

ENERGY STAR NEW HOMES	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	\$1,062,419	\$1,062,419	\$1,062,419
Trans. & Dist. Capacity	N/A	\$133,051	\$133,051	\$133,051
Marginal Energy	N/A	\$1,336,099	\$1,336,099	\$1,336,099
Avoided Emissions (CO2)	N/A	N/A	N/A	\$0
Subtotal				\$2,531,569
Non-Energy Benefits Adder (20%)				\$506,314
Subtotal	N/A	\$2,531,569	\$2,531,569	\$3,037,882
Other Benefits				
Bill Reduction - Electric	\$6,165,293	N/A	N/A	N/A
Participant Rebates and Incentives	\$652,641	N/A	N/A	\$652,641
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$12,681	N/A	N/A	\$11,667
Subtotal	\$6,830,615	N/A	N/A	\$664,307
Total Benefits	\$6,830,615	\$2,531,569	\$2,531,569	\$3,702,190
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$497,478	\$497,478	\$497,478
Advertising/Promotion/Customer Ed	N/A	\$30,861	\$30,861	\$30,861
Participant Rebates and Incentives	N/A	\$652,641	\$652,641	\$652,641
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$223,236	\$223,236	\$223,236
Subtotal	N/A	\$1,404,216	\$1,404,216	\$1,404,216
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$5,672,070	N/A
Subtotal	N/A	N/A	\$5,672,070	N/A
Participant Costs				
Incremental Capital Costs	\$2,866,198	N/A	N/A	\$2,636,903
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$2,866,198	N/A	N/A	\$2,636,903
Total Costs	\$2,866,198	\$1,404,216	\$7,076,285	\$4,041,118
Net Benefit (Cost)	\$3,964,416	\$1,127,353	(\$4,544,717)	(\$338,929)
Benefit/Cost Ratio	2.38	1.80	0.36	0.92

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	19 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	81.01%
Gross Load Factor at Customer	E	32.82%
Net-to-Gross (Energy)	F	92.0%
Net-to-Gross (Demand)	G	92.0%
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%
MITRC Net Benefit (Cost)	L	-\$279
MITRC Non-Energy Benefit Adder	M	\$417
Gross Annual kWh Saved at Customer	(B x E x C)	2,875 kWh
Net Annual kWh Saved at Customer	(F x (B x E x C x J))	2,645 kWh
Net Annual kWh Saved at Generator	(F x (B x E x C x J)) / (1 - H)	2,825 kWh
Program Summary All Participants		
Total Budget	N	\$1,404,216
Net coincident kW Saved at Generator	(G x O x K) x D / (1 - I)	997 kW
Net Annual kWh Saved at Customer	(F x (B x E x O x J))	3,214,900 kWh
Net Annual kWh Saved at Generator	(F x (B x E x O x J)) / (1 - H)	3,433,972 kWh
TRC Net Benefits with Adder	(O x L)	(\$338,929)
TRC Net Benefits without Adder	(O x (L - M))	(\$845,242)
Utility Program Cost per kWh Lifetime		
Utility Program Cost per kWh at Gen		\$0.0211
		\$1,408

ENERGY STAR NEW HOMES	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	\$1,032,541	\$1,032,541	\$1,032,541
Trans. & Dist. Capacity	N/A	\$132,607	\$132,607	\$132,607
Marginal Energy	N/A	\$1,358,823	\$1,358,823	\$1,358,823
Avoided Emissions (CO2)	N/A	N/A	N/A	\$0
Subtotal				\$2,523,971
Non-Energy Benefits Adder (20%)				\$504,794
Subtotal	N/A	\$2,523,971	\$2,523,971	\$3,028,765
Other Benefits				
Bill Reduction - Electric	\$6,096,086	N/A	N/A	N/A
Participant Rebates and Incentives	\$630,353	N/A	N/A	\$630,353
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$13,315	N/A	N/A	\$12,250
Subtotal	\$6,739,754	N/A	N/A	\$642,603
Total Benefits	\$6,739,754	\$2,523,971	\$2,523,971	\$3,671,368
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$197,478	\$197,478	\$197,478
Advertising/Promotion/Customer Ed	N/A	\$300,861	\$300,861	\$300,861
Participant Rebates and Incentives	N/A	\$630,353	\$630,353	\$630,353
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$196,632	\$196,632	\$196,632
Subtotal	N/A	\$1,325,324	\$1,325,324	\$1,325,324
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$5,608,399	N/A
Subtotal	N/A	N/A	\$5,608,399	N/A
Participant Costs				
Incremental Capital Costs	\$2,830,444	N/A	N/A	\$2,604,008
Incremental O&M Costs	\$0	N/A	N/A	\$0
Subtotal	\$2,830,444	N/A	N/A	\$2,604,008
Total Costs	\$2,830,444	\$1,325,324	\$6,933,723	\$3,929,332
Net Benefit (Cost)	\$3,909,311	\$1,198,647	(\$4,409,752)	(\$257,964)
Benefit/Cost Ratio	2.38	1.90	0.36	0.93

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	19 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	74.69%
Gross Load Factor at Customer	E	29.51%
Net-to-Gross (Energy)	F	92.0%
Net-to-Gross (Demand)	G	92.0%
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	-\$195
MTRC Non-Energy Benefit Adder	M	\$382
Gross Annual kWh Saved at Customer	(B x E x C)	2,585 kWh
Net Annual kWh Saved at Customer	(F x (B x E x C x J))	2,378 kWh
Net Annual kWh Saved at Generator	(F x (B x E x C x J)) / (1 - H)	2,540 kWh

Program Summary All Participant

Total Budget	N	\$1,325,324
Net coincident kW Saved at Generator	(G x O x K) x D / (1 - I)	1,000 kW
Net Annual kWh Saved at Customer	(F x (B x E x O x J))	3,146,244 kWh
Net Annual kWh Saved at Generator	(F x (B x E x O x J)) / (1 - H)	3,360,638 kWh
TRC Net Benefits with Adder	(O x L)	(\$257,964)
TRC Net Benefits without Adder	(O x (L - M))	(\$762,758)
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Utility Program Cost per kWh Lifetime		\$0.0207
Utility Program Cost per kW at Gen		\$1,325