

**RESIDENTIAL HEATING & COOLING**

2022 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
<b>Benefits</b>				
<b>Avoided Revenue Requirements</b>				
Generation Capacity	N/A	\$11,745,517	\$11,745,517	\$11,745,517
Trans. & Dist. Capacity	N/A	\$1,470,980	\$1,470,980	\$1,470,980
Marginal Energy	N/A	\$3,353,145	\$3,353,145	\$3,353,145
Avoided Emissions (CO2)	N/A	N/A	N/A	\$2,392,776
Subtotal				\$18,962,418
Non-Energy Benefits Adder (20.0%)				\$3,313,928
Subtotal	N/A	\$16,569,642	\$16,569,642	\$22,276,346
<b>Participant Benefits</b>				
Bill Reduction - Electric	\$18,740,928	N/A	N/A	N/A
Participant Rebates and Incentives	\$6,281,909	N/A	N/A	\$6,281,909
Incremental Capital Savings	\$12,048,784	N/A	N/A	\$8,434,149
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$37,071,621	N/A	N/A	\$14,716,058
<b>Total Benefits</b>	<b>\$37,071,621</b>	<b>\$16,569,642</b>	<b>\$16,569,642</b>	<b>\$36,992,404</b>
<b>Costs</b>				
<b>Utility Project Costs</b>				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$1,544,002	\$1,544,002	\$1,544,002
Advertising/Promotion/Customer Ed	N/A	\$1,244,610	\$1,244,610	\$1,244,610
Participant Rebates and Incentives	N/A	\$6,281,909	\$6,281,909	\$6,281,909
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$52,000	\$52,000	\$52,000
Subtotal	N/A	\$9,122,521	\$9,122,521	\$9,122,521
<b>Utility Revenue Reduction</b>				
Revenue Reduction - Electric	N/A	N/A	\$18,593,145	N/A
Subtotal	N/A	N/A	\$18,593,145	N/A
<b>Participant Costs</b>				
Incremental Capital Costs	\$10,251,740	N/A	N/A	\$7,844,060
Incremental O&M Costs	\$879,809	N/A	N/A	\$651,637
Subtotal	\$11,131,549	N/A	N/A	\$8,495,697
<b>Total Costs</b>	<b>\$11,131,549</b>	<b>\$9,122,521</b>	<b>\$27,715,665</b>	<b>\$17,618,218</b>
<b>Net Benefit (Cost)</b>	<b>\$25,940,072</b>	<b>\$7,447,121</b>	<b>(\$11,146,024)</b>	<b>\$19,374,186</b>
<b>Benefit/Cost Ratio</b>	<b>3.33</b>	<b>1.82</b>	<b>0.60</b>	<b>2.10</b>

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

**2022**

**ELECTRIC**

**GOAL**

Input Summary and Totals

<b>Program "Inputs" per Customer kW and per Participant</b>		
Lifetime (Weighted on Generator kWh)	A	15.7 years
T & D Loss Factor (Energy)	B	6.38%
T & D Loss Factor (Demand)	C	9.13%
Net-to-Gross (Energy)	D	80.87%
Net-to-Gross (Demand)	E	77.45%
<b>Installation Rate (Energy)</b>	F	<b>100.00%</b>
<b>Installation Rate (Demand)</b>	G	<b>100.00%</b>
Net coincident kW Saved at Generator	H	0.39 kW
Gross Annual kWh Saved at Customer	I	506.33 kWh
Net Annual kWh Saved at Generator	J	437.39 kWh
<b>Program Summary All Participants</b>		
<b>Total Budget</b>	K	<b>\$9,122,521</b>
<b>Net coincident kW Saved at Generator</b>	L	<b>11,477 kW</b>
Gross Annual kWh Saved at Customer	M	14,989,494 kWh
<b>Net Annual kWh Saved at Generator</b>	N	<b>12,948,632 kWh</b>
<b>Total MTRC Net Benefits with Adder</b>	O	<b>\$19,374,186</b>
<b>Total MTRC Net Benefits without Adder</b>	P	<b>\$16,060,257</b>
<b>Utility Program Cost per kWh Lifetime</b>	K/(A x N)	<b>\$0.0449</b>
<b>Utility Program Cost per kW at Gen</b>	K/ L	<b>\$795</b>
<b>Avoided Lifetime CO2 Emissions, Total Program (tons CO2)</b>		<b>59,213</b>

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	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified Total Resource Test (\$Total)
<b>Benefits</b>				
<b>Avoided Revenue Requirements</b>				
Commodity Cost Reduction	N/A	\$5,145,429	\$5,145,429	\$5,145,429
Variable O&M Savings	N/A	\$83,028	\$83,028	\$83,028
Demand Savings	N/A	\$581,564	\$581,564	\$581,564
Subtotal				\$5,810,021
Non-Energy Benefits Adder (20.0%)				\$1,162,004
Subtotal	N/A	\$5,810,021	\$5,810,021	\$6,972,025
<b>Participant Benefits</b>				
Bill Reduction - Gas	\$9,324,914	N/A	N/A	N/A
Participant Rebates and Incentives	\$1,903,803	N/A	N/A	\$1,903,803
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$11,228,718	N/A	N/A	\$1,903,803
<b>Total Benefits</b>	<b>\$11,228,718</b>	<b>\$5,810,021</b>	<b>\$5,810,021</b>	<b>\$8,875,828</b>
<b>Costs</b>				
<b>Utility Project Costs</b>				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$706,741	\$706,741	\$706,741
Advertising/Promotion/ Customer Ed	N/A	\$297,040	\$297,040	\$297,040
Participant Rebates and Incentives	N/A	\$1,903,803	\$1,903,803	\$1,903,803
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$20,000	\$20,000	\$20,000
Subtotal	N/A	\$2,927,584	\$2,927,584	\$2,927,584
<b>Utility Revenue Reduction</b>				
Revenue Reduction - Gas	N/A	N/A	\$9,171,432	N/A
Subtotal	N/A	N/A	\$9,171,432	N/A
<b>Participant Costs</b>				
Incremental Capital Costs	\$6,938,173	N/A	N/A	\$5,713,364
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$6,938,173	N/A	N/A	\$5,713,364
<b>Total Costs</b>	<b>\$6,938,173</b>	<b>\$2,927,584</b>	<b>\$12,099,016</b>	<b>\$8,640,949</b>
<b>Net Benefit (Cost)</b>	<b>\$4,290,545</b>	<b>\$2,882,436</b>	<b>(\$6,288,996)</b>	<b>\$234,879</b>
<b>Benefit/Cost Ratio</b>	<b>1.62</b>	<b>1.98</b>	<b>0.48</b>	<b>1.03</b>

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

**2022**

**GAS**

**GOAL**

<b>Input Summary and Totals</b>		
<b>Program "Inputs" per Dth</b>		
Lifetime (Weighted on Dth)	A	15.3 years
Net-to-Gross (Weighted on Dth)	B	89.85%
Install Rate (Weighted on Dth)	C	100.00%
<b>Program Summary per Participant</b>		
Gross Annual Dth Saved	D	11.0
Net Annual Dth Saved	E	9.8
<b>Program Summary All Participants</b>		
<b>Total Budget</b>	F	<b>\$2,927,584</b>
Gross Annual Dth Saved	G	187,763 Dth
Net Annual Dth Saved	H	168,699 Dth
<b>Total MTRC Net Benefits with Adder</b>	I	<b>\$234,879</b>
<b>Total MTRC Net Benefits without Adder</b>	J	<b>(\$927,125)</b>
<b>Utility Program Cost per Dth Lifetime</b>	F / (A x H)	<b>\$1.1365</b>