

<b>LIGHTING EFFICIENCY</b>	<b>2019</b>	<b>ELECTRIC</b>	<b>GOAL</b>
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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)
<b>Benefits</b>				
<b>Avoided Revenue Requirements</b>				
Generation Capacity	N/A	\$17,025,408	\$17,025,408	\$17,025,408
Trans. & Dist. Capacity	N/A	\$2,132,134	\$2,132,134	\$2,132,134
Marginal Energy	N/A	\$37,661,846	\$37,661,846	\$37,661,846
Avoided Emissions (CO2)	N/A	N/A	N/A	\$0
Subtotal				\$56,819,388
Non-Energy Benefits Adder (20%)				\$11,363,878
Subtotal	N/A	\$56,819,388	\$56,819,388	\$68,183,266
<b>Other Benefits</b>				
Bill Reduction - Electric	\$130,951,507	N/A	N/A	N/A
Participant Rebates and Incentives	\$13,942,075	N/A	N/A	\$13,942,075
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$144,893,582	N/A	N/A	\$13,942,075
<b>Total Benefits</b>	<b>\$144,893,582</b>	<b>\$56,819,388</b>	<b>\$56,819,388</b>	<b>\$82,125,340</b>
<b>Utility Project Costs</b>				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$3,055,429	\$3,055,429	\$3,055,429
Advertising/Promotion/Customer Ed	N/A	\$717,064	\$717,064	\$717,064
Participant Rebates and Incentives	N/A	\$13,942,075	\$13,942,075	\$13,942,075
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$55,000	\$55,000	\$55,000
Subtotal	N/A	\$17,769,567	\$17,769,567	\$17,769,567
<b>Utility Revenue Reduction</b>				
Revenue Reduction - Electric	N/A	N/A	\$105,296,244	N/A
Subtotal	N/A	N/A	\$105,296,244	N/A
<b>Participant Costs</b>				
Incremental Capital Costs	\$46,249,137	N/A	N/A	\$36,455,602
Incremental O&M Costs	\$4,221,220	N/A	N/A	\$3,456,956
Subtotal	\$50,470,357	N/A	N/A	\$39,912,558
<b>Total Costs</b>	<b>\$50,470,357</b>	<b>\$17,769,567</b>	<b>\$123,065,811</b>	<b>\$57,682,125</b>
<b>Net Benefit (Cost)</b>	<b>\$94,423,225</b>	<b>\$39,049,821</b>	<b>(\$66,246,423)</b>	<b>\$24,443,215</b>
<b>Benefit/Cost Ratio</b>	<b>2.87</b>	<b>3.20</b>	<b>0.46</b>	<b>1.42</b>

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

<b>Input Summary and Totals</b>		
<b>Program Inputs per Customer kW</b>		
Lifetime (Weighted on Generator kWh)	A	15 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	63.81%
Gross Load Factor at Customer	E	58.49%
Net-to-Gross (Energy)	F	82.8%
Net-to-Gross (Demand)	G	84.0%
Transmission Loss Factor (Energy)	H	5.332%
Transmission Loss Factor (Demand)	I	7.711%
<b>Installation Rate (Energy)</b>	<b>J</b>	<b>99.5%</b>
<b>Installation Rate (Demand)</b>	<b>K</b>	<b>99.4%</b>
MTRC Net Benefit (Cost)	<b>L</b>	\$705
MTRC Non-Energy Benefit Adder	<b>M</b>	\$328
Gross Annual kWh Saved at Customer	( B x E x C )	5,124 kWh
Net Annual kWh Saved at Customer	( F x ( B x E x C x J ) )	4,220 kWh
Net Annual kWh Saved at Generator	( F x ( B x E x C x J ) ) / ( 1 - H )	4,457 kWh
<b>Program Summary All Participants</b>		
<b>Total Budget</b>	N	<b>\$17,769,567</b>
<b>Net coincident kW Saved at Generator</b>	( G x O x K ) x D / ( 1 - I )	20,011 kW
Net Annual kWh Saved at Customer	( F x ( B x E x O x J ) )	146,212,202 kWh
<b>Net Annual kWh Saved at Generator</b>	( F x ( B x E x O x J ) ) / ( 1 - H )	<b>154,447,632 kWh</b>
<b>TRC Net Benefits with Adder</b>	( O x L )	<b>\$24,443,215</b>
<b>TRC Net Benefits without Adder</b>	( O x ( L - M ) )	<b>\$13,079,337</b>
<b>Utility Program Cost per kWh Lifetime</b>		
<b>Utility Program Cost per kWh at Gen</b>		<b>\$0.0078</b>
		<b>\$888</b>

<b>LIGHTING EFFICIENCY</b>	<b>2020</b>	<b>ELECTRIC</b>	<b>GOAL</b>
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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)
<b>Benefits</b>				
<b>Avoided Revenue Requirements</b>				
Generation Capacity	N/A	\$21,879,603	\$21,879,603	\$21,879,603
Trans. & Dist. Capacity	N/A	\$2,772,520	\$2,772,520	\$2,772,520
Marginal Energy	N/A	\$46,762,162	\$46,762,162	\$46,762,162
Avoided Emissions (CO2)	N/A	N/A	N/A	\$0
Subtotal				\$71,414,285
Non-Energy Benefits Adder (20%)				\$14,282,857
Subtotal	N/A	\$71,414,285	\$71,414,285	\$85,697,142
<b>Other Benefits</b>				
Bill Reduction - Electric	\$155,658,334	N/A	N/A	N/A
Participant Rebates and Incentives	\$16,869,991	N/A	N/A	\$16,869,991
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$172,528,325	N/A	N/A	\$16,869,991
<b>Total Benefits</b>	<b>\$172,528,325</b>	<b>\$71,414,285</b>	<b>\$71,414,285</b>	<b>\$102,567,133</b>
<b>Utility Project Costs</b>				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$3,225,108	\$3,225,108	\$3,225,108
Advertising/Promotion/Customer Ed	N/A	\$692,065	\$692,065	\$692,065
Participant Rebates and Incentives	N/A	\$16,869,991	\$16,869,991	\$16,869,991
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$55,000	\$55,000	\$55,000
Subtotal	N/A	\$20,842,164	\$20,842,164	\$20,842,164
<b>Utility Revenue Reduction</b>				
Revenue Reduction - Electric	N/A	N/A	\$125,524,490	N/A
Subtotal	N/A	N/A	\$125,524,490	N/A
<b>Participant Costs</b>				
Incremental Capital Costs	\$51,212,088	N/A	N/A	\$40,746,476
Incremental O&M Costs	\$5,391,883	N/A	N/A	\$4,390,987
Subtotal	\$56,603,971	N/A	N/A	\$45,137,462
<b>Total Costs</b>	<b>\$56,603,971</b>	<b>\$20,842,164</b>	<b>\$146,366,654</b>	<b>\$65,979,626</b>
<b>Net Benefit (Cost)</b>	<b>\$115,924,354</b>	<b>\$50,572,121</b>	<b>(\$74,952,369)</b>	<b>\$36,587,507</b>
<b>Benefit/Cost Ratio</b>	<b>3.05</b>	<b>3.43</b>	<b>0.49</b>	<b>1.55</b>

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

<b>Input Summary and Totals</b>		
<b>Program Inputs per Customer kW</b>		
Lifetime (Weighted on Generator kWh)	A	15 years
Annual Hours	B	8760
Gross Customer kW	C	1 kW
Generator Peak Coincidence Factor	D	70.32%
Gross Load Factor at Customer	E	59.55%
Net-to-Gross (Energy)	F	83.1%
Net-to-Gross (Demand)	G	83.7%
Transmission Loss Factor (Energy)	H	5.332%
Transmission Loss Factor (Demand)	I	7.711%
<b>Installation Rate (Energy)</b>	<b>J</b>	<b>99.5%</b>
<b>Installation Rate (Demand)</b>	<b>K</b>	<b>99.4%</b>
MTRC Net Benefit (Cost)	<b>L</b>	\$918
MTRC Non-Energy Benefit Adder	<b>M</b>	\$358
Gross Annual kWh Saved at Customer	( B x E x C )	5,217 kWh
Net Annual kWh Saved at Customer	( F x ( B x E x C x J ) )	4,314 kWh
Net Annual kWh Saved at Generator	( F x ( B x E x C x J ) ) / ( 1 - H )	4,557 kWh
<b>Program Summary All Participant</b>		
<b>Total Budget</b>	N	<b>\$20,842,164</b>
<b>Net coincident kW Saved at Generator</b>	( G x O x K ) x D / ( 1 - I )	<b>25,262 kW</b>
Net Annual kWh Saved at Customer	( F x ( B x E x O x J ) )	171,930,816 kWh
<b>Net Annual kWh Saved at Generator</b>	( F x ( B x E x O x J ) ) / ( 1 - H )	<b>181,614,852 kWh</b>
<b>TRC Net Benefits with Adder</b>	( O x L )	<b>\$36,587,507</b>
<b>TRC Net Benefits without Adder</b>	( O x ( L - M ) )	<b>\$22,304,650</b>
<b>Utility Program Cost per kWh Lifetime</b>		
<b>Utility Program Cost per kWh at Gen</b>		<b>\$0.0079</b>
		<b>\$825</b>