

HIGH EFFICIENCY AIR CONDITIONING	2019	ELECTRIC	GOAL
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2019 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified TRC Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$1,914,134	\$1,914,134	\$1,914,134
Trans. & Dist. Capacity	N/A	\$239,714	\$239,714	\$239,714
Marginal Energy	N/A	\$643,950	\$643,950	\$643,950
Avoided Emissions (CO2)	N/A	N/A	N/A	\$0
Subtotal				\$2,797,797
Non-Energy Benefits Adder (20%)				\$559,559
Subtotal	N/A	\$2,797,797	\$2,797,797	\$3,357,357
Other Benefits				
Bill Reduction - Electric	\$3,867,844	N/A	N/A	N/A
Participant Rebates and Incentives	\$1,290,887	N/A	N/A	\$1,290,887
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$5,158,731	N/A	N/A	\$1,290,887
Total Benefits	\$5,158,731	\$2,797,797	\$2,797,797	\$4,648,244
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$330,525	\$330,525	\$330,525
Advertising/Promotion/Customer Ed	N/A	\$55,000	\$55,000	\$55,000
Participant Rebates and Incentives	N/A	\$1,290,887	\$1,290,887	\$1,290,887
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$48,000	\$48,000	\$48,000
Subtotal	N/A	\$1,724,412	\$1,724,412	\$1,724,412
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$2,735,989	N/A
Subtotal	N/A	N/A	\$2,735,989	N/A
Participant Costs				
Incremental Capital Costs	\$2,449,601	N/A	N/A	\$1,851,461
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$2,449,601	N/A	N/A	\$1,851,461
Total Costs	\$2,449,601	\$1,724,412	\$4,460,401	\$3,575,873
Net Benefit (Cost)	\$2,709,131	\$1,073,385	(\$1,662,603)	\$1,072,371
Benefit/Cost Ratio	2.11	1.62	0.63	1.30

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

Input Summary and Totals		
Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	18 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	89.61%
Gross Load Factor at Customer	E	11.00%
Net-to-Gross (Energy)	F	71.7%
Net-to-Gross (Demand)	G	75.8%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.129%
Installation Rate (Energy)	J	100.0%
Installation Rate (Demand)	K	100.0%
MTRC Net Benefit (Cost)	L	\$441
MTRC Non-Energy Benefit Adder	M	\$230
Gross Annual kWh Saved at Customer	(B x E x C)	964 kWh
Net Annual kWh Saved at Customer	(F x (B x E x C x J))	691 kWh
Net Annual kWh Saved at Generator	(F x (B x E x C x J)) / (1 - H)	738 kWh
Program Summary All Participants		
Total Budget	N	\$1,724,412
Net coincident kW Saved at Generator	(G x O x K) x D / (1 - I)	1,819 kW
Net Annual kWh Saved at Customer	(F x (B x E x O x J))	1,681,037 kWh
Net Annual kWh Saved at Generator	(F x (B x E x O x J)) / (1 - H)	1,795,587 kWh
TRC Net Benefits with Adder	(O x L)	\$1,072,371
TRC Net Benefits without Adder	(O x (L - M))	\$512,812
Utility Program Cost per kWh Lifetime		
Utility Program Cost per kWh at Gen		\$948

HIGH EFFICIENCY AIR CONDITIONING	2020 ELECTRIC	GOAL
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2020 Net Present Cost Benefit Summary Analysis For All Participants

	Participant Test (\$Total)	Utility Test (\$Total)	Rate Impact Test (\$Total)	Modified TRC Test (\$Total)
Benefits				
Avoided Revenue Requirements				
Generation Capacity	N/A	\$2,901,161	\$2,901,161	\$2,901,161
Trans. & Dist. Capacity	N/A	\$363,335	\$363,335	\$363,335
Marginal Energy	N/A	\$970,690	\$970,690	\$970,690
Avoided Emissions (CO2)	N/A	N/A	N/A	\$0
Subtotal				\$4,235,186
Non-Energy Benefits Adder (20%)				\$847,037
Subtotal	N/A	\$4,235,186	\$4,235,186	\$5,082,224
Other Benefits				
Bill Reduction - Electric	\$5,603,060	N/A	N/A	N/A
Participant Rebates and Incentives	\$1,855,827	N/A	N/A	\$1,855,827
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$7,458,888	N/A	N/A	\$1,855,827
Total Benefits	\$7,458,888	\$4,235,186	\$4,235,186	\$6,938,051
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$430,963	\$430,963	\$430,963
Advertising/Promotion/Customer Ed	N/A	\$45,000	\$45,000	\$45,000
Participant Rebates and Incentives	N/A	\$1,855,827	\$1,855,827	\$1,855,827
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$55,000	\$55,000	\$55,000
Subtotal	N/A	\$2,386,790	\$2,386,790	\$2,386,790
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$3,986,627	N/A
Subtotal	N/A	N/A	\$3,986,627	N/A
Participant Costs				
Incremental Capital Costs	\$3,630,552	N/A	N/A	\$2,776,809
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$3,630,552	N/A	N/A	\$2,776,809
Total Costs	\$3,630,552	\$2,386,790	\$6,373,417	\$5,163,600
Net Benefit (Cost)	\$3,828,336	\$1,848,396	(\$2,138,230)	\$1,774,451
Benefit/Cost Ratio	2.05	1.77	0.66	1.34

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

Input Summary and Totals		
Program Inputs per Customer kW		
Lifetime (Weighted on Generator kWh)	A	18 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	89.73%
Gross Load Factor at Customer	E	10.67%
Net-to-Gross (Energy)	F	72.2%
Net-to-Gross (Demand)	G	76.9%
Transmission Loss Factor (Energy)	H	6.380%
Transmission Loss Factor (Demand)	I	9.129%
Installation Rate (Energy)	J	100.0%
Installation Rate (Demand)	K	100.0%
MTRC Net Benefit (Cost)	L	\$498
MTRC Non-Energy Benefit Adder	M	\$238
Gross Annual kWh Saved at Customer	(B x E x C)	934 kWh
Net Annual kWh Saved at Customer	(F x (B x E x C x J))	675 kWh
Net Annual kWh Saved at Generator	(F x (B x E x C x J)) / (1 - H)	721 kWh
Program Summary All Participant		
Total Budget	N	\$2,386,790
Net coincident kW Saved at Generator	(G x O x K) x D / (1 - I)	2,703 kW
Net Annual kWh Saved at Customer	(F x (B x E x O x J))	2,402,470 kWh
Net Annual kWh Saved at Generator	(F x (B x E x O x J)) / (1 - H)	2,566,181 kWh
TRC Net Benefits with Adder	(O x L)	\$1,774,451
TRC Net Benefits without Adder	(O x (L - M))	\$927,414
Utility Program Cost per kWh Lifetime		
Utility Program Cost per kWh at Gen		\$0.0516
		\$883