

LIGHTING EFFICIENCY					2019 ELECTRIC			GOAL
2019 Net Present Cost Benefit Summary Analysis For All Participants					Input Summary and Totals			
	Participant	Utility	Rate	Modified	Program Inputs per Customer kW			
	Test	Test	Impact	TRC	Lifetime (Weighted on Generator kWh)	A		15 years
	(\$Total)	(\$Total)	(\$Total)	(\$Total)	Annual Hours	B		8760
Benefits					Gross Customer kW	C		1 kW
<b>Avoided Revenue Requirements</b>					Generator Peak Coincidence Factor	D		63.81%
Generation Capacity	N/A	\$17,025,408	\$17,025,408	\$17,025,408	Gross Load Factor at Customer	E		58.49%
Trans. & Dist. Capacity	N/A	\$2,132,134	\$2,132,134	\$2,132,134	Net-to-Gross (Energy)	F		82.8%
Marginal Energy	N/A	\$37,661,846	\$37,661,846	\$37,661,846	Net-to-Gross (Demand)	G		84.0%
Avoided Emissions (CO2)	N/A	N/A	N/A	\$0	Transmission Loss Factor (Energy)	H		5.332%
Subtotal				\$56,819,388	Transmission Loss Factor (Demand)	I		7.711%
Non-Energy Benefits Adder (20%)				\$11,363,878	<b>Installation Rate (Energy)</b>	<b>J</b>		<b>99.5%</b>
Subtotal	N/A	\$56,819,388	\$56,819,388	\$68,183,266	<b>Installation Rate (Demand)</b>	<b>K</b>		<b>99.4%</b>
<b>Other Benefits</b>					MTRC Net Benefit (Cost)	<b>L</b>		\$708
Bill Reduction - Electric	\$130,951,507	N/A	N/A	N/A	MTRC Non-Energy Benefit Adder	<b>M</b>		\$328
Participant Rebates and Incentives	\$13,942,075	N/A	N/A	\$13,942,075	Gross Annual kWh Saved at Customer	( B x E x C )		5,124 kWh
Incremental Capital Savings	\$0	N/A	N/A	\$0	Net Annual kWh Saved at Customer	( F x ( B x E x C x J ) )		4,220 kWh
Incremental O&M Savings	\$0	N/A	N/A	\$0	Net Annual kWh Saved at Generator	( F x ( B x E x C x J ) ) / ( 1 - H )		4,457 kWh
Subtotal	\$144,893,582	N/A	N/A	\$13,942,075	<b>Program Summary All Participants</b>			
<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>Total Budget</b>	<b>N</b>		<b>\$17,769,567</b>
<b>Utility Project Costs</b>					<b>Net coincident kW Saved at Generator</b>	( G x O x K ) x D / ( 1 - I )		<b>20,011 kW</b>
Program Planning & Design	N/A	\$0	\$0	\$0	Net Annual kWh Saved at Customer	( F x ( B x E x O x J ) )		146,212,202 kWh
Administration & Program Delivery	N/A	\$3,055,429	\$3,055,429	\$3,055,429	<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>
Advertising/Promotion/Customer Ed	N/A	\$717,064	\$717,064	\$717,064	<b>TRC Net Benefits with Adder</b>	( O x L )		<b>\$24,536,099</b>
Participant Rebates and Incentives	N/A	\$13,942,075	\$13,942,075	\$13,942,075	<b>TRC Net Benefits without Adder</b>	( O x ( L - M ) )		<b>\$13,172,221</b>
Equipment & Installation	N/A	\$0	\$0	\$0	<b>Utility Program Cost per kWh Lifetime</b>			
Measurement and Verification	N/A	\$55,000	\$55,000	\$55,000	<b>Utility Program Cost per kW at Gen</b>			
Subtotal	N/A	\$17,769,567	\$17,769,567	\$17,769,567				<b>\$0.0078</b>
<b>Utility Revenue Reduction</b>								<b>\$888</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	\$46,123,619	N/A	N/A	\$36,362,718				
Incremental O&M Costs	\$4,221,220	N/A	N/A	\$3,456,956				
Subtotal	\$50,344,839	N/A	N/A	\$39,819,675				
<b>Total Costs</b>	<b>\$50,344,839</b>	<b>\$17,769,567</b>	<b>\$123,065,811</b>	<b>\$57,589,242</b>				
<b>Net Benefit (Cost)</b>	<b>\$94,548,743</b>	<b>\$39,049,821</b>	<b>(\$66,246,423)</b>	<b>\$24,536,099</b>				
<b>Benefit/Cost Ratio</b>	<b>2.88</b>	<b>3.20</b>	<b>0.46</b>	<b>1.43</b>				

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

LIGHTING EFFICIENCY					2020 ELECTRIC			GOAL
2020 Net Present Cost Benefit Summary Analysis For All Participants					Input Summary and Totals			
	Participant	Utility	Rate	Modified	Program Inputs per Customer kW			
	Test	Test	Impact	TRC	Lifetime (Weighted on Generator kWh)	A		15 years
	(\$Total)	(\$Total)	(\$Total)	(\$Total)	Annual Hours	B		8760
Benefits					Gross Customer kW	C		1 kW
<b>Avoided Revenue Requirements</b>					Generator Peak Coincidence Factor	D		70.32%
Generation Capacity	N/A	\$21,879,603	\$21,879,603	\$21,879,603	Gross Load Factor at Customer	E		59.55%
Trans. & Dist. Capacity	N/A	\$2,772,520	\$2,772,520	\$2,772,520	Net-to-Gross (Energy)	F		83.1%
Marginal Energy	N/A	\$46,762,162	\$46,762,162	\$46,762,162	Net-to-Gross (Demand)	G		83.7%
Avoided Emissions (CO2)	N/A	N/A	N/A	\$0	Transmission Loss Factor (Energy)	H		5.332%
Subtotal				\$71,414,285	Transmission Loss Factor (Demand)	I		7.711%
Non-Energy Benefits Adder (20%)				\$14,282,857	<b>Installation Rate (Energy)</b>	<b>J</b>		<b>99.5%</b>
Subtotal	N/A	\$71,414,285	\$71,414,285	\$85,697,142	<b>Installation Rate (Demand)</b>	<b>K</b>		<b>99.4%</b>
<b>Other Benefits</b>					MTRC Net Benefit (Cost)	<b>L</b>		\$920
Bill Reduction - Electric	\$155,658,334	N/A	N/A	N/A	MTRC Non-Energy Benefit Adder	<b>M</b>		\$358
Participant Rebates and Incentives	\$16,869,991	N/A	N/A	\$16,869,991	Gross Annual kWh Saved at Customer	( B x E x C )		5,217 kWh
Incremental Capital Savings	\$0	N/A	N/A	\$0	Net Annual kWh Saved at Customer	( F x ( B x E x C x J ) )		4,314 kWh
Incremental O&M Savings	\$0	N/A	N/A	\$0	Net Annual kWh Saved at Generator	( F x ( B x E x C x J ) ) / ( 1 - H )		4,557 kWh
Subtotal	\$172,528,325	N/A	N/A	\$16,869,991	<b>Program Summary All Participant</b>			
<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>Total Budget</b>	<b>N</b>		<b>\$20,842,164</b>
<b>Utility Project Costs</b>					<b>Net coincident kW Saved at Generator</b>	( G x O x K ) x D / ( 1 - I )		<b>25,262 kW</b>
Program Planning & Design	N/A	\$0	\$0	\$0	Net Annual kWh Saved at Customer	( F x ( B x E x O x J ) )		171,930,816 kWh
Administration & Program Delivery	N/A	\$3,225,108	\$3,225,108	\$3,225,108	<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>
Advertising/Promotion/Customer Ed	N/A	\$692,065	\$692,065	\$692,065	<b>TRC Net Benefits with Adder</b>	( O x L )		<b>\$36,661,095</b>
Participant Rebates and Incentives	N/A	\$16,869,991	\$16,869,991	\$16,869,991	<b>TRC Net Benefits without Adder</b>	( O x ( L - M ) )		<b>\$22,378,238</b>
Equipment & Installation	N/A	\$0	\$0	\$0				
Measurement and Verification	N/A	\$55,000	\$55,000	\$55,000	<b>Utility Program Cost per kWh Lifetime</b>			<b>\$0.0079</b>
Subtotal	N/A	\$20,842,164	\$20,842,164	\$20,842,164	<b>Utility Program Cost per kW at Gen</b>			<b>\$825</b>
<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	\$51,112,644	N/A	N/A	\$40,672,887				
Incremental O&M Costs	\$5,391,883	N/A	N/A	\$4,390,987				
Subtotal	\$56,504,527	N/A	N/A	\$45,063,874				
<b>Total Costs</b>	<b>\$56,504,527</b>	<b>\$20,842,164</b>	<b>\$146,366,654</b>	<b>\$65,906,038</b>				
<b>Net Benefit (Cost)</b>	<b>\$116,023,798</b>	<b>\$50,572,121</b>	<b>(\$74,952,369)</b>	<b>\$36,661,095</b>				
<b>Benefit/Cost Ratio</b>	<b>3.05</b>	<b>3.43</b>	<b>0.49</b>	<b>1.56</b>				

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