>\$909,724</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$251,823	\$251,823	\$251,823	\$251,823
Advertising & Promotion	N/A	\$26	\$26	\$26	\$26
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$212,824	\$212,824	\$212,824	\$212,824
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$464,673	\$464,673	\$464,673	\$464,673
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$189	N/A	N/A
Subtotal	N/A	N/A	\$189	N/A	N/A
<b>Participant Costs</b>					
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
<b>Total Costs</b>	<b>\$0</b>	<b>\$464,673</b>	<b>\$464,862</b>	<b>\$464,673</b>	<b>\$464,673</b>
<b>Net Benefit (Cost)</b>	<b>\$213,013</b>	<b>\$232,202</b>	<b>\$232,012</b>	<b>\$445,026</b>	<b>\$445,050</b>
<b>Benefit/Cost Ratio</b>	<b>INF</b>	<b>1.50</b>	<b>1.50</b>	<b>1.96</b>	<b>1.96</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	1.0 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	258.28 kW
Gross Annual kWh Saved at Customer	37 kWh
Net Annual kWh Saved at Generator	40 kWh

Program Summary All Participants

Total Participants	37
<b>Total Budget</b>	<b>\$464,673</b>
<b>Net coincident kW Saved at Generator</b>	<b>9,556 kW</b>
Gross Annual kWh Saved at Customer	1,380 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>1,478 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$314.3279</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$49</b>

**PROCESS EFFICIENCY**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$10,594,087	\$10,594,087	\$10,594,087	\$12,564,024
T & D	N/A	\$1,868,453	\$1,868,453	\$1,868,453	\$2,225,205
Marginal Energy	N/A	\$25,060,823	\$25,060,823	\$25,060,823	\$30,727,341
Environmental Externality	N/A	N/A	N/A	N/A	\$5,123,474
Subtotal	N/A	\$37,523,362	\$37,523,362	\$37,523,362	\$50,640,043
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$109,535,818	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$4,313,419	N/A	N/A	\$4,313,419	\$4,313,419
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$61,559,047	N/A	N/A	\$61,559,047	\$75,670,086
Subtotal	\$175,408,283	N/A	N/A	\$65,872,466	\$79,983,505
<b>Total Benefits</b>	<b>\$175,408,283</b>	<b>\$37,523,362</b>	<b>\$37,523,362</b>	<b>\$103,395,827</b>	<b>\$130,623,548</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$805,575	\$805,575	\$805,575	\$805,575
Project Administration	N/A	\$1,969,377	\$1,969,377	\$1,969,377	\$1,969,377
Advertising & Promotion	N/A	\$25,000	\$25,000	\$25,000	\$25,000
Measurement & Verification	N/A	\$16,000	\$16,000	\$16,000	\$16,000
Rebates	N/A	\$4,313,419	\$4,313,419	\$4,313,419	\$4,313,419
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$7,129,371	\$7,129,371	\$7,129,371	\$7,129,371
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$109,535,818	N/A	N/A
Subtotal	N/A	N/A	\$109,535,818	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$25,382,757	N/A	N/A	\$25,382,757	\$25,382,757
Incremental O&M Costs	\$862,061	N/A	N/A	\$862,061	\$1,027,721
Subtotal	\$26,244,818	N/A	N/A	\$26,244,818	\$26,410,478
<b>Total Costs</b>	<b>\$26,244,818</b>	<b>\$7,129,371</b>	<b>\$116,665,189</b>	<b>\$33,374,189</b>	<b>\$33,539,849</b>
<b>Net Benefit (Cost)</b>	<b>\$149,163,466</b>	<b>\$30,393,991</b>	<b>(\$79,141,827)</b>	<b>\$70,021,639</b>	<b>\$97,083,699</b>
<b>Benefit/Cost Ratio</b>	<b>6.68</b>	<b>5.26</b>	<b>0.32</b>	<b>3.10</b>	<b>3.89</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	16.7 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	37.77 kW
Gross Annual kWh Saved at Customer	184,687 kWh
Net Annual kWh Saved at Generator	197,843 kWh

Program Summary All Participants

Total Participants	371
<b>Total Budget</b>	<b>\$7,129,371</b>
<b>Net coincident kW Saved at Generator</b>	<b>14,011 kW</b>
Gross Annual kWh Saved at Customer	68,518,797 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>73,399,890 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0058</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$509</b>



**PROCESS EFFICIENCY**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$9,437,986	\$9,437,986	\$9,437,986	\$11,331,941
T & D	N/A	\$1,694,106	\$1,694,106	\$1,694,106	\$2,039,074
Marginal Energy	N/A	\$22,914,680	\$22,914,680	\$22,914,680	\$28,510,206
Environmental Externality	N/A	N/A	N/A	N/A	\$5,205,047
Subtotal	N/A	\$34,046,772	\$34,046,772	\$34,046,772	\$47,086,268
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$103,838,891	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$5,592,797	N/A	N/A	\$5,592,797	\$5,592,797
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$79,786,205	N/A	N/A	\$79,786,205	\$100,095,877
Subtotal	\$189,217,893	N/A	N/A	\$85,379,002	\$105,688,674
<b>Total Benefits</b>	<b>\$189,217,893</b>	<b>\$34,046,772</b>	<b>\$34,046,772</b>	<b>\$119,425,774</b>	<b>\$152,774,942</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$28,499	\$28,499	\$28,499	\$28,499
Project Administration	N/A	\$1,976,000	\$1,976,000	\$1,976,000	\$1,976,000
Advertising & Promotion	N/A	\$20	\$20	\$20	\$20
Measurement & Verification	N/A	\$12,859	\$12,859	\$12,859	\$12,859
Rebates	N/A	\$5,592,797	\$5,592,797	\$5,592,797	\$5,592,797
Other	N/A	\$44,885	\$44,885	\$44,885	\$44,885
Subtotal	N/A	\$7,655,060	\$7,655,060	\$7,655,060	\$7,655,060
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$103,838,891	N/A	N/A
Subtotal	N/A	N/A	\$103,838,891	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$34,845,058	N/A	N/A	\$34,845,058	\$34,845,058
Incremental O&M Costs	\$486,502	N/A	N/A	\$486,502	\$603,667
Subtotal	\$35,331,560	N/A	N/A	\$35,331,560	\$35,448,726
<b>Total Costs</b>	<b>\$35,331,560</b>	<b>\$7,655,060</b>	<b>\$111,493,951</b>	<b>\$42,986,620</b>	<b>\$43,103,785</b>
<b>Net Benefit (Cost)</b>	<b>\$153,886,333</b>	<b>\$26,391,712</b>	<b>(\$77,447,179)</b>	<b>\$76,439,154</b>	<b>\$109,671,157</b>
<b>Benefit/Cost Ratio</b>	<b>5.36</b>	<b>4.45</b>	<b>0.31</b>	<b>2.78</b>	<b>3.54</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	17.3 years
T & D Loss Factor (Energy)	6.65%
T & D Loss Factor (Demand)	8.06%
Net coincident kW Saved at Generator	32.62 kW
Gross Annual kWh Saved at Customer	194,871 kWh
Net Annual kWh Saved at Generator	208,753 kWh

Program Summary All Participants

Total Participants	347
<b>Total Budget</b>	<b>\$7,655,060</b>
<b>Net coincident kW Saved at Generator</b>	<b>11,319 kW</b>
Gross Annual kWh Saved at Customer	67,620,229 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>72,437,310 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0061</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$676</b>





**SELF-DIRECT**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
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
<b>Participant Benefits</b>					
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
<b>Total Benefits</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$5,150	\$5,150	\$5,150	\$5,150
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	\$5,150	\$5,150	\$5,150	\$5,150
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$0	N/A	N/A
Subtotal	N/A	N/A	\$0	N/A	N/A
<b>Participant Costs</b>					
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
<b>Total Costs</b>	<b>\$0</b>	<b>\$5,150</b>	<b>\$5,150</b>	<b>\$5,150</b>	<b>\$5,150</b>
<b>Net Benefit (Cost)</b>	<b>\$0</b>	<b>(\$5,150)</b>	<b>(\$5,150)</b>	<b>(\$5,150)</b>	<b>(\$5,150)</b>
<b>Benefit/Cost Ratio</b>	<b>INF</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	0.0 years
T & D Loss Factor (Energy)	0.00%
T & D Loss Factor (Demand)	0.00%
Net coincident kW Saved at Generator	#DIV/0!
Gross Annual kWh Saved at Customer	#DIV/0!
Net Annual kWh Saved at Generator	#DIV/0!

Program Summary All Participants

Total Participants	0
<b>Total Budget</b>	<b>\$5,150</b>
<b>Net coincident kW Saved at Generator</b>	<b>#DIV/0!</b>
Gross Annual kWh Saved at Customer	#DIV/0!
<b>Net Annual kWh Saved at Generator</b>	<b>#DIV/0!</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>#DIV/0!</b>
<b>Utility Program Cost per kW at Gen</b>	<b>#DIV/0!</b>

<b>SELF-DIRECT</b>						<b>2022 ELECTRIC</b>		<b>ACTUAL</b>				
<b>Net Present Cost Benefit Summary Analysis For All Participants</b>						<b>Input Summary and Totals</b>						
	<b>Participant Test (\$Total)</b>	<b>Utility Test (\$Total)</b>	<b>Rate Impact Test (\$Total)</b>	<b>Total Resource Test (\$Total)</b>	<b>Societal Test (\$Total)</b>	<b>Program "Inputs" per Customer kW and per Participant</b>						
<b>Benefits</b>						Lifetime (Weighted on Generator kWh)	17.0	years				
<b>Avoided Revenue Requirements</b>						T & D Loss Factor (Energy)	6.65%					
Generation	N/A	\$109,438	\$109,438	\$109,438	\$129,674	T & D Loss Factor (Demand)	8.06%					
T & D	N/A	\$19,606	\$19,606	\$19,606	\$23,276	Net coincident kW Saved at Generator	43.44	kW				
Marginal Energy	N/A	\$353,483	\$353,483	\$353,483	\$430,987	Gross Annual kWh Saved at Customer	299,589	kWh				
Environmental Externality	N/A	N/A	N/A	N/A	\$69,364	Net Annual kWh Saved at Generator	320,931	kWh				
Subtotal	N/A	\$482,527	\$482,527	\$482,527	\$653,301	<b>Program Summary All Participants</b>						
<b>Participant Benefits</b>						Total Participants	3					
Bill Reduction - Electric	\$1,616,269	N/A	N/A	N/A	N/A	<b>Total Budget</b>	<b>\$115,118</b>					
Rebates from Xcel Energy	\$89,877	N/A	N/A	\$89,877	\$89,877	<b>Net coincident kW Saved at Generator</b>	<b>130</b>	<b>kW</b>				
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0	Gross Annual kWh Saved at Customer	898,766	kWh				
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0	<b>Net Annual kWh Saved at Generator</b>	<b>962,792</b>	<b>kWh</b>				
Subtotal	\$1,706,146	N/A	N/A	\$89,877	\$89,877	<b>Utility Program Cost per kWh Lifetime</b>						
<b>Total Benefits</b>						<b>\$1,706,146</b>	<b>\$482,527</b>	<b>\$482,527</b>	<b>\$572,404</b>	<b>\$743,178</b>	<b>Utility Program Cost per kW at Gen</b>	<b>\$883</b>
<b>Costs</b>												
<b>Utility Project Costs</b>												
Customer Services	N/A	\$0	\$0	\$0	\$0							
Project Administration	N/A	\$25,241	\$25,241	\$25,241	\$25,241							
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0							
Measurement & Verification	N/A	\$0	\$0	\$0	\$0							
Rebates	N/A	\$89,877	\$89,877	\$89,877	\$89,877							
Other	N/A	\$0	\$0	\$0	\$0							
Subtotal	N/A	\$115,118	\$115,118	\$115,118	\$115,118							
<b>Utility Revenue Reduction</b>												
Revenue Reduction - Electric	N/A	N/A	\$1,616,269	N/A	N/A							
Subtotal	N/A	N/A	\$1,616,269	N/A	N/A							
<b>Participant Costs</b>												
Incremental Capital Costs	\$182,387	N/A	N/A	\$182,387	\$182,387							
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0							
Subtotal	\$182,387	N/A	N/A	\$182,387	\$182,387							
<b>Total Costs</b>						<b>\$182,387</b>	<b>\$115,118</b>	<b>\$1,731,387</b>	<b>\$297,505</b>	<b>\$297,505</b>		
<b>Net Benefit (Cost)</b>	<b>\$1,523,759</b>	<b>\$367,409</b>	<b>(\$1,248,860)</b>	<b>\$274,899</b>	<b>\$445,673</b>							
<b>Benefit/Cost Ratio</b>	<b>9.35</b>	<b>4.19</b>	<b>0.28</b>	<b>1.92</b>	<b>2.50</b>							

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

**RESIDENTIAL SEGMENT WITH INDIRECT PARTICIPANTS**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$41,188,310	\$41,188,310	\$41,188,310	\$47,287,089
T & D	N/A	\$5,538,233	\$5,538,233	\$5,538,233	\$6,140,196
Marginal Energy	N/A	\$61,533,507	\$61,533,507	\$61,533,507	\$76,635,966
Environmental Externality	N/A	N/A	N/A	N/A	\$13,956,649
Subtotal	N/A	\$108,260,049	\$108,260,049	\$108,260,049	\$144,019,900
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$382,940,694	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$12,350,462	N/A	N/A	\$12,350,462	\$12,350,462
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$13,500
Incremental O&M Savings	\$4,252,269	N/A	N/A	\$4,252,269	\$4,803,430
Subtotal	\$399,543,425	N/A	N/A	\$16,602,731	\$17,167,392
<b>Total Benefits</b>	<b>\$399,543,425</b>	<b>\$108,260,049</b>	<b>\$108,260,049</b>	<b>\$124,862,780</b>	<b>\$161,187,292</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$635,459	\$635,459	\$635,459	\$635,459
Project Administration	N/A	\$15,357,454	\$15,357,454	\$15,357,454	\$15,357,454
Advertising & Promotion	N/A	\$2,304,099	\$2,304,099	\$2,304,099	\$2,304,099
Measurement & Verification	N/A	\$181,500	\$181,500	\$181,500	\$181,500
Rebates	N/A	\$12,350,462	\$12,350,462	\$12,350,462	\$12,350,462
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$30,828,974	\$30,828,974	\$30,828,974	\$30,828,974
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$382,940,694	N/A	N/A
Subtotal	N/A	N/A	\$382,940,694	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$21,471,605	N/A	N/A	\$21,471,605	\$20,981,136
Incremental O&M Costs	\$2,053	N/A	N/A	\$2,053	\$2,319
Subtotal	\$21,473,658	N/A	N/A	\$21,473,658	\$20,983,455
<b>Total Costs</b>	<b>\$21,473,658</b>	<b>\$30,828,974</b>	<b>\$413,769,668</b>	<b>\$52,302,632</b>	<b>\$51,812,429</b>
<b>Net Benefit (Cost)</b>	<b>\$378,069,767</b>	<b>\$77,431,075</b>	<b>(\$305,509,619)</b>	<b>\$72,560,148</b>	<b>\$109,374,863</b>
<b>Benefit/Cost Ratio</b>	<b>18.61</b>	<b>3.51</b>	<b>0.26</b>	<b>2.39</b>	<b>3.11</b>

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

**2022 ELECTRIC**
**GOAL**

Input Summary and Totals

**Program "Inputs" per Customer kW and per Participant**

Lifetime (Weighted on Generator kWh)	14.3 years
T & D Loss Factor (Energy)	7.69%
T & D Loss Factor (Demand)	9.55%
Net coincident kW Saved at Generator	0.04 kW
Gross Annual kWh Saved at Customer	133 kWh
Net Annual kWh Saved at Generator	140 kWh

**Program Summary All Participants**

Total Participants	<b>1,569,815</b>
<b>Total Budget</b>	<b>\$30,828,974</b>
<b>Net coincident kW Saved at Generator</b>	<b>64,560 kW</b>
Gross Annual kWh Saved at Customer	208,020,398 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>219,190,172 kWh</b>

**Utility Program Cost per kWh Lifetime**
**\$0.0099**
**Utility Program Cost per kW at Gen**
**\$478**

**RESIDENTIAL SEGMENT WITH INDIRECT PARTICIPANTS**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$56,297,648	\$56,297,648	\$56,297,648	\$66,333,444
T & D	N/A	\$10,075,854	\$10,075,854	\$10,075,854	\$11,900,396
Marginal Energy	N/A	\$91,816,794	\$91,816,794	\$91,816,794	\$115,110,556
Environmental Externality	N/A	N/A	N/A	N/A	\$20,415,154
Subtotal	N/A	\$158,190,296	\$158,190,296	\$158,190,296	\$213,759,550
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$531,010,343	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$16,280,319	N/A	N/A	\$16,280,319	\$16,280,319
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$4,758,033	N/A	N/A	\$4,758,033	\$5,375,460
Subtotal	\$552,048,695	N/A	N/A	\$21,038,352	\$21,655,779
<b>Total Benefits</b>	<b>\$552,048,695</b>	<b>\$158,190,296</b>	<b>\$158,190,296</b>	<b>\$179,228,648</b>	<b>\$235,415,328</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$398,115	\$398,115	\$398,115	\$398,115
Project Administration	N/A	\$12,434,672	\$12,434,672	\$12,434,672	\$12,434,672
Advertising & Promotion	N/A	\$2,047,209	\$2,047,209	\$2,047,209	\$2,047,209
Measurement & Verification	N/A	\$81,787	\$81,787	\$81,787	\$81,787
Rebates	N/A	\$16,280,319	\$16,280,319	\$16,280,319	\$16,280,319
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$31,242,100	\$31,242,100	\$31,242,100	\$31,242,100
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$531,010,343	N/A	N/A
Subtotal	N/A	N/A	\$531,010,343	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$26,317,450	N/A	N/A	\$26,317,450	\$26,317,450
Incremental O&M Costs	\$1,525	N/A	N/A	\$1,525	\$1,722
Subtotal	\$26,318,975	N/A	N/A	\$26,318,975	\$26,319,172
<b>Total Costs</b>	<b>\$26,318,975</b>	<b>\$31,242,100</b>	<b>\$562,252,443</b>	<b>\$57,561,075</b>	<b>\$57,561,273</b>
<b>Net Benefit (Cost)</b>	<b>\$525,729,720</b>	<b>\$126,948,196</b>	<b>(\$404,062,147)</b>	<b>\$121,667,573</b>	<b>\$177,854,056</b>
<b>Benefit/Cost Ratio</b>	<b>20.98</b>	<b>5.06</b>	<b>0.28</b>	<b>3.11</b>	<b>4.09</b>

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

**2022 ELECTRIC**
**ACTUAL**

Input Summary and Totals

**Program "Inputs" per Customer kW and per Participant**

Lifetime (Weighted on Generator kWh)	15.6 years
T & D Loss Factor (Energy)	7.72%
T & D Loss Factor (Demand)	9.57%
Net coincident kW Saved at Generator	0.04 kW
Gross Annual kWh Saved at Customer	144 kWh
Net Annual kWh Saved at Generator	152 kWh

**Program Summary All Participants**

Total Participants	1,962,462
<b>Total Budget</b>	<b>\$31,242,100</b>
<b>Net coincident kW Saved at Generator</b>	<b>83,688 kW</b>
Gross Annual kWh Saved at Customer	282,213,705 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>298,823,384 kWh</b>

**Utility Program Cost per kWh Lifetime**
**\$0.0067**
**Utility Program Cost per kW at Gen**
**\$373**







**RESIDENTIAL SEGMENT EE AND DR TOTAL**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$41,188,310	\$41,188,310	\$41,188,310	\$47,287,089
T & D	N/A	\$5,538,233	\$5,538,233	\$5,538,233	\$6,140,196
Marginal Energy	N/A	\$61,533,507	\$61,533,507	\$61,533,507	\$76,635,966
Environmental Externality	N/A	N/A	N/A	N/A	\$13,956,649
Subtotal	N/A	\$108,260,049	\$108,260,049	\$108,260,049	\$144,019,900
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$382,940,694	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$12,350,462	N/A	N/A	\$12,350,462	\$12,350,462
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$13,500
Incremental O&M Savings	\$4,252,269	N/A	N/A	\$4,252,269	\$4,803,430
Subtotal	\$399,543,425	N/A	N/A	\$16,602,731	\$17,167,392
<b>Total Benefits</b>	<b>\$399,543,425</b>	<b>\$108,260,049</b>	<b>\$108,260,049</b>	<b>\$124,862,780</b>	<b>\$161,187,292</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$635,459	\$635,459	\$635,459	\$635,459
Project Administration	N/A	\$12,644,124	\$12,644,124	\$12,644,124	\$12,644,124
Advertising & Promotion	N/A	\$1,744,899	\$1,744,899	\$1,744,899	\$1,744,899
Measurement & Verification	N/A	\$181,500	\$181,500	\$181,500	\$181,500
Rebates	N/A	\$12,350,462	\$12,350,462	\$12,350,462	\$12,350,462
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$27,556,444	\$27,556,444	\$27,556,444	\$27,556,444
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$382,940,694	N/A	N/A
Subtotal	N/A	N/A	\$382,940,694	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$21,471,605	N/A	N/A	\$21,471,605	\$20,981,136
Incremental O&M Costs	\$2,053	N/A	N/A	\$2,053	\$2,319
Subtotal	\$21,473,658	N/A	N/A	\$21,473,658	\$20,983,455
<b>Total Costs</b>	<b>\$21,473,658</b>	<b>\$27,556,444</b>	<b>\$410,497,138</b>	<b>\$49,030,102</b>	<b>\$48,539,899</b>
<b>Net Benefit (Cost)</b>	<b>\$378,069,767</b>	<b>\$80,703,605</b>	<b>(\$302,237,089)</b>	<b>\$75,832,678</b>	<b>\$112,647,393</b>
<b>Benefit/Cost Ratio</b>	<b>18.61</b>	<b>3.93</b>	<b>0.26</b>	<b>2.55</b>	<b>3.32</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	14.3 years
T & D Loss Factor (Energy)	7.69%
T & D Loss Factor (Demand)	9.55%
Net coincident kW Saved at Generator	0.11 kW
Gross Annual kWh Saved at Customer	361 kWh
Net Annual kWh Saved at Generator	380 kWh

Program Summary All Participants

Total Participants	576,564
<b>Total Budget</b>	<b>\$27,556,444</b>
<b>Net coincident kW Saved at Generator</b>	<b>64,560 kW</b>
Gross Annual kWh Saved at Customer	208,020,398 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>219,190,172 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0088

Utility Program Cost per kW at Gen

\$427

**RESIDENTIAL SEGMENT EE AND DR TOTAL**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$56,297,648	\$56,297,648	\$56,297,648	\$66,333,444
T & D	N/A	\$10,075,854	\$10,075,854	\$10,075,854	\$11,900,396
Marginal Energy	N/A	\$91,816,794	\$91,816,794	\$91,816,794	\$115,110,556
Environmental Externality	N/A	N/A	N/A	N/A	\$20,415,154
Subtotal	N/A	\$158,190,296	\$158,190,296	\$158,190,296	\$213,759,550
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$531,010,343	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$16,335,569	N/A	N/A	\$16,335,569	\$16,335,569
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$4,758,033	N/A	N/A	\$4,758,033	\$5,375,460
Subtotal	\$552,103,945	N/A	N/A	\$21,093,602	\$21,711,029
<b>Total Benefits</b>	<b>\$552,103,945</b>	<b>\$158,190,296</b>	<b>\$158,190,296</b>	<b>\$179,283,898</b>	<b>\$235,470,578</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$398,115	\$398,115	\$398,115	\$398,115
Project Administration	N/A	\$10,009,275	\$10,009,275	\$10,009,275	\$10,009,275
Advertising & Promotion	N/A	\$1,263,476	\$1,263,476	\$1,263,476	\$1,263,476
Measurement & Verification	N/A	\$81,787	\$81,787	\$81,787	\$81,787
Rebates	N/A	\$16,335,569	\$16,335,569	\$16,335,569	\$16,335,569
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$28,088,221	\$28,088,221	\$28,088,221	\$28,088,221
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$531,010,343	N/A	N/A
Subtotal	N/A	N/A	\$531,010,343	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$26,317,450	N/A	N/A	\$26,317,450	\$26,317,450
Incremental O&M Costs	\$1,525	N/A	N/A	\$1,525	\$1,722
Subtotal	\$26,318,975	N/A	N/A	\$26,318,975	\$26,319,172
<b>Total Costs</b>	<b>\$26,318,975</b>	<b>\$28,088,221</b>	<b>\$559,098,564</b>	<b>\$54,407,196</b>	<b>\$54,407,394</b>
<b>Net Benefit (Cost)</b>	<b>\$525,784,970</b>	<b>\$130,102,075</b>	<b>(\$400,908,268)</b>	<b>\$124,876,702</b>	<b>\$181,063,185</b>
<b>Benefit/Cost Ratio</b>	<b>20.98</b>	<b>5.63</b>	<b>0.28</b>	<b>3.30</b>	<b>4.33</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.6 years
T & D Loss Factor (Energy)	7.72%
T & D Loss Factor (Demand)	9.57%
Net coincident kW Saved at Generator	0.08 kW
Gross Annual kWh Saved at Customer	257 kWh
Net Annual kWh Saved at Generator	272 kWh

Program Summary All Participants

Total Participants	<b>1,098,724</b>
<b>Total Budget</b>	<b>\$28,088,221</b>
<b>Net coincident kW Saved at Generator</b>	<b>83,688 kW</b>
Gross Annual kWh Saved at Customer	282,213,705 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>298,823,384 kWh</b>

Utility Program Cost per kWh Lifetime

**\$0.0060**

Utility Program Cost per kW at Gen

**\$336**





**EFFICIENT NEW HOMES CONSTRUCTION**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$1,532,955	\$1,532,955	\$1,532,955	\$1,842,602
T & D	N/A	\$275,197	\$275,197	\$275,197	\$331,627
Marginal Energy	N/A	\$1,714,910	\$1,714,910	\$1,714,910	\$2,178,373
Environmental Externality	N/A	N/A	N/A	N/A	\$346,724
Subtotal	N/A	\$3,523,062	\$3,523,062	\$3,523,062	\$4,699,327
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$10,587,690	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$620,067	N/A	N/A	\$620,067	\$620,067
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$41,856	N/A	N/A	\$41,856	\$47,281
Subtotal	\$11,249,613	N/A	N/A	\$661,923	\$667,348
<b>Total Benefits</b>	<b>\$11,249,613</b>	<b>\$3,523,062</b>	<b>\$3,523,062</b>	<b>\$4,184,985</b>	<b>\$5,366,674</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$321,451	\$321,451	\$321,451	\$321,451
Advertising & Promotion	N/A	\$60,000	\$60,000	\$60,000	\$60,000
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$620,067	\$620,067	\$620,067	\$620,067
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,001,518	\$1,001,518	\$1,001,518	\$1,001,518
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$10,587,690	N/A	N/A
Subtotal	N/A	N/A	\$10,587,690	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$2,631,633	N/A	N/A	\$2,631,633	\$2,377,673
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$2,631,633	N/A	N/A	\$2,631,633	\$2,377,673
<b>Total Costs</b>	<b>\$2,631,633</b>	<b>\$1,001,518</b>	<b>\$11,589,208</b>	<b>\$3,633,151</b>	<b>\$3,379,191</b>
<b>Net Benefit (Cost)</b>	<b>\$8,617,980</b>	<b>\$2,521,544</b>	<b>(\$8,066,146)</b>	<b>\$551,834</b>	<b>\$1,987,484</b>
<b>Benefit/Cost Ratio</b>	<b>4.27</b>	<b>3.52</b>	<b>0.30</b>	<b>1.15</b>	<b>1.59</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	19.5 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.32 kW
Gross Annual kWh Saved at Customer	694 kWh
Net Annual kWh Saved at Generator	754 kWh

Program Summary All Participants

Total Participants	5,759
<b>Total Budget</b>	<b>\$1,001,518</b>
<b>Net coincident kW Saved at Generator</b>	<b>1,828 kW</b>
Gross Annual kWh Saved at Customer	3,998,220 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>4,344,002 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0118

Utility Program Cost per kW at Gen

\$548

**EFFICIENT NEW HOMES CONSTRUCTION**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$1,278,761	\$1,278,761	\$1,278,761	\$1,557,351
T & D	N/A	\$230,033	\$230,033	\$230,033	\$280,891
Marginal Energy	N/A	\$2,410,835	\$2,410,835	\$2,410,835	\$3,070,258
Environmental Externality	N/A	N/A	N/A	N/A	\$487,860
Subtotal	N/A	\$3,919,629	\$3,919,629	\$3,919,629	\$5,396,359
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$13,732,503	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$1,022,329	N/A	N/A	\$1,022,329	\$1,022,329
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$459	N/A	N/A	\$459	\$576
Subtotal	\$14,755,291	N/A	N/A	\$1,022,788	\$1,022,905
<b>Total Benefits</b>	<b>\$14,755,291</b>	<b>\$3,919,629</b>	<b>\$3,919,629</b>	<b>\$4,942,417</b>	<b>\$6,419,264</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$39,329	\$39,329	\$39,329	\$39,329
Advertising & Promotion	N/A	\$43,986	\$43,986	\$43,986	\$43,986
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$1,022,329	\$1,022,329	\$1,022,329	\$1,022,329
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,105,644	\$1,105,644	\$1,105,644	\$1,105,644
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$13,732,503	N/A	N/A
Subtotal	N/A	N/A	\$13,732,503	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$3,618,141	N/A	N/A	\$3,618,141	\$3,618,141
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$3,618,141	N/A	N/A	\$3,618,141	\$3,618,141
<b>Total Costs</b>	<b>\$3,618,141</b>	<b>\$1,105,644</b>	<b>\$14,838,147</b>	<b>\$4,723,786</b>	<b>\$4,723,786</b>
<b>Net Benefit (Cost)</b>	<b>\$11,137,149</b>	<b>\$2,813,985</b>	<b>(\$10,918,518)</b>	<b>\$218,631</b>	<b>\$1,695,478</b>
<b>Benefit/Cost Ratio</b>	<b>4.08</b>	<b>3.55</b>	<b>0.26</b>	<b>1.05</b>	<b>1.36</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	19.9 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.37 kW
Gross Annual kWh Saved at Customer	1,482 kWh
Net Annual kWh Saved at Generator	1,610 kWh

Program Summary All Participants

Total Participants	3,737
<b>Total Budget</b>	<b>\$1,105,644</b>
<b>Net coincident kW Saved at Generator</b>	<b>1,401 kW</b>
Gross Annual kWh Saved at Customer	5,537,078 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>6,015,947 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0092

Utility Program Cost per kW at Gen

\$789







**ENERGY EFFICIENT SHOWERHEAD**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$35,638	\$35,638	\$35,638	\$39,306
T & D	N/A	\$6,317	\$6,317	\$6,317	\$6,972
Marginal Energy	N/A	\$173,163	\$173,163	\$173,163	\$193,783
Environmental Externality	N/A	N/A	N/A	N/A	\$36,690
Subtotal	N/A	\$215,119	\$215,119	\$215,119	\$276,750
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$999,906	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$10,638	N/A	N/A	\$10,638	\$10,638
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$1,230,430	N/A	N/A	\$1,230,430	\$1,389,913
Subtotal	\$2,240,975	N/A	N/A	\$1,241,068	\$1,400,551
<b>Total Benefits</b>	<b>\$2,240,975</b>	<b>\$215,119</b>	<b>\$215,119</b>	<b>\$1,456,187</b>	<b>\$1,677,301</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$23,987	\$23,987	\$23,987	\$23,987
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$10,638	\$10,638	\$10,638	\$10,638
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$34,625	\$34,625	\$34,625	\$34,625
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$999,906	N/A	N/A
Subtotal	N/A	N/A	\$999,906	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$10,818	N/A	N/A	\$10,818	\$10,818
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$10,818	N/A	N/A	\$10,818	\$10,818
<b>Total Costs</b>	<b>\$10,818</b>	<b>\$34,625</b>	<b>\$1,034,531</b>	<b>\$45,443</b>	<b>\$45,443</b>
<b>Net Benefit (Cost)</b>	<b>\$2,230,157</b>	<b>\$180,494</b>	<b>(\$819,412)</b>	<b>\$1,410,744</b>	<b>\$1,631,859</b>
<b>Benefit/Cost Ratio</b>	<b>207.15</b>	<b>6.21</b>	<b>0.21</b>	<b>32.04</b>	<b>36.91</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	10.0 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.01 kW
Gross Annual kWh Saved at Customer	212 kWh
Net Annual kWh Saved at Generator	139 kWh

Program Summary All Participants

Total Participants	5,840
<b>Total Budget</b>	<b>\$34,625</b>
<b>Net coincident kW Saved at Generator</b>	<b>66 kW</b>
Gross Annual kWh Saved at Customer	1,239,150 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>810,168 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0043</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$523</b>

**ENERGY EFFICIENT SHOWERHEAD**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$8,354	\$8,354	\$8,354	\$9,214
T & D	N/A	\$1,481	\$1,481	\$1,481	\$1,634
Marginal Energy	N/A	\$41,119	\$41,119	\$41,119	\$46,015
Environmental Externality	N/A	N/A	N/A	N/A	\$8,712
Subtotal	N/A	\$50,954	\$50,954	\$50,954	\$65,576
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$218,536	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$25,777	N/A	N/A	\$25,777	\$25,777
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$502,219	N/A	N/A	\$502,219	\$567,377
Subtotal	\$746,532	N/A	N/A	\$527,996	\$593,154
<b>Total Benefits</b>	<b>\$746,532</b>	<b>\$50,954</b>	<b>\$50,954</b>	<b>\$578,951</b>	<b>\$658,730</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$39,984	\$39,984	\$39,984	\$39,984
Advertising & Promotion	N/A	\$287	\$287	\$287	\$287
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$25,777	\$25,777	\$25,777	\$25,777
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$66,048	\$66,048	\$66,048	\$66,048
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$218,536	N/A	N/A
Subtotal	N/A	N/A	\$218,536	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$3,297	N/A	N/A	\$3,297	\$3,297
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$3,297	N/A	N/A	\$3,297	\$3,297
<b>Total Costs</b>	<b>\$3,297</b>	<b>\$66,048</b>	<b>\$284,584</b>	<b>\$69,346</b>	<b>\$69,346</b>
<b>Net Benefit (Cost)</b>	<b>\$743,235</b>	<b>(\$15,094)</b>	<b>(\$233,630)</b>	<b>\$509,605</b>	<b>\$589,385</b>
<b>Benefit/Cost Ratio</b>	<b>226.41</b>	<b>0.77</b>	<b>0.18</b>	<b>8.35</b>	<b>9.50</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	10.0 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.02 kW
Gross Annual kWh Saved at Customer	388 kWh
Net Annual kWh Saved at Generator	244 kWh

Program Summary All Participants

Total Participants	788
<b>Total Budget</b>	<b>\$66,048</b>
<b>Net coincident kW Saved at Generator</b>	<b>16 kW</b>
Gross Annual kWh Saved at Customer	305,640 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>192,381 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0343

Utility Program Cost per kW at Gen

\$4,257





## HOME ENERGY INSIGHTS

### 2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$919,101	\$919,101	\$919,101	\$919,101
T & D	N/A	\$160,486	\$160,486	\$160,486	\$160,486
Marginal Energy	N/A	\$1,424,479	\$1,424,479	\$1,424,479	\$1,424,479
Environmental Externality	N/A	N/A	N/A	N/A	\$992,565
Subtotal	N/A	\$2,504,067	\$2,504,067	\$2,504,067	\$3,496,631
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$7,889,243	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	\$7,889,243	N/A	N/A	\$0	\$0
<b>Total Benefits</b>	<b>\$7,889,243</b>	<b>\$2,504,067</b>	<b>\$2,504,067</b>	<b>\$2,504,067</b>	<b>\$3,496,631</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$1,429,827	\$1,429,827	\$1,429,827	\$1,429,827
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	\$1,429,827	\$1,429,827	\$1,429,827	\$1,429,827
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$7,889,243	N/A	N/A
Subtotal	N/A	N/A	\$7,889,243	N/A	N/A
<b>Participant Costs</b>					
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
<b>Total Costs</b>	<b>\$0</b>	<b>\$1,429,827</b>	<b>\$9,319,069</b>	<b>\$1,429,827</b>	<b>\$1,429,827</b>
<b>Net Benefit (Cost)</b>	<b>\$7,889,243</b>	<b>\$1,074,240</b>	<b>(\$6,815,003)</b>	<b>\$1,074,240</b>	<b>\$2,066,805</b>
<b>Benefit/Cost Ratio</b>	<b>INF</b>	<b>1.75</b>	<b>0.27</b>	<b>1.75</b>	<b>2.45</b>

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

## 2022 ELECTRIC

## GOAL

### Input Summary and Totals

#### Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	2.7 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.02 kW
Gross Annual kWh Saved at Customer	87 kWh
Net Annual kWh Saved at Generator	94 kWh

#### Program Summary All Participants

Total Participants	230,000
<b>Total Budget</b>	<b>\$1,429,827</b>
<b>Net coincident kW Saved at Generator</b>	<b>5,492 kW</b>
Gross Annual kWh Saved at Customer	19,920,859 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>21,643,697 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0243</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$260</b>

## HOME ENERGY INSIGHTS

### 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$689,900	\$689,900	\$689,900	\$689,900
T & D	N/A	\$120,465	\$120,465	\$120,465	\$120,465
Marginal Energy	N/A	\$1,235,351	\$1,235,351	\$1,235,351	\$1,235,351
Environmental Externality	N/A	N/A	N/A	N/A	\$893,350
Subtotal	N/A	\$2,045,716	\$2,045,716	\$2,045,716	\$2,939,066
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$7,065,320	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	\$7,065,320	N/A	N/A	\$0	\$0
<b>Total Benefits</b>	<b>\$7,065,320</b>	<b>\$2,045,716</b>	<b>\$2,045,716</b>	<b>\$2,045,716</b>	<b>\$2,939,066</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$1,517,443	\$1,517,443	\$1,517,443	\$1,517,443
Advertising & Promotion	N/A	\$2,854	\$2,854	\$2,854	\$2,854
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	\$1,520,297	\$1,520,297	\$1,520,297	\$1,520,297
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$7,065,320	N/A	N/A
Subtotal	N/A	N/A	\$7,065,320	N/A	N/A
<b>Participant Costs</b>					
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
<b>Total Costs</b>	<b>\$0</b>	<b>\$1,520,297</b>	<b>\$8,585,617</b>	<b>\$1,520,297</b>	<b>\$1,520,297</b>
<b>Net Benefit (Cost)</b>	<b>\$7,065,320</b>	<b>\$525,419</b>	<b>(\$6,539,901)</b>	<b>\$525,419</b>	<b>\$1,418,769</b>
<b>Benefit/Cost Ratio</b>	<b>INF</b>	<b>1.35</b>	<b>0.24</b>	<b>1.35</b>	<b>1.93</b>

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

## 2022 ELECTRIC

## ACTUAL

### Input Summary and Totals

#### Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	3.0 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.01 kW
Gross Annual kWh Saved at Customer	28 kWh
Net Annual kWh Saved at Generator	30 kWh

#### Program Summary All Participants

Total Participants	633,219
<b>Total Budget</b>	<b>\$1,520,297</b>
<b>Net coincident kW Saved at Generator</b>	<b>4,109 kW</b>
Gross Annual kWh Saved at Customer	17,648,015 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>19,174,288 kWh</b>

#### Utility Program Cost per kWh Lifetime

**\$0.0264**

#### Utility Program Cost per kW at Gen

**\$370**







## HOME ENERGY SQUAD

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$1,481,469	\$1,481,469	\$1,481,469	\$1,719,064
T & D	N/A	\$214,952	\$214,952	\$214,952	\$255,646
Marginal Energy	N/A	\$3,138,861	\$3,138,861	\$3,138,861	\$3,935,497
Environmental Externality	N/A	N/A	N/A	N/A	\$658,363
Subtotal	N/A	\$4,835,282	\$4,835,282	\$4,835,282	\$6,568,569
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$19,980,044	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$821,582	N/A	N/A	\$821,582	\$821,582
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$892,668	N/A	N/A	\$892,668	\$1,008,371
Subtotal	\$21,694,293	N/A	N/A	\$1,714,249	\$1,829,953
<b>Total Benefits</b>	<b>\$21,694,293</b>	<b>\$4,835,282</b>	<b>\$4,835,282</b>	<b>\$6,549,531</b>	<b>\$8,398,522</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$620,609	\$620,609	\$620,609	\$620,609
Project Administration	N/A	\$497,830	\$497,830	\$497,830	\$497,830
Advertising & Promotion	N/A	\$332,299	\$332,299	\$332,299	\$332,299
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$821,582	\$821,582	\$821,582	\$821,582
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$2,272,320	\$2,272,320	\$2,272,320	\$2,272,320
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$19,980,044	N/A	N/A
Subtotal	N/A	N/A	\$19,980,044	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$806,748	N/A	N/A	\$806,748	\$800,168
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$806,748	N/A	N/A	\$806,748	\$800,168
<b>Total Costs</b>	<b>\$806,748</b>	<b>\$2,272,320</b>	<b>\$22,252,364</b>	<b>\$3,079,068</b>	<b>\$3,072,488</b>
<b>Net Benefit (Cost)</b>	<b>\$20,887,546</b>	<b>\$2,562,962</b>	<b>(\$17,417,083)</b>	<b>\$3,470,463</b>	<b>\$5,326,034</b>
<b>Benefit/Cost Ratio</b>	<b>26.89</b>	<b>2.13</b>	<b>0.22</b>	<b>2.13</b>	<b>2.73</b>

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

## 2022 ELECTRIC

## GOAL

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	18.1 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.27 kW
Gross Annual kWh Saved at Customer	887 kWh
Net Annual kWh Saved at Generator	964 kWh

Program Summary All Participants

Total Participants	9,149
<b>Total Budget</b>	<b>\$2,272,320</b>
<b>Net coincident kW Saved at Generator</b>	<b>2,497 kW</b>
Gross Annual kWh Saved at Customer	8,116,664 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>8,818,627 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0142

Utility Program Cost per kW at Gen

\$910

**HOME ENERGY SQUAD**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$314,142	\$314,142	\$314,142	\$379,385
T & D	N/A	\$56,437	\$56,437	\$56,437	\$68,336
Marginal Energy	N/A	\$933,698	\$933,698	\$933,698	\$1,185,185
Environmental Externality	N/A	N/A	N/A	N/A	\$196,203
Subtotal	N/A	\$1,304,277	\$1,304,277	\$1,304,277	\$1,829,109
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$5,505,872	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	\$177,031	N/A	N/A	\$177,031	\$199,999
Subtotal	\$5,682,903	N/A	N/A	\$177,031	\$199,999
<b>Total Benefits</b>	<b>\$5,682,903</b>	<b>\$1,304,277</b>	<b>\$1,304,277</b>	<b>\$1,481,309</b>	<b>\$2,029,108</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$398,115	\$398,115	\$398,115	\$398,115
Project Administration	N/A	\$188,320	\$188,320	\$188,320	\$188,320
Advertising & Promotion	N/A	\$158,913	\$158,913	\$158,913	\$158,913
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	\$745,348	\$745,348	\$745,348	\$745,348
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$5,505,872	N/A	N/A
Subtotal	N/A	N/A	\$5,505,872	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$121,603	N/A	N/A	\$121,603	\$121,603
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$121,603	N/A	N/A	\$121,603	\$121,603
<b>Total Costs</b>	<b>\$121,603</b>	<b>\$745,348</b>	<b>\$6,251,220</b>	<b>\$866,951</b>	<b>\$866,951</b>
<b>Net Benefit (Cost)</b>	<b>\$5,561,301</b>	<b>\$558,929</b>	<b>(\$4,946,943)</b>	<b>\$614,358</b>	<b>\$1,162,157</b>
<b>Benefit/Cost Ratio</b>	<b>46.73</b>	<b>1.75</b>	<b>0.21</b>	<b>1.71</b>	<b>2.34</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	19.3 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.12 kW
Gross Annual kWh Saved at Customer	729 kWh
Net Annual kWh Saved at Generator	792 kWh

Program Summary All Participants

Total Participants	<b>3,126</b>
<b>Total Budget</b>	<b>\$745,348</b>
<b>Net coincident kW Saved at Generator</b>	<b>365 kW</b>
Gross Annual kWh Saved at Customer	2,279,820 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>2,476,988 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0156</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$2,040</b>





## HOME LIGHTING

### 2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$15,492,834	\$15,492,834	\$15,492,834	\$18,564,170
T & D	N/A	\$2,779,828	\$2,779,828	\$2,779,828	\$3,340,052
Marginal Energy	N/A	\$47,981,140	\$47,981,140	\$47,981,140	\$60,140,535
Environmental Externality	N/A	N/A	N/A	N/A	\$10,413,657
Subtotal	N/A	\$66,253,801	\$66,253,801	\$66,253,801	\$92,458,415
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$298,321,738	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$4,443,277	N/A	N/A	\$4,443,277	\$4,443,277
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$302,765,015	N/A	N/A	\$4,443,277	\$4,443,277
<b>Total Benefits</b>	<b>\$302,765,015</b>	<b>\$66,253,801</b>	<b>\$66,253,801</b>	<b>\$70,697,078</b>	<b>\$96,901,692</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$566,354	\$566,354	\$566,354	\$566,354
Advertising & Promotion	N/A	\$625,000	\$625,000	\$625,000	\$625,000
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$4,443,277	\$4,443,277	\$4,443,277	\$4,443,277
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$5,634,631	\$5,634,631	\$5,634,631	\$5,634,631
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$298,321,738	N/A	N/A
Subtotal	N/A	N/A	\$298,321,738	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$6,446,509	N/A	N/A	\$6,446,509	\$6,446,509
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$6,446,509	N/A	N/A	\$6,446,509	\$6,446,509
<b>Total Costs</b>	<b>\$6,446,509</b>	<b>\$5,634,631</b>	<b>\$303,956,369</b>	<b>\$12,081,140</b>	<b>\$12,081,140</b>
<b>Net Benefit (Cost)</b>	<b>\$296,318,506</b>	<b>\$60,619,170</b>	<b>(\$237,702,568)</b>	<b>\$58,615,939</b>	<b>\$84,820,552</b>
<b>Benefit/Cost Ratio</b>	<b>46.97</b>	<b>11.76</b>	<b>0.22</b>	<b>5.85</b>	<b>8.02</b>

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

## 2022 ELECTRIC

## GOAL

### Input Summary and Totals

#### Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.6 years
T & D Loss Factor (Energy)	7.58%
T & D Loss Factor (Demand)	9.26%
Net coincident kW Saved at Generator	0.10 kW
Gross Annual kWh Saved at Customer	650 kWh
Net Annual kWh Saved at Generator	699 kWh

#### Program Summary All Participants

Total Participants	224,476
<b>Total Budget</b>	<b>\$5,634,631</b>
<b>Net coincident kW Saved at Generator</b>	<b>21,534 kW</b>
Gross Annual kWh Saved at Customer	145,976,903 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>156,826,897 kWh</b>

#### Utility Program Cost per kWh Lifetime

\$0.0023

#### Utility Program Cost per kW at Gen

\$262

## HOME LIGHTING

### 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$25,597,444	\$25,597,444	\$25,597,444	\$30,832,143
T & D	N/A	\$4,596,587	\$4,596,587	\$4,596,587	\$5,551,812
Marginal Energy	N/A	\$80,299,663	\$80,299,663	\$80,299,663	\$101,166,203
Environmental Externality	N/A	N/A	N/A	N/A	\$17,305,330
Subtotal	N/A	\$110,493,694	\$110,493,694	\$110,493,694	\$154,855,487
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$465,289,951	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$7,216,569	N/A	N/A	\$7,216,569	\$7,216,569
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$472,506,520	N/A	N/A	\$7,216,569	\$7,216,569
<b>Total Benefits</b>	<b>\$472,506,520</b>	<b>\$110,493,694</b>	<b>\$110,493,694</b>	<b>\$117,710,263</b>	<b>\$162,072,056</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$753,148	\$753,148	\$753,148	\$753,148
Advertising & Promotion	N/A	\$648,666	\$648,666	\$648,666	\$648,666
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$7,216,569	\$7,216,569	\$7,216,569	\$7,216,569
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$8,618,383	\$8,618,383	\$8,618,383	\$8,618,383
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$465,289,951	N/A	N/A
Subtotal	N/A	N/A	\$465,289,951	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$7,125,718	N/A	N/A	\$7,125,718	\$7,125,718
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$7,125,718	N/A	N/A	\$7,125,718	\$7,125,718
<b>Total Costs</b>	<b>\$7,125,718</b>	<b>\$8,618,383</b>	<b>\$473,908,334</b>	<b>\$15,744,101</b>	<b>\$15,744,101</b>
<b>Net Benefit (Cost)</b>	<b>\$465,380,802</b>	<b>\$101,875,311</b>	<b>(\$363,414,640)</b>	<b>\$101,966,162</b>	<b>\$146,327,955</b>
<b>Benefit/Cost Ratio</b>	<b>66.31</b>	<b>12.82</b>	<b>0.23</b>	<b>7.48</b>	<b>10.29</b>

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

## 2022 ELECTRIC

## ACTUAL

### Input Summary and Totals

#### Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	16.6 years
T & D Loss Factor (Energy)	7.67%
T & D Loss Factor (Demand)	9.39%
Net coincident kW Saved at Generator	0.09 kW
Gross Annual kWh Saved at Customer	635 kWh
Net Annual kWh Saved at Generator	682 kWh

#### Program Summary All Participants

Total Participants	363,713
<b>Total Budget</b>	<b>\$8,618,383</b>
<b>Net coincident kW Saved at Generator</b>	<b>33,620 kW</b>
Gross Annual kWh Saved at Customer	230,832,062 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>248,059,214 kWh</b>

#### Utility Program Cost per kWh Lifetime

Utility Program Cost per kWh at Gen	\$0.0021
Utility Program Cost per kW at Gen	\$256

## INSULATION REBATE PROGRAM

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$169,725	\$169,725	\$169,725	\$197,487
T & D	N/A	\$29,061	\$29,061	\$29,061	\$34,041
Marginal Energy	N/A	\$76,250	\$76,250	\$76,250	\$93,193
Environmental Externality	N/A	N/A	N/A	N/A	\$14,201
Subtotal	N/A	\$275,036	\$275,036	\$275,036	\$338,921
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$425,059	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$42,482	N/A	N/A	\$42,482	\$42,482
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$467,541	N/A	N/A	\$42,482	\$42,482
<b>Total Benefits</b>	<b>\$467,541</b>	<b>\$275,036</b>	<b>\$275,036</b>	<b>\$317,518</b>	<b>\$381,403</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$42,064	\$42,064	\$42,064	\$42,064
Advertising & Promotion	N/A	\$5,000	\$5,000	\$5,000	\$5,000
Measurement & Verification	N/A	\$2,000	\$2,000	\$2,000	\$2,000
Rebates	N/A	\$42,482	\$42,482	\$42,482	\$42,482
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$91,546	\$91,546	\$91,546	\$91,546
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$425,059	N/A	N/A
Subtotal	N/A	N/A	\$425,059	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$358,646	N/A	N/A	\$358,646	\$283,994
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$358,646	N/A	N/A	\$358,646	\$283,994
<b>Total Costs</b>	<b>\$358,646</b>	<b>\$91,546</b>	<b>\$516,605</b>	<b>\$450,193</b>	<b>\$375,540</b>
<b>Net Benefit (Cost)</b>	<b>\$108,895</b>	<b>\$183,489</b>	<b>(\$241,570)</b>	<b>(\$132,675)</b>	<b>\$5,863</b>
<b>Benefit/Cost Ratio</b>	<b>1.30</b>	<b>3.00</b>	<b>0.53</b>	<b>0.71</b>	<b>1.02</b>

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

## 2022 ELECTRIC

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.2 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.19 kW
Gross Annual kWh Saved at Customer	147 kWh
Net Annual kWh Saved at Generator	160 kWh

Program Summary All Participants

Total Participants	<b>1,381</b>
<b>Total Budget</b>	<b>\$91,546</b>
<b>Net coincident kW Saved at Generator</b>	<b>256 kW</b>
Gross Annual kWh Saved at Customer	203,685 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>221,301 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0272</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$358</b>



**INSULATION REBATE PROGRAM**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$110,646	\$110,646	\$110,646	\$127,375
T & D	N/A	\$19,735	\$19,735	\$19,735	\$22,763
Marginal Energy	N/A	\$54,791	\$54,791	\$54,791	\$67,487
Environmental Externality	N/A	N/A	N/A	N/A	\$12,376
Subtotal	N/A	\$185,172	\$185,172	\$185,172	\$230,002
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$287,806	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$46,228	N/A	N/A	\$46,228	\$46,228
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$334,034	N/A	N/A	\$46,228	\$46,228
<b>Total Benefits</b>	<b>\$334,034</b>	<b>\$185,172</b>	<b>\$185,172</b>	<b>\$231,400</b>	<b>\$276,230</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$28,145	\$28,145	\$28,145	\$28,145
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0
Measurement & Verification	N/A	\$3,582	\$3,582	\$3,582	\$3,582
Rebates	N/A	\$46,228	\$46,228	\$46,228	\$46,228
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$77,956	\$77,956	\$77,956	\$77,956
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$287,806	N/A	N/A
Subtotal	N/A	N/A	\$287,806	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$333,962	N/A	N/A	\$333,962	\$333,962
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$333,962	N/A	N/A	\$333,962	\$333,962
<b>Total Costs</b>	<b>\$333,962</b>	<b>\$77,956</b>	<b>\$365,762</b>	<b>\$411,918</b>	<b>\$411,918</b>
<b>Net Benefit (Cost)</b>	<b>\$73</b>	<b>\$107,216</b>	<b>(\$180,590)</b>	<b>(\$180,517)</b>	<b>(\$135,688)</b>
<b>Benefit/Cost Ratio</b>	<b>1.00</b>	<b>2.38</b>	<b>0.51</b>	<b>0.56</b>	<b>0.67</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	17.0 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.24 kW
Gross Annual kWh Saved at Customer	246 kWh
Net Annual kWh Saved at Generator	267 kWh

Program Summary All Participants

Total Participants	712
<b>Total Budget</b>	<b>\$77,956</b>
<b>Net coincident kW Saved at Generator</b>	<b>170 kW</b>
Gross Annual kWh Saved at Customer	174,919 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>190,047 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0241

Utility Program Cost per kW at Gen

\$458





## REFRIGERATOR RECYCLING

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$1,012,817	\$1,012,817	\$1,012,817	\$244,126
T & D	N/A	\$477,192	\$477,192	\$477,192	\$124,507
Marginal Energy	N/A	\$60,954	\$60,954	\$60,954	\$65,111
Environmental Externality	N/A	N/A	N/A	N/A	\$119,619
Subtotal	N/A	\$1,550,963	\$1,550,963	\$1,550,963	\$553,364
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$4,392	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$472,500	N/A	N/A	\$472,500	\$472,500
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$13,500
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$476,892	N/A	N/A	\$472,500	\$486,000
<b>Total Benefits</b>	<b>\$476,892</b>	<b>\$1,550,963</b>	<b>\$1,550,963</b>	<b>\$2,023,463</b>	<b>\$1,039,364</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$11,100	\$11,100	\$11,100	\$11,100
Project Administration	N/A	\$561,312	\$561,312	\$561,312	\$561,312
Advertising & Promotion	N/A	\$210,000	\$210,000	\$210,000	\$210,000
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$472,500	\$472,500	\$472,500	\$472,500
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,254,912	\$1,254,912	\$1,254,912	\$1,254,912
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$4,392	N/A	N/A
Subtotal	N/A	N/A	\$4,392	N/A	N/A
<b>Participant Costs</b>					
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
<b>Total Costs</b>	<b>\$0</b>	<b>\$1,254,912</b>	<b>\$1,259,304</b>	<b>\$1,254,912</b>	<b>\$1,254,912</b>
<b>Net Benefit (Cost)</b>	<b>\$476,892</b>	<b>\$296,051</b>	<b>\$291,659</b>	<b>\$768,551</b>	<b>(\$215,548)</b>
<b>Benefit/Cost Ratio</b>	<b>INF</b>	<b>1.24</b>	<b>1.23</b>	<b>1.61</b>	<b>0.83</b>

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

## 2022 ELECTRIC

## GOAL

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	7.2 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.10 kW
Gross Annual kWh Saved at Customer	585 kWh
Net Annual kWh Saved at Generator	636 kWh

Program Summary All Participants

Total Participants	10,200
<b>Total Budget</b>	<b>\$1,254,912</b>
<b>Net coincident kW Saved at Generator</b>	<b>1,020 kW</b>
Gross Annual kWh Saved at Customer	5,969,361 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>6,485,616 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0269

Utility Program Cost per kW at Gen

\$1,231

**REFRIGERATOR RECYCLING**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$259,343	\$259,343	\$259,343	\$279,124
T & D	N/A	\$45,801	\$45,801	\$45,801	\$49,315
Marginal Energy	N/A	\$722,802	\$722,802	\$722,802	\$790,780
Environmental Externality	N/A	N/A	N/A	N/A	\$180,563
Subtotal	N/A	\$1,027,946	\$1,027,946	\$1,027,946	\$1,299,782
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$4,159,476	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$296,696	N/A	N/A	\$296,696	\$296,696
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$4,456,173	N/A	N/A	\$296,696	\$296,696
<b>Total Benefits</b>	<b>\$4,456,173</b>	<b>\$1,027,946</b>	<b>\$1,027,946</b>	<b>\$1,324,643</b>	<b>\$1,596,478</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$411,965	\$411,965	\$411,965	\$411,965
Advertising & Promotion	N/A	\$50,155	\$50,155	\$50,155	\$50,155
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$296,696	\$296,696	\$296,696	\$296,696
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$758,816	\$758,816	\$758,816	\$758,816
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$4,159,476	N/A	N/A
Subtotal	N/A	N/A	\$4,159,476	N/A	N/A
<b>Participant Costs</b>					
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
<b>Total Costs</b>	<b>\$0</b>	<b>\$758,816</b>	<b>\$4,918,292</b>	<b>\$758,816</b>	<b>\$758,816</b>
<b>Net Benefit (Cost)</b>	<b>\$4,456,173</b>	<b>\$269,131</b>	<b>(\$3,890,346)</b>	<b>\$565,827</b>	<b>\$837,663</b>
<b>Benefit/Cost Ratio</b>	<b>INF</b>	<b>1.35</b>	<b>0.21</b>	<b>1.75</b>	<b>2.10</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	7.7 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.14 kW
Gross Annual kWh Saved at Customer	983 kWh
Net Annual kWh Saved at Generator	1,068 kWh

Program Summary All Participants

Total Participants	4,337
<b>Total Budget</b>	<b>\$758,816</b>
<b>Net coincident kW Saved at Generator</b>	<b>615 kW</b>
Gross Annual kWh Saved at Customer	4,265,108 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>4,633,972 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0212

Utility Program Cost per kW at Gen

\$1,234

**RESIDENTIAL DEMAND RESPONSE**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$12,134,655	\$12,134,655	\$12,134,655	\$13,798,500
T & D	N/A	\$95,402	\$95,402	\$95,402	\$105,289
Marginal Energy	N/A	\$122,461	\$122,461	\$122,461	\$137,524
Environmental Externality	N/A	N/A	N/A	N/A	\$23,618
Subtotal	N/A	\$12,352,518	\$12,352,518	\$12,352,518	\$14,064,931
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$4,720,716	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$1,052,236	N/A	N/A	\$1,052,236	\$1,052,236
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$5,772,952	N/A	N/A	\$1,052,236	\$1,052,236
<b>Total Benefits</b>	<b>\$5,772,952</b>	<b>\$12,352,518</b>	<b>\$12,352,518</b>	<b>\$13,404,754</b>	<b>\$15,117,167</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$7,836,275	\$7,836,275	\$7,836,275	\$7,836,275
Advertising & Promotion	N/A	\$375,000	\$375,000	\$375,000	\$375,000
Measurement & Verification	N/A	\$150,000	\$150,000	\$150,000	\$150,000
Rebates	N/A	\$1,052,236	\$1,052,236	\$1,052,236	\$1,052,236
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$9,413,511	\$9,413,511	\$9,413,511	\$9,413,511
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$4,720,716	N/A	N/A
Subtotal	N/A	N/A	\$4,720,716	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$785,439	N/A	N/A	\$785,439	\$759,550
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$785,439	N/A	N/A	\$785,439	\$759,550
<b>Total Costs</b>	<b>\$785,439</b>	<b>\$9,413,511</b>	<b>\$14,134,227</b>	<b>\$10,198,950</b>	<b>\$10,173,061</b>
<b>Net Benefit (Cost)</b>	<b>\$4,987,513</b>	<b>\$2,939,007</b>	<b>(\$1,781,709)</b>	<b>\$3,205,804</b>	<b>\$4,944,106</b>
<b>Benefit/Cost Ratio</b>	<b>7.35</b>	<b>1.31</b>	<b>0.87</b>	<b>1.31</b>	<b>1.49</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	9.8 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.67 kW
Gross Annual kWh Saved at Customer	15 kWh
Net Annual kWh Saved at Generator	17 kWh

Program Summary All Participants

Total Participants	31,515
<b>Total Budget</b>	<b>\$9,413,511</b>
<b>Net coincident kW Saved at Generator</b>	<b>21,246 kW</b>
Gross Annual kWh Saved at Customer	486,401 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>528,467 kWh</b>

Utility Program Cost per kWh Lifetime

\$1.8210

Utility Program Cost per kW at Gen

\$443

**RESIDENTIAL DEMAND RESPONSE**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$14,272,677	\$14,272,677	\$14,272,677	\$16,112,518
T & D	N/A	\$2,538,335	\$2,538,335	\$2,538,335	\$2,869,710
Marginal Energy	N/A	\$69,454	\$69,454	\$69,454	\$78,027
Environmental Externality	N/A	N/A	N/A	N/A	\$12,868
Subtotal	N/A	\$16,880,467	\$16,880,467	\$16,880,467	\$19,073,122
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$4,560,622	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$1,335,754	N/A	N/A	\$1,335,754	\$1,335,754
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$5,896,375	N/A	N/A	\$1,335,754	\$1,335,754
<b>Total Benefits</b>	<b>\$5,896,375</b>	<b>\$16,880,467</b>	<b>\$16,880,467</b>	<b>\$18,216,220</b>	<b>\$20,408,876</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$5,912,833	\$5,912,833	\$5,912,833	\$5,912,833
Advertising & Promotion	N/A	\$292,807	\$292,807	\$292,807	\$292,807
Measurement & Verification	N/A	\$51,352	\$51,352	\$51,352	\$51,352
Rebates	N/A	\$1,335,754	\$1,335,754	\$1,335,754	\$1,335,754
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$7,592,746	\$7,592,746	\$7,592,746	\$7,592,746
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$4,560,622	N/A	N/A
Subtotal	N/A	N/A	\$4,560,622	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$2,094,367	N/A	N/A	\$2,094,367	\$2,094,367
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$2,094,367	N/A	N/A	\$2,094,367	\$2,094,367
<b>Total Costs</b>	<b>\$2,094,367</b>	<b>\$7,592,746</b>	<b>\$12,153,367</b>	<b>\$9,687,112</b>	<b>\$9,687,112</b>
<b>Net Benefit (Cost)</b>	<b>\$3,802,009</b>	<b>\$9,287,721</b>	<b>\$4,727,099</b>	<b>\$8,529,108</b>	<b>\$10,721,764</b>
<b>Benefit/Cost Ratio</b>	<b>2.82</b>	<b>2.22</b>	<b>1.39</b>	<b>1.88</b>	<b>2.11</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	9.9 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.89 kW
Gross Annual kWh Saved at Customer	9 kWh
Net Annual kWh Saved at Generator	9 kWh

Program Summary All Participants

Total Participants	30,538
<b>Total Budget</b>	<b>\$7,592,746</b>
<b>Net coincident kW Saved at Generator</b>	<b>27,296 kW</b>
Gross Annual kWh Saved at Customer	261,702 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>284,335 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$2.6970</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$278</b>

Company: **Xcel Energy**  
 Project: **Residential Demand Response**

Input Data		2022
1) Retail Rate (\$/Dth) =	\$6.06	
Escalation Rate =	4.69%	
2) Non-Gas Fuel Retail Rate (\$/Fuel Unit) =	\$0.000	
Escalation Rate =	4.69%	
Non-Gas Fuel Units (ie. kWh, Gallons, etc) =	kWh	
3) Commodity Cost (\$/Dth) =	\$3.25	
Escalation Rate =	4.69%	
4) Demand Cost (\$/Unit/Yr) =	\$82.36	
Escalation Rate =	4.69%	
5) Peak Reduction Factor =	1.00%	
6) Variable O&M (\$/Dth) =	\$0.0411	
Escalation Rate =	4.69%	
7) Non-Gas Fuel Cost (\$/Fuel Unit) =	\$0.00000	
Escalation Rate =	3.59%	
8) Non-Gas Fuel Loss Factor	0.00%	
9) Gas Environmental Damage Factor =	\$2.0700	
Escalation Rate =	2.30%	
10) Non Gas Fuel Enviro. Damage Factor (\$/Unit) =	\$0.0000	
Escalation Rate =	2.30%	
11) Participant Discount Rate =	3.02%	
12) MN CIP Utility Discount Rate =	5.34%	
13) Societal Discount Rate =	3.02%	
14) General Input Data Year =	2020	
15a) Project Analysis Year 1 =	2021	
15b) Project Analysis Year 2 =	2022	
15c) Project Analysis Year 3 =	2023	
		= Administrative & Operating Costs = \$34,380
		Incentive Costs = \$276,764
		16) Total Utility Project Costs = \$311,144
		17) Direct Participant Costs (\$/Part.) = \$15
		18) Participant Non-Energy Costs (Annual \$/Part.) = \$0
		Escalation Rate = 2.30%
		19) Participant Non-Energy Savings (Annual \$/Part.) = \$0
		Escalation Rate = 2.30%
		20) Project Life (Years) = 10.0
		21) Avg. Dth/Part. Saved = 2.05
		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 = 14,650
		24) Total Annual Dth Saved = 29,999
		25) Incentive/Participant = \$18.89

Cost Summary	2022	Test Results	2022 NPV	2022 B/C
Utility Cost per Participant =	\$21	<b>Ratepayer Impact Measure Test</b>	(\$932,573)	0.59
Cost per Participant per Dth =	\$17.47	<b>Utility Cost Test</b>	\$1,004,771	4.23
Lifetime Energy Reduction (Dth)	299,990	<b>Societal Test</b>	\$1,812,677	4.30
Societal Cost per Dth	\$1.83	<b>Participant Test</b>	\$2,001,297	10.40





**RESIDENTIAL HEATING AND COOLING**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$6,630,266	\$6,630,266	\$6,630,266	\$7,910,659
T & D	N/A	\$1,182,742	\$1,182,742	\$1,182,742	\$1,415,067
Marginal Energy	N/A	\$3,505,245	\$3,505,245	\$3,505,245	\$4,360,938
Environmental Externality	N/A	N/A	N/A	N/A	\$647,848
Subtotal	N/A	\$11,318,253	\$11,318,253	\$11,318,253	\$14,334,513
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$19,789,247	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$3,997,106	N/A	N/A	\$3,997,106	\$3,997,106
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$23,786,353	N/A	N/A	\$3,997,106	\$3,997,106
<b>Total Benefits</b>	<b>\$23,786,353</b>	<b>\$11,318,253</b>	<b>\$11,318,253</b>	<b>\$15,315,359</b>	<b>\$18,331,619</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$3,750	\$3,750	\$3,750	\$3,750
Project Administration	N/A	\$652,341	\$652,341	\$652,341	\$652,341
Advertising & Promotion	N/A	\$132,600	\$132,600	\$132,600	\$132,600
Measurement & Verification	N/A	\$29,500	\$29,500	\$29,500	\$29,500
Rebates	N/A	\$3,997,106	\$3,997,106	\$3,997,106	\$3,997,106
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$4,815,298	\$4,815,298	\$4,815,298	\$4,815,298
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$19,789,247	N/A	N/A
Subtotal	N/A	N/A	\$19,789,247	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$9,498,869	N/A	N/A	\$9,498,869	\$9,375,880
Incremental O&M Costs	\$684	N/A	N/A	\$684	\$773
Subtotal	\$9,499,554	N/A	N/A	\$9,499,554	\$9,376,653
<b>Total Costs</b>	<b>\$9,499,554</b>	<b>\$4,815,298</b>	<b>\$24,604,545</b>	<b>\$14,314,851</b>	<b>\$14,191,951</b>
<b>Net Benefit (Cost)</b>	<b>\$14,286,800</b>	<b>\$6,502,955</b>	<b>(\$13,286,292)</b>	<b>\$1,000,508</b>	<b>\$4,139,669</b>
<b>Benefit/Cost Ratio</b>	<b>2.50</b>	<b>2.35</b>	<b>0.46</b>	<b>1.07</b>	<b>1.29</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	18.1 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.43 kW
Gross Annual kWh Saved at Customer	432 kWh
Net Annual kWh Saved at Generator	469 kWh

Program Summary All Participants

Total Participants	18,510
<b>Total Budget</b>	<b>\$4,815,298</b>
<b>Net coincident kW Saved at Generator</b>	<b>7,898 kW</b>
Gross Annual kWh Saved at Customer	7,987,769 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>8,678,584 kWh</b>

Utility Program Cost per kWh Lifetime

**\$0.0307**

Utility Program Cost per kW at Gen

**\$610**

**RESIDENTIAL HEATING AND COOLING**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$11,826,474	\$11,826,474	\$11,826,474	\$14,121,099
T & D	N/A	\$2,121,151	\$2,121,151	\$2,121,151	\$2,538,033
Marginal Energy	N/A	\$2,990,067	\$2,990,067	\$2,990,067	\$3,692,420
Environmental Externality	N/A	N/A	N/A	N/A	\$658,464
Subtotal	N/A	\$16,937,693	\$16,937,693	\$16,937,693	\$21,010,016
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$13,188,112	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$5,592,154	N/A	N/A	\$5,592,154	\$5,592,154
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$369	N/A	N/A	\$369	\$478
Subtotal	\$18,780,635	N/A	N/A	\$5,592,523	\$5,592,631
<b>Total Benefits</b>	<b>\$18,780,635</b>	<b>\$16,937,693</b>	<b>\$16,937,693</b>	<b>\$22,530,215</b>	<b>\$26,602,648</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$501,891	\$501,891	\$501,891	\$501,891
Advertising & Promotion	N/A	\$65,343	\$65,343	\$65,343	\$65,343
Measurement & Verification	N/A	\$26,853	\$26,853	\$26,853	\$26,853
Rebates	N/A	\$5,592,154	\$5,592,154	\$5,592,154	\$5,592,154
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$6,186,240	\$6,186,240	\$6,186,240	\$6,186,240
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$13,188,112	N/A	N/A
Subtotal	N/A	N/A	\$13,188,112	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$12,294,355	N/A	N/A	\$12,294,355	\$12,294,355
Incremental O&M Costs	\$1,525	N/A	N/A	\$1,525	\$1,722
Subtotal	\$12,295,880	N/A	N/A	\$12,295,880	\$12,296,077
<b>Total Costs</b>	<b>\$12,295,880</b>	<b>\$6,186,240</b>	<b>\$19,374,353</b>	<b>\$18,482,120</b>	<b>\$18,482,318</b>
<b>Net Benefit (Cost)</b>	<b>\$6,484,755</b>	<b>\$10,751,452</b>	<b>(\$2,436,660)</b>	<b>\$4,048,095</b>	<b>\$8,120,330</b>
<b>Benefit/Cost Ratio</b>	<b>1.53</b>	<b>2.74</b>	<b>0.87</b>	<b>1.22</b>	<b>1.44</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	17.5 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.60 kW
Gross Annual kWh Saved at Customer	334 kWh
Net Annual kWh Saved at Generator	363 kWh

Program Summary All Participants

Total Participants	21,608
<b>Total Budget</b>	<b>\$6,186,240</b>
<b>Net coincident kW Saved at Generator</b>	<b>13,058 kW</b>
Gross Annual kWh Saved at Customer	7,221,669 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>7,846,229 kWh</b>

Utility Program Cost per kWh Lifetime

**\$0.0451**

Utility Program Cost per kW at Gen

**\$474**



Company: **Xcel Energy**  
 Project: **Residential Heating and Cooling**

Input Data		2022
1) Retail Rate (\$/Dth) =	\$6.06	
Escalation Rate =	4.69%	
2) Non-Gas Fuel Retail Rate (\$/Fuel Unit) =	\$0.000	
Escalation Rate =	4.69%	
Non-Gas Fuel Units (ie. kWh, Gallons, etc) =	kWh	
3) Commodity Cost (\$/Dth) =	\$3.25	
Escalation Rate =	4.69%	
4) Demand Cost (\$/Unit/Yr) =	\$82.36	
Escalation Rate =	4.69%	
5) Peak Reduction Factor =	1.00%	
6) Variable O&M (\$/Dth) =	\$0.0411	
Escalation Rate =	4.69%	
7) Non-Gas Fuel Cost (\$/Fuel Unit) =	\$0.00000	
Escalation Rate =	3.59%	
8) Non-Gas Fuel Loss Factor	0.00%	
9) Gas Environmental Damage Factor =	\$2.0700	
Escalation Rate =	2.30%	
10) Non Gas Fuel Enviro. Damage Factor (\$/Unit) =	\$0.0000	
Escalation Rate =	2.30%	
11) Participant Discount Rate =	3.02%	
12) MN CIP Utility Discount Rate =	5.34%	
13) Societal Discount Rate =	3.02%	
14) General Input Data Year =	2020	
15a) Project Analysis Year 1 =	2021	
15b) Project Analysis Year 2 =	2022	
15c) Project Analysis Year 3 =	2023	
		= Administrative & Operating Costs = \$492,247
		Incentive Costs = \$3,536,639
		16) Total Utility Project Costs = \$4,028,885
		17) Direct Participant Costs (\$/Part.) = 745
		18) Participant Non-Energy Costs (Annual \$/Part.) = -
		Escalation Rate = 2.30%
		19) Participant Non-Energy Savings (Annual \$/Part.) = -
		Escalation Rate = 2.30%
		20) Project Life (Years) = 18.0
		21) Avg. Dth/Part. Saved = 17.38
		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 = 13,505
		24) Total Annual Dth Saved = 234,697
		25) Incentive/Participant = \$261.88

Cost Summary	2022	Test Results	2022 NPV	2022 B/C
Utility Cost per Participant =	\$298	<b>Ratepayer Impact Measure Test</b>	(\$12,593,160)	0.59
Cost per Participant per Dth =	\$60.03	<b>Utility Cost Test</b>	\$14,106,915	4.50
Lifetime Energy Reduction (Dth)	4,214,502	<b>Societal Test</b>	\$20,102,861	2.43
Societal Cost per Dth	\$3.34	<b>Participant Test</b>	\$20,175,754	3.01

**SCHOOL EDUCATION KITS**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$1,749,161	\$1,749,161	\$1,749,161	\$2,017,299
T & D	N/A	\$312,069	\$312,069	\$312,069	\$360,613
Marginal Energy	N/A	\$3,303,609	\$3,303,609	\$3,303,609	\$4,067,088
Environmental Externality	N/A	N/A	N/A	N/A	\$696,511
Subtotal	N/A	\$5,364,840	\$5,364,840	\$5,364,840	\$7,141,511
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$20,024,267	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$863,257	N/A	N/A	\$863,257	\$863,257
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$2,087,316	N/A	N/A	\$2,087,316	\$2,357,865
Subtotal	\$22,974,840	N/A	N/A	\$2,950,572	\$3,221,121
<b>Total Benefits</b>	<b>\$22,974,840</b>	<b>\$5,364,840</b>	<b>\$5,364,840</b>	<b>\$8,315,412</b>	<b>\$10,362,633</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$696,464	\$696,464	\$696,464	\$696,464
Advertising & Promotion	N/A	\$5,000	\$5,000	\$5,000	\$5,000
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$863,257	\$863,257	\$863,257	\$863,257
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,564,721	\$1,564,721	\$1,564,721	\$1,564,721
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$20,024,267	N/A	N/A
Subtotal	N/A	N/A	\$20,024,267	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$863,257	N/A	N/A	\$863,257	\$863,257
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$863,257	N/A	N/A	\$863,257	\$863,257
<b>Total Costs</b>	<b>\$863,257</b>	<b>\$1,564,721</b>	<b>\$21,588,988</b>	<b>\$2,427,977</b>	<b>\$2,427,977</b>
<b>Net Benefit (Cost)</b>	<b>\$22,111,583</b>	<b>\$3,800,119</b>	<b>(\$16,224,148)</b>	<b>\$5,887,435</b>	<b>\$7,934,656</b>
<b>Benefit/Cost Ratio</b>	<b>26.61</b>	<b>3.43</b>	<b>0.25</b>	<b>3.42</b>	<b>4.27</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	13.8 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.07 kW
Gross Annual kWh Saved at Customer	355 kWh
Net Annual kWh Saved at Generator	271 kWh

Program Summary All Participants

Total Participants	<b>39,500</b>
<b>Total Budget</b>	<b>\$1,564,721</b>
<b>Net coincident kW Saved at Generator</b>	<b>2,680 kW</b>
Gross Annual kWh Saved at Customer	14,018,364 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>10,720,881 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0106</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$584</b>

**SCHOOL EDUCATION KITS**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$1,907,222	\$1,907,222	\$1,907,222	\$2,186,184
T & D	N/A	\$339,963	\$339,963	\$339,963	\$390,396
Marginal Energy	N/A	\$3,030,448	\$3,030,448	\$3,030,448	\$3,743,300
Environmental Externality	N/A	N/A	N/A	N/A	\$653,070
Subtotal	N/A	\$5,277,633	\$5,277,633	\$5,277,633	\$6,972,949
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$16,843,843	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$779,145	N/A	N/A	\$779,145	\$779,145
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$4,077,955	N/A	N/A	\$4,077,955	\$4,607,030
Subtotal	\$21,700,943	N/A	N/A	\$4,857,100	\$5,386,175
<b>Total Benefits</b>	<b>\$21,700,943</b>	<b>\$5,277,633</b>	<b>\$5,277,633</b>	<b>\$10,134,733</b>	<b>\$12,359,124</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$596,182	\$596,182	\$596,182	\$596,182
Advertising & Promotion	N/A	\$466	\$466	\$466	\$466
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$779,145	\$779,145	\$779,145	\$779,145
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,375,793	\$1,375,793	\$1,375,793	\$1,375,793
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$16,843,843	N/A	N/A
Subtotal	N/A	N/A	\$16,843,843	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$669,515	N/A	N/A	\$669,515	\$669,515
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$669,515	N/A	N/A	\$669,515	\$669,515
<b>Total Costs</b>	<b>\$669,515</b>	<b>\$1,375,793</b>	<b>\$18,219,636</b>	<b>\$2,045,308</b>	<b>\$2,045,308</b>
<b>Net Benefit (Cost)</b>	<b>\$21,031,428</b>	<b>\$3,901,840</b>	<b>(\$12,942,003)</b>	<b>\$8,089,425</b>	<b>\$10,313,816</b>
<b>Benefit/Cost Ratio</b>	<b>32.41</b>	<b>3.84</b>	<b>0.29</b>	<b>4.96</b>	<b>6.04</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	14.1 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.08 kW
Gross Annual kWh Saved at Customer	369 kWh
Net Annual kWh Saved at Generator	267 kWh

Program Summary All Participants

Total Participants	<b>36,882</b>
<b>Total Budget</b>	<b>\$1,375,793</b>
<b>Net coincident kW Saved at Generator</b>	<b>3,000 kW</b>
Gross Annual kWh Saved at Customer	13,602,981 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>9,857,946 kWh</b>

Utility Program Cost per kWh Lifetime

**\$0.0099**

Utility Program Cost per kW at Gen

**\$459**





Company: **Xcel Energy**  
 Project: **School Education Kits**

Input Data		2022	
1) Retail Rate (\$/Dth) =	\$6.06	Administrative & Operating Costs =	\$358,995
Escalation Rate =	4.69%	Incentive Costs =	\$72,798
2) Non-Gas Fuel Retail Rate (\$/Fuel Unit) =	\$0.000	16) Total Utility Project Costs =	\$431,793
Escalation Rate =	4.69%	17) Direct Participant Costs (\$/Part.) =	4
Non-Gas Fuel Units (ie. kWh, Gallons, etc) =	kWh	18) Participant Non-Energy Costs (Annual \$/Part.) =	-
3) Commodity Cost (\$/Dth) =	\$3.25	Escalation Rate =	2.30%
Escalation Rate =	4.69%	19) Participant Non-Energy Savings (Annual \$/Part) =	821
4) Demand Cost (\$/Unit/Yr) =	\$82.36	Escalation Rate =	2.30%
Escalation Rate =	4.69%	20) Project Life (Years) =	10.0
5) Peak Reduction Factor =	1.00%	21) Avg. Dth/Part. Saved =	3.19
6) Variable O&M (\$/Dth) =	\$0.0411	22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
Escalation Rate =	4.69%	22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
7) Non-Gas Fuel Cost (\$/Fuel Unit) =	\$0.00000	23) Number of Participants =	19,786
Escalation Rate =	3.59%	24) Total Annual Dth Saved =	63,155
8) Non-Gas Fuel Loss Factor	0.00%	25) Incentive/Participant =	\$3.68
9) Gas Environmental Damage Factor =	\$2.0700		
Escalation Rate =	2.30%		
10) Non Gas Fuel Enviro. Damage Factor (\$/Unit) =	\$0.0000		
Escalation Rate =	2.30%		
11) Participant Discount Rate =	3.02%		
12) MN CIP Utility Discount Rate =	5.34%		
13) Societal Discount Rate =	3.02%		
14) General Input Data Year =	2020		
15a) Project Analysis Year 1 =	2021		
15b) Project Analysis Year 2 =	2022		
15c) Project Analysis Year 3 =	2023		

Cost Summary	2022	Test Results	2022 NPV	2022 B/C
Utility Cost per Participant =	\$22	Ratepayer Impact Measure Test	(\$1,740,045)	0.61
Cost per Participant per Dth =	\$8.05	Utility Cost Test	\$2,338,511	6.42
Lifetime Energy Reduction (Dth)	631,549	Societal Test	\$23,239,980	46.74
Societal Cost per Dth	\$0.80	Participant Test	\$20,322,161	267.32

**WHOLE HOME EFFICIENCY**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$29,689	\$29,689	\$29,689	\$34,775
T & D	N/A	\$4,986	\$4,986	\$4,986	\$5,895
Marginal Energy	N/A	\$32,435	\$32,435	\$32,435	\$39,445
Environmental Externality	N/A	N/A	N/A	N/A	\$6,853
Subtotal	N/A	\$67,110	\$67,110	\$67,110	\$86,969
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$198,391	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$27,317	N/A	N/A	\$27,317	\$27,317
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$225,709	N/A	N/A	\$27,317	\$27,317
<b>Total Benefits</b>	<b>\$225,709</b>	<b>\$67,110</b>	<b>\$67,110</b>	<b>\$94,427</b>	<b>\$114,286</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$16,219	\$16,219	\$16,219	\$16,219
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$27,317	\$27,317	\$27,317	\$27,317
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$43,536	\$43,536	\$43,536	\$43,536
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$198,391	N/A	N/A
Subtotal	N/A	N/A	\$198,391	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$69,687	N/A	N/A	\$69,687	\$63,289
Incremental O&M Costs	\$1,369	N/A	N/A	\$1,369	\$1,546
Subtotal	\$71,056	N/A	N/A	\$71,056	\$64,835
<b>Total Costs</b>	<b>\$71,056</b>	<b>\$43,536</b>	<b>\$241,927</b>	<b>\$114,592</b>	<b>\$108,371</b>
<b>Net Benefit (Cost)</b>	<b>\$154,653</b>	<b>\$23,574</b>	<b>(\$174,818)</b>	<b>(\$20,165)</b>	<b>\$5,915</b>
<b>Benefit/Cost Ratio</b>	<b>3.18</b>	<b>1.54</b>	<b>0.28</b>	<b>0.82</b>	<b>1.05</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	14.4 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.19 kW
Gross Annual kWh Saved at Customer	440 kWh
Net Annual kWh Saved at Generator	478 kWh

Program Summary All Participants

Total Participants	234
<b>Total Budget</b>	<b>\$43,536</b>
<b>Net coincident kW Saved at Generator</b>	<b>44 kW</b>
Gross Annual kWh Saved at Customer	103,022 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>111,932 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0270</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$990</b>

**WHOLE HOME EFFICIENCY**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$32,683	\$32,683	\$32,683	\$39,150
T & D	N/A	\$5,864	\$5,864	\$5,864	\$7,042
Marginal Energy	N/A	\$28,567	\$28,567	\$28,567	\$35,531
Environmental Externality	N/A	N/A	N/A	N/A	\$6,358
Subtotal	N/A	\$67,115	\$67,115	\$67,115	\$88,081
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$158,301	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$20,917	N/A	N/A	\$20,917	\$20,917
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$179,219	N/A	N/A	\$20,917	\$20,917
<b>Total Benefits</b>	<b>\$179,219</b>	<b>\$67,115</b>	<b>\$67,115</b>	<b>\$88,032</b>	<b>\$108,998</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$20,032	\$20,032	\$20,032	\$20,032
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$20,917	\$20,917	\$20,917	\$20,917
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$40,949	\$40,949	\$40,949	\$40,949
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$158,301	N/A	N/A
Subtotal	N/A	N/A	\$158,301	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$56,492	N/A	N/A	\$56,492	\$56,492
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$56,492	N/A	N/A	\$56,492	\$56,492
<b>Total Costs</b>	<b>\$56,492</b>	<b>\$40,949</b>	<b>\$199,251</b>	<b>\$97,442</b>	<b>\$97,442</b>
<b>Net Benefit (Cost)</b>	<b>\$122,726</b>	<b>\$26,165</b>	<b>(\$132,136)</b>	<b>(\$9,410)</b>	<b>\$11,557</b>
<b>Benefit/Cost Ratio</b>	<b>3.17</b>	<b>1.64</b>	<b>0.34</b>	<b>0.90</b>	<b>1.12</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	16.6 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.63 kW
Gross Annual kWh Saved at Customer	1,324 kWh
Net Annual kWh Saved at Generator	1,438 kWh

Program Summary All Participants

Total Participants	<b>64</b>
<b>Total Budget</b>	<b>\$40,949</b>
<b>Net coincident kW Saved at Generator</b>	<b>40 kW</b>
Gross Annual kWh Saved at Customer	84,711 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>92,037 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0269</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$1,022</b>

Company: **Xcel Energy**  
 Project: **Whole Home Efficiency**

Input Data			2022
1) Retail Rate (\$/Dth) =	\$6.06	Administrative & Operating Costs =	\$88,373
Escalation Rate =	4.69%	Incentive Costs =	\$34,845
2) Non-Gas Fuel Retail Rate (\$/Fuel Unit) =	\$0.000	16) Total Utility Project Costs =	\$123,218
Escalation Rate =	4.69%	17) Direct Participant Costs (\$/Part.) =	\$1,117
Non-Gas Fuel Units (ie. kWh, Gallons, etc) =	kWh	18) Participant Non-Energy Costs (Annual \$/Part.) =	\$0
3) Commodity Cost (\$/Dth) =	\$3.25	Escalation Rate =	2.30%
Escalation Rate =	4.69%	19) Participant Non-Energy Savings (Annual \$/Part.) =	\$0
4) Demand Cost (\$/Unit/Yr) =	\$82.36	Escalation Rate =	2.30%
Escalation Rate =	4.69%	20) Project Life (Years) =	16.4
5) Peak Reduction Factor =	1.00%	21) Avg. Dth/Part. Saved =	14.93
6) Variable O&M (\$/Dth) =	\$0.0411	22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
Escalation Rate =	4.69%	22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
7) Non-Gas Fuel Cost (\$/Fuel Unit) =	\$0.00000	23) Number of Participants =	212
Escalation Rate =	3.59%	24) Total Annual Dth Saved =	3,164
8) Non-Gas Fuel Loss Factor	0.00%	25) Incentive/Participant =	\$164.36
9) Gas Environmental Damage Factor =	\$2.0700		
Escalation Rate =	2.30%		
10) Non Gas Fuel Enviro. Damage Factor (\$/Unit) =	\$0.0000		
Escalation Rate =	2.30%		
11) Participant Discount Rate =	3.02%		
12) MN CIP Utility Discount Rate =	5.34%		
13) Societal Discount Rate =	3.02%		
14) General Input Data Year =	2020		
15a) Project Analysis Year 1 =	2021		
15b) Project Analysis Year 2 =	2022		
15c) Project Analysis Year 3 =	2023		

Cost Summary	2022	Test Results	2022 NPV	2022 B/C
Utility Cost per Participant =	\$581	<b>Ratepayer Impact Measure Test</b>	(\$228,423)	0.49
Cost per Participant per Dth =	\$113.74	<b>Utility Cost Test</b>	\$99,560	1.81
Lifetime Energy Reduction (Dth)	51,998	<b>Societal Test</b>	\$44,245	1.12
Societal Cost per Dth	\$7.04	<b>Participant Test</b>	\$126,130	1.53



**LOW INCOME SEGMENT TOTAL**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$646,156	\$646,156	\$646,156	\$734,494
T & D	N/A	\$89,203	\$89,203	\$89,203	\$103,075
Marginal Energy	N/A	\$1,004,423	\$1,004,423	\$1,004,423	\$1,235,216
Environmental Externality	N/A	N/A	N/A	N/A	\$210,020
Subtotal	N/A	\$1,739,781	\$1,739,781	\$1,739,781	\$2,282,805
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$6,234,537	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$3,639,686	N/A	N/A	\$3,639,686	\$3,639,686
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$577,300	N/A	N/A	\$577,300	\$652,094
Subtotal	\$10,451,523	N/A	N/A	\$4,216,985	\$4,291,780
<b>Total Benefits</b>	<b>\$10,451,523</b>	<b>\$1,739,781</b>	<b>\$1,739,781</b>	<b>\$5,956,767</b>	<b>\$6,574,584</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$221,706	\$221,706	\$221,706	\$221,706
Project Administration	N/A	\$942,753	\$942,753	\$942,753	\$942,753
Advertising & Promotion	N/A	\$252,193	\$252,193	\$252,193	\$252,193
Measurement & Verification	N/A	\$29,350	\$29,350	\$29,350	\$29,350
Rebates	N/A	\$3,639,686	\$3,639,686	\$3,639,686	\$3,639,686
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$5,085,687	\$5,085,687	\$5,085,687	\$5,085,687
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$6,234,537	N/A	N/A
Subtotal	N/A	N/A	\$6,234,537	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$3,706,634	N/A	N/A	\$3,706,634	\$3,689,687
Incremental O&M Costs	\$3,933	N/A	N/A	\$3,933	\$4,402
Subtotal	\$3,710,566	N/A	N/A	\$3,710,566	\$3,694,088
<b>Total Costs</b>	<b>\$3,710,566</b>	<b>\$5,085,687</b>	<b>\$11,320,225</b>	<b>\$8,796,254</b>	<b>\$8,779,776</b>
<b>Net Benefit (Cost)</b>	<b>\$6,740,956</b>	<b>(\$3,345,906)</b>	<b>(\$9,580,443)</b>	<b>(\$2,839,487)</b>	<b>(\$2,205,191)</b>
<b>Benefit/Cost Ratio</b>	<b>2.82</b>	<b>0.34</b>	<b>0.15</b>	<b>0.68</b>	<b>0.75</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.5 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.12 kW
Gross Annual kWh Saved at Customer	295 kWh
Net Annual kWh Saved at Generator	318 kWh

Program Summary All Participants

Total Participants	<b>10,035</b>
<b>Total Budget</b>	<b>\$5,085,687</b>
<b>Net coincident kW Saved at Generator</b>	<b>1,213 kW</b>
Gross Annual kWh Saved at Customer	2,963,068 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>3,191,101 kWh</b>

Utility Program Cost per kWh Lifetime

**\$0.1027**

Utility Program Cost per kW at Gen

**\$4,194**

**LOW INCOME SEGMENT TOTAL**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$326,422	\$326,422	\$326,422	\$380,670
T & D	N/A	\$58,336	\$58,336	\$58,336	\$68,166
Marginal Energy	N/A	\$775,551	\$775,551	\$775,551	\$946,855
Environmental Externality	N/A	N/A	N/A	N/A	\$165,181
Subtotal	N/A	\$1,160,309	\$1,160,309	\$1,160,309	\$1,560,872
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$4,273,559	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$2,934,884	N/A	N/A	\$2,934,884	\$2,934,884
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$112,198	N/A	N/A	\$112,198	\$126,776
Subtotal	\$7,320,642	N/A	N/A	\$3,047,082	\$3,061,661
<b>Total Benefits</b>	<b>\$7,320,642</b>	<b>\$1,160,309</b>	<b>\$1,160,309</b>	<b>\$4,207,391</b>	<b>\$4,622,533</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$85,787	\$85,787	\$85,787	\$85,787
Project Administration	N/A	\$711,647	\$711,647	\$711,647	\$711,647
Advertising & Promotion	N/A	\$150,437	\$150,437	\$150,437	\$150,437
Measurement & Verification	N/A	\$19,844	\$19,844	\$19,844	\$19,844
Rebates	N/A	\$2,934,884	\$2,934,884	\$2,934,884	\$2,934,884
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$3,902,598	\$3,902,598	\$3,902,598	\$3,902,598
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$4,273,559	N/A	N/A
Subtotal	N/A	N/A	\$4,273,559	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$2,936,639	N/A	N/A	\$2,936,639	\$2,936,639
Incremental O&M Costs	\$2,964	N/A	N/A	\$2,964	\$3,345
Subtotal	\$2,939,603	N/A	N/A	\$2,939,603	\$2,939,984
<b>Total Costs</b>	<b>\$2,939,603</b>	<b>\$3,902,598</b>	<b>\$8,176,158</b>	<b>\$6,842,202</b>	<b>\$6,842,582</b>
<b>Net Benefit (Cost)</b>	<b>\$4,381,038</b>	<b>(\$2,742,289)</b>	<b>(\$7,015,849)</b>	<b>(\$2,634,810)</b>	<b>(\$2,220,049)</b>
<b>Benefit/Cost Ratio</b>	<b>2.49</b>	<b>0.30</b>	<b>0.14</b>	<b>0.61</b>	<b>0.68</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	16.4 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.08 kW
Gross Annual kWh Saved at Customer	429 kWh
Net Annual kWh Saved at Generator	463 kWh

Program Summary All Participants

Total Participants	5,412
<b>Total Budget</b>	<b>\$3,902,598</b>
<b>Net coincident kW Saved at Generator</b>	<b>459 kW</b>
Gross Annual kWh Saved at Customer	2,321,425 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>2,504,552 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0949</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$8,505</b>

Company: **Xcel Energy**  
 Project: **Low Income Segment Total**

Input Data		2022	
1) Retail Rate (\$/Dth) =	\$5.43	Administrative & Operating Costs =	\$1,105,104
Escalation Rate =	4.69%	Incentive Costs =	\$2,696,177
2) Non-Gas Fuel Retail Rate (\$/Fuel Unit) =	\$0.000	16) Total Utility Project Costs =	\$3,801,280
Escalation Rate =	4.69%	17) Direct Participant Costs (\$/Part.) =	\$1,670
Non-Gas Fuel Units (ie. kWh, Gallons, etc) =	kWh	18) Participant Non-Energy Costs (Annual \$/Part.) =	\$0
3) Commodity Cost (\$/Dth) =	\$3.25	Escalation Rate =	2.30%
Escalation Rate =	4.69%	19) Participant Non-Energy Savings (Annual \$/Part.) =	\$1,053
4) Demand Cost (\$/Unit/Yr) =	\$82.36	Escalation Rate =	2.30%
Escalation Rate =	4.69%	20) Project Life (Years) =	16.3
5) Peak Reduction Factor =	1.00%	21) Avg. Dth/Part. Saved =	18.31
6) Variable O&M (\$/Dth) =	\$0.0411	22) Avg Non-Gas Fuel Units/Part. Saved =	0 kWh
Escalation Rate =	4.69%	22a) Avg Additional Non-Gas Fuel Units/ Part. Used =	0 kWh
7) Non-Gas Fuel Cost (\$/Fuel Unit) =	\$0.00000	23) Number of Participants =	1,724
Escalation Rate =	3.59%	24) Total Annual Dth Saved =	31,561
8) Non-Gas Fuel Loss Factor	0.00%	25) Incentive/Participant =	\$1,564.30
9) Gas Environmental Damage Factor =	\$2.0700		
Escalation Rate =	2.30%		
10) Non Gas Fuel Enviro. Damage Factor (\$/Unit) =	\$0.0000		
Escalation Rate =	2.30%		
11) Participant Discount Rate =	6.38%		
12) MN CIP Utility Discount Rate =	5.34%		
13) Societal Discount Rate =	3.02%		
14) General Input Data Year =	2020		
15a) Project Analysis Year 1 =	2021		
15b) Project Analysis Year 2 =	2022		
15c) Project Analysis Year 3 =	2023		

Cost Summary	2022	Test Results	2022 NPV	2022 B/C
Utility Cost per Participant =	\$2,205	<b>Ratepayer Impact Measure Test</b>	(\$4,842,051)	0.31
Cost per Participant per Dth =	\$211.65	<b>Utility Cost Test</b>	(\$1,597,383)	0.58
Lifetime Energy Reduction (Dth)	514,364	<b>Societal Test</b>	\$1,532,370	1.23
Societal Cost per Dth	\$13.02	<b>Participant Test</b>	\$4,877,482	2.69





**AFFORDABLE EFFICIENT NEW HOME CONSTRUCTION**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$50,200	\$50,200	\$50,200	\$60,880
T & D	N/A	\$9,011	\$9,011	\$9,011	\$10,960
Marginal Energy	N/A	\$138,750	\$138,750	\$138,750	\$176,542
Environmental Externality	N/A	N/A	N/A	N/A	\$28,121
Subtotal	N/A	\$197,961	\$197,961	\$197,961	\$276,504
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$857,839	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$199,581	N/A	N/A	\$199,581	\$199,581
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$9,246	N/A	N/A	\$9,246	\$10,445
Subtotal	\$1,066,666	N/A	N/A	\$208,827	\$210,025
<b>Total Benefits</b>	<b>\$1,066,666</b>	<b>\$197,961</b>	<b>\$197,961</b>	<b>\$406,788</b>	<b>\$486,529</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$4,970	\$4,970	\$4,970	\$4,970
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$199,581	\$199,581	\$199,581	\$199,581
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$204,551	\$204,551	\$204,551	\$204,551
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$857,839	N/A	N/A
Subtotal	N/A	N/A	\$857,839	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$325,508	N/A	N/A	\$325,508	\$311,707
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$325,508	N/A	N/A	\$325,508	\$311,707
<b>Total Costs</b>	<b>\$325,508</b>	<b>\$204,551</b>	<b>\$1,062,390</b>	<b>\$530,059</b>	<b>\$516,258</b>
<b>Net Benefit (Cost)</b>	<b>\$741,157</b>	<b>(\$6,590)</b>	<b>(\$864,429)</b>	<b>(\$123,272)</b>	<b>(\$29,729)</b>
<b>Benefit/Cost Ratio</b>	<b>3.28</b>	<b>0.97</b>	<b>0.19</b>	<b>0.77</b>	<b>0.94</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	19.6 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.27 kW
Gross Annual kWh Saved at Customer	1,496 kWh
Net Annual kWh Saved at Generator	1,626 kWh

Program Summary All Participants

Total Participants	216
<b>Total Budget</b>	<b>\$204,551</b>
<b>Net coincident kW Saved at Generator</b>	<b>58 kW</b>
Gross Annual kWh Saved at Customer	323,166 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>351,115 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0298</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$3,542</b>

**AFFORDABLE EFFICIENT NEW HOME CONSTRUCTION**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$7,317	\$7,317	\$7,317	\$8,910
T & D	N/A	\$1,316	\$1,316	\$1,316	\$1,607
Marginal Energy	N/A	\$41,093	\$41,093	\$41,093	\$52,314
Environmental Externality	N/A	N/A	N/A	N/A	\$8,328
Subtotal	N/A	\$49,727	\$49,727	\$49,727	\$71,158
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$234,312	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$268,181	N/A	N/A	\$268,181	\$268,181
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$1,792	N/A	N/A	\$1,792	\$2,047
Subtotal	\$504,285	N/A	N/A	\$269,973	\$270,227
<b>Total Benefits</b>	<b>\$504,285</b>	<b>\$49,727</b>	<b>\$49,727</b>	<b>\$319,700</b>	<b>\$341,386</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$3,779	\$3,779	\$3,779	\$3,779
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$268,181	\$268,181	\$268,181	\$268,181
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$271,960	\$271,960	\$271,960	\$271,960
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$234,312	N/A	N/A
Subtotal	N/A	N/A	\$234,312	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$220,148	N/A	N/A	\$220,148	\$220,148
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$220,148	N/A	N/A	\$220,148	\$220,148
<b>Total Costs</b>	<b>\$220,148</b>	<b>\$271,960</b>	<b>\$506,272</b>	<b>\$492,108</b>	<b>\$492,108</b>
<b>Net Benefit (Cost)</b>	<b>\$284,137</b>	<b>(\$222,234)</b>	<b>(\$456,546)</b>	<b>(\$172,408)</b>	<b>(\$150,722)</b>
<b>Benefit/Cost Ratio</b>	<b>2.29</b>	<b>0.18</b>	<b>0.10</b>	<b>0.65</b>	<b>0.69</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	19.8 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.50 kW
Gross Annual kWh Saved at Customer	5,931 kWh
Net Annual kWh Saved at Generator	6,443 kWh

Program Summary All Participants

Total Participants	16
<b>Total Budget</b>	<b>\$271,960</b>
<b>Net coincident kW Saved at Generator</b>	<b>8 kW</b>
Gross Annual kWh Saved at Customer	94,888 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>103,094 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.1333</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$33,938</b>





## HOME ENERGY SAVINGS PROGRAM

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$157,466	\$157,466	\$157,466	\$183,484
T & D	N/A	\$21,896	\$21,896	\$21,896	\$25,595
Marginal Energy	N/A	\$320,617	\$320,617	\$320,617	\$395,318
Environmental Externality	N/A	N/A	N/A	N/A	\$67,682
Subtotal	N/A	\$499,980	\$499,980	\$499,980	\$672,079
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$2,026,749	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$1,474,289	N/A	N/A	\$1,474,289	\$1,474,289
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$216,573	N/A	N/A	\$216,573	\$244,644
Subtotal	\$3,717,611	N/A	N/A	\$1,690,862	\$1,718,933
<b>Total Benefits</b>	<b>\$3,717,611</b>	<b>\$499,980</b>	<b>\$499,980</b>	<b>\$2,190,842</b>	<b>\$2,391,013</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$547,821	\$547,821	\$547,821	\$547,821
Advertising & Promotion	N/A	\$220,138	\$220,138	\$220,138	\$220,138
Measurement & Verification	N/A	\$12,697	\$12,697	\$12,697	\$12,697
Rebates	N/A	\$1,474,289	\$1,474,289	\$1,474,289	\$1,474,289
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$2,254,946	\$2,254,946	\$2,254,946	\$2,254,946
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$2,026,749	N/A	N/A
Subtotal	N/A	N/A	\$2,026,749	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$1,474,289	N/A	N/A	\$1,474,289	\$1,474,289
Incremental O&M Costs	\$3,933	N/A	N/A	\$3,933	\$4,402
Subtotal	\$1,478,222	N/A	N/A	\$1,478,222	\$1,478,691
<b>Total Costs</b>	<b>\$1,478,222</b>	<b>\$2,254,946</b>	<b>\$4,281,695</b>	<b>\$3,733,168</b>	<b>\$3,733,637</b>
<b>Net Benefit (Cost)</b>	<b>\$2,239,389</b>	<b>(\$1,754,966)</b>	<b>(\$3,781,715)</b>	<b>(\$1,542,326)</b>	<b>(\$1,342,624)</b>
<b>Benefit/Cost Ratio</b>	<b>2.51</b>	<b>0.22</b>	<b>0.12</b>	<b>0.59</b>	<b>0.64</b>

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

## 2022 ELECTRIC

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.9 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.06 kW
Gross Annual kWh Saved at Customer	230 kWh
Net Annual kWh Saved at Generator	248 kWh

Program Summary All Participants

Total Participants	4,060
<b>Total Budget</b>	<b>\$2,254,946</b>
<b>Net coincident kW Saved at Generator</b>	<b>227 kW</b>
Gross Annual kWh Saved at Customer	934,386 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>1,008,489 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.1404</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$9,920</b>

## HOME ENERGY SAVINGS PROGRAM

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$155,206	\$155,206	\$155,206	\$182,083
T & D	N/A	\$27,762	\$27,762	\$27,762	\$32,641
Marginal Energy	N/A	\$353,990	\$353,990	\$353,990	\$434,287
Environmental Externality	N/A	N/A	N/A	N/A	\$75,903
Subtotal	N/A	\$536,958	\$536,958	\$536,958	\$724,913
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$2,059,426	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$1,181,430	N/A	N/A	\$1,181,430	\$1,181,430
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$34,270	N/A	N/A	\$34,270	\$38,716
Subtotal	\$3,275,126	N/A	N/A	\$1,215,700	\$1,220,146
<b>Total Benefits</b>	<b>\$3,275,126</b>	<b>\$536,958</b>	<b>\$536,958</b>	<b>\$1,752,657</b>	<b>\$1,945,059</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$534,990	\$534,990	\$534,990	\$534,990
Advertising & Promotion	N/A	\$115,790	\$115,790	\$115,790	\$115,790
Measurement & Verification	N/A	\$19,844	\$19,844	\$19,844	\$19,844
Rebates	N/A	\$1,181,430	\$1,181,430	\$1,181,430	\$1,181,430
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,852,053	\$1,852,053	\$1,852,053	\$1,852,053
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$2,059,426	N/A	N/A
Subtotal	N/A	N/A	\$2,059,426	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$1,099,158	N/A	N/A	\$1,099,158	\$1,099,158
Incremental O&M Costs	\$2,964	N/A	N/A	\$2,964	\$3,345
Subtotal	\$1,102,122	N/A	N/A	\$1,102,122	\$1,102,503
<b>Total Costs</b>	<b>\$1,102,122</b>	<b>\$1,852,053</b>	<b>\$3,911,479</b>	<b>\$2,954,175</b>	<b>\$2,954,556</b>
<b>Net Benefit (Cost)</b>	<b>\$2,173,003</b>	<b>(\$1,315,095)</b>	<b>(\$3,374,522)</b>	<b>(\$1,201,518)</b>	<b>(\$1,009,497)</b>
<b>Benefit/Cost Ratio</b>	<b>2.97</b>	<b>0.29</b>	<b>0.14</b>	<b>0.59</b>	<b>0.66</b>

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

## 2022 ELECTRIC

ACTUAL

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	16.3 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.10 kW
Gross Annual kWh Saved at Customer	487 kWh
Net Annual kWh Saved at Generator	521 kWh

Program Summary All Participants

Total Participants	2,206
<b>Total Budget</b>	<b>\$1,852,053</b>
<b>Net coincident kW Saved at Generator</b>	<b>215 kW</b>
Gross Annual kWh Saved at Customer	1,074,245 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>1,149,511 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0990

Utility Program Cost per kW at Gen

\$8,608







**LOW INCOME HOME ENERGY SQUAD**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$319,201	\$319,201	\$319,201	\$356,487
T & D	N/A	\$37,104	\$37,104	\$37,104	\$42,747
Marginal Energy	N/A	\$388,366	\$388,366	\$388,366	\$477,732
Environmental Externality	N/A	N/A	N/A	N/A	\$81,324
Subtotal	N/A	\$744,671	\$744,671	\$744,671	\$958,289
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$2,417,073	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$259,945	N/A	N/A	\$259,945	\$259,945
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$225,465	N/A	N/A	\$225,465	\$254,656
Subtotal	\$2,902,483	N/A	N/A	\$485,410	\$514,601
<b>Total Benefits</b>	<b>\$2,902,483</b>	<b>\$744,671</b>	<b>\$744,671</b>	<b>\$1,230,081</b>	<b>\$1,472,890</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$221,706	\$221,706	\$221,706	\$221,706
Project Administration	N/A	\$198,375	\$198,375	\$198,375	\$198,375
Advertising & Promotion	N/A	\$25,485	\$25,485	\$25,485	\$25,485
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$259,945	\$259,945	\$259,945	\$259,945
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$705,510	\$705,510	\$705,510	\$705,510
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$2,417,073	N/A	N/A
Subtotal	N/A	N/A	\$2,417,073	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$200,965	N/A	N/A	\$200,965	\$197,819
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$200,965	N/A	N/A	\$200,965	\$197,819
<b>Total Costs</b>	<b>\$200,965</b>	<b>\$705,510</b>	<b>\$3,122,584</b>	<b>\$906,475</b>	<b>\$903,329</b>
<b>Net Benefit (Cost)</b>	<b>\$2,701,518</b>	<b>\$39,161</b>	<b>(\$2,377,913)</b>	<b>\$323,606</b>	<b>\$569,561</b>
<b>Benefit/Cost Ratio</b>	<b>14.44</b>	<b>1.06</b>	<b>0.24</b>	<b>1.36</b>	<b>1.63</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.7 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.39 kW
Gross Annual kWh Saved at Customer	629 kWh
Net Annual kWh Saved at Generator	684 kWh

Program Summary All Participants

Total Participants	1,793
<b>Total Budget</b>	<b>\$705,510</b>
<b>Net coincident kW Saved at Generator</b>	<b>702 kW</b>
Gross Annual kWh Saved at Customer	1,128,057 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>1,225,616 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.0366</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$1,005</b>

**LOW INCOME HOME ENERGY SQUAD**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$51,936	\$51,936	\$51,936	\$61,121
T & D	N/A	\$9,295	\$9,295	\$9,295	\$10,960
Marginal Energy	N/A	\$146,990	\$146,990	\$146,990	\$180,489
Environmental Externality	N/A	N/A	N/A	N/A	\$30,505
Subtotal	N/A	\$208,221	\$208,221	\$208,221	\$282,875
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$607,648	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	\$76,136	N/A	N/A	\$76,136	\$86,014
Subtotal	\$683,784	N/A	N/A	\$76,136	\$86,014
<b>Total Benefits</b>	<b>\$683,784</b>	<b>\$208,221</b>	<b>\$208,221</b>	<b>\$284,356</b>	<b>\$368,888</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$85,787	\$85,787	\$85,787	\$85,787
Project Administration	N/A	\$47,824	\$47,824	\$47,824	\$47,824
Advertising & Promotion	N/A	\$34,647	\$34,647	\$34,647	\$34,647
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	\$168,258	\$168,258	\$168,258	\$168,258
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$607,648	N/A	N/A
Subtotal	N/A	N/A	\$607,648	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$25,740	N/A	N/A	\$25,740	\$25,740
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$25,740	N/A	N/A	\$25,740	\$25,740
<b>Total Costs</b>	<b>\$25,740</b>	<b>\$168,258</b>	<b>\$775,906</b>	<b>\$193,998</b>	<b>\$193,998</b>
<b>Net Benefit (Cost)</b>	<b>\$658,044</b>	<b>\$39,963</b>	<b>(\$567,685)</b>	<b>\$90,359</b>	<b>\$174,890</b>
<b>Benefit/Cost Ratio</b>	<b>26.57</b>	<b>1.24</b>	<b>0.27</b>	<b>1.47</b>	<b>1.90</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	18.4 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.10 kW
Gross Annual kWh Saved at Customer	612 kWh
Net Annual kWh Saved at Generator	665 kWh

Program Summary All Participants

Total Participants	649
<b>Total Budget</b>	<b>\$168,258</b>
<b>Net coincident kW Saved at Generator</b>	<b>68 kW</b>
Gross Annual kWh Saved at Customer	397,398 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>431,767 kWh</b>

Utility Program Cost per kWh Lifetime

\$0.0211

Utility Program Cost per kW at Gen

\$2,474





**MULTI-FAMILY ENERGY SAVINGS PROGRAM**

2022 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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$119,289	\$119,289	\$119,289	\$133,643
T & D	N/A	\$21,191	\$21,191	\$21,191	\$23,774
Marginal Energy	N/A	\$156,690	\$156,690	\$156,690	\$185,623
Environmental Externality	N/A	N/A	N/A	N/A	\$32,892
Subtotal	N/A	\$297,170	\$297,170	\$297,170	\$375,932
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$932,876	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$1,705,871	N/A	N/A	\$1,705,871	\$1,705,871
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$126,016	N/A	N/A	\$126,016	\$142,349
Subtotal	\$2,764,763	N/A	N/A	\$1,831,887	\$1,848,220
<b>Total Benefits</b>	<b>\$2,764,763</b>	<b>\$297,170</b>	<b>\$297,170</b>	<b>\$2,129,057</b>	<b>\$2,224,152</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$191,586	\$191,586	\$191,586	\$191,586
Advertising & Promotion	N/A	\$6,570	\$6,570	\$6,570	\$6,570
Measurement & Verification	N/A	\$16,653	\$16,653	\$16,653	\$16,653
Rebates	N/A	\$1,705,871	\$1,705,871	\$1,705,871	\$1,705,871
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,920,680	\$1,920,680	\$1,920,680	\$1,920,680
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$932,876	N/A	N/A
Subtotal	N/A	N/A	\$932,876	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$1,705,871	N/A	N/A	\$1,705,871	\$1,705,871
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$1,705,871	N/A	N/A	\$1,705,871	\$1,705,871
<b>Total Costs</b>	<b>\$1,705,871</b>	<b>\$1,920,680</b>	<b>\$2,853,557</b>	<b>\$3,626,552</b>	<b>\$3,626,552</b>
<b>Net Benefit (Cost)</b>	<b>\$1,058,892</b>	<b>(\$1,623,510)</b>	<b>(\$2,556,387)</b>	<b>(\$1,497,495)</b>	<b>(\$1,402,399)</b>
<b>Benefit/Cost Ratio</b>	<b>1.62</b>	<b>0.15</b>	<b>0.10</b>	<b>0.59</b>	<b>0.61</b>

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

**2022 ELECTRIC**

**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	12.1 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.06 kW
Gross Annual kWh Saved at Customer	146 kWh
Net Annual kWh Saved at Generator	153 kWh

Program Summary All Participants

Total Participants	3,966
<b>Total Budget</b>	<b>\$1,920,680</b>
<b>Net coincident kW Saved at Generator</b>	<b>226 kW</b>
Gross Annual kWh Saved at Customer	577,459 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>605,880 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.2620</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$8,505</b>

**MULTI-FAMILY ENERGY SAVINGS PROGRAM**

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)
<b>Benefits</b>					
<b>Avoided Revenue Requirements</b>					
Generation	N/A	\$111,963	\$111,963	\$111,963	\$128,556
T & D	N/A	\$19,964	\$19,964	\$19,964	\$22,958
Marginal Energy	N/A	\$233,478	\$233,478	\$233,478	\$279,766
Environmental Externality	N/A	N/A	N/A	N/A	\$50,646
Subtotal	N/A	\$365,404	\$365,404	\$365,404	\$481,927
<b>Participant Benefits</b>					
Bill Reduction - Electric	\$1,372,173	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$1,485,274	N/A	N/A	\$1,485,274	\$1,485,274
Incremental Capital Savings	\$0	N/A	N/A	\$0	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0	\$0
Subtotal	\$2,857,447	N/A	N/A	\$1,485,274	\$1,485,274
<b>Total Benefits</b>	<b>\$2,857,447</b>	<b>\$365,404</b>	<b>\$365,404</b>	<b>\$1,850,678</b>	<b>\$1,967,200</b>
<b>Costs</b>					
<b>Utility Project Costs</b>					
Customer Services	N/A	\$0	\$0	\$0	\$0
Project Administration	N/A	\$125,054	\$125,054	\$125,054	\$125,054
Advertising & Promotion	N/A	\$0	\$0	\$0	\$0
Measurement & Verification	N/A	\$0	\$0	\$0	\$0
Rebates	N/A	\$1,485,274	\$1,485,274	\$1,485,274	\$1,485,274
Other	N/A	\$0	\$0	\$0	\$0
Subtotal	N/A	\$1,610,327	\$1,610,327	\$1,610,327	\$1,610,327
<b>Utility Revenue Reduction</b>					
Revenue Reduction - Electric	N/A	N/A	\$1,372,173	N/A	N/A
Subtotal	N/A	N/A	\$1,372,173	N/A	N/A
<b>Participant Costs</b>					
Incremental Capital Costs	\$1,591,594	N/A	N/A	\$1,591,594	\$1,591,594
Incremental O&M Costs	\$0	N/A	N/A	\$0	\$0
Subtotal	\$1,591,594	N/A	N/A	\$1,591,594	\$1,591,594
<b>Total Costs</b>	<b>\$1,591,594</b>	<b>\$1,610,327</b>	<b>\$2,982,501</b>	<b>\$3,201,921</b>	<b>\$3,201,921</b>
<b>Net Benefit (Cost)</b>	<b>\$1,265,853</b>	<b>(\$1,244,923)</b>	<b>(\$2,617,096)</b>	<b>(\$1,351,243)</b>	<b>(\$1,234,721)</b>
<b>Benefit/Cost Ratio</b>	<b>1.80</b>	<b>0.23</b>	<b>0.12</b>	<b>0.58</b>	<b>0.61</b>

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

**2022 ELECTRIC**

**ACTUAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant

Lifetime (Weighted on Generator kWh)	15.1 years
T & D Loss Factor (Energy)	7.96%
T & D Loss Factor (Demand)	9.84%
Net coincident kW Saved at Generator	0.07 kW
Gross Annual kWh Saved at Customer	297 kWh
Net Annual kWh Saved at Generator	323 kWh

Program Summary All Participants

Total Participants	2,541
<b>Total Budget</b>	<b>\$1,610,327</b>
<b>Net coincident kW Saved at Generator</b>	<b>168 kW</b>
Gross Annual kWh Saved at Customer	754,894 kWh
<b>Net Annual kWh Saved at Generator</b>	<b>820,180 kWh</b>

<b>Utility Program Cost per kWh Lifetime</b>	<b>\$0.1296</b>
<b>Utility Program Cost per kW at Gen</b>	<b>\$9,604</b>

► One-Stop Efficiency Shop Program (Electric) 2022 Actual

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)
<b>Benefits</b>					
Avoided Revenue Requirements					
Generation	N/A	\$ 6,297,450	\$ 6,297,450	\$ 6,297,450	\$ 7,429,088
T & D	N/A	\$ 1,127,396	\$ 1,127,396	\$ 1,127,396	\$ 1,332,836
Marginal Energy	N/A	\$ 13,504,472	\$ 13,504,472	\$ 13,504,472	\$ 16,496,989
Environmental Externality	N/A	N/A	N/A	N/A	\$ 2,781,032
<b>Subtotal</b>	<b>N/A</b>	<b>\$ 20,929,318</b>	<b>\$ 20,929,318</b>	<b>\$ 20,929,318</b>	<b>\$ 28,039,946</b>
Participant Benefits					
Bill Reduction - Electric	\$ 48,599,791	N/A	N/A	N/A	N/A
Rebates from Xcel Energy	\$ 5,468,977	N/A	N/A	\$ 5,468,977	\$ 5,468,977
Incremental Capital Savings	\$ -	N/A	N/A	\$ -	\$ -
Incremental O&M Savings	\$ -	N/A	N/A	\$ -	\$ -
<b>Subtotal</b>	<b>\$ 54,068,768</b>	<b>N/A</b>	<b>N/A</b>	<b>\$ 5,468,977</b>	<b>\$ 5,468,977</b>
<b>Total Benefits</b>	<b>\$ 54,068,768</b>	<b>\$ 20,929,318</b>	<b>\$ 20,929,318</b>	<b>\$ 26,398,295</b>	<b>\$ 33,508,923</b>
<b>Costs</b>					
Utility Project Costs					
Project Administration	N/A	\$ 4,283,034	\$ 4,283,034	\$ 4,283,034	\$ 4,283,034
Utility Administration	N/A	\$ 275,454	\$ 275,454	\$ 275,454	\$ 275,454
Advertising & Promotion	N/A	\$ -	\$ -	\$ -	\$ -
Measurement & Verification	N/A	\$ -	\$ -	\$ -	\$ -
Rebates	N/A	\$ 5,468,977	\$ 5,468,977	\$ 5,468,977	\$ 5,468,977
Other	N/A	\$ -	\$ -	\$ -	\$ -
<b>Subtotal</b>	<b>N/A</b>	<b>\$ 10,027,465</b>	<b>\$ 10,027,465</b>	<b>\$ 10,027,465</b>	<b>\$ 10,027,465</b>
Utility Revenue Reduction					
Revenue Reduction - Electric	N/A	N/A	\$ 48,599,791	N/A	N/A
<b>Subtotal</b>	<b>N/A</b>	<b>N/A</b>	<b>\$ 48,599,791</b>	<b>N/A</b>	<b>N/A</b>
Participant Costs					
Incremental Capital Costs	\$ 10,672,286	N/A	N/A	\$ 10,672,286	\$ 10,672,286
Incremental O&M Costs	\$ 1,261,168	N/A	N/A	\$ 1,261,168	\$ 1,499,215
<b>Subtotal</b>	<b>\$ 11,933,454</b>	<b>N/A</b>	<b>N/A</b>	<b>\$ 11,933,454</b>	<b>\$ 12,171,501</b>
<b>Total Costs</b>	<b>\$ 11,933,454</b>	<b>\$ 10,027,465</b>	<b>\$ 58,627,256</b>	<b>\$ 21,960,919</b>	<b>\$ 22,198,966</b>
<b>Net Benefit (Cost)</b>	<b>\$42,135,314</b>	<b>\$10,901,853</b>	<b>(\$37,697,938)</b>	<b>\$4,437,376</b>	<b>\$11,309,956</b>
<b>Benefit/Cost Ratio</b>	<b>4.53</b>	<b>2.09</b>	<b>0.36</b>	<b>1.20</b>	<b>1.51</b>

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

► One-Stop Efficiency Shop Program 2022 Actual

Input Summary and Totals

Program "Inputs" per Customer kW		
Lifetime (Weighted on Generator kWh)	A	16.00 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	78.08%
Gross Load Factor at Customer	E	45.23%
Transmission Loss Factor (Energy)	F	6.650%
Transmission Loss Factor (Demand)	G	8.060%
TRC Net Benefit (Cost)	H	\$1,167
Net coincident kW Saved at Generator	$(D \times C) / (1 - G)$	0.8493 kW
Gross Annual kWh Saved at Customer	$(B \times E \times C)$	3,962 kWh
Net Annual kWh Saved at Generator	$(B \times E \times C) / (1 - F)$	4,244 kWh

Program Summary per Participant

Gross kW Saved at Customer	I	5.98 kW
Net coincident kW Saved at Generator	$(I \times D) / (1 - G)$	5.08 kW
Gross Annual kWh Saved at Customer	$(B \times E \times I)$	23,680 kWh
Net Annual kWh Saved at Generator	$(B \times E \times I) / (1 - F)$	25,366 kWh

Program Summary All Participants

Total Participants	J	1,621
Total Budget	K	\$ 10,027,465
Gross kW Saved at Customer	$(J \times I)$	9,688 kW
Net coincident kW Saved at Generator	$(I \times D) / (1 - G) \times J$	8,228 kW
Gross Annual kWh Saved at Customer	$(B \times E \times I) \times J$	38,384,522 kWh
Net Annual kWh Saved at Generator	$((B \times E \times I) / (1 - F)) \times J$	41,118,931 kWh
TRC Net Benefits	$(J \times I \times H)$	\$11,309,956

Utility Program Cost per kWh Lifetime	\$0.0152
Utility Program Cost per kW at Gen	\$1,218.67



Conservation Improvement Program (CIP)

BENEFIT COST FOR GAS CIPS-- Cost-Effectiveness Analysis

Company: **Xcel Energy**  
 Project: **One-Stop Efficiency Shop**

Input Data		2022
1) Retail Rate (\$/Dth) =	\$5.43	
Escalation Rate =	4.69%	
2) Non-Gas Fuel Retail Rate (\$/Fuel Unit) =	\$0.000	
Escalation Rate =	4.69%	
Non-Gas Fuel Units (ie. kWh,Gallons, etc) =	kWh	
3) Commodity Cost (\$/Dth) =	\$3.25	
Escalation Rate =	4.69%	
4) Demand Cost (\$/Unit/Yr) =	\$82.36	
Escalation Rate =	4.69%	
5) Peak Reduction Factor =	1.00%	
6) Variable O&M (\$/Dth) =	\$0.0411	
Escalation Rate =	4.69%	
7) Non-Gas Fuel Cost (\$/Fuel Unit) =	\$0.00000	
Escalation Rate =	3.59%	
8) Non-Gas Fuel Loss Factor	0.00%	
9) Gas Environmental Damage Factor =	\$2.0700	
Escalation Rate =	2.30%	
10) Non Gas Fuel Enviro. Damage Factor (\$/Unit) =	\$0.0198	
Escalation Rate =	2.30%	
11) Participant Discount Rate =	6.38%	
12) Utility Discount Rate =	5.34%	
13) Societal Discount Rate =	3.02%	
14) General Input Data Year =	2020	
15a) Project Analysis Year 1 =	2021	
15b) Project Analysis Year 2 =	2022	
15c) Project Analysis Year 3 =	2023	
16 Utility Project Costs		
16 a) Administrative & Operating Costs =		\$ 99,901
16 b) Incentive Costs =		\$ 28,145
16 c) Total Utility Project Costs =		\$128,046
17) Direct Participant Costs (\$/Part.) =		\$0
18) Participant Non-Energy Costs (Annual \$/Part.) =		\$0.00
Escalation Rate =		2.30%
19) Participant Non-Energy Savings (Annual \$/Part) =		\$0
Escalation Rate =		2.30%
20) Project Life (Years) =		10
21) Avg. Dth/Part. Saved =		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 =		56
24) Total Annual Dth Saved =		5,560
25) Incentive/Participant =		\$503

Cost Summary	2022	Test Results	2022	2022
			NPV	B/C
Utility Cost per Participant =	\$2,286.53	<b>Ratepayer Impact Measure Test</b>	(\$195,663)	0.54
Cost per Participant per Dth =	\$ 23.03	<b>Utility Cost Test</b>	\$109,964	1.90
Lifetime Energy Reduction (Dth)	55,598	<b>Societal Test</b>	\$278,255	3.87
Societal Cost per Dth	\$ 1.74	<b>Participant Test</b>	\$316,269	N/A

## Attachment D: Detailed Technical Assumption

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Affordable Efficient New Home Construction - MN	New Homes	11 MSR - Combo Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$13,900.00	\$13,819.71	1,274	0.200	296.8	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes	12 MSR - Combo Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$14,600.00	\$14,541.50	1,323	0.216	401.1	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes	13 MSR - Combo Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$14,500.00	\$14,400.69	1,329	0.217	418.2	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes	11 MSR - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$11,100.00	\$11,055.77	0	0.000	296.8	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes	12 MSR - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$11,700.00	\$11,633.20	0	0.000	296.8	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes	13 MSR - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$11,600.00	\$11,520.55	0	0.000	418.2	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes - 100% Electric Homes	11 MSR + Electrification - Electric Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$14,200.00	\$14,129.71	7,878	0.452	0.0	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes - 100% Electric Homes	12 MSR + Electrification - Electric Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$14,900.00	\$14,851.50	9,883	0.469	0.0	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes - 100% Electric Homes	13 MSR + Electrification - Electric Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$15,000.00	\$14,910.69	10,210	0.469	0.0	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes	20% to 25% Improvement over code - Combo Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$1,000.00	\$4,452.55	1,455	0.491	32.5	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes	25% to 30% Improvement over code - Combo Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$1,200.00	\$5,437.00	1,895	0.551	43.9	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes	30% to 35% Improvement over code - Combo Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$1,500.00	\$6,715.04	5,521	0.925	21.8	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes	35% and greater improvement over code - Combo Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$2,000.00	\$7,918.43	6,466	0.716	37.4	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes	20% to 25% Improvement over code - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$1,000.00	\$3,913.00	0	0.000	32.1	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes	25% to 30% Improvement over code - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$1,200.00	\$7,802.11	1,905	0.511	35.3	\$0.00	100%	1	1
Affordable Efficient New Home Construction - MN	New Homes	30% to 35% Improvement over code - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$1,500.00	\$14,398.02	6,995	0.495	57.5	\$0.00	100%	15	0
Affordable Efficient New Home Construction - MN	New Homes	35% and greater improvement over code - Gas Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$2,000.00	\$4,335.84	0	0.000	88.9	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes - 100% Electric Homes	20% to 25% Improvement over code - 100% Electric Home - Electric Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$1,000.00	\$6,047.08	5,344	0.509	0.0	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes - 100% Electric Homes	25% to 30% Improvement over code - 100% Electric Home - Electric Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$1,200.00	\$7,702.49	6,636	0.653	0.0	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes - 100% Electric Homes	30% to 35% Improvement over code - 100% Electric Home - Electric Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$1,500.00	\$9,956.47	8,434	0.876	0.0	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	New Homes - 100% Electric Homes	35% and greater improvement over code - 100% Electric Home - Electric Only Customers	Energy Efficient Home	Reference Home Based upon Local Code	20	\$2,000.00	\$16,518.88	19,398	1.360	0.0	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	ENERGY STAR Refrigerator	Refrigerator Replacement	ENERGY STAR @ Refrigerators	Industry Standard	14	\$15.00	\$20.00	45	0.003	0.0	\$0.00	100%	16	0
Affordable Efficient New Home Construction - MN	ENERGY STAR Clothes Dryer	ENERGY STAR Clothes Dryer	Energy Star Clothes Dryer >= 4.4 Cu Ft	Industry Standard	12	\$40.00	\$75.00	98	0.350	0.0	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Front-loading Clothes Washer - Combo Customers w/ Electric DHW	Energy Star Front-Loading Clothes Washer w/ electric DHW and Electric Dryer	Industry Standard Front-Loading Clothes Washer	11	\$40.00	\$50.00	101	0.209	0.0	\$0.00	100%	11	0
Affordable Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Front-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Front-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Industry Standard Front-Loading Clothes Washer	11	\$20.00	\$50.00	125	0.420	1.2	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	AC Rewards-EE	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$110.00	\$110.00	76	0.180	5.5	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	AC Rewards-DR	Residential Smart Thermostat - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$190.00	\$190.00	2	1.109	0.0	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	AC Rewards-DR	Residential Smart Thermostat	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$125.00	\$215.00	2	1.109	0.0	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	76	0.180	5.5	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	76	0.180	0.0	\$0.00	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Affordable Efficient New Home Construction - MN	Smart Thermostat	Install Energy Star certified smart thermostat - GAS ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	0	0.000	5.5	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	ES Radon Fans	Energy Star Radon Fans	Energy Star Radon Fan - Radonaway RP140	Radonaway RP140	10	\$20.00	\$0.00	273	0.031	0.0	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.25	\$1.25	74	0.010	0.0	\$12.17	100%	0	0
Affordable Efficient New Home Construction - MN	Aerators - EWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$1.50	\$1.50	91	0.013	0.0	\$17.32	100%	0	0
Affordable Efficient New Home Construction - MN	Aerators - GWH	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	2.2 GPM Kitchen Faucet Aerator	10	\$1.25	\$1.25	0	0.000	0.3	\$12.17	100%	0	0
Affordable Efficient New Home Construction - MN	Aerators - GWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$1.50	\$1.50	0	0.000	0.4	\$17.32	100%	0	0
Affordable Efficient New Home Construction - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$3.50	511	0.037	0.0	\$97.40	100%	0	0
Affordable Efficient New Home Construction - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$3.50	344	0.025	0.0	\$65.49	100%	0	0
Affordable Efficient New Home Construction - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$3.50	0	0.000	2.2	\$97.40	100%	0	0
Affordable Efficient New Home Construction - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$3.50	0	0.000	1.5	\$65.49	100%	0	0
Affordable Efficient New Home Construction - MN	Water Heater DR	Demand response capability on grid enabled electric resistance water heater	Demand response from electric resistance water heater	No management of water heater time of use	1	\$100.00	\$200.00	1	0.213	0.0	\$0.00	100%	0	0
Affordable Efficient New Home Construction - MN	Water Heater DR	Load Shift & Demand response capability on new heat pump water heater (CTA 2045)	Heat Pump Water Heater w/ DR Management	No management of water heater time of use	1	\$100.00	\$325.00	152	0.071	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Behavioral Industrial	Behavioral Changes	Behavior changes that reduce energy use	No change in behavior	3	\$464.91	\$0.00	23,245	1.445	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Behavioral Commercial	Behavioral Changes	Behavior changes that reduce energy use	No change in behavior	3	\$1,859.62	\$0.00	92,981	5.778	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	1	0.806	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	3	2.113	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	AC Rewards - Business	Business Smart Thermostat - DR Direct Install	New installation of DR Capable Smart Thermostat	Non communicating thermostat	5	\$255.00	\$255.00	14	2.081	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	AC Rewards - Business	Business Smart Thermostat - BYOT	Existing Dispatchable Device	Non communicating thermostat	5	\$100.00	\$100.00	14	2.081	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & GAS	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	7.7	\$0.00	100%	0	0
Business Energy Assessments - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC ONLY	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	911	0.000	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods	No control	1	\$5,274.00	\$0.00	986	164.289	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods	No control	1	\$5,274.00	\$0.00	986	164.289	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Custom BEA Industrial Project	Custom Industrial BEA Electric	High Efficiency Product/System	Less Efficient Product/Systems	18	\$5,036.11	\$80,089.96	115,245	13.872	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Custom BEA Industrial Project	Custom Industrial BEA Gas	High Efficiency Product/System	Less Efficient Product/Systems	19	\$12,823.85	\$74,630.00	0	0.000	2,564.8	\$16,050.85	100%	0	0
Business Energy Assessments - MN	Custom BEA Commercial Project	Custom Commercial BEA Electric	New Efficient Equipment	Less Efficient Product/Systems	17	\$7,752.07	\$34,850.64	101,300	19.617	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Custom BEA Commercial Project	Custom Commercial BEA Gas	New Efficient Equipment	Less Efficient Product/Systems	15	\$3,688.67	\$17,980.33	0	0.000	737.8	\$42.67	100%	0	0
Business Energy Assessments - MN	Efficiency Controls Gas Project	Business Energy Assessments Controls Gas Project	New Building Controls	Old Building Controls	15	\$4,005.47	\$47,311.88	0	0.000	801.1	\$1,195.19	100%	0	0
Business Energy Assessments - MN	Efficiency Controls Electric Project	Business Energy Assessments Controls Electric Project	New Building Controls	Old Building Controls	15	\$8,375.64	\$52,277.85	170,777	2.244	0.0	\$1,481.23	100%	0	0
Business Energy Assessments - MN	Industrial Prescriptive	Average Cooling Project	More efficient cooling equipment	Baseline System	20	\$740.70	\$1,532.95	13,379	1.284	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Industrial Prescriptive	Average Compressed Air/FSO Project	Optimized System	Old System	11	\$4,654.65	\$7,994.12	68,687	6.876	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Industrial Prescriptive	Average EMS	New Direct Digital Controls System	Old System	15	\$1,598.33	\$41,031.09	66,293	0.000	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Industrial Prescriptive	Average Lighting Project	Optimized System	Old System	15	\$5,474.70	\$22,849.44	78,367	7.781	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Industrial Prescriptive	Average Motor Project	Optimized System	Old System	15	\$3,031.26	\$10,652.08	33,890	6.214	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Industrial Prescriptive	Average Heating Project	New System	Old System	17	\$99.42	\$312.88	0	0.000	195.5	\$0.00	100%	0	0
Business Energy Assessments - MN	Commercial Prescriptive	Average Cooling Project	More efficient cooling equipment	Baseline System	20	\$24,535.65	\$28,196.15	211,955	20.190	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Commercial Prescriptive	Average Compressed Air/FSO Project	Efficient Equipment	Old System	11	\$7,456.56	\$9,340.91	62,980	7.132	0.0	\$9.38	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Business Energy Assessments - MN	Commercial Prescriptive	Average Lighting Project	Efficient Equipment	Old System	15	\$6,926.60	\$25,670.06	130,959	19.684	0.0	-\$641.69	100%	0	0
Business Energy Assessments - MN	Commercial Prescriptive	Average Motor Project	Efficient Equipment	Old System	15	\$7,459.87	\$25,828.65	92,699	14.282	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Commercial Prescriptive	Average Heating Project	Efficient Equipment	Old System	17	\$387.62	\$1,039.70	0	0.000	240.4	-\$0.72	100%	0	0
Business Energy Assessments - MN	BEA Building Assessment	Building Assessment	Assessment Performed and Energy Efficient Improvements Implemented	Existing Building Pre-Assessment	0	\$3,500.00	\$5,000.00	0	0.000	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	BEA Targeted Building Assessment	Targeted Building Assessment	Assessment Performed and Energy Efficient Improvements Implemented	Existing Building Pre-Assessment	0	\$15,000.00	\$20,000.00	0	0.000	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Building Assessment RCx Implementation	Recommissioning Implementation	Post-Recommissioned Building	Pre-Recommissioned Building	7	\$3,782.02	\$14,400.34	118,214	3.695	320.6	\$374.36	100%	0	0
Business Energy Assessments - MN	Targeted Building Assessment RCx Implementation	Recommissioning Implementation	Post-Recommissioned Building	Pre-Recommissioned Building	7	\$6,303.37	\$24,000.57	197,023	6.159	534.4	\$623.93	100%	0	0
Business Energy Assessments - MN	BEA Industrial Streamlined Assessment	Industrial Streamlined Assessment	Assessment Performed and Energy Efficient Improvements Implemented	Existing Building Pre-Assessment	0	\$6,172.07	\$6,172.07	0	0.000	0.0	\$0.00	100%	0	0
Business Energy Assessments - MN	Building Operator Certification	BOC	Energy Use After Class	Energy Usage Before Class	5	\$500.00	\$250.00	47,908	1.896	0.0	\$0.00	100%	16	0
Business Energy Assessments - MN	BEA Industrial Streamlined Assessment	Recommissioning Implementation	Post-Recommissioned Building	Pre-Recommissioned Building	7	\$0.00	\$250.00	21,741	0.000	260.6	\$0.00	100%	0	0
Business New Construction - MN	EDA	Energy Design Assistance - Gas	More Efficient than Code Building	Code-Compliant Building	30	\$4,689.65	\$76,470.98	0	0.000	907.9	\$0.00	100%	0	114
Business New Construction - MN	EDA	Energy Design Assistance - Electric	More Efficient than Code Building	Code-Compliant Building	30	\$56,478.82	\$207,319.96	371,400	69.916	0.0	-\$104.84	100%	114	0
Business New Construction - MN	EDA	Energy Design Assistance - Gas - 2023	More Efficient than Code Building	Code-Compliant Building	20	\$8,952.58	\$161,280.57	0	0.000	1,790.5	\$0.00	100%	0	0
Business New Construction - MN	EDA	Energy Design Assistance - Electric - 2023	More Efficient than Code Building	Code-Compliant Building	20	\$52,180.67	\$201,846.37	344,615	77.186	0.0	-\$104.84	100%	0	0
Business New Construction - MN	EEB	Energy Efficient Buildings - Gas	More Efficient than Code Building	Code-Compliant Building	19	\$272.07	\$728.38	0	0.000	37.9	-\$28.00	100%	0	560
Business New Construction - MN	EEB	Energy Efficient Buildings - Electric	More Efficient than Code Building	Code-Compliant Building	18	\$3,378.89	\$12,180.47	30,985	3.493	0.0	-\$130.09	100%	530	0
Business New Construction - MN	Code Compliance	Code review of buildings to elevate reviewed buildings to code.	Code-Compliant Building	Non-Compliant Building	14	\$0.00	\$61,987.35	188,288	9.697	0.0	\$0.00	100%	13	13
Business New Construction - MN	Interrupted Rates	Participating Customer	Utility load control for at least 50 kW for control period	No control	5	\$0.00	\$0.00	329	164.289	0.0	\$0.00	100%	0	0
Business New Construction - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	1	0.806	0.0	\$0.00	100%	0	0
Business New Construction - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	3	2.113	0.0	\$0.00	100%	0	0
Business New Construction - MN	AC Rewards - Business	Business Smart Thermostat - DR Direct Install	New Installation of DR Capable Smart Thermostat	Non communicating thermostat	5	\$255.00	\$255.00	14	2.081	0.0	\$0.00	100%	0	0
Business New Construction - MN	AC Rewards - Business	Business Smart Thermostat - BYOT	Existing Dispatchable Device	Non communicating thermostat	5	\$100.00	\$100.00	14	2.081	0.0	\$0.00	100%	0	0
Business New Construction - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & GAS	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	7.7	\$0.00	100%	0	0
Business New Construction - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC ONLY	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	0.0	\$0.00	100%	0	0
Business New Construction - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	911	0.000	0.0	\$0.00	100%	0	0
Business New Construction - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	\$3,667.00	\$0.00	685	114.240	0.0	\$0.00	100%	0	0
Business New Construction - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	\$3,667.00	\$0.00	685	114.240	0.0	\$0.00	100%	0	0
Business New Construction - MN	AC Rewards-DR	Residential Smart Thermostat - Multifamily - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$25.00	\$25.00	1	0.386	0.0	\$0.00	70%	0	0
Business New Construction - MN	AC Rewards-EE	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo - Multifamily	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$110.00	\$110.00	43	0.082	1.4	\$0.00	100%	0	0
Business New Construction - MN	EEB	Energy Efficient Buildings - Gas - 2023	More Efficient than Code Building	Code-Compliant Building	19	\$3,694.44	\$8,754.70	0	0.000	193.7	-\$28.00	100%	0	0
Business New Construction - MN	EEB	Energy Efficient Buildings - Electric - 2023	More Efficient than Code Building	Code-Compliant Building	18	\$8,340.74	\$16,995.81	35,543	9.401	0.0	-\$130.09	100%	0	0
Commercial Efficiency - MN	Behavioral Commercial	Behavioral Changes	Behavior changes that reduce energy use.	No change in behavior	3	\$1,859.62	\$0.00	92,981	5.778	0.0	\$0.00	100%	0	0
Commercial Efficiency - MN	EDA	CE Parent for gas EDA projects	More Efficient than Code Building	Code-Compliant Building	20	\$10,043.00	\$161,280.57	0	0.000	2,014.1	\$0.00	100%	0	0
Commercial Efficiency - MN	EDA	CE Parent for electric EDA projects	More Efficient than Code Building	Code-Compliant Building	20	\$13,684.00	\$60,987.85	198,178	39	35.8	-\$104.84	100%	5	5
Commercial Efficiency - MN	EDA	CE Parent for gas EDA projects - 2023	More Efficient than Code Building	Code-Compliant Building	20	\$8,952.58	\$161,280.57	0	0.000	1,790.5	\$0.00	100%	0	0
Commercial Efficiency - MN	EDA	CE Parent for electric EDA projects - 2023	More Efficient than Code Building	Code-Compliant Building	20	\$52,180.67	\$201,846.37	344,615	77.186	0.0	-\$104.84	100%	0	0
Commercial Efficiency - MN	EEB	CE Parent for gas EEB projects	More Efficient than Code Building	Code-Compliant Building	20	\$3,694.44	\$8,754.70	0	0.000	193.7	-\$28.00	100%	0	0
Commercial Efficiency - MN	EEB	CE Parent for electric EEB projects	More Efficient than Code Building	Code-Compliant Building	20	\$8,340.74	\$16,995.81	40,755	10.476	0.0	-\$130.09	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Commercial Efficiency - MN	Electric Rate Savings	Participating Customer	Utility load control of at least 50 kW for control period	No control	5	\$0.00	\$0.00	329	184.289	0.0	\$0.00	100%	0	0
Commercial Efficiency - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	1	0.806	0.0	\$0.00	100%	0	0
Commercial Efficiency - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	3	2.113	0.0	\$0.00	100%	0	0
Commercial Efficiency - MN	AC Rewards - Business	Business Smart Thermostat - DR Direct Install	New installation of DR Capable Smart Thermostat	Non communicating thermostat	5	\$255.00	\$255.00	14	2.081	0.0	\$0.00	100%	0	0
Commercial Efficiency - MN	AC Rewards - Business	Business Smart Thermostat - BYOT	Existing Dispatchable Device	Non communicating thermostat	5	\$100.00	\$100.00	14	2.081	0.0	\$0.00	100%	0	0
Commercial Efficiency - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & GAS	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	7.7	\$0.00	100%	0	0
Commercial Efficiency - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC ONLY	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	0.0	\$0.00	100%	0	0
Commercial Efficiency - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	911	0.000	0.0	\$0.00	100%	0	0
Commercial Efficiency - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods	No control	1	\$6,559.00	\$0.00	1,226	204.320	0.0	\$0.00	100%	0	0
Commercial Efficiency - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods	No control	1	\$6,559.00	\$0.00	1,226	204.320	0.0	\$0.00	100%	0	0
Commercial Efficiency - MN	Custom Electric Commercial Efficiency Project	Custom Electric Commercial Efficiency Project	New Efficient Equipment	Less Efficient Product/Systems	6	\$3,793.75	\$15,887.25	101,114	14	0.0	\$0.00	100%	2	2
Commercial Efficiency - MN	Custom Gas Commercial Efficiency Project	Custom Gas Commercial Efficiency Project	New Efficient Equipment	Less Efficient Product/Systems	18	\$4,416.06	\$19,884.14	179,889	4	8.0	\$42.67	100%	8	8
Commercial Efficiency - MN	Efficiency Controls Gas Project	Commercial Efficiency Controls Gas Project	New Building Controls	Old Building Controls	15	\$14,769.26	\$8,181.36	0	0.000	193.8	\$1,195.19	100%	0	11
Commercial Efficiency - MN	Efficiency Controls Electric Project	Commercial Efficiency Controls Electric Project	New Building Controls	Old Building Controls	15	\$8,375.64	\$52,277.85	170,777	2,244	0.0	\$1,461.23	100%	0	0
Commercial Efficiency - MN	Data Center Efficiency Implementation	CE Data Center Custom Project	High Efficiency Product/System	Less Efficient Product/Systems	20	\$5,708.54	\$86,625.00	146,829	7,547	0.0	\$2,000.00	100%	0	0
Commercial Efficiency - MN	Commercial Efficiency Prescriptive	Average Cooling Project	More efficient cooling equipment	Baseline System	20	\$9,406.11	\$6,007.00	76,927	4	0.0	\$0.00	100%	10	10
Commercial Efficiency - MN	Commercial Efficiency Prescriptive	Average Compressed Air/FSO Project	Optimized System	Old System	15	\$950.73	\$4,728.25	35,258	4	0.0	\$0.00	100%	20	21
Commercial Efficiency - MN	Commercial Efficiency Prescriptive	Average Lighting Project	Optimized System	Old System	10	\$631.92	\$2,908.21	11,837	4	0.0	-\$137.11	100%	613	613
Commercial Efficiency - MN	Commercial Efficiency Prescriptive	Average Motor Project	Optimized System	Old System	10	\$899.22	\$2,978.50	27,748	3	0.0	\$0.00	100%	184	184
Commercial Efficiency - MN	Commercial Efficiency Prescriptive	Average Heating Project	New System	Old System	4	\$1,262.51	\$8,513.17	0	0.000	841.7	\$0.00	100%	0	29
Commercial Efficiency - MN	Commercial Efficiency Study	Phase 2 Study	0	0	0	\$13,782.44	\$17,974.94	0	0.000	0.0	\$0.00	100%	0	0
Commercial Efficiency - MN	RCx Implementation	Implementation of ECO's found in studies	Post-Commissioned Building	Pre-Commissioned Building	20	\$615.00	\$2,788.97	38,814	4	0.0	\$0.00	100%	2	3
Commercial Efficiency - MN	CE	System Optimization and Annual Achievement Bonuses	0	0	0	\$176.98	\$0.00	0	0.000	0.0	\$0.00	100%	0	50
Commercial Efficiency - MN	EEB	Energy Efficient Buildings - Gas - 2023	More Efficient than Code Building	Code-Compliant Building	19	\$3,694.44	\$8,754.70	0	0.000	193.7	-\$28.00	100%	0	0
Commercial Efficiency - MN	EEB	Energy Efficient Buildings - Electric - 2023	More Efficient than Code Building	Code-Compliant Building	18	\$8,340.74	\$16,995.81	35,543	9,401	0.0	-\$130.09	100%	0	0
Commercial Streamlined Assessments - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$2.00	1	1	0.0	\$0.00	100%	1	1
Commercial Streamlined Assessments - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	3	2.113	0.0	\$0.00	100%	0	0
Commercial Streamlined Assessments - MN	AC Rewards - Business	Business Smart Thermostat - DR Direct Install	New installation of DR Capable Smart Thermostat	Non communicating thermostat	5	\$255.00	\$255.00	14	2.081	0.0	\$0.00	100%	0	0
Commercial Streamlined Assessments - MN	AC Rewards - Business	Business Smart Thermostat - BYOT	Existing Dispatchable Device	Non communicating thermostat	5	\$100.00	\$100.00	14	2.081	0.0	\$0.00	100%	0	0
Commercial Streamlined Assessments - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & GAS	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	7.7	\$0.00	100%	0	0
Commercial Streamlined Assessments - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC ONLY	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	0.0	\$0.00	100%	0	0
Commercial Streamlined Assessments - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	911	0.000	0.0	\$0.00	100%	0	0
Commercial Streamlined Assessments - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods	No control	1	\$3,821.00	\$0.00	714	119.040	0.0	\$0.00	100%	0	0
Commercial Streamlined Assessments - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods	No control	1	\$3,821.00	\$0.00	714	119.040	0.0	\$0.00	100%	0	0
Commercial Streamlined Assessments - MN	Custom Turnkey Electric Project	Custom Turnkey Electric Project	New Efficient Equipment	Less Efficient Product/Systems	20	\$4,757.00	\$17,986.15	224,297	31	0.0	\$6,856.27	100%	1	3
Commercial Streamlined Assessments - MN	Custom Turnkey Gas Project	Custom Turnkey Gas Project	New Efficient Equipment	Less Efficient Product/Systems	18	\$986.00	\$16,377.00	0	0.000	187.2	\$0.00	100%	0	1
Commercial Streamlined Assessments - MN	Turn Key Services Prescriptive	Average Cooling Project	More efficient cooling equipment	Baseline System	20	\$1,342.40	\$6,498.60	6,960	4	0.0	\$0.00	100%	63	63
Commercial Streamlined Assessments - MN	Turn Key Services Prescriptive	Average Compressed Air/FSO Project	Efficient Equipment	Non-Optimized System	14	\$1,573.31	\$3,323.81	27,893	3	0.0	\$20.67	100%	21	24

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Commercial Streamlined Assessments - MN	Turn Key Services Prescriptive	Average Lighting Project	Optimized System	Old System	15	\$1,306.96	\$3,403.75	24,253	1	0.0	-\$359.82	100%	214	218
Commercial Streamlined Assessments - MN	Turn Key Services Prescriptive	Average Motor Project	Efficient Equipment	Old System	15	\$437.50	\$2,010.26	2,886	0	0.0	\$0.00	100%	2	2
Commercial Streamlined Assessments - MN	Turn Key Services Prescriptive	Average Heating Project	New System	Old System	15	\$576.81	\$2,389.90	12,744	6	77.9	\$0.00	100%	7	92
Commercial Streamlined Assessments - MN	Commercial Streamlined Assessment	Streamlined Assessment	Assessment Performed and Energy Efficient Improvements Implemented	Existing Building Pre-Assessment	0	\$1,500.00	\$1,750.00	0	0.000	0.0	\$0.00	100%	0	0
Commercial Streamlined Assessments - MN	Commercial Streamlined Assessment	Recommissioning Implementation	Post-Recommissioned Building	Pre-Recommissioned Building	7	\$0.00	\$250.00	21,741	0.000	260.6	\$0.00	100%	0	0
Compressed Air Efficiency - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	\$4,458.00	\$0.00	833	138.880	0.0	\$0.00	100%	0	0
Compressed Air Efficiency - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	\$4,458.00	\$0.00	833	138.880	0.0	\$0.00	100%	0	0
Compressed Air Efficiency - MN	ECO	Non-Custom Opportunity Identified in a study	Optimized System	Non-Optimized System	5	\$0.00	\$2,568.00	106,530	12.275	0.0	\$0.00	100%	0	0
Compressed Air Efficiency - MN	Supply Side Study	Supply-side compressed air study with leak fixes	Leaks & Waste Found and Repaired	Existing System with Leaks & Waste that have not been repaired	5	\$5,317.00	\$7,443.00	58,574	6.460	0.0	\$0.00	100%	0	0
Compressed Air Efficiency - MN	Cycling Dryers	Cycling or Variable Speed Refrigerated Dryer	New Cycling Refrigerated Dryer	New Non-Cycling Refrigerated Dryer	20	\$729.82	\$1,176.25	12,883	1	0.0	\$0.00	100%	22	0
Compressed Air Efficiency - MN	Dryer Purge Demand Controls	Dryer Purge Demand Controls on a Heatless Desiccant Dryer	Purge Control for Heatless Desiccant Dryers	No Purge Control for Heatless Desiccant Dryers	15	\$2,030.00	\$3,444.20	95,483	10	0.0	\$0.00	100%	4	0
Compressed Air Efficiency - MN	Mist Eliminators	Mist Eliminator Filter w/ rated pressure drop of 1 psig or less	New Mist Eliminator Filter	New General Purpose Filter	15	\$900.00	\$2,384.00	8,180	1	0.0	\$323.00	100%	3	0
Compressed Air Efficiency - MN	No Air Loss Drain	New No-Air Loss Drains	New No-Air Loss Drains	New Electronic Solenoid/Timer Drains	20	\$392.31	\$623.98	1,048	1	0.0	\$0.00	100%	26	0
Compressed Air Efficiency - MN	New VFD Compressor	10HP VFD Air Compressor - New	New 10HP VFD Compressor	New 10HP Fixed Speed Compressor w/ modulation or load no-load control	20	\$1,500.00	\$2,174.25	3,226	2	0.0	\$0.00	100%	3	0
Compressed Air Efficiency - MN	New VFD Compressor	15HP VFD Air Compressor - New	New 15HP VFD Compressor	New 15HP Fixed Speed Compressor w/ modulation or load no-load control	20	\$2,250.00	\$2,782.50	3,779	3	0.0	\$0.00	100%	4	0
Compressed Air Efficiency - MN	New VFD Compressor	20HP VFD Air Compressor - New	New 20HP VFD Compressor	New 20HP Fixed Speed Compressor w/ modulation or load no-load control	20	\$4,000.00	\$5,122.67	11,809	5	0.0	\$0.00	100%	3	0
Compressed Air Efficiency - MN	New VFD Compressor	25HP VFD Air Compressor - New	New 25HP VFD Compressor	New 25HP Fixed Speed Compressor w/ modulation or load no-load control	20	\$4,375.00	\$6,025.83	24,866	6	0.0	\$0.00	100%	6	0
Compressed Air Efficiency - MN	New VFD Compressor	30HP VFD Air Compressor - New	New 30HP VFD Compressor	New 30HP Fixed Speed Compressor w/ modulation or load no-load control	20	\$4,500.00	\$7,111.25	26,406	8	0.0	\$0.00	100%	3	0
Compressed Air Efficiency - MN	New VFD Compressor	40HP VFD Air Compressor - New	New 40HP VFD Compressor	New 40HP Fixed Speed Compressor w/ modulation or load no-load control	20	\$6,461.54	\$8,197.83	36,921	9	0.0	\$0.00	100%	13	0
Compressed Air Efficiency - MN	Demand Side Study	Demand-side compressed air and vacuum system studies	Study Completed	No Study Completed	5	\$3,753.00	\$5,003.00	0	0.000	0.0	\$0.00	100%	0	0
Compressed Air Efficiency - MN	Custom Compressed Air Project	Custom compressed air, blower, and vacuum opportunities. With Study	New Equipment	Old or less efficient systems or equipment	5	\$5,298.01	\$3,984.44	38,116	3	0.0	\$76.92	100%	31	0
Compressed Air Efficiency - MN	Custom Compressed Air Project	Custom compressed air, blower, and vacuum opportunities. Without Study	New Equipment	Old or less efficient systems or equipment	20	\$15,598.78	\$46,473.33	246,696	27	0.0	\$0.00	100%	9	0
Custom Efficiency - MN	Custom Custom Electric Project	Custom Efficiency Electric	High Efficiency Product/System	Less Efficient Product/Systems	15	\$10,632.04	\$126,302.54	168,240	16	0.0	\$71,529.57	100%	28	0
Custom Efficiency - MN	Custom Gas Project	Custom Efficiency Gas	High Efficiency Product/System	Less Efficient Product/Systems	15	\$7,327.24	\$88,980.25	0	0.000	1,884.1	\$16,050.85	100%	0	16
Custom Efficiency - MN	In-Depth Study	Custom Studies Electric	0	0	0	\$12,972.79	\$22,074.46	0	0.000	0.0	\$0.00	100%	0	0
Custom Efficiency - MN	In-Depth Study	Custom Studies Gas	0	0	0	\$15,653.25	\$22,463.67	0	0.000	0.0	\$0.00	100%	0	0
Data Center Efficiency - MN	EDA	New Construction, addition or renovation for Data Centers	Highly efficient data center	Standard efficiency new data center	20	\$40,444.44	\$50.00	44	0.006	0.8	\$0.00	100%	0	0
Data Center Efficiency - MN	Electric Rate Savings	Participating Customer	Utility load control of at least 50 kW for control period	No control	5	\$0.00	\$50.00	71	0.010	0.0	\$0.00	100%	0	0
Data Center Efficiency - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	\$8,259.00	\$3,624.95	1,143	0.385	24.1	\$0.00	100%	0	0
Data Center Efficiency - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	\$8,259.00	\$3,624.95	1,143	0.385	0.0	\$0.00	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Data Center Efficiency - MN	Computer VDI	Zero & Thin Client Installations	Server & software at data center, along with thin-client or zero-client devices, to replace desktop CPU (e.g. VM Ware w/ Wyse thin-client system, Palo-Logic zero-client system), meeting Energy Star (E) specification	Desktop computers meeting ENERGY STAR 3.0 specifications	10	\$10.00	\$3,064.94	0	0.000	22.3	\$0.00	100%	0	0
Data Center Efficiency - MN	Data Center Efficiency Implementation	Data Center Measures - Study Identified	High Efficiency Product/System	Less Efficient Product/Systems	20	\$5,708.54	\$2,339.31	3,751	0.815	17.7	\$0.00	100%	0	0
Data Center Efficiency - MN	Data Center Efficiency Implementation	Data Center Measures - Customer Identified	High Efficiency Product/System	Less Efficient Product/Systems	20	\$5,708.54	\$3,387.13	5,493	1.164	30.6	\$0.00	100%	0	0
Data Center Efficiency - MN	Data Center Efficiency Implementation	Data Center Measures - On Site	High Efficiency Product/System	Less Efficient Product/Systems	20	\$5,708.54	\$4,362.94	6,276	1.275	46.6	\$0.00	100%	0	0
Data Center Efficiency - MN	Data Center Efficiency Prescriptive	Average Cooling Project	Efficient Equipment	Old System	20	\$45,500.67	\$5,220.27	8,245	1.540	65.4	\$0.00	100%	0	0
Data Center Efficiency - MN	Data Center Efficiency Prescriptive	Average Lighting Project	Efficient Equipment	Old System	20	\$1,784.25	\$8,940.30	30,819	3	203.2	\$0.00	100%	8	0
Data Center Efficiency - MN	Data Center Efficiency Prescriptive	Average Motor Project	Efficient Equipment	Old System	15	\$16,120.00	\$8,499.94	11,455	1.436	100.7	\$0.00	100%	0	0
Data Center Efficiency - MN	Data Center Efficiency Prescriptive	Average Computer Project	Efficient Equipment	Old System	10	\$4,717.89	\$694.08	1,077	0.253	0.0	\$0.00	100%	0	0
Data Center Efficiency - MN	CRAC Units	Downflow, Air-Cooled w/ Economizer, 65,000 ≤ Net Sensible Btuh < 240,000	More efficient CRAC unit	CRAC unit at Code efficiency	20	\$1,200.00	\$2,314.72	27,308	3	0.0	\$0.00	100%	1	0
Data Center Efficiency - MN	CRAC Units	Downflow, Air-Cooled w/ Economizer, 240,000 ≤ Net Sensible Btuh < 760,000	More efficient CRAC unit	CRAC unit at Code efficiency	20	\$3,195.20	\$1,097.93	1,678	0.403	0.0	\$0.00	100%	0	0
Data Center Efficiency - MN	CRAC Units	Upflow, Air-Cooled w/ Economizer, 240,000 ≤ Net Sensible Btuh < 760,000	More efficient CRAC unit	CRAC unit at Code efficiency	20	\$3,301.40	\$1,244.03	2,079	0.533	0.0	\$0.00	100%	0	0
Data Center Efficiency - MN	CRAC Units	Downflow, Glycol-Cooled, 65,000 ≤ Net Sensible Btuh < 240,000	More efficient CRAC unit	CRAC unit at Code efficiency	20	\$893.00	\$3,386.95	2,796	0.639	0.0	\$0.00	100%	0	0
Data Center Efficiency - MN	CRAC Units	Upflow, Glycol-Cooled w/ Economizer, 240,000 ≤ Net Sensible Btuh < 760,000	More efficient CRAC unit	CRAC unit at Code efficiency	20	\$1,656.48	\$2,413.31	21,926	1.683	0.0	\$0.00	100%	0	0
Data Center Efficiency - MN	Plate & Frame Heat Exchangers	Chilled Water Systems Waterside Economizer	Chilled water system with waterside economizer	Chilled water system without economizer	20	\$21,200.00	\$1,602.38	0	0.000	11.9	\$0.00	100%	0	0
Data Center Efficiency - MN	In-Depth Study	Data Center Efficiency Study	Study Performed	0	0	\$7,350.00	\$2,475.61	0	0.000	22.3	\$0.00	100%	0	0
Efficiency Controls - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$3,270.90	0	0.000	34.7	\$0.00	100%	0	0
Efficiency Controls - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$4,700.30	0	0.000	43.3	\$0.00	100%	0	0
Efficiency Controls - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	\$4,171.00	\$2,443.25	0	0.000	64.5	\$0.00	100%	0	0
Efficiency Controls - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	\$4,171.00	\$7,794.54	0	0.000	88.9	\$0.00	100%	0	0
Efficiency Controls - MN	Efficiency Controls Gas Project	Efficiency Controls - Gas	New Building Controls	Old Building Controls	15	\$4,005.47	\$88,728.00	0	0.000	\$88.9	\$1,195.19	100%	0	8
Efficiency Controls - MN	Efficiency Controls Electric Project	Efficiency Controls - Electric	New Building Controls	Old Building Controls	15	\$8,375.64	\$53,524.68	\$51,359	11,114	0.0	\$1,461.23	100%	29	0
Efficiency Controls - MN	Demand Control	RTU Economizer Control with Demand Control Ventilation	RTU With Demand Control	RTU Without Demand Control	15	\$303.13	\$1,879.00	1,060	1.602	0.0	\$0.00	100%	8	0
Efficient New Home Construction - MN	ENERGY STAR Refrigerator	Refrigerator Replacement	ENERGY STAR® Refrigerators	Industry Standard	14	\$14.99	\$25.00	45	3	0.0	\$0.00	100%	1,592	0
Efficient New Home Construction - MN	ENERGY STAR Clothes Dryer	ENERGY STAR Clothes Dryer	Energy Star Clothes Dryer >= 4.4 Cu.Ft.	Industry Standard	10	\$40.00	\$75.00	25	3	0.0	\$0.00	100%	136	0
Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Front-loading Clothes Washer - Combo Customers w/ Electric DHW	Energy Star Front-Loading Clothes Washer w/ electric DHW and Electric Dryer	Standard Front-Loading Clothes Washer	13	\$36.84	\$17.00	37	3	0.0	\$0.00	100%	19	0
Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Front-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Front-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	\$9.79	\$24.00	14	0	6.2	\$0.00	100%	73	73
Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Top-loading Clothes Washer - Combo Customers w/ Electric DHW	Energy Star Top-Loading Clothes Washer w/ electric DHW and Electric Dryer	Standard Top-Loading Clothes Washer	14	\$40.00	\$30.00	11	3	0.0	\$0.00	100%	45	0
Efficient New Home Construction - MN	ENERGY STAR Clothes Washer	Energy Star Top-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Top-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Top-Loading Clothes Washer	14	\$10.00	\$25.00	14	0	6.2	\$0.00	100%	58	58
Efficient New Home Construction - MN	New Homes	Low Income Envelope Improvements - Combo	Energy Efficient Home	Reference Home Based upon Local Code	20	\$588.31	\$215.00	2	1.109	0.0	\$0.00	100%	0	0
Efficient New Home Construction - MN	New Homes	Low Income Envelope Improvements - Electric Only	Energy Efficient Home	Reference Home Based upon Local Code	20	\$100.00	\$125.00	253	0.600	3.2	\$0.00	100%	0	0
Efficient New Home Construction - MN	New Homes	Low Income Envelope Improvements - Gas Only	Energy Efficient Home	Reference Home Based upon Local Code	20	\$563.42	\$40.68	118	0.180	0.0	\$0.00	100%	0	0
Efficient New Home Construction - MN	New Homes	10% to 15% Improvement over code - Combo	Energy Efficient Home	Reference Home Based upon Local Code	20	\$125.00	\$1,788.00	1,719	5	12.3	\$0.00	100%	352	352
Efficient New Home Construction - MN	New Homes	15% to 20% Improvement over code - Combo	Energy Efficient Home	Reference Home Based upon Local Code	20	\$249.33	\$1,080.04	1,411	5	32.0	\$0.00	100%	749	749
Efficient New Home Construction - MN	New Homes	20% to 25% Improvement over code - Combo	Energy Efficient Home	Reference Home Based upon Local Code	20	\$500.00	\$2,181.47	1,635	5	34.8	\$12.17	100%	604	604
Efficient New Home Construction - MN	New Homes	25% to 30% Improvement over code - Combo	Energy Efficient Home	Reference Home Based upon Local Code	20	\$600.00	\$2,810.13	1,871	5	46.8	\$17.32	100%	113	113



Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Efficient New Home Construction - MN	New Homes	30% to 35% improvement over code - Combo	Energy Efficient Home	Reference Home Based upon Local Code	20	\$750.00	\$3,708.00	1,988	0	81.3	\$12.17	100%	7	7
Efficient New Home Construction - MN	New Homes	35% and greater improvement over code - Combo	Energy Efficient Home	Reference Home Based upon Local Code	20	\$1,000.00	\$4,449.07	4,704	1	58.9	\$17.32	100%	4	4
Efficient New Home Construction - MN	New Homes	10% to 15% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	\$100.00	\$3.30	811	0.000	0.0	\$97.40	100%	0	0
Efficient New Home Construction - MN	New Homes	15% to 20% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	\$100.00	\$3.50	944	0.000	0.0	\$65.49	100%	0	0
Efficient New Home Construction - MN	New Homes	20% to 25% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	\$100.00	\$3.30	0	0.000	2.2	\$97.40	100%	0	0
Efficient New Home Construction - MN	New Homes	25% to 30% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	\$100.00	\$3.50	0	0.000	1.5	\$65.49	100%	0	0
Efficient New Home Construction - MN	New Homes	30% to 35% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	\$100.00	\$200.00	1	0.213	0.0	\$0.00	100%	0	0
Efficient New Home Construction - MN	New Homes	35% and greater improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	\$100.00	\$325.00	152	0.071	0.0	\$0.00	100%	0	0
Efficient New Home Construction - MN	New Homes	10% to 15% improvement over code - Gas Only	Energy Efficient Home	Reference Home Based upon Local Code	20	\$250.00	\$3.30	152	0.071	11.8	\$0.00	100%	0	83
Efficient New Home Construction - MN	New Homes	15% to 20% improvement over code - Gas Only	Energy Efficient Home	Reference Home Based upon Local Code	20	\$500.00	\$2,478.91	0	0.000	22.3	\$0.00	100%	0	259
Efficient New Home Construction - MN	New Homes	20% to 25% improvement over code - Gas Only	Energy Efficient Home	Reference Home Based upon Local Code	20	\$1,000.00	\$3,370.90	0	0.000	34.0	\$0.00	100%	0	182
Efficient New Home Construction - MN	New Homes	25% to 30% improvement over code - Gas Only	Energy Efficient Home	Reference Home Based upon Local Code	20	\$1,200.00	\$4,700.30	0	0.000	47.2	\$0.00	100%	0	24
Efficient New Home Construction - MN	New Homes	30% to 35% improvement over code - Gas Only	Energy Efficient Home	Reference Home Based upon Local Code	20	\$1,500.00	\$2,443.20	0	0.000	64.5	\$0.00	100%	0	3
Efficient New Home Construction - MN	New Homes	35% and greater improvement over code - Gas Only	Energy Efficient Home	Reference Home Based upon Local Code	20	\$2,000.00	\$7,794.54	0	0.000	88.9	\$0.00	100%	0	0
Efficient New Home Construction - MN	New Homes - 100% Electric Homes	10% to 15% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	\$100.00	\$664.08	1,877	0	0.0	\$0.00	100%	408	0
Efficient New Home Construction - MN	New Homes - 100% Electric Homes	15% to 20% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	\$99.88	\$481.30	1,988	0	0.0	\$0.00	100%	850	0
Efficient New Home Construction - MN	New Homes - 100% Electric Homes	20% to 25% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	\$101.47	\$1,080.91	1,876	0	0.0	\$0.00	100%	545	0
Efficient New Home Construction - MN	New Homes - 100% Electric Homes	25% to 30% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	\$111.83	\$1,344.20	2,076	1	0.0	\$0.00	100%	93	0
Efficient New Home Construction - MN	New Homes - 100% Electric Homes	30% to 35% improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	\$207.69	\$3,388.00	2,798	1	0.0	\$0.00	100%	13	0
Efficient New Home Construction - MN	New Homes - 100% Electric Homes	35% and greater improvement over code - Electric Only Customer	Energy Efficient Home	Reference Home Based upon Local Code	20	\$100.00	\$1,888.02	4,000	1	0.0	\$0.00	100%	1	0
Efficient New Home Construction - MN	AC Rewards-EE	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$66.67	\$95.48	48	0	2.7	\$0.00	100%	0	0
Efficient New Home Construction - MN	AC Rewards-DR	Residential Smart Thermostat - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$190.00	\$190.00	2	1.109	0.0	\$0.00	100%	0	0
Efficient New Home Construction - MN	AC Rewards-EE	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$66.67	\$95.48	48	0	2.7	\$0.00	100%	450	315
Efficient New Home Construction - MN	AC Rewards-DR	Residential Smart Thermostat	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$125.00	\$215.00	2	1.109	0.0	\$0.00	100%	0	0
Efficient New Home Construction - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	253	0.600	3.2	\$0.00	100%	0	0
Efficient New Home Construction - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$40.68	118	0.180	0.0	\$0.00	100%	0	0
Efficient New Home Construction - MN	Smart Thermostat	Install Energy Star certified smart thermostat - GAS ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$106.07	0	0.000	2.8	\$0.00	100%	0	0
Efficient New Home Construction - MN	ES Radon Fans	Energy Star Radon Fans	Energy Star Radon Fan - Radonaway RP140	Radonaway RP145	10	\$20.00	\$0.00	273	0.031	0.0	\$0.00	100%	0	0
Efficient New Home Construction - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.25	\$1.25	74	0.010	0.0	\$12.17	100%	0	0
Efficient New Home Construction - MN	Aerators - EWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$1.50	\$1.50	91	0.013	0.0	\$17.32	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Efficient New Home Construction - MN	Aerators - GWH	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	2.2 GPM Kitchen Faucet Aerator	10	\$1.25	\$1.25	0	0.000	0.3	\$12.17	100%	0	0
Efficient New Home Construction - MN	Aerators - GWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$1.50	\$1.50	0	0.000	0.4	\$17.32	100%	0	0
Efficient New Home Construction - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$3.50	511	0.037	0.0	\$97.40	100%	0	0
Efficient New Home Construction - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$3.50	344	0.025	0.0	\$65.49	100%	0	0
Efficient New Home Construction - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$3.50	0	0.000	2.2	\$97.40	100%	0	0
Efficient New Home Construction - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$3.50	0	0.000	1.5	\$65.49	100%	0	0
Efficient New Home Construction - MN	Water Heater DR	Demand response capability on grid enabled electric resistance water heater	Demand response from electric resistance water heater	No management of water heater time of use	1	\$100.00	\$200.00	1	0.213	0.0	\$0.00	100%	0	0
Efficient New Home Construction - MN	Water Heater DR	Load Shift & Demand response capability on new heat pump water heater (CTA 2045)	Heat Pump Water Heater w/ DR Management	No management of water heater time of use	1	\$100.00	\$325.00	152	0.071	0.0	\$0.00	100%	0	0
Efficient New Home Construction - MN	Water Heater DR	Load Shift & Demand response capability on new heat pump water heater (CTA 2045) - Annual Re Enrollment	Heat Pump Water Heater w/ DR Management - Re Enrollment of Existing Customer	No management of water heater time of use	1	\$25.00	\$0.00	152	0.071	0.0	\$0.00	100%	0	0
EIS - MN	Behavioral EIS	Behavioral Changes	Behavior changes that reduce energy use	No change in behavior	5	\$2,095.80	\$0.00	107,802	52	1,512.3	\$0.00	100%	5	0
EIS - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	1	0.806	0.0	\$0.00	100%	0	0
EIS - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	3	2.113	0.0	\$0.00	100%	0	0
EIS - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	\$3,657.00	\$0.00	694	113.920	0.0	\$0.00	100%	0	0
EIS - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	\$3,657.00	\$0.00	694	113.920	0.0	\$0.00	100%	0	0
EIS - MN	Custom EIS Project	Custom EIS Project	New Equipment	Less Efficient Product/Systems	16	\$13,157.33	\$26,308.00	200,621	29,239	0.0	\$0.00	100%	0	0
EIS - MN	RCx Implementation	Recommissioning Implementation	Post-Recommissioned Building	Pre-Recommissioned Building	7	\$6,303.37	\$24,000.57	197,023	6,159	534.4	\$623.93	100%	0	0
EIS - MN	EIS - Prescriptive	Average Cooling Project	More efficient cooling equipment	Baseline System	20	\$209.80	\$1,057.28	327	0.368	0.0	\$0.00	100%	0	0
EIS - MN	EIS - Prescriptive	Average Lighting Project	Efficient Equipment	Old System	15	\$1,513.08	\$7,876.14	36,603	4	0.0	\$240.58	100%	86	0
EIS - MN	EIS - Prescriptive	Average Motor Project	Efficient Equipment	Old System	17	\$3,120.08	\$13,988.34	84,987	7	0.0	\$0.00	100%	25	0
EIS - MN	EIS - Prescriptive	Average Heating Project	Efficient Equipment	Old System	20	\$397.66	\$1,251.52	0	0.000	782.0	\$0.00	100%	0	0
EIS - MN	Custom EIS Gas Project	Custom EIS Gas Project	New Efficient Equipment	Less Efficient Product/Systems	15	\$3,688.67	\$17,980.33	0	0.000	737.8	\$42.67	100%	0	0
EIS - MN	Efficiency Controls Electric Project	EIS Efficiency Controls Electric Project	New Building Controls	Old Building Controls	12	\$1,555.78	\$5,024.71	67,344	6	0.0	\$1,461.23	100%	7	0
EIS - MN	Efficiency Controls Gas Project	EIS Efficiency Controls Gas Project	New Building Controls	Old Building Controls	15	\$4,005.47	\$47,311.88	0	0.000	801.1	\$1,195.19	100%	0	0
EIS - MN	EIS Prescriptive	Average Compressed Air/FSO Project	Optimized System	Old System	11	\$5,560.00	\$13,880.63	52,930	7,257	0.0	\$0.00	100%	0	0
EIS - MN	Energy Information Installation	Energy Information Installation	New EIS	Old EIS	5	\$1,720.00	\$1.00	113,997	30	0.0	\$0.00	100%	1	0
Electric Rate Savings - MN	Electric Rate Savings	Participating Customer	Utility load control of at least 50 kW for control period	No control	5	\$0.00	\$7.09	1,927	629,760	0.0	\$0.00	100%	47	0
Energy Efficient Showerhead - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2021	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.84	\$1.84	99	0.009	0.0	\$12.17	30.0%	352	0
Energy Efficient Showerhead - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2022	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.64	\$1.64	74	0.010	0.0	\$12.17	30.0%	0	0
Energy Efficient Showerhead - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2023	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.64	\$1.64	74	0.010	0.0	\$12.17	30.0%	0	0
Energy Efficient Showerhead - MN	Aerators - EWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2021	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.62	\$0.62	62	0.006	0.0	\$12.22	35.1%	343	0
Energy Efficient Showerhead - MN	Aerators - EWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2022	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.52	\$0.52	64	0.009	0.0	\$12.22	35.1%	0	0
Energy Efficient Showerhead - MN	Aerators - EWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2023	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.52	\$0.52	64	0.009	0.0	\$12.22	35.1%	0	0
Energy Efficient Showerhead - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2021	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.64	\$0.64	64	0.006	0.0	\$12.22	35.1%	191	0
Energy Efficient Showerhead - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2022	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.52	\$0.52	64	0.009	0.0	\$12.22	35.1%	0	0
Energy Efficient Showerhead - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater - 2023	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.52	\$0.52	64	0.009	0.0	\$12.22	35.1%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Energy Efficient Showerhead - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2021	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.95	\$1.95	0	0.000	0.3	\$12.17	30.0%	0	2,551
Energy Efficient Showerhead - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2022	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.64	\$1.64	0	0.000	0.3	\$12.17	30.0%	0	0
Energy Efficient Showerhead - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2023	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.64	\$1.64	0	0.000	0.3	\$12.17	30.0%	0	0
Energy Efficient Showerhead - MN	Aerators - GWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2021	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.52	\$0.52	0	0.000	0.3	\$12.22	35.1%	0	2,585
Energy Efficient Showerhead - MN	Aerators - GWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2022	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.52	\$0.52	0	0.000	0.3	\$12.22	35.1%	0	0
Energy Efficient Showerhead - MN	Aerators - GWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2023	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.52	\$0.52	0	0.000	0.3	\$12.22	35.1%	0	0
Energy Efficient Showerhead - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2021	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.64	\$0.64	0	0.000	0.3	\$12.22	35.1%	0	1,700
Energy Efficient Showerhead - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2022	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.52	\$0.52	0	0.000	0.3	\$12.22	35.1%	0	0
Energy Efficient Showerhead - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater - 2023	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.52	\$0.52	0	0.000	0.3	\$12.22	35.1%	0	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2021	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.40	\$3.40	490	0.030	0.0	\$97.40	63.8%	318	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2022	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.25	\$3.25	511	0.037	0.0	\$97.40	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2023	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.25	\$3.25	511	0.037	0.0	\$97.40	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2021	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.72	\$3.72	341	0.020	0.0	\$65.49	63.8%	171	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2022	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.25	\$3.25	344	0.025	0.0	\$65.49	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2023	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.25	\$3.25	344	0.025	0.0	\$65.49	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2021	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$5.71	\$5.71	300	0.020	0.0	\$97.40	63.8%	47	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2022	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$2.66	\$8.65	511	0.037	0.0	\$97.40	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2023	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$2.66	\$8.65	511	0.037	0.0	\$97.40	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2021	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$9.11	\$9.11	340	0.020	0.0	\$65.49	63.8%	9	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2022	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$2.66	\$8.65	344	0.025	0.0	\$65.49	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2023	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$2.66	\$8.65	344	0.025	0.0	\$65.49	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2021	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	\$1.26	\$4.25	511	0.037	0.0	\$97.40	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2022	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	\$4.17	\$4.17	340	0.020	0.0	\$97.40	63.8%	35	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Primary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2023	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	\$1.26	\$4.25	511	0.037	0.0	\$97.40	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2021	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	\$1.26	\$4.25	344	0.025	0.0	\$65.49	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2022	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	\$4.65	\$4.65	341	0.020	0.0	\$65.49	63.8%	21	0
Energy Efficient Showerhead - MN	Showerheads - EWH	Secondary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater - 2023	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	\$1.26	\$4.25	344	0.025	0.0	\$65.49	63.8%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2021	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.70	\$3.70	0	0.000	2.2	\$97.40	63.8%	0	2,309
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2022	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.25	\$3.25	0	0.000	2.2	\$97.40	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2023	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.25	\$3.25	0	0.000	2.2	\$97.40	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2021	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.71	\$3.71	0	0.000	1.5	\$65.49	63.8%	0	1,576
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2022	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.25	\$3.25	0	0.000	1.5	\$65.49	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2023	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.25	\$3.25	0	0.000	1.5	\$65.49	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2021	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$9.04	\$9.04	0	0.000	2.2	\$97.40	63.8%	0	212
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2022	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$2.66	\$8.65	0	0.000	2.2	\$97.40	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2023	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$2.66	\$8.65	0	0.000	2.2	\$97.40	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2021	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$9.00	\$9.00	0	0.000	1.5	\$65.49	63.8%	0	76
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2022	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$2.66	\$8.65	0	0.000	1.5	\$65.49	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2023	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$2.66	\$8.65	0	0.000	1.5	\$65.49	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2021	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	\$1.26	\$4.25	0	0.000	2.2	\$97.40	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2022	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	\$4.74	\$4.74	0	0.000	2.2	\$97.40	63.8%	0	193
Energy Efficient Showerhead - MN	Showerheads - GWH	Primary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2023	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	\$1.26	\$4.25	0	0.000	2.2	\$97.40	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2021	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	\$1.26	\$4.25	0	0.000	1.5	\$65.49	63.8%	0	0
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2022	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	\$4.65	\$4.65	0	0.000	1.5	\$65.49	63.8%	0	124
Energy Efficient Showerhead - MN	Showerheads - GWH	Secondary Styled Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater - 2023	1.5 GPM Styled Showerhead	2.5 GPM Showerhead	10	\$1.26	\$4.25	0	0.000	1.5	\$65.49	63.8%	0	0
Foodservice Equipment - MN	Dishwasher Combo	Dishwashers - Primary Fuel: Elec; Secondary Fuel: Gas	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	12	\$170.64	\$170.64	11,869	1,940	16.8	\$81.50	100%	6	0
Foodservice Equipment - MN	Dishwasher Combo	Dishwashers - Primary Fuel: Gas; Secondary Fuel: Elec	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	14	\$212.43	\$163.32	4,846	5,009	26.4	\$598.52	100%	1	2
Foodservice Equipment - MN	Dishwasher Electric	Dishwashers - Primary Fuel: Elec; Secondary Fuel: Elec	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	14	\$125.00	\$125.00	3,175	3,412	0.0	\$138.78	100%	2	0
Foodservice Equipment - MN	Dishwasher Electric	Dishwashers - Primary Fuel: Elec; Secondary Fuel: None	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	15	\$250.00	\$50.00	2,046	5,300	0.0	\$246.46	100%	3	0
Foodservice Equipment - MN	Dishwasher Gas	Dishwashers - Primary Fuel: Gas; Secondary Fuel: Gas	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	10	\$250.00	\$120.00	0	0.000	7.1	\$28.52	100%	0	0
Foodservice Equipment - MN	Dishwasher Gas	Dishwashers - Primary Fuel: Gas; Secondary Fuel: None	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	10	\$250.00	\$50.00	0	0.000	10.6	\$66.97	100%	0	0
Foodservice Equipment - MN	Food Service	Combi-Oven	Combination Oven	Steamer	12	\$1,000.00	\$4,498.12	0	0.000	199.4	\$0.00	100%	0	14
Foodservice Equipment - MN	Food Service	Commercial Gas Fryer	High Efficiency Unit	Standard Efficiency Unit	12	\$250.00	\$1,080.73	0	0.000	23.0	\$0.00	100%	0	5
Foodservice Equipment - MN	Food Service	Convection Oven	Convection Oven	Deck Oven	12	\$500.00	\$2,247.27	0	0.000	113.3	\$0.00	100%	0	9
Foodservice Equipment - MN	Food Service	Conveyor Oven	Conveyor Oven	Pizza Deck Oven	12	\$750.00	\$9,733.03	0	0.000	254.3	\$0.00	100%	0	0
Foodservice Equipment - MN	Food Service	High Efficiency Charbroiler	High Efficiency Charbroiler	Standard Charbroiler	12	\$300.00	\$1,080.50	0	0.000	107.0	\$0.00	100%	0	3
Foodservice Equipment - MN	Food Service	High Efficiency Salamander Broiler	High Efficiency Salamander Broiler	Standard Salamander Broiler	12	\$150.00	\$1,320.90	0	0.000	31.0	\$0.00	100%	0	2
Foodservice Equipment - MN	Food Service	Pasta Cooker	Pasta Cooker	Gas Range	12	\$200.00	\$1,972.81	0	0.000	113.0	\$0.00	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Foodservice Equipment - MN	Food Service	Rotating Rack Oven	Rotating Rack Oven	Deck Oven	12	\$500.00	\$1,819.20	0	0.000	104.2	\$0.00	100%	0	1
Foodservice Equipment - MN	Food Service	Rotisserie Oven	Rotisserie Oven - Infrared	Open Flame Rotisserie Oven	12	\$500.00	\$2,189.40	0	0.000	45.4	\$0.00	100%	0	0
Foodservice Equipment - MN	Food Service	Upright Broiler	Upright Broiler	Standard Radiant Broiler	12	\$600.00	\$1,272.00	0	0.000	31.2	\$0.00	100%	0	0
Foodservice Equipment - MN	Food Service Electric	Hot Food Holding Cabinet	ENERGY STAR qualified unit	Conventional unit as defined by ENERGY STAR	12	\$400.00	\$1,113.00	3,875	5.304	0.0	\$0.00	100%	1	0
Foodservice Equipment - MN	Steam Cooker	3 Pan Steam Cooker	Energy Star 3 Pan Steam Cooker	Non-Energy Star 3 Pan Steam Cooker	12	\$349.72	\$2,270.00	0	0.000	87.4	\$219.40	100%	0	0
Foodservice Equipment - MN	Steam Cooker	4 Pan Steam Cooker	Energy Star 4 Pan Steam Cooker	Non-Energy Star 4 Pan Steam Cooker	12	\$402.64	\$2,270.00	0	0.000	100.7	\$292.49	100%	0	0
Foodservice Equipment - MN	Steam Cooker	5 Pan Steam Cooker	Energy Star 5 Pan Steam Cooker	Non-Energy Star 5 Pan Steam Cooker	12	\$456.38	\$3,370.00	0	0.000	117.5	\$365.61	100%	0	1
Foodservice Equipment - MN	Steam Cooker	6+ Pan Steam Cooker	Energy Star 6+ Pan Steam Cooker	Non-Energy Star 6+ Pan Steam Cooker	12	\$509.32	\$3,370.00	0	0.000	119.8	\$438.73	100%	0	2
Foodservice Equipment - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	1	0.806	0.0	\$0.00	100%	0	0
Foodservice Equipment - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	3	2.113	0.0	\$0.00	100%	0	0
Foodservice Equipment - MN	AC Rewards - Business	Business Smart Thermostat - DR Direct Install	New installation of DR Capable Smart Thermostat	Non communicating thermostat	5	\$255.00	\$255.00	14	2.081	0.0	\$0.00	100%	0	0
Foodservice Equipment - MN	AC Rewards - Business	Business Smart Thermostat - BYOT	Existing Dispatchable Device	Non communicating thermostat	5	\$100.00	\$100.00	14	2.081	0.0	\$0.00	100%	0	0
Foodservice Equipment - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & GAS	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	7.7	\$0.00	100%	0	0
Foodservice Equipment - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC ONLY	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	0.0	\$0.00	100%	0	0
Foodservice Equipment - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	911	0.000	0.0	\$0.00	100%	0	0
Foodservice Equipment - MN	Demand Control Ventilation	Demand Controlled Ventilation - Electric Only or Gas Only or Combo Customer	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	20	\$751.03	\$4,103.00	10,800	1.000	221.1	\$0.00	100%	17	7
Home Energy Insights - MN	Behavioral Residential	Online Energy Feedback & Tools	Treatment	Control	1	\$0.00	\$0.00	90	0.000	1.8	\$0.00	100%	29,210	29,210
Home Energy Insights - MN	Behavioral Residential	ROLL-UP: Existing Participant - 2021	Treatment	Control	1	\$0.00	\$0.00	171	0.042	0.5	\$0.00	100%	0	0
Home Energy Insights - MN	Behavioral Residential	ROLL-UP: New Participant - 2021	Treatment	Control	1	\$0.00	\$0.00	115	0.024	0.3	\$0.00	100%	0	0
Home Energy Insights - MN	Behavioral Residential	ROLL-UP: Existing Participant - 2022	Treatment	Control	1	\$0.00	\$0.00	196	0.000	9.9	\$0.00	100%	317,850	196,179
Home Energy Insights - MN	Behavioral Residential	ROLL-UP: New Participant - 2022	Treatment	Control	1	\$0.00	\$0.00	103	0.024	0.3	\$0.00	100%	0	0
Home Energy Insights - MN	Behavioral Residential	ROLL-UP: Existing Participant - 2023	Treatment	Control	1	\$0.00	\$0.00	143	0.039	0.5	\$0.00	100%	0	0
Home Energy Insights - MN	Behavioral Residential	ROLL-UP: New Participant - 2023	Treatment	Control	1	\$0.00	\$0.00	103	0.024	0.3	\$0.00	100%	0	0
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustment-Online Group Savings	Treatment	Control	0	\$0.00	\$0.00	-21	-0.1	-1.1	\$0.00	100%	315,369	29,210
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustments Rollup: Existing Participants 2021 Savings	Treatment	Control	0	\$0.00	\$0.00	-114	-0.028	-0.3	\$0.00	100%	0	0
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustments Rollup: New Participant 2021 Savings	Treatment	Control	0	\$0.00	\$0.00	-76	-0.016	-0.2	\$0.00	100%	0	0
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustments Rollup: Existing Participants 2022 Savings	Treatment	Control	0	\$0.00	\$0.00	91	0.000	-0.3	\$0.00	100%	317,850	196,179
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustments Rollup: New Participant 2022 Savings	Treatment	Control	0	\$0.00	\$0.00	-68	-0.016	-0.2	\$0.00	100%	0	0
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustments Rollup: Existing Participants 2023 Savings	Treatment	Control	0	\$0.00	\$0.00	-95	-0.026	-0.3	\$0.00	100%	0	0
Home Energy Insights - MN	Behavioral Residential	Behavioral Adjustments Rollup: New Participant 2023 Savings	Treatment	Control	0	\$0.00	\$0.00	-68	-0.016	-0.2	\$0.00	100%	0	0
Home Energy Insights - MN	Behavioral Residential	Behavioral Demand Response	Treatment	Control	1	\$0.00	\$0.00	0	0.038	0.0	\$0.00	100%	0	0
Home Energy Insights - MN	High Bill Alerts	High Bill Alert	Customer enrolled in High Bill Alerts	Customer not enrolled in High Bill Alerts	1	\$0.00	\$0.00	90	0.000	0.0	\$0.00	100%	286,159	0
Home Energy Savings Program - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	7	\$19.72	\$25.00	99	0.000	0.00	\$0.00	75%	955	0
Home Energy Savings Program - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$5.20	\$8.11	76	0.010	0.0	\$12.17	100%	22	0
Home Energy Savings Program - MN	Aerators - EWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$5.20	\$8.10	91	0.010	0.0	\$17.32	100%	5	0
Home Energy Savings Program - MN	Aerators - EWH	Renter Kit Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.22	\$1.22	74	0.010	0.0	\$12.17	100%	0	0
Home Energy Savings Program - MN	Aerators - EWH	Renter Kit Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$0.48	\$0.48	64	0.009	0.0	\$12.22	100%	0	0
Home Energy Savings Program - MN	Aerators - EWH	Secondary 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	2.2 GPM Bathroom Faucet Aerator	10	\$5.20	\$5.20	91	0.013	0.0	\$17.32	100%	0	0
Home Energy Savings Program - MN	Aerators - GWH	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	2.2 GPM Kitchen Faucet Aerator	10	\$5.20	\$5.20	0	0.000	0.3	\$12.17	100%	0	0
Home Energy Savings Program - MN	Aerators - GWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$5.20	\$5.20	0	0.000	0.4	\$17.32	100%	0	0
Home Energy Savings Program - MN	Aerators - GWH	Renter Kit 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	2.2 GPM Kitchen Faucet Aerator	10	\$1.22	\$1.22	0	0.000	0.3	\$12.17	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Home Energy Savings Program - MN	Aerators - GWH	Renter Kit Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$0.48	\$0.48	0	0.000	0.3	\$12.22	100%	0	0
Home Energy Savings Program - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 0.6 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	0.6 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$5.20	\$5.20	0	0.000	0.4	\$17.32	100%	0	0
Home Energy Savings Program - MN	Air Sealing - Electric Heating and Cooling	Air sealing in homes with electric heating / electric cooling	Home with bypass air sealing performed	Existing home without air sealing	10	\$401.76	\$122.76	93	0.000	0.0	\$0.00	100%	1	0
Home Energy Savings Program - MN	Air Sealing - Electric Heating Only	Air sealing in homes with electric heating / no cooling	Home with bypass air sealing performed	Existing home without air sealing	10	\$401.76	\$401.76	4.693	0.000	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for combo customers	Home with bypass air sealing performed	Existing home without air sealing	10	\$401.76	\$420.96	676	1.137	16.7	\$0.00	100%	9	141
Home Energy Savings Program - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for gas-only customers	Home with bypass air sealing performed	Existing home without air sealing	10	\$401.76	\$401.76	54	0.103	14.7	\$0.00	100%	0	0
Home Energy Savings Program - MN	Air Sealing - Gas Heating Only	Air sealing in homes with gas heating / no cooling	Home with bypass air sealing performed	Existing home without air sealing	10	\$401.76	\$401.76	0	0.000	17.3	\$0.00	100%	0	0
Home Energy Savings Program - MN	Attic Insulation - Electric Heating and Cooling	Attic insulation in homes with electric heating / electric cooling	Home with R49 or more attic insulation	Existing home with 971 sqft avg attic area and R19 avg baseline insulation	20	\$2,348.72	\$1,968.00	1,019	0.360	0.0	\$0.00	100%	1	0
Home Energy Savings Program - MN	Attic Insulation - Electric Heating Only	Attic insulation in homes with electric heating / no cooling	Home with R49 or more attic insulation	Existing home with 971 sqft avg attic area and R19 avg baseline insulation	20	\$2,999.65	\$2,999.65	1,754	0.000	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for combo customers	Home with R49 or more attic insulation	Existing home with 971 sqft avg attic area and R19 avg baseline insulation	20	\$3,073.59	\$3,323.76	976	0.700	10.3	\$0.00	100%	11	105
Home Energy Savings Program - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for gas-only customers	Home with R49 or more attic insulation	Existing home with 971 sqft avg attic area and R19 avg baseline insulation	20	\$2,476.38	\$2,476.38	42	0.081	8.5	\$0.00	100%	0	0
Home Energy Savings Program - MN	Attic Insulation - Gas Heating Only	Attic insulation in homes with gas heating / no cooling	Home with R49 or more attic insulation	Existing home with 971 sqft avg attic area and R19 avg baseline insulation	20	\$2,894.97	\$3,174.07	0	0.000	8.4	\$0.00	100%	0	33
Home Energy Savings Program - MN	Boiler	95% Efficient Boiler	95% Efficient Boiler	84% Efficient Boiler	20	\$9,070.00	\$8,394.75	0	0.000	10.0	\$0.00	100%	0	48
Home Energy Savings Program - MN	Dehumidifier Recycling	Dehumidifier removal and Recycling	Removal of dehumidifier	Existing dehumidifier	5	\$15.00	\$15.00	824	0.426	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	ECM Furnace Fan	EC Fan Motor on Retrofit Residential Furnace no AC	Furnace Fan without AC retrofitted with ECM	Existing furnace without AC with non-EC Motor	7	\$845.00	\$798.00	433	0.000	0.0	-\$9.50	100%	1	0
Home Energy Savings Program - MN	ECM Furnace Fan	EC Fan Motor on Retrofit Residential Furnace with AC	Furnace Fan with AC retrofitted with ECM	Existing furnace with AC and non-EC Motor	7	\$845.00	\$798.00	528	0.134	0.0	-\$9.50	100%	1	0
Home Energy Savings Program - MN	ENERGY STAR Dehumidifier	≤ 50 pints/day dehumidifier	ENERGY STAR Dehumidifier low capacity	Standard efficiency dehumidifier (Current Federal Standard)	12	\$289.00	\$350.00	116	0.000	0.00	\$0.00	100%	15	0
Home Energy Savings Program - MN	ENERGY STAR Refrigerator	Freezer Replacement	ENERGY STAR ® Freezers	Industry Standard	11	\$405.00	\$299.00	366	0.000	\$0.00	\$0.00	100%	299	0
Home Energy Savings Program - MN	ENERGY STAR Refrigerator	Refrigerator Replacement	ENERGY STAR ® Refrigerators	Industry Standard	14	\$705.00	\$768.25	290	0.203	\$0.00	\$0.00	100%	501	0
Home Energy Savings Program - MN	Furnace	Replace Furnace AFUE 80 to 95 (SF)	95% Efficient Furnace	80% Efficient Furnace	18	\$4,500.00	\$4,230.04	0	0.000	10.0	\$0.00	100%	0	79
Home Energy Savings Program - MN	Home Lighting DI	LED A19 10W	LED A19 10W	EISA Standard Bulb	20	\$4.80	\$24.96	0	0.000	\$0.00	\$0.00	100%	4	0
Home Energy Savings Program - MN	Home Lighting DI	LED A19 10W	LED A19 10W	Existing CFL Bulb	20	\$4.80	\$24.96	366	0.000	\$0.00	\$0.00	100%	960	0
Home Energy Savings Program - MN	Home Lighting DI	LED Candelabra 6W	LED Candelabra 6W	EISA Specialty Bulb	20	\$4.90	\$24.96	364	0.000	\$0.00	\$0.00	100%	216	0
Home Energy Savings Program - MN	Home Lighting DI	LED Globe 6W	LED Globe 6W	EISA Specialty Bulb	20	\$4.90	\$24.96	363	0.001	\$0.00	\$0.00	100%	268	0
Home Energy Savings Program - MN	Home Lighting DI	Renter Kit 11W LED	11W LED	EISA Standard Bulb	20	\$4.81	\$4.81	32	0.004	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Home Lighting DI	Renter Kit 9W LED	9W LED	EISA Standard Bulb	20	\$3.19	\$3.19	34	0.004	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	HP Water Heater	Heat Pump Water Heater - Non- Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater	Existing Electric Water Heater	10	\$4,600.00	\$4,320.00	2,800	0.267	0.0	-\$15.73	100%	25	0
Home Energy Savings Program - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling ASHP Heat	High Efficiency Heat Pump Water Heater	Existing Electric Water Heater	10	\$4,600.00	\$4,600.00	2,018	0.267	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Electric Resistance Heat	High Efficiency Heat Pump Water Heater	Existing Electric Water Heater	10	\$4,600.00	\$4,600.00	1,727	0.267	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater	Existing Electric Water Heater	10	\$4,600.00	\$4,600.00	2,336	0.267	0.0	-\$15.73	100%	0	0
Home Energy Savings Program - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling ASHP Heat	High Efficiency Heat Pump Water Heater	Existing Electric Water Heater	10	\$4,600.00	\$4,600.00	2,035	0.269	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Electric Resistance Heat	High Efficiency Heat Pump Water Heater	Existing Electric Water Heater	10	\$4,600.00	\$4,600.00	1,743	0.269	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Mini-Split Heat Pump	Mini-Split Heat Pump	Residential Mini Multi-Split Heat Pump w/ 2 heads (Nominal 1.8 Tons with 18.9 SEER, 12.9 EER, 10.2 HSPF) with electric resistance heat backup	Spot Cooling Solution needed with Existing Electric Resistance Heating	15	\$9,000.00	\$9,000.00	4,012	0.881	0.0	\$0.00	100%	0	0



Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Home Energy Savings Program - MN	Mini-Split Heat Pump	Mini-Split Heat Pump	Residential Mini Multi-Split Heat Pump w/ 2 heads (Nominal 1.8 Tons with 18.9 SEER, 12.9 EER, 10.2 HSPF (unadjusted) ) replacing a MSHHP or new spot cooling need.	MSHP size 1.8 tons, 14 SEER, 8.19 EER, 8.2 HSPF (unadjusted).	15	\$9,000.00	\$9,000.00	814	0.881	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Refrigerator Recycling	Freezer Removal and Recycling	Removal of freezer	Existing primary unit - age mostly >10 years	7	\$75.00	\$75.00	833	0.095		\$0.00	100%	0	0
Home Energy Savings Program - MN	Refrigerator Recycling	Refrigerator Removal and Recycling	Removal of Primary and Secondary Refrigerator	Existing Primary and Secondary Unit - age mostly > 15 years	8	\$75.00	\$75.00	810	0.093		\$0.00	100%	0	0
Home Energy Savings Program - MN	Res ASHP	Installation of new ASHP 16 SEER, 13 EER, 9 HSPF 2 tons w/ Electric Resistance Heat Backup	Quality installation of new ASHP 16 SEER, 13 EER, 9 HSPF 2 tons w/ Electric Resistance Heat Backup	Non-Quality Installation of ASHP 14 SEER (Baseline) ASHP 2 tons	18	\$9,942.00	\$9,942.00	4,498	0.211	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Residential Boiler Tune Up	Boiler Tune Up	Existing Boiler with Tune Up - 5% improvement in efficiency	Existing Boiler	2	\$305.50	\$305.50	0	0.000	5.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Residential Furnace Tune Up	Furnace Tune Up	Existing Furnace with Tune Up - 5% improvement in efficiency	Existing Furnace	2	\$270.00	<del>\$270.00</del>	0	0.000	<del>6.3</del>	\$0.00	100%	0	10
Home Energy Savings Program - MN	Room Air Conditioner Recycling	Wall Air Conditioner Removal and Recycling	Removal of Standard 10,000 Btu/hr Window AC Unit	Existing Window AC Unit	5	\$50.00	\$50.00	542	0.781		\$0.00	100%	0	0
Home Energy Savings Program - MN	Room Air Conditioner Recycling	Window Air Conditioner Removal and Recycling	Removal of Standard 10,000 Btu/hr Window AC Unit	Existing Window AC Unit	5	\$50.00	\$50.00	499	0.720		\$0.00	100%	0	0
Home Energy Savings Program - MN	Saver's Switch	Residential AC Switch	Utility Load Control for control period with smart switch	No Control, No Switch	15	\$10.00	\$10.00	1	0.748		\$0.00	100%	0	0
Home Energy Savings Program - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$47.00	\$47.00	511	0.037	0.0	\$97.40	100%	0	0
Home Energy Savings Program - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$15.00	<del>\$15.00</del>	<del>511</del>	<del>0.037</del>	0.0	\$97.40	100%	22	0
Home Energy Savings Program - MN	Showerheads - EWH	Renter Kit Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.22	\$3.22	511	0.037	0.0	\$97.40	100%	0	0
Home Energy Savings Program - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$47.00	\$47.00	344	0.025	0.0	\$65.49	100%	0	0
Home Energy Savings Program - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$15.00	<del>\$15.00</del>	<del>344</del>	<del>0.025</del>	0.0	\$65.49	100%	22	0
Home Energy Savings Program - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$47.00	\$47.00	0	0.000	2.2	\$97.40	100%	0	0
Home Energy Savings Program - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$15.00	\$15.00	0	0.000	2.2	\$97.40	100%	0	0
Home Energy Savings Program - MN	Showerheads - GWH	Renter Kit Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.22	\$3.22	0	0.000	2.2	\$97.40	100%	0	0
Home Energy Savings Program - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$47.00	\$47.00	0	0.000	1.5	\$65.49	100%	0	0
Home Energy Savings Program - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$15.00	\$15.00	0	0.000	1.5	\$65.49	100%	0	0
Home Energy Savings Program - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	76	0.180	5.5	\$0.00	100%	0	0
Home Energy Savings Program - MN	Wall AC	Wall Air Conditioner Replacement	Average Energy Star Wall AC w/ Louvers 10,000 Btu/hr 10.8 EER Window AC Unit	Existing Window AC Unit	9	\$727.50	<del>\$727.50</del>	<del>76</del>	<del>0.180</del>		\$0.00	100%	254	0
Home Energy Savings Program - MN	Wall Insulation - Electric Heating and Cooling	Wall Insulation in homes with electric heating / electric cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$2,374.40	\$2,374.40	7,216	0.287	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Wall Insulation - Electric Heating Only	Wall Insulation in homes with electric heating / no cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$2,374.40	\$2,374.40	6,867	0.000	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall Insulation in homes with gas heating / electric cooling for combo customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$2,417.96	<del>\$2,417.96</del>	<del>1,900</del>	<del>0.807</del>	<del>34.7</del>	\$0.00	100%	4	36
Home Energy Savings Program - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall Insulation in homes with gas heating / electric cooling for gas-only customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$1,111.47	\$1,111.47	62	0.119	12.5	\$0.00	100%	0	0
Home Energy Savings Program - MN	Wall Insulation - Gas Heating Only	Wall Insulation in homes with gas heating / no cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$2,876.75	<del>\$2,876.75</del>	0	0.000	<del>33.2</del>	\$0.00	100%	0	13
Home Energy Savings Program - MN	Water Heater	High Efficiency Storage Water Heater	68% UEF High Efficiency Storage Water Heater - Medium Draw	Minimum Efficiency Storage Water Heater	13	\$3,000.00	<del>\$3,000.00</del>	0	0.000	1.8	\$0.00	100%	0	176
Home Energy Savings Program - MN	Water Heater	High Efficiency Storage Water Heater	68% UEF High Efficiency Storage Water Heater - High Draw	Minimum Efficiency Storage Water Heater	13	\$3,200.00	\$3,200.00	0	0.000	1.8	\$0.00	100%	0	0
Home Energy Savings Program - MN	Weatherstripping - Electric Heating and Cooling	Weatherstripping in homes with electric heating / electric cooling	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$32.00	\$32.00	322	0.012	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Weatherstripping - Electric Heating Only	Weatherstripping in homes with electric heating / no cooling	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$32.00	\$32.00	316	0.000	0.0	\$0.00	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Home Energy Savings Program - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for combo customers	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$32.00	\$30.00	6	0.012	1.4	\$0.00	100%	0	2
Home Energy Savings Program - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for gas-only customers	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$32.00	\$32.00	6	0.012	1.8	\$0.00	100%	0	0
Home Energy Savings Program - MN	Weatherstripping - Gas Heating Only	Weatherstripping in homes with gas heating / no cooling	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$32.00	\$21.00	0	0.000	1.4	\$0.00	100%	0	2
Home Energy Savings Program - MN	Window AC	Window Air Conditioner Replacement	Average Energy Star Window AC with Louvers 10,000 Btu/hr 10.8 EER Window AC Unit	Existing Window AC Unit	9	\$627.50	\$442.00	35	0.000	0.00	\$0.00	100%	437	0
Home Energy Squad - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	7	\$25.00	\$25.00	68	0.009	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Advanced Power Strip	Advanced Power Strip	Tier 2 Advanced Power Strip	Standard Power Strip	8	\$40.00	\$40.00	118	0.015	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	ENERGY STAR Dehumidifier	>50 pints/day dehumidifier	ENERGY STAR Dehumidifier high capacity	Standard efficiency dehumidifier (Current Federal Standard)	12	\$35.00	\$34.00	178	0.110	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	ENERGY STAR Dehumidifier	≤ 50 pints/day dehumidifier	ENERGY STAR Dehumidifier low capacity	Standard efficiency dehumidifier (Current Federal Standard)	12	\$35.00	\$34.00	211	0.130	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Weatherstripping - Electric Heating and Cooling	Weatherstripping in homes with electric heating / electric cooling	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$12.00	\$18.28	327	0.008	0.0	\$0.00	100%	28	0
Home Energy Squad - MN	Weatherstripping - Electric Heating and Cooling	A la carte weatherstripping in homes with electric heating / electric cooling	Additional weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Additional existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$0.00	\$12.00	322	0.012	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Weatherstripping - Electric Heating Only	Weatherstripping in homes with electric heating / no cooling	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$12.00	\$12.00	316	0.000	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Weatherstripping - Electric Heating Only	A la carte weatherstripping in homes with electric heating / no cooling	Additional weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Additional existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$0.00	\$12.00	316	0.000	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for combo customers	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$12.00	\$4.54	8	0.012	0.8	\$0.00	100%	1,861	1,861
Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for gas-only customers	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$12.00	\$12.00	6	0.012	1.8	\$0.00	100%	0	0
Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for electric-only customers	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$12.00	\$12.00	6	0.012	1.8	\$0.00	100%	0	0
Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	A la carte weatherstripping in homes with gas heating / electric cooling for combo customers	Additional weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Additional existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$0.00	\$12.00	6	0.012	1.8	\$0.00	100%	0	0
Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	A la carte weatherstripping in homes with gas heating / electric cooling for gas-only customers	Additional weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Additional existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$0.00	\$12.00	6	0.012	1.8	\$0.00	100%	0	0
Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	A la carte weatherstripping in homes with gas heating / electric cooling for electric-only customers	Additional weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Additional existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$0.00	\$12.00	6	0.012	1.8	\$0.00	100%	0	0
Home Energy Squad - MN	Weatherstripping - Gas Heating Only	Weatherstripping in homes with gas heating / no cooling	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$12.00	\$18.00	0	0.000	1.8	\$0.00	100%	0	144
Home Energy Squad - MN	Weatherstripping - Gas Heating Only	A la carte weatherstripping in homes with gas heating / no cooling	Additional weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Additional existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$0.00	\$12.00	0	0.000	1.8	\$0.00	100%	0	0
Home Energy Squad - MN	Home Energy Squad Service	Home Energy Squad Service	Tier One Energy Squad Service	0	0	\$0.00	\$70.00	0	0.000	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Home Lighting DI	LED - A-lamp (9W)	9w Standard LED (60w Equivalent)	EISA Standard Bulb	20	\$2.65	\$1.99	34	0.004	0.0	\$0.00	100%	63,548	0
Home Energy Squad - MN	Home Lighting DI	LED - A-lamp (15W)	15w Standard LED (100w Equivalent)	EISA Standard Bulb	20	\$2.65	\$2.65	56	0.007	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Home Lighting DI	LED - Flood (10W)	10W VALUE led (60W Equivalent)	EISA Specialty Bulb	20	\$2.65	\$2.65	32	0.004	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Home Lighting DI	LED - Globe (6W)	6w Globe LED Dim	EISA Specialty Bulb	15	\$2.65	\$2.65	23	0.003	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Home Lighting DI	LED - Candelabra (5W)	LED - Candelabra (5W)	EISA Specialty Bulb	15	\$2.65	\$2.65	21	0.003	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Home Lighting DI	Replace Compact Fluorescent Lamps (CFLs) with LEDs	A-Line LED	Existing CFL	20	\$2.65	\$2.65	10	0.001	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Home Lighting DI	Replace Compact Fluorescent Lamps (CFLs) with LEDs	Specialty LED	Existing CFL	17	\$2.65	\$2.65	3	0.000	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	AC Rewards-DR	Residential Smart Thermostat - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$25.00	\$25.00	2	1.109	0.00	\$0.00	100%	0	0



Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Home Energy Squad - MN	AC Rewards-EE	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	76	0.180	5.5	\$0.00	100%	0	0
Home Energy Squad - MN	AC Rewards-EE	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	2,361	0.180	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	AC Rewards-EE	Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	76	0.180	5.5	\$0.00	100%	0	0
Home Energy Squad - MN	AC Rewards-EE	Install Energy Star certified smart thermostat - AC ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	76	0.180	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Programmable Thermostat	Install Programmable T-stat (Elec Cooling & Gas Heat)	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.6 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	\$35.00	\$35.00	79	0.112	8.4	\$0.00	100%	0	0
Home Energy Squad - MN	Programmable Thermostat	Install Second Programmable Thermostat	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.6 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	\$0.00	\$125.00	98	0.108	10.0	\$0.00	100%	1	1
Home Energy Squad - MN	Programmable Thermostat	Programming of Existing T-stat (Elec Cooling & Gas Heat)	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.6 F for heating with 80% AFUE furnace	Base modeled home w/ 10 SEER AC and no setup temp	10	\$0.00	\$0.00	79	0.112	8.4	\$0.00	100%	0	0
Home Energy Squad - MN	Saver's Switch	Residential AC Switch	Utility Load Control for control period with smart switch	No Control, No Switch	15	\$90.00	\$90.00	1	0.748	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$50.00	\$125.00	1,370	0.180	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$50.00	\$63.00	98	0.086	4.0	\$0.00	100%	303	303
Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$50.00	\$125.00	76	0.180	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - GAS Only	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$50.00	\$125.00	0	0.000	5.5	\$0.00	100%	0	0
Home Energy Squad - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.25	\$1.25	74	0.010	0.0	\$12.17	100%	26	0
Home Energy Squad - MN	Aerators - EWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$1.50	\$1.50	81	0.013	0.0	\$17.32	100%	147	0
Home Energy Squad - MN	Aerators - GWH	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	2.2 GPM Kitchen Faucet Aerator	10	\$1.25	\$1.25	0	0.000	0.0	\$12.17	100%	0	135
Home Energy Squad - MN	Aerators - GWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$1.50	\$1.50	0	0.000	0.0	\$17.32	100%	0	579
Home Energy Squad - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$3.50	511	0.037	0.0	\$97.40	100%	0	0
Home Energy Squad - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$3.50	943	0.026	0.0	\$65.49	100%	42	0
Home Energy Squad - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$9.50	\$9.50	505	0.007	0.0	\$97.40	100%	154	0
Home Energy Squad - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$9.50	\$9.50	344	0.025	0.0	\$65.49	100%	0	0
Home Energy Squad - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$3.50	0	0.000	0.0	\$97.40	100%	0	593
Home Energy Squad - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$3.50	0	0.000	0.0	\$65.49	100%	0	188
Home Energy Squad - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$9.50	\$9.50	0	0.000	2.2	\$97.40	100%	0	0
Home Energy Squad - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$9.50	\$9.50	0	0.000	1.5	\$65.49	100%	0	0
Home Energy Squad - MN	Water Heater DR	Demand response capability on grid enabled electric resistance water heater	Demand response from electric resistance water heater	No management of water heater time of use	1	\$100.00	\$200.00	1	0.213	0.0	\$0.00	100%	0	0
Home Energy Squad - MN	Water Heater Setback	Gas Water Heater Setback	setback WH setpoint to 120 F	Existing WH at setpoint of 130 F	8	\$0.00	\$0.00	0	0.000	0.0	\$0.00	100%	0	260
Home Energy Squad - MN	Water Heater Setback	Electric Water Heater Setback	setback WH setpoint to 120 F	Existing WH at setpoint of 130 F	2	\$0.00	\$0.00	161	0.007	0.0	\$0.00	100%	0	0
Home Lighting - MN	Residential Home Lighting - Residential Customers	LED Bulb - A-Line	LED Bulb Purchase - A-Line	Equivalent (Post-EISA)	20	\$1.28	\$1.36	98	0.008	0.0	\$0.00	99%	3,796,181	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Home Lighting - MN	Residential Home Lighting - Business Customers	LED Bulb - A-Line	LED Bulb Purchase - A-Line	Incandescent Equivalent (Post-EISA)	4	\$1.55	\$1.67	166	0.006	0.0	\$0.00	100%	166,046	0
Home Lighting - MN	Residential Home Lighting - Residential Customers	LED Bulb - Specialty	LED Bulb Purchase - Specialty	Incandescent Equivalent (Exempt/Post-EISA)	20	\$1.86	\$1.68	96	0.007	0.0	\$0.00	99%	788,069	0
Home Lighting - MN	Residential Home Lighting - Business Customers	LED Bulb - Specialty	LED Bulb Purchase - Specialty	Incandescent Equivalent (Exempt/Post-EISA)	5	\$1.86	\$1.68	960	0.006	0.0	\$0.00	100%	50,303	0
Home Lighting - MN	Residential Home Lighting - Residential Customers	LED Tubes (Linear Lamps)	LED Linear Tube	Fluorescent Lamp	20	\$2.08	\$5.16	13	1.000	0.0	\$0.00	99%	8,242	0
Home Lighting - MN	Residential Home Lighting - Business Customers	LED Tubes (Linear Lamps)	LED Linear Tube	Fluorescent Lamp	9	\$2.32	\$8.20	60	0.012	0.0	\$0.00	100%	54,425	0
HVACR - MN	Ozone Laundry	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	new or existing commercial washing machine using hot water heated with natural gas	10	\$4,741.50	\$12,180.71	0	0.000	128.8	\$1,272.23	100%	0	70
HVACR - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	1	0.806	0.0	\$0.00	100%	0	0
HVACR - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	3	2.113	0.0	\$0.00	100%	0	0
HVACR - MN	AC Rewards - Business	Business Smart Thermostat - DR Direct Install	New Installation of DR Capable Smart Thermostat	Non communicating thermostat	5	\$255.00	\$255.00	14	2.081	0.0	\$0.00	100%	0	0
HVACR - MN	AC Rewards - Business	Business Smart Thermostat - BYOT	Existing Dispatchable Device	Non communicating thermostat	5	\$100.00	\$100.00	14	2.081	0.0	\$0.00	100%	0	0
HVACR - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & GAS	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	7.7	\$0.00	100%	0	0
HVACR - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC ONLY	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	0.0	\$0.00	100%	0	0
HVACR - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	911	0.000	0.0	\$0.00	100%	0	0
HVACR - MN	Custom Cooling Project	Custom Cooling Projects	New Efficient Equipment	Existing or New Inefficient Equipment	18	\$8,843.85	\$58,558.67	93,404	19,134	0.0	\$1.67	100%	0	0
HVACR - MN	Custom Motors Project	Custom Motors Project	New Equipment	Existing or New Inefficient	14	\$4,574.00	\$44,874.00	101,894	7	0.0	\$0.00	100%	1	0
HVACR - MN	Custom Heating Project	Custom Heating Project	New Efficient Equipment	Less Efficient Product/Systems	20	\$3,018.00	\$34,390.00	0	0.000	809.1	\$0.00	100%	0	1
HVACR - MN	Custom Refrigeration Project	Custom Refrigeration Project	New Efficient Equipment	Less Efficient Product/Systems	16	\$12,257.79	\$71,019.11	154,882	24,504	0.0	\$7,781.69	100%	0	0
HVACR - MN	DX	DX Units < 5.4 tons	DX unit size 3.79 tons, 12.30 EER, 15.09 SEER	DX unit size 3.79 tons, 11.05 EER, 13.00 SEER	20	\$937.61	\$557.64	507	0	0.0	\$0.00	100%	363	0
HVACR - MN	DX	DX Units 5.4 - 11.3 tons	DX unit size 7.98 tons, 12.01 EER, 14.08 SEER	DX unit size 7.98 tons, 11.00 EER, 11.20 SEER	20	\$5,644.12	\$4,180.84	8,719	4	0.0	\$0.00	100%	24	0
HVACR - MN	DX	DX Units 11.4 - 19.9 tons	DX unit size 14.65 tons, 11.87 EER, 14.44 SEER	DX unit size 14.65 tons, 10.90 EER, 11.00 SEER	20	\$2,562.98	\$2,400.90	3,176	2	0.0	\$0.00	100%	190	0
HVACR - MN	DX	DX Units 20 - 63.3 tons	DX unit size 31.74 tons, 11.39 EER, 13.94 SEER	DX unit size 31.74 tons, 9.80 EER, 9.90 SEER	20	\$8,495.88	\$6,300.38	41,200	7	0.0	\$0.00	100%	33	0
HVACR - MN	DX	DX Units ≥ 63.3 tons	DX unit size 89.99 tons, 10.87 EER, 15.10 SEER	DX unit size 89.99 tons, 9.50 EER, 9.60 SEER	20	\$12,766.24	\$9,898.48	44,632	12,932	0.0	\$0.00	100%	0	0
HVACR - MN	WSHP	Water Source Heat Pumps	WSHP unit size 2.81 tons, 14.20 EER, 15.78 SEER	WSHP unit size 2.81 tons, 12.00 EER, 13.33 SEER	20	\$974.85	\$1,198.15	1,980	1	0.0	\$0.00	100%	51	0
HVACR - MN	DX	PTAC Units	PTAC unit size 0.44 tons, 13.14 EER, 15.46 SEER	PTAC unit size 0.44 tons, 12.21 EER, 14.36 SEER	20	\$1,421.52	\$6,498.00	1,200	2	0.0	\$0.00	100%	9	0
HVACR - MN	Chiller	Scroll/Screw Chiller < 75 tons	Chiller size 55 tons, 0.70 FLV kW/ton, 0.59 IPLV kW/ton	Chiller size 55 tons, 0.78 FLV kW/ton, 0.63 IPLV kW/ton	20	\$1,155.00	\$7,150.00	716	3,960	0.0	\$0.00	100%	0	0
HVACR - MN	Chiller	Scroll/Screw chiller 75 to 150 tons	Chiller size 78.3 tons, 0.70 FLV kW/ton, 0.58 IPLV kW/ton	Chiller size 78.3 tons, 0.78 FLV kW/ton, 0.62 IPLV kW/ton	20	\$1,644.30	\$7,047.00	1,464	5,638	0.0	\$0.00	100%	0	0
HVACR - MN	Chiller	Scroll/Screw chiller 150 to 300 tons	Chiller size 225 tons, 0.60 FLV kW/ton, 0.54 IPLV kW/ton	Chiller size 225 tons, 0.68 FLV kW/ton, 0.58 IPLV kW/ton	20	\$4,725.00	\$20,250.00	4,208	16,200	0.0	\$0.00	100%	0	0
HVACR - MN	Chiller	Scroll/Screw chiller ≥ 300 tons	Chiller size 500 tons, 0.54 FLV kW/ton, 0.50 IPLV kW/ton	Chiller size 500 tons, 0.62 FLV kW/ton, 0.54 IPLV kW/ton	20	\$10,500.00	\$20,000.00	9,351	36,000	0.0	\$0.00	100%	0	0
HVACR - MN	Chiller	Centrifugal Chillers < 150 tons	Chiller size 75.00 tons, 0.60 FLV kW/ton, 0.58 IPLV kW/ton	Chiller size 75.00 tons, 0.63 FLV kW/ton, 0.60 IPLV kW/ton	20	\$885.00	\$9,750.00	283	1,978	0.0	\$0.00	100%	0	0
HVACR - MN	Chiller	Centrifugal Chillers 150 - 300 tons	Chiller size 250.00 tons, 0.58 FLV kW/ton, 0.35 IPLV kW/ton	Chiller size 250.00 tons, 0.63 FLV kW/ton, 0.60 IPLV kW/ton	20	\$7,753.13	\$21,250.00	28,040	11,296	0.0	\$0.00	100%	0	0
HVACR - MN	Chiller	Centrifugal Chillers 300 - 600 tons	Chiller size 385.63 tons, 0.55 FLV kW/ton, 0.35 IPLV kW/ton	Chiller size 385.63 tons, 0.58 FLV kW/ton, 0.55 IPLV kW/ton	20	\$14,467.53	\$47,175.00	31,800	3	0.0	\$0.00	100%	1	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
HVACR - MN	Chiller	Centrifugal Chillers ≥ 600 tons	Chiller size 1,000.00 tons, 0.54 FLV kW/Ton, 0.35 IPLV kW/Ton	Chiller size 1,000.00 tons, 0.57 FLV kW/Ton, 0.54 IPLV kW/Ton	20	\$24,427.50	\$40,000.00	100,905	60.966	0.0	\$0.00	100%	0	0
HVACR - MN	Chiller	Air-Cooled Chillers < 150 tons	Chiller size 88.61 tons, 10.95 EER, 16.16 SEER	Chiller size 88.61 tons, 9.56 EER, 12.50 SEER	20	\$27,001.88	\$48,420.24	75,704	80	0.0	\$0.00	100%	8	0
HVACR - MN	Chiller	Air-Cooled Chillers ≥ 150 tons	Chiller size 258.87 tons, 10.45 EER, 17.83 SEER	Chiller size 258.87 tons, 9.56 EER, 12.75 SEER	20	\$2,612.53	\$10,320.81	17,448	8	0.0	\$0.00	100%	10	0
HVACR - MN	Chiller VFD	Chiller VFD Retrofit	VFD Chiller size 686 tons, 0.58 FLV kW/Ton, 0.38 IPLV	Const Speed Chiller size 686 tons, 0.56 FLV kW/Ton, 0.49 IPLV	15	\$11,088.04	\$49,336.11	216,690	-10.449	0.0	\$0.00	100%	0	0
HVACR - MN	MN ERV	ERV Install on RTU/AHU for reduced cooling & heating load	70% Sensible Effectiveness Heat Recovery on 5041 CFM OA (Cooling Mode)	No heat recovery on 5041 CFM OA	15	\$5,378.71	\$2,880.50	12,497	12	866.5	\$0.00	100%	21	0
HVACR - MN	Mini Split	Mini-Split Heat Pump	MSHP size 1.2 tons, 21.27 SEER, 10.50 HSPF	MSHP size 1.2 tons, 14 SEER, 8.2 HSPF	18	\$227.30	\$512.36	0	0.000	0.0	\$0.00	100%	0	0
HVACR - MN	Mini-Split	Mini-Split AC - Data Center	MSAC size 2-2 tons, 17.70 SEER	MSAC size 2-2 tons, 14 SEER	48	\$407.84	\$642.09	2,926	9.669	6.0	\$9.00	100%	0	0
HVACR - MN	Boiler	Hot Water Boiler - Non-condensing 0 - 0.499 MMBTUH	85% Efficient Boiler	80% Efficient Boiler	20	\$4,372.50	\$15,120.00	0	0.000	374.8	\$0.00	100%	0	2
HVACR - MN	Boiler	Hot Water Boiler - Non-condensing 0.5 - 0.999 MMBTUH	85% Efficient Boiler	80% Efficient Boiler	20	\$1,308.96	\$2,440.11	0	0.000	85.5	\$0.00	100%	0	19
HVACR - MN	Boiler	Hot Water Boiler - Non-condensing 1 - 1.999 MMBTUH	85% Efficient Boiler	80% Efficient Boiler	20	\$864.00	\$4,400.00	0	0.000	207.8	\$0.00	100%	0	0
HVACR - MN	Boiler	Hot Water Boiler - Non-condensing 2 - 2.499 MMBTUH	85% Efficient Boiler	80% Efficient Boiler	20	\$1,600.00	\$5,000.00	0	0.000	240.6	\$0.00	100%	0	0
HVACR - MN	Boiler	Hot Water Boiler - Non-condensing 2.5 - 3.999 MMBTUH	85% Efficient Boiler	82% Efficient Boiler	20	\$2,400.00	\$5,000.00	0	0.000	352.0	\$0.00	100%	0	0
HVACR - MN	Boiler	Hot Water Boiler - Non-condensing 4 - 5.999 MMBTUH	85% Efficient Boiler	82% Efficient Boiler	20	\$3,200.00	\$10,000.00	0	0.000	281.6	\$0.00	100%	0	0
HVACR - MN	Boiler	Hot Water Boiler - Non-condensing 6 - 7.999 MMBTUH	85% Efficient Boiler	82% Efficient Boiler	20	\$4,800.00	\$15,000.00	0	0.000	422.4	\$0.00	100%	0	0
HVACR - MN	Boiler	Hot Water Boiler - Non-condensing 8 - 9.999 MMBTUH	85% Efficient Boiler	82% Efficient Boiler	20	\$6,400.00	\$20,000.00	0	0.000	563.2	\$0.00	100%	0	0
HVACR - MN	Boiler	Hot Water Boiler - Condensing 0 - 0.499 MMBTUH	88% Efficient Boiler	80% Efficient Boiler	20	\$2,985.94	\$8,790.00	0	0.000	199.0	\$0.00	100%	0	16
HVACR - MN	Boiler	Hot Water Boiler - Condensing 0.5 - 0.999 MMBTUH	88% Efficient Boiler	80% Efficient Boiler	20	\$7,000.00	\$22,800.00	0	0.000	394.9	\$0.00	100%	0	1
HVACR - MN	Boiler	Hot Water Boiler - Condensing 1 - 1.999 MMBTUH	88% Efficient Boiler	80% Efficient Boiler	20	\$26,250.00	\$91,980.00	0	0.000	1,200.9	\$0.00	100%	0	2
HVACR - MN	Boiler	Hot Water Boiler - Condensing 2 - 2.499 MMBTUH	88% Efficient Boiler	80% Efficient Boiler	20	\$21,000.00	\$70,700.00	0	0.000	892.1	\$0.00	100%	0	4
HVACR - MN	Boiler	Hot Water Boiler - Condensing 2.5 - 3.999 MMBTUH	88% Efficient Boiler	82% Efficient Boiler	20	\$10,255.00	\$14,500.00	0	0.000	550.1	\$0.00	100%	0	0
HVACR - MN	Boiler	Hot Water Boiler - Condensing 4 - 5.999 MMBTUH	88% Efficient Boiler	82% Efficient Boiler	20	\$28,000.00	\$53,000.00	0	0.000	1,127.4	\$0.00	100%	0	1
HVACR - MN	Boiler	Hot Water Boiler - Condensing 6 - 7.999 MMBTUH	88% Efficient Boiler	82% Efficient Boiler	20	\$21,000.00	\$43,500.00	0	0.000	1,126.4	\$0.00	100%	0	0
HVACR - MN	Boiler	Hot Water Boiler - Condensing 8 - 9.999 MMBTUH	88% Efficient Boiler	82% Efficient Boiler	20	\$28,000.00	\$58,000.00	0	0.000	1,501.9	\$0.00	100%	0	0
HVACR - MN	Boiler	Condensing Boiler Upgrade; 0 - 0.499 MMBTUH; for space heating	88% Efficient Boiler	78% Efficient Boiler	20	\$2,030.00	\$4,600.00	0	0.000	85.8	\$0.00	100%	0	0
HVACR - MN	Boiler	Condensing Boiler Upgrade; 0.500 - 0.999 MMBTUH; for space heating	88% Efficient Boiler	78% Efficient Boiler	20	\$4,900.00	\$11,200.00	0	0.000	207.3	\$0.00	100%	0	0
HVACR - MN	Boiler	Condensing Boiler Upgrade; 1 - 1.999 MMBTUH; for space heating	88% Efficient Boiler	78% Efficient Boiler	20	\$5,250.00	\$11,200.00	0	0.000	343.3	\$0.00	100%	0	2
HVACR - MN	Boiler	Condensing Boiler Upgrade; 2 - 3.999 MMBTUH; for space heating	88% Efficient Boiler	78% Efficient Boiler	20	\$11,200.00	\$23,000.00	0	0.000	520.8	\$0.00	100%	0	5
HVACR - MN	Boiler	Condensing Boiler Upgrade; 4 - 5.999 MMBTUH; for space heating	88% Efficient Boiler	78% Efficient Boiler	20	\$33,232.50	\$60,200.00	0	0.000	1,697.1	\$0.00	100%	0	4
HVACR - MN	Boiler	Condensing Boiler Upgrade; 6 - 7.999 MMBTUH; for space heating	88% Efficient Boiler	78% Efficient Boiler	20	\$42,000.00	\$79,500.00	0	0.000	1,776.2	\$0.00	100%	0	0
HVACR - MN	Boiler	Condensing Boiler Upgrade; 8 - 9.999 MMBTUH; for space heating	88% Efficient Boiler	78% Efficient Boiler	20	\$56,000.00	\$106,000.00	0	0.000	2,368.3	\$0.00	100%	0	0
HVACR - MN	Boiler	Low Pressure Steam Boiler; 0 - 0.499 MMBTUH	84% Efficient Boiler	79% Efficient Boiler	20	\$230.00	\$1,320.00	0	0.000	56.0	\$0.00	100%	0	0
HVACR - MN	Boiler	Low Pressure Steam Boiler; 0.5 - 4.999 MMBTUH	84% Efficient Boiler	79% Efficient Boiler	20	\$1,755.00	\$3,168.00	0	0.000	427.5	\$0.00	100%	0	0
HVACR - MN	Boiler	Low Pressure Steam Boiler; 5 - 9.999 MMBTUH	84% Efficient Boiler	79% Efficient Boiler	20	\$4,385.00	\$16,500.00	0	0.000	1,281.7	\$0.00	100%	0	0
HVACR - MN	Boiler	High Pressure Steam Boiler; 0 - 0.499 MMBTUH	83% Efficient Boiler	79% Efficient Boiler	20	\$117.00	\$1,320.00	0	0.000	33.3	\$0.00	100%	0	1
HVACR - MN	Boiler	High Pressure Steam Boiler; 0.5 - 4.999 MMBTUH	83% Efficient Boiler	79% Efficient Boiler	20	\$2,205.00	\$3,168.00	0	0.000	429.7	\$0.00	100%	0	0
HVACR - MN	Boiler	High Pressure Steam Boiler; 5 - 9.999 MMBTUH	83% Efficient Boiler	79% Efficient Boiler	20	\$4,155.00	\$16,500.00	0	0.000	1,012.0	\$0.00	100%	0	0
HVACR - MN	Furnace	90% Efficient Furnaces	90% Efficient Furnaces	78% Eff Furnace	20	\$100.00	\$1,254.30	0	0.000	12.3	\$0.00	100%	0	0
HVACR - MN	Furnace	92% Efficient Furnaces	92% Efficient Furnaces	78% Eff Furnace	18	\$250.00	\$1,877.36	0	0.000	18.5	\$0.00	100%	0	4
HVACR - MN	Furnace	94% Efficient Furnaces	94% Efficient Furnaces	78% Eff Furnace	18	\$365.38	\$2,089.24	0	0.000	26.5	\$0.00	100%	0	13
HVACR - MN	Furnace	96% Efficient Furnaces	96% Efficient Furnaces	78% Eff Furnace	18	\$355.70	\$1,798.00	0	0.000	19.5	\$0.00	100%	0	100
HVACR - MN	Unit Heater	Non-Condensing Power Vent (83% efficiency)	Non-condensing power vent unit heater	Non-condensing standard forced-air unit heater	20	\$726.67	\$1,999.23	0	0.000	114.3	\$0.00	100%	0	6
HVACR - MN	Unit Heater	Condensing (>90% efficiency)	Condensing power vent unit heater	Non-condensing standard forced-air unit heater	20	\$5,270.00	\$9,999.81	0	0.000	269.1	\$0.00	100%	0	5
HVACR - MN	Unit Heater Infrared	Infrared	Infrared Heater	Non-condensing standard forced-air unit heater	15	\$389.73	\$532.83	3,289	5	196.3	\$0.00	100%	7	7
HVACR - MN	Boiler Tune Up	Non-Condensing Boiler Tune-Up <= 300 MMBTUH	Boiler Tune-up - 2% additive improvement in efficiency; Boiler now at 80% efficiency	Existing boiler Poorly functioning at 78% efficiency	2	\$455.22	\$1,991.73	0	0.000	261.3	\$0.00	100%	0	230
HVACR - MN	Boiler Tune Up	Non-Condensing Boiler Tune-Up 301 - 1 MMBTUH	Boiler Tune-up - 2% additive improvement in efficiency; Boiler now at 80% efficiency	Existing boiler Poorly functioning at 78% efficiency	2	\$108.25	\$433.00	0	0.000	24.7	\$0.00	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
HVACR - MN	Boiler Tune Up	Non-Condensing Boiler Tune-Up 1 - 10 MMBTUH	Boiler Tune-up - 2% additive improvement in efficiency. Boiler now at 80% efficiency.	Existing boiler Poorly functioning at 78% efficiency.	2	\$174.25	\$697.00	0	0.000	100.7	\$0.00	100%	0	0
HVACR - MN	Boiler Tune Up	Non-Condensing Boiler Tune-Up >= 10 MMBTUH	Boiler Tune-up - 2% additive improvement in efficiency. Boiler now at 80% efficiency.	Existing boiler Poorly functioning at 78% efficiency.	2	\$182.50	\$730.00	0	0.000	333.0	\$0.00	100%	0	0
HVACR - MN	Boiler Tune Up	Condensing Boiler Tune-Up	Condensing Boiler Tune-up - 0.8% additive improvement in efficiency. Boiler now at 88% average annual operating efficiency.	Existing condensing boiler Poorly functioning at 87.2% efficiency.	20	\$289.73	\$1,948.73	0	0.000	48.4	\$0.00	100%	0	67
HVACR - MN	Water Heater	Commercial Water Heaters - Tankless	95% Efficient Tankless Water Heater	80% Efficient Storage Water Heater	20	\$1,247.33	\$2,768.26	0	0.000	84.7	-\$800.00	100%	0	8
HVACR - MN	Water Heater	Commercial Water Heaters - Storage	96% Efficient Storage Water Heater	80% Efficient Storage Water Heater	20	\$780.36	\$9,028.84	0	0.000	226.0	\$0.00	100%	0	18
HVACR - MN	Boiler Controls	Outdoor Air Reset on Non Condensing Boiler <= 300MBTUH	83% Efficient Boiler	80% Efficient existing boiler	20	\$230.77	\$13,800.14	0	0.000	14.2	\$0.00	100%	0	13
HVACR - MN	Boiler Controls	Outdoor Air Reset on Non-Condensing Boiler 301 - 1 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	20	\$200.00	\$1,271.00	0	0.000	35.7	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Outdoor Air Reset on Non-Condensing Boiler 1 - 10 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	20	\$200.00	\$1,504.00	0	0.000	145.6	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Outdoor Air Reset on Non-Condensing Boiler >= 10 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	20	\$200.00	\$1,500.00	0	0.000	1,324.1	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Stack Dampers on Non Condensing Boiler <= 300MBTUH	81% Efficient Boiler	80% Efficient existing boiler	20	\$204.78	\$819.11	0	0.000	22.5	\$0.00	100%	0	10
HVACR - MN	Boiler Controls	Stack Dampers on Non-Condensing Boiler 301 - 1 MMBTUH	81% Efficient Boiler	80% Efficient existing boiler	12	\$127.00	\$508.00	0	0.000	12.2	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Stack Dampers on Non-Condensing Boiler 1 - 10 MMBTUH	81% Efficient Boiler	80% Efficient existing boiler	12	\$200.00	\$800.00	0	0.000	49.7	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Stack Dampers on Non-Condensing Boiler >= 10 MMBTUH	81% Efficient Boiler	80% Efficient existing boiler	12	\$250.00	\$2,000.00	0	0.000	452.3	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Modulating Burners on Non Condensing Boiler <= 300MBTUH	83% Efficient Boiler	80% Efficient existing boiler	20	\$9,762.40	\$98,026.40	0	0.000	813.7	\$0.00	100%	0	5
HVACR - MN	Boiler Controls	Modulating Burners on Non-Condensing Boiler 1 - 10 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	20	\$810.00	\$34,667.00	0	0.000	35.7	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Modulating Burners on Non-Condensing Boiler 1 - 10 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	20	\$3,300.00	\$30,004.00	0	0.000	145.6	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Modulating Burners on Non-Condensing Boiler >= 10 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	20	\$7,000.00	\$58,530.00	0	0.000	1,324.1	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Turbulators on Non Condensing Boiler <= 300MBTUH	83% Efficient Boiler	80% Efficient existing boiler	20	\$400.00	\$3,125.00	0	0.000	16.6	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Turbulators on Non-Condensing Boiler 301 - 1 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	20	\$400.00	\$3,125.00	0	0.000	35.7	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Turbulators on Non-Condensing Boiler 1 - 10 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	20	\$400.00	\$3,125.00	0	0.000	145.6	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Turbulators on Non-Condensing Boiler >= 10 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	20	\$400.00	\$3,125.00	0	0.000	1,324.1	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	O2 Trim Control on Non Condensing Boiler <= 300MBTUH	82% Efficient Boiler	80% Efficient existing boiler	20	\$5,287.50	\$21,198.00	0	0.000	4,293.9	\$0.00	100%	0	1
HVACR - MN	Boiler Controls	O2 Trim Control on Non-Condensing Boiler 301 - 1 MMBTUH	82% Efficient Boiler	80% Efficient existing boiler	20	\$1,827.75	\$7,311.00	0	0.000	24.1	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	O2 Trim Control on Non-Condensing Boiler 1 - 10 MMBTUH	82% Efficient Boiler	80% Efficient existing boiler	20	\$1,827.75	\$7,311.00	0	0.000	98.3	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	O2 Trim Control on Non-Condensing Boiler >= 10 MMBTUH	82% Efficient Boiler	80% Efficient existing boiler	20	\$1,827.75	\$7,311.00	0	0.000	893.5	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Linkageless Controls on Non Condensing Boiler <= 300MBTUH	83% Efficient Boiler	80% Efficient existing boiler	16	\$5,694.00	\$48,207.00	0	0.000	1,348.0	\$0.00	100%	0	2
HVACR - MN	Boiler Controls	Linkageless Controls on Non-Condensing Boiler 301 - 1 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	16	\$162.00	\$1,218.73	0	0.000	35.7	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Linkageless Controls on Non-Condensing Boiler 1 - 10 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	16	\$660.00	\$4,965.20	0	0.000	145.6	\$0.00	100%	0	0
HVACR - MN	Boiler Controls	Linkageless Controls on Non-Condensing Boiler >= 10 MMBTUH	83% Efficient Boiler	80% Efficient existing boiler	16	\$6,000.00	\$45,138.16	0	0.000	1,324.1	\$0.00	100%	0	0
HVACR - MN	Steam Traps	Steam Traps - Low Pressure	New Steam Traps	Existing Boiler, malfunctioning steam traps	7	\$2,010.00	\$193,729.26	0	0.000	1,889.7	\$0.00	100%	0	5
HVACR - MN	Steam Traps	Steam Traps - High Pressure	New Steam Traps	Existing Boiler, malfunctioning steam traps	5	\$50.00	\$316.96	0	0.000	89.2	\$0.00	100%	0	0
HVACR - MN	Pipe Insulation	Pipe Insulation 105-200 Degree	100 ft of pipe with new insulation	100 ft of pipe with no or old insulation	7	\$1,179.72	\$2,498.20	0	0.000	23.9	\$0.00	100%	0	28
HVACR - MN	Pipe Insulation	Pipe Insulation 201-250 Degree	101 ft of pipe with new insulation	101 ft of pipe with no or old insulation	7	\$458.00	\$1,280.13	0	0.000	22.0	\$0.00	100%	0	3
HVACR - MN	Pipe Insulation	Pipe Insulation 251-350 Degree	102 ft of pipe with new insulation	102 ft of pipe with no or old insulation	7	\$507.88	\$1,267.92	0	0.000	29.4	\$0.00	100%	0	13
HVACR - MN	Destratification Fans	LED Refrigerated Case Lighting	HVLS Destratification Fan, 14 ft to <=26 ft	No destratification fan	15	\$2,000.00	\$7,320.00	0	0.000	87.8	\$0.00	100%	0	0
HVACR - MN	Retrofit Refrigerated	LED Refrigerated Case Lighting	LED Strip lighting	T8 or T12 Fluorescent	20	\$45.00	\$163.75	682	0.081	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	1 HP Enhanced Efficiency Motor	1 hp motor 1% more efficient than NEMA Premium	1 hp NEMA Premium motor	16	\$100.00	\$880.24	96	0	0.0	\$0.00	100%	12	0
HVACR - MN	Motors	1.5 HP Enhanced Efficiency Motor	1.5 hp motor 1% more efficient than NEMA Premium	1.5 hp NEMA Premium motor	16	\$100.00	\$719.14	94	0	0.0	\$0.00	100%	9	0
HVACR - MN	Motors	2 HP Enhanced Efficiency Motor	2 hp motor 1% more efficient than NEMA Premium	2 hp NEMA Premium motor	16	\$127.59	\$890.40	106	0	0.0	\$0.00	100%	29	0
HVACR - MN	Motors	3 HP Enhanced Efficiency Motor	3 hp motor 1% more efficient than NEMA Premium	3 hp NEMA Premium motor	16	\$166.94	\$1,025.25	101	0	0.0	\$0.00	100%	31	0
HVACR - MN	Motors	5 HP Enhanced Efficiency Motor	5 hp motor 1% more efficient than NEMA Premium	5 hp NEMA Premium motor	16	\$226.06	\$864.06	104	0	0.0	\$0.00	100%	71	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
HVACR - MN	Motors	7.5 HP Enhanced Efficiency Motor	7.5 hp motor 1% more efficient than NEMA Premium	7.5 hp NEMA Premium motor	15	\$405.98	\$1,487.52	698	0	0.0	\$0.00	100%	46	0
HVACR - MN	Motors	10 HP Enhanced Efficiency Motor	10 hp motor 1% more efficient than NEMA Premium	10 hp NEMA Premium motor	15	\$289.77	\$1,210.15	550	0	0.0	\$0.00	100%	44	0
HVACR - MN	Motors	15 HP Enhanced Efficiency Motor	15 hp motor 1% more efficient than NEMA Premium	15 hp NEMA Premium motor	15	\$399.19	\$2,158.27	784	0	0.0	\$0.00	100%	31	0
HVACR - MN	Motors	20 HP Enhanced Efficiency Motor	20 hp motor 1% more efficient than NEMA Premium	20 hp NEMA Premium motor	15	\$512.50	\$2,821.43	1,000	0	0.0	\$0.00	100%	34	0
HVACR - MN	Motors	25 HP Enhanced Efficiency Motor	25 hp motor 1% more efficient than NEMA Premium	25 hp NEMA Premium motor	15	\$603.45	\$3,583.25	1,100	0	0.0	\$0.00	100%	29	0
HVACR - MN	Motors	30 HP Enhanced Efficiency Motor	30 hp motor 1% more efficient than NEMA Premium	30 hp NEMA Premium motor	15	\$588.24	\$3,098.82	1,237	0	0.0	\$0.00	100%	17	0
HVACR - MN	Motors	40 HP Enhanced Efficiency Motor	40 hp motor 1% more efficient than NEMA Premium	40 hp NEMA Premium motor	15	\$692.31	\$3,820.24	1,379	0	0.0	\$0.00	100%	13	0
HVACR - MN	Motors	50 HP Enhanced Efficiency Motor	50 hp motor 1% more efficient than NEMA Premium	50 hp NEMA Premium motor	15	\$1,125.00	\$5,028.00	2,000	0	0.0	\$0.00	100%	16	0
HVACR - MN	Motors	60 HP Enhanced Efficiency Motor	60 hp motor 1% more efficient than NEMA Premium	60 hp NEMA Premium motor	15	\$1,050.00	\$5,361.24	2,120	0	0.0	\$0.00	100%	6	0
HVACR - MN	Motors	75 HP Enhanced Efficiency Motor	75 hp motor 1% more efficient than NEMA Premium	75 hp NEMA Premium motor	15	\$1,125.00	\$5,240.48	2,442	0	0.0	\$0.00	100%	2	0
HVACR - MN	Motors	100 HP Enhanced Efficiency Motor	100 hp motor 1% more efficient than NEMA Premium	100 hp NEMA Premium motor	15	\$2,250.00	\$10,908.41	5,946	1	0.0	\$0.00	100%	2	0
HVACR - MN	Motors	125 HP Enhanced Efficiency Motor	125 hp motor 1% more efficient than NEMA Premium	125 hp NEMA Premium motor	20	\$312.50	\$2,783.49	2,749	0.538	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	150 HP Enhanced Efficiency Motor	150 hp motor 1% more efficient than NEMA Premium	150 hp NEMA Premium motor	15	\$2,250.00	\$9,428.10	3,750	1	0.0	\$0.00	100%	1	0
HVACR - MN	Motors	200 HP Enhanced Efficiency Motor	200 hp motor 1% more efficient than NEMA Premium	200 hp NEMA Premium motor	15	\$2,500.00	\$11,288.78	5,000	1	0.0	\$0.00	100%	1	0
HVACR - MN	Motors	250 HP Enhanced Efficiency Motor	250 hp motor 1% more efficient than NEMA Premium	250 hp NEMA Premium motor	15	\$4,687.50	\$13,926.50	6,125	1	0.0	\$0.00	100%	2	0
HVACR - MN	Motors	300 HP Enhanced Efficiency Motor	300 hp motor 1% more efficient than NEMA Premium	300 hp NEMA Premium motor	15	\$3,125.00	\$18,027.25	4,900	1	0.0	\$0.00	100%	1	0
HVACR - MN	Motors	350 HP Enhanced Efficiency Motor	350 hp motor 1% more efficient than NEMA Premium	350 hp NEMA Premium motor	20	\$787.50	\$10,114.75	11,922	1.460	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	400 HP Enhanced Efficiency Motor	400 hp motor 1% more efficient than NEMA Premium	400 hp NEMA Premium motor	20	\$900.00	\$11,547.97	13,663	1.513	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	450 HP Enhanced Efficiency Motor	450 hp motor 1% more efficient than NEMA Premium	450 hp NEMA Premium motor	20	\$1,012.50	\$13,102.94	15,328	1.877	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	500 HP Enhanced Efficiency Motor	500 hp motor 1% more efficient than NEMA Premium	500 hp NEMA Premium motor	20	\$1,125.00	\$13,566.70	17,070	2.182	0.0	\$0.00	100%	0	0
HVACR - MN	VFDs	1 HP Variable Frequency Drive	1 hp centrifugal fan or pump coupled with a VFD	1 hp centrifugal fan or pump without a VFD	15	\$560.00	\$3,084.94	1,200	0	0.0	\$0.00	100%	10	0
HVACR - MN	VFDs	1.5 HP Variable Frequency Drive	1.5 hp centrifugal fan or pump coupled with a VFD	1.5 hp centrifugal fan or pump without a VFD	15	\$1,200.00	\$7,485.20	4,317	1	0.0	\$0.00	100%	3	0
HVACR - MN	VFDs	2 HP Variable Frequency Drive	2 hp centrifugal fan or pump coupled with a VFD	2 hp centrifugal fan or pump without a VFD	15	\$654.55	\$4,083.17	2,000	1	0.0	\$0.00	100%	11	0
HVACR - MN	VFDs	3 HP Variable Frequency Drive	3 hp centrifugal fan or pump coupled with a VFD	3 hp centrifugal fan or pump without a VFD	15	\$896.00	\$8,947.97	7,420	1	0.0	\$0.00	100%	25	0
HVACR - MN	VFDs	5 HP Variable Frequency Drive	5 hp centrifugal fan or pump coupled with a VFD	5 hp centrifugal fan or pump without a VFD	15	\$1,926.32	\$11,738.78	20,804	3	0.0	\$0.00	100%	38	0
HVACR - MN	VFDs	7.5 HP Variable Frequency Drive	7.5 hp centrifugal fan or pump coupled with a VFD	7.5 hp centrifugal fan or pump without a VFD	15	\$1,379.03	\$7,511.48	12,206	3	0.0	\$0.00	100%	31	0
HVACR - MN	VFDs	10 HP Variable Frequency Drive	10 hp centrifugal fan or pump coupled with a VFD	10 hp centrifugal fan or pump without a VFD	15	\$1,392.86	\$8,748.07	15,819	3	0.0	\$0.00	100%	28	0
HVACR - MN	VFDs	15 HP Variable Frequency Drive	15 hp centrifugal fan or pump coupled with a VFD	15 hp centrifugal fan or pump without a VFD	15	\$1,899.04	\$7,800.77	24,325	5	0.0	\$0.00	100%	52	0
HVACR - MN	VFDs	20 HP Variable Frequency Drive	20 hp centrifugal fan or pump coupled with a VFD	20 hp centrifugal fan or pump without a VFD	15	\$2,666.67	\$9,880.84	38,149	6	0.0	\$0.00	100%	36	0
HVACR - MN	VFDs	25 HP Variable Frequency Drive	25 hp centrifugal fan or pump coupled with a VFD	25 hp centrifugal fan or pump without a VFD	15	\$2,695.65	\$8,703.50	35,363	6	0.0	\$0.00	100%	23	0
HVACR - MN	VFDs	30 HP Variable Frequency Drive	30 hp centrifugal fan or pump coupled with a VFD	30 hp centrifugal fan or pump without a VFD	15	\$3,284.21	\$8,362.18	48,480	8	0.0	\$0.00	100%	19	0
HVACR - MN	VFDs	40 HP Variable Frequency Drive	40 hp centrifugal fan or pump coupled with a VFD	40 hp centrifugal fan or pump without a VFD	15	\$5,863.64	\$14,261.28	77,079	10	0.0	\$0.00	100%	22	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
HVACR - MN	VFDs	50 HP Variable Frequency Drive	50 hp centrifugal fan or pump coupled with a VFD	50 hp centrifugal fan or pump without a VFD	15	\$4,593.75	\$10,273.74	64,214	15	0.0	\$0.00	100%	16	0
HVACR - MN	VFDs	60 HP Variable Frequency Drive	60 hp centrifugal fan or pump coupled with a VFD	60 hp centrifugal fan or pump without a VFD	15	\$4,666.67	\$10,901.26	60,801	15	0.0	\$0.00	100%	12	0
HVACR - MN	VFDs	75 HP Variable Frequency Drive	75 hp centrifugal fan or pump coupled with a VFD	75 hp centrifugal fan or pump without a VFD	15	\$6,875.00	\$19,201.22	103,070	20	0.0	\$0.00	100%	8	0
HVACR - MN	VFDs	100 HP Variable Frequency Drive	100 hp centrifugal fan or pump coupled with a VFD	100 hp centrifugal fan or pump without a VFD	15	\$10,285.71	\$18,270.41	208,464	27	0.0	\$0.00	100%	7	0
HVACR - MN	VFDs	125 HP Variable Frequency Drive	125 hp centrifugal fan or pump coupled with a VFD	125 hp centrifugal fan or pump without a VFD	15	\$7,000.00	\$19,994.26	209,320	27	0.0	\$0.00	100%	3	0
HVACR - MN	VFDs	150 HP Variable Frequency Drive	150 hp centrifugal fan or pump coupled with a VFD	150 hp centrifugal fan or pump without a VFD	15	\$7,000.00	\$11,346.11	75,849	30	0.0	\$0.00	100%	2	0
HVACR - MN	VFDs	200 HP Variable Frequency Drive	200 hp centrifugal fan or pump coupled with a VFD	200 hp centrifugal fan or pump without a VFD	15	\$8,000.00	\$12,471.35	220,703	32.066	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	1 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$100.00	\$683.54	68	0.011	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	1.5 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$100.00	\$718.34	54	0.013	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	2 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$100.00	\$726.88	95	0.020	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	3 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$112.50	\$759.91	135	0.026	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	5 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$150.00	\$802.06	172	0.035	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	7.5 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$225.00	\$996.00	346	0.062	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	10 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$250.00	\$1,117.02	436	0.079	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	15 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$375.00	\$2,144.34	558	0.090	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	20 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$425.00	\$2,369.70	922	0.154	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	25 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$500.00	\$2,675.38	866	0.155	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	30 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$500.00	\$2,921.91	1,113	0.155	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	40 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$600.00	\$3,403.22	1,126	0.174	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	50 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$750.00	\$3,728.24	1,622	0.271	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	60 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$900.00	\$4,731.77	2,002	0.312	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	75 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$1,125.00	\$5,507.32	2,297	0.311	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	100 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$1,500.00	\$7,154.13	2,790	0.427	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	125 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$1,875.00	\$8,514.50	2,365	0.463	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	150 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$2,250.00	\$9,729.63	2,760	0.469	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	200 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$2,500.00	\$11,653.55	4,491	0.666	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	250 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$3,125.00	\$13,935.15	6,140	0.765	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	300 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$3,125.00	\$16,722.72	4,007	0.524	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	350 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$3,125.00	\$26,199.40	7,153	0.876	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	400 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$5,000.00	\$29,656.70	10,930	1.210	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	450 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$5,000.00	\$33,407.70	9,197	1.126	0.0	\$0.00	100%	0	0
HVACR - MN	Motors	500 HP Upgrade Motor	NEMA Premium Efficient Motor	EPACT Efficient Motor	15	\$5,000.00	\$34,526.40	6,828	0.873	0.0	\$0.00	100%	0	0
HVACR - MN	Well Pump VFD	1 HP Well Water Pump Variable Frequency Drive	1 hp well water pump coupled with a VFD	1 hp well water pump without a VFD	15	\$100.00	\$2,182.10	184	0.046	0.0	\$0.00	100%	0	0
HVACR - MN	Well Pump VFD	1.5 HP Well Water Pump Variable Frequency Drive	1.5 hp well water pump coupled with a VFD	1.5 hp well water pump without a VFD	15	\$100.00	\$2,493.50	276	0.069	0.0	\$0.00	100%	0	0
HVACR - MN	Well Pump VFD	2 HP Well Water Pump Variable Frequency Drive	2 hp well water pump coupled with a VFD	2 hp well water pump without a VFD	30	\$620.00	\$3,098.96	3,907	1	0.0	\$0.00	100%	1	0
HVACR - MN	Well Pump VFD	3 HP Well Water Pump Variable Frequency Drive	3 hp well water pump coupled with a VFD	3 hp well water pump without a VFD	30	\$240.00	\$473.30	3,354	1	0.0	\$0.00	100%	2	0
HVACR - MN	Well Pump VFD	5 HP Well Water Pump Variable Frequency Drive	5 hp well water pump coupled with a VFD	5 hp well water pump without a VFD	15	\$150.00	\$3,705.41	921	0.231	0.0	\$0.00	100%	0	0
HVACR - MN	Well Pump VFD	7.5 HP Well Water Pump Variable Frequency Drive	7.5 hp well water pump coupled with a VFD	7.5 hp well water pump without a VFD	30	\$847.50	\$3,074.80	12,313	3	0.0	\$0.00	100%	5	0
HVACR - MN	Well Pump VFD	10 HP Well Water Pump Variable Frequency Drive	10 hp well water pump coupled with a VFD	10 hp well water pump without a VFD	15	\$225.00	\$4,654.52	7,890	0.826	0.0	\$0.00	100%	0	0
HVACR - MN	Well Pump VFD	15 HP Well Water Pump Variable Frequency Drive	15 hp well water pump coupled with a VFD	15 hp well water pump without a VFD	30	\$390.00	\$451.98	4,800	1	0.0	\$0.00	100%	2	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCKW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
HVACR - MN	Well Pump VFD	20 HP Well Water Pump Variable Frequency Drive	20 hp well water pump coupled with a VFD	20 hp well water pump without a VFD	15	\$450.00	\$5,846.74	17,561	2.238	0.0	\$0.00	100%	0	0
HVACR - MN	Well Pump VFD	25 HP Well Water Pump Variable Frequency Drive	25 hp well water pump coupled with a VFD	25 hp well water pump without a VFD	15	\$550.00	\$6,292.12	19,227	3.739	0.0	\$0.00	100%	0	0
HVACR - MN	Well Pump VFD	30 HP Well Water Pump Variable Frequency Drive	30 hp well water pump coupled with a VFD	30 hp well water pump without a VFD	15	\$62.50	\$6,681.09	22,938	2.401	0.0	\$0.00	100%	0	0
HVACR - MN	Well Pump VFD	40 HP Well Water Pump Variable Frequency Drive	40 hp well water pump coupled with a VFD	40 hp well water pump without a VFD	15	\$2,010.00	\$4,784.50	25,772	4	0.0	\$0.00	100%	5	0
HVACR - MN	Well Pump VFD	50 HP Well Water Pump Variable Frequency Drive	50 hp well water pump coupled with a VFD	50 hp well water pump without a VFD	15	\$1,000.00	\$7,903.80	47,438	6.346	0.0	\$0.00	100%	0	0
HVACR - MN	Well Pump VFD	60 HP Well Water Pump Variable Frequency Drive	60 hp well water pump coupled with a VFD	60 hp well water pump without a VFD	15	\$2,000.00	\$8,380.40	26,104	3	0.0	\$0.00	100%	1	0
HVACR - MN	Well Pump VFD	75 HP Well Water Pump Variable Frequency Drive	75 hp well water pump coupled with a VFD	75 hp well water pump without a VFD	15	\$1,475.00	\$9,031.71	49,110	6.898	0.0	\$0.00	100%	0	0
HVACR - MN	Well Pump VFD	100 HP Well Water Pump Variable Frequency Drive	100 hp well water pump coupled with a VFD	100 hp well water pump without a VFD	15	\$1,700.00	\$9,928.29	31,817	5.129	0.0	\$0.00	100%	0	0
HVACR - MN	Well Pump VFD	125 HP Well Water Pump Variable Frequency Drive	125 hp well water pump coupled with a VFD	125 hp well water pump without a VFD	15	\$3,000.00	\$9,928.29	37,203	4	0.0	\$0.00	100%	1	0
HVACR - MN	Well Pump VFD	150 HP Well Water Pump Variable Frequency Drive	150 hp well water pump coupled with a VFD	150 hp well water pump without a VFD	15	\$3,500.00	\$10,984.38	44,844	11	0.0	\$0.00	100%	2	0
HVACR - MN	Well Pump VFD	200 HP Well Water Pump Variable Frequency Drive	200 hp well water pump coupled with a VFD	200 hp well water pump without a VFD	15	\$4,000.00	\$12,471.38	105,498	15	0.0	\$0.00	100%	1	0
HVACR - MN	Fan Efficiency (FEI)	1 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	15	\$100.00	\$513.99	3,375	1	0.0	\$0.00	100%	1	0
HVACR - MN	Fan Efficiency (FEI)	1.5 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$160.00	\$324.90	146	0.025	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	2 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$180.00	\$356.79	223	0.032	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	3 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$200.00	\$405.08	305	0.047	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	5 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$220.00	\$405.27	484	0.074	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	7.5 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$240.00	\$511.59	695	0.108	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	10 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$260.00	\$557.78	936	0.140	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	15 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$300.00	\$566.01	1,169	0.177	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	20 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$320.00	\$545.64	1,477	0.229	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	25 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$360.00	\$645.32	1,794	0.281	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	30 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$380.00	\$695.06	2,461	0.344	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	40 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$420.00	\$809.83	3,303	0.449	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	50 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$460.00	\$843.13	4,020	0.582	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	60 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$500.00	\$844.69	5,420	0.669	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	75 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$540.00	\$1,150.65	6,352	0.812	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	100 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$600.00	\$1,287.82	8,034	1.102	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	125 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$640.00	\$1,095.45	10,126	1.352	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	150 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$820.00	\$1,392.99	12,344	1.641	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	200 HP Efficient Fan	Efficient Fan with Qualifying FEI	Fan with Baseline FEI	20	\$1,100.00	\$1,840.38	14,063	1.895	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	1 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$520.00	\$2,365.32	986	0.174	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	1.5 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$560.00	\$2,718.31	1,490	0.256	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	2 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$580.00	\$3,019.32	2,339	0.339	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	3 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$600.00	\$3,395.09	3,192	0.495	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	5 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$820.00	\$3,995.48	5,391	0.822	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	7.5 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$990.00	\$4,585.74	7,772	1.210	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	10 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$1,260.00	\$5,098.48	10,727	1.604	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	15 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$1,550.00	\$5,743.76	15,552	2.356	0.0	\$0.00	100%	0	0



Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCKW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
HVACR - MN	Fan Efficiency (FEI)	20 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$1,920.00	\$6,266.13	20,209	3.128	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	25 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$2,360.00	\$6,898.24	24,797	3.888	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	30 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$2,780.00	\$7,208.23	33,292	4.656	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	40 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$3,420.00	\$7,964.98	45,511	6.187	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	50 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$3,960.00	\$8,597.51	53,132	7.693	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	60 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$4,500.00	\$9,030.05	74,574	9.203	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	75 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$5,540.00	\$9,982.36	89,276	11.415	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	100 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$6,600.00	\$10,950.26	110,616	15.174	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	125 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$7,640.00	\$11,582.14	142,076	18.966	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	150 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$7,820.00	\$12,486.98	170,589	22.672	0.0	\$0.00	100%	0	0
HVACR - MN	Fan Efficiency (FEI)	200 HP Efficient Fan and integrated VFD	Variable Speed Efficient Fan with Qualifying FEI and Integrated VFD	Constant Speed Fan with Baseline FEI	15	\$9,100.00	\$14,209.42	224,002	30.184	0.0	\$0.00	100%	0	0
HVACR - MN	Refrigeration Fans	PMSM - Medium Temp Display Case	PMSM Motor	Shaded Pole Motor	15	\$1,040.00	\$1,008.46	10,708	1	0.0	\$0.00	100%	2	0
HVACR - MN	Refrigeration Fans	PMSM - Low Temp Display Case	PMSM Motor	Shaded Pole Motor	15	\$40.00	\$93.30	508	0.058	0.0	\$0.00	100%	0	0
HVACR - MN	Refrigeration Fans	ECM Motors - Medium Temp Display Case	ECM Motor	Shaded Pole Motor	15	\$40.00	\$140.71	414	0.047	0.0	\$0.00	100%	0	0
HVACR - MN	Refrigeration Fans	ECM Motors - Low Temp Display Case	ECM Motor	Shaded Pole Motor	15	\$40.00	\$140.71	489	0.056	0.0	\$0.00	100%	0	0
HVACR - MN	Refrigeration Fans	ECM Motors - Medium Temp Walk-in, Evap fan <= 15" Diameter	ECM Motor	Shaded Pole Motor	15	\$236.92	\$810.80	3,884	0	0.0	\$0.00	100%	13	0
HVACR - MN	Refrigeration Fans	ECM Motors - Low Temp Walk-in, Evap fan <= 15" Diameter	ECM Motor	Shaded Pole Motor	15	\$269.23	\$1,094.90	3,884	0	0.0	\$0.00	100%	13	0
HVACR - MN	Refrigeration Fans	ECM Motors - Medium Temp Walk-in, Evap fan > 15" Diameter	ECM Motor	PSC	15	\$280.00	\$1,078.04	3,425	0	0.0	\$0.00	100%	3	0
HVACR - MN	Refrigeration Fans	ECM Motors - Low Temp Walk-in, Evap fan > 15" Diameter	ECM Motor	PSC	15	\$210.00	\$857.03	3,146	0	0.0	\$0.00	100%	1	0
HVACR - MN	Fractional HP Circ. Pumps	1/20 HP Circulator Pump	1/20 HP Circulator Pump with an ECM	1/20 HP Circulator Pump with a PSC	15	\$63.41	\$194.86	683	0	0.0	\$0.00	100%	41	0
HVACR - MN	Fractional HP Circ. Pumps	1/15 HP Circulator Pump	1/15 HP Circulator Pump with an ECM	1/15 HP Circulator Pump with a PSC	15	\$50.00	\$144.55	549	0.098	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Circ. Pumps	1/6 HP Circulator Pump	1/6 HP Circulator Pump with an ECM	1/6 HP Circulator Pump with a PSC	15	\$50.00	\$158.35	1,373	0.245	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Circ. Pumps	1/4 HP Circulator Pump	1/4 HP Circulator Pump with an ECM	1/4 HP Circulator Pump with a PSC	15	\$50.00	\$169.86	2,059	0.368	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Circ. Pumps	1/3 HP Circulator Pump	1/3 HP Circulator Pump with an ECM	1/3 HP Circulator Pump with a PSC	15	\$100.00	\$181.37	2,746	0.491	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Circ. Pumps	1/2 HP Circulator Pump	1/2 HP Circulator Pump with an ECM	1/2 HP Circulator Pump with a PSC	15	\$100.00	\$204.38	4,119	0.736	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Circ. Pumps	3/4 HP Circulator Pump	3/4 HP Circulator Pump with an ECM	3/4 HP Circulator Pump with a PSC	15	\$100.00	\$238.90	6,178	1.104	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Circ. Pumps	7/8 HP Circulator Pump	7/8 HP Circulator Pump with an ECM	7/8 HP Circulator Pump with a PSC	15	\$100.00	\$256.16	7,206	1.288	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Fan Motors	1/20 HP Fan Motor	1/20 HP Fan with an ECM	1/20 HP Fan with a PSC	15	\$50.00	\$142.24	163	0.056	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Fan Motors	1/15 HP Fan Motor	1/15 HP Fan with an ECM	1/15 HP Fan with a PSC	15	\$50.00	\$144.54	230	0.079	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Fan Motors	1/6 HP Fan Motor	1/6 HP Fan with an ECM	1/6 HP Fan with a PSC	15	\$50.00	\$158.35	582	0.109	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Fan Motors	1/4 HP Fan Motor	1/4 HP Fan with an ECM	1/4 HP Fan with a PSC	15	\$50.00	\$169.86	555	0.100	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Fan Motors	1/3 HP Fan Motor	1/3 HP Fan with an ECM	1/3 HP Fan with a PSC	15	\$100.00	\$181.36	686	0.235	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Fan Motors	1/2 HP Fan Motor	1/2 HP Fan with an ECM	1/2 HP Fan with a PSC	15	\$100.00	\$204.38	872	0.299	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Fan Motors	3/4 HP Fan Motor	3/4 HP Fan with an ECM	3/4 HP Fan with a PSC	15	\$100.00	\$238.89	1,014	0.348	0.0	\$0.00	100%	0	0
HVACR - MN	Fractional HP Fan Motors	7/8 HP Fan Motor	7/8 HP Fan with an ECM	7/8 HP Fan with a PSC	15	\$100.00	\$256.15	1,050	0.360	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	1 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$100.00	\$187.35	374	0.068	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	1.5 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$120.00	\$214.51	548	0.100	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	2 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$120.00	\$236.14	728	0.133	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	3 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$160.00	\$270.38	1,061	0.193	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	5 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	15	\$300.00	\$841.30	3,208	0	0.0	\$0.00	100%	1	0
HVACR - MN	Pump Efficiency (PEI)	7.5 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$200.00	\$367.18	2,595	0.473	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	10 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$220.00	\$404.21	3,439	0.627	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	15 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$260.00	\$462.82	5,105	0.931	0.0	\$0.00	100%	0	0



Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCKW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
HVACR - MN	Pump Efficiency (PEI)	20 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$280.00	\$509.49	6,776	1.236	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	25 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$320.00	\$548.91	8,423	1.536	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	30 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	18	\$366.67	\$624.75	8,348	1	0.0	\$0.00	100%	3	0
HVACR - MN	Pump Efficiency (PEI)	40 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$380.00	\$642.20	13,404	2.444	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	50 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$400.00	\$691.89	16,667	3.039	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	60 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$420.00	\$735.33	19,938	3.635	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	75 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$460.00	\$792.23	24,836	4.528	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	100 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$500.00	\$872.12	33,016	6.020	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	125 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$540.00	\$939.60	41,266	7.524	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	150 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$580.00	\$998.60	49,329	8.994	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	200 HP Efficient Pump	Pump at least 0.02 PEI better than minimum efficiency	Pump at minimum efficiency	20	\$640.00	\$1,051.35	65,673	11.974	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	1 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$500.00	\$2,412.74	2,371	0.432	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	1.5 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$520.00	\$2,757.52	3,477	0.634	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	2 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$520.00	\$3,031.63	4,817	0.842	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	3 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$560.00	\$3,464.86	6,732	1.227	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	5 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$780.00	\$4,099.85	11,186	2.039	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	7.5 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$950.00	\$4,517.00	15,245	2.780	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	10 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$1,220.00	\$4,965.93	20,204	3.684	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	15 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$1,510.00	\$5,675.44	29,988	5.468	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	20 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$1,880.00	\$6,239.50	39,809	7.258	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	25 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$2,320.00	\$6,715.35	49,484	9.022	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	30 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$2,740.00	\$7,130.97	59,256	10.804	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	40 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$3,360.00	\$7,839.70	78,744	14.357	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	50 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$3,900.00	\$8,437.60	97,912	17.852	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	60 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$4,420.00	\$8,959.81	117,127	21.356	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	75 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$5,460.00	\$9,643.14	145,903	26.602	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	100 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$6,500.00	\$10,601.55	193,961	35.365	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	125 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$7,540.00	\$11,410.08	242,426	44.201	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	150 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$7,580.00	\$12,116.28	289,795	52.838	0.0	\$0.00	100%	0	0
HVACR - MN	Pump Efficiency (PEI)	200 HP Efficient Pump With Integrated VFD	Pump at least 0.02 PEI better than minimum efficiency with a VFD	Pump at minimum efficiency	15	\$8,640.00	\$13,283.37	385,810	70.344	0.0	\$0.00	100%	0	0
HVACR - MN	Anti-Sweat Heater Controls	Anti-Sweat Heater Controls, Medium Temperature Case	Anti-Sweat Heater Controls	Anti-Sweat Heaters running constantly	12	\$60.00	\$180.00	955	0.098	0.0	\$0.00	100%	0	0
HVACR - MN	Anti-Sweat Heater Controls	Anti-Sweat Heater Controls, Low Temperature Case	Anti-Sweat Heater Controls	Anti-Sweat Heaters running constantly	12	\$60.00	\$180.00	1,874	0.193	0.0	\$0.00	100%	0	0
HVACR - MN	No Heat Case Doors	No Heat Case Doors - Medium Temp	No Heat Case Doors	Anti-Sweat Heaters running constantly	18	\$1,300.00	\$3,375.00	13,793	3	0.0	\$0.00	100%	3	0
HVACR - MN	No Heat Case Doors	No Heat Case Doors - Low Temp	No Heat Case Doors	Anti-Sweat Heaters running constantly	18	\$2,550.00	\$13,800.00	35,455	4	0.0	\$0.00	100%	1	0
HVACR - MN	Evaporator Fan Motor Controller	Evaporator Fan Motor Controller (EFMC) (Cooler)	Evaporator fan motor control on medium temp walk-in	No fan motor controls on medium temp walk-in	15	\$35.00	\$351.49	450	0.051	0.0	\$0.00	100%	0	0
HVACR - MN	Evaporator Fan Motor Controller	Evaporator Fan Motor Controller (EFMC) (Freezer)	Evaporator fan motor control on low temp walk-in	No fan motor controls on low temp walk-in	15	\$35.00	\$351.49	274	0.032	0.0	\$0.00	100%	0	0
HVACR - MN	Medium-temp Enclosed Reach-In Case	Medium-temp Enclosed Reach-In Case (per linear foot)	Medium-temp Reach-In Cases with Doors	Medium-temp Open Reach-In Cases	18	\$1,866.67	\$17,808.18	35,879	3	0.0	\$0.00	100%	3	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
HVACR - MN	Medium-temp Enclosed Reach-In Case	New Medium-temp Enclosed Reach-In Case (per linear foot)	New Medium-temp Reach-In Cases with Doors	New Medium-temp Open Reach-In Cases	15	\$70.00	\$337.58	970	0.111	0.0	\$0.00	100%	0	0
HVACR - MN	Retrofit of open multi-deck cases with solid glass doors	Retrofit of open multi-deck cooler cases with solid glass doors (per linear foot of case)	Closed Case with Doors	Open Case with No Doors	12	\$100.00	\$497.82	514	0.059	6.7	\$0.00	100%	0	0
HVACR - MN	Retrofit of open multi-deck cases with solid glass doors	Retrofit of open multi-deck freezer cases with solid glass doors (per linear foot of case)	Closed Case with Doors	Open Case with No Doors	12	\$150.00	\$497.82	1,563	0.178	8.3	\$0.00	100%	0	0
HVACR - MN	Walk-in Freezer Defrost Controls	Controls that only operate defrost when needed in a Walk-in Freezer	Demand Defrost Controls installed in Walk-in Freezer	Walk-in Freezer with Electronic Defrost on Timer Controls	18	\$858.00	\$1,361.00	9,076	1	0.0	\$0.00	100%	8	0
HVACR - MN	Floating Head Pressure Controls	Floating head pressure controls added onto a commercial refrigeration system	Electronic solenoids connected to floating head pressure controls to reduce minimum head pressure	Mechanical solenoids set at fixed head pressure	18	\$1,303.14	\$4,188.00	37,871	3	0.0	\$0.00	100%	7	0
HVACR - MN	In-Depth Study	Cooling Studies	0	0	0	\$12,725.00	\$17,650.00	0	0.000	0.0	\$0.00	100%	0	0
HVACR - MN	In-Depth Study	Motors Studies	0	0	0	\$10,875.00	\$14,500.00	0	0.000	0.0	\$0.00	100%	0	0
HVACR - MN	In-Depth Study	Heating Studies	0	0	0	\$15,653.25	\$22,463.67	0	0.000	0.0	\$0.00	100%	0	0
HVACR - MN	Assessment	Refrigeration Assessment	0	0	0	\$3,000.00	\$3,000.00	0	0.000	0.0	\$0.00	100%	0	0
HVACR - MN	In-Depth Study	Refrigeration Study	0	0	0	\$12,972.79	\$22,074.46	0	0.000	0.0	\$0.00	100%	0	0
HVACR - MN	Aerators	Sink Aerator -restroom, elec water heating (per aerator)	6 gallons per minute restroom faucet aerator	2.2 gallons per minute faucet	18	\$6,168.00	\$6,168.00	0	0.000	4,687.4	\$360.96	100%	0	1
HVACR - MN	Aerators	Sink Aerator -kitchen, elec water heating (per aerator)	1.5 gallons per minute kitchen faucet aerator	2.2 gallons per minute faucet	9	\$8.00	\$8.00	389	0.000	0.0	\$52.75	100%	0	0
HVACR - MN	Aerators	CHW Pre-Rinse Sprayer - electric water heating	1.28 gallons per minute sprayer	1.60 gallons per minute sprayer	5	\$45.00	\$45.00	455	0.001	0.0	\$87.35	100%	0	0
HVACR - MN	Aerators	Faucet Aerator (Restroom), gas water heating	1.5 gallons per minute restroom faucet aerator	2.2 gallons per minute faucet	9	\$8.00	\$8.00	0	0.000	8.1	\$360.96	100%	0	0
HVACR - MN	Aerators	Faucet Aerator (Kitchen), gas water heating	1.5 gallons per minute kitchen faucet aerator	2.2 gallons per minute faucet	9	\$8.00	\$8.00	0	0.000	1.6	\$52.75	100%	0	0
HVACR - MN	Aerators	CHW Pre-Rinse Sprayer - gas water heating	1.28 gallons per minute sprayer	1.60 gallons per minute sprayer	5	\$45.00	\$45.00	0	0.000	1.9	\$87.35	100%	0	0
HVACR - MN	Strip Curtains - Direct Install	Strip Curtains - Doorway to Freezer Space	Installation of new strip curtain at least 0.06 inches thick added to a walk-in freezer covering entire doorway when open	Walk-in freezer than previously had either no strip curtain installed or an old, ineffective strip curtain installed	4	\$270.83	\$270.83	4,620	0.527	0.0	\$0.00	100%	0	0
HVACR - MN	Auto Closers - Direct Install	Auto-Close Doors - Walk-in Cooler	Installation of new automatic, hydraulic-type door closer on main walk-in cooler door	Walk-in cooler without an automatic closure	8	\$156.82	\$156.82	943	0.137	0.0	\$0.00	100%	0	0
HVACR - MN	Auto Closers - Direct Install	Auto-Close Doors - Walk-in Freezer	Installation of new automatic, hydraulic-type door closer on main walk-in freezer door	Walk-in freezer without an automatic closure	8	\$156.82	\$156.82	2,307	0.309	0.0	\$0.00	100%	0	0
HVACR - MN	Direct Install Refrigerated	LED Ref and Frz Screw in Fixture Retrofit	LED Lamp	Halogen, Incandescent, or CFL Lamp	36	\$967.50	\$3,520.63	16,667	3	0.0	\$0.00	100%	2	0
Insulation Rebates - MN	Attic Insulation - Electric Heating and Cooling	Attic insulation in homes with electric heating / electric cooling	Home with R49 or more attic insulation	Existing home with R19 or less attic insulation	20	\$314.59	\$1,664.07	2,604	0.133	0.0	\$0.00	100%	16	0
Insulation Rebates - MN	Attic Insulation - Electric Heating Only	Attic insulation in homes with electric heating / no cooling	Home with R49 or more attic insulation	Existing home with R19 or less attic insulation	36	\$314.59	\$1,938.00	1,829	0	0.0	\$0.00	100%	0	0
Insulation Rebates - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for combo customers	Home with R49 or more attic insulation	Existing home with R19 or less attic insulation	20	\$336.83	\$2,062.15	149	0.287	9.6	\$0.00	100%	180	482
Insulation Rebates - MN	Attic Insulation - Gas Heating Only	Attic insulation in homes with gas heating / no cooling	Home with R49 or more attic insulation	Existing home with R19 or less attic insulation	20	\$322.59	\$2,007.53	0	0.000	8.7	\$0.00	100%	0	11
Insulation Rebates - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for gas-only customers	Home with R49 or more attic insulation	Existing home with R19 or less attic insulation	20	\$326.91	\$2,111.96	50	0.096	10.1	\$0.00	100%	0	0
Insulation Rebates - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for electric-only customers	Home with R49 or more attic insulation	Existing home with R19 or less attic insulation	20	\$60.00	\$2,243.57	57	0.110	11.6	\$0.00	100%	0	0
Insulation Rebates - MN	Wall Insulation - Electric Heating and Cooling	Wall insulation in homes with electric heating / electric cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$300.00	\$4,746.50	5,464	0.246	0.0	\$0.00	100%	6	0
Insulation Rebates - MN	Wall Insulation - Electric Heating Only	Wall insulation in homes with electric heating / no cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$300.00	\$3,248.89	6,867	0.000	0.0	\$0.00	100%	0	0
Insulation Rebates - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall insulation in homes with gas heating / electric cooling for combo customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$283.49	\$3,703.72	904	1.739	49.3	\$0.00	100%	23	80
Insulation Rebates - MN	Wall Insulation - Gas Heating Only	Wall insulation in homes with gas heating / no cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$291.20	\$2,930.00	0	0.000	43.0	\$0.00	100%	0	3
Insulation Rebates - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall insulation in homes with gas heating / electric cooling for gas-only customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$210.00	\$3,512.00	198	0.380	40.0	\$0.00	100%	0	0
Insulation Rebates - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall insulation in homes with gas heating / electric cooling for electric-only customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$25.00	\$3,343.07	185	0.356	37.4	\$0.00	100%	0	0
Insulation Rebates - MN	Air Sealing - Electric Heating and Cooling	Air sealing in homes with electric heating / electric cooling	Home with bypass air sealing performed	Existing home without air sealing	10	\$150.00	\$915.42	1,923	0.073	0.0	\$0.00	100%	12	0
Insulation Rebates - MN	Air Sealing - Electric Heating Only	Air sealing in homes with electric heating / no cooling	Home with bypass air sealing performed	Existing home without air sealing	10	\$150.00	\$500.00	1,993	0.000	0.0	\$0.00	100%	0	0
Insulation Rebates - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for combo customers	Home with bypass air sealing performed	Existing home without air sealing	10	\$146.49	\$1,117.41	194	0.374	17.4	\$0.00	100%	151	484
Insulation Rebates - MN	Air Sealing - Gas Heating Only	Air sealing in homes with gas heating / no cooling	Home with bypass air sealing performed	Existing home without air sealing	10	\$146.41	\$1,786.12	0	0.000	27.3	\$0.00	100%	0	0
Insulation Rebates - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for gas-only customers	Home with bypass air sealing performed	Existing home without air sealing	10	\$145.05	\$842.25	91	0.175	26.1	\$0.00	100%	0	0
Insulation Rebates - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for electric-only customers	Home with bypass air sealing performed	Existing home without air sealing	10	\$15.00	\$1,109.69	90	0.174	25.7	\$0.00	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Insulation Rebates - MN	AC Rewards-DR	Residential Smart Thermostat - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$190.00	\$190.00	2	1.109	0.0	\$0.00	100%	0	0
Insulation Rebates - MN	AC Rewards-EE	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$110.00	\$110.00	123	0.236	9.5	\$0.00	100%	0	0
Lighting - MN	Custom Lighting Project	Custom Lighting	High Efficiency Lighting	Existing Lower Efficiency Lighting	19	\$12,600.19	\$9,143.26	129,196	29	0.0	-\$78.56	100%	19	0
Lighting - MN	Network Lighting Controls	Networked Lighting Controls	Lighting Fixture with Networked Lighting Controls or Networked LLC	Lighting Fixture with Manual Switch	14	\$4,724.53	\$17,265.11	26,459	5	0.0	-\$0.15	100%	9	0
Lighting - MN	Lighting Controls	Occupancy Sensor	Sensor	Manual Switch	8	\$503.12	\$5,944.37	15,759	3	0.0	-\$0.04	100%	42	0
Lighting - MN	Lighting Controls	Photocell Sensor	Sensor	Manual Switch	8	\$390.38	\$1,891.52	4,947	1	0.0	-\$0.03	100%	15	0
Lighting - MN	Lighting Controls	Occupancy & Photo Cell Sensor	Sensor	Manual Switch	8	\$8.58	\$27.98	107	0.018	0.0	-\$0.06	100%	0	0
Lighting - MN	Retrofit Flat	LED Stairwell Fixtures	LED Stairwell Fixture	HID or Fluorescent Fixture	20	\$669.13	\$3,738.23	9,219	1	0.0	-\$1.65	100%	23	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 75-94W	LED High Bay Fixture	HID Fixture	20	\$166.67	\$258.69	1,762	0	0.0	-\$1.96	100%	3	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 95-189W	LED High Bay Fixture	HID Fixture	20	\$2,641.42	\$10,264.81	31,261	4	0.0	-\$4.68	100%	53	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 190-290W	LED High Bay Fixture	HID Fixture	20	\$1,536.84	\$9,121.14	17,368	3	0.0	-\$4.80	100%	19	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 291-464W	LED High Bay Fixture	HID Fixture	20	\$8,296.67	\$26,225.12	32,221	3	0.0	-\$5.82	100%	3	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 465-625W	LED High Bay Fixture	HID Fixture	20	\$27,500.00	\$148,371.06	118,307	16	0.0	-\$13.34	100%	1	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 75-94W	LED High Bay Kit	HID Fixture	20	\$30.00	\$144.02	484	0.086	0.0	-\$1.96	100%	0	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 95-189W	LED High Bay Kit	HID Fixture	20	\$240.00	\$2,824.16	4,627	1	0.0	-\$4.46	100%	1	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 190-290W	LED High Bay Kit	HID Fixture	20	\$40.00	\$370.24	1,189	0.211	0.0	-\$4.80	100%	0	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 291-464W	LED High Bay Kit	HID Fixture	20	\$50.00	\$534.99	1,441	0.256	0.0	-\$5.82	100%	0	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 465-625W	LED High Bay Kit	HID Fixture	20	\$105.00	\$852.72	3,303	0.587	0.0	-\$13.34	100%	0	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 75-94W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	20	\$880.83	\$3,488.96	7,126	1	0.0	-\$1.53	100%	15	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 95-189W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	20	\$3,126.41	\$12,221.16	26,228	4	0.0	-\$2.83	100%	103	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 190-290W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	20	\$2,405.88	\$12,875.44	26,814	3	0.0	-\$5.64	100%	17	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 291-464W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	20	\$1,560.00	\$8,203.20	8,472	1	0.0	-\$7.16	100%	1	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture - 465-625W (Fluorescent Baseline)	LED High Bay Fixture	Fluorescent Fixture	20	\$165.00	\$1,421.20	2,227	0.396	0.0	-\$9.00	100%	0	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 75-94W (Fluorescent Baseline)	LED High Bay Kit	Fluorescent Fixture	20	\$30.00	\$144.02	379	0.067	0.0	-\$1.53	100%	0	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 95-189W (Fluorescent Baseline)	LED High Bay Kit	Fluorescent Fixture	20	\$1,132.50	\$12,813.84	23,273	4	0.0	-\$2.46	100%	4	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 190-290W (Fluorescent Baseline)	LED High Bay Kit	Fluorescent Fixture	20	\$40.00	\$370.24	1,021	0.182	0.0	-\$4.12	100%	0	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 291-464W (Fluorescent Baseline)	LED High Bay Kit	Fluorescent Fixture	20	\$50.00	\$534.99	1,774	0.315	0.0	-\$7.16	100%	0	0
Lighting - MN	Retrofit High Bay	LED High Bay Fixture Kit - 465-625W (Fluorescent Baseline)	LED High Bay Kit	Fluorescent Fixture	20	\$105.00	\$852.72	2,227	0.396	0.0	-\$9.00	100%	0	0
Lighting - MN	Retrofit Exterior	LED Street Lighting - 30-44W	LED Street Lighting	HID Fixture	20	\$15.00	\$394.82	240	0.000	0.0	\$0.00	100%	0	0
Lighting - MN	Retrofit Exterior	LED Street Lighting - 45-55W	LED Street Lighting	HID Fixture	20	\$25.00	\$420.42	384	0.000	0.0	\$0.00	100%	0	0
Lighting - MN	Retrofit Exterior	LED Street Lighting - 56-79W	LED Street Lighting	HID Fixture	20	\$25.00	\$454.87	579	0.000	0.0	\$0.00	100%	0	0
Lighting - MN	Retrofit Exterior	LED Street Lighting - 80-109W	LED Street Lighting	HID Fixture	20	\$25.00	\$280.41	533	0.000	0.0	\$0.00	100%	0	0
Lighting - MN	Retrofit Exterior	LED Street Lighting - 110-139W	LED Street Lighting	HID Fixture	20	\$200.00	\$1,770.56	3,975	3	0.0	\$0.00	100%	1	0
Lighting - MN	Retrofit Exterior	LED Street Lighting - 140-209W	LED Street Lighting	HID Fixture	20	\$50.00	\$593.93	1,081	0.000	0.0	\$0.00	100%	0	0
Lighting - MN	Retrofit Exterior	LED Area Lighting - 45-65W	LED Area Lighting	HID Fixture	20	\$241.11	\$2,781.26	7,222	0	0.0	\$0.00	100%	9	0
Lighting - MN	Retrofit Exterior	LED Area Lighting - 66-89W	LED Area Lighting	HID Fixture	20	\$226.15	\$2,400.83	5,826	0	0.0	\$0.00	100%	13	0
Lighting - MN	Retrofit Exterior	LED Area Lighting - 90-119W	LED Area Lighting	HID Fixture	20	\$512.12	\$3,493.32	13,228	0	0.0	\$0.00	100%	52	0
Lighting - MN	Retrofit Exterior	LED Area Lighting - 120-140W	LED Area Lighting	HID Fixture	20	\$591.18	\$7,444.23	15,379	0	0.0	\$0.00	100%	17	0
Lighting - MN	Retrofit Exterior	LED Area Lighting - 141-199W	LED Area Lighting	HID Fixture	20	\$626.71	\$5,344.51	22,261	0	0.0	\$0.00	100%	41	0
Lighting - MN	Retrofit Exterior	LED Area Lighting - 200-550W	LED Area Lighting	HID Fixture	20	\$1,380.29	\$12,261.58	36,261	0	0.0	\$0.00	100%	52	0
Lighting - MN	Retrofit Troffer	LED Troffer Fixture	LED Troffer Fixture	Fluorescent Fixture	20	\$1,920.86	\$9,822.47	14,712	0	0.0	-\$0.14	100%	575	0
Lighting - MN	Retrofit Troffer	LED Troffer Retrofit Kit	LED Troffer Kit	Fluorescent Fixture	5	\$535.09	\$151.07	5,493	1	0.0	-\$0.10	100%	76	0
Lighting - MN	Retrofit Exterior	LED Exterior Wall Pack <= 25W	LED Exterior Wall Packs	HID Wall Pack Fixture	20	\$83.67	\$1,198.73	3,226	0	0.0	\$0.00	100%	32	0
Lighting - MN	Retrofit Exterior	LED Exterior Wall Pack 26W - 60W	LED Exterior Wall Packs	HID Wall Pack Fixture	20	\$167.10	\$1,499.93	4,726	0	0.0	\$0.00	100%	93	0
Lighting - MN	Retrofit Exterior	LED Exterior Wall Pack 61W - 150W	LED Exterior Wall Packs	HID Wall Pack Fixture	20	\$209.07	\$1,747.47	5,444	0	0.0	\$0.00	100%	62	0
Lighting - MN	Retrofit Flat	LED Parking Garage Wall Pack <= 25W	LED Parking Garage Wall Packs	Fluorescent Fixture	20	\$90.00	\$1,100.24	3,726	0	0.0	\$0.00	100%	1	0
Lighting - MN	Retrofit Flat	LED Parking Garage Wall Pack 26W - 60W	LED Parking Garage Wall Packs	Fluorescent Fixture	20	\$120.00	\$654.64	3,374	0	0.0	\$0.00	100%	1	0
Lighting - MN	Retrofit Flat	LED Parking Garage Wall Pack 61W - 150W	LED Parking Garage Wall Packs	Fluorescent Fixture	20	\$525.00	\$4,916.26	16,224	0	0.0	\$0.00	100%	2	0
Lighting - MN	Retrofit Exterior	LED Outdoor Canopy or Soffit lighting 25W - 60W	LED Outdoor Canopy Lighting	HID Fixture	20	\$110.56	\$1,198.81	3,896	0	0.0	\$0.00	100%	9	0
Lighting - MN	Retrofit Exterior	LED Outdoor Canopy or Soffit lighting 61W - 150W	LED Outdoor Canopy Lighting	HID Fixture	20	\$25.00	\$311.21	1,760	0	0.0	\$0.00	100%	1	0
Lighting - MN	Retrofit Troffer	LED Linear Ambient <=35W	LED Linear Ambients	Fluorescent Fixture	5	\$860.12	\$5,963.27	8,170	1	0.0	-\$0.72	100%	81	0
Lighting - MN	Retrofit Troffer	LED Linear Ambient 36-60W	LED Linear Ambients	Fluorescent Fixture	20	\$340.85	\$2,348.55	3,985	1	0.0	-\$1.18	100%	125	0
Lighting - MN	Retrofit Troffer	LED Linear Ambient >=61W	LED Linear Ambients	Fluorescent Fixture	20	\$866.24	\$6,239.27	11,200	0	0.0	-\$1.47	100%	49	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Lighting - MN	Retrofit Flat	LED Exit Sign	Exit Sign Retrofit and Replacement	Incandescent Exit Sign	30	\$335.12	\$1,994.20	4,433	1	0.0	-\$1.35	100%	42	0
Lighting - MN	Retrofit Refrigerated	LED Ref and Frz Cases 5' or 6' doors	LED Linear Tubes	Fluorescent Tubes	30	\$420.00	\$1,394.80	3,610	1	0.0	\$0.00	100%	1	0
Lighting - MN	Retrofit Tube	LED Linear Tube Type A 2 foot	LED Linear Tubes	Fluorescent Tubes	10	\$2.00	\$5.41	55	0.010	0.0	-\$0.23	100%	0	0
Lighting - MN	Retrofit Tube	LED Linear Tube Type B 2 foot	LED Linear Tubes	Fluorescent Tubes	10	\$280.56	\$1,479.21	4,143	1	0.0	-\$0.16	100%	24	0
Lighting - MN	Retrofit Tube	LED Linear Tube Type C 2 foot	LED Linear Tubes	Fluorescent Tubes	30	\$250.00	\$1,982.50	1,985	6	0.0	-\$0.14	100%	2	0
Lighting - MN	Retrofit Tube	LED Linear Tube Type A 4 foot	LED Linear Tubes	Fluorescent Tubes	9	\$351.39	\$1,393.90	16,209	3	0.0	-\$0.34	100%	188	0
Lighting - MN	Retrofit Tube	LED Linear Tube Type B 4 foot	LED Linear Tubes	Fluorescent Tubes	10	\$3.00	\$16.52	78	0.014	0.0	-\$0.33	100%	0	0
Lighting - MN	Retrofit Tube	LED Linear Tube Type C 4 foot	LED Linear Tubes	Fluorescent Tubes	30	\$5,806.50	\$31,821.20	\$3,846	30	0.0	-\$0.35	100%	15	0
Lighting - MN	Retrofit Tube	LED Tube Type A 4 foot T5	LED Linear Tubes	T5 Fluorescent Tubes	10	\$610.42	\$4,307.50	95,373	8	0.0	-\$0.75	100%	19	0
Lighting - MN	Retrofit Tube	LED Tube Type B 4 foot T5	LED Linear Tubes	T5 Fluorescent Tubes	10	\$635.38	\$3,491.07	16,963	3	0.0	-\$0.77	100%	562	0
Lighting - MN	Retrofit Tube	LED Tube Type C 4 foot T5	LED Linear Tubes	T5 Fluorescent Tubes	30	\$250.00	\$1,733.50	4,700	1	0.0	-\$0.55	100%	1	0
Lighting - MN	Retrofit High Bay	LED Lamps - 30-39W (HID Base)	LED Screw-in Lamps	HID Lamp	8	\$30.00	\$85.92	538	0.080	0.0	-\$1.63	100%	0	0
Lighting - MN	Retrofit High Bay	LED Lamps - 40-49W (HID Base)	LED Screw-in Lamps	HID Lamp	8	\$40.00	\$67.39	1,080	0.161	0.0	-\$3.27	100%	0	0
Lighting - MN	Retrofit High Bay	LED Lamps - 50-79W (HID Base)	LED Screw-in Lamps	HID Lamp	8	\$50.00	\$125.20	1,343	0.200	0.0	-\$4.07	100%	0	0
Lighting - MN	Retrofit High Bay	LED Lamps - 80-119W (HID Base)	LED Screw-in Lamps	HID Lamp	8	\$60.00	\$193.65	1,611	0.240	0.0	-\$4.88	100%	0	0
Lighting - MN	Retrofit High Bay	LED Lamps - 120-144W (HID Base)	LED Screw-in Lamps	HID Lamp	8	\$75.00	\$192.41	2,106	0.314	0.0	-\$6.38	100%	0	0
Lighting - MN	Retrofit High Bay	LED Lamps - 145-230W (HID Base)	LED Screw-in Lamps	HID Lamp	8	\$75.00	\$243.81	1,974	0.295	0.0	-\$5.98	100%	0	0
Lighting - MN	Retrofit Troffer	LED PL/G based CFL Replacement lamp	LED PL/G based CFL Replacement lamp	CFL Lamp	10	\$533.40	\$891.40	7,020	1	0.0	-\$0.48	100%	81	0
Lighting - MN	Retrofit Troffer	LED PL/G based CFL Replacement lamp Type B	LED PL/G based CFL Replacement lamp	CFL Lamp	11	\$564.38	\$2,777.40	12,836	3	0.0	-\$0.53	100%	30	0
Lighting - MN	Retrofit Troffer	LED Interior Fixture <= 25W	LED Interior Fixtures	Incandescent Fixture	20	\$35.00	\$83.99	571	0.112	0.0	-\$2.46	100%	0	0
Lighting - MN	Retrofit Troffer	LED Interior Fixture <= 25W (CFL Base)	LED Interior Fixtures	CFL Fixture	20	\$25.00	\$50.06	158	0.031	0.0	-\$0.68	100%	0	0
Lighting - MN	Retrofit Troffer	LED Interior Fixture 26W - 50W	LED Interior Fixtures	Incandescent Fixture	20	\$50.00	\$133.39	722	0.141	0.0	-\$3.11	100%	0	0
Lighting - MN	Retrofit Troffer	LED Interior Fixture 26W - 50W (CFL Base)	LED Interior Fixtures	CFL Fixture	20	\$35.00	\$145.42	192	0.038	0.0	-\$0.83	100%	0	0
Lighting - MN	Retrofit Flat	LED Parking Garage Lighting 25W-60W (Fluorescent Baseline)	LED Parking Garage Lighting	Fluorescent Fixture	30	\$5,520.00	\$16,271.68	30,844	3	0.0	\$0.00	100%	1	0
Lighting - MN	Retrofit Flat	LED Parking Garage lighting 61W-83W (Fluorescent Baseline)	LED Parking Garage Lighting	Fluorescent Fixture	30	\$5,718.75	\$11,891.20	37,713	1	0.0	\$0.00	100%	1	0
Lighting - MN	Retrofit Flat	LED Parking Garage Lighting 25W-60W	LED Parking Garage Lighting	HID Fixture	30	\$2,982.81	\$7,486.70	45,620	5	0.0	\$0.00	100%	8	0
Lighting - MN	Retrofit Flat	LED Parking Garage lighting 61W - 83W	LED Parking Garage Lighting	HID Fixture	30	\$10,437.50	\$16,718.20	94,308	10	0.0	\$0.00	100%	2	0
Lighting - MN	Midstream Screw In	LED Interior Lamp - A Lamps	LED Lamp	Halogen, Incandescent, or CFL Lamp	4	\$2.98	\$1.91	99	0.017	0.0	-\$0.43	100%	0	0
Lighting - MN	Midstream Screw In	LED Interior Lamp - PAR20, R20	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	\$4.00	\$3.49	133	0.022	0.0	-\$0.57	100%	0	0
Lighting - MN	Midstream Screw In	LED Interior Lamp - PAR30	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	\$4.96	\$4.63	221	0.037	0.0	-\$0.95	100%	0	0
Lighting - MN	Midstream Screw In	LED Interior Lamp - BR30	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	\$2.20	\$1.40	173	0.029	0.0	-\$0.75	100%	0	0
Lighting - MN	Midstream Screw In	LED Interior Lamp - PAR38	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	\$9.56	\$10.26	310	0.052	0.0	-\$1.33	100%	0	0
Lighting - MN	Midstream Screw In	LED Interior Lamp - BR40	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	\$5.98	\$6.98	250	0.042	0.0	-\$1.08	100%	0	0
Lighting - MN	Midstream Screw In	LED Interior Lamp - PAR16	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	\$1.54	\$1.27	100	0.017	0.0	-\$0.43	100%	0	0
Lighting - MN	Midstream Screw In	LED Interior Lamp - MR16	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	\$5.02	\$7.98	198	0.033	0.0	-\$0.85	100%	0	0
Lighting - MN	Midstream Screw In	LED Interior Lamp - Decorative (B, BA, Candle)	LED Lamp	Halogen, Incandescent, or CFL Lamp	4	\$3.79	\$5.93	167	0.028	0.0	-\$0.72	100%	0	0
Lighting - MN	Midstream Screw In	LED Interior Screw In Fixture Retrofit	LED Retrofit Kit	Halogen, Incandescent, or CFL Fixture	9	\$6.10	\$3.18	115	0.019	0.0	-\$0.49	100%	0	0
Lighting - MN	Midstream Tube	LED Linear Tube Type A 2 foot	LED Linear Tubes	Fluorescent Tubes	30	\$163.77	\$471.90	3,243	1	0.0	-\$0.23	100%	32	0
Lighting - MN	Midstream Tube	LED Linear Tube Type B 2 foot	LED Linear Tubes	Fluorescent Tubes	10	\$3.00	\$8.26	39	0.007	0.0	-\$0.16	100%	0	0
Lighting - MN	Midstream Tube	LED Linear Tube Type C 2 foot	LED Linear Tubes	Fluorescent Tubes	20	\$5.00	\$21.65	34	0.006	0.0	-\$0.14	100%	0	0
Lighting - MN	Midstream Tube	LED Linear Tube Type A 4 foot	LED Linear Tubes	Fluorescent Tubes	9	\$2.00	\$6.64	61	0.015	0.0	-\$0.34	100%	0	0
Lighting - MN	Midstream Tube	LED Linear Tube Type B 4 foot	LED Linear Tubes	Fluorescent Tubes	10	\$3.00	\$16.52	79	0.014	0.0	-\$0.33	100%	0	0
Lighting - MN	Midstream Tube	LED Linear Tube Type C 4 foot	LED Linear Tubes	Fluorescent Tubes	20	\$5.00	\$25.08	83	0.015	0.0	-\$0.35	100%	0	0
Lighting - MN	Midstream Tube	LED Tube Type A 4 foot T5	LED Linear Tubes	T5 Fluorescent Tubes	9	\$2.00	\$13.73	181	0.032	0.0	-\$0.75	100%	0	0
Lighting - MN	Midstream Tube	LED Tube Type B 4 foot T5	LED Linear Tubes	T5 Fluorescent Tubes	10	\$3.00	\$23.68	185	0.033	0.0	-\$0.77	100%	0	0
Lighting - MN	Midstream Tube	LED Tube Type C 4 foot T5	LED Linear Tubes	T5 Fluorescent Tubes	20	\$5.00	\$34.67	132	0.024	0.0	-\$0.55	100%	0	0
Lighting - MN	Midstream High Bay	LED Lamps - 30-39W (HID Base)	LED Screw-in Lamps	HID Lamp	8	\$204.38	\$470.76	3,905	1	0.0	-\$1.63	100%	4	0
Lighting - MN	Midstream High Bay	LED Lamps - 40-49W (HID Base)	LED Screw-in Lamps	HID Lamp	8	\$40.00	\$67.39	1,080	0.161	0.0	-\$3.27	100%	0	0
Lighting - MN	Midstream High Bay	LED Lamps - 50-79W (HID Base)	LED Screw-in Lamps	HID Lamp	8	\$695.00	\$1,448.27	20,963	3	0.0	-\$4.07	100%	5	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Lighting - MN	Midstream High Bay	LED Lamps - 80-119W (HID Base)	LED Screw-in Lamps	HID Lamp	8	\$445.71	\$1,445.11	3,900	3	0.0	-\$4.88	100%	7	0
Lighting - MN	Midstream High Bay	LED Lamps - 120-144W (HID Base)	LED Screw-in Lamps	HID Lamp	8	\$75.00	\$192.41	2,106	0.314	0.0	-\$6.38	100%	0	0
Lighting - MN	Midstream High Bay	LED Lamps - 145-230W (HID Base)	LED Screw-in Lamps	HID Lamp	9	\$525.00	\$1,708.07	3,900	3	0.0	-\$5.98	100%	2	0
Lighting - MN	Midstream Troffer	LED PL/G based CFL Replacement lamp	CFL Lamp	CFL Lamp	11	\$7.00	\$20.66	116	0.022	0.0	-\$0.48	100%	0	0
Lighting - MN	Midstream Troffer	LED PL/G based CFL Replacement lamp Type B	CFL Lamp	CFL Lamp	11	\$7.00	\$41.33	126	0.024	0.0	-\$0.53	100%	0	0
Lighting - MN	Midstream Troffer	LED Interior Fixture <= 25W	LED Interior Fixtures	Incandescent Fixture	30	\$1,133.30	\$2,030.85	10,718	3	0.0	-\$2.46	100%	75	0
Lighting - MN	Midstream Troffer	LED Interior Fixture <= 25W (CFL Base)	LED Interior Fixtures	CFL Fixture	30	\$2,214.49	\$5,390.85	13,403	3	0.0	-\$0.68	100%	85	0
Lighting - MN	Midstream Troffer	LED Interior Fixture 26W - 50W	LED Interior Fixtures	Incandescent Fixture	30	\$2,003.75	\$6,214.80	20,374	3	0.0	-\$3.11	100%	20	0
Lighting - MN	Midstream Troffer	LED Interior Fixture 26W - 50W (CFL Base)	LED Interior Fixtures	CFL Fixture	30	\$1,163.75	\$5,795.15	8,023	1	0.0	-\$0.83	100%	9	0
Lighting - MN	New Construction Troffer	LED Interior Fixture <= 25W	LED Downlight Fixture	Incandescent Fixture	30	\$1,525.04	\$2,794.53	14,118	3	0.0	-\$0.82	100%	169	0
Lighting - MN	New Construction Troffer	LED Interior Fixture 26W - 50W	LED Downlight Fixture	Incandescent Fixture	30	\$1,223.39	\$5,308.03	21,960	4	0.0	-\$2.64	100%	56	0
Lighting - MN	New Construction Refrigerated	LED Ref and Frz Cases 5' or 6' doors	LED Strip Lighting	Fluorescent Tubes	20	\$35.00	\$87.03	412	0.069	0.0	\$0.00	100%	0	0
Lighting - MN	New Construction Flat	LED Parking Garage Lighting 25W-60W	LED Parking Garage Fixture	HID Fixture	30	\$3,321.88	\$15,135.15	159,438	33	0.0	\$0.00	100%	4	0
Lighting - MN	New Construction Flat	LED Parking Garage lighting 61W - 83W	LED Parking Garage Fixture	HID Fixture	30	\$1,750.00	\$6,839.20	66,790	13	0.0	\$0.00	100%	1	0
Lighting - MN	New Construction High Bay	LED High Bay Fixture - 75-94W	LED High Bay Fixture	HID Fixture	30	\$2,174.62	\$2,888.50	30,363	6	0.0	-\$2.17	100%	13	0
Lighting - MN	New Construction High Bay	LED High Bay Fixture - 95-189W	LED High Bay Fixture	HID Fixture	30	\$3,040.01	\$7,149.26	30,231	3	0.0	-\$3.12	100%	109	0
Lighting - MN	New Construction High Bay	LED High Bay Fixture - 190-290W	LED High Bay Fixture	HID Fixture	30	\$6,372.58	\$24,885.14	60,836	14	0.0	-\$5.54	100%	31	0
Lighting - MN	New Construction High Bay	LED High Bay Fixture - 291-464W	LED High Bay Fixture	HID Fixture	30	\$6,352.50	\$22,875.28	113,852	26	0.0	-\$11.91	100%	4	0
Lighting - MN	New Construction High Bay	LED High Bay Fixture - 465-625W	LED High Bay Fixture	HID Fixture	20	\$115.00	\$322.52	3,454	0.610	0.0	-\$14.61	100%	0	0
Lighting - MN	New Construction Exterior	LED Street Lighting - 30-44W	LED Street Lighting	HID Fixture	20	\$15.00	\$240.28	240	0.000	0.0	\$0.00	100%	0	0
Lighting - MN	New Construction Exterior	LED Street Lighting - 45-55W	LED Street Lighting	HID Fixture	20	\$25.00	\$253.22	384	0.000	0.0	\$0.00	100%	0	0
Lighting - MN	New Construction Exterior	LED Street Lighting - 56-79W	LED Street Lighting	HID Fixture	20	\$25.00	\$270.63	579	0.000	0.0	\$0.00	100%	0	0
Lighting - MN	New Construction Exterior	LED Street Lighting - 80-109W	LED Street Lighting	HID Fixture	20	\$25.00	\$59.43	533	0.000	0.0	\$0.00	100%	0	0
Lighting - MN	New Construction Exterior	LED Street Lighting - 110-139W	LED Street Lighting	HID Fixture	20	\$40.00	\$346.93	814	0.000	0.0	\$0.00	100%	0	0
Lighting - MN	New Construction Exterior	LED Street Lighting - 140-209W	LED Street Lighting	HID Fixture	20	\$50.00	\$258.11	1,081	0.000	0.0	\$0.00	100%	0	0
Lighting - MN	New Construction Exterior	LED Area Lighting - 45-65W	LED Fixture	HID Fixture	30	\$105.00	\$671.98	1,828	0	0.0	\$0.00	100%	2	0
Lighting - MN	New Construction Exterior	LED Area Lighting - 66-89W	LED Fixture	HID Fixture	30	\$239.53	\$1,986.16	4,214	0	0.0	\$0.00	100%	16	0
Lighting - MN	New Construction Exterior	LED Area Lighting - 90-119W	LED Fixture	HID Fixture	30	\$350.00	\$1,840.91	4,276	0	0.0	\$0.00	100%	6	0
Lighting - MN	New Construction Exterior	LED Area Lighting - 120-140W	LED Fixture	HID Fixture	30	\$401.39	\$1,823.21	13,200	3	0.0	\$0.00	100%	9	0
Lighting - MN	New Construction Exterior	LED Area Lighting - 141-199W	LED Fixture	HID Fixture	30	\$433.68	\$2,971.19	21,093	3	0.0	\$0.00	100%	34	0
Lighting - MN	New Construction Exterior	LED Area Lighting - 200-550W	LED Fixture	HID Fixture	30	\$1,060.00	\$6,997.38	46,936	0	0.0	\$0.00	100%	18	0
Lighting - MN	New Construction Troffer	LED Troffer Fixture	LED Troffer Fixture	Fluorescent Fixture	30	\$1,378.33	\$4,418.21	6,940	3	0.0	-\$0.09	100%	278	0
Lighting - MN	New Construction Troffer	LED Linear Ambient <=35W	LED Linear Ambient Fixture	Fluorescent Fixture	30	\$409.99	\$1,946.33	4,061	1	0.0	-\$0.72	100%	85	0
Lighting - MN	New Construction Troffer	LED Linear Ambient 36-60W	LED Linear Ambient Fixture	Fluorescent Fixture	30	\$439.47	\$1,864.48	4,815	1	0.0	-\$1.18	100%	85	0
Lighting - MN	New Construction Troffer	LED Linear Ambient >=61W	LED Linear Ambient Fixture	Fluorescent Fixture	30	\$472.55	\$5,485.24	11,378	3	0.0	-\$1.47	100%	51	0
Lighting - MN	New Construction Exterior	LED Exterior Wall Pack <= 25W	LED Wall Pack Fixture	HID Wall Pack Fixture	30	\$112.39	\$290.96	3,768	3	0.0	\$0.00	100%	34	0
Lighting - MN	New Construction Exterior	LED Exterior Wall Pack 26W - 60W	LED Wall Pack Fixture	HID Wall Pack Fixture	30	\$175.79	\$334.42	4,139	3	0.0	\$0.00	100%	57	0
Lighting - MN	New Construction Exterior	LED Exterior Wall Pack 61W - 150W	LED Wall Pack Fixture	HID Wall Pack Fixture	30	\$520.59	\$1,716.06	10,219	0	0.0	\$0.00	100%	34	0
Lighting - MN	New Construction Flat	LED Parking Garage Wall Pack <= 25W	LED Wall Pack Fixture	HID Wall Pack Fixture	30	\$82.50	\$296.36	4,600	1	0.0	\$0.00	100%	2	0
Lighting - MN	New Construction Flat	LED Parking Garage Wall Pack 26W - 60W	LED Wall Pack Fixture	HID Wall Pack Fixture	30	\$67.50	\$417.75	4,284	3	0.0	\$0.00	100%	1	0
Lighting - MN	New Construction Flat	LED Parking Garage Wall Pack 61W - 150W	LED Wall Pack Fixture	HID Wall Pack Fixture	20	\$50.00	\$242.57	3,640	0.416	0.0	\$0.00	100%	0	0
Lighting - MN	New Construction Exterior	LED Outdoor Canopy or Soffit lighting 25W - 60W	LED Canopy Fixture	HID Fixture	30	\$176.67	\$1,371.85	8,830	3	0.0	\$0.00	100%	6	0
Lighting - MN	New Construction Exterior	LED Outdoor Canopy or Soffit lighting 61W - 160W	LED Canopy Fixture	HID Fixture	30	\$133.33	\$418.36	10,718	3	0.0	\$0.00	100%	3	0
Lighting - MN	Lighting Redesign	Lighting Redesign Studies	Redesign Lighting Solution Study	Existing Overlaid Lighting System	0	\$21,637.50	\$29,953.20	0	0.000	0.0	\$0.00	100%	0	0
Lighting - MN	Lighting Redesign	Lighting Redesign Implementation	Redesign Lighting Solution Installed	Existing Overlaid Lighting System	20	\$9,174.72	\$87,556.11	162,234	11,975	0.0	\$0.00	100%	0	0
Lighting - MN	Retrofit Troffer	LED Linear Ambient Retrofit Kit <=35W	LED Linear Ambient Kits	Fluorescent Fixture	30	\$237.39	\$1,475.44	2,305	0	0.0	-\$0.72	100%	71	0
Lighting - MN	Retrofit Troffer	LED Linear Ambient Retrofit Kit 36-60W	LED Linear Ambient Kits	Fluorescent Fixture	30	\$460.95	\$1,536.50	1,333	1	0.0	-\$1.18	100%	21	0
Lighting - MN	Retrofit Troffer	LED Linear Ambient Retrofit Kit >=61W	LED Linear Ambient Kits	Fluorescent Fixture	30	\$232.50	\$1,711.95	4,719	1	0.0	-\$1.47	100%	2	0
Lighting - MN	New Construction Lighting Controls	Occupancy Sensor	Sensor	Manual Switch	6	\$272.69	\$1,260.73	6,966	1	0.0	-\$0.04	100%	12	0
Lighting - MN	New Construction Troffer	LED Stairwell Fixtures	LED Stairwell Fixture	HID or Fluorescent Fixture	30	\$310.00	\$1,403.90	3,768	1	0.0	-\$1.65	100%	6	0
Lighting - MN	New Construction Tube	LED Tubes	LED Tubes	Fluorescent Tubes	10	\$816.00	\$4,520.90	20,061	4	0.0	-\$0.30	100%	7	0
Lighting - MN	New Construction Troffer	LED Linear Ambient Retrofit Kit <=35W	LED Linear Ambient Kits	Fluorescent Fixture	20	\$10.00	\$71.48	173	0.033	0.0	-\$0.72	100%	0	0
Lighting - MN	New Construction Troffer	LED Linear Ambient Retrofit Kit 36-60W	LED Linear Ambient Kits	Fluorescent Fixture	20	\$15.00	\$76.97	283	0.055	0.0	-\$1.18	100%	0	0
Lighting - MN	New Construction Troffer	LED Linear Ambient Retrofit Kit >=61W	LED Linear Ambient Kits	Fluorescent Fixture	20	\$20.00	\$105.30	352	0.068	0.0	-\$1.47	100%	0	0
Low Income Home Energy Squad - MN	AC Rewards-DR	Residential Smart Thermostat - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	15	\$3.00	\$27.23	75	0.013	0.0	-\$0.04	100%	0	0
Low Income Home Energy Squad - MN	AC Rewards-DR	Residential Smart Thermostat - Direct Install	Utility Load Control for control period with Tier II or III Thermostat	Existing standard manual or Non Utilized Tier I Thermostat	15	\$5.16	\$24.48	60	0.013	0.0	-\$0.03	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Low Income Home Energy Squad - MN	AC Rewards-EE	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	15	\$8.58	\$27.98	107	0.018	0.0	-\$0.06	100%	0	0
Low Income Home Energy Squad - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	15	\$20.03	\$63.56	119	0.020	0.0	-\$0.02	100%	0	0
Low Income Home Energy Squad - MN	Advanced Power Strip	Advanced Power Strip	Tier 2 Advanced Power Strip	Standard Power Strip	20	\$132.09	\$482.02	2,285	0.455	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.25	\$1.25	74	0.003	0.0	\$12.17	100%	42	0
Low Income Home Energy Squad - MN	Aerators - EWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$1.50	\$1.50	81	0.013	0.0	\$17.32	100%	61	0
Low Income Home Energy Squad - MN	Aerators - GWH	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	2.2 GPM Kitchen Faucet Aerator	10	\$1.25	\$1.25	0	0.000	0.3	\$12.17	100%	0	42
Low Income Home Energy Squad - MN	Aerators - GWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$1.50	\$1.50	0	0.000	0.4	\$17.32	100%	0	99
Low Income Home Energy Squad - MN	Dehumidifier Recycling	Dehumidifier removal and Recycling	Removal of dehumidifier	Existing dehumidifier	5	\$15.00	\$15.00	824	0.426	0.0	\$1.00	100%	0	0
Low Income Home Energy Squad - MN	ENERGY-STAR Dehumidifier	5-50 Pints/Day Dehumidifier	ENERGY STAR Dehumidifier	Standard Dehumidifier	12	\$229.97	\$129.97	123	0.008	0.0	\$0.00	100%	28	0
Low Income Home Energy Squad - MN	Home Energy Squad Service	Home Energy Squad Service	Tier One Energy Squad Service	0	0	\$70.00	\$70.00	0	0.000	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Home Lighting DI	3-WAY 5W-9W-16W	3-WAY 5W-9W-16W	EISA Specialty Bulb	15	\$2.65	\$2.65	20	0.003	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Home Lighting DI	LED - A-lamp (15W)	15w Standard LED (100w Equivalent)	EISA Standard Bulb	20	\$2.65	\$1.66	34	0.004	0.0	\$0.00	100%	9,980	0
Low Income Home Energy Squad - MN	Home Lighting DI	LED - A-lamp (9W)	9w Standard LED (60w Equivalent)	EISA Standard Bulb	20	\$2.65	\$2.65	34	0.004	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Home Lighting DI	LED - Candelabra (5W)	LED - Candelabra (5W)	EISA Specialty Bulb	15	\$2.65	\$2.65	21	0.003	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Home Lighting DI	LED - Flood (10W)	10W VALUE led (60W Equivalent)	EISA Specialty Bulb	20	\$2.65	\$2.65	32	0.004	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Home Lighting DI	LED - Globe (6W)	6w Globe LED Dim	EISA Specialty Bulb	15	\$2.65	\$2.65	23	0.003	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Home Lighting DI	Replace Compact Fluorescent Lamps (CFLs) with LEDs	A-Line LED	Existing CFL	20	\$2.65	\$2.65	10	0.001	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Home Lighting DI	Replace Compact Fluorescent Lamps (CFLs) with LEDs	Specialty LED	Existing CFL	17	\$2.65	\$2.65	3	0.000	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Programmable Thermostat	Install Programmable T-stat (Elec Cooling & Gas Heat) - Gas Only Customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.6 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	\$35.00	\$35.00	0	0.000	8.4	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Programmable Thermostat	Install Programmable T-stat (Elec Cooling & Gas Heat) combo customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.6 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	\$35.00	\$30.00	81	0.008	0.2	\$0.00	100%	64	64
Low Income Home Energy Squad - MN	Programmable Thermostat	Install Programmable T-stat (Elec Cooling & Gas Heat) electric only customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.6 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	\$35.00	\$35.00	79	0.112	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Programmable Thermostat	Install Second Programmable Thermostat - Combo Customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.6 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	\$35.00	\$35.00	39	0.056	4.2	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Programmable Thermostat	Install Second Programmable Thermostat - Electric Only	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.6 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	\$35.00	\$35.00	39	0.056	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Programmable Thermostat	Install Second Programmable Thermostat - Gas Only Customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.6 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	\$35.00	\$35.00	0	0.000	4.2	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Programmable Thermostat	Programming of Existing T-stat (Elec Cooling & Gas Heat) - Combo Customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.6 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	\$0.00	\$0.00	700	0.108	0.0	\$0.00	100%	24	24
Low Income Home Energy Squad - MN	Programmable Thermostat	Programming of Existing T-stat (Elec Cooling & Gas Heat) - Electric Only Customer	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.6 F for heating with 80% AFUE furnace	Existing home w/ no auto setup or setback temps	10	\$0.00	\$0.00	79	0.112	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Saver's Switch	Residential AC Switch	Utility Load Control for control period with smart switch	No Control, No Switch	15	\$90.00	\$90.00	1	0.748	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$9.50	\$3.00	810	0.007	0.0	\$97.40	100%	64	0
Low Income Home Energy Squad - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$3.50	511	0.037	0.0	\$97.40	100%	0	0
Low Income Home Energy Squad - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$9.50	\$9.50	344	0.025	0.0	\$65.49	100%	0	0



Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Low Income Home Energy Squad - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$2.00	943	0.006	0.0	\$65.49	100%	16	0
Low Income Home Energy Squad - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$9.50	\$9.50	0	0.000	2.2	\$97.40	100%	0	0
Low Income Home Energy Squad - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$2.00	0	0.000	2.2	\$97.40	100%	0	118
Low Income Home Energy Squad - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$9.50	\$9.50	0	0.000	1.5	\$65.49	100%	0	0
Low Income Home Energy Squad - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.50	\$2.00	0	0.000	1.5	\$65.49	100%	0	37
Low Income Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$3,140.00	85	0.314	2.4	\$0.00	100%	1	1
Low Income Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	76	0.180	5.5	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	76	0.180	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Smart Thermostat	Install Energy Star certified smart thermostat - GAS ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	0	0.000	5.5	\$8.77	100%	0	0
Low Income Home Energy Squad - MN	Water Heater DR	Demand response capability on grid enabled electric resistance water heater	Demand response from electric resistance water heater	No management of water heater time of use	1	\$100.00	\$200.00	1	0.213	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Water Heater Setback	Electric Water Heater Setback	setback WH setpoint to 120 F	Existing WH at setpoint of 130 F	2	\$0.00	\$0.00	161	0.007	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Water Heater Setback	Gas Water Heater Setback	setback WH setpoint to 120 F	Existing WH at setpoint of 130 F	8	\$0.00	\$2.00	0	0.000	5.4	\$0.00	100%	0	58
Low Income Home Energy Squad - MN	Weatherstripping - Electric Heating and Cooling	Weatherstripping in homes with electric heating / electric cooling	Weatherstripped door achieving 0.18 CFM/linear ft of crack leakage rate	Existing door with 0.55 CFM/linear ft of crack leakage rate	10	\$12.00	\$12.00	322	0.012	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Weatherstripping - Electric Heating Only	Weatherstripping in homes with electric heating / no cooling	Weatherstripped door achieving 0.18 CFM/linear ft of crack leakage rate	Existing door with 0.55 CFM/linear ft of crack leakage rate	10	\$12.00	\$12.00	316	0.000	0.0	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for combo customers	Weatherstripped door achieving 0.18 CFM/linear ft of crack leakage rate	Existing door with 0.55 CFM/linear ft of crack leakage rate	10	\$12.00	\$5.25	51	0.013	1.8	\$0.00	100%	188	188
Low Income Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for electric-only customers	Weatherstripped door achieving 0.18 CFM/linear ft of crack leakage rate	Existing door with 0.55 CFM/linear ft of crack leakage rate	10	\$12.00	\$12.00	6	0.012	1.8	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for gas-only customers	Weatherstripped door achieving 0.18 CFM/linear ft of crack leakage rate	Existing door with 0.55 CFM/linear ft of crack leakage rate	10	\$12.00	\$12.00	6	0.012	1.8	\$0.00	100%	0	0
Low Income Home Energy Squad - MN	Weatherstripping - Gas Heating Only	Weatherstripping in homes with gas heating / no cooling	Weatherstripped door achieving 0.18 CFM/linear ft of crack leakage rate	Existing door with 0.55 CFM/linear ft of crack leakage rate	10	\$12.00	\$113.48	343	0.402	5.4	\$0.00	100%	1	4
Low Income Multi-Family - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	7	\$20.00	\$20.00	68	0.009	0.0	\$0.00	75%	0	0
Low Income Multi-Family - MN	Aerators - EWH	Renter Kit Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.22	\$1.22	98	0.014	0.0	\$15.76	100%	0	0
Low Income Multi-Family - MN	Aerators - EWH	Renter Kit Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$0.48	\$0.48	73	0.010	0.0	\$13.85	100%	0	0
Low Income Multi-Family - MN	Dehumidifier Recycling	Dehumidifier removal and Recycling	Removal of dehumidifier	Existing dehumidifier	5	\$15.00	\$15.00	824	0.426	0.0	\$0.00	100%	0	0
Low Income Multi-Family - MN	ENERGY STAR Dehumidifier	≤ 50 pints/day dehumidifier	ENERGY STAR Dehumidifier low capacity	Standard efficiency dehumidifier (Current Federal Standard)	12	\$289.00	\$289.00	211	0.130	0.0	\$0.00	100%	0	0
Low Income Multi-Family - MN	ENERGY STAR Refrigerator	Freezer Replacement	ENERGY STAR ® Freezers	Industry Standard	11	\$347.94	\$139.90	395	0.303	0.0	\$0.00	100%	21	0
Low Income Multi-Family - MN	ENERGY STAR Refrigerator	Refrigerator Replacement	ENERGY STAR ® Refrigerators	Industry Standard	14	\$823.87	\$128.19	398	0.306	0.0	\$0.00	100%	1,709	0
Low Income Multi-Family - MN	Home Lighting DI	LED A19 10W	LED A19 10W	EISA Standard Bulb	20	\$4.80	\$23.80	39	0.008	0.0	\$0.00	100%	25	0
Low Income Multi-Family - MN	Home Lighting DI	LED A19 10W	LED A19 10W	Existing CFL Bulb	20	\$4.80	\$67.80	398	0.027	0.0	\$0.00	100%	440	0
Low Income Multi-Family - MN	Home Lighting DI	LED Candelabra 6W	LED Candelabra 6W	EISA Specialty Bulb	20	\$4.90	\$18.90	127	0.018	0.0	\$0.00	100%	117	0
Low Income Multi-Family - MN	Home Lighting DI	LED Globe 6W	LED Globe 6W	EISA Specialty Bulb	20	\$4.90	\$28.90	95	0.012	0.0	\$0.00	100%	361	0
Low Income Multi-Family - MN	Home Lighting DI	Renter Kit 11W LED	11W LED	EISA Standard Bulb	20	\$4.81	\$4.81	32	0.004	0.0	\$0.00	100%	0	0
Low Income Multi-Family - MN	Home Lighting DI	Renter Kit 9W LED	9W LED	EISA Standard Bulb	20	\$3.19	\$3.19	34	0.004	0.0	\$0.00	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Low Income Multi-Family - MN	Mini-Split Heat Pump	Mini-Split Heat Pump	Residential Mini-Split Heat Pump (Nominal 1.8 Tons with 18.9 SEER, 12.9 EER, 10.2 HSPF ) with electric resistance heat backup	Spot Cooling Solution needed with Existing Electric Resistance Heating	15	\$6,855.29	\$6,855.29	4,012	0.881	0.0	\$0.00	100%	0	0
Low Income Multi-Family - MN	Mini-Split Heat Pump	Mini-Split Heat Pump	Residential Mini-Split Heat Pump (Nominal 1.8 Tons with 18.9 SEER, 12.9 EER, 10.2 HSPF (unadjusted) ) replacing a MSHSP or new spot cooling need.	MSHP size 1.8 tons, 14 SEER, 8.19 EER, 8.2 HSPF (unadjusted).	15	\$6,855.29	\$6,786.31	442	0.303	0.0	\$0.00	100%	47	0
Low Income Multi-Family - MN	Refrigerator Recycling	Freezer Removal and Recycling	Removal of freezer	Existing primary unit - age mostly >10 years	7	\$40.75	\$40.75	833	0.095		\$0.00	100%	0	0
Low Income Multi-Family - MN	Refrigerator Recycling	Refrigerator Removal and Recycling	Removal of Primary and Secondary Refrigerator	Existing Primary and Secondary Unit - age mostly > 15 years	8	\$40.75	\$40.75	810	0.093		\$0.00	100%	0	0
Low Income Multi-Family - MN	Room Air Conditioner Recycling	Wall Air Conditioner Removal and Recycling	Removal of Standard 10,000 Btu/hr 9.8 EER Window AC Unit	Existing Window AC Unit	5	\$40.75	\$40.75	642	0.781		\$0.00	100%	0	0
Low Income Multi-Family - MN	Room Air Conditioner Recycling	Window Air Conditioner Removal and Recycling	Removal of Standard 10,000 Btu/hr Window AC Unit	Existing Window AC Unit	5	\$40.75	\$40.75	591	0.720		\$0.00	100%	0	0
Low Income Multi-Family - MN	Showerheads - EWH	Renter Kit Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.22	\$3.22	604	0.044	0.0	\$115.19	100%	0	0
Low Income Multi-Family - MN	Wall AC	Wall Air Conditioner Replacement	Average Energy Star Wall AC w/ Louvers 10,000 Btu/hr 10.8 EER Window AC Unit	Existing Window AC Unit	9	\$706.69	\$690.93	82	0.198		\$0.00	100%	486	0
Low Income Multi-Family - MN	Window AC	Window Air Conditioner Replacement	Average Energy Star Window AC with Louvers 10,000 Btu/hr 10.8 EER Window AC Unit	Existing Window AC Unit	9	\$443.12	\$433.80	92	0.200		\$0.00	100%	13	0
Multi-Family Building Efficiency - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	5	\$481.93	\$481.93	1,815	0	0.0	\$0.00	75%	296	0
Multi-Family Building Efficiency - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	1	0.806	0.0	\$0.00	100%	0	0
Multi-Family Building Efficiency - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	3	2.113	0.0	\$0.00	100%	0	0
Multi-Family Building Efficiency - MN	Custom Electric Multi-Family Building Efficiency Project	Custom Electric MFBE	Efficient Equipment	Inefficient Equipment	18	\$1,367.29	\$4,303.71	11,158	1	0.0	\$0.00	100%	17	0
Multi-Family Building Efficiency - MN	Custom Gas Multi-Family Building Efficiency Project	Custom Gas MFBE	Efficient Equipment	Inefficient Equipment	18	\$20,496.80	\$46,781.08	0	0.000	326.0	\$0.00	100%	0	5
Multi-Family Building Efficiency - MN	Multi-Family Bundles	Carryover Projects Electric	Efficient Equipment	Old System	19	\$3,352.56	\$8,034.48	15,383	1.538	0.0	-\$30.44	100%	0	0
Multi-Family Building Efficiency - MN	Multi-Family Bundles	Carryover Projects Gas	Efficient Equipment	Old System	19	\$3,732.72	\$33,096.56	0	0.000	45.3	\$0.00	100%	0	0
Multi-Family Building Efficiency - MN	Weatherstripping - Electric Heating and Cooling	Weatherstripping in homes with electric heating / electric cooling	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$30.00	\$30.00	322	0.012	0.0	\$0.00	100%	0	0
Multi-Family Building Efficiency - MN	Weatherstripping - Electric Heating Only	Weatherstripping in homes with electric heating / no cooling	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$30.00	\$30.00	14	0	0.0	\$0.00	100%	1	0
Multi-Family Building Efficiency - MN	Weatherstripping - Gas Heating / Electric Cooling	Weatherstripping in homes with gas heating / electric cooling for combo customers	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$30.00	\$30.00	6	0.012	1.8	\$0.00	100%	0	0
Multi-Family Building Efficiency - MN	Weatherstripping - Gas Heating Only	Weatherstripping in homes with gas heating / no cooling	Weatherstripped door achieving 0.18 CFM/linear ft of crack) leakage rate	Existing door with 0.55 CFM/linear ft of crack) leakage rate	10	\$30.00	\$30.00	0	0.000	1.8	\$0.00	100%	0	0
Multi-Family Building Efficiency - MN	Renter Kit Window Film - Gas Heating Only	Window film in homes with gas heating	Window with seasonal window film installed	Untreated window	1	\$0.00	\$0.00	0	0.000	0.1	\$0.00	100%	0	0
Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Cooling Project	Efficient Cooling Equipment	Baseline System	38	\$1,650.67	\$2,807.00	1,228	0	0.0	\$0.00	100%	3	0
Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Lighting Project	LED Lighting	Old System	14	\$138.84	\$593.04	3,267	0	0.0	\$0.00	100%	396	0
Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Motor Project	Efficient Motors & Drives	Old System	18	\$58.33	\$198.15	3,470	0	0.0	\$0.00	100%	6	0
Multi-Family Building Efficiency - MN	Multi-Family Prescriptive	Average Heating Project	Efficient Heating Equipment	Old System	11	\$473.56	\$1,813.02	0	0.000	86.7	\$0.00	100%	0	25
Multi-Family Building Efficiency - MN	Home Lighting DI	Replace screw-in incandescents within tenant units with LEDs	LED Bulbs	EISA Standard Bulb	30	\$293.37	\$293.37	3,370	0	0.0	\$0.00	100%	738	0
Multi-Family Building Efficiency - MN	Home Lighting DI	Replace screw-in CFL within tenant units with LEDs	LED Bulbs	Existing CFL	30	\$198.87	\$198.87	360	0	0.0	\$0.00	100%	374	0
Multi-Family Building Efficiency - MN	Home Lighting DI	Renter Kit 9W LED	9W LED	EISA Standard Bulb	20	\$0.00	\$0.00	32	0.004	0.0	\$0.00	100%	0	0
Multi-Family Building Efficiency - MN	Home Lighting DI	Renter Kit 11W LED	11W LED	EISA Standard Bulb	20	\$0.00	\$0.00	32	0.004	0.0	\$0.00	100%	0	0
Multi-Family Building Efficiency - MN	Lighting DI	Replace screw-in incandescents and CFLs in common areas with screw-in LEDs	LED Bulbs	Average EISA Standard halogen or CFL A-Style Bulb	6	\$6.15	\$6.15	218	0.036	0.0	\$0.00	100%	0	0
Multi-Family Building Efficiency - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$15.95	\$13.95	128	0	4.2	\$15.76	100%	91	89
Multi-Family Building Efficiency - MN	Aerators - EWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$41.20	\$41.20	10,070	0	8.7	\$13.85	100%	2	12
Multi-Family Building Efficiency - MN	Aerators - EWH	Secondary 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	2.2 GPM Bathroom Faucet Aerator	10	\$1.48	\$1.48	73	0.010	0.0	\$13.85	100%	0	0



Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCKW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Multi-Family Building Efficiency - MN	Aerators - EWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$35.20	\$35.20	92	0	7.4	\$19.64	100%	107	107
Multi-Family Building Efficiency - MN	Aerators - EWH	Secondary Bath Faucet Aerator - 0.6 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$4.00	\$4.00	103	0.015	0.0	\$19.64	100%	0	0
Multi-Family Building Efficiency - MN	Aerators - EWH	Renter Kit Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$0.00	\$0.00	98	0.014	0.0	\$15.76	100%	0	0
Multi-Family Building Efficiency - MN	Aerators - EWH	Renter Kit Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$0.00	\$0.00	73	0.010	0.0	\$13.85	100%	0	0
Multi-Family Building Efficiency - MN	Aerators - GWH	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	2.2 GPM Kitchen Faucet Aerator	10	\$2.86	\$2.86	0	0.000	0.4	\$15.76	100%	0	0
Multi-Family Building Efficiency - MN	Aerators - GWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$1.48	\$1.48	0	0.000	0.3	\$13.85	100%	0	0
Multi-Family Building Efficiency - MN	Aerators - GWH	Secondary 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	2.2 GPM Bathroom Faucet Aerator	10	\$1.48	\$1.48	0	0.000	0.3	\$13.85	100%	0	0
Multi-Family Building Efficiency - MN	Aerators - GWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$4.00	\$4.00	0	0.000	0.4	\$19.64	100%	0	0
Multi-Family Building Efficiency - MN	Aerators - GWH	Secondary Bath Faucet Aerator - 0.6 GPM to replace existing 2.2 GPM aerator in home with natural gas DHW heater	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$4.00	\$4.00	0	0.000	0.4	\$19.64	100%	0	0
Multi-Family Building Efficiency - MN	Aerators - GWH	Renter Kit 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	2.2 GPM Kitchen Faucet Aerator	10	\$0.00	\$0.00	0	0.000	0.4	\$15.76	100%	0	0
Multi-Family Building Efficiency - MN	Aerators - GWH	Renter Kit Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$0.00	\$0.00	0	0.000	0.3	\$13.85	100%	0	0
Multi-Family Building Efficiency - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$47.20	\$47.20	5007	0	0.0	\$115.19	100%	7	0
Multi-Family Building Efficiency - MN	Showerheads - EWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$5.60	\$5.60	79	0.006	0.0	\$15.02	100%	0	0
Multi-Family Building Efficiency - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$27.08	\$27.08	1306	0	0.0	\$115.19	100%	6	0
Multi-Family Building Efficiency - MN	Showerheads - EWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$16.25	\$16.25	79	0.006	0.0	\$15.02	100%	0	0
Multi-Family Building Efficiency - MN	Showerheads - EWH	Renter Kit Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$0.00	\$0.00	604	0.044	0.0	\$115.19	100%	0	0
Multi-Family Building Efficiency - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$56.97	\$56.97	0	0.000	26.2	\$115.19	100%	0	92
Multi-Family Building Efficiency - MN	Showerheads - GWH	Secondary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$5.60	\$5.60	0	0.000	0.3	\$15.02	100%	0	0
Multi-Family Building Efficiency - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$65.63	\$65.63	0	0.000	10.4	\$115.19	100%	0	26
Multi-Family Building Efficiency - MN	Showerheads - GWH	Secondary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$16.25	\$16.25	0	0.000	0.3	\$15.02	100%	0	0
Multi-Family Building Efficiency - MN	Showerheads - GWH	Renter Kit Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$0.00	\$0.00	0	0.000	2.6	\$115.19	100%	0	0
Multi-Family Building Efficiency - MN	Water Heater Setback	Water Heater Setback	Building hot water system with setback	Building hot water system without setback	10	\$0.00	\$0.00	744	0	1.8	\$0.00	100%	2	2
Multi-Family Building Efficiency - MN	Water Heater Setback	Water Heater Setback	Building hot water system with setback	Building hot water system without setback	10	\$0.00	\$0.00	0	0.000	2.6	\$0.00	100%	0	0
Non-Profit Program - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	1	0.806	0.0	\$0.00	100%		
Non-Profit Program - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	3	2.113	0.0	\$0.00	100%		
Non-Profit Program - MN	Custom Electric Non-Profit Program Project	Custom Electric NPP	Efficient Equipment	Inefficient Equipment	18	\$259.46	\$1,161.09	1,766	0.330	0.0	\$0.00	100%		
Non-Profit Program - MN	Custom Gas Non-Profit Program Project	Custom Gas NPP	Efficient Equipment	Inefficient Equipment	19	\$237.72	\$2,124.07	0	0.000	29.7	\$0.00	100%		
Non-Profit Program - MN	Non-Profit Prescriptive	Average Cooling Project	Efficient Cooling Equipment	Baseline System	20	\$1,217.20	\$2,254.26	890	1.204	0.0	\$0.00	100%		
Non-Profit Program - MN	Non-Profit Prescriptive	Average Lighting Project	LED Lighting	Old System	10	\$14.69	\$23.00	121	0.021	0.0	\$0.00	100%		
Non-Profit Program - MN	Non-Profit Prescriptive	Average Motor Project	Efficient Motors & Drives	Old System	19	\$315.69	\$975.10	591	0.097	0.0	\$0.00	100%		
Non-Profit Program - MN	Non-Profit Prescriptive	Average Heating Project	Efficient Heating Equipment	Old System	10	\$2,068.28	\$2,271.71	0	0.000	102.3	\$0.00	100%		
Non-Profit Program - MN	Non-Profit Prescriptive	Average Foodservice Project	Efficient Foodservice Equipment	Old System	15	\$1,063.58	\$3,269.51	5,981	0.861	90.9	\$32.74	100%		
Non-Profit Program - MN	Home Lighting DI	LED Lamps	LED Bulbs	Removed Lamp	20	\$5.08	\$5.08	31	0.004	0.0	\$0.00	100%		
Non-Profit Program - MN	Home Lighting DI	LED Lamps CFL Baseline	LED Bulbs	Removed Lamp	20	\$5.08	\$5.08	6	0.001	0.0	\$0.00	100%		

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCKW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Non-Profit Program - MN	Direct Install Screw In	Replace screw-in incandescents and CFLs in common areas with screw-in LEDs	LED Bulbs	Average EISA Standard halogen or CFL 2.5-Slide Bulb	6	\$6.15	\$6.15	218	0.036	0.0	\$0.00	100%		
Non-Profit Program - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with electric DHW heater	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$2.86	\$2.86	98	0.014	0.0	\$15.76	100%		
Non-Profit Program - MN	Aerators - GWH	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	2.2 GPM Kitchen Faucet Aerator	10	\$2.86	\$2.86	0	0.000	0.4	\$15.76	100%		
Non-Profit Program - MN	Aerators - EWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$4.00	\$4.00	103	0.015	0.0	\$19.64	100%		
Non-Profit Program - MN	Aerators - GWH	Primary 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	2.2 GPM Bathroom Faucet Aerator	10	\$4.00	\$4.00	0	0.000	0.4	\$19.64	100%		
Non-Profit Program - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$5.60	\$5.60	604	0.044	0.0	\$115.19	100%		
Non-Profit Program - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$5.60	\$5.60	0	0.000	2.6	\$115.19	100%		
Non-Profit Program - MN	Showerheads - EWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with electric DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$16.25	\$16.25	604	0.044	0.0	\$115.19	100%		
Non-Profit Program - MN	Showerheads - GWH	Primary Handheld Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with natural gas DHW heater	1.5 GPM Handheld Showerhead	2.5 GPM Showerhead	10	\$16.25	\$16.25	0	0.000	2.6	\$115.19	100%		
Non-Profit Program - MN	Water Heater Setback	Water Heater Setback	Building hot water system with setback	Building hot water system without setback	2	\$0.00	\$0.00	4,875	0.556	0.0	\$0.00	100%		
Non-Profit Program - MN	Water Heater Setback	Water Heater Setback	Building hot water system with setback	Building hot water system without setback	2	\$0.00	\$0.00	0	0.000	25.9	\$0.00	100%		
Peak Partner Rewards - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	3	\$5,608.20	\$0.00	96	201	0.0	\$0.00	100%	38	0
Peak Partner Rewards - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	\$28,418.00	\$0.00	5,312	885,294	0.0	\$0.00	100%		
Process Efficiency - MN	Behavioral Process	Behavioral Changes	Behavior changes that reduce energy use	No change in behavior	3	\$1,859.62	\$0.00	92,981	5,778	0.0	\$0.00	100%	0	0
Process Efficiency - MN	EDA	PE Parent for gas EDA projects	More Efficient than Code Building	Code-Compliant Building	20	\$10,043.00	\$161,280.57	0	0.000	2,014.1	\$0.00	100%	0	0
Process Efficiency - MN	EDA	PE Parent for electric EDA projects	More Efficient than Code Building	Code-Compliant Building	20	\$659,612.00	\$1,159,418.74	\$1,179,298	1,996	0.0	-\$104.84	100%	1	0
Process Efficiency - MN	EDA	PE Parent for gas EDA projects - 2023	More Efficient than Code Building	Code-Compliant Building	20	\$8,952.58	\$161,280.57	0	0.000	1,790.5	\$0.00	100%	0	0
Process Efficiency - MN	EDA	PE Parent for electric EDA projects - 2023	More Efficient than Code Building	Code-Compliant Building	20	\$52,180.67	\$201,846.37	344,615	77,186	0.0	-\$104.84	100%	0	0
Process Efficiency - MN	EEB	PE Parent for gas EEB projects	More Efficient than Code Building	Code-Compliant Building	20	\$3,694.44	\$8,754.70	0	0.000	193.7	-\$28.00	100%	0	0
Process Efficiency - MN	EEB	PE Parent for electric EEB projects	More Efficient than Code Building	Code-Compliant Building	20	\$8,340.74	\$16,995.61	40,755	10,476	0.0	-\$130.09	100%	0	0
Process Efficiency - MN	Electric Rate Savings	Participating Customer	Utility load control of at least 50 kW for control period	No control	5	\$0.00	\$0.00	329	164,289	0.0	\$0.00	100%	0	0
Process Efficiency - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	1	0.806	0.0	\$0.00	100%	0	0
Process Efficiency - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	3	2,113	0.0	\$0.00	100%	0	0
Process Efficiency - MN	Peak Partner Rewards	New Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	\$15,356.00	\$0.00	2,870	478,400	0.0	\$0.00	100%	0	0
Process Efficiency - MN	Peak Partner Rewards	Existing Participating Customer	Reduction of building electrical load by a program agreed upon amount when the electric grid experiences peak demand periods.	No control	1	\$15,356.00	\$0.00	2,870	478,400	0.0	\$0.00	100%	0	0
Process Efficiency - MN	Custom Electric Process Efficiency Project	Custom Electric Process Project	New or Optimized System or Equipment	Old or less efficient systems or equipment	18	\$51,852.00	\$768,718.34	701,800	111	0.0	\$41,231.94	100%	33	0
Process Efficiency - MN	Custom Gas Process Efficiency Project	Custom Gas Process Project	New or Optimized System or Equipment	Old or less efficient systems or equipment	15	\$12,905.79	\$128,802.89	0	0.000	1,308.7	\$11,577.24	100%	0	9
Process Efficiency - MN	Process Efficiency Prescriptive	Average Cooling Project	More efficient cooling equipment	Baseline System	20	\$6,317.42	\$7,890.43	30,204	10	0.0	\$0.00	100%	39	0
Process Efficiency - MN	Process Efficiency Prescriptive	Average Compressed Air/FSO Project	Efficient Equipment	Old System	18	\$9,603.72	\$80,114.57	147,000	19	0.0	\$9.38	100%	67	0
Process Efficiency - MN	Process Efficiency Prescriptive	Average Lighting Project	Efficient Equipment	Old System	18	\$3,233.70	\$10,688.11	97,217	6	0.0	-\$641.69	100%	341	0
Process Efficiency - MN	Process Efficiency Prescriptive	Average Motor Project	Efficient Equipment	Old System	18	\$3,451.96	\$10,120.38	94,208	6	0.0	\$0.00	100%	283	0
Process Efficiency - MN	Process Efficiency Prescriptive	Average Heating Project	Efficient Equipment	Old System	6	\$773.47	\$16,380.07	0	0.000	1,182.8	-\$0.72	100%	0	44
Process Efficiency - MN	Process Efficiency Study	Phase 2 Study	0	0	0	\$15,628.95	\$16,355.26	0	0.000	0.0	\$0.00	100%	0	0
Process Efficiency - MN	RCx Implementation	Implementation of ECO's found in PE studies	Post-Recommissioned Building	Pre-Recommissioned Building	7	\$8,955.81	\$22,383.73	310,434	9,334	0.0	\$0.00	100%	0	0
Process Efficiency - MN	PE Bonuses	System Optimization and Annual Achievement Bonuses	0	0	0	\$36,680.27	\$0.00	0	0.000	0.0	\$0.00	100%	0	0
Process Efficiency - MN	EEB	Energy Efficient Buildings - Gas - 2023	More Efficient than Code Building	Code-Compliant Building	19	\$3,694.44	\$8,754.70	0	0.000	193.7	-\$28.00	100%	0	0
Process Efficiency - MN	EEB	Energy Efficient Buildings - Electric - 2023	More Efficient than Code Building	Code-Compliant Building	18	\$8,340.74	\$16,995.61	35,543	9,401	0.0	-\$130.09	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Refrigerator Recycling - MN	Dehumidifier Recycling	Dehumidifier removal and Recycling	Removal of dehumidifier	Existing dehumidifier	5	\$0.00	\$0.00	966	5.366	0.0	\$0.00	100%	166	0
Refrigerator Recycling - MN	Refrigerator Recycling	Freezer Removal and Recycling	Removal of freezer	Existing primary unit - age mostly >10 years	7	\$50.00	\$0.00	961	5.198	0.0	\$0.00	100%	758	0
Refrigerator Recycling - MN	Refrigerator Recycling	Refrigerator Removal and Recycling	Removal of Primary and Secondary Refrigerator	Existing Primary and Secondary Unit - age mostly > 15 years	8	\$50.00	\$0.00	1,006	5.115	0.0	\$0.00	100%	3,415	0
Refrigerator Recycling - MN	Room Air Conditioner Recycling	Remove and Recycling Room AC	Removal of Standard 10,000 Btu/hr Window AC Unit	Existing Window AC Unit	5	\$0.00	\$0.00	666	9.071	0.0	\$0.00	100%	20	0
Refrigerator Recycling - MN	Saver's Switch	Residential AC Switch	Utility Load Control for control period with smart switch	No Control, No Switch	15	\$90.00	\$90.00	1	0.748	0.0	\$0.00	100%	0	0
Refrigerator Recycling - MN	Refrigerator Recycling	Secondary Market - Freezer Removal and Recycling	Removal of Resale Freezer	Resale Unit - manufactured before 2001	7	\$35.00	\$0.00	45	0.003	0.0	\$0.00	100%	0	0
Refrigerator Recycling - MN	Refrigerator Recycling	Secondary Market - Refrigerator Removal and Recycling	Removal of Resale Refrigerator	Resale Unit - manufactured before 2001	8	\$35.00	\$0.00	43	0.003	0.0	\$0.00	100%	0	0
Residential Demand Response - MN	AC Rewards-DR	Residential Smart Thermostat - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$190.00	\$190.00	2	1.109	0.0	\$0.00	100%	0	0
Residential Demand Response - MN	AC Rewards-EE	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$110.00	\$110.00	43	0.074	1.4	\$0.00	100%	2,528	4
Residential Demand Response - MN	AC Rewards-DR	Residential Smart Thermostat - Townhomes - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$190.00	\$190.00	1	0.706	0.0	\$0.00	100%	0	0
Residential Demand Response - MN	AC Rewards-EE	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo - Townhomes	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$110.00	\$110.00	48	0.114	2.9	\$0.00	100%	0	0
Residential Demand Response - MN	AC Rewards-DR	Residential Smart Thermostat - Multifamily - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$190.00	\$190.00	1	0.388	0.0	\$0.00	100%	0	0
Residential Demand Response - MN	AC Rewards-EE	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo - Multifamily	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$110.00	\$110.00	26	0.063	0.8	\$0.00	100%	0	0
Residential Demand Response - MN	AC Rewards-DR	Residential Smart Thermostat - BYOT	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$75.00	\$190.00	2	1.166	0.0	\$0.00	100%	10,759	0
Residential Demand Response - MN	Saver's Switch	MN - Residential AC Switch	Utility Load Control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	1	0.779	0.0	\$0.00	100%	15,737	0
Residential Demand Response - MN	Saver's Switch	MN - Residential WH Switch	Utility Load Control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	2	0.200	0.0	\$0.00	100%	0	0
Residential Demand Response - MN	Smart Thermostat	BYOT EE - AC & Electric Heating	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$50.00	\$110.00	1,270	0.160	0.0	\$0.00	100%	1	0
Residential Demand Response - MN	Smart Thermostat	BYOT EE - AC & Gas Heating - Combo Customer	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$50.00	\$110.00	303	0.460	7.9	\$0.00	100%	201	468
Residential Demand Response - MN	Smart Thermostat	BYOT EE - AC & Gas Heating - Electric Only Customer	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$50.00	\$30.00	76	0.160	5.5	\$0.00	100%	832	0
Residential Demand Response - MN	Smart Thermostat	BYOT EE - Gas Heating Gas Only Customer	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$50.00	\$76.00	0	0.000	0.0	\$0.00	100%	0	154
Residential Demand Response - MN	Smart Thermostat	Direct Install Smart Thermostat EE - AC & Electric Heating	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$0.00	\$0.00	76	0.180	0.0	\$0.00	100%	0	0
Residential Demand Response - MN	Smart Thermostat	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$0.00	\$0.00	76	0.180	5.5	\$0.00	100%	0	0
Residential Demand Response - MN	Smart Thermostat	Direct Install Smart Thermostat EE - AC & Gas Heating - Electric only	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$0.00	\$0.00	76	0.180	5.5	\$0.00	100%	0	0
Residential Demand Response - MN	Smart Thermostat	Direct Install Smart Thermostat EE - Gas Heating Gas Only Customer	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$0.00	\$0.00	0	0.000	5.5	\$0.00	100%	0	0
Residential Demand Response - MN	AC Rewards-EE	Eco+	Smart thermostat with eco+	Smart thermostat	10	\$0.00	\$0.00	18	0.043	0.0	\$0.00	100%	0	0
Residential Demand Response - MN	Water Heater DR	Load Shift & Demand response capability on new heat pump water heater (CTA 2045)	Heat Pump Water Heater w/ DR Management	No management of water heater time of use	1	\$100.00	\$325.00	152	0.071	0.0	\$0.00	100%	0	0
Residential Demand Response - MN	Water Heater DR	Load Shift & Demand response capability on new heat pump water heater (CTA 2045) - Annual Re Enrollment	Heat Pump Water Heater w/ DR Management - Re Enrollment of Existing Customer	No management of water heater time of use	1	\$25.00	\$0.00	152	0.071	0.0	\$0.00	100%	0	0
Residential Demand Response - MN	Water Heater DR	Demand response capability on grid enabled electric resistance water heater (CTA 2045)	Electric Resistance Water Heater w/ DR Management	No management of water heater time of use	1	\$100.00	\$325.00	1	0.213	0.0	\$0.00	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Residential Demand Response - MN	Water Heater DR	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	No management of water heater time of use	1	\$100.00	\$0.00	1	0.213	0.0	\$0.00	100%	0	0
Residential HVAC - MN	AC Rewards-DR	Residential Smart Thermostat - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$190.00	\$190.00	2	1.109	0.0	\$0.00	100%	0	0
Residential HVAC - MN	AC Rewards-EE	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$110.00	\$78.34	172	2.288	7.8	\$0.00	100%	169	161
Residential HVAC - MN	AC Rewards-DR	Residential Smart Thermostat	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$125.00	\$215.00	2	1.109	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Boiler	95% Efficient Boiler	95% Efficient Boiler	84% Efficient Boiler	20	\$400.00	\$1,432.00	0	0.000	23.5	\$0.00	100%	0	497
Residential HVAC - MN	Furnace	95% Efficient Furnace in Existing Home	95% Efficient Furnace in existing home	80% Efficient Furnace	18	\$200.00	\$672.00	0	0.000	19.3	\$0.00	100%	0	302
Residential HVAC - MN	Furnace	95% Efficient Furnace in New Home	95% Efficient Furnace in new home	90% Efficient Furnace	18	\$100.00	\$184.00	0	0.000	8.8	\$0.00	100%	0	3
Residential HVAC - MN	Furnace	96% Efficient Furnace in Existing Home	96% Efficient Furnace in existing home	90% Efficient Furnace	18	\$300.00	\$678.00	0	0.000	20.9	\$0.00	100%	0	7,102
Residential HVAC - MN	Furnace	96% Efficient Furnace in New Home	96% Efficient Furnace in new home	90% Efficient Furnace	18	\$150.00	\$273.00	0	0.000	7.3	\$0.00	100%	0	53
Residential HVAC - MN	Furnace	97% Efficient Furnace in Existing Home	97% Efficient Furnace in existing home	90% Efficient Furnace	18	\$400.00	\$1,144.00	0	0.000	24.9	\$0.00	100%	0	1,226
Residential HVAC - MN	Furnace	97% Efficient Furnace in New Home	97% Efficient Furnace in new home	90% Efficient Furnace	18	\$200.00	\$678.00	0	0.000	8.2	\$0.00	100%	0	10
Residential HVAC - MN	Mini-Split Heat Pump	Mini Split Heat Pumps	Residential Mini-Split Heat Pump (Nominal 1.8 Tons with 18.9 SEER, 12.9 EER, 10.2 HSPF ) with electric resistance heat backup	Spot Cooling Solution needed with Existing Electric Resistance Heating	15	\$600.00	\$414.56	147	0.234	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Mini-Split Heat Pump	Mini-Split Heat Pump	Residential Mini-Split Heat Pump (Nominal 1.8 Tons with 18.9 SEER, 12.9 EER, 10.2 HSPF (unadjusted) ) replacing a MSHP or new spot cooling need.	MSHP size 1.8 tons, 14 SEER, 8.19 EER, 8.2 HSPF (unadjusted)	15	\$300.00	\$414.56	147	0.234	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res AC	Installation of new AC 15 SEER 2.25 tons	Quality Installation of 15 SEER 2.25 tons	Non-Quality Installation of 13 SEER (Baseline and Model) 2 tons	18	\$350.00	\$513.41	207	1.818	0.0	\$0.00	100%	2,301	0
Residential HVAC - MN	Res AC	Installation of new AC 16 SEER 2.25 tons	Quality Installation of 16 SEER 2.25 tons	Non-Quality Installation of 13 SEER (Baseline and Model) 2 tons	18	\$450.00	\$633.32	203	1.892	0.0	\$0.00	100%	436	0
Residential HVAC - MN	Res AC w/ Furnace	Installation of new AC 15 SEER 2.25 tons w/ assoc furnace	Non - Quality Installation of 15 SEER 2.25 tons with Associated Furnace	Non-Quality Installation of 13 SEER (Baseline and Model) 2 tons	18	\$200.00	\$414.56	147	0.234	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res AC w/ Furnace	Installation of new AC 16 SEER 2.25 tons w/ assoc furnace	Non - Quality Installation of 16 SEER 2.25 tons with Associated Furnace	Non-Quality Installation of 13 SEER (Baseline and Model) 2 tons	18	\$300.00	\$621.86	207	0.311	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res AC	Provide Quality Installation of new AC 13 - 14.5 SEER 2.25 tons	Quality Installation of 13 - 14.5 SEER 2.25 tons	Non-Quality Installation of 13 - 14.5 SEER 2 tons	18	\$150.00	\$241.98	172	2.287	0.0	\$0.00	100%	4,812	0
Residential HVAC - MN	Res AC w/ Furnace	Provide Quality Installation of new AC 13 - 14.5 SEER 2.25 tons w/ assoc furnace	Quality Installation of 13 - 14.5 SEER 2.25 tons w/ assoc furnace	Non-Quality Installation of 2.5 Ton AC 13 - 14.5 SEER 2 tons	18	\$150.00	\$273.00	203	1.976	8.3	\$0.00	100%	3,755	1,268
Residential HVAC - MN	Res AC w/ Furnace	Provide Quality Installation of new AC 15 SEER 2.25 tons w/ assoc furnace	Quality Installation of 15 SEER 2.25 tons w/ assoc furnace	Non-Quality Installation of 2.5 Ton AC 15 SEER 2 tons	18	\$150.00	\$0.00	0	0.000	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res AC w/ Furnace	Provide Quality Installation of new AC 16 SEER 2.25 tons w/ assoc furnace	Quality Installation of 16 SEER 2.25 tons w/ assoc furnace	Non-Quality Installation of 2.5 Ton AC 16 SEER 2 tons	18	\$150.00	\$0.00	0	0.000	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP	Installation of new ASHP 15 SEER 12.5 EER 9 HSPF 2 tons w/ Electric Resistance Heat Backup	Quality Installation of New ASHP 15 SEER, 12.5 EER, 9 HSPF 2 tons with Electric Resistance heat backup	Non-Quality Installation of 14 SEER AC (Baseline and Model) 2 tons in home with existing electric resistance heat	18	\$350.00	\$361.14	438	1.440	0.0	\$0.00	100%	10	0
Residential HVAC - MN	Res ASHP	Installation of new ASHP 16 SEER, 13 EER, 9 HSPF 2 tons w/ Electric Resistance Heat Backup	Quality Installation of new ASHP 16 SEER, 13 EER, 9 HSPF 2 tons w/ Electric Resistance Heat Backup	Non-Quality Installation of ASHP 14 SEER (Baseline) ASHP 2 tons	18	\$450.00	\$598.32	433	1.603	0.0	\$0.00	100%	43	0
Residential HVAC - MN	Res ASHP	Provide Quality Installation of new ASHP 14 SEER ASHP 2 tons w/ Electric Resistance Heat Backup	Quality Installation of 14 SEER ASHP 2 tons With Electric Resistance heat Backup	Non-Quality Installation of 14 SEER ASHP 2 tons	18	\$150.00	\$228.32	665	0.305	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP	Provide Quality Installation of new ASHP 14.5 SEER ASHP 2 tons w/ Electric Resistance Heat Backup	Quality Installation of 14.5 SEER ASHP 2 tons with electric Resistance heat backup	Non-Quality Installation of 14.5 SEER ASHP 2 tons	18	\$150.00	\$228.32	659	0.305	0.0	\$0.00	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Residential HVAC - MN	Res ASHP - Cooling only	Installation of new ASHP 15 SEER 12.5 EER 9 HSPF 2 tons for cooling use only	Non - Quality Installation of New ASHP 15 SEER, 12.5 EER, 9 HSPF, 2 tons for cooling use only	Non-Quality Installation of ASHP 15 SEER ASHP 2 tons	18	\$200.00	\$362.47	60	0.110	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP - Cooling only	Installation of new ASHP 16 SEER 13 EER 9 HSPF 2 tons for cooling use only	Non - Quality Installation of new ASHP 16 SEER 13 EER 9 HSPF 2 tons for cooling use only	Non-Quality Installation of ASHP 16 SEER ASHP 2 tons	18	\$300.00	\$724.95	113	0.177	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP - Cooling only	Provide Quality Installation of new ASHP 14 SEER ASHP 2 tons cooling use only	Quality Installation of new ASHP 14 SEER ASHP 2 tons cooling use only	Non-Quality Installation of 14 SEER ASHP 2 tons	18	\$150.00	\$228.32	151	0.036	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP - Cooling only	Provide Quality Installation of new ASHP 14.5 SEER ASHP 2 tons cooling use only	Quality Installation of new ASHP 14.5 SEER ASHP 2 tons cooling use only	Non-Quality Installation of 14.5 SEER ASHP 2 tons	18	\$150.00	\$228.32	146	0.036	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP - Cooling only	Provide Quality Installation of new ASHP 15 SEER 12.5 EER ASHP 2 tons cooling use only	Quality Installation of ASHP 15 SEER, 12.5 EER, 9 HSPF 2 tons cooling use only	Non-Quality Installation of 15 SEER ASHP 2 tons	18	\$150.00	\$413.30	163	0.400	0.0	\$0.00	100%	29	0
Residential HVAC - MN	Res ASHP - Cooling only	Provide Quality Installation of new ASHP 16 SEER 13 EER ASHP 2 tons cooling use only	Quality Installation of new ASHP 16 SEER 13 EER ASHP 2 tons cooling use only	Non-Quality Installation of 16 SEER ASHP 2 tons	18	\$150.00	\$645.20	180	0.502	0.0	\$0.00	100%	99	0
Residential HVAC - MN	Res GSHP	Installation of High Efficiency GSHP equipment Existing Home	Quality Installation of GLHP Brine to Air with 55,690 BTUH heating, 18 EER, 4.0 COP	Non-Quality Installation of 2.5 Ton 13 SEER AC and Electric Resistance Heat	20	\$2,320.42	\$0.00	0	0.000	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res GSHP	Installation of High Efficiency GSHP equipment Existing Home	Quality Installation of 2.5 Ton, closed loop, 18 EER GSHP with 55,690 BTUH heating capacity	Non-Quality Installation of 2.5 Ton 13 SEER AC and 80% AFUE gas fired furnace heating	20	\$1,856.33	\$0.00	0	0.000	146.6	\$0.00	100%	0	0
Residential HVAC - MN	Res GSHP	Installation of High Efficiency GSHP equipment New Home	Quality Installation of GLHP Brine to Air with 55,690 BTUH heating, 18 EER, 4.0 COP	Non-Quality Installation of 2.5 Ton 13 SEER AC and Electric Resistance Heat	20	\$2,320.42	\$14,204.99	24,592	0.804	0.0	\$0.00	100%	0	0
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Electric Resistance Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	10	\$400.00	\$784.00	2,303	0.337	0.0	\$0.00	100%	40	0
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling ASHP Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	10	\$400.00	\$784.00	2,557	0.337	0.0	\$0.00	100%	0	0
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	10	\$400.00	\$784.00	2,953	0.337	0.0	-\$19.66	100%	0	0
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Electric Resistance Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	10	\$400.00	\$784.00	2,172	0.335	0.0	\$0.00	100%	0	0
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling ASHP Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	10	\$400.00	\$810.72	2,536	0.335	0.0	\$0.00	100%	0	845
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	10	\$400.00	\$784.00	2,933	0.335	0.0	-\$19.66	100%	0	0
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Electric Resistance Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	10	\$500.00	\$784.00	2,192	0.337	0.0	\$0.00	100%	0	0
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling ASHP Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	10	\$500.00	\$784.00	2,557	0.337	0.0	\$0.00	100%	0	0
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Natural Gas Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	10	\$500.00	\$784.00	2,953	0.337	0.0	-\$19.66	100%	0	0
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Electric Resistance Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	10	\$500.00	\$784.00	2,172	0.335	0.0	\$0.00	100%	0	0
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling ASHP Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	10	\$500.00	\$784.00	2,536	0.335	0.0	\$0.00	100%	0	0
Residential HVAC - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Natural Gas Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	10	\$500.00	\$784.00	2,933	0.335	0.0	-\$19.66	100%	0	0
Residential HVAC - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater <= 40 Gal - Medium Draw	Minimum Efficiency Storage Water Heater	13	\$75.00	\$126.88	0	0.000	2.8	\$0.00	100%	0	0
Residential HVAC - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater <= 40 Gal - High Draw	Minimum Efficiency Storage Water Heater	13	\$75.00	\$260.86	0	0.000	1.8	\$0.00	100%	0	0
Residential HVAC - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater > 40 Gal - Medium Draw	Minimum Efficiency Storage Water Heater	13	\$75.00	\$119.30	0	0.000	3.6	\$0.00	100%	0	0
Residential HVAC - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater > 40 Gal - High Draw	Minimum Efficiency Storage Water Heater	13	\$75.00	\$384.34	0	0.000	2.0	\$0.00	100%	0	0
Residential HVAC - MN	Water Heater	High Efficiency Tankless Water Heater	High Efficiency Tankless Water Heater - High Draw	Minimum Efficiency Storage Water Heater	20	\$250.00	\$861.92	0	0.000	7.7	\$0.00	100%	0	0
Residential HVAC - MN	Water Heater	High Efficiency Tankless Water Heater	High Efficiency Tankless Water Heater - Medium Draw	Minimum Efficiency Storage Water Heater	20	\$250.00	\$541.99	0	0.000	8.1	\$0.00	100%	0	0
Saver's Switch for Business - MN	Business Saver's Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	1	0.806	0.0	\$0.00	100%	0	0
Saver's Switch for Business - MN	Business Saver's Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	15	\$0.00	\$0.00	3	2.113	0.0	\$0.00	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Saver's Switch for Business - MN	AC Rewards - Business	Business Smart Thermostat - DR Direct Install	New Installation of DR Capable Smart Thermostat	Non communicating thermostat	5	\$386.71	\$386.71	13	3	0.0	\$0.00	100%	973	0
Saver's Switch for Business - MN	AC Rewards - Business	Business Smart Thermostat - BYOT	Existing Dispatchable Device	Non communicating thermostat	10	\$62.11	\$62.11	146	0	0.4	\$0.00	100%	145	145
Saver's Switch for Business - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & GAS	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	7.7	\$0.00	100%	0	0
Saver's Switch for Business - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC ONLY	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	378	0.000	0.0	\$0.00	100%	0	0
Saver's Switch for Business - MN	AC Rewards - Business	Install Energy Star certified smart thermostat - AC & ELEC HEAT	Energy Star Certified Thermostat	Manual or programmable thermostat	10	\$95.00	\$95.00	911	0.000	0.0	\$0.00	100%	0	0
Saver's Switch for Business - MN	Commercial AC Switch	Commercial AC Switch Single Stage - MN	Utility load control for control period with smart switch	No control, no switch	10	\$0.00	\$0.00	1	1	0.0	\$0.00	100%	930	0
Saver's Switch for Business - MN	Commercial AC Switch	Commercial AC Switch Multi Stage - MN	Utility load control for control period with smart switch	No control, no switch	10	\$0.00	\$0.00	3	3	0.0	\$0.00	100%	323	0
School Education Kits - MN	Advanced Power Strip	Advanced Power Strip	Tier 1 Advanced Power Strip	Standard Power Strip	7	\$25.00	\$5.00	68	0.000	0.0	\$0.00	71%	4,686	0
School Education Kits - MN	Advanced Power Strip	Advanced Power Strip	Tier 2 Advanced Power Strip	Standard Power Strip	8	\$40.00	\$40.00	118	0.015	0.0	\$0.00	71%	0	0
School Education Kits - MN	Home Lighting DI	9 Watt LED Bulbs	LED: 2 x 9W	Removed Lamp	20	\$6.38	\$6.38	63	0.000	0.0	\$0.00	92%	27,844	0
School Education Kits - MN	Home Lighting DI	11 Watt LED Bulbs	LED: 2 x 11 W	Removed Lamp	20	\$9.62	\$9.62	67	0.000	0.0	\$0.00	92%	32,195	0
School Education Kits - MN	Home Lighting DI	9 Watt LED Bulbs - Electric Only	LED: 2 x 9W	Removed Lamp	20	\$6.38	\$6.38	67	0.009	0.0	\$0.00	92%	0	0
School Education Kits - MN	Home Lighting DI	11 Watt LED Bulbs - Electric Only	LED: 2 x 11 W	Removed Lamp	20	\$9.62	\$9.62	63	0.008	0.0	\$0.00	92%	0	0
School Education Kits - MN	Home Lighting DI	15 Watt LED Bulbs	LED: 15W	Removed Lamp	20	\$2.79	\$2.79	66	0.007	0.0	\$0.00	92%	10,362	0
School Education Kits - MN	Home Lighting DI	8W Reflector LED	1 x 8W Reflector LED	Removed Lamp	20	\$2.65	\$2.65	66	0.007	0.0	\$0.00	92%	4,351	0
School Education Kits - MN	Home Lighting DI	6W Globe LED	2 x 6W Globe LED	Removed Lamp	20	\$5.30	\$5.30	65	0.000	0.0	\$0.00	92%	4,351	0
School Education Kits - MN	Home Lighting DI	4W-8W-14W 3-WAY LED	1 x 4W-8W-14W 3-WAY LED	Removed Lamp	20	\$2.65	\$2.65	66	0.006	0.0	\$0.00	92%	6,452	0
School Education Kits - MN	Home Lighting DI	5W Candle LED	4 x 5W Candle LED	Removed Lamp	20	\$10.60	\$10.60	65	0.012	0.0	\$0.00	92%	4,351	0
School Education Kits - MN	Programmable Thermostat	Programming of Existing T-stat (Elec Cooling & Gas Heat)	New T-stat w/ Auto setup by 1.2 F for cooling assume 2.3 ton AC, 13.4 SEER and setback of 2.6 F for heating with 80% AFUE furnace	Base modeled home w/ 10 SEER AC and no setup temp	10	\$0.00	\$0.00	68	0.007	10.1	\$0.00	40%	44,102	8,698
School Education Kits - MN	Aerators - EWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with unknown DHW heater (EWH portion)	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.22	\$1.00	16	0.002	0.3	\$12.17	41%	15,451	12,393
School Education Kits - MN	Aerators - EWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with unknown DHW heater (EWH portion)	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.48	\$0.30	16	0.002	0.3	\$17.32	43%	16,013	16,517
School Education Kits - MN	Aerators - GWH	Kitchen Aerator - 1.5 GPM to replace existing 2.2 GPM aerator in home with unknown DHW heater (GWH portion)	1.5 GPM Kitchen Faucet Aerator	2.2 GPM Kitchen Faucet Aerator	10	\$1.22	\$1.22	0	0.000	0.3	\$12.17	41%	0	0
School Education Kits - MN	Aerators - GWH	Primary Bath Faucet Aerator - 0.5 GPM to replace existing 2.2 GPM aerator in home with unknown DHW heater (GWH portion)	0.5 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.48	\$0.48	0	0.000	0.4	\$17.32	43%	0	0
School Education Kits - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with unknown DHW heater (EWH portion)	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.22	\$3.00	124	0.000	2.3	\$97.40	48%	16,013	16,517
School Education Kits - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with unknown DHW heater (GWH portion)	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$3.22	\$3.22	0	0.000	2.2	\$97.40	48%	0	0
School Education Kits - MN	Water Heater Setback	Gas Water Heater Setback	setback WH setpoint to 120 F	Existing WH at setpoint of 130 F	8	\$0.00	\$0.00	0	0.000	0.4	\$0.00	40%	0	0
School Education Kits - MN	Water Heater Setback	Electric Water Heater Setback	setback WH setpoint to 120 F	Existing WH at setpoint of 130 F	2	\$0.00	\$0.00	161	0.007	0.0	\$0.00	40%	0	0
Self Direct - MN	Custom Self-Direct Project	Self Direct Project	New Efficient Equipment	Old or less efficient systems or equipment	10	\$29,959.00	\$60,789.00	280,000	40	0.0	\$0.00	100%	3	0
Whole Home Efficiency - MN	ENERGY STAR Clothes Dryer	ENERGY STAR Clothes Dryer	Energy Star Clothes Dryer == 4.4 Cu Ft	Industry Standard	12	\$40.00	\$75.00	98	0.350	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	ENERGY STAR Clothes Washer	Energy Star Front-loading Clothes Washer - Combo Customers w/ Electric DHW	Energy Star Front-Loading Clothes Washer w/ electric DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	\$10.00	\$50.00	151	0.510	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	ENERGY STAR Clothes Washer	Energy Star Front-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Front-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Front-Loading Clothes Washer	11	\$10.00	\$50.00	125	0.420	1.2	\$0.00	100%	0	0
Whole Home Efficiency - MN	ENERGY STAR Clothes Washer	Energy Star Top-loading Clothes Washer - Combo Customers w/ Electric DHW	Energy Star Top-Loading Clothes Washer w/ electric DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	\$10.00	\$50.00	397	1.340	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	ENERGY STAR Clothes Washer	Energy Star Top-Loading Clothes Washer - Combo Customers w/ Gas DHW	Energy Star Top-Loading Clothes Washer w/ Gas DHW and Electric Dryer	Standard Top-Loading Clothes Washer	11	\$10.00	\$50.00	306	1.040	4.1	\$0.00	100%	0	0
Whole Home Efficiency - MN	ENERGY STAR Dehumidifier	>50 pints/day dehumidifier	ENERGY STAR Dehumidifier high capacity	Standard efficiency dehumidifier (Current Federal Standard)	12	\$35.00	\$144.00	178	0.110	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	ENERGY STAR Dehumidifier	≤ 50 pints/day dehumidifier	ENERGY STAR Dehumidifier low capacity	Standard efficiency dehumidifier (Current Federal Standard)	12	\$35.00	\$144.00	211	0.130	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	ENERGY STAR Refrigerator	Refrigerator Replacement	ENERGY STAR® Refrigerators	Industry Standard	14	\$15.00	\$20.00	45	0.003	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	AC Rewards-DR	Residential Smart Thermostat - Direct Install	Utility Load Control for control period with Tier II or III thermostat	Existing standard manual or Non Utilized Tier I Thermostat	5	\$190.00	\$190.00	2	1.109	0.0	\$0.00	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Whole Home Efficiency - MN	AC Rewards-EE	Direct Install Smart Thermostat EE - AC & Gas Heating - Combo	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$110.00	\$110.00	76	0.180	5.5	\$0.00	100%	0	0
Whole Home Efficiency - MN	Air Sealing - Electric Heating and Cooling	Air sealing in homes with electric heating / electric cooling	Home with bypass air sealing performed	Existing home without air sealing	10	\$1,238.68	<del>\$1,988.25</del>	3,254	0.001	0.0	\$0.00	100%	4	0
Whole Home Efficiency - MN	Air Sealing - Electric Heating Only	Air sealing in homes with electric heating / no cooling	Home with bypass air sealing performed	Existing home without air sealing	10	\$1,038.22	<del>\$1,100.00</del>	3,791	0.000	0.0	\$0.00	100%	1	0
Whole Home Efficiency - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for combo customers	Home with bypass air sealing performed	Existing home without air sealing	10	\$278.56	<del>\$1,302.96</del>	949	1.000	19.3	\$0.00	100%	8	89
Whole Home Efficiency - MN	Air Sealing - Gas Heating / Electric Cooling	Air sealing in homes with gas heating / electric cooling for gas-only customers	Home with bypass air sealing performed	Existing home without air sealing	10	\$243.31	\$710.01	67	0.167	24.3	\$0.00	100%	0	0
Whole Home Efficiency - MN	Air Sealing - Gas Heating Only	Air sealing in homes with gas heating / no cooling	Home with bypass air sealing performed	Existing home without air sealing	10	\$243.31	\$710.01	0	0.000	24.3	\$0.00	100%	0	0
Whole Home Efficiency - MN	Attic Insulation - Electric Heating and Cooling	Attic insulation in homes with electric heating / electric cooling	Home with 1162 sqft avg attic area and R51 avg upgraded insulation	Existing home with 1162 sqft avg attic area and R17 avg baseline insulation	20	\$464.52	<del>\$2,988.36</del>	3,130	0.300	0.0	\$0.00	100%	4	0
Whole Home Efficiency - MN	Attic Insulation - Electric Heating Only	Attic insulation in homes with electric heating / no cooling	Home with 1162 sqft avg attic area and R51 avg upgraded insulation	Existing home with 1162 sqft avg attic area and R17 avg baseline insulation	20	\$438.56	\$2,041.96	1,754	0.000	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for combo customers	Home with 1162 sqft avg attic area and R51 avg upgraded insulation	Existing home with 1162 sqft avg attic area and R17 avg baseline insulation	20	\$84.96	<del>\$1,600.00</del>	37	0.072	7.7	\$0.00	100%	0	3
Whole Home Efficiency - MN	Attic Insulation - Gas Heating / Electric Cooling	Attic insulation in homes with gas heating / electric cooling for gas-only customers	Home with 1162 sqft avg attic area and R51 avg upgraded insulation	Existing home with 1162 sqft avg attic area and R17 avg baseline insulation	20	\$74.59	\$2,178.89	37	0.071	7.5	\$0.00	100%	0	0
Whole Home Efficiency - MN	Attic Insulation - Gas Heating Only	Attic insulation in homes with gas heating / no cooling	Home with 1162 sqft avg attic area and R51 avg upgraded insulation	Existing home with 1162 sqft avg attic area and R17 avg baseline insulation	20	\$74.59	\$2,178.89	0	0.000	7.5	\$0.00	100%	0	0
Whole Home Efficiency - MN	Boiler	95% Efficient Boiler	95% Efficient Boiler	84% Efficient Boiler	20	\$400.00	\$1,421.90	0	0.000	13.4	\$0.00	100%	0	0
Whole Home Efficiency - MN	Furnace	95% Efficient Furnace in Existing Home	95% Efficient Furnace in existing home	80% Efficient Furnace	18	\$200.00	\$842.88	0	0.000	10.9	\$0.00	100%	0	0
Whole Home Efficiency - MN	Furnace	96% Efficient Furnace in Existing Home	96% Efficient Furnace in existing home	80% Efficient Furnace	18	\$300.00	<del>\$678.22</del>	0	0.000	19.3	\$0.00	100%	0	2
Whole Home Efficiency - MN	Furnace	97% Efficient Furnace in Existing Home	97% Efficient Furnace in existing home	80% Efficient Furnace	18	\$400.00	\$1,144.88	0	0.000	12.4	\$0.00	100%	0	0
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Electric Resistance Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	10	\$450.00	<del>\$784.00</del>	3,046	0.370	0.0	\$0.00	100%	3	0
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling ASHP Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	10	\$450.00	\$784.00	2,557	0.337	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	10	\$450.00	\$784.00	2,953	0.337	0.0	-\$19.66	100%	0	0
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Electric Resistance Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	10	\$450.00	\$784.00	2,172	0.335	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling ASHP Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	10	\$450.00	\$784.00	2,536	0.335	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Natural Gas Heat	High Efficiency Heat Pump Water Heater	Minimum Efficiency Electric Water Heater	10	\$450.00	\$784.00	2,933	0.335	0.0	-\$19.66	100%	0	0
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Electric Resistance Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	10	\$550.00	\$784.00	2,192	0.337	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling ASHP Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	10	\$550.00	\$784.00	2,557	0.337	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Refrigerant Based Cooling Natural Gas Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	10	\$550.00	\$784.00	2,953	0.337	0.0	-\$19.66	100%	0	0
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Electric Resistance Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	10	\$550.00	\$784.00	2,172	0.335	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling ASHP Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	10	\$550.00	\$784.00	2,536	0.335	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	HP Water Heater	Heat Pump Water Heater - Non-Refrigerant Based Cooling Natural Gas Heat + CEA/ANSI Communications Port	High Efficiency Heat Pump Water Heater with Communications Port	Minimum Efficiency Electric Water Heater	10	\$550.00	\$784.00	2,933	0.335	0.0	-\$19.66	100%	0	0
Whole Home Efficiency - MN	Mini-Split Heat Pump	Mini-Split Heat Pump	Residential Mini-Split Heat Pump (Nominal 1.8 Tons with 18.9 SEER, 12.8 EER, 10.2 HSPF (unadjusted) ) with electric resistance heat backup	Spot Cooling Solution needed with Existing Electric Resistance Heating	15	\$600.00	\$6,855.29	4,012	0.881	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	Mini-Split Heat Pump	Mini-Split Heat Pump	Residential Mini-Split Heat Pump (Nominal 1.8 Tons with 18.9 SEER, 12.8 EER, 10.2 HSPF (unadjusted) ) replacing a MSHSP or new spot cooling need	MSHSP size 1.8 tons, 14 SEER, 8.19 EER, 8.2 HSPF (unadjusted).	15	\$300.00	\$739.97	614	0.881	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	Res AC	Installation of new AC 15 SEER 2.25 tons	Quality installation of 15 SEER 2.25 tons	Non-Quality installation of 13 SEER (Baseline and Model) 2 tons	18	\$350.00	\$646.49	307	0.566	0.0	\$0.00	100%	0	0



Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Whole Home Efficiency - MN	Res AC	Installation of new AC 16 SEER 2.25 tons	Quality Installation of 16 SEER 2.25 tons	Non-Quality Installation of 13 SEER (Baseline and Model) 2 tons	18	\$450.00	\$849.55	356	0.629	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	Res AC	Provide Quality Installation of new AC 13 - 14.5 SEER 2.25 tons	Quality Installation of 13 - 14.5 SEER 2.25 tons	Non-Quality Installation of 2.5 Ton AC 13 - 14.5 SEER 2 tons	18	\$150.00	\$240.38	177	0.346	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	Res AC w/ Furnace	Installation of new AC 15 SEER 2.25 tons w/ assoc furnace	Non - Quality Installation of 15 SEER 2.25 tons with Associated Furnace	Non-Quality Installation of 13 SEER (Baseline and Model) 2.25 tons	18	\$200.00	\$414.56	147	0.234	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	Res AC w/ Furnace	Installation of new AC 16 SEER 2.25 tons w/ assoc furnace	Non - Quality Installation of 16 SEER 2.25 tons with Associated Furnace	Non-Quality Installation of 13 SEER (Baseline and Model) 2 tons	18	\$300.00	\$621.86	207	0.311	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	Res AC w/ Furnace	Provide Quality Installation of new AC 13 - 14.5 SEER 2.25 tons w/ assoc furnace	Quality Installation of 13 - 14.5 SEER 2.25 tons w/ assoc furnace	Non-Quality Installation of 2.5 Ton AC 13 - 14.5 SEER 2 tons	18	\$150.00	\$240.38	177	0.346	5.7	\$0.00	100%	0	0
Whole Home Efficiency - MN	Res AC w/ Furnace	Provide Quality Installation of new AC 15 SEER 2.25 tons w/ assoc furnace	Quality Installation of 15 SEER 2.25 tons w/ assoc furnace	Non-Quality Installation of 2.5 Ton AC 15 SEER 2 tons	18	\$150.00	\$231.92	160	0.332	5.7	\$0.00	100%	0	0
Whole Home Efficiency - MN	Res AC w/ Furnace	Provide Quality Installation of new AC 16 SEER 2.25 tons w/ assoc furnace	Quality Installation of 16 SEER 2.25 tons w/ assoc furnace	Non-Quality Installation of 2.5 Ton AC 16 SEER 2 tons	18	\$150.00	<del>\$231.92</del>	<del>160</del>	<del>0.332</del>	5.7	\$0.00	100%	1	0
Whole Home Efficiency - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC & GAS	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	76	0.180	5.5	\$0.00	100%	0	0
Whole Home Efficiency - MN	Smart Thermostat	Install Energy Star certified smart thermostat - AC ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	76	0.180	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	Smart Thermostat	Install Energy Star certified smart thermostat - GAS ONLY	Average Single Family House with EnergyStar Smart Thermostat	Average Single Family House with Standard Thermostat	10	\$125.00	\$125.00	0	0.000	5.5	\$0.00	100%	0	0
Whole Home Efficiency - MN	Wall Insulation - Electric Heating and Cooling	Wall Insulation in homes with electric heating / electric cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$1,349.90	<del>\$2,116.25</del>	<del>5,527</del>	<del>5.306</del>	0.0	\$0.00	100%	4	0
Whole Home Efficiency - MN	Wall Insulation - Electric Heating Only	Wall Insulation in homes with electric heating / no cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$1,313.62	\$2,031.48	5,254	0.000	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall Insulation in homes with gas heating / electric cooling for combo customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$329.86	<del>\$2,091.57</del>	<del>5,179</del>	<del>4.179</del>	<del>53.0</del>	\$0.00	100%	6	51
Whole Home Efficiency - MN	Wall Insulation - Gas Heating / Electric Cooling	Wall Insulation in homes with gas heating / electric cooling for gas-only customers	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$293.58	\$2,031.48	145	0.279	29.4	\$0.00	100%	0	0
Whole Home Efficiency - MN	Wall Insulation - Gas Heating Only	Wall Insulation in homes with gas heating / no cooling	Home with R11 wall cavity insulation added	Home with no wall cavity insulation	20	\$293.58	\$2,031.48	0	0.000	29.4	\$0.00	100%	0	0
Whole Home Efficiency - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater <= 40 Gal - Medium Draw	Minimum Efficiency Storage Water Heater	13	\$100.00	\$126.88	0	0.000	2.5	\$0.00	100%	0	0
Whole Home Efficiency - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater <= 40 Gal - High Draw	Minimum Efficiency Storage Water Heater	13	\$100.00	\$260.86	0	0.000	1.6	\$0.00	100%	0	0
Whole Home Efficiency - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater > 40 Gal - Medium Draw	Minimum Efficiency Storage Water Heater	13	\$100.00	\$119.30	0	0.000	2.5	\$0.00	100%	0	0
Whole Home Efficiency - MN	Water Heater	High Efficiency Storage Water Heater	Storage Water Heater > 40 Gal - High Draw	Minimum Efficiency Storage Water Heater	13	\$100.00	\$384.34	0	0.000	<del>1.6</del>	\$0.00	100%	0	3
Whole Home Efficiency - MN	Water Heater	Tankless Water Heater	High Efficiency Tankless Water Heater - High Draw	Minimum Efficiency Storage Water Heater	20	\$275.00	\$861.92	0	0.000	6.2	\$0.00	100%	0	0
Whole Home Efficiency - MN	Water Heater	Tankless Water Heater	High Efficiency Tankless Water Heater - Medium Draw	Minimum Efficiency Storage Water Heater	20	\$275.00	\$541.99	0	0.000	6.9	\$0.00	100%	0	0
Whole Home Efficiency - MN	Water Heater DR	Load Shift & Demand response capability on new heat pump water heater (CTA 2045)	Heat Pump Water Heater w/ DR Management	No management of water heater time of use	1	\$100.00	\$325.00	152	0.071	0.0	\$0.00	100%	0	0
Whole Home Efficiency - MN	Water Heater DR	Load Shift & Demand response capability on new heat pump water heater (CTA 2045) - Annual Re Enrollment	Heat Pump Water Heater w/ DR Management - Re Enrollment of Existing Customer	No management of water heater time of use	1	\$25.00	\$0.00	152	0.071	0.0	\$0.00	100%	0	0
CPP/TOU Pilot - MN	Critical Peak Pricing	New Participating Customer	Reduction of building electrical load due to participation in this program and higher prices implemented when the electric grid experiences peak demand periods	No participation in program	1	\$0.00	\$0.00	2,786	696.470	0.0	\$0.00	100%		
CPP/TOU Pilot - MN	Critical Peak Pricing	Existing Participating Customer	Reduction of building electrical load due to participation in this program and higher prices implemented when the electric grid experiences peak demand periods	No participation in program	1	\$0.00	\$0.00	2,786	696.470	0.0	\$0.00	100%		
Foodbank Energy Efficiency Distribution - MN	Aerators - GWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with unknown DHW heater (GWH portion)	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.65	\$0.65	0	0.000	0.3	\$12.22	43%		



Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Foodbank Energy Efficiency Distribution - MN	Aerators - EWH	Primary Bath Faucet Aerator - 1.0 GPM to replace existing 2.2 GPM aerator in home with unknown DHW heater (EWH portion)	1.0 GPM Bathroom Faucet Aerator	2.2 GPM Bathroom Faucet Aerator	10	\$0.65	\$0.65	64	0.009	0.0	\$12.22	43%		
Foodbank Energy Efficiency Distribution - MN	Showerheads - GWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with unknown DHW heater (GWH portion)	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$6.22	\$6.22	0	0.000	2.2	\$97.40	48%		
Foodbank Energy Efficiency Distribution - MN	Showerheads - EWH	Primary Showerhead - 1.5 gpm showerhead to replace existing 2.5 gpm showerhead in home with unknown DHW heater (EWH portion)	1.5 GPM Showerhead	2.5 GPM Showerhead	10	\$6.22	\$6.22	511	0.037	0.0	\$97.40	48%		
Foodbank Energy Efficiency Distribution - MN	Home Lighting - LI Kit Giveaways	Home Lighting - LI Kit Giveaways	LED: 4 x 9W A-lamp	Removed Lamp	17	\$3.51	\$3.51	134	0.017	0.0	\$0.00	92%		
Foodbank Energy Efficiency Distribution - MN	Home Lighting - LI Kit Giveaways	LED Nightlight	LED Nightlight	Removed Lamp	8	\$1.89	\$1.89	30	0.000	0.0	\$0.00	92%		
School Education Kits - MN	Home Lighting - Direct Install	13 Watt LED Bulb	LED: 13W	Removed Lamp	20	\$5.02	\$5.02	98	0.007	0.0	\$0.00	92%	4,698	0
School Education Kits - MN	Home Lighting - Direct Install	LED Nightlight	LED Nightlight	Removed Lamp	8	\$1.40	\$1.40	37	0.000	0.0	\$0.00	92%	19,581	0
Lighting - MN	Lighting Controls	Occupancy Sensor - LLLC	Luminaire Level Sensor	Manual Switch	15	\$3.00	\$27.23	75	0.013	0.0	-\$0.04	100%	0	0
Lighting - MN	Lighting Controls	Photocell Sensor - LLLC	Luminaire Level Sensor	Manual Switch	15	\$5.16	\$24.48	60	0.013	0.0	-\$0.03	100%	0	0
Lighting - MN	Lighting Controls	Occupancy & Photo Cell Sensor - LLLC	Luminaire Level Sensor	Manual Switch	15	\$8.58	\$27.98	107	0.018	0.0	-\$0.06	100%	0	0
Lighting - MN	Lighting Controls	High End Trim - LLLC	Luminaire Level Sensor	Manual Switch	15	\$20.03	\$63.56	119	0.020	0.0	-\$0.02	100%	0	0
Lighting - MN	Indoor Agricultural Lighting	LED Grow Lighting Fixtures	LED Grow Lighting Fixture	HID or Fluorescent Fixture	20	\$132.09	\$482.02	2,285	0.455	0.0	\$0.00	100%	0	0
Lighting - MN	Retrofit Tube	LED Linear Tube Type A 3 foot	LED Linear Tubes	Fluorescent Tubes	20	\$15.00	\$123.90	440	0	0.0	-\$0.28	100%	1	0
Lighting - MN	Retrofit Tube	LED Linear Tube Type B 3 foot	LED Linear Tubes	Fluorescent Tubes	15	\$5.25	\$23.42	75	0	0.0	-\$0.25	100%	4	0
Lighting - MN	Retrofit Tube	LED Linear Tube Type C 3 foot	LED Linear Tubes	Fluorescent Tubes	20	\$5.00	\$23.37	58	0.011	0.0	-\$0.24	100%	0	0
Lighting - MN	Retrofit Screw In	LED Interior Lamp - A Lamps	LED Lamp	Halogen, Incandescent, or CFL Lamp	4	\$233.54	\$119.08	5,342	1	0.0	-\$0.43	100%	1,508	0
Lighting - MN	Retrofit Screw In	LED Interior Lamp - PAR20, R20	LED Lamp	Halogen, Incandescent, or CFL Lamp	5	\$58.94	\$26.81	1,126	1	0.0	-\$0.57	100%	67	0
Lighting - MN	Retrofit Screw In	LED Interior Lamp - PAR30	LED Lamp	Halogen, Incandescent, or CFL Lamp	6	\$123.95	\$140.70	5,158	1	0.0	-\$0.95	100%	137	0
Lighting - MN	Retrofit Screw In	LED Interior Lamp - BR30	LED Lamp	Halogen, Incandescent, or CFL Lamp	6	\$193.20	\$117.96	8,240	1	0.0	-\$0.75	100%	148	0
Lighting - MN	Retrofit Screw In	LED Interior Lamp - PAR38	LED Lamp	Halogen, Incandescent, or CFL Lamp	6	\$225.84	\$112.23	6,494	1	0.0	-\$1.33	100%	199	0
Lighting - MN	Retrofit Screw In	LED Interior Lamp - BR40	LED Lamp	Halogen, Incandescent, or CFL Lamp	6	\$75.93	\$64.87	3,170	1	0.0	-\$1.08	100%	34	0
Lighting - MN	Retrofit Screw In	LED Interior Lamp - PAR16	LED Lamp	Halogen, Incandescent, or CFL Lamp	6	\$31.10	\$1.89	1,201	0	0.0	-\$0.43	100%	30	0
Lighting - MN	Retrofit Screw In	LED Interior Lamp - MR16	LED Lamp	Halogen, Incandescent, or CFL Lamp	6	\$81.65	\$116.08	2,836	1	0.0	-\$0.85	100%	152	0
Lighting - MN	Retrofit Screw In	LED Interior Lamp - Decorative (B, BA, Candle)	LED Lamp	Halogen, Incandescent, or CFL Lamp	4	\$116.15	\$161.91	6,870	1	0.0	-\$0.72	100%	244	0
Lighting - MN	Retrofit Screw In	LED Interior Screw In Fixture Retrofit	LED Retrofit Kit	Halogen, Incandescent, or CFL Fixture	9	\$6.10	\$3.18	115	0.019	0.0	-\$0.49	100%	0	0
Lighting - MN	New Construction Lighting Controls	Occupancy Sensor - LLLC	Luminaire Level Sensor	Manual Switch	15	\$3.00	\$27.23	75	0.013	0.0	-\$0.04	100%	0	0
Lighting - MN	New Construction Indoor Agricultural Lighting	LED Grow Lighting Fixtures	LED Grow Lighting Fixture	HID or Fluorescent Fixture	20	\$132.09	\$482.02	2,285	0.455	0.0	\$0.00	100%	0	0
HVACR - MN	DX ACCU	DX ACCU > 11.3 tons	efficient ACCU full refrigerant circuit replacement, no HVAC fans	MN TRM baseline ACCU full refrigerant circuit replacement, no HVAC fans	20	\$3,909.69	\$1,801.94	3,527	2.110	0.0	\$0.00	100%	0	0
HVACR - MN	Mini Split	Mini-Split AC	MSAC size 2.2 tons, 17.79 SEER	MSAC size 2.2 tons, 14 SEER	14	\$610.97	\$1,370.62	2,340	2	0.0	\$0.00	100%	45	0
HVACR - MN	Integrated Drives	1 HP Switched Reluctance Motor with controller	1 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	1 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$415.00	\$1,034.00	844	0.177	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	1.5 HP Switched Reluctance Motor with controller	1.5 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	1.5 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$415.00	\$1,073.00	1,603	0.251	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	2 HP Switched Reluctance Motor with controller	2 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	2 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$415.00	\$1,132.00	1,787	0.344	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	3 HP Switched Reluctance Motor with controller	3 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	3 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$420.00	\$1,282.00	2,676	0.499	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	5 HP Switched Reluctance Motor with controller	5 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	5 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$620.00	\$2,271.00	5,568	0.864	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	7.5 HP Switched Reluctance Motor with controller	7.5 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	7.5 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$780.00	\$3,030.00	8,270	1.276	0.0	\$0.00	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
HVACR - MN	Integrated Drives	10 HP Switched Reluctance Motor with controller	10 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	10 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$1,035.00	\$3,500.00	9,113	1,598	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	15 HP Switched Reluctance Motor with controller	15 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	15 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$1,295.00	\$4,619.00	13,479	2,363	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	20 HP Switched Reluctance Motor with controller	20 HP centrifugal fan or pump coupled with a Switched Reluctance Motor with controller	20 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$1,660.00	\$5,409.00	18,028	3,039	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	1 HP ECM	1 HP centrifugal fan or pump coupled with an ECM	1 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$415.00	\$2,588.78	906	0.100	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	1.5 HP ECM	1.5 HP centrifugal fan or pump coupled with an ECM	1.5 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$415.00	\$2,762.19	1,713	0.268	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	2 HP ECM	2 HP centrifugal fan or pump coupled with an ECM	2 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$415.00	\$2,915.60	1,841	0.354	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	3 HP ECM	3 HP centrifugal fan or pump coupled with an ECM	3 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$420.00	\$3,388.43	2,737	0.510	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	5 HP ECM	5 HP centrifugal fan or pump coupled with an ECM	5 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$620.00	\$3,594.60	5,725	0.889	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	7.5 HP ECM	7.5 HP centrifugal fan or pump coupled with an ECM	7.5 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$780.00	\$4,592.88	8,371	1.291	0.0	\$0.00	100%	0	0
HVACR - MN	Integrated Drives	10 HP ECM	10 HP centrifugal fan or pump coupled with an ECM	10 HP centrifugal fan or pump coupled with a Premium efficiency motor	15	\$1,035.00	\$5,648.33	9,409	1.650	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	ENERGY STAR Dehumidifier	Installation of ENERGY STAR Dehumidifier	ENERGY STAR Dehumidifier (Current ENERGY STAR Criteria)	Standard Efficiency Dehumidifier (Current Federal Standard)	12	\$289.00	\$289.00	106	0.025	0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Crawl Space Insulation - Electric Heating and Cooling	Crawl Space insulation in homes with electric heating / electric cooling	Home with R13 crawl space insulation added	Home with modest existing crawl space insulation (R1.9 above grade, R2.9 below grade)	20	\$1,757.17	\$1,757.17	1,308	0.024	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Crawl Space Insulation - Electric Heating Only	Crawl Space insulation in homes with electric heating / no cooling	Home with R13 crawl space insulation added	Home with modest existing crawl space insulation (R1.9 above grade, R2.9 below grade)	20	\$1,757.17	\$1,757.17	1,296	0.000	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Crawl Space Insulation - Gas Heating / Electric Cooling	Crawl Space insulation in homes with gas heating / electric cooling for combo customers	Home with R13 crawl space insulation added	Home with modest existing crawl space insulation (R1.9 above grade, R2.9 below grade)	20	\$1,757.17	\$1,757.17	13	0.024	7.2	\$0.00	100%	0	0
Home Energy Savings Program - MN	Crawl Space Insulation - Gas Heating Only	Crawl Space insulation in homes with gas heating / no cooling	Home with R13 crawl space insulation added	Home with modest existing crawl space insulation (R1.9 above grade, R2.9 below grade)	20	\$1,757.17	\$1,757.17	0	0.000	7.2	\$0.00	100%	0	0
Home Energy Savings Program - MN	Crawl Space Insulation - Gas Heating / Electric Cooling	Crawl Space insulation in homes with gas heating / electric cooling for gas-only customers	Home with R13 crawl space insulation added	Home with modest existing crawl space insulation (R1.9 above grade, R2.9 below grade)	20	\$1,757.17	\$1,757.17	0	0.000	7.2	\$0.00	100%	0	0
Home Energy Savings Program - MN	Rim Joist Insulation - Electric Heating and Cooling	Rim Joist insulation in homes with electric heating / electric cooling	Home with R13 rim joist insulation added	Home with no rim joist insulation	20	\$636.30	\$636.30	361	0.019	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Rim Joist Insulation - Electric Heating Only	Rim Joist insulation in homes with electric heating / no cooling	Home with R13 rim joist insulation added	Home with no rim joist insulation	20	\$636.30	\$636.30	351	0.000	0.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Rim Joist Insulation - Gas Heating / Electric Cooling	Rim Joist insulation in homes with gas heating / electric cooling for combo customers	Home with R13 rim joist insulation added	Home with no rim joist insulation	20	\$636.30	\$636.30	10	0.019	2.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Rim Joist Insulation - Gas Heating Only	Rim Joist insulation in homes with gas heating / no cooling	Home with R13 rim joist insulation added	Home with no rim joist insulation	20	\$636.30	\$636.30	0	0.000	2.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Rim Joist Insulation - Gas Heating / Electric Cooling	Rim Joist insulation in homes with gas heating / electric cooling for gas-only customers	Home with R13 rim joist insulation added	Home with no rim joist insulation	20	\$636.30	\$636.30	0	0.000	2.0	\$0.00	100%	0	0
Home Energy Savings Program - MN	Mini-Split Heat Pump	Mini-Split Heat Pump	Residential Multi-Split Heat Pump w/ 2 heads (Nominal 1.8 Tons with 18.9 SEER2, 12.9 EER2, 10.2 HSPF2) with electric resistance heat backup	Spot Cooling Solution needed with Existing Electric Resistance Heating	15	\$9,000.00	\$18,980.33	1,359	1,359	0.0	\$0.00	100%	3	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Home Energy Savings Program - MN	Mini-Split Heat Pump	Mini-Split Heat Pump	Residential Multi-Split Heat Pump w/ 2 heads (Nominal 1.8 Tons with 18.9 SEER2, 12.9 EER2, 10.2 HSPF2 (unadjusted) ) replacing a MSHP or new spot cooling need.	MSHP size 1.8 tons, 13.4 SEER2, 9.72 EER2, 3.412 HSPF2 (unadjusted).	15	\$9,000.00	\$11,112.20	1,136	5.307	0.0	\$0.00	100%	4	0
Home Energy Savings Program - MN	Res ASHP	Installation of new ASHP 16 SEER2, 13 EER2, 9 HSPF2 2 tons w/ Electric Resistance Heat Backup	Quality Installation of new ASHP 16 SEER2, 13 EER2, 9 HSPF2 2 tons w/ Electric Resistance Heat Backup	Non-Quality Installation of 13.4 SEER2 AC sized at 2 tons in home with existing electric resistance heat	18	\$9,942.00	\$14,582.00	8,203	9.840	0.0	\$0.00	100%	3	0
Residential HVAC - MN	Mini-Split Heat Pump	Mini Split Heat Pumps	Residential Mini-Split Heat Pump (Nominal 1.8 Tons with 18.9 SEER2, 12.9 EER2, 10.2 HSPF2 ) with Electric Resistance baselining	Spot Cooling Solution needed with Existing Electric Resistance Heating	15	\$600.00	\$500.47	602	5.706	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Mini-Split Heat Pump	Mini-Split Heat Pump	Residential Mini-Split Heat Pump (Nominal 1.8 Tons with 18.9 SEER2, 12.9 EER2, 10.2 HSPF2 (unadjusted) ) replacing a MSHP or new spot cooling need.	MSHP size 1.8 tons, 13.4 SEER2, 9.72 EER2, 3.412 HSPF2 (unadjusted).	15	\$300.00	\$1,388.47	1,054	9.706	0.0	\$0.00	100%	1,055	0
Residential HVAC - MN	Res AC	Installation of new AC 15 SEER2 2.25 tons	Quality Installation of 15.2 SEER2 2.25 tons	Non-Quality Installation of 13.4 SEER2 (Baseline and Model) 2 tons	18	\$350.00	\$646.49	284	0.376	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res AC	Installation of new AC 16 SEER2 2.25 tons	Quality Installation of 16 SEER2 2.25 tons	Non-Quality Installation of 13.4 SEER2 (Baseline and Model) 2 tons	18	\$450.00	\$849.55	323	0.376	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res AC w/ Furnace	Installation of new AC 15 SEER2 2.25 tons w/ assoc furnace	Non - Quality Installation of 15.2 SEER2 2.25 tons with Associated Furnace	Non-Quality Installation of 13.4 SEER2 (Baseline and Model) 2.25 tons	18	\$200.00	\$414.56	127	0.015	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res AC w/ Furnace	Installation of new AC 16 SEER2 2.25 tons w/ assoc furnace	Non - Quality Installation of 16 SEER2 2.25 tons with Associated Furnace	Non-Quality Installation of 13.4 SEER2 (Baseline and Model) 2 tons	18	\$300.00	\$621.86	174	0.015	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res AC	Provide Quality Installation of new AC 13.4 SEER2 2.25 tons	Quality Installation of 13.4 SEER2 2.25 tons	Non-Quality Installation of 13.4 SEER2 2 tons	18	\$150.00	\$240.38	179	0.361	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res AC w/ Furnace	Provide Quality Installation of new AC 13.4 SEER2 2.25 tons w/ assoc furnace	Quality Installation of 13.4 SEER2 2.25 tons w/ assoc furnace	Non-Quality Installation of 2.5 Ton AC 13.4 SEER2 2 tons	18	\$150.00	\$240.38	179	0.361	5.7	\$0.00	100%	0	0
Residential HVAC - MN	Res AC w/ Furnace	Provide Quality Installation of new AC 15 SEER2 2.25 tons w/ assoc furnace	Quality Installation of 15.2 SEER2 2.25 tons w/ assoc furnace	Non-Quality Installation of 2.5 Ton AC 15 SEER2 2 tons	18	\$150.00	\$413.99	405	5.802	21.4	\$0.00	100%	760	277
Residential HVAC - MN	Res AC w/ Furnace	Provide Quality Installation of new AC 16 SEER2 2.25 tons w/ assoc furnace	Quality Installation of 16 SEER2 2.25 tons w/ assoc furnace	Non-Quality Installation of 2.5 Ton AC 16 SEER2 2 tons	18	\$150.00	\$442.02	398	5.703	27.3	\$0.00	100%	6,226	601
Residential HVAC - MN	Res ASHP	Installation of new ASHP 15.2 SEER2, 11.7 EER2, 7.8 HSPF2 2 tons w/ Electric Resistance Heat Backup	Quality Installation of New ASHP 15.2 SEER2, 11.7 EER2, 7.8 HSPF2 2 tons with Electric Resistance backup heat	Non-Quality Installation of 13.4 SEER2 AC Sized at 2 tons in home with existing electric resistance heat	18	\$350.00	\$1,287.07	4,503	0.331	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP	Installation of new ASHP 16 SEER2, 13 EER2, 9 HSPF2 2 tons w/ Electric Resistance Heat Backup	Quality Installation of new ASHP 16 SEER2, 13 EER2, 9 HSPF2 2 tons w/ Electric Resistance Heat Backup	Non-Quality Installation of 13.4 SEER2 AC sized at 2 tons in home with existing electric resistance heat	18	\$450.00	\$1,642.14	4,538	0.397	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP	Provide Quality Installation of new ASHP 14.3 SEER2 Sized at 2 tons w/ Electric Resistance Heat Backup	Quality Installation of 14.3 SEER2 ASHP 2 tons With Electric Resistance heat Backup	Non-Quality Installation of 14.3 SEER2 ASHP 2 tons	18	\$150.00	\$228.32	661	0.318	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP	Provide Quality Installation of new ASHP 14.5 SEER2 ASHP 2 tons w/ Electric Resistance Heat Backup	Quality Installation of 14.5 SEER2 ASHP 2 tons with electric Resistance heat backup	Non-Quality Installation of 14.5 SEER2 ASHP 2 tons	18	\$150.00	\$220.93	653	0.318	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP - Cooling only	Installation of new ASHP 15 SEER2 12.5 EER2 9 HSPF2 2 tons for cooling use only	Non - Quality Installation of New ASHP 15 SEER2, 12.5 EER2, 9 HSPF2 2 tons for cooling use only.	Non-Quality Installation of ASHP 15 SEER2 ASHP 2 tons	18	\$200.00	\$362.47	112	0.013	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP - Cooling only	Installation of new ASHP 16 SEER2 13 EER2 9 HSPF2 2 tons for cooling use only	Non - Quality Installation of new ASHP 16 SEER2 13 EER2 9 HSPF2 2 tons for cooling use only.	Non-Quality Installation of ASHP 16 SEER2 ASHP 2 tons	18	\$300.00	\$724.95	153	0.093	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP - Cooling only	Provide Quality Installation of new ASHP 14.3 SEER2 ASHP 2 tons cooling use only	Quality Installation of new ASHP 14.3 SEER2 ASHP 2 tons cooling use only	Non-Quality Installation of 14.3 SEER2 ASHP 2 tons	18	\$150.00	\$228.32	148	0.036	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP - Cooling only	Provide Quality Installation of new ASHP 14.5 SEER2 ASHP 2 tons cooling use only	Quality Installation of new ASHP 14.5 SEER2 ASHP 2 tons cooling use only	Non-Quality Installation of 14.5 SEER2 ASHP 2 tons	18	\$150.00	\$220.93	139	0.036	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res ASHP - Cooling only	Provide Quality Installation of new ASHP 15 SEER2 12.5 EER2, 9 HSPF2 2 tons cooling use only	Quality Installation of ASHP 15 SEER2, 12.5 EER2, 9 HSPF2 2 tons cooling use only	Non-Quality Installation of 15 SEER2 ASHP 2 tons	18	\$150.00	\$220.93	139	0.035	0.0	\$0.00	100%	0	0

Program	Measure Group	Measure Description	Efficient Product Description / Rating	Baseline Product Description / Rating	Measure Lifetime (years)	Rebate Amount (\$)	Incremental Cost of Efficient Product (\$)	Annual Customer kWh Savings (kWh/yr)	PCkW	Gas Savings (Dth)	Non-Energy O&M Savings (\$)	Install Rate (%)	2022 Electric Units	2022 Gas Units
Residential HVAC - MN	Res ASHP - Cooling only	Provide Quality Installation of new ASHP 16 SEER2 13 EER2 ASHP 2 tons cooling use only	Quality Installation of new ASHP 16 SEER2 13 EER2 ASHP 2 tons cooling use only	Non-Quality Installation of 16 SEER2 ASHP 2 tons	18	\$150.00	\$213.53	132	0.034	0.0	\$0.00	100%	0	0
Residential HVAC - MN	Res GSHP	Installation of High Efficiency GSHP equipment Existing Home	Quality Installation of GLHP Brine to Air with 55,690 BTUH heating, 18 EER2, 4.0 COP	Non-Quality Installation of 2.5 Ton 13.4 SEER2 AC and Electric Resistance Heat	20	\$2,320.42	<del>\$12,820.20</del>	<del>20,441</del>	<del>0.882</del>	0.0	\$0.00	100%	15	0
Residential HVAC - MN	Res GSHP	Installation of High Efficiency GSHP equipment New Home	Quality Installation of GLHP Brine to Air with 55,690 BTUH heating, 18 EER2, 4.0 COP	Non-Quality Installation of 2.5 Ton 13.4 SEER2 AC and Electric Resistance Heat	20	\$2,320.42	\$14,204.99	24,562	0.761	0.0	\$0.00	100%	0	0
Residential HVAC - MN	ENERGY STAR Dehumidifier	Installation of ENERGY STAR Dehumidifier	ENERGY STAR Dehumidifier (Current ENERGY STAR Criteria)	Standard Efficiency Dehumidifier (Current Federal Standard)	12	\$35.00	\$50.00	116	0.041	0	\$0.00	100%	0	0



