

BUSINESS HVAC+R SYSTEMS				
2023 Net Present Cost Benefit Summary Analysis For All Participants				
	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$10,942,368	\$10,942,368	\$10,942,368
Trans. & Dist. Capacity	N/A	\$1,337,303	\$1,337,303	\$1,337,303
Marginal Energy	N/A	\$5,011,191	\$5,011,191	\$5,011,191
Avoided Emissions (CO2)	N/A	N/A	N/A	\$8,455,496
Subtotal				\$25,746,358
Non-Energy Benefits Adder (20.0%)				\$3,458,172
Subtotal	N/A	\$17,290,862	\$17,290,862	\$29,204,531
Participant Benefits				
Bill Reduction - Electric	\$23,640,895	N/A	N/A	N/A
Participant Rebates and Incentives	\$3,411,053	N/A	N/A	\$3,411,053
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$31,263	N/A	N/A	\$27,199
Subtotal	\$27,083,211	N/A	N/A	\$3,438,251
Total Benefits	\$27,083,211	\$17,290,862	\$17,290,862	\$32,642,782
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$3,428,101	\$3,428,101	\$3,428,101
Advertising/Promotion/Customer Ed	N/A	\$0	\$0	\$0
Participant Rebates and Incentives	N/A	\$3,411,053	\$3,411,053	\$3,411,053
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$45,929	\$45,929	\$45,929
Subtotal	N/A	\$6,885,083	\$6,885,083	\$6,885,083
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$23,640,895	N/A
Subtotal	N/A	N/A	\$23,640,895	N/A
Participant Costs				
Incremental Capital Costs	\$9,239,189	N/A	N/A	\$7,581,303
Incremental O&M Costs	\$221,099	N/A	N/A	\$168,016
Subtotal	\$9,460,288	N/A	N/A	\$7,749,319
Total Costs	\$9,460,288	\$6,885,083	\$30,525,978	\$14,634,402
Net Benefit (Cost)	\$17,622,923	\$10,405,780	(\$13,235,115)	\$18,008,380
Benefit/Cost Ratio	2.86	2.51	0.57	2.23

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

2023	ELECTRIC	GOAL
Input Summary and Totals		
Program "Inputs" per Customer kW and per Participant		
Lifetime (Weighted on Generator kWh)	A	16.9 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	81.76%
Net-to-Gross (Demand)	E	79.09%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	2.49 kW
Gross Annual kWh Saved at Customer	I	7,809.89 kWh
Net Annual kWh Saved at Generator	J	6,744.68 kWh
Program Summary All Participants		
Total Budget	K	\$6,885,083
Net coincident kW Saved at Generator	L	8,656 kW
Gross Annual kWh Saved at Customer	M	27,201,836 kWh
Net Annual kWh Saved at Generator	N	23,491,703 kWh
Total MTRC Net Benefits with Adder	O	\$18,008,380
Total MTRC Net Benefits without Adder	P	\$14,550,208

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0173
Utility Program Cost per kW at Gen	K/ L	\$795
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		143,606

**BUSINESS HVAC+R SYSTEMS****2023 Net Present Cost Benefit Summary Analysis For All Participants**

	Participant Test	Utility Test	Rate Impact Test	Modified Total Resource Test
	(\$Total)	(\$Total)	(\$Total)	(\$Total)
<b>Benefits</b>				
<b>Avoided Revenue Requirements</b>				
Commodity Cost Reduction	N/A	\$2,211,284	\$2,211,284	\$2,211,284
Variable O&M Savings	N/A	\$28,530	\$28,530	\$28,530
Demand Savings	N/A	\$431,218	\$431,218	\$431,218
Avoided Emissions (CO2)	N/A	N/A	N/A	\$3,272,163
Avoided Emissions (CH4)	N/A	N/A	N/A	\$47,261
Subtotal				\$5,990,456
Non-Energy Benefits Adder (8.9%)				\$534,206
Subtotal	N/A	\$2,671,032	\$2,671,032	\$6,524,663
<b>Participant Benefits</b>				
Bill Reduction - Gas	\$3,118,275	N/A	N/A	N/A
Participant Rebates and Incentives	\$481,500	N/A	N/A	\$481,500
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$172,390	N/A	N/A	\$170,841
Subtotal	\$3,772,164	N/A	N/A	\$652,341
<b>Total Benefits</b>	<b>\$3,772,164</b>	<b>\$2,671,032</b>	<b>\$2,671,032</b>	<b>\$7,177,004</b>
<b>Costs</b>				
<b>Utility Project Costs</b>				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$458,414	\$458,414	\$458,414
Advertising/Promotion/Customer Ed	N/A	\$2,494	\$2,494	\$2,494
Participant Rebates and Incentives	N/A	\$481,500	\$481,500	\$481,500
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$20,000	\$20,000	\$20,000
Subtotal	N/A	\$962,408	\$962,408	\$962,408
<b>Utility Revenue Reduction</b>				
Revenue Reduction - Gas	N/A	N/A	\$3,118,275	N/A
Subtotal	N/A	N/A	\$3,118,275	N/A
<b>Participant Costs</b>				
Incremental Capital Costs	\$2,100,773	N/A	N/A	\$2,021,001
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$2,100,773	N/A	N/A	\$2,021,001
<b>Total Costs</b>	<b>\$2,100,773</b>	<b>\$962,408</b>	<b>\$4,080,683</b>	<b>\$2,983,409</b>
<b>Net Benefit (Cost)</b>	<b>\$1,671,392</b>	<b>\$1,708,625</b>	<b>(\$1,409,651)</b>	<b>\$4,193,595</b>
<b>Benefit/Cost Ratio</b>	<b>1.80</b>	<b>2.78</b>	<b>0.65</b>	<b>2.41</b>

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

**2023****GAS****GOAL****Input Summary and Totals****Program "Inputs" per Dth**

Lifetime (Weighted on Dth)	A	12.9 years
Net-to-Gross (Weighted on Dth)	B	93.16%
Install Rate (Weighted on Dth)	C	100.00%

**Program Summary per Participant**

Gross Annual Dth Saved	D	121.3
Net Annual Dth Saved	E	113.0

**Program Summary All Participants**

<b>Total Budget</b>	F	<b>\$962,408</b>
Gross Annual Dth Saved	G	<b>72,446 Dth</b>
Net Annual Dth Saved	H	<b>67,490 Dth</b>
Total MTRC Net Benefits with Adder	I	<b>\$4,193,595</b>
Total MTRC Net Benefits without Adder	J	<b>\$3,659,388</b>

<b>Utility Program Cost per Dth Lifetime</b>	<b>F / (A x H)</b>	<b>\$1.1050</b>
<b>Avoided Lifetime CO2 Emissions, Total Program (tons CO2)</b>		<b>50,951</b>
<b>Avoided Lifetime CH4 Emissions, Total Program (tons CH4)</b>		<b>26.5</b>