

RESIDENTIAL HEATING & COOLING

2021 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	\$11,426,245	\$11,426,245	\$11,426,245
Trans. & Dist. Capacity	N/A	\$1,430,986	\$1,430,986	\$1,430,986
Marginal Energy	N/A	\$3,548,792	\$3,548,792	\$3,548,792
Avoided Emissions (CO2)	N/A	N/A	N/A	\$2,693,593
Subtotal				\$19,099,617
Non-Energy Benefits Adder (20.0%)				\$3,281,205
Subtotal	N/A	\$16,406,023	\$16,406,023	\$22,380,821
Participant Benefits				
Bill Reduction - Electric	\$19,642,088	N/A	N/A	N/A
Participant Rebates and Incentives	\$6,191,376	N/A	N/A	\$6,191,376
Incremental Capital Savings	\$11,499,147	N/A	N/A	\$8,049,403
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$37,332,611	N/A	N/A	\$14,240,779
Total Benefits	\$37,332,611	\$16,406,023	\$16,406,023	\$36,621,600
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$1,495,162	\$1,495,162	\$1,495,162
Advertising/Promotion/Customer Ed	N/A	\$1,280,780	\$1,280,780	\$1,280,780
Participant Rebates and Incentives	N/A	\$6,191,376	\$6,191,376	\$6,191,376
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$50,000	\$50,000	\$50,000
Subtotal	N/A	\$9,017,318	\$9,017,318	\$9,017,318
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$19,497,556	N/A
Subtotal	N/A	N/A	\$19,497,556	N/A
Participant Costs				
Incremental Capital Costs	\$10,311,951	N/A	N/A	\$9,045,497
Incremental O&M Costs	\$852,119	N/A	N/A	\$634,292
Subtotal	\$11,164,070	N/A	N/A	\$9,679,788
Total Costs	\$11,164,070	\$9,017,318	\$28,514,874	\$18,697,106
Net Benefit (Cost)	\$26,168,541	\$7,388,706	(\$12,108,851)	\$17,924,494
Benefit/Cost Ratio	3.34	1.82	0.58	1.96

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

2021 ELECTRIC**GOAL**

Input Summary and Totals

Program "Inputs" per Customer kW and per Participant		
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	87.82%
Net-to-Gross (Demand)	E	78.29%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	0.39 kW
Gross Annual kWh Saved at Customer	I	510.66 kWh
Net Annual kWh Saved at Generator	J	479.03 kWh

Program Summary All Participants

Total Budget	K	\$9,017,318
Net coincident kW Saved at Generator	L	11,378 kW
Gross Annual kWh Saved at Customer	M	14,998,591 kWh
Net Annual kWh Saved at Generator	N	14,069,696 kWh
Total MTRC Net Benefits with Adder	O	\$17,924,494
Total MTRC Net Benefits without Adder	P	\$14,643,289

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0409
Utility Program Cost per kW at Gen	K/L	\$793

Avoided Lifetime CO2 Emissions, Total Program (tons CO2)	69,440
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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)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$11,935,511	\$11,935,511	\$11,935,511
Trans. & Dist. Capacity	N/A	\$1,494,774	\$1,494,774	\$1,494,774
Marginal Energy	N/A	\$3,664,198	\$3,664,198	\$3,664,198
Avoided Emissions (CO2)	N/A	N/A	N/A	\$2,616,482
Subtotal				\$19,710,965
Non-Energy Benefits Adder (20.0%)				\$3,418,897
Subtotal	N/A	\$17,094,483	\$17,094,483	\$23,129,862
Participant Benefits				
Bill Reduction - Electric	\$20,228,421	N/A	N/A	N/A
Participant Rebates and Incentives	\$6,323,442	N/A	N/A	\$6,323,442
Incremental Capital Savings	\$12,048,784	N/A	N/A	\$8,434,149
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$38,600,647	N/A	N/A	\$14,757,591
Total Benefits	\$38,600,647	\$17,094,483	\$17,094,483	\$37,887,452
Costs				
Utility Project Costs				
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	\$6,323,442	\$6,323,442	\$6,323,442
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$52,000	\$52,000	\$52,000
Subtotal	N/A	\$9,164,054	\$9,164,054	\$9,164,054
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$20,080,638	N/A
Subtotal	N/A	N/A	\$20,080,638	N/A
Participant Costs				
Incremental Capital Costs	\$10,299,367	N/A	N/A	\$9,031,718
Incremental O&M Costs	\$879,809	N/A	N/A	\$651,637
Subtotal	\$11,179,176	N/A	N/A	\$9,683,355
Total Costs	\$11,179,176	\$9,164,054	\$29,244,692	\$18,847,408
Net Benefit (Cost)	\$27,421,471	\$7,930,429	(\$12,150,209)	\$19,040,044
Benefit/Cost Ratio	3.45	1.87	0.58	2.01

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)	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	87.53%
Net-to-Gross (Demand)	E	78.10%
Installation Rate (Energy)	F	100.00%
Installation Rate (Demand)	G	100.00%
Net coincident kW Saved at Generator	H	0.39 kW
Gross Annual kWh Saved at Customer	I	508.08 kWh
Net Annual kWh Saved at Generator	J	475.01 kWh

Program Summary All Participants

Total Budget	K	\$9,164,054
Net coincident kW Saved at Generator	L	11,639 kW
Gross Annual kWh Saved at Customer	M	15,041,334 kWh
Net Annual kWh Saved at Generator	N	14,062,106 kWh
Total MTRC Net Benefits with Adder	O	\$19,040,044
Total MTRC Net Benefits without Adder	P	\$15,621,147

Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0415
Utility Program Cost per kW at Gen	K/L	\$787

Avoided Lifetime CO2 Emissions, Total Program (tons CO2) 64,872

RESIDENTIAL HEATING & COOLING

2021 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				
Commodity Cost Reduction	N/A	\$5,337,053	\$5,337,053	\$5,337,053
Variable O&M Savings	N/A	\$89,504	\$89,504	\$89,504
Demand Savings	N/A	\$626,924	\$626,924	\$626,924
Subtotal				\$6,053,482
Non-Energy Benefits Adder (20.0%)				\$1,210,696
Subtotal	N/A	\$6,053,482	\$6,053,482	\$7,264,178
Participant Benefits				
Bill Reduction - Gas	\$9,660,049	N/A	N/A	N/A
Participant Rebates and Incentives	\$1,987,136	N/A	N/A	\$1,987,136
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$11,647,185	N/A	N/A	\$1,987,136
Total Benefits	\$11,647,185	\$6,053,482	\$6,053,482	\$9,251,314
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$737,986	\$737,986	\$737,986
Advertising/Promotion/Customer Ed	N/A	\$292,020	\$292,020	\$292,020
Participant Rebates and Incentives	N/A	\$1,987,136	\$1,987,136	\$1,987,136
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$19,500	\$19,500	\$19,500
Subtotal	N/A	\$3,036,642	\$3,036,642	\$3,036,642
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$9,512,992	N/A
Subtotal	N/A	N/A	\$9,512,992	N/A
Participant Costs				
Incremental Capital Costs	\$7,347,427	N/A	N/A	\$6,607,898
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$7,347,427	N/A	N/A	\$6,607,898
Total Costs	\$7,347,427	\$3,036,642	\$12,549,634	\$9,644,540
Net Benefit (Cost)	\$4,299,759	\$3,016,840	(\$6,496,152)	(\$393,226)
Benefit/Cost Ratio	1.59	1.99	0.48	0.96

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

2021 GAS GOAL

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	15.4 years
Net-to-Gross (Weighted on Dth)	B	91.99%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	11.2
Net Annual Dth Saved	E	10.3

Program Summary All Participants

Total Budget	F	\$3,036,642
Gross Annual Dth Saved	G	195,985 Dth
Net Annual Dth Saved	H	180,289 Dth
Total MTRC Net Benefits with Adder	I	(\$393,226)
Total MTRC Net Benefits without Adder	I	(\$1,603,922)

Utility Program Cost per Dth Lifetime	F / (A x H)	\$1.0932
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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)
Benefits				
Avoided Revenue Requirements				
Commodity Cost Reduction	N/A	\$5,284,248	\$5,284,248	\$5,284,248
Variable O&M Savings	N/A	\$85,185	\$85,185	\$85,185
Demand Savings	N/A	\$596,670	\$596,670	\$596,670
Subtotal				\$5,966,103
Non-Energy Benefits Adder (20.0%)				\$1,193,221
Subtotal	N/A	\$5,966,103	\$5,966,103	\$7,159,323
Participant Benefits				
Bill Reduction - Gas	\$9,572,351	N/A	N/A	N/A
Participant Rebates and Incentives	\$1,868,670	N/A	N/A	\$1,868,670
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$11,441,022	N/A	N/A	\$1,868,670
Total Benefits	\$11,441,022	\$5,966,103	\$5,966,103	\$9,027,993
Costs				
Utility Project Costs				
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	\$1,868,670	\$1,868,670	\$1,868,670
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$20,000	\$20,000	\$20,000
Subtotal	N/A	\$2,892,451	\$2,892,451	\$2,892,451
Utility Revenue Reduction				
Revenue Reduction - Gas	N/A	N/A	\$9,418,869	N/A
Subtotal	N/A	N/A	\$9,418,869	N/A
Participant Costs				
Incremental Capital Costs	\$6,890,546	N/A	N/A	\$6,217,692
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$6,890,546	N/A	N/A	\$6,217,692
Total Costs	\$6,890,546	\$2,892,451	\$12,311,320	\$9,110,144
Net Benefit (Cost)	\$4,550,475	\$3,073,652	(\$6,345,217)	(\$82,150)
Benefit/Cost Ratio	1.66	2.06	0.48	0.99

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

2022

GAS

GOAL

Input Summary and Totals

Program "Inputs" per Dth		
Lifetime (Weighted on Dth)	A	15.3 years
Net-to-Gross (Weighted on Dth)	B	92.28%
Install Rate (Weighted on Dth)	C	100.00%

Program Summary per Participant

Gross Annual Dth Saved	D	10.9
Net Annual Dth Saved	E	10.1

Program Summary All Participants

Total Budget	F	\$2,892,451
Gross Annual Dth Saved	G	186,996 Dth
Net Annual Dth Saved	H	172,559 Dth
Total MTRC Net Benefits with Adder	I	(\$82,150)
Total MTRC Net Benefits without Adder	I	(\$1,275,371)

Utility Program Cost per Dth Lifetime	F / (A x H)	\$1.0968
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