

➤ **Summary of 60-Day Notice: Lighting Efficiency**

The following 60-Day Notice summarizes Public Service Company of Colorado's (the "Company") action to update the deemed savings, technical assumptions, and measure rebates in the Lighting Efficiency product.

The Company is including with this Notice:

- Redlined product write-up;
- Redlined Deemed Savings worksheets;
- Updated Technical Assumptions worksheets; and
- Updated cost-benefit analyses.

A copy of this notice is available on our website at:

https://www.xcelenergy.com/company/rates_and_regulations/filings/colorado_demand-side_management

Indoor horticultural grow lighting measure

The horticultural lighting market has grown over the past few years with multiple manufacturers, products and models now available. Grow customers have focused on production related issues such as crop scheduling, nutrition and pest control rather than energy efficient lighting. The Company proposes to include a new indoor horticultural grow lighting rebate within the Lighting Efficiency product to motivate customers to make the switch to LED energy efficient lighting that will reduce upfront investment costs and decrease operating expenses over time.

The Company will offer commercial customers a prescriptive rebate for retrofit and new construction horticultural grow lighting projects. Rebates will be available for vegetable, microgreen and cannabis grow lighting projects. New proposed grow lighting equipment must be LED and equipment must be classified for grow lighting with the photon flux efficacy rating for the equipment noted on the equipment specification sheets.

The Company utilized data from numerous indoor horticultural lighting projects submitted through the Colorado Custom Efficiency product offering to create the proposed energy savings and cost assumptions.

A technical qualified products list created by the DesignLights Consortium ("DLC") for horticultural lighting provides a tool for utilities to validate products and energy savings. There is added value in the testing and certification required for a product to be listed by the DLC. Thus, rebates will be a tiered rebate structure with non-DLC measures receiving a rebate equal to 75% of the comparable DLC listed measure. To foster adoption the Company designed the measure to be easy to use, with rebates based on a dollar per proposed watt basis, at \$0.25 per watt. This rebate amount is comparable to what was provided to customers through the Custom Efficiency offering while making it easier for customers to participate through the prescriptive rebate channel.

The Company will utilize a 92% Net-to-Gross Ratio ("NTGR") for this rebate measure specifically. The 92% NTGR will be consistent with the prospective NTGR recommended for prescriptive lighting installed via the Small Business Energy Solutions program in the 2020

program evaluation. The 2020 Small Business evaluation findings noted that while the lighting market is moving exclusively to LEDs, small businesses have been slower to install new lighting measures with low free-ridership ratio driven by over two thirds of participating customers in the small business lighting program reporting that they would not have installed the equipment without the product. While some of the facilities that are participating in the proposed measure will meet the definition of a small business, the Company finds two compelling reasons for special treatment of this segment.

First, similar to the small business market, reaching customers within the indoor horticultural lighting segment and influencing customers to make the switch to energy efficient LED lighting will require additional resources, efforts, and spend from the Company. The Company will provide horticulture customers with case studies, marketing collateral, educational tools, and continuous training for both customers and trade partners to encourage adoption and highlight the value proposition of converting to energy efficient lighting.

Second, the customized approach to working with trade partners to help them better understand and convey the benefits of efficient agricultural lighting is expected to create greater influence in the marketplace. The Company will retain a separate NTG for this segment-specific offering until the first evaluation of Lighting Efficiency after full implementation, i.e. the current evaluation of the Lighting Efficiency product will not assess the NTG of this offering because the customer sample used for the 2022 Comprehensive Evaluation research will primarily be 2021 participants.

Improvements to Lighting Controls

The Company is improving and expanding the lighting controls rebates to motivate the market and position the product for future success. This includes adding standalone and networked rebates for integrated luminaire level lighting controls (“LLLC”), reducing the cost of existing controls and differentiating the lifetime between LLLCs and external lighting controls.

Networked Lighting Controls

The Company is expanding the Networked Lighting Controls to include integrated LLLC using the same parameters as the existing offering. In addition, the Company will add a tiered rebate structure with non-DLC measures receiving a rebate equal to 75% of the comparable DLC listed measure.

High End Trim

The DLC defines high-end trim as “The capability to set the maximum light output to a less-than maximum state of an individual or group of luminaires at the time of installation or commissioning.” The addition of this measure will offer customers who do not qualify for networked lighting controls additional opportunities to save energy by reducing their fixture power from 100% to a minimum of 80% of the original wattage. The high-end trim rebate will mirror the current control rebate offerings and will be based on a dollar per controlled basis at \$0.15 per controlled watt.

Reduced incremental capital costs

The Company is updating the incremental costs of all existing controls rebates. The Company analyzed the equipment costs of products submitted for rebates in 2021 and utilized the Northwest

Energy Efficiency Alliance report on declining luminaire-level lighting control costs to determine that the costs for controls have declined since the 2021-22 DSM Plan was approved. The Company proposes to revise the incremental costs based on this new information.

Lifetime differentiation between standalone and luminaire level lighting controls

The company proposes to add rebates for standalone integrated LLLC. Integrated control equipment provides a longer lifetime as it is part of the fixture. Thus, standalone integrated LLLC will adopt a 15-year measure life and standalone wall or ceiling mounted controls would continue to use a 8-year measure life.

Medium Base (E26) HID Replacement Lamps accepted through the midstream mogul base category

DLC defines mogul-base lamps as E39 and E40 base types. Distributors have seen an increase in sales of E26 base lamps and expressed that adding rebates could motivate additional sales of this product. Distributors have expressed interest in allowing E26 base HID replacement lamps to receive rebates through the mogul base rebate category. The product team collected equipment costs, baseline and proposed savings information from multiple distributors on E26 base lamps and determined that the savings and cost information for these products align with the assumptions used for mogul base lamps. As a result, E26 base lamps will be able to receive prescriptive/midstream rebates through the current mogul base category at non-DLC rebate level.

Table 1: Summary of Forecasted Impacts: Lighting Efficiency

	2022	
	<i>As Filed</i>	<i>Revised per 60-day</i>
Electric Savings (kWh)	93,847,489	102,299,183
Electric Demand Reduction (kW)	14,585	16,350
Budget*	\$8,201,981	\$8,931,996
MTRC Test Ratio	1.74	1.81

*Rebates only. While the anticipated expenditure impacts are forecasted, the Company acknowledges that this Notice does not change the filed budget.

➤ Lighting Efficiency

A. Description

The Lighting Efficiency product offers prescriptive and custom rebates to Xcel Energy electric business customers who install qualifying energy-efficient lighting equipment in existing Rebates are offered to encourage customers to purchase energy-efficient lighting by lowering the upfront costs associated with this equipment.

The product's main offerings include the following:

- Prescriptive rebates for qualifying lighting measures and projects¹ that save energy such as:
 - LED fixtures that replace inefficient systems, including incandescent, HID and fluorescent. LED measures include both interior and exterior fixtures, retrofit kits, and lamps for retrofit applications;
- Custom rebates for energy-saving lighting projects that do not fall within the requirements of the prescriptive rebate;
- Midstream LED lamp rebates called Business LED Instant Rebate; and
- Networked Lighting Control Rebates for qualifying systems controlling LED technology [and rebates for indoor LED horticultural lighting projects.](#)

Prescriptive Lighting Rebates

The product offers rebates for qualifying lighting equipment that is more efficient than existing equipment in retrofit situations. Lighting measures applicable to a prescriptive rebate format are ones that are commonly installed in the marketplace and have an easily identifiable means to determine energy savings.

Custom Lighting Rebates

The program pays custom rebates for qualifying energy saving measures that are not included under the prescriptive rebate category. Such projects are evaluated under the Custom Efficiency analysis and must follow the rules of the Custom Efficiency program. Requirements include that the customer obtains and provides all information needed to analyze the energy savings potential of the project. In addition, for advanced lighting controls projects all equipment must be new and the control retrofit must be for an existing building.

Additionally, as the importance of managing peak demand continues to grow, the Company will explore ways to incentivize and incorporate load management technologies and strategies. Interval data from advanced meters will help the Company better identify strategies to shift energy use from peak to off-peak periods.

Business LED Instant Rebates

¹http://www.xcelenergy.com/Save_Money_&_Energy/Rebates/Lighting_Efficiency_-_CO

The product offers upfront rebates to customers on qualifying LED screw-in or pin-based lamps and downlight retrofit kits and fixtures that are purchased from distributors participating in the LED Instant rebate program.

B. Targets, Participants & Budgets

Targets and Participants

The product's participation and energy savings targets were determined by looking at historical participation levels, as well as the large number of LED products that are expected to be commercially available during the time period of this Plan. Previous project characteristics, including equipment type/mix, were also used to develop projected average cents-per-kWh rebate for each measure.

Budgets

Historical expenditures were analyzed to project the budget. The main budget drivers include:

- *Participant Incentives* – The vast majority of the budget is allocated for rebates. This budget reflects the new rebate levels and projected customer participation in each measure, which was based on 2019 and some of 2020 participation across the offerings.
- *Administration* – These budgets are based on past product performance with a slight increase built in for expanded product offerings, engineering, and account management involvement. The budget also includes third-party implementer costs for the implementation of Business LED Instant Rebate efforts, technical assistance with complex lighting projects, and preparing rebate paperwork
- *Advertising and Promotion* – A promotional budget was developed based on historical expenditures on marketing activities. Promotions and paid advertising are targeted to customers and trade partners and typically focus around activities such as new or revised product offerings, case studies featuring successful projects, educational opportunities such as events, and bonus rebates.

C. Application Process

The Company promotes the Lighting Efficiency product through several channels, including the Company's website, advertising, direct mail, email promotions or through the lighting trade. Account Managers work directly with the Company's largest customers to help them identify energy saving opportunities in lighting and BSC representatives are available for all business customers, particularly small- and mid-sized business customers, who need information on lighting rebate products.

Lighting Efficiency Retrofit Application

The application process for the prescriptive retrofit product is similar to other prescriptive products. Customers may apply for rebates by completing the application and providing a detailed invoice for the newly installed equipment. The customers may submit a rebate application after the equipment has been purchased and installed. The replacement of fixtures must provide equivalent lighting levels between the baseline and proposed scenarios and result in energy savings.

The equipment must be new and meet all the qualifications detailed on the application form. After the customer has installed the equipment, the application and invoice must be submitted to the Company within 24 months of the invoice date for retrofit projects. Once the paperwork is completed and submitted, rebate checks will be mailed to the customer as indicated on the application within six to eight weeks.

Business LED Instant Rebates

At the point of sale, participating distributors validate that the end-use customer is an active customer within Xcel Energy electric service territory. Participating distributors will apply an incentive to the retail price to decrease the qualified product cost. Customers will not be required to submit a rebate application as the participating distributor will provide the sales data to the utility.

Custom Efficiency Lighting

Applications for energy saving lighting projects that do not fit into the prescriptive paths may be reviewed using the Custom Efficiency or Advanced Lighting Control product application and the accompanying Lighting Evaluation Worksheet.

D. Marketing Objectives & Strategies

The key marketing objective is to raise awareness, interest and participation in the Lighting Efficiency product, contributing to goals for energy savings and demand reduction.

Marketing Strategy

Lighting Efficiency is primarily promoted through Company Account Managers, BSC representatives via inbound and outbound telemarketing, through Colorado's lighting and electrical trade via the Company's Channel Managers, and by traditional marketing vehicles such as advertising, mailings, Web content and tools, email and other sales promotions.

Significant market segments for potential Lighting Efficiency savings include: office buildings, manufacturing sites, retail establishments, schools, and 24-hour facilities. Marketing campaigns targeted to those customer segments are executed during one-on-one Account Manager meetings, BSC scripted calls, and/or customer-direct that drive inquiries to the Company's inbound phone center.

Marketing to Trade Partners

The Company's outreach and relationship building with lighting and electrical trade, professional engineers, architects and lighting designers is another key strategy to reach important business segments and indirectly influence the purchase and installation of energy-efficient lighting systems. The Company establishes and maintains contact with this audience by:

- In-person training and presentations by the Channel Managers at industry events and trade shows, such as the Energy Efficiency Expo, for both customers and trade allies;
- The Lighting Advisory Board, described in section *F. Stakeholder Involvement* below;
- *Energy Exchange*, an email that is sent to the trade discussing energy efficiency lighting applications, case studies, product changes, and other pertinent topics; and

- Trade website,² including applications, specific brochures and informational pieces directed toward the trade, and updates on product offerings.

Marketing to Small Business Customers

The Company accesses this harder-to-reach market primarily through direct mail, email, and the BSC, as well as via outreach conducted by the Company's Small Business Solutions third-party implementer.

In addition, several marketing pieces are available on the Company's website³ or viewing or download. These pieces are targeted to large-, medium- and small-sized business customers, as well as trade partners. The website offers information on lighting technologies, case studies of successful lighting upgrades, and external sources highlighting reasons to pursue lighting upgrades or implement efficient lighting sources.

- *Prescriptive Rebate Applications* – Applications detail product requirements, rebate levels and additional information to help customers complete the form and submit it for rebate with accompanying invoices and equipment specifications.
- *Resource Documents* – The Lighting Efficiency webpage links to several documents on energy efficient lighting technologies, written by outside organizations such as E-Source, that further identify lighting efficiency sources and opportunities.

E. Product-Specific Policies

Lighting Efficiency has a number of product-specific policies:

- All rebated equipment must be new, meet all product rules and requirements, and the application must be submitted within 24 months of the invoice date for retrofit projects.
- Non-DLC and non-ENERGY STAR® products must meet the DLC or ENERGY STAR® product eligibility category definitions.
- Customers who purchase lights in bulk can earn rebates on select LED lamps for stocking purposes. Lamps in storage must remain on the premises.
- In cases where the customer is unable to obtain an equipment invoice, the Company will send an Account Manager to complete an onsite field verification to confirm that equipment was installed as stated on the application.

F. Stakeholder Involvement

Stakeholder involvement in the Lighting Efficiency product comes through a Lighting Advisory Board and the quarterly DSM Roundtable Meetings. The Lighting Advisory Board was formed as a collaborative effort between several key lighting professionals and the Company's management team. The objectives of the board are to identify gaps in the Company's product offerings, suggest

²http://www.xcelenergy.com/Energy_Partners/Trade_Partners/Commercial_Programs/Lighting_Efficiency_for_Trade_Partners_-_CO

³http://www.xcelenergy.com/Save_Money_&_Energy/Rebates/Lighting_Efficiency_-_CO

areas of improvement, and to offer a forum for open discussion of lighting topics. Several recommendations from the board have been addressed through the Company's product development process and incorporated into the product. The Board will continue to meet on a regular basis, or as long as needed.

G. Rebates & Incentives

The Lighting Efficiency product offers rebates through the retrofit prescriptive component, and/or Custom Efficiency and Advanced Lighting Controls, and/or the Business LED Instant Rebate component.

The Company will use the most appropriate rebate channel to implement rebates.

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

14.1 Lighting Controls

Algorithms

Customer kW = kW Connected × % Savings × Cooling kW Savings Factor

Customer kWh = kW Connected × % Savings × Hours × Cooling kWh Savings Factor

Customer PckW = kW Connected × % Savings × Cooling kW Savings Factor × CF

Natural Gas Savings (Dth) = kW Connected × % Savings × Hours × Heating Penalty Factor

Variables

Cooling_kW_Savings_Factor	See Table 14.0.1	Cooling system secondary demand savings factor resulting from efficient lighting. Reduction in lighting demand results in a reduction in cooling demand, if the customer has air conditioning. Existence of air conditioning determined by HVAC_Type.
Cooling_kWh_Savings_Factor	See Table 14.0.1	Cooling system secondary energy savings factor resulting from efficient lighting. Reduction in lighting energy results in a reduction in cooling energy, if the customer has air conditioning. Existence of air conditioning determined by HVAC_Type.
Heating_Penalty_Factor	See Table 14.0.1	Heating system secondary energy penalty factor resulting from efficient lighting. Reduction in lighting demand results in an increase in heating usage, if the customer has gas heating. Existence of gas heating to be determined by HVAC_Type.
CF	See Table 14.0.3	Coincidence Factor is the probability that the peak demand of the lights will coincide with the peak utility system demand, determined by Facility_Type.
Hours	See Table 14.0.3	Annual operating hours, determined by Facility_Type.
% Savings	See Table 14.1.1	Stipulated savings percentage based on control type.
Measure Life	See Table 14.0.2	Length of time the lighting equipment will be operational.
NTG	See Table 14.1.2	Net-to-gross.

Customer Inputs

M&V Verified

HVAC_Type	Yes	Type of heating or cooling, verified during M&V.
Facility_Type	No	Type of facility.
kW_Connected	Yes	Total connected fixture load connected to lighting controls, provided by customer and verified during M&V.

Table 14.1.1 Lighting Controls ^{4, 5, 12}

Control Type	% Savings	Full Cost Per Watt
Standalone or Integrated LLLC - Occupancy Sensor	24%	\$0.49
Standalone or Integrated LLLC - Daylighting (Photocell) Sensor	28%	\$0.49
Standalone or Integrated LLLC - Occupancy and Daylighting (Photocell) Sensor	38%	\$0.49
Networked Lighting Controls (w & w/o LLLC)	49%	\$0.97
Integrated LLLC - High End Trim	29%	\$0.48

Table 14.1.2 Net To Gross ^{11, 28}

Program	NTG %
Lighting Efficiency	100%
Small Business Solutions	94%

References:

4. Design Lights Consortium. (2017). Energy Savings from Networked Lighting Control (NLC) Systems. Medford: Design Lights Consortium. Retrieved 1 23, 2020, from <https://www.designlights.org/lighting-controls/reports-tools-resources/nlc-energy-savings-report/>

5. Lawrence Berkeley National Laboratory. (2011). A Meta-Analysis of Energy Savings from Lighting Controls in Commercial Buildings. Berkeley, CA: Lawrence Berkeley National Laboratory. Retrieved 10 01, 2017, from https://eta.lbl.gov/sites/default/files/publications/a_meta-analysis_of_energy_savings_from_lighting_controls_in_commercial_buildings_lbnl-5095e.pdf

6. Measure Life for automatically controlled measures from the Deemed Savings for CO Energy Management Systems, 2019-2020. (NLC Measure Life)

11. The Unopposed Settlement Agreement in Proceeding No. 18A-0606EG.

12. "Lighting Efficiency - CO" and "Lighting - Small Business" participation data

28. Net-to-Gross factor from the Evaluation of Xcel Energy's Small Business Solutions Program. 2020. EMI Consulting.

29. Design Lights Consortium. Energy Savings from Networked Lighting Control (NLC) Systems with and without LLLC. Sept 24, 2020. <https://www.designlights.org/resources/reports/report-30>.

30. NEEA. 2020 Luminaire Level Lighting Controls Incremental Cost Study. <https://neea.org/img/documents/2020-LLLC-Incremental-Cost-Study.pdf>

DEEMED SAVINGS TECHNICAL ASSUMPTIONS

14.6 Grow Lighting

Algorithms

$$\text{Customer kW} = \left(\left(\frac{\text{Proposed Fixture kW} * \text{Proposed Quantity} * \% \text{Reflector Eff}_{prop} * \text{Proposed PPE}}{\% \text{Reflector Eff}_{base} * \text{Baseline PPE}} \right) - \text{Proposed Quantity} * \text{Proposed Fixture kW} \right) * \text{Cooling kW Savings Factor}$$

$$\text{Customer kWh} = \left(\left(\frac{\text{Proposed Fixture kW} * \text{Proposed Quantity} * \% \text{Reflector Eff}_{prop} * \text{Proposed PPE}}{\% \text{Reflector Eff}_{base} * \text{Baseline PPE}} \right) - \text{Proposed Quantity} * \text{Proposed Fixture kW} \right) * \text{Hours} * \text{Cooling kWh Savings Factor}$$

$$PCKW = \text{Customer kW} * CF$$

Variables

%Reflector Eff_base	78.3%	Accounts for reflector losses and amount of useful light delivered using baseline fixtures ⁴
%Reflector Eff_prop	97.2%	Accounts for reflector losses and amount of useful light delivered from LED grow lights ⁴
Cooling kW Savings Factor*	1.33	Assuming year round A/C cooling for indoor grow facilities
Cooling kWh Savings Factor*	See Table 14.0.1	Assuming year round A/C cooling for indoor grow facilities
Hours	See Table 14.6.1	Annual Hours of Operation
CF	See Table 14.6.1	Coincidence Factor
Incremental Cost	See Table 14.6.2	Average fixture costs per watt based weighted against total watts from historical custom projects
Baseline PPE	See Table 14.6.3	Average value weighted against historical custom project baseline wattage

* These values assume year round mechanical cooling in all facilities. This is the current standard assumption for custom analysis.

Customer Inputs

M&V Verified

Grow Room Type*	Yes	Flower or Veg
Proposed Fixture Quantity	Yes	Number of proposed LED grow fixtures being installed
Proposed Fixture PPE (PPF/W)	Yes	Umols/J from spec sheet or DLC listing
Proposed Fixture kW	Yes	kW per proposed LED fixture
Total Equipment Cost	No	Field only used for data collection to update cost assumptions to match changing market conditions
Total Labor Cost	No	Field only used for data collection to update cost assumptions to match changing market conditions

Table 14.6.1: Operating Schedule^{1,4}

Grow Room Type	Annual Hours*	CF*	Cooling kWh Savings Factor
Cannabis Flower Room	4,255	0.68	1.16
Cannabis Veg Room	6,498	0.89	1.24
Flowering Crops (Tomatoes/Peppers/Flowers)	4,200	0.76	1.21
Vegetative/Propagation Growth	6,300	0.95	1.21
Microgreens	6,300	0.95	1.21

* Cannabis values are calculated averages of custom indoor grow project operating schedules

Table 14.6.2: Incremental Cost per Watt¹

Baseline Cost/W*	Proposed Cost/W**
\$ 0.27	\$ 1.40

* Calculated as average baseline cost per watt from historical custom projects weighted against baseline wattage

** Calculated as average proposed cost per watt from historical custom projects weighted against proposed wattage

Table 14.6.3: Baseline PPF²

	PPE	Wtd Avg PPE** ¹
Mogul Based HPS	1.02	1.08
DE HPS	1.7	
CMH	1.46	
Fluorescent*	0.84	

* The reference for this was specific to T8. Due to lack of sources T5 is assumed to be equivalent

** Baseline average PPE calculated from historical custom projects and weighted against total baseline watts. We investigated using separate values based on room type but found only a 3% difference between flower and veg and determined a single value was sufficient.

References:

1. Historical custom grow lighting projects from 2020. 54 spaces and over 5500 proposed fixtures.
2. LED and HID Horticultural Luminaire Testing Report, Lighting Energy Analysis, Natural Resourced Canada, 2018: <https://www.lrc.rpi.edu/programs/energy/pdf/HorticulturalLightingReport-Final.pdf>
3. Energy Savings Potential of SSL in Horticultural Applications, US Department of Energy Office of Energy Efficiency and Renewable Energy, December 2017: https://www.energy.gov/sites/prod/files/2017/12/f46/ssl_horticulture_dec2017.pdf
4. State of Illinois Technical Reference Manual, Version 9.0 Final Technical Version as of October 17th, 2019. Effective January 1st, 2021.

LIGHTING EFFICIENCY

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	\$15,675,949	\$15,675,949	\$15,675,949
Trans. & Dist. Capacity	N/A	\$1,963,214	\$1,963,214	\$1,963,214
Marginal Energy	N/A	\$21,735,321	\$21,735,321	\$21,735,321
Avoided Emissions (CO2)	N/A	N/A	N/A	\$16,272,452
Subtotal				\$55,646,936
Non-Energy Benefits Adder (20.0%)				\$7,874,897
Subtotal	N/A	\$39,374,484	\$39,374,484	\$63,521,833
Participant Benefits				
Bill Reduction - Electric	\$84,899,130	N/A	N/A	N/A
Participant Rebates and Incentives	\$8,931,996	N/A	N/A	\$8,931,996
Incremental Capital Savings	\$0	N/A	N/A	\$0
Incremental O&M Savings	\$0	N/A	N/A	\$0
Subtotal	\$93,831,126	N/A	N/A	\$8,931,996
Total Benefits	\$93,831,126	\$39,374,484	\$39,374,484	\$72,453,829
Costs				
Utility Project Costs				
Program Planning & Design	N/A	\$0	\$0	\$0
Administration & Program Delivery	N/A	\$2,685,624	\$2,685,624	\$2,685,624
Advertising/Promotion/Customer Ed	N/A	\$1,200,000	\$1,200,000	\$1,200,000
Participant Rebates and Incentives	N/A	\$8,931,996	\$8,931,996	\$8,931,996
Equipment & Installation	N/A	\$0	\$0	\$0
Measurement and Verification	N/A	\$55,000	\$55,000	\$55,000
Subtotal	N/A	\$12,872,620	\$12,872,620	\$12,872,620
Utility Revenue Reduction				
Revenue Reduction - Electric	N/A	N/A	\$84,899,130	N/A
Subtotal	N/A	N/A	\$84,899,130	N/A
Participant Costs				
Incremental Capital Costs	\$35,722,222	N/A	N/A	\$26,848,683
Incremental O&M Costs	\$362,975	N/A	N/A	\$273,713
Subtotal	\$36,085,197	N/A	N/A	\$27,122,396
Total Costs	\$36,085,197	\$12,872,620	\$97,771,750	\$39,995,016
Net Benefit (Cost)	\$57,745,929	\$26,501,864	(\$58,397,266)	\$32,458,813
Benefit/Cost Ratio	2.60	3.06	0.40	1.81

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	14.5 years
T & D Loss Factor (Energy)	B	5.33%
T & D Loss Factor (Demand)	C	7.71%
Net-to-Gross (Energy)	D	75.98%
Net-to-Gross (Demand)	E	76.58%
Installation Rate (Energy)	F	99.64%
Installation Rate (Demand)	G	99.58%
Net coincident kW Saved at Generator	H	0.03 kW
Gross Annual kWh Saved at Customer	I	259.35 kWh
Net Annual kWh Saved at Generator	J	207.40 kWh
Program Summary All Participants		
Total Budget	K	\$12,872,620
Net coincident kW Saved at Generator	L	16,350 kW
Gross Annual kWh Saved at Customer	M	127,927,611 kWh
Net Annual kWh Saved at Generator	N	102,299,183 kWh
Total MTRC Net Benefits with Adder	O	\$32,458,813
Total MTRC Net Benefits without Adder	P	\$24,583,916
Utility Program Cost per kWh Lifetime	K/(A x N)	\$0.0087
Utility Program Cost per kW at Gen	K/ L	\$787
Avoided Lifetime CO2 Emissions, Total Program (tons CO2)		398,523