



790 South Buchanan Street
Amarillo, TX 79101

April 17, 2020

New Mexico Public Regulation Commission
Attn: Melanie Sandoval – Records Bureau Chief
P.E.R.A. Building
1120 Paseo De Peralata
Santa Fe, NM 87501

Re: Case No. 19-00140-UT Compliance Filing

Dear Ms. Sandoval:

Southwestern Public Service Company (“SPS”) submits an original and Five (5) copies of Southwestern Public Service Company’s (“SPS”) modified 2020 Triennial Plan incorporating all approved changes in legislative format. The enclosed is provided in compliance with the Commission’s Order Adopting and Approving Certification of Stipulation in Case No.19-00140-UT.

If you need any further information, please contact me at (806) 378-2416.

Sincerely,

/s/ Jeffery L. Comer

Jeffrey L. Comer
Regulatory Case Specialist
Southwestern Public Service Company

Enclosure

Southwestern Public Service Company's

2020-2022

Energy Efficiency and Load Management Plan

Case No. 19-00140-UT

**Prepared in Compliance with the Efficient Use of Energy Act
and 17.7.2 NMAC (Energy Efficiency Rule)**

May 15, 2019

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Glossary of Acronyms and Defined Terms

<u>Acronym/Defined Term</u>	<u>Meaning</u>
C&I	commercial and industrial
CFL	compact fluorescent light
Commission	New Mexico Public Regulation Commission
deemed savings	Expected energy and demand savings attributed to well-known or commercially available energy efficiency and load management devices or measures based on standard engineering calculations, ratings, simulation models or field measurement studies, periodically adjusted as appropriate for New Mexico specific data, including building and household characteristics, and climate conditions in pertinent region(s) within the state
DSM	demand-side management
EE	Energy Efficiency
EE Rider	Energy Efficiency Rider
EES	Energy Efficiency Specialist
EESP or contractors	Energy Efficiency Service Provider
EMNRD	New Mexico State Energy, Minerals, and Natural Resources Department
EPE	El Paso Electric Company
EUEA	New Mexico Efficient Use of Energy Act, as amended by Senate Bill 418 (2007), House Bill 305 (2008) and House Bill 267 (2013), NMSA 1978, §§62-17-1 through 62-17-11
GWh	gigawatt-hour, a measure of energy savings
HER	Home Energy Report
HES	Home Energy Services
Home Use Study	Study of appliance saturations performed periodically

<u>Acronym/Defined Term</u>	<u>Meaning</u>
	by Wiese Research Associates
HPWH	Heat Pump Water Heater
HVAC	heating, ventilation, and air conditioning
Independent Program Evaluator or Evaluator	Person or group selected by a Commission-approved Evaluation Committee for the purpose of Measurement and Verification of the installation of cost-effective energy efficiency or load management projects
kW	kilowatt
kWh	kilowatt-hour
Large Customer	A utility customer at a single, contiguous field, location or facility, regardless of the number of meters at that field, location or facility, with electricity consumption greater than 7,000 megawatt- hours per year
LED	light-emitting diode
M&V	Measurement and Verification
Measure	The components of a public utility program, which may include material, device, technology, educational program, practice, or facility alteration.
MW	megawatt
MWh	megawatt-hour
NEB	Non-Energy Benefits
NEMA	National Electrical Manufacturers Association, an organization that rates motor efficiency
NMGC	New Mexico Gas Company
NTG	Net-to-Gross
PNM	Public Service Company of New Mexico

<u>Acronym/Defined Term</u>	<u>Meaning</u>
Portfolio	All programs which will continue to be offered, and those proposed to be offered, by the public utility
Program	One or more measures or a bundled group of two or more products provided as part of a single offering to consumers
PSCo	Public Service Company of Colorado, a Colorado corporation
Rule	Commission's Energy Efficiency Rule, 17.7.2 NMAC
Self-Direct Administrator	Person or group selected by SPS to administer and manage cost-effective energy efficiency projects under the Large Customer Self-Direct program.
SPS	Southwestern Public Service Company, a New Mexico corporation
Staff	Commission's Utility Division Staff
SWEEP	Southwest Energy Efficiency Project
Triennial Plan or Plan	SPS's 2020-2022 Energy Efficiency Plan
UCT	Utility Cost Test
VFD	variable frequency drive
WACC	weighted average cost of capital
Xcel Energy	Xcel Energy Inc.
XES	Xcel Energy Services Inc.

Executive Summary

In accordance with the Efficient Use of Energy Act, as amended by Senate Bill 418 (2007), House Bill 305 (2008) (NMSA 1978, §62-17-1 through 62-17-11, “EUEA”)¹, and House Bill 267 (2013), and the New Mexico Public Regulation Commission’s (“Commission”) 2017 version of the Energy Efficiency Rule (17.7.2 NMAC, “Rule”), Southwestern Public Service Company, a New Mexico corporation (“SPS”) and electric utility operating company that is a wholly-owned subsidiary of Xcel Energy Inc. (“Xcel Energy”), respectfully submits for Commission review and approval SPS’s 2020-2022 Energy Efficiency Plan (“Triennial Plan” or “Plan”).

The EUEA requires public utilities to obtain cost-effective and achievable energy efficiency (“EE”) and load management and a reduction of no less than five percent of 2005 retail sales by 2014 and eight percent by 2020. In 2005, SPS’s retail sales were 3,750,469 megawatt-hours (“MWh”). Therefore, the EUEA requirements equate to targets of 187.5 gigawatt-hours (“GWh”) of energy efficiency savings at the customer meter by 2014 and 300 GWh by 2020 at the customer meter. SPS has achieved 8.06% of its 2005 retail sales based on the 2018 Annual Report and Evaluation and in doing so has met the EUEA requirement two years early.

The Triennial Plan provides SPS’s proposed programs, budgets, and goals for its energy efficiency for program for years 2020 through 2022. SPS proposes a portfolio of electric energy efficiency direct impact programs in two main customer segments: Residential (including Low-Income) and Business (including Large Customer). In addition, the Triennial Plan includes a Planning & Research Segment, which provides support functions for the direct impact programs.

Plan Overview

SPS proposes the following energy efficiency programs for 2020-2022:

Residential Segment

- Energy Feedback Program;
- Residential Cooling;
- Home Energy Services (“HES”) (includes low-income);
- Home Lighting & Recycling;
- School Education Kits;
- Heat Pump Water Heaters; and

¹ The EUEA was most recently amended in the 2019 legislative session through HB 291 and has an effective date of June 14, 2019.

- Smart Thermostat Program

Business Segment

- Business Comprehensive

Planning and Research Segment

- Market Research;
- Measurement and Verification (“M&V”);
- Planning & Administration; and
- Product Development.

Tables 1a through Table 1c show SPS’s proposed Triennial Plan budgets and goals for PYs 2020-2022. The portfolio-level Utility Cost Test (“UCT”) ratio is forecasted to be 1.47 in 2020, 1.5~~59~~ in 2021, and 1.~~6774~~ in 2022.

Table 1a: SPS’s 2020 Budgets & Goals

2020	Electric Participants	Electric Budget	Net Customer kW	Net Customer kWh	Net Generator kW	Net Generator kWh	Utility Cost Test Ratio
Residential Segment							
Energy Feedback	26,315	\$143,485	866	4,720,924	1,010	5,328,357	1.09
Heat Pump Water Heaters	55	\$44,500	25	185,716	29	209,612	1.18
Home Energy Services: Residential and Low Income	3,263	\$2,193,861	904	8,963,155	1,055	10,116,428	2.06
Home Lighting & Recycling	330,500	\$1,199,817	973	5,642,488	1,131	6,298,717	2.22
Residential Cooling	96	\$43,040	39	125,177	46	141,284	1.43
School Education Kits	2,500	\$145,417	10	376,378	12	424,806	0.80
Smart Thermostats	1,671	\$142,500	-37	825,149	-43	931,320	1.26
Residential Segment Total	364,400	\$3,912,620	2,785	20,853,234	3,240	23,450,523	1.98
Business Segment							
Business Comprehensive	477	\$4,798,684	2,263	15,985,365	2,479	17,207,066	1.31
Business Segment Total	477	\$4,798,684	2,263	15,985,365	2,479	17,207,066	1.31
Planning and Research Segment							
Consumer Education	0	\$200,000	0	0	0	0	0
Market Research	0	\$110,000	0	0	0	0	0
Measurement & Verification	0	\$15,000	0	0	0	0	0
Planning & Administration	0	\$285,000	0	0	0	0	0
Product Development	0	\$190,000	0	0	0	0	0
Planning & Research Segment Total	0	\$800,000	0	0	0	0	0
PORTFOLIO TOTAL	364,877	\$9,511,304	4,985	36,885,682	5,719	40,657,589	1.47

Table 1b: SPS's 2021 Budgets & Goals

2021	Electric Participants	Electric Budget	Net Customer kW	Net Customer kWh	Net Generator kW	Net Generator kWh	Utility Cost Test Ratio
Residential Segment							
Energy Feedback	23,418	\$143,485	778	4,291,520	908	4,843,702	1.07
Heat Pump Water Heaters	100	\$78,500	45	337,666	53	381,113	1.30
Home Energy Services: Residential and Low Income	3,263	\$2,213,861	904	8,963,155	1,055	10,116,428	2.18
Home Lighting & Recycling	322,550	\$1,169,217	951	5,514,523	1,106	6,155,861	2.37
Residential Cooling	96	\$43,040	39	125,177	46	141,284	1.55
School Education Kits	2,500	\$145,917	10	376,378	12	424,806	0.84
Smart Thermostats	1,296	\$122,500	0	698,746	0	788,652	1.41
Residential Segment Total	353,223	\$3,916,520	2,733	20,320,915	3,180	22,851,845	2.10
Business Segment Total	107	\$5,682,482	2,764	19,763,161	3,027	21,273,586	1.46
Planning and Research Segment							
Consumer Education	0	\$200,000	0	0	0	0	
Market Research	0	\$110,000	0	0	0	0	
Measurement & Verification	0	\$15,000	0	0	0	0	
Planning & Administration	0	\$290,000	0	0	0	0	
Product Development	0	\$190,000	0	0	0	0	
Planning & Research Segment Total	0	\$805,000	0	0	0	0	
PORTFOLIO TOTAL	353,710	\$10,404,002	5,425	40,134,737	6,207	44,125,431	1.59
2021 Modified By Settlement	Electric Participants	Electric Budget	Net Customer kW	Net Customer kWh	Net Generator kW	Net Generator kWh	Utility Cost Test Ratio
Residential Segment							
Energy Feedback	23,418	\$143,485	778	4,291,520	908	4,843,702	1.07
Heat Pump Water Heaters	100	\$78,500	45	337,666	53	381,113	1.30
Home Energy Services: Residential and Low Income	3,263	\$2,213,861	904	8,963,155	1,055	10,116,428	2.18
Home Lighting & Recycling	322,550	\$1,169,217	951	5,514,523	1,106	6,155,861	2.37
Residential Cooling	96	\$43,040	39	125,177	46	141,284	1.55
School Education Kits	2,500	\$145,917	10	376,378	12	424,806	0.84
Smart Thermostats	1,296	\$122,500	0	698,746	0	788,652	1.41
Residential Segment Total	353,223	\$3,916,520	2,733	20,320,915	3,180	22,851,845	2.10
Business Segment							
Business Comprehensive	487	\$5,682,482	2,764	19,763,161	3,027	21,273,586	1.46
Business Segment Total	487	\$5,682,482	2,764	19,763,161	3,027	21,273,586	1.46
Planning and Research Segment							
Consumer Education	0	\$200,000	0	0	0	0	
Market Research	0	\$360,000	0	0	0	0	
Measurement & Verification	0	\$15,000	0	0	0	0	
Planning & Administration	0	\$290,000	0	0	0	0	
Product Development	0	\$190,000	0	0	0	0	
Planning & Research Segment Total	0	\$1,055,000	0	0	0	0	
PORTFOLIO TOTAL	353,710	\$10,654,002	5,425	40,134,737	6,207	44,125,431	1.55

Table 1c: SPS's 2022 Budgets & Goals

2022	Electric Participants	Electric Budget	Net Customer kW	Net Customer kWh	Net Generator kW	Net Generator kWh	Utility Cost Test Ratio
Residential Segment							
Energy Feedback	21,058	\$144,485	708	3,947,163	826	4,455,038	1.14
Heat Pump Water Heaters	125	\$68,500	57	422,082	66	476,391	2.01
Home Energy Services: Residential and Low Income	3,263	\$2,163,861	904	8,963,155	1,055	10,116,428	2.39
Home Lighting & Recycling	309,200	\$1,158,151	914	5,300,679	1,063	5,917,133	2.46
Residential Cooling	96	\$68,540	39	125,177	46	141,284	1.06
School Education Kits	2,500	\$166,417	10	376,378	12	424,806	0.78
Smart Thermostats	1,288	\$82,500	0	742,417	0	837,943	2.35
Residential Segment Total	337,530	\$3,852,454	2,637	19,890,259	3,068	22,369,022	2.26
Business Segment Total	486	\$5,741,548	2,797	20,111,128	3,063	21,648,146	1.57
Planning and Research Segment							
Consumer Education	0	\$200,000	0	0	0	0	
Market Research	0	\$110,000	0	0	0	0	
Measurement & Verification	0	\$15,000	0	0	0	0	
Planning & Administration	0	\$295,000	0	0	0	0	
Product Development	0	\$190,000	0	0	0	0	
Planning & Research Segment Total	0	\$810,000	0	0	0	0	
PORTFOLIO TOTAL	338,016	\$10,404,002	5,363	40,052,074	6,131	44,017,168	1.71

2022 Modified By Settlement	Electric Participants	Electric Budget	Net Customer kW	Net Customer kWh	Net Generator kW	Net Generator kWh	Utility Cost Test Ratio
Residential Segment							
Energy Feedback	21,058	\$144,485	708	3,947,163	826	4,455,038	1.14
Heat Pump Water Heaters	125	\$68,500	57	422,082	66	476,391	2.01
Home Energy Services: Residential and Low Income	3,263	\$2,163,861	904	8,963,155	1,055	10,116,428	2.39
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Residential Cooling	96	\$68,540	39	125,177	46	141,284	1.06
School Education Kits	2,500	\$166,417	10	376,378	12	424,806	0.78
Smart Thermostats	1,288	\$82,500	0	742,417	0	837,943	2.35
Residential Segment Total	337,530	\$3,852,454	2,637	19,890,259	3,068	22,369,022	2.26
Business Segment							
Business Comprehensive	486	\$5,741,548	2,797	20,111,128	3,063	21,648,146	1.57
Business Segment Total	486	\$5,741,548	2,797	20,111,128	3,063	21,648,146	1.57
Planning and Research Segment							
Consumer Education	0	\$200,000	0	0	0	0	
Market Research	0	\$360,000	0	0	0	0	
Measurement & Verification	0	\$15,000	0	0	0	0	
Planning & Administration	0	\$295,000	0	0	0	0	
Product Development	0	\$190,000	0	0	0	0	
Planning & Research Segment Total	0	\$1,060,000	0	0	0	0	
PORTFOLIO TOTAL	338,016	\$10,654,002	5,363	40,052,074	6,131	44,017,168	1.67

I. Portfolio Characteristics

SPS's energy savings obligations under the EUEA and the Rule are shown in the following table as a percent of 2005 sales, along with SPS's verified achievements (through 2018), and forecasted savings (2019-2020). As shown in Table 2, SPS met its EUEA obligation of saving 8% of 2005 retail sales in Plan Year 2018.

Table 2: SPS Progress to EUEA Goal as a Percent of 2005 Sales

Year	Annual Net Customer Achievement (GWh)	Cumulative Net Customer Achievement (GWh)	Cumulative % of 2005 Retail Sales
2008	3.355	3.355	0.09%
2009	14.136	17.491	0.47%
2010	23.231	40.722	1.09%
2011	35.642	76.363	2.04%
2012	31.534	107.897	2.88%
2013	34.452	142.349	3.80%
2014	30.493	172.841	4.61%
2015	32.805	202.962	5.41%
2016	31.966	234.257	6.25%
2017	29.429	263.686	7.03%
2018	38.680	302.366	8.06%
2019 (Forecast)	27.687	311.776	8.31%
2020 (Forecast)	36.885	329.572	8.79%

A. Public Participation

17.7.2.8.B NMAC requires utilities to solicit public input from the Commission's Utility Division Staff ("Staff"), the New Mexico Attorney General, the New Mexico State Energy, Minerals, and Natural Resources Department ("EMNRD"), as well as environmental group representatives, consumer advocates, and other interested parties on the design and implementation of its proposed programs prior to filing its Energy Efficiency Plan. In compliance with this requirement, SPS invited representatives from Staff, the New Mexico Attorney General's office, Southwest Energy Efficiency Project ("SWEEP"), Coalition for Clean Affordable Energy, EMNRD, Occidental Petroleum, LLC, El Paso Electric ("EPE"), New Mexico Gas Company ("NMGC"), and Public Service Company of New Mexico ("PNM"). SPS held its first public participation meeting on February 18, 2019 via web conference. Representatives of SWEEP, Staff,

EPE, PNM, and NMGC participated in the meeting. SPS representatives provided a review of 2018 preliminary achievements, an overview of the 2019 Plan, and the tentative programs and products the Company was reviewing for inclusion into the Triennial filing.

SPS held its second public participation meeting on April 22, 2019 via web conference. Participating attendees included representatives from Staff, SWEEP, market actors, Vote Solar, NMGC, EPE, and PNM. SPS provided final savings from 2018, discussed measures and products SPS reviewed based on the feedback it received from Seventhwave and CleaResult, and requested additional non-binding feedback from stakeholders on the programs proposed by SPS. Table 3, below, presents a summary of the feedback SPS received from both meetings held in preparation of the Triennial Plan:

Table 3: SPS Response to Public Meeting Input

Category	Question/Suggestion	SPS Response
<u>February 18, 2019 Public Participation Meeting</u>		
Program Implementation	Who is the existing vendor for Energy Feedback and why is SPS transitioning to a new vendor for 2020?	Xcel Energy went out to RFP in 2018 to determine if other vendors could implement a similar program with the goal of refreshing the offering in all states that it is offered.
Home Lighting Program	The net-to-gross factor provided isn't relative to the value of the program. Will SPS be updating this factor?	SPS receives net-to-gross numbers from the Statewide Evaluator, Evergreen. The Home Lighting Program was last evaluated in 2017 and is not expected to be evaluated until 2020. If the next evaluation comes back with a different net-to-gross, SPS will update that factor.
Home Energy Services	Considering the program had great success in 2018, does SPS expect to see similar savings in 2019?	It is still too early to tell at this point. Several factors played into the higher 2018 achievement including contractors entering in the market sooner than expected.
Program Design	Would it make sense to merge HES and the Residential Cooling Program due to the low participation in cooling?	ADM (the prior statewide evaluator), recommended in their Annual Report that we separate Cooling measures to ensure that customers who just want a cooling measure,

		will not be required to sign up for HES standard offer measures. SPS agreed with this approach and separated into two separate program offerings.
Business Comprehensive	There are no customers participating in the Building Tune-Up Product. Is SPS thinking about ways to make it more attractive to customers, like direct install measures, higher incentives, etc.?	Direct install measures are currently available. SPS will update product information to promote the offering to customers considering a building tune-up.
Business Comprehensive	Within the Business Lighting Product, will SPS expand the prescriptive measures to make it easier for customers to participate?	Yes. New light-emitting diode (“LED”) rebate measures that have been cost effective in other states will be considered in the Triennial Planning process.
Market Research	You mentioned earlier that SPS has a high number of electric water heaters. How did you find this out?	We conduct a Home Use Study which polls our customers on a variety of appliances and customer usage trends within their home. This study is done every other year and was last completed in August 2018.
Product Development	Is the Seventhwave Study something that can be shared or included with the filing?	Yes. We plan to include the study within our filing.
<u>February 18, 2019 Public Participation Meeting</u>		
2018 Achievements	Are the savings provided at generator or customer level	The achievements provided in the slide deck are at a customer level.
System Benefits Forecast	Can you speak more to the way avoided generation cost is set to zero for the first eight years?	These numbers reflect SPS being long on capacity during those years. The specific inputs come from SPS’s Resource Planning group.
Residential Cooling	Does the cooling program allow someone that is switching from evaporative cooling to central AC units to participate?	Yes. The program does allow for this technology switching. Based on prior filing Final Order requirements, SPS does have

		to track these customers. At this time, SPS has not had a customer participate in the program that switched technology.
Heat Pump Water Heaters	SWEEP advocated using a market transformation type approach to focus more on upstream incentives for water heater dealers to help increase the stocking of heat pump water heaters in the last DSM plan for Colorado (Xcel accepted that recommendation). This approach may be important in the New Mexico territory.	Public Service Company of Colorado, a Colorado corporation (“PSCo”), agreed to this in Colorado due to the size of the territory and being able to apply more market influence with these stocking dealers. PSCo’s intent was to buy down the cost for the models available through Home Depot and Lowes with hopes of increasing inventory in the stores. SPS expects there to be challenges with a similar approach in New Mexico due to the smaller rebates and market influence; however it will look into this approach as we build the proposed program.
Smart Thermostats	Is there an opportunity to have a combined EE/DR program?	SPS currently offers this, but during the Triennial Planning process, had identified three options to enhance the program offering. Unfortunately, with such low avoided capacity values, it made providing any DR program option non cost effective.
Energy Feedback	Does SPS provide a behavioral incentive program such as Home Energy Reports (“HER”) within Consumer Education and will you claim savings?	SPS provides HERs through its Energy Feedback Program. SPS does not offer that program within its Consumer Education Segment and does not account for any savings in Consumer Education.
Smart Thermostats	Will current participants in the program be notified of the changes and will SPS account	Yes, SPS will notify current participants of the program changes at the end of 2019.

	for savings from previously installed thermostats?	After discussions with the Statewide Evaluator, Evergreen, SPS will account for the remaining life savings from the previously installed thermostats in its proposed new program.
System Benefits Forecast	There is a big drop in avoided costs. How is the cost effectiveness looking for the portfolio as a whole? Will there be some programs that fall below 1.0?	Decreasing avoided costs did change the mix of measures offered in each program. SPS expects that all programs proposed today will achieve cost effectiveness, however.
System Benefits Forecast	Are you including a value for avoided CO2 emissions?	Yes. We do have a value for CO2 emissions currently in the forecast.
Legislative Changes	Is there anything to say regarding any thinking you've been doing for the plan (2020-2022)? The Legislature just passed an amendment to the EUEA, which includes savings/targets for 2021-2025. It also included potential for changes in funding levels? Will there be any elements in the Plan that are in response to the new legislation?	SPS is aware of the legislative changes. We won't know the actual goal in this filing and there will be some challenges to meeting that increased goal with the SPS demographic. We are still analyzing the full effects, but the filing will look at all available opportunities.

B. Broad Participation of all Classes

SPS recognizes that its customers represent a large variety of end-uses including, but not limited to: residential; irrigation; agricultural processing; oil well pumping; grain elevators; industrial; gas pipeline compression; federal installations; municipal street, guard, and flood lighting; public and parochial schools; and water pumping customers. For the purposes of this Triennial Plan, all end-uses have been divided into two customer segments: Residential and Business. Household and low-income customers fall into the Residential Segment. Commercial, agricultural, municipal, school, and industrial customers fall into the Business Segment. SPS has developed a portfolio that is well-balanced and designed to provide all customers the ability to participate. For business customers, SPS has a custom product within the Business Comprehensive program that provides rebates for any cost-effective energy efficiency measures that have not been included in a prescriptive product, ensuring that all business customers may participate in a program.

C. Estimated Energy and Demand Savings

SPS manages its energy efficiency and load management programs as cost-effectively as possible and maximizes its energy and demand savings at a reasonable cost. The 2020, 2021, and 2022 estimated energy and demand savings for the individual programs are shown in Tables 1a-1c (above). SPS's proposed goals assume that all programs will operate for a full 12 months.

D. Ease of Program Deployment

SPS continues to leverage its large institutional infrastructure to bring its energy efficiency programs to the market. Specifically, through Xcel Energy Services Inc. ("XES"), SPS has internal capabilities in product development, program management, rebate processing, and regulatory administration, which it can rely on to develop, implement, and administer the energy efficiency and load management programs.

SPS intends to administer the Business Comprehensive program in conjunction with a third-party contractor. The Business Comprehensive program includes: Cooling Efficiency, Custom Efficiency, Large Customer Self-Direct, Lighting Efficiency, Building Tune-Up, and Motor & Drive Efficiency.

Other programs, including Energy Feedback, HES (including low-income), Home Lighting & Recycling, and School Education Kits, will be partially or completely administered by third-party providers.

E. Product Development Process

For over 30 years, XES or its predecessors has successfully operated energy efficiency and load management programs, and in doing so, has gained significant expertise in the design and development of these programs. XES and SPS use a comprehensive product development process to identify, analyze, prioritize, and select the programs to include in its energy efficiency and load management portfolio. The product development process utilizes traditional stage/gate methods in order to foster sound ideas that meet customer needs and Company goals. The process begins by analyzing service territory characteristics (e.g., number and types of customers, climate, and market potential) to develop a list of relevant programs that Xcel Energy's operating companies have successfully operated in other jurisdictions. The specific stages that the product development process then follows are: Opportunity Identification, Framing, Concept Evaluation, Development, Test, and Launch. Ideas are reviewed by management at the transition points between each stage, which allows for proper culling of less effective ideas early in the process before significant work is done. Descriptions of each stage are provided below.

Opportunity Identification - The objectives of this stage are to compile ideas for new programs/products from those who are closest to the customers, describe the program concept, and to filter the most viable ideas that will progress to the Framing Stage. This stage begins by asking: *"What idea do you have that will solve a customer concern?"* This stage solicits ideas from several sources and provides a brief explanation of the concept in the form of an Idea Napkin. To progress to Framing, new ideas must pass a prioritization screening process so that only the most promising ideas are worked on in the Framing Stage.

Framing - The objectives of this stage are to evaluate the market opportunity of new program/product ideas. This stage begins by asking: *"What is the opportunity for this idea?"* The ultimate deliverable of this stage will be a Framing Document, which is the due diligence needed to develop the program/product case. It will also define project boundaries and determine strategic fit from a business, technical, and market perspective. The primary gate decision here is, *"Does this concept merit spending more resources?"*

Concept Evaluation - Once it has been determined that a new concept is a viable opportunity upon which to spend more resources, the program/product idea moves to the Concept Evaluation Stage. The objectives of this stage are to refine and validate assumptions made in the Framing Stage, and to more clearly define the program/product and opportunity. The process to obtain any legal approvals or meet any regulations begins here. The deliverables of this stage are high-level requirements, a Product Case 1.0, and a high-level project plan. The primary gate decision is, *"Should we commit the resources/dollars to build this measure, product, or program?"*

Development - Once the program/product receives concept approval, the process moves to the Development Stage. All high-level requirements are broken down into detailed requirements, and the project plan is refined in order to accomplish physical development of the product and systems. Preliminary launch planning begins in this stage. The

deliverable from this stage is a testable product. The primary gate decision is, *“Is the measure, product, or program ready to be tested (if needed) or moved to launch?”*

Test - Once the measure, product, or program has passed the Development Stage, it is tested against user requirements and usage scenarios to verify desired performance. Operational processes are also tested for flow-through. Testing assesses the readiness for full deployment. Testing could take various forms such as laboratory testing or field trial (pilot testing). Any needed rework of the product before deployment is done in this stage. The deliverables of this stage are: end-to-end validation of test results, operational and product/program assessments for full deployment, and the complete marketing plan to bring the product/program to launch. The primary gate decision is, *“Are we ready to proceed with launch, or should the measure, product, or program go back to design?”*

Launch - Upon successful testing, the process moves to the Launch Stage. The objectives of this phase are to stabilize all processes, transition the new product/program into a life cycle, and execute launching the product/program. The primary gate decision is, *“Is everything ready from beginning to end that will enable this product/program to be successful?”*

F. Risk of Technologies and Methods

As discussed above, SPS’s affiliated operating companies have extensive experience designing, implementing, and administering energy efficiency and load management programs in a variety of jurisdictions. The Plan benefits from those years of experience and expertise and allows SPS to have greater confidence in its program proposals. The proposed programs have been offered successfully either in New Mexico or in other jurisdictions. The third-party partnerships are with reputable, long-standing organizations. Therefore, SPS does not perceive a great risk with the technologies or methods it has chosen. However, the New Mexico service area is a significantly different market than other jurisdictions where the Company offers demand-side management (“DSM”) programs. The SPS jurisdiction has much lower population density and a more homogenous business sector with the largest local industries being: oil and gas production and agriculture. In other jurisdictions, manufacturing, commercial real estate, education, and retail are more prevalent and more likely to participate. SPS is mindful of the challenges associated with its market with regards to customer participation.

G. Under Review, Rejected, and Future Programs

SPS draws on the historical knowledge it has developed over the past several years operating Energy Efficiency and Load Management programs in New Mexico. As discussed below, SPS conducted a thorough market study. SPS continuously works with customers, vendors, and other organizations to identify new opportunities.

The following programs/products were reviewed in the Product Development process, but are still under review.

1. Programs/Measures Under Review

a. Oil Field Measures

SPS continues to look for possible prescriptive measures for this market segment. One avenue for this research is to review custom projects for repeatable measures. SPS is working with CleaResult to continue pursuing custom projects with which to gain more insight into technology that could be moved to a prescriptive measure. SPS is planning to evaluate whether or not electric submersible pumps could be moved from custom to prescriptive. SPS will continue to work with the oil and gas industry to help identify potential measures specific to this customer segment.

2. Programs/Measures Rejected

CleaResult conducted a market study on behalf of SPS to explore the addition of a food service product within the Business Comprehensive Program. It was determined that several factors would make it difficult to create a cost-effective program, including a market that requires larger incentives, increased levels of interaction with customers, and competition with used equipment dealers.

CleaResult also evaluated the potential of a holistic irrigation program and determined that this approach would not be cost effective as a standalone program. After further review, SPS currently has technical assumptions for these measures within its existing Motors and Drives product. SPS has included additional funding within the product to account for an increased marketing initiative and incentive expenditures to target this new segment moving forward. Future Programs

SPS believes its proposed Triennial Plan provides sufficient program opportunities to cover the most common electric end-uses operated in households and businesses. As new technologies become available, the Product Development team will evaluate them for inclusion in future programs. Furthermore, any party interested in submitting a new measure to SPS for consideration can do so through the Xcel Energy website.²

H. Goal Setting

SPS considered the following factors while developing its energy efficiency program goals and budgets for the Triennial Plan:

- legislated goals;
- legislated budget parameters;
- historical and expected participation levels;
- settlement requirements;
- incremental cost of energy efficient equipment;
- results of Seventhwave's Portfolio Optimization Study;
- results of both CleaResult market Studies;

² <http://www.xcelenergy.com/productideas>

- recent Commission decisions; and
- cost-effectiveness.

I. General Marketing

SPS proposes to market to both the residential and business customer segments based on the number of customers, relative size of each customer, and potential for conservation at the customer site. SPS uses a more personal sales approach for large commercial and industrial (“C&I”) customers because they generally have larger and more complex energy efficiency and load management opportunities. Small business customers may work with XES’s Business Solutions Center to learn more about program offerings. In contrast, because energy efficiency potential for individual residential customers is relatively small and costs per participant need to be strictly controlled, SPS relies most heavily on mass-market advertising and promotion for this segment as well as trade partners that have been trained to utilize the programs.

In addition to formal rebate and incentive programs, SPS maintains a large database of energy savings information on its website.³ All currently rebated measures, as well as rebate amounts, can be found on the website. Customers and the general public are able to access information on the latest technologies and practices available for saving energy. Residential customers can access information on low/no-cost ways to save energy, performing an energy assessment, and calculating appliance energy consumption. Business customers can keep up-to-date on new technologies and access one of several energy advisor or energy assessment tools.

The proposed programs in this Triennial are designed to accommodate diverse customer lifestyles and provide convenient participation and information to assist customers in making wise energy choices. In addition to its direct impact program portfolio, SPS plans to provide consumer education, as well as conduct market research, product development, and planning and administration to support these programs. More detailed marketing approaches are available in the program description sections of the Plan.

J. Utility Cost Test and Avoided Costs

17.7.2.8.J NMAC requires that a utility’s portfolio of energy efficiency and load management programs be cost-effective, and Section 62-17-4(C) of the EUEA states the UCT shall be used to determine cost-effectiveness. Programs are cost-effective if they achieve positive net benefits in the UCT (*i.e.*, the UCT is greater than 1.0). All of the programs proposed by SPS in the Triennial Plan, with the exception of School Education Kits, are cost-effective (*i.e.*, achieve positive UCT net benefits) at the estimated budget and participation levels.

³ https://www.xcelenergy.com/Programs_and_Rebates

Individual program-level UCT results are provided in Table 1a-1c. The following sections describe the assumptions SPS has made in order to perform the cost-effectiveness and energy and demand savings estimates.

1. Avoided Costs

In order to determine the cost-effectiveness of its programs, SPS must first calculate the avoided generation, transmission, distribution, and marginal energy costs associated with the energy efficiency and load management savings.

a. Generation

Avoided generation represents the cost of supply-side generation resources displaced by energy efficiency and load management programs. The avoided generation values used in the Triennial Plan were derived by XES's Resource Planning group. SPS used a portfolio approach considering future resource needs and forecasted generation additions to the SPS system consistent with the final order in SPS's most recent rate case (Case No.17-00255-UT).⁴ Resources were selected that most closely met resource needs based on an overall least-cost approach that balanced actual resource cost and the corresponding cost of energy. The analysis covered the entire 22-year planning period of this Plan. Table 4 below provides the annual values of avoided generation costs from 2020 to 2041.

Table 4: Estimated Annual Avoided Generation Capacity Costs for Energy Efficiency Programs

Year	Gen Capacity \$/kW-yr	Year	Gen Capacity \$/kW-yr
2020	\$0.00	2031	\$71.16
2021	\$0.00	2032	\$72.58
2022	\$0.00	2033	\$74.04
2023	\$0.00	2034	\$75.52
2024	\$0.00	2035	\$77.03
2025	\$0.00	2036	\$78.57
2026	\$0.00	2037	\$80.14
2027	\$0.00	2038	\$81.74
2028	\$67.06	2039	\$83.38
2029	\$68.40	2040	\$85.04
2030	\$69.77	2041	\$86.74

b. Transmission and Distribution

Avoided transmission and distribution refers to the costs avoided by saving electricity rather than having to extend or improve the existing transmission and distribution system

⁴ Case No. 07-00376-UT; *In the Matter of Southwestern Public Service Company's Application for Revision of its Retail Rates Under Advice Notice No. 272*; Final Order (Sept 5, 2018).

to meet increased demand. The values in the table below were provided by XES Transmission and Resource Planning groups and represent the estimated annualized cost of transmission interconnection and delivery of the proposed supply-side generation resources.

Table 5: Estimated Avoided Transmission and Distribution Costs

Avoided Capacity \$/kW-yr				Avoided Capacity \$/kW-yr			
Year	Transmission	Distribution	T&D	Year	Transmission	Distribution	T&D
2020	\$2.42	\$8.88	\$11.30	2031	\$3.01	\$11.05	\$14.05
2021	\$2.47	\$9.06	\$11.53	2032	\$3.07	\$11.27	\$14.33
2022	\$2.51	\$9.24	\$11.76	2033	\$3.13	\$11.49	\$14.62
2023	\$2.57	\$9.43	\$11.99	2034	\$3.19	\$11.72	\$14.91
2024	\$2.62	\$9.62	\$12.23	2035	\$3.25	\$11.96	\$15.21
2025	\$2.67	\$9.81	\$12.48	2036	\$3.32	\$12.20	\$15.51
2026	\$2.72	\$10.01	\$12.73	2037	\$3.38	\$12.44	\$15.82
2027	\$2.78	\$10.21	\$12.98	2038	\$3.45	\$12.69	\$16.14
2028	\$2.83	\$10.41	\$13.24	2039	\$3.52	\$12.94	\$16.46
2029	\$2.89	\$10.62	\$13.51	2040	\$3.59	\$13.20	\$16.79
2030	\$2.95	\$10.83	\$13.78	2041	\$3.66	\$13.47	\$17.13

c. Marginal Energy

The hourly marginal energy costs represent the incremental fuel cost from owned and purchased power generation or the incremental cost of short-term market purchases, whichever are lower, after meeting SPS's load requirements. The hourly marginal costs are representative of the costs avoided by saving energy rather than generating or purchasing it. For the Triennial Plan, the Company's Generation Modelling Services group produced a PLEXOS run to produce hourly marginal energy estimates. The marginal energy cost is representative of SPS generation resources, SPS contractual assets, future-planned asset additions, and electric markets. For each individual measure in the Plan, an hourly load shape is assigned. The estimated annual avoided energy resulting from the product of hourly marginal energy estimates and the hourly load shape is used to determine the estimate annual avoided energy costs for each measure.

Table 6 below provides annual average values for the marginal energy baseline and the incremental emissions costs. The sum of these two costs equals the total marginal cost of energy when carbon dioxide costs are internalized.

Table 6: Estimated Annual Avoided Marginal Energy Costs

	Annual Average \$/MWh		Annual Average \$/MWh
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Year	Marginal Energy without Emissions	Avoided Emissions	Year	Marginal Energy without Emissions	Avoided Emissions
2020	\$22.62	\$0.00	2031	\$37.59	\$1.31
2021	\$22.99	\$0.07	2032	\$39.65	\$1.38
2022	\$24.08	\$2.26	2033	\$41.98	\$1.46
2023	\$26.27	\$2.16	2034	\$44.43	\$1.55
2024	\$27.86	\$2.70	2035	\$47.11	\$1.64
2025	\$29.44	\$2.12	2036	\$49.99	\$1.74
2026	\$30.20	\$2.46	2037	\$53.12	\$1.85
2027	\$30.05	\$1.99	2038	\$56.51	\$1.97
2028	\$31.89	\$0.91	2039	\$60.19	\$2.09
2029	\$33.88	\$1.18	2040	\$64.20	\$2.23
2030	\$35.48	\$1.23	2041	\$68.57	\$2.39

2. Discount Rate/Cost of Capital

SPS used the before-tax weighted average cost of capital (“WACC”) provided by XES’s Finance department for the discount rate in its cost-effectiveness analysis. SPS utilized the rate of return and capital structure as filed in Case No. 17-00255-UT, SPS’s most recently approved rate case filing. The following table details the calculation of the resulting 7.24 percent before-tax WACC:

Table 7: Weighted Average Cost of Capital

Component	Portion of Capital Structure	Allowed Return	Before-Tax Weighted Average Cost of Capital	Tax Rate	After-Tax Weighted Average Cost of Capital
Calculation Methodology	(A)	(B)	(C) = (A) * (B)	(D)	(E) = (C) * (1-(D))
Long-Term Debt	46.03%	4.51%	2.08%	25.66%	1.55%
Common Equity	53.97%	9.56%	5.16%		5.16%
Total	100.00%		7.24%		6.71%

3. Net-to-Gross

Net-to-Gross (“NTG”) refers to the percent of customers who purchase energy efficient equipment or provide load control who would not have done so without the existence of the utility’s energy efficiency and load management programs. NTG is used to determine the actual amount of energy and demand saved that can be attributed to the influence of SPS’s energy efficiency and load management programs. The NTG ratio does not normally reflect the percent of customers who install the efficiency measure; instead, the “Installation Rate” is estimated through the M&V process.

The following table provides the program-level NTG ratios as calculated by Evergreen Economics in its 2018 M&V Report. SPS will utilize these NTG in the calculation of

energy savings until updated values become available. Additional details on NTG factors, including product, channel, or measure level NTG ratios can be found in Appendix B: Planning Assumptions, of the 2018 M&V Report included as Appendix A to SPS's 2018 Annual Report.

Table 8: Program Net-to-Gross Factors

Program	NTG Ratio
Business Comprehensive	0.783
Home Lighting & Recycling	0.710
Energy Feedback	1.068
Residential Cooling	0.660
School Education Kits	1.000
Home Energy Services	0.971
Saver's Switch	1.000
Saver's Stat	1.000
Overall Portfolio	0.838

4. Transmission Loss Factors

The Transmission Loss Factor accounts for the energy lost in the form of heat due to resistance while electricity is being transmitted from the generator to the customer. This value becomes important because energy and demand savings are typically measured at the customer meter and must be converted into generator savings to understand their impact on resource planning. SPS uses a weighted average loss factor of 7.1 percent for the annual energy saved, and a factor of 8.7 percent at the time of system peak for the annual capacity savings for all business programs. For residential programs, these factors are 11.4 percent for the annual energy saved, and 14.3 percent for the annual capacity savings. These factors are consistent with those used in SPS's most recently approved base rate case (Case No. 17-00255-UT).

5. Non-Energy Benefits

Non-energy benefits ("NEB") are those savings to the customer or utility that result from participation in an energy efficiency or load management program but that are not directly related to the consumption of fuel served by SPS (electricity). Such NEBs may include savings from reduced outages, arrearages, savings, or costs related to the change in consumption of fuel not served by SPS (*e.g.*, natural gas, propane, wood, etc.), or incremental operation and maintenance savings of labor, maintenance, or materials. Since the UCT does not consider participant benefits and costs, SPS has not included NEBs in its benefit-cost analyses.

6. System Benefits

System benefits refer to the benefits received by everyone served by SPS's electrical system as a result of SPS offering energy efficiency and load management programs. By definition, cost-effective energy efficiency and load management programs deliver system benefits to all customers by reducing or alleviating the need to build new generation, transmission, or distribution to meet growing customer demand. While the participants in these programs will reap the additional benefit of a decrease in their electricity consumption, all customers will benefit from the system reductions. The total portfolio UCTs for the Triennial filing are projected to be 1.47 in 2020, 1.5~~59~~ in 2021, and 1.~~6774~~ in 2022, which demonstrates that the benefits (the avoided costs of generation, transmission, distribution of traditional power plants or purchases of power) outweigh the projected energy efficiency programs' utility and customer costs by a ratio of nearly 2 to 1.

II. Program Delivery and Administration

A. General Marketing and Outreach Plan

SPS has developed an extensive marketing and outreach plan to target residential (including low-income) and business customers throughout the service area. The following sections describe the plans specific to each customer segment.

1. Residential Segment

The focus during the Triennial will be to increase awareness and interest in energy efficiency among homeowners and renters. Efficiency messages will be promoted through a variety of channels, including:

- efficient equipment distributors and installation contractors;
- advertising, bill inserts, newsletters, and direct mail campaigns;
- internet, email, and social media marketing; and
- SPS's residential call center; and
- joint promotions with SPS's Consumer Education program (indirect).

2. Business Segment

SPS will use a wide variety of channels and marketing tactics to reach its business customers and trade allies. The ultimate goal is to increase program awareness and knowledge with customers and trade partners, drive efficient equipment stocking practices, and increase program participation.

SPS will use the following channels to interact with customers:

- Account Managers – Account Managers will work with SPS's large, managed account customers to inform them of energy efficiency programs, help them identify qualifying energy efficiency opportunities, and walk them through the participation process. This channel is very important for the customized programs due to the participation requirements and complexities of analyzing energy savings.
- Energy Efficiency Specialists – The Energy Efficiency Specialists ("EES") from the Business Solutions Center will handle all interactions with SPS's small and mid-sized non-managed account customers. They will educate business customers about efficiency programs and cross-sell energy efficiency on incoming calls for utility issues. In addition, they will proactively reach out to customers to help promote energy efficiency programs, guide customers through the application process, and prepare paperwork for rebate submission.
- Trade Relations Manager – The Trade Relations Manager will conduct outreach to trade partners, including distributors, wholesalers, and installation contractors. This position educates local and regional trade partners about our efficiency

programs through personal meetings, workshops, and training sessions. They also provide valuable feedback on new technologies and program improvements.

- Third-Party Program Implementers – SPS will rely on a third-party program implementer to provide direct customer marketing, outreach, and trade training for specific program offerings. The implementer will perform energy efficiency audits and will recommend participation in all Business programs. The implementer will also perform a sales engineering role supporting both managed and non-managed customers. The implementer will also assist customers to complete rebate applications and process supporting documentation.

SPS will use the following marketing tactics to notify and educate business customers about the programs:

- program collateral including feature sheets, case studies, rebate applications, and engineering analysis worksheets;
- newsletters, newspaper advertising, radio advertising, and internet search advertising;
- presentations to Chambers of Commerce, trade organizations, and architectural and engineering firms; and
- targeted campaigns via direct mail or email to customers and trade allies.

SPS remains committed to delivering cost-effective projects in the future, and to that end, it is implementing strategies to accelerate customer acceptance going forward. SPS's efforts to improve business performance include:

- continuing to build general energy efficiency and program awareness with customers;
- expanding trade outreach to increase the number of energy efficiency proponents in its service territory;
- increasing large customer planning and sales efforts; and
- continuing to aggressively market all business programs.

SPS is confident that these activities will significantly augment the work already started in New Mexico and build a strong pipeline of energy efficiency projects for completion in future years.

B. Roles and Responsibilities

SPS typically uses resources from several different internal departments to administer its energy efficiency programs. Specifically, the following roles contribute to the process:

- Market Research Analyst – performs and oversees research on the energy efficiency market to help guide program planning;
- Product Developer – identifies and develops the proposed programs and products;
- Program Manager – manages overall program marketing and performance tracking;
- Account Manager – interacts with large business customers to promote programs;

- Trade Relations Manager – works with the trade (vendors, contractors, and manufacturers) to educate them about the programs;
- Energy Efficiency Engineer – reviews Custom Efficiency and Large Customer Self-Direct applications, and helps to develop and refine product deemed savings and technical assumptions;
- Energy Efficiency Specialist – works with small and mid-sized account customers;
- Rebate Processor – reviews/approves applications and invoices and pays rebates; and
- Regulatory Analyst – performs benefit-cost analyses, drafts and manages program filings, and corresponds with regulators and other interested parties.

In addition, SPS works with outside groups such as equipment vendors and manufacturers, community agencies, third-party administrators, and contractors as noted in the individual program descriptions.

C. Reporting Process

SPS filed its first annual report reflecting its 2008 program year on August 1, 2009, and has filed its reports annually each subsequent year. The 2018 Annual Report was filed on May 15, 2019. Listed below are the details provided in this report:

- actual expenditures and verified achievements of the preceding calendar year;
- reporting requirements as stated in 17.7.2.14 NMAC;
- program/project descriptions, including an explanation of deviations from goal and changes during 2018 organized into the Residential, Business, and Planning & Research Segments; and
- benefit-cost analyses for the Residential and Business programs, as well as the overall portfolio.

D. Cost Recovery

The EUEA authorizes utilities to receive cost recovery for Commission-approved energy efficiency and load management expenditures. Cost recovery from each customer is capped at \$75,000 per year. To recover these expenditures, SPS proposes to continue collecting its costs through an Energy Efficiency Rider (“EE Rider”) charge applied to the energy consumption adjusted for the loss factor at each of four voltage-service levels. The EE Rider rates for these service levels are summarized in Table 9a below. The EE Rider will approximate contemporaneous cost recovery of the 2020 Plan expenditures. The EE Rider will be revised with each plan to recover:

- forecasted expenditures - for 2020, expenditures are forecasted to be \$9,511,304;
- any approved incentive/disincentive compensation for the program year; and
- half of the cost related to SPS’s proposed EE Potential Study [\(PY 2020 & 2021\)](#).

The proposed Triennial Plan costs would result in the EE Rider rates shown in Table 9a below.

Table 9a: Triennial Plan Energy Efficiency Rider

Rate Schedule	Rate (% of Bill)
Residential Service, Residential Heating Service, Residential Water Heating Service, Small General Service, Small Municipal and School Service, Municipal Street Lighting Service, Area Lighting Service	3.0%
Secondary General Service, Irrigation Power Service, Large Municipal and School Service	3.0%
Primary General Service	3.0%
Large General Service – Transmission	3.0%

1. Rate Impact and Customer Bill Impact

The following table shows the estimated average monthly bill impact of the proposed EE Rider:

Table 9b: Estimated Average Bill Impact of Triennial Plan Energy Efficiency Rider

Average Customer Impacts (assumes \$9,511,304 recovery of estimated costs)			
Rate Schedule	Monthly Bill excluding EER	Monthly EE Rider Charge	Charge as % of Bill
Residential Service -- 800 kWh	\$83.77	\$ 2.51	3.000%
Small General Service -- 1,500 kWh	\$130.20	\$ 3.91	3.000%
Secondary General Service -- 50 kW; 20,000 kWh	\$1,473.32	\$ 44.20	3.000%
Primary General Service -- 100 kW; 30,000 kWh	\$2,452.50	\$ 73.58	3.000%
Large General Service Transmission -- 4,000 kW; 800,000 kWh	\$64,094.00	\$ 1,922.82	3.000%

The bill impacts shown in this table do not include the effects of recoveries to compensate for disincentives or to provide incentives for SPS expenditures on energy efficiency programs, as authorized in Sections 62-17-5(F) and 62-17-6(A) of the EUEA.

2. Shared/Allocated Program Costs

SPS's plan includes indirect programs with associated costs. Since these costs cannot be directly attributed to a program, SPS uses an allocation methodology approved by the Commission in the Final Order in Case No. 07-00376-UT. The Commission adopted the

Recommended Decision of the Hearing Examiner in that case, which stated “SPS’s filing demonstrates that its alternative method is appropriate and should be approved.”

In accordance with its approved alternative method, SPS has allocated the projected direct program costs associated with M&V, marketing and promotion, rebates, labor, and utility administration to the individual program budgets. However, the indirect costs of Consumer Education, Market Research, M&V, Planning & Administration, and Product Development were kept out of the individual program budgets.

SPS believes that this is the most appropriate treatment of costs not specific to a particular program for several reasons:

- First, such costs are often not directly related to individual programs. Therefore, to use the direct costs of those particular programs as an allocation method would not be accurate.
- Second, these types of costs are often irregular, with large expenses in some years and almost no expenditures in other years. If SPS must allocate these charges to the programs, regardless of magnitude, it may result in certain programs becoming non-cost-effective.
- Third, given the variation in these costs from year-to-year, and the suggested method to allocate based on direct program costs, it would be very difficult for SPS to manage individual program budgets and insure their cost-effectiveness because program managers would not know how much to expect from these indirect programs.
- Finally, it is more administratively efficient for SPS to manage the indirect costs outside of the individual programs. SPS’s internal accounting system uses individual accounting codes for each indirect program as well as for each direct-impact program. These indirect costs could not be allocated directly to the programs, but would first be charged to their subject area, and then allocated to the programs, creating a two-step accounting process instead of one.

3. Budget Categories

SPS intends to use the following five budget categories to track and report its annual expenditures for each energy efficiency program:

- Total Incentive – The total dollars paid in rebates to customers.
- Internal Administration – This category includes the costs for:
 - Project Delivery – to deliver the program to the customer including Program Manager labor and costs;
 - Utility Administration – to administer the program internally, including Rebate Processing and Planning & Administration;
 - Other Project Administration – internal or external costs not covered in any other cost category. These costs may include outside contractors and consultants hired to perform installation, engineering, or other services for SPS to assist in delivery or administration of programs to customers; and
 - Research & Development – internal costs to develop the programs.
- Third-Party Delivery – Used only when a third-party administers, implements, or delivers a major portion of the program to customers. This should include all

costs that the third-party incurs, minus the cost of the energy efficient equipment, which should be counted as a rebate.

- Promotion – Costs to market and promote the programs.
- M&V – Costs to perform M&V on the programs.

The following table describes SPS's proposed program expenditures split into the proposed budget categories listed above.

Table 10a: SPS's 2020 Program Costs by Budget Category

2020	Internal Administration	Third Party Delivery	Promotion	Participant Incentives	M&V	Total Program Costs
Residential Segment						
Energy Feedback	\$22,000	\$90,285	\$1,200	\$0	\$30,000	\$143,485
Heat Pump Water Heaters	\$23,500	\$0	\$10,000	\$11,000	\$0	\$44,500
Home Energy Services: Residential and Low Income	\$175,000	\$1,345,303	\$100,000	\$573,558	\$0	\$2,193,861
Home Lighting & Recycling	\$150,000	\$242,000	\$470,000	\$312,817	\$25,000	\$1,199,817
Residential Cooling	\$20,000	\$0	\$10,000	\$13,040	\$0	\$43,040
School Education Kits	\$14,608	\$76,000	\$2,500	\$52,309	\$0	\$145,417
Smart Thermostats	\$25,000	\$0	\$50,000	\$37,500	\$30,000	\$142,500
<i>Residential Segment Total</i>	\$430,108	\$1,753,588	\$643,700	\$1,000,224	\$85,000	\$3,912,620
Business Segment						
Business Comprehensive	\$769,803	\$1,465,665	\$747,804	\$1,720,412	\$95,000	\$4,798,684
<i>Business Segment Total</i>	\$769,803	\$1,465,665	\$747,804	\$1,720,412	\$95,000	\$4,798,684
Planning and Research Segment						
Consumer Education	\$200,000					\$200,000
Market Research	\$110,000					\$110,000
Measurement & Verification	\$15,000					\$15,000
Planning & Administration	\$285,000					\$285,000
Product Development	\$190,000					\$190,000
<i>Planning & Research Segment Total</i>	\$800,000	\$0	\$0	\$0	\$0	\$800,000
PORTFOLIO TOTAL	\$1,999,911	\$3,219,253	\$1,391,504	\$2,720,636	\$180,000	\$9,511,304

Table 10b: SPS's 2021 Program Costs by Budget Category

2021	Internal Administration	Third Party Delivery	Promotion	Participant Incentives	M&V	Total Program Costs
Residential Segment						
Energy Feedback	\$22,000	\$90,285	\$1,200	\$0	\$30,000	\$143,485
Heat Pump Water Heaters	\$23,500	\$0	\$15,000	\$20,000	\$20,000	\$78,500
Home Energy Services: Residential and Low Income	\$175,000	\$1,345,303	\$80,000	\$573,558	\$40,000	\$2,213,861
Home Lighting & Recycling	\$150,000	\$243,000	\$470,000	\$306,217	\$0	\$1,169,217
Residential Cooling	\$20,000	\$0	\$10,000	\$13,040	\$0	\$43,040
School Education Kits	\$15,108	\$76,000	\$2,500	\$52,309	\$0	\$145,917
Smart Thermostats	\$27,500		\$55,000	\$40,000	\$0	\$122,500
Business Segment Total	\$781,137	\$1,827,204	\$880,912	\$2,098,229	\$95,000	\$5,682,482
Planning and Research Segment						
Consumer Education	\$200,000					\$200,000
Market Research	\$110,000					\$110,000
Measurement & Verification	\$15,000					\$15,000
Planning & Administration	\$290,000					\$290,000
Product Development	\$190,000					\$190,000
Planning & Research Segment Total	\$805,000	\$0	\$0	\$0	\$0	\$805,000
PORTFOLIO TOTAL	\$2,019,245	\$3,581,792	\$1,514,612	\$3,103,353	\$185,000	\$10,404,002

2021 Modified By Settlement	Internal Administration	Third Party Delivery	Promotion	Participant Incentives	M&V	Total Program Costs
Residential Segment						
Energy Feedback	\$22,000	\$90,285	\$1,200	\$0	\$30,000	\$143,485
Heat Pump Water Heaters	\$23,500	\$0	\$15,000	\$20,000	\$20,000	\$78,500
Home Energy Services: Residential and Low Income	\$175,000	\$1,345,303	\$80,000	\$573,558	\$40,000	\$2,213,861
Home Lighting & Recycling	\$150,000	\$243,000	\$470,000	\$306,217	\$0	\$1,169,217
Residential Cooling	\$20,000	\$0	\$10,000	\$13,040	\$0	\$43,040
School Education Kits	\$15,108	\$76,000	\$2,500	\$52,309	\$0	\$145,917
Smart Thermostats	\$27,500		\$55,000	\$40,000	\$0	\$122,500
Residential Segment Total	\$433,108	\$1,754,588	\$633,700	\$1,005,124	\$90,000	\$3,916,520
Business Segment						
Business Comprehensive	\$781,137	\$1,827,204	\$880,912	\$2,098,229	\$95,000	\$5,682,482
Business Segment Total	\$781,137	\$1,827,204	\$880,912	\$2,098,229	\$95,000	\$5,682,482
Planning and Research Segment						
Consumer Education	\$200,000					\$200,000
Market Research	\$360,000					\$360,000
Measurement & Verification	\$15,000					\$15,000
Planning & Administration	\$290,000					\$290,000
Product Development	\$190,000					\$190,000
Planning & Research Segment Total	\$1,055,000	\$0	\$0	\$0	\$0	\$1,055,000
PORTFOLIO TOTAL	\$2,269,245	\$3,581,792	\$1,514,612	\$3,103,353	\$185,000	\$10,654,002

Table 10c: SPS's 2022 Program Costs by Budget Category

2022	Internal Administration	Third Party Delivery	Promotion	Participant Incentives	M&V	Total Program Costs
Residential Segment						
Energy Feedback	\$23,000	\$90,285	\$1,200	\$0	\$30,000	\$144,485
Heat Pump Water Heaters	\$23,500	\$0	\$20,000	\$25,000	\$0	\$68,500
Home Energy Services: Residential and Low Income	\$175,000	\$1,345,303	\$70,000	\$573,558	\$0	\$2,163,861
Home Lighting & Recycling	\$150,000	\$243,000	\$470,000	\$295,151	\$0	\$1,158,151
Residential Cooling	\$18,000	\$0	\$7,500	\$13,040	\$30,000	\$68,540
School Education Kits	\$15,608	\$76,000	\$2,500	\$52,309	\$20,000	\$166,417
Smart Thermostats	\$30,000	\$0	\$10,000	\$42,500	\$0	\$82,500
<i>Residential Segment Total</i>	<i>\$435,108</i>	<i>\$1,754,588</i>	<i>\$581,200</i>	<i>\$1,001,558</i>	<i>\$80,000</i>	<i>\$3,852,454</i>
<i>Business Segment Total</i>	<i>\$732,633</i>	<i>\$1,872,849</i>	<i>\$890,912</i>	<i>\$2,150,154</i>	<i>\$95,000</i>	<i>\$5,741,548</i>
Planning and Research Segment						
Consumer Education	\$200,000					\$200,000
Market Research	\$110,000					\$110,000
Measurement & Verification	\$15,000					\$15,000
Planning & Administration	\$295,000					\$295,000
Product Development	\$190,000					\$190,000
<i>Planning & Research Segment Total</i>	<i>\$810,000</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$810,000</i>
PORTFOLIO TOTAL	\$1,977,741	\$3,627,437	\$1,472,112	\$3,151,712	\$175,000	\$10,404,002

2022 Modified By Settlement	Internal Administration	Third Party Delivery	Promotion	Participant Incentives	M&V	Total Program Costs
Residential Segment						
Energy Feedback	\$23,000	\$90,285	\$1,200	\$0	\$30,000	\$144,485
Heat Pump Water Heaters	\$23,500	\$0	\$20,000	\$25,000	\$0	\$68,500
Home Energy Services: Residential and Low Income	\$175,000	\$1,345,303	\$70,000	\$573,558	\$0	\$2,163,861
Home Lighting & Recycling	\$150,000	\$243,000	\$470,000	\$295,151	\$0	\$1,158,151
Residential Cooling	\$18,000	\$0	\$7,500	\$13,040	\$30,000	\$68,540
School Education Kits	\$15,608	\$76,000	\$2,500	\$52,309	\$20,000	\$166,417
Smart Thermostats	\$30,000	\$0	\$10,000	\$42,500	\$0	\$82,500
<i>Residential Segment Total</i>	<i>\$435,108</i>	<i>\$1,754,588</i>	<i>\$581,200</i>	<i>\$1,001,558</i>	<i>\$80,000</i>	<i>\$3,852,454</i>
Business Segment						
Business Comprehensive	\$732,633	\$1,872,849	\$890,912	\$2,150,154	\$95,000	\$5,741,548
<i>Business Segment Total</i>	<i>\$732,633</i>	<i>\$1,872,849</i>	<i>\$890,912</i>	<i>\$2,150,154</i>	<i>\$95,000</i>	<i>\$5,741,548</i>
Planning and Research Segment						
Consumer Education	\$200,000					\$200,000
Market Research	\$360,000					\$360,000
Measurement & Verification	\$15,000					\$15,000
Planning & Administration	\$295,000					\$295,000
Product Development	\$190,000					\$190,000
<i>Planning & Research Segment Total</i>	<i>\$1,060,000</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$0</i>	<i>\$1,060,000</i>
PORTFOLIO TOTAL	\$2,227,741	\$3,627,437	\$1,472,112	\$3,151,712	\$175,000	\$10,654,002

III. Program Details

A. Residential Segment

SPS will continue to offer a wide range of product offerings to serve the Residential Segment throughout the Triennial. These offerings will be available to over 95,000 customers residing in single family homes, multi-family homes, and apartments and condominiums in southeastern New Mexico.

The Residential Segment will focus on educating customers about energy efficiency, giving them simple ways to participate, and encouraging them to make long-term commitments to reduce their energy usage. The marketing strategy for the Residential Segment is to build awareness and provide consumers a variety of energy efficiency offerings, including direct impact measures, indirect impact services, and educational tools.

SPS will execute Residential Segment outreach and marketing efforts through the use of targeted advertising, statement messaging, community meetings, events at local retailers, as well as content and tools on Xcel Energy's website xcelenergy.com.

SPS proposes to offer residential customers seven energy efficiency programs in the Triennial Plan, including: (i) Energy Feedback, (ii) Residential Cooling, (iii) HES(Residential and Low-Income), (iv) Home Lighting & Recycling, (v) Heat Pump Water Heaters, (vi) School Education Kits, and (viii) Smart Thermostats. The following sections detail each of the proposed programs.

1. Energy Feedback

a. Program Description

The program provides targeted Home Energy Reports ("HERs") to SPS's New Mexico residential customers, providing energy-use comparisons, and specific energy efficiency recommendations and tips to motivate and to educate customers to reduce their energy consumption. Customers receive new information with each HER that is delivered by mail or a combination of mail and email, when email addresses are available. An online version of this information provides additional energy-awareness and savings tools that are available to all SPS residential customers.

The product's main offerings include the following two components:

Personalized HERs – A targeted direct mailing and/or email that provides specific recommendations and tips to motivate customers to reduce their energy consumption. The individualized reports provide:

- customers' energy use compared to the average of similar-sized homes with similar characteristics (neighbor comparison);
- personalized energy efficiency recommendations and tips based on an analysis of the household's energy usage, demographics, and home characteristics and information provided by the participant; and
- advice on how report recipients can easily implement efficiency measures based on their individual circumstances.

The group of randomly assigned customers receiving the HERs is referred to as the Treatment Group. The Treatment Group customers are compared to a Control Group made up of randomly-assigned non-participating customers. The third-party implementer uses its extensive experience with utility behavioral programs and data analytics capabilities to determine which customers receive a mailed print version of the HER, an emailed report or both print and email reports.

Online Portal – An online suite of tools that gives customers greater insight into their energy consumption and actions they can take to become more energy efficient. These tools are available to all SPS residential customers in New Mexico, and provide the same information as customers receive in their HERs, but with a more robust set of customization options. These tools offer customers flexibility to analyze their consumption and provide options for customers to update their profiles making future HERs even more personalized and useful.

Customers who engage in the online portal are compared to similar customers who have not accessed the portal in order to determine energy savings driven by the use of the online tools. Savings from customers who are part of the HER Treatment Group who also use online tools will have all savings measured as part of their HER savings calculation. Only savings from customers who are not part of the HER Treatment Groups will be counted as attributable to online savings.

Budget

The budgets were developed based on estimated third-party implementer pricing, the Company's portfolio targets, and internal administrative cost estimates.⁵ The majority of the product's budget is allocated to third-party implementation services, which include preparing and mailing the HERs, data analytics, marketing and conducting an ongoing regression analysis of Treatment and Control Group participants to determine the electric savings. Administrative costs for customer data extraction and product administration to be completed by SPS are based on costs derived from previous program years.

⁵ The third-party implementer contract pricing is currently under negotiation for 2020.

The budget for the online portal is largely fixed due to the information technology and delivery method, and does not change as more customers use the tools and services. Online portal license fees are apportioned to this product's budget based on customer counts.

Changes for 2020-2022

A new third party implementer will take over program administration; however, there are no material changes planned for 2020-2022. The Company will work with the third-party administrator to determine when a refill of customers can be added based on a sample size that will provide statistically significant savings. The existing 2019 participants ("Legacy group") will roll over into 2020 and continue to receive print HERs. In addition to receiving print HERs, emailed reports will be sent to those participants with an active email address.

b. Program Administration

There is no customer application or rebate for this product. Participants for the Treatment group are secured using a random selection process administered by the third-party implementer. New participants, when added, will be informed of their selection at the beginning of treatment and will be given the opportunity to opt-out from receiving the Treatment Group communications at any time. Appropriately-sized Control Groups are identified by the third-party implementer and enable isolation of effects attributable to each Treatment Group. The Control Group customers have not and will not be directly contacted or targeted by SPS or the third-party implementer regarding this product.

The on-line version of the Energy Feedback program is opt-in. Customers become participants once they log onto My Account and go to the Energy Feedback tab.

c. Marketing and Outreach Plan

The program randomly selects and opts customers into the print HERprogram. It is not marketed for customer enrollment. Participants may opt out of outbound communications at any time.

The online portal will be available to all New Mexico residential customers who engage in the My Account portal. Active engagement of those customers will be initiated through:

- Customer visits to the My Account portion of Xcel Energy's website, which features customized energy feedback results and a prominent button for customers to select to see more details and use the portal tools. My Account customers receive periodic reminders to visit My Account to view their bill, make payments, or track energy use.
- General marketing and promotion of online tools and services as part of program communications.

- Outbound marketing efforts to targeted customers may include; email, on-bill messaging and promotion and social marketing.

d. Measurement & Verification Plan

Actual consumption in the form of meter billing data is used to M&V this program. Data for all participants, comparison homes, and control homes is provided to the third-party implementer for continuous analysis and performance reporting. The third-party implementer compares the consumption of participants (Treatment Group) to those of the Control Group to determine the savings resulting from the program. Regarding both the HER and online measures, energy savings will have a one-year life, with ongoing treatment and information exposure necessary to continue the full energy-savings benefits.

The independent evaluator will perform M&V on the program annually.

e. Cost Effectiveness Tests

See Appendix A for the Triennial program benefit-cost analyses and Appendix B for the forecast planning assumptions.

2. Residential Cooling

a. Program Description

The Residential Cooling program provides a rebate to SPS customers who purchase qualifying evaporative cooling and heating, ventilation, and air conditioning (“HVAC”) equipment for residential use. This program strives to increase energy efficiency in residential homes by encouraging consumers to purchase high efficiency evaporative coolers, central air conditioning and other HVAC equipment. Because not all local retailers and contractors stock high efficiency cooling units, the overall goals of the program are to educate customers on the benefits of using high efficiency units and creating demand by encourage retailers and contractors to stock high efficiency units.

Rebates are available for premium evaporative cooling systems, which include equipment with media saturation effectiveness of 85 percent or higher. Only new, permanently installed direct, indirect, or two-stage evaporative cooling units qualify for the program. Customers must select their model from the pre-qualified equipment list. Portable coolers or systems with vapor compression backup are not eligible, nor are used or reconditioned equipment. Rebates are also available for qualifying high efficiency air conditioning, air source heat pump systems, and select mini-split heat pumps by registered contractors who perform a quality installation, which includes proper sizing and testing.

Budget

The budget for the Residential Cooling program was developed based on historical program participation. The majority of the funds will go toward customer rebates, contractor incentives, and program promotions. Residential Cooling promotions include: an advertising campaign, retailer in-store signage, program applications, educational information about high efficiency units such as brochures for customers and contractors, bill inserts along with update articles, and possible contractor training if needed.

Changes for 2020-2022

Electronically commutated motor rebates will no longer be available in the program. HVAC contractor or distributor trade incentives will be added to the program to supplement residential customer rebates for high efficiency equipment. The programmable thermostats measure has also been moved to this program from HES to better align SPS's cooling offerings in one location.

In addition to these changes, SPS will evaluate the cost-effectiveness and marketability of adding whole house fans as a measure in this program. The existing program budgets described in this plan will cover these additional costs should the evaluation deem successful.

b. Program Administration

SPS will administer the Residential Cooling program internally. Customers will purchase the qualifying equipment and have it installed by a certified contractor of their choice. SPS will maintain a list of certified contractors who will assist the customer to determine eligible equipment, install equipment correctly, complete rebate applications, and answer technical questions.

c. Marketing and Outreach Plan

The Residential Cooling program will include the following strategic marketing efforts:

- advertising through local radio, print, and internet ads;
- contractor/retailer incentives to increase contractor support of the program;
- customer email newsletters;
- bill inserts during the cooling season; and
- informational packets to contractors in the SPS New Mexico area detailing the program and its benefits.

SPS will target local retailers, regional equipment distributors, and contractors in SPS's New Mexico service area to receive program literature and promote the program. Retailers, distributors, and contractors in New Mexico will be an essential part of customer awareness efforts and will receive information on program changes regularly.

d. Measurement & Verification Plan

The independent evaluator is expected to perform M&V on the program in 2022.

e. Cost Effectiveness Tests

See Appendix A for the Triennial program benefit-cost analyses and Appendix B for the forecast planning assumptions.

3. Home Energy Services (Residential and Low-Income)

a. Program Description

The HES offering will be provided to both residential and low-income customers with differing requirements and parameters for each customer group. The following sections describe these requirements by group.

The HES program provides incentives to Energy Efficiency Service Providers (“EESPs” or “contractors”) for the installation of a range of upgrades that save energy and reduce costs for existing residential and low-income households. Qualifying residential customers can receive any combination of attic insulation, air infiltration reduction, duct leakage repairs, energy efficient showerheads.

The Low-Income product is designed similarly to the Residential HES product and is frequently referred to as Low-Income HES. Income-qualified customers will receive attic insulation, air infiltration reduction, duct leakage repairs, or showerheads as appropriate at reduced cost.

Additionally, Income-qualified customers will receive an offer through mail informing them of their eligibility to receive a free Energy Savings Kit. A customer is qualified by being identified as receiving energy assistance through federal Low-Income Home Energy Assistance Program (LIHEAP). If the customer chooses to receive a kit, they will send their response to the third-party implementer. Customers will receive a kit within six to eight weeks. The kits provide customers with the following measures:

- four (4) 9 Watt LED bulbs;
- high efficiency showerhead (1.5 gpm);
- kitchen aerator (1.5 gpm); and
- bathroom aerator (1.0 gpm)

The primary objective of this program is to achieve cost-effective reductions in energy consumption in residential homes. Additional objectives of the program are to:

- encourage private sector delivery of energy efficiency products and services;
- utilize a whole-house approach to upgrade efficiently; and
- significantly reduce barriers to participation by streamlining program procedures and M&V requirements.

SPS will partner with qualifying EESPs to deliver these services and will make any customers with ability to pay problems aware of the program. EESPs must apply to the program and be approved in order to participate. SPS will require EESPs to receive pre-approval for targeted multi-family sites prior to installation of any energy efficiency measures for which an incentive will be requested.

Budget

The budget is primarily calculated by reviewing historical costs per participant and applying those costs to the estimated number of participants. Participation rates were determined by considering a feasible number of energy efficiency projects and the most likely measures to be installed during the year. To estimate the number of projects for 2020-2022, historical participation from 2018 and feedback from the contractors were used. The HES program devotes over 60 percent of its budget to contractor incentives and third-party administration, just under 30 percent to customer incentives, and the remainder to administrative activities such as measurement and verification, data capture and analysis, processing for rebates, and communications/promotions.

Changes for 2020-2022

HVAC measures and programmable thermostats were removed from the New Mexico HES program and concentrated in the New Mexico Residential Cooling program. Radiant barrier measures were also removed due to the difficulty of installation and lack of participation over the last several years.

b. Program Administration

SPS will pay incentives to contractors on the basis of the deemed savings per measure implemented in customer homes. To determine the total rebate, each project will be evaluated individually based on the efficiency measures incorporated and the summer demand and annual energy savings achieved.

In their incentive application, contractors must include: the name of the EESP; the scope and location of work; the number and type of measures installed; the time period for completion of work; the payment requested; and the energy demand and consumption savings expected by the installed measures. Savings, rebates and contractor incentives will be tracked by the Frontier Energy P-3 database.

SPS will administer the HES program and will contract with third-party EESPs to perform all marketing and installations for this program. SPS will hold a series of contractor workshops and contact experienced contractors to explain the program, its process, and participation requirements.

In order to be approved as a certified EESP, each contractor will be required to demonstrate a commitment to fulfilling program objectives and a competency in completing the proposed project. To do so, EESPs will be required to submit the following information as part of the application process:

- a description of the EESP's business, including relevant experience, areas of expertise, and references;

- a work plan that covers the design, implementation, project schedule, operation, and management of the project, including M&V of the project (the amount of detail required in this work plan will vary with project size);
- evidence of good credit;
- proof of applicable insurance, licenses, and permits;
- a valid New Mexico Contractor's License (GB-2 or GB-98);
- a New Mexico tax number;
- a valid New Mexico business license; and
- SPS-approved certification for at least one person on each work crew.

The Low-Income Kits offering does not pay a rebate, but rather provides free energy efficiency measures to participating income-qualified customers. Identified incentive dollars are the estimated value of the measures of the kit.

c. Marketing and Outreach Plan

SPS will work with contractors to market the program in order to reach a broad audience of customers and increase participation. Additionally, SPS will continue to conduct outreach for the program sponsors through a variety of marketing methods, including brochures, workshops, advertising, bill inserts, and other appropriate means. When and if possible, SPS will also contact and coordinate with community agencies such as the New Mexico Mortgage Finance Authority or LIHEAP agencies for the low-income portion of the program.

SPS will manage the marketing and outreach for the Low-Income Kits portion of the Low-Income HES product. Income-qualified customers will receive direct mail offers for the free energy savings kits which include a pre-paid business reply card.

d. Measurement & Verification Plan

A third party inspection contractor will conduct random in person visits to ongoing and finished projects to determine if contractors have fulfilled their stated claims of energy efficiency increases. The inspection contractor will also randomly inspect customer agreements, low-income certifications, field notes, insurance, and contractor licenses to insure that contractors are complying with all requirements of the program.

The independent evaluator is expected to perform M&V on the program in 2021.

e. Cost Effectiveness Tests

See Appendix A for the Triennial program benefit-cost analyses and Appendix B for the forecast planning assumptions.

4. Home Lighting & Recycling

a. Program Description

The Home Lighting & Recycling program provides discounts for customers to purchase energy efficient LED light bulbs at participating retailers and dispose of them in an environmentally friendly manner. Energy-efficient light bulbs are an economical and easy way for customers to save electricity.

SPS promotes energy-efficient lighting by offering in-store retail discount promotions. In these promotions, the bulb manufacturer, retailer, and SPS combine funds to offer instant rebates on a variety of bulb models enabling customers to purchase discounted LEDs. SPS partners with retailers such as Home Depot, Walmart, Dollar Tree, and Ace Hardware. Customers receive the discounted price at the register at the time of the purchase. There is no mail-in rebate form.

The CFL Recycling component provides an environmentally friendly method for customers to dispose of CFLs. SPS created a partnership with retailers to serve as the retail arm for CFL recycling. Customers can bring spent CFLs to participating hardware stores and recycle them free of charge. The retailer stores the bulbs in a covered bin until it is full and ships the bulbs to the recycler in the postage paid bin. SPS covers the cost to ship and recycle the bulbs. When needed, retailer calls to ask for a replacement bin to be shipped. There is no known health risk associated with LED disposal. Therefore, SPS will not offer LED recycling at this time.

Budget

The Home Lighting & Recycling program budget is based primarily on the number of bulbs sold. SPS developed the budget by combining costs for incentives, implementation, advertising, promotion, and labor. The advertising costs will be spent on TV, radio, online, and print advertising.

The goal for this program was developed by reviewing market potential and logistics, including an analysis of historical sales data, retail store chains, and local promotional opportunities. This in turn helps determine estimated costs for budget development.

Changes in 2020-2022

The company plans on adding linear tube (TLED) discounts to the program.

SPS also plans to use best efforts to add additional retailers to the program and to pursue opportunities to add retail locations.

b. Program Administration

The Home Lighting program is offered throughout the SPS service area. SPS works with large retail chain stores in order to obtain maximum penetration of the product and reach as many people as possible. SPS obtains sales data from the participating retailers for the sales of energy efficient bulbs including the wattage, model of bulb, date of sale, and retailer/location of sale. SPS uses a third-party implementer, Slipstream (formally known

as Wisconsin Energy Conservation Corporation), to oversee manufacturer and retailer relations, develop an RFP to select partners, create parameters and contracts with partners and implement the on-site field visits to educate partners, set sale signage, and verify inventory and prices of the discounted bulbs. SPS uses a variety of retail partners to ensure optimal pricing and help reduce free-ridership, including big box, mass merchandiser, and hardware stores. SPS makes every effort to target retailers and events that serve the hard-to-reach market segment.

c. Marketing and Outreach Plan

The objectives of the Home Lighting & Recycling program are to motivate customers to purchase LEDs; persuade them to try using energy-efficient bulbs in different applications throughout their homes; and encourage them to recycle the CFL bulbs when they burn out.

SPS uses discounts to motivate customers to purchase bulbs. The value of the incentive varies by the type and cost of the bulb. The discounted bulbs are available at participating retailers. Customers can find a listing of participating retailers, locations, and the bulbs that are discounted on the Xcel Energy website: <http://www.xcelenergy.com/lightingdeals>. Xcel Energy creates awareness of the program and drives customers to the retailers and/or website with television, radio, print, point-of-purchase display, outdoor bill boards, and online advertising. SPS also uses local consumer events, education, and promotions to raise awareness of energy-efficiency and distribute free energy efficient bulbs.

d. Measurement & Verification Plan

The independent evaluator is expected to perform M&V on the program in 2020.

e. Cost-Effectiveness Tests

See Appendix A for the Triennial program benefit-cost analyses and Appendix B for the forecast planning assumptions.

5. Heat Pump Water Heaters

a. Program Description

The Heat Pump Water Heater (“HPWH”) program is designed to encourage SPS customers to purchase and install an eligible energy-efficient electric HPWH for residential use. HPWHs are the most efficient electric fuel option for customers. The incentive will be available for self-install or professional installation through an HVAC contractor. Following installation, a completed rebate application form and invoice are submitted to SPS. Customers can expect to receive a rebate six to eight weeks after submitting an application.

Qualifying Appliances:

The electric HPWH must meet the following requirements in order to qualify for the incentive:

- residential equipment listed on the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) website or ENERGY STAR website. Indirect units and commercial water heaters are not eligible;
- installed in a new or existing home; and
- customer must receive electric service from SPS to qualify for a rebate.

Budget

The budget for the HPWH program was developed based on forecasted participation. The majority of the funds will go toward customer rebates and internal administration to launch the new program.

Changes for 2020-2022

This program is new to the SPS Portfolio in PY 2020.

b. Program Administration

SPS will administer the HPWH program internally. Customers can purchase the qualifying equipment and install it themselves or work with the contractor of their choice to have it installed.

c. Marketing and Outreach Plan

The HPWH program will include the following strategic marketing efforts:

- customer email newsletters;
- bill inserts throughout the year; and
- informational packets to contractors in the SPS New Mexico area detailing the program and its benefits.

SPS will target local retailers, regional equipment distributors, and contractors in SPS's New Mexico service area to receive program literature and promote the program. Retailers, distributors, and contractors in New Mexico will be an essential part of customer awareness efforts and will receive information on program changes regularly.

Once the program successfully launches, SPS will be using its best efforts to increase the number of retail stores which stock heat pump water heaters for immediate customer purchase.

d. Measurement & Verification Plan

The independent evaluator is expected to perform M&V on the program in 2021.

e. Cost-Effectiveness Tests

See Appendix A for the Triennial program benefit-cost analyses and Appendix B for the forecasted planning assumptions.

6. School Education Kits

a. Program Description

School Education Kits is a turnkey educational program that combines energy efficiency curriculum for teachers with easy-to-install energy efficiency and water-saving measures for students to install at home. SPS targets fifth grade students in its New Mexico service area with this annual program. SPS and the third-party contractor will monitor schools in the New Mexico service area to determine if the program should be moved to another grade level to meet individual school district standards. The same content and kit measures would be provided, and the program would remain at that specific grade level in subsequent years.

The School Education Kits program will provide the following classroom materials to each student participant:

- two 9-Watt LED bulbs;
- two 11-Watt LED bulbs;
- high efficiency showerhead (1.5 gpm);
- kitchen aerator (1.5 gpm);
- bathroom aerator (1.0 gpm);
- furnace air filter alarm;
- LED nightlight;
- digital water/air thermometer;
- toilet leak detector tablets; and
- parent evaluation card.

The program provides direct-impact conservation as part of an education program, building awareness of energy conservation in children, and providing energy efficiency programs to customers of all income levels.

Budget

The School Education Kits budget was developed based on SPS's participation goals and historical budgets. About 50 percent of the School Education Kits program budget will be paid to the third-party contractor for administration of the program. The remainder of the budget is designated for the cost of the measures in the kits, as well as internal labor to provide direction and oversight to the implementer, prepare and analyze data for reporting, and manage program expenditures.

The School Education Kits program does not pay a rebate, but rather provides free energy efficiency curriculum and activity kits to participating classrooms. Identified incentive dollars are the estimated value of the measures of the kit.

Changes for 2020-2022

None.

b. Program Administration

The program will be marketed and administered by the third-party contractor. The third-party contractor assumes all responsibility for curriculum and kit development, outreach to teachers, delivery of materials, and participant survey. SPS pays a flat rate per kit to cover all of these services.

In addition, the third-party contractor will perform pre- and post-surveys to gather installation data on the program. These surveys will confirm installation of energy and water saving devices. These results will be used, along with deemed savings estimates, to determine the demand and energy savings from the kits based on students and teacher responses identifying the number of LEDs, high efficiency showerheads, and faucet aerators that were installed.

c. Marketing and Outreach Plan

The third-party contractor will manage all aspects of the School Education Kits program marketing and outreach activities. They will identify the schools that are within SPS's New Mexico service area and determine the approximate number of eligible teachers and students. They will send out customized marketing materials to help enroll the classrooms. The materials explain the program, while providing teachers with helpful tips to teach the energy efficiency curriculum to their students. Kits will also provide teachers with information about how and why SPS sponsors this program offering and the importance of conservation as part of their curriculum. As in the past, SPS and the third-party contractor will continue to work together to determine the strategic approach for identifying schools.

d. Measurement & Verification Plan

The independent evaluator is expected to perform M&V on the program in 2022. SPS will work with the independent evaluator to include estimates of water and natural gas savings in the annual program evaluations, if no additional cost to do so is required by the evaluator.

e. Cost-Effectiveness Tests

See Appendix A for the Triennial benefit-cost analyses and Appendix B for the forecasted planning assumptions. Although the program is not cost effective, SPS will conduct annual reviews with the third-party contractor to determine if costs for the kit measures have declined over time.

7. Smart Thermostat Program

a. Program Description

The Smart Thermostat Pilot, marketed to customers as the “Saver’s Stat Program,” in SPS’s 2016 Plan Filing for PY 2017, was designed to evaluate the energy efficiency and demand response impacts of Wi-Fi connected communicating “smart” thermostats in residential single family homes. The pilot ran from 2016 through 2019 and was evaluated after the 2016 program year. SPS offered customers a smart thermostat and installation at no charge in exchange for customers allowing SPS to call demand response events and measure the capacity savings of these events.

While preparing filing materials for the 2020 triennial, SPS concluded that residential demand response programs cannot be cost effectively implemented over the next three years due to the reduced avoided capacity costs. As a result, the Saver’s Stat program will be transitioned into an exclusively energy efficiency program utilizing the new ENERGY STAR connected Thermostat specification. Thermostats meeting the ENERGY STAR connected thermostat specification have demonstrated the ability to achieve energy savings through HVAC equipment runtime reductions, specifically an 8% or higher reduction in heating equipment runtime and a 10% or higher reduction for cooling equipment runtime.

While demand response is not cost effective in the short term, SPS recognizes that there will be a need for a smart thermostat demand response program in the future. Because of this, the new program will only be rebating smart thermostats that not only meet the Energy Star performance standard but are also compatible with Xcel Energy’s demand response management system. This will increase the potential customer base of a future demand response program and will provide SPS with data regarding potential customers. Current dispatchable customers will be retained in case SPS is required to call and emergency event. This will also allow SPS to retain a dispatchable customer base for when a demand response program is needed in the future.

Budget

The budget will be primarily comprised of efficiency rebate dollars and program administration. Additional administration dollars were added to the program to maintain the dispatchable customer base to track and report the available dispatchable load.

Changes for 2020-2022

For the Triennial Plan the Smart Thermostat Pilot will be transitioned into an exclusively energy efficiency program using the ENERGY STAR Smart Thermostat standard.

b. Program Administration

Eligible customers will be able to receive the \$50 rebate for an ENERGY STAR connected thermostat through the Xcel Energy storefront, paper applications and online applications that will be available to both end use customers and trade allies. SPS will also explore offering additional instant rebates, such as in hardware stores or other online

storefronts, as program interest and budget allows. Customers must receive electric service from SPS in order to be eligible for a rebate.

c. Marketing and Outreach Plan

SPS plans to promote this program via bill inserts, email marketing, direct mail, Xcel Energy's website, community events and/or local print media or radio. Marketing efforts will be aligned with promotions from SPS's thermostat manufacturing partners in order to provide the best value to customers and encourage participation. This will include promotions surrounding holidays and new product releases. Product demand peaks in the cooling season along and end of year promotion schedule so marketing campaigns will be aligned with these trends as well.

d. Measurement & Verification Plan

The independent evaluator is expected to perform M&V on the program in 2020.

e. Cost-Effectiveness Tests

See Appendix A for the Triennial benefit-cost analyses and Appendix B for the forecasted planning assumptions.

B. Business Segment

SPS's Business Segment in New Mexico consists of approximately 24,000 active customer locations. This customer group consumes a substantial share of the total energy in the service area, and, as such, represents much of the energy efficiency and load management potential for the region.

SPS encourages business customers to reduce their energy use, offset energy peaks, and minimize environmental impacts through a variety of programs offering prescriptive rebates, customized programs, and study-funding. Despite these efforts, SPS business customers experience a number of barriers to participation, including:

- business customers often have little or no capital to invest in projects;
- business customers require very short payback periods for their projects; and
- typical business projects have very long lead times.

To combat these barriers, SPS's Account Managers, trade allies, EESPs, and EES are trained to address the specific needs of business customers. SPS commonly assigns an Account Manager to its larger, more complex customers. EES (phone-based account managers) serve the mid-market and small business customers, prospect for and promote savings opportunities, and manage the application and project completion process, assisting both customers and trade partners alike. Awareness-building communication campaigns, community and trade outreach, site visits, incentives, and direct and

electronic communications are also key components of the strategy to penetrate the SPS market.

1. Business Comprehensive

a. Program Description

Business Comprehensive is the bundling of the traditional prescriptive, custom, and study/implementation products to provide customers with valuable energy management information and less complexity, as they consider participation in SPS programs. This program includes the Cooling Efficiency, Custom Efficiency, Large Customer Self-Direct, Lighting Efficiency, Motor & Drive Efficiency, and Building Tune-Up products.

A description of each of the products offered within the Business Comprehensive program follows:

Cooling Efficiency

The Cooling Efficiency product encourages SPS business customers to choose the most efficient air conditioning equipment to meet their needs. The product offers rebates in both new construction and retrofit applications. Rebates reflect a significant portion of the cost of selecting high efficiency measures over standard efficiency measures.

Lighting Efficiency

The Lighting Efficiency product offers rebates to customers who purchase and install qualifying energy efficient lighting products in existing or new construction buildings. Rebates are offered to encourage customers to purchase energy efficient lighting by lowering the upfront premium costs associated with this equipment. Common lighting retrofit projects include replacing high intensity discharge or fluorescent fixtures with LED fixtures. Retrofit rebates also include networked lighting controls and standalone control rebates for occupancy sensors and photocells which are used for daylight harvesting.

Motor & Drive Efficiency

The Motor & Drive Efficiency product is designed to reduce the barriers that prevent customers from purchasing high efficiency motors, variable frequency drives (“VFDs”), or motor controls. To overcome these barriers, SPS offers rebates to customers who install:

- motors that meet the Department of Energy (DOE) efficiency standards for motors;
- VFDs to vary the speed of motors;
- motor controllers to reduce the energy consumption of motors that must operate at a constant speed;
- Pump-Off Controllers on oil wells; or
- energy efficient compressed air equipment.

Custom Efficiency

The Custom Efficiency product is designed to provide SPS's business customers rebates on a wide variety of unique or unusual equipment and process improvements that are not covered by the prescriptive products, including combined heat and power projects. Rebates are offered for measures that exceed the standard efficiency options. The rebate is intended to reduce the incremental project cost of the higher efficiency option, thereby encouraging customers to choose the more energy efficient option. Since energy applications and building system complexity can vary greatly by customer type, it is important for customers to have a customized energy efficiency option to help them implement cost-effective energy efficiency measures.

The Custom Efficiency product includes an optional evaluation component designed to introduce large commercial and industrial customers to energy efficiency opportunities and build the product pipeline for future years. This component of the Custom Efficiency product is modeled after the Process Efficiency program that Xcel Energy offers in other jurisdictions, but differs in that it is available to large commercial and industrial customers instead of being limited to manufacturing customers. The goals of this component, called the Large C&I Study, are to:

- increase customer awareness of energy consumption and opportunities to reduce consumption;
- identify and develop specific conservation opportunities;
- drive customers to implement identified measures through existing prescriptive and customized rebate programs; and
- drive customers to implement low capital and or short payback measures even though they may not qualify for an implementation rebate.

The Large C&I Study effort has several phases, which are customized and defined in a Memorandum of Understanding between SPS and each customer:

- Phase 1: Identification – Interested C&I customers will receive a free, one-day, on-site energy assessment performed by SPS staff and a contract vendor. At the end of the assessment, the customer will receive a detailed report identifying their energy consumption habits and conservation opportunities.
- Phase 2: Scoping – SPS will provide support and resources to further define and provide recommendations for energy savings opportunities identified in Phase 1. The customer will pay no more than \$7,500 towards these efforts.
- Phase 3: Implementation – Implementation of measures scoped in Phase 2 will typically follow one of two paths:
 - Customers implementing measures that qualify for rebates under one of the prescriptive rebate products (*i.e.*, Lighting Efficiency, Motor & Drive Efficiency, etc.) or the Custom Efficiency product will receive rebates in accordance with the appropriate product.
 - Customers who implement measures scoped in Phase 2 that do not meet program/product requirements will not receive a rebate; however, SPS will count the energy and demand savings resulting from implementation.

SPS is targeting customers with aggregated annual consumption greater than 4 GWh for participation in the Large C&I Study. These C&I customers typically offer the largest

potential conservation opportunities per study dollar spent. Account Managers will contact eligible customers and describe the product to solicit participation. Based on experience with similar products in other service territories, SPS expects project lifecycles to be greater than one year.

Large Customer Self-Direct

As an alternative to the guided process of the Custom Efficiency product, the Large Customer Self-Direct product is available to SPS customers with contiguous facilities that use over 7,000 MWh per year (“Large Customer”). Self-Direct participants are also eligible for the other Business Segment programs.

The Large Customer Self-Direct product entitles customers who use more than 7,000 MWh per year at a single, contiguous facility to apply for either:

- A bill credit of up to 70 percent of the energy efficiency tariff rider charges for approved incremental expenditures made towards cost-effective energy efficiency or load management; or
- An exemption of up to 70 percent of the energy efficiency tariff rider charges for 24 months if the customer demonstrates that it has exhausted all cost-effective energy efficiency or load management projects at its facility.

In this context, a project is cost-effective if it has a simple payback period of more than one year, but less than seven years.

To claim a credit, the customer must submit to the Self-Direct Administrator an energy efficiency project description, along with relevant engineering studies showing the projected savings, expenditures, and cost effectiveness, by November 30 of the year preceding the installation of the project. To claim an exemption, the customer must submit to the Self-Direct Administrator a detailed engineering study showing the absence of cost-effective energy efficiency investments and an affidavit confirming the results of the engineering study from the Evaluator by November 30 of the year preceding the exemption.

An energy efficiency project must reduce electric energy consumption or peak demand and be cost-effective in order to qualify for a credit. Large Customers will be able to receive the credit only after expenditures have been made, the project has been completed, and the Evaluator has determined that the efficiency measures are properly installed and are able to deliver the expected energy or peak demand savings. For projects that take more than one year to complete, annual credits for operating energy efficiency measures will be determined by the Evaluator. Eligible expenses incurred in excess of \$52,500 in any year may be recovered in the subsequent year.

Eligible expenses are actual expenses reasonably incurred by a Large Customer in connection with construction, installation, or implementation of an eligible project, including but not limited to, equipment costs, engineering and consulting expenses, and finance charges.

Building Tune-Up

The Building Tune-Up product, is a study/implementation option targeted at buildings smaller than 75,000 square feet. The study vendor, selected by SPS, will work through a checklist of measures focusing on the proper operation of existing equipment and complete fixes on-site as appropriate. The Building Tune-Up product is designed to assist smaller business customers to improve the efficiency of existing building operations by identifying existing functional systems that can be “tuned up” to run as efficiently as possible through low- or no-cost improvements.

Examples of typical Building Tune-Up measures include:

- calibration/tune-up of Energy Management System points;
- adjustment of outside air and return air dampers;
- resetting the chilled water and hot water supply temperatures;
- optimizing the start/stop of air handlers and makeup air units (early shutdown in the evening, late start in the morning);
- resetting chiller condenser water temperature; and
- eliminating simultaneous heating and cooling.

Building Tune-Up consists of two phases: diagnosis (study) and implementation. SPS offers rebates for Building Tune-Up studies and the implementation of recommissioning measures. To ensure consistency with the studies and implementation of on-site fixes, SPS will hire a qualified engineering firm to complete both the study and implementation phases.

Budget

The Business Comprehensive program budget was developed based on the established goals. Rebates, promotional expenses, and labor, as described below, comprise the majority of the budget:

- Incentives: The largest portion of the Business Comprehensive budget is dedicated to customer rebates, which will be paid based on the energy savings achieved. The rebate budget is an average of all the rebate amounts which have been tracked in previous years. Prescriptive rebates are based on both the kW saved and a reasonable percent of the incremental cost of the higher efficiency option. Custom rebates are based on the calculated savings of expected projects.
- Promotions: The promotional budget includes spending for direct mail, email, radio, outdoor and print advertising, educational and sales materials, social media, online advertising, and events, webinars, and seminars for customers and the trade.
- Internal Administration: This was determined by estimating the number of full-time employees needed to manage the product and execute the marketing strategy, trade incentives, and engineering analysis and rebate processing, including internal employees, external consultants, and/or contract labor. Approximately half of the internal administration budget is dedicated to the cost of conducting engineering analysis for custom projects to ensure energy savings are accurate and credible.

- Third-Party Delivery: Much of SPS's program administration and delivery is delivered via a contracted agent/third-party. This portion of the budget includes costs that the third-party incurs, minus the cost of the energy efficient equipment, which should be counted as a rebate.
- M&V: The time and cost the Evaluator expends to verify energy savings, by in-person customer visits or post-project telephone surveys or metering.

Changes for 2020-2022

The program will add the following new measures and baselines:

- Lighting Efficiency Product
 - o LED high/low bay fixtures replacing HID fixtures
 - o LED replacement lamp for 400 watt HID lamps
 - o Standalone controls
 - o Networked Lighting Controls
 - o LED stairwell fixtures
 - o LED linear ambient fixtures
 - o T12 baselines to all measures with fluorescent baselines
 - o Fluorescent baselines to high-bay measures
- Custom Efficiency Product
 - o Strategic Energy Management to capture continuous improvement efforts. SPS will take credit for energy savings as a result of operational changes for customers that participate in the offering as long as the Evaluator and SPS agree on the calculation methodologies.
 - Building Tune-up
 - o Including direct installation measures such as LED lamps, Smart Thermostats, and other low-cost measures in an effort to drive participation.

The program will remove the following new measures:

- Lighting Efficiency Product
 - o All CFL measures
 - o All fluorescent measures
 - o All optimization measures
 - o Traffic and pedestrian signals

b. Program Administration

Customers learn about the program and its benefits through newsletters, email, webinars, social media, online ads, direct mail, trade allies, Account Managers, and Energy Efficiency Specialists (EES). Applications for the program are available both on Xcel Energy's website⁶ and from trade allies. Customers may apply for rebates by completing the application and providing a detailed invoice for the newly installed efficient

⁶ <http://www.xcelenergy.com/business>

equipment. The equipment must be new and meet all the qualifications detailed on the application. After the customer has installed the equipment, the application and invoice must be submitted to SPS within 12 months of the invoice date. Once the paperwork is completed and submitted, rebate checks will be mailed to the customer within six to eight weeks. Participants in the program may submit their application to their Account Manager or an EES.

The custom components of the Business Comprehensive program will be administered internally. The project review process involves the following steps:

1. Application – Prior to purchase and installation of equipment, customers must submit an application and receive pre-approval for their custom projects. The application form requests a description of the project, operating hours, and costs.
2. Pre-Approval – To qualify for a custom rebate, projects must be cost-effective using the UCT. SPS's engineering team will review the proposal, specifically reviewing the project's demand and energy savings relative to industry standards and the interactive energy effects of the system components. NEBs, such as maintenance savings and reduced water consumption, are considered in the analysis for customer benefit. These NEBs are not used to calculate the UCT by the Independent Evaluator.
3. Pre-Approval Notification – Typically, within approximately ten business days after receiving the complete proposal information, SPS will determine whether or not the project qualifies and notifies the customer of the decision and the rebate amount (if project is pre-approved).
4. Implementation – Once the customer has received pre-approval, they may purchase and install their new energy efficient equipment or process improvement.
5. Post-Project Review & Payment of Rebate – Upon completion of the project, the customer must notify SPS. If the project has undergone any changes of scope or equipment, a second engineering analysis will be performed to determine whether the project still qualifies under the program guidelines and what level of rebate is owed.

The study components of the Business Comprehensive program will be administered through a third-party study provider. Customers will learn about the program and its benefits through newsletters, email, online ads, direct mail, trade allies, Account Managers, and EES. Applications for the program are available both on Xcel Energy's website and from trade allies. Customers may apply for study rebates by completing the application and corresponding Building Tune-Up. Once the study is completed and paperwork submitted, rebate checks will be mailed to the customer within six to eight weeks. Participants in the program may submit their application to their Account Manager or an EES.

c. Marketing and Outreach Plan

Marketing communications will revolve around the benefits of choosing high energy efficiency equipment through paybacks, lifecycle cost and environmental benefits. The Business Comprehensive program creates a base level of awareness and knowledge in the marketplace through various tactics including, but not limited to: newsletters, online ads, radio, outdoor, case studies, social media, website, collateral, webinars, events, email and direct mail to customers and trade allies. These tactics make customers aware of the key benefits of energy efficiency and its applicability to their systems, and give the trade a platform from which to educate customers on high efficiency solutions for their particular applications and the myriad benefits of newer equipment. An effort will also be implemented to update business customer industry segments in order to craft and customize messages that would best resonate with this class. SPS Account Managers and the third-party implementer will continue efforts to target the oil and gas industry to identify energy efficiency projects. The third-party implementer will attend industry events to network with new customers and raise awareness of potential energy efficiency measures. SPS and the third-party implementer will conduct similar outreach efforts with customers and distributors within the irrigation segment.

The program also provides tools for the customers and trade allies to evaluate rebates and incorporate them into purchase decisions. SPS Account Managers and EES will educate customers on specific energy efficiency opportunities, evaluate rebate potential, and assist in the rebate application process. The trade can find similar assistance through trade trainings and in some cases, the trades may be offered a cash incentive to promote qualifying products. It is also necessary to continue to partner with the trade allies and position customer incentives as a tool to increase their sales volumes and educate on best practices in sales techniques. Trade allies are one of SPS's greatest assets in continuing to educate customers on the benefits of energy efficient equipment. SPS's internal Account Managers and EES are also an essential part of assisting customers with program participation and understanding.

To reach its energy savings goal, SPS will to continue to educate customers and increase awareness of the program offerings. In addition, SPS will work with local communities on high-level energy efficiency planning and benchmarking to assist with long-term goals through the utilization of third-party administration expertise to achieve higher level savings and sustain long-term plans and partnerships at the city level.

d. Measurement & Verification Plan

The independent evaluator is expected to perform M&V on the program annually.

e. Cost-Effectiveness Tests

See Appendix A for product-level benefit-cost analyses and Appendix B for the forecasted planning assumptions.

C. Planning & Research Segment

The Planning & Research Segment consists of internal company functions (not customer-facing), which support the direct impact energy efficiency and load management programs. The Segment includes energy efficiency-related expenses for Consumer Education, Market Research, M&V, Planning & Administration, and Product Development. The overall objectives of the Planning & Research Segment are to:

- provide strategic direction for SPS's energy efficiency and load management programs;
- support direct impact programs through education and opportunity identification;
- ensure regulatory compliance with energy efficiency and load management legislation and rules;
- guide SPS internal policy issues related to energy efficiency and load management;
- evaluate program technical assumptions, program achievements, cost-effectiveness, and marketing strategies;
- provide segment and target market information;
- analyze overall effects of SPS's energy efficiency and load management portfolio on customer usage and overall system peak demand and system energy usage;
- measure customer satisfaction with SPS's energy efficiency and load management efforts; and
- develop new energy efficiency and load management programs.

Because of the indirect nature of the Planning & Research Segment, the normal program categories (*i.e.*, rebate structure, program administration, marketing & outreach, M&V, and cost-effectiveness) do not apply. The following sections are limited to a description of each program.

1. Consumer Education

Consumer Education is an indirect impact program that focuses primarily on creating consumer awareness of energy efficiency while providing residential customers with information on what they can do in their daily lives to reduce their energy usage. The program also supports the various energy efficiency products SPS offers to residential customers. SPS employs a variety of resources and channels to communicate conservation and energy efficiency messages, including the Xcel Energy website, social media, print, direct mail, public library partnerships and sponsorship of community events. SPS has found through industry and internal market research that customers who are educated on the benefits of energy efficiency are much more likely to participate in DSM programs. This research also shows that customers need multiple exposures to the same message before it becomes knowledge. SPS believes that this general education drives customers to participate in its portfolio of programs.

SPS's Consumer Education program targets all of its New Mexico residential customers. The primary emphasis will continue to focus on:

- Power Check meters and materials placed in public libraries;
- social media (Facebook, Twitter, blogs, etc.)
- targeted communications to address seasonal usage challenges;
- conservation messaging through Xcel Energy's newsletters and bill onserts to residential customers;
- creation and publication of reference education materials (in English and Spanish);
- sponsorship of community events supporting residential conservation and energy efficiency; and
- customer feedback surveys and customized post-event emails following outreach events.

SPS has approximately 90,000 residential customers in its New Mexico service territory. SPS plans to interface with approximately 80 percent of the residential customer base through bill onserts, public library partnerships, digital kiosks, and community outreach events.

Budget

The Consumer Education budget was developed based on past experience building awareness and community outreach in New Mexico, as well as projected costs for reaching customers through multiple communication channels and tactics including:

- Power Check meters and materials in public libraries;
- social media;
- direct mail campaigns and promotions about conservation;
- bill onserts; and
- sponsorship of community events supporting residential conservation and energy efficiency.

Changes for 2020-2022

SPS will continue to focus efforts on direct program promotion and awareness with lessor emphasis on general education activities in 2020.

2. Market Research

The Market Research group oversees a variety of research efforts that are used to assist SPS with energy efficiency and load management decision-making. These research functions are needed to provide overall support for clarifying issues and for thoroughly understanding both current and potential customers. Often, similar information is collected over multiple service territories, making comparisons possible.

In 2020, the Market Research group plans to conduct several projects and studies as described below:

- **Dun & Bradstreet Business List Purchase** – Quarterly update on the demographics of existing business customers. This updated information can then be used to understand, profile, and target marketing efforts more effectively.
- **E Source Membership** – Robust repository of secondary and syndicated research resources for national marketing studies, research services, and consulting services.
- **J.D. Power Key Account Multi-Client Study** – Research of the service provided to Xcel Energy’s largest customers including hospitals, universities, and military bases and how the company performs compared to our peers in the utility industry.
- **Xcel Energy Proprietary Relationship Study** – Provides more frequent feedback about customer attitudes and behaviors around energy.
- **J.D. Power Residential Electric Satisfaction Studies** – Identifies key drivers of customer satisfaction levels and benchmarks Xcel Energy’s performance against utility peers.
- **Residential Segmentation** – Purchased customer data which will help in creating a new residential segmentation scheme and personas that will help identify customer groups for marketing efforts.
- **E Source Gap & Priority Studies** – Studies focus on small and midsize and large C&I customers.

In the Spring of 2020, SPS will issue an RFP for an Energy Efficiency Potential Study to be conducted in late 2020 and early 2021. The study will investigate and quantify the achievable savings in SPS’s service area through:

- a) Assessment of existing research;
- b) Collecting primary research with SPS customers and trade partners if necessary;
- c) Calculating the Technical Potential;
- d) Calculating the Economic Potential;
- e) Calculating the Achievable Potential subject to the EUEA

Budget

The Market Research budget was developed based on past experience and the costs of the projects listed above.

SPS’s expected cost of the Potential Study (\$500,000) will be included within SPS’s 2021 and 2022 program portfolio budgets as a Market Research cost (\$250,000 each year).

Changes for 2020-2022

Market Research will be overseeing several new projects and studies in 2019, including Residential Segmentation and the J.D. Power Key Account Multi-Client Study.

3. Measurement and Verification

17.7.2.15. NMAC requires that all energy efficiency and load management programs be subject to measurement and verification through the Evaluator, where M&V is defined as “means an analysis performed by an independent evaluator that estimates, consistent with 17.7.2.7.B NMAC, reductions of energy usage or peak demand and determines any actual reduction of energy usage or peak demand that directly results from the utility’s implementation of particular energy efficiency measures or programs or of particular load management measures or programs.” Under the direction of the Commission and Staff, the Evaluator will conduct an analysis of specified programs and provide a report on its findings. SPS will facilitate the M&V of all of its direct impact energy efficiency and load management programs according to the requirements set forth in the New Mexico rules and statutes.

a. Selection of the Independent Program Evaluator

While the Evaluation Committee has been eliminated as part of the statewide process, 17.7.2.15.B still provides the utilities the opportunity to participate in the selection of a statewide, M&V contractor.

b. Measurement & Verification Process

In the Triennial, SPS will require M&V of selected prescriptive programs (deemed savings) and its custom programs (calculated savings). The Evaluator will provide an individual M&V Plan for programs describing both the annual and comprehensive plans according to the program characteristics. The following are nationally accepted guidelines as to the type of M&V for each category of energy efficiency and load management programs:

Prescriptive Programs/Products

Prescriptive products are those pre-defined, common energy efficiency measures that do not require individual complex engineering analysis and are below a certain kW/kWh threshold. These measures make up a program, making the program ‘prescriptive’ in nature. The gross savings from prescriptive programs, which are determined using deemed savings technical assumptions, will be verified each year based on the factors identified in the deemed savings algorithm. In addition, the independent evaluator may choose to perform field measurements and verification in order to fine-tune the technical assumptions. For some programs, such as HES, which provide savings that may be detected at the whole-house level, the Evaluator may choose to perform an independent billing analysis of electric billings before and after the installation of measures, in order to calculate the gross savings.

SPS’s algorithms and underlying deemed savings assumptions will be provided to the Evaluator to assist in its review. As part of their responsibilities, the Commission may rely on the Evaluator to assist the Commission in their review of these deemed savings technical assumptions. In addition, the Evaluator will review program processes and establish net-to-gross ratios to account for free-ridership.

Custom Products

For the custom projects (e.g., Custom Efficiency and Large Customer Self-Direct), SPS and the Evaluator will analyze each project's savings separately, employing both internal and external engineers to calculate and provide expert engineering reviews. For projects that have large energy savings or unique technologies, the Evaluator may choose to perform pre- and post-metering of the efficiency measure or process. If metering is not physically or economically feasible, engineering models or other regression analyses may be employed to calculate the savings of each project.

c. Portfolio-Level M&V

The Evaluator will assess the cost-effectiveness of all programs each year prior to the annual status report filing. In compliance with reporting requirements, the Evaluator's M&V Report will include:

- expenditure documentation, at both the total portfolio and individual program levels;
- measured and verified savings;
- cost-effectiveness of all of SPS's energy efficiency and load management programs;
- deemed savings assumptions and all other assumptions used by the Evaluator; and
- description of the M&V process, including confirmation that:
 - o measures are actually installed;
 - o installations meet reasonable quality standards; and
 - o measures are operating correctly and are expected to generate the predicted savings.

Budget

The Triennial budget for *indirect* M&V expenses includes the following:

- Internal labor and expenses to provide project management of the entire M&V process, to interface with the Evaluator processing invoices and tracking costs, and to ensure internally that proper M&V and data tracking is in place.
- Costs for special projects such as the development or updating of Technical Reference Manuals.

In addition, SPS has budgeted for direct program-related M&V costs for the specific programs that Evergreen has designated for M&V within its 2020 budgets. SPS also included M&V costs for PY 2021-2022 although no statewide evaluator has been selected for those program years. For total budgeted costs see Table 1a-1c, and for the cost for each program by cost category, see Table 10a-10c.

Changes for 2020-2022

None.

4. Planning & Administration

Planning & Administration provides policies and procedures for effectively addressing the requirements of the energy efficiency and load management regulatory processes. This functional team manages all regulatory filings, directs and carries out benefit-cost analyses, provides tracking and reporting of energy efficiency and load management achievements and expenditures, and analyzes and prepares cost recovery reports. The costs of outside legal services are included within this function as well. Outside legal services are retained for the purposes of preparing and filing of DSM regulatory reports, DSM plans, and settlements and representing SPS at all DSM evidentiary hearings. In addition, Planning & Administration supports the energy efficiency and load management components of resource planning, participates in rulemaking, and provides internal policy guidance. These functions are needed to ensure a cohesive and high-quality energy efficiency portfolio that meets legal requirements as well as the expectations of SPS's customers, regulators, and staff.

Budget

The Triennial budgets includes funds for: internal labor to prepare filings and benefit-cost analyses, outside legal services to support energy efficiency and load management filings and hearings, and employee expenses related to travel to and from New Mexico.

Changes for 2020-2022

None.

5. Product Development

The Product Development group identifies, assesses, and develops new energy efficiency products and services that can be offered to customers in SPS's New Mexico service area. New product development will focus on exploring ideas and concepts from customers, regulators, energy professionals, interest groups, and Xcel Energy staff. These ideas are then carefully screened and only ideas with the most potential are selected for the development process.

Measures, products, and programs are selected for development based on a variety of criteria, including: savings, potential cost of savings, ability to be developed quickly, longevity of the offering (*i.e.*, how long until a technology being rebated becomes the standard), level of market barriers and risk.

Budget

The Triennial Plan budgets include funds for internal labor as well as outside consultant support.

Changes for 2020-2022

None.

IV. Conclusion

SPS proposes the following eight programs to make up its portfolio of energy efficiency programs, consistent with the EUEA requirement:

Residential Segment

- Energy Feedback;
- Residential Cooling;
- Home Energy Services;
- Home Lighting & Recycling;
- School Education Kits;
- Heat Pump Water Heaters; and
- Smart Thermostats

Business Segment

- Business Comprehensive

These programs were designed to offer SPS's customers opportunities for broad participation and the ability to reduce their energy consumption and peak demand. SPS solicited input on the proposed Triennial Plan program design from Staff, the New Mexico Attorney General's office, Southwest Energy Efficiency Project, and Coalition for Clean Affordable Energy.

SPS has provided two appendices to this Plan:

- Appendix A contains the cost-effectiveness analyses of the individual programs, the customer segments, and the portfolio as a whole; and
- Appendix B presents the detailed forecasted planning assumptions on which the energy and demand savings projections and the cost-effectiveness analyses were calculated.

PORTFOLIO TOTAL				2020	ELECTRIC	GOAL
2020 Net Present Cost Benefit Summary						
Analysis For All Participants						
Input Summary and Totals						
Program Inputs per Customer kW				A	14.88 years	
Lifetime (Weighted on Generator kWh)				B	8760	
Annual Hours				C	1 kW	
Gross Customer kW				D	36.12%	
Generator Peak Coincidence Factor				E	30.24%	
Gross Load Factor at Customer				F	83.8%	
Net-to-Gross (Energy)				G	82.6%	
Net-to-Gross (Demand)				H	9.277%	
Transmission Loss Factor (Energy)				I	12.828%	
Transmission Loss Factor (Demand)				J	99.394%	
Installation Rate (Energy)				K	99.978%	
Installation Rate (Demand)				L	\$269	
UCT Net Benefit (Cost)						
Net coincident kW Saved at Generator				$(G \times C \times K) \times D / (1 - I)$		
Gross Annual kWh Saved at Customer				$(B \times E \times C)$		
Net Annual kWh Saved at Customer				$(F \times (B \times E \times C \times J))$		
Net Annual kWh Saved at Generator				$(F \times (B \times E \times C \times J)) / (1 - H)$		
Program Summary per Participant						
Gross kW Saved at Customer				M	0.05 kW	
Net coincident kW Saved at Generator				$(G \times M \times K) \times D / (1 - I)$		
Gross Annual kWh Saved at Customer				$(B \times E \times M)$		
Net Annual kWh Saved at Customer				$(F \times (B \times E \times M \times J))$		
Net Annual kWh Saved at Generator				$(F \times (B \times E \times M \times J)) / (1 - H)$		
Program Summary All Participants						
Total Participants				N	364,877	
Total Budget				O	\$9,511,304	
Gross kW Saved at Customer				$(N \times M)$		
Net coincident kW Saved at Generator				$((G \times M \times K) \times D / (1 - I)) \times N$		
Gross Annual kWh Saved at Customer				$(B \times E \times M) \times N$		
Gross Installed Annual kWh Saved at Customer				$(B \times E \times M) \times N \times J$		
Net Annual kWh Saved at Customer				$(B \times E \times M) \times N \times J \times F$		
Net Annual kWh Saved at Generator				$((B \times E \times M) / (1 - H)) \times N \times J \times F$		
UCT Net Benefits				$(N \times M \times L)$		
Utility Program Cost per kWh Lifetime						
Utility Program Cost per kW at Gen				\$0.0157		
Benefit/Cost Ratio				\$1,663		

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

PORTFOLIO TOTAL				2021	ELECTRIC	GOAL
2021 Net Present Cost Benefit Summary						
Analysis For All Participants						
Input Summary and Totals						
Program Inputs per Customer kW						
Lifetime (Weighted on Generator kWh)		A				15.14 years
Annual Hours		B				8760
Gross Customer kW		C				1 kW
Generator Peak Coincidence Factor		D				38.04%
Gross Load Factor at Customer		E				31.90%
Net-to-Gross (Energy)		F				83.1%
Net-to-Gross (Demand)		G				82.1%
Transmission Loss Factor (Energy)		H				9.044%
Transmission Loss Factor (Demand)		I				12.599%
Installation Rate (Energy)		J				99.441%
Installation Rate (Demand)		K				99.980%
UCT Net Benefit (Cost)		L				\$338
Net coincident kW Saved at Generator		(G x C x K) x D / (1 - I)				0.3433 kW
Gross Annual kWh Saved at Customer		(B x E x C)				2,794 kWh
Net Annual kWh Saved at Customer		(F x (B x E x C x J))				2,310 kWh
Net Annual kWh Saved at Generator		(F x (B x E x C x J)) / (1 - H)				2,540 kWh
Program Summary per Participant						
Gross kW Saved at Customer		M				0.05 kW
Net coincident kW Saved at Generator		(G x M x K) x D / (1 - I)				0.02 kW
Gross Annual kWh Saved at Customer		(B x E x M)				137 kWh
Net Annual kWh Saved at Customer		(F x (B x E x M x J))				113 kWh
Net Annual kWh Saved at Generator		(F x (B x E x M x J)) / (1 - H)				125 kWh
Program Summary All Participants						
Total Participants		N				353,710
Total Budget		O				\$10,654,002
Gross kW Saved at Customer		(N x M)				17,373 kW
Net coincident kW Saved at Generator		((G x M x K) x D / (1 - I)) x N				6,207 kW
Gross Annual kWh Saved at Customer		(B x E x M) x N				48,540,417 kWh
Gross Installed Annual kWh Saved at Customer		(B x E x M) x N x J				48,269,063 kWh
Net Annual kWh Saved at Customer		(B x E x M) x N x J x F				40,134,737 kWh
Net Annual kWh Saved at Generator		((B x E x M) / (1 - H)) x N x J x F				44,125,431 kWh
UCT Net Benefits		(N x M x L)				\$5,878,190
Utility Program Cost per kWh Lifetime						
Utility Program Cost per kW at Gen						\$0.0159
Utility Program Cost per kW at Gen						\$1,716

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

PORTFOLIO TOTAL		2022	ELECTRIC	GOAL
2022 Net Present Cost Benefit Summary				
Analysis For All Participants				
Input Summary and Totals				
Benefits	Program Inputs per Customer kW			
	Lifetime (Weighted on Generator kWh)	A		15.21 years
	Annual Hours	B		8760
	Gross Customer kW	C		1 kW
	Generator Peak Coincidence Factor	D		38.47%
	Gross Load Factor at Customer	E		32.53%
	Net-to-Gross (Energy)	F		83.1%
	Net-to-Gross (Demand)	G		82.0%
	Transmission Loss Factor (Energy)	H		9.008%
	Transmission Loss Factor (Demand)	I		12.533%
	Installation Rate (Energy)	J		99.440%
	Installation Rate (Demand)	K		99.979%
	UCT Net Benefit (Cost)	L		\$417
	Net coincident kW Saved at Generator		$(G \times C \times K) \times D / (1 - I)$	0.3464 kW
	Gross Annual kWh Saved at Customer		$(B \times E \times C)$	2,850 kWh
	Net Annual kWh Saved at Customer		$(F \times (B \times E \times C \times J))$	2,354 kWh
	Net Annual kWh Saved at Generator		$(F \times (B \times E \times C \times J)) / (1 - H)$	2,587 kWh
Program Summary per Participant				
Participant Costs	Gross kW Saved at Customer	M		0.05 kW
	Net coincident kW Saved at Generator		$(G \times M \times K) \times D / (1 - I)$	0.02 kW
	Gross Annual kWh Saved at Customer		$(B \times E \times M)$	143 kWh
	Net Annual kWh Saved at Customer		$(F \times (B \times E \times M \times J))$	118 kWh
	Net Annual kWh Saved at Generator		$(F \times (B \times E \times M \times J)) / (1 - H)$	130 kWh
Program Summary All Participants				
Costs	Total Participants	N		338,016
	Total Budget	O		\$10,654,002
	Gross kW Saved at Customer		$(N \times M)$	17,013 kW
	Net coincident kW Saved at Generator		$((G \times M \times K) \times D / (1 - I)) \times N$	6,131 kW
	Gross Annual kWh Saved at Customer		$(B \times E \times M) \times N$	48,487,852 kWh
	Gross Installed Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J$	48,216,129 kWh
	Net Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J \times F$	40,052,074 kWh
	Net Annual kWh Saved at Generator		$((B \times E \times M) / (1 - H)) \times N \times J \times F$	44,017,168 kWh
	UCT Net Benefits		$(N \times M \times L)$	\$7,093,332
	Utility Program Cost per kWh Lifetime			\$0.0159
	Utility Program Cost per kW at Gen			\$1,738
2022 Net Present Cost Benefit Summary				
Analysis For All Participants				
Benefits	Utility Cost Test (\$Total)			
	Generation Capacity			\$1,781,674
	Transmission & Distribution Capacity			\$688,884
	Marginal Energy			\$14,583,556
	Avoided Emissions			\$693,219
	Total Benefits			\$17,747,334
Costs	System Benefits (Avoided Costs)			
	Generation Capacity			\$1,781,674
	Transmission & Distribution Capacity			\$688,884
	Marginal Energy			\$14,583,556
	Avoided Emissions			\$693,219
	Total Benefits			\$17,747,334
	Costs			
	Total Incentive			\$3,151,712
	Internal Administration			\$2,227,741
	Third-Party Delivery			\$3,627,437
	Promotion			\$1,472,112
	M&V			\$175,000
	Subtotal			\$10,654,002
	Participant Costs			
	Incremental Capital Costs		N/A	
	Incremental O&M Costs		N/A	
	Subtotal		N/A	
	Reductions to Costs			
	Participant Rebates		N/A	
	Subtotal		N/A	
	Total Costs			\$10,654,002
Net Benefit (Cost)				
Net Benefit (Cost)				\$7,093,332
Benefit/Cost Ratio				1.67

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

RESIDENTIAL SEGMENT TOTAL				2020	ELECTRIC	GOAL
2020 Net Present Cost Benefit Summary						
Analysis For All Participants						
Benefits	Input Summary and Totals					
	Program Inputs per Customer kW					
	Lifetime (Weighted on Generator kWh)	A			14.10 years	
	Annual Hours	B			8760	
	Gross Customer kW	C			1 kW	
	Generator Peak Coincidence Factor	D			25.23%	
	Gross Load Factor at Customer	E			21.32%	
	Net-to-Gross (Energy)	F			88.7%	
	Net-to-Gross (Demand)	G			86.8%	
	Transmission Loss Factor (Energy)	H			11.076%	
	Transmission Loss Factor (Demand)	I			14.047%	
	Installation Rate (Energy)	J			98.953%	
Installation Rate (Demand)	K			99.961%		
UCT Net Benefit (Cost)	L			\$301		
Total Benefits						0.2462 kW
Costs						
	Net coincident kW Saved at Generator				$(G \times C \times K) \times D / (1 - I)$	
	Gross Annual kWh Saved at Customer				$(B \times E \times C)$	
	Net Annual kWh Saved at Customer				$(F \times (B \times E \times C \times J))$	
	Net Annual kWh Saved at Generator				$(F \times (B \times E \times C \times J)) / (1 - H)$	
	Program Summary per Participant					
	Gross kW Saved at Customer		M		0.03 kW	
	Net coincident kW Saved at Generator				$(G \times M \times K) \times D / (1 - I)$	
	Gross Annual kWh Saved at Customer				$(B \times E \times M)$	
	Net Annual kWh Saved at Customer				$(F \times (B \times E \times M \times J))$	
	Net Annual kWh Saved at Generator				$(F \times (B \times E \times M \times J)) / (1 - H)$	
	Program Summary All Participants					
Total Participants		N		364,400		
Total Budget		O		\$3,912,620		
Gross kW Saved at Customer				$(N \times M)$		
Net coincident kW Saved at Generator				$((G \times M \times K) \times D / (1 - I)) \times N$		
Gross Annual kWh Saved at Customer				$(B \times E \times M) \times N$		
Gross Installed Annual kWh Saved at Customer				$(B \times E \times M) \times N \times J$		
Net Annual kWh Saved at Customer				$(B \times E \times M) \times N \times J \times F$		
Net Annual kWh Saved at Generator				$((B \times E \times M) / (1 - H)) \times N \times J \times F$		
UCT Net Benefits				$(N \times M \times L)$		
Total Costs						
Net Benefit (Cost)						
Benefit/Cost Ratio						
Utility Program Cost per kWh Lifetime				\$0.018		
Utility Program Cost per kW at Gen				\$1,208		

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

RESIDENTIAL SEGMENT TOTAL				2021	ELECTRIC		GOAL
2021 Net Present Cost Benefit Summary							
Analysis For All Participants				Input Summary and Totals			
Benefits	Utility Cost Test (\$Total)			Program Inputs per Customer kW			
				Lifetime (Weighted on Generator kWh)	A		14.32 years
				Annual Hours	B		8760
				Gross Customer kW	C		1 kW
				Generator Peak Coincidence Factor	D		25.33%
				Gross Load Factor at Customer	E		21.27%
				Net-to-Gross (Energy)	F		88.5%
				Net-to-Gross (Demand)	G		86.7%
				Transmission Loss Factor (Energy)	H		11.075%
				Transmission Loss Factor (Demand)	I		14.048%
				Installation Rate (Energy)	J		98.926%
				Installation Rate (Demand)	K		99.960%
			UCT Net Benefit (Cost)	L		\$346	
Total Benefits		\$8,223,379	Net coincident kW Saved at Generator $(G \times C \times K) \times D / (1 - I)$				
Costs			Gross Annual kWh Saved at Customer $(B \times E \times C)$				
Utility Project Costs			Net Annual kWh Saved at Customer $(F \times (B \times E \times C \times J))$				
Total Incentive		\$1,005,124	Net Annual kWh Saved at Generator $(F \times (B \times E \times C \times J)) / (1 - H)$				
Internal Administration		\$433,108	Program Summary per Participant				
Third-Party Delivery		\$1,754,588	Gross kW Saved at Customer M				
Promotion		\$633,700	Net coincident kW Saved at Generator $(G \times M \times K) \times D / (1 - I)$				
M&V		\$901,000	Gross Annual kWh Saved at Customer $(B \times E \times M)$				
Subtotal		\$3,916,520	Net Annual kWh Saved at Customer $(F \times (B \times E \times M \times J))$				
Participant Costs			Net Annual kWh Saved at Generator $(F \times (B \times E \times M \times J)) / (1 - H)$				
Costs			Program Summary All Participants				
Incremental Capital Costs		N/A	Total Participants N				
Incremental O&M Costs		N/A	Total Budget O				
Subtotal		N/A	Gross kW Saved at Customer $(N \times M)$				
Reductions to Costs			Net coincident kW Saved at Generator $((G \times M \times K) \times D / (1 - I)) \times N$				
Participant Rebates		N/A	Gross Annual kWh Saved at Customer $(B \times E \times M) \times N$				
Subtotal		N/A	Gross Installed Annual kWh Saved at Customer $(B \times E \times M) \times N \times J$				
Subtotal		N/A	Net Annual kWh Saved at Customer $(B \times E \times M) \times N \times J \times F$				
Total Costs		\$3,916,520	Net Annual kWh Saved at Generator $((B \times E \times M) / (1 - H)) \times N \times J \times F$				
			UCT Net Benefits $(N \times M \times L)$				
Net Benefit (Cost)		\$4,306,859	Utility Program Cost per kWh Lifetime				
Benefit/Cost Ratio		2.10	Utility Program Cost per kW at Gen				

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

RESIDENTIAL SEGMENT TOTAL				2022	ELECTRIC	GOAL
2022 Net Present Cost Benefit Summary						
Analysis For All Participants						
Benefits	Input Summary and Totals					
	Program Inputs per Customer kW					14.43 years
	Lifetime (Weighted on Generator kWh)			A		8760
	Annual Hours			B		1 kW
	Gross Customer kW			C		
	Generator Peak Coincidence Factor			D		25.44%
	Gross Load Factor at Customer			E		21.63%
	Net-to-Gross (Energy)			F		88.6%
	Net-to-Gross (Demand)			G		86.6%
	Transmission Loss Factor (Energy)			H		11.081%
System Benefits (Avoided Costs)	Transmission Loss Factor (Demand)			I		14.048%
	Installation Rate (Energy)			J		98.903%
	Installation Rate (Demand)			K		99.959%
	UCT Net Benefit (Cost)			L		\$406
	Net coincident kW Saved at Generator			(G x C x K) x D / (1 - I)		0.2475 kW
	Gross Annual kWh Saved at Customer			(B x E x C)		1,895 kWh
	Net Annual kWh Saved at Customer			(F x (B x E x C x J))		1,660 kWh
	Net Annual kWh Saved at Generator			(F x (B x E x C x J)) / (1 - H)		1,867 kWh
	Program Summary per Participant					
	Gross kW Saved at Customer			M		0.04 kW
Utility Project Costs	Net coincident kW Saved at Generator			(G x M x K) x D / (1 - I)		0.01 kW
	Gross Annual kWh Saved at Customer			(B x E x M)		67 kWh
	Net Annual kWh Saved at Customer			(F x (B x E x M x J))		59 kWh
	Net Annual kWh Saved at Generator			(F x (B x E x M x J)) / (1 - H)		66 kWh
	Program Summary All Participants					
	Total Participants			N		337,530
	Total Budget			O		\$3,852,454
	Gross kW Saved at Customer			(N x M)		11,983 kW
	Net coincident kW Saved at Generator			((G x M x K) x D / (1 - I)) x N		3,068 kW
	Gross Annual kWh Saved at Customer			(B x E x M) x N		22,709,049 kWh
Participant Costs	Gross Installed Annual kWh Saved at Customer			(B x E x M) x N x J		22,459,980 kWh
	Net Annual kWh Saved at Customer			(B x E x M) x N x J x F		19,890,259 kWh
	Net Annual kWh Saved at Generator			((B x E x M) / (1 - H)) x N x J x F		22,369,022 kWh
	UCT Net Benefits			(N x M x L)		\$4,865,720
	Utility Program Cost per kWh Lifetime					\$0.0119
	Utility Program Cost per kW at Gen					\$1,256
	Benefit/Cost Ratio					2.26

BUSINESS SEGMENT TOTAL				2020	ELECTRIC	GOAL
2020 Net Present Cost Benefit Summary						
Analysis For All Participants						
Input Summary and Totals						
Program Inputs per Customer kW		Lifetime (Weighted on Generator kWh)		A	15.82 years	
Annual Hours				B	8760	
Gross Customer kW				C	1 kW	
Generator Peak Coincidence Factor				D	72.97%	
Gross Load Factor at Customer				E	58.66%	
Net-to-Gross (Energy)				F	78.0%	
Net-to-Gross (Demand)				G	77.7%	
Transmission Loss Factor (Energy)				H	7.100%	
Transmission Loss Factor (Demand)				I	8.700%	
Installation Rate (Energy)				J	100.000%	
Installation Rate (Demand)				K	100.000%	
UCT Net Benefit (Cost)				L	\$370	
Net coincident kW Saved at Generator				$(G \times C \times K) \times D / (1 - I)$		0.6104 kW
Gross Annual kWh Saved at Customer				$(B \times E \times C)$		5,138 kWh
Net Annual kWh Saved at Customer				$(F \times (B \times E \times C \times J))$		4,006 kWh
Net Annual kWh Saved at Generator				$(F \times (B \times E \times C \times J)) / (1 - H)$		4,312 kWh
Program Summary per Participant						
Gross kW Saved at Customer				M	8.36 kW	
Net coincident kW Saved at Generator				$(G \times M \times K) \times D / (1 - I)$		5.19 kW
Gross Annual kWh Saved at Customer				$(B \times E \times M)$		42,957 kWh
Net Annual kWh Saved at Customer				$(F \times (B \times E \times M \times J))$		33,486 kWh
Net Annual kWh Saved at Generator				$(F \times (B \times E \times M \times J)) / (1 - H)$		36,046 kWh
Program Summary All Participants						
Total Participants				N	477	
Total Budget				O	\$4,798,684	
Gross kW Saved at Customer				$(N \times M)$		3,991 kW
Net coincident kW Saved at Generator				$((G \times M \times K) \times D / (1 - I)) \times N$		2,479 kW
Gross Annual kWh Saved at Customer				$(B \times E \times M) \times N$		20,506,263 kWh
Gross Installed Annual kWh Saved at Customer				$(B \times E \times M) \times N \times J$		20,506,263 kWh
Net Annual kWh Saved at Customer				$(B \times E \times M) \times N \times J \times F$		15,985,365 kWh
Net Annual kWh Saved at Generator				$((B \times E \times M) / (1 - H)) \times N \times J \times F$		17,207,066 kWh
UCT Net Benefits				$(N \times M \times L)$		\$1,477,447
Utility Program Cost per kWh Lifetime						
Utility Program Cost per kWh at Gen						\$0.0176
Utility Program Cost per kW at Gen						
						\$1,936

Net Benefit (Cost)	\$1,477,447
Benefit/Cost Ratio	1.31

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

Benefits	Utility Cost Test (\$Total)
System Benefits (Avoided Costs)	
Generation Capacity	\$566,472
Transmission & Distribution Capacity	\$297,968
Marginal Energy	\$5,169,744
Avoided Emissions	\$241,947

Total Benefits	\$6,276,131
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Costs	
Utility Project Costs	
Total Incentive	\$1,720,412
Internal Administration	\$769,803
Third-Party Delivery	\$1,463,665
Promotion	\$747,804
M&V	\$93,000
Subtotal	\$4,798,684

Participant Costs	
Costs	
Incremental Capital Costs	N/A
Incremental O&M Costs	N/A
Subtotal	N/A
Reductions to Costs	
Participant Rebates	N/A
Subtotal	N/A

Total Costs	\$4,798,684
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BUSINESS SEGMENT TOTAL				2021	ELECTRIC	GOAL
2021 Net Present Cost Benefit Summary						
Analysis For All Participants						
Benefits						
System Benefits (Avoided Costs)						
Generation Capacity				Program Inputs per Customer kW		15.93 years
Transmission & Distribution Capacity				Lifetime (Weighted on Generator kWh)		8760
Marginal Energy				Annual Hours		1 kW
Avoided Emissions				Gross Customer kW		72.25%
				Generator Peak Coincidence Factor		58.82%
				Gross Load Factor at Customer		78.0%
				Net-to-Gross (Energy)		77.8%
				Net-to-Gross (Demand)		7.100%
				Transmission Loss Factor (Energy)		8.700%
				Transmission Loss Factor (Demand)		100.000%
				Installation Rate (Energy)		100.000%
				Installation Rate (Demand)		100.000%
				UCT Net Benefit (Cost)		\$534
Total Benefits						
				Net coincident kW Saved at Generator		$(G \times C \times K) \times D / (1 - I)$
				Gross Annual kWh Saved at Customer		$(B \times E \times C)$
				Net Annual kWh Saved at Customer		$(F \times (B \times E \times C \times J))$
				Net Annual kWh Saved at Generator		$(F \times (B \times E \times C \times J)) / (1 - H)$
Costs						
Utility Project Costs						
Total Incentive				Program Summary per Participant		10.09 kW
Internal Administration				Gross kW Saved at Customer		6.21 kW
Third-Party Delivery				Net coincident kW Saved at Generator		52,003 kWh
Promotion				Gross Annual kWh Saved at Customer		40,567 kWh
M&V				Net Annual kWh Saved at Customer		43,668 kWh
Subtotal				Net Annual kWh Saved at Generator		
Participant Costs						
Costs				Program Summary All Participants		487
Incremental Capital Costs				Total Participants		\$5,682,482
Incremental O&M Costs				Gross kW Saved at Customer		4,917 kW
Subtotal				Net coincident kW Saved at Generator		3,027 kW
Reductions to Costs				Gross Annual kWh Saved at Customer		25,334,118 kWh
Participant Rebates				Gross Installed Annual kWh Saved at Customer: $(B \times E \times M) \times N \times J$		25,334,118 kWh
Subtotal				Net Annual kWh Saved at Customer		19,763,161 kWh
Subtotal				Net Annual kWh Saved at Generator		21,273,586 kWh
				UCT Net Benefits		\$2,626,331
Total Costs						
				Utility Program Cost per kWh Lifetime		\$0.0168
				Utility Program Cost per kW at Gen		\$1,877

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

Program Summary per Participant		Program Summary All Participants	
Gross kW Saved at Customer		Total Participants	
		Total Budget	
Net coincident kW Saved at Generator		Gross kW Saved at Customer	
Gross Annual kWh Saved at Customer		Net coincident kW Saved at Generator	
Net Annual kWh Saved at Customer		Gross Annual kWh Saved at Customer	
Net Annual kWh Saved at Generator		Net Annual kWh Saved at Customer	
		Net Annual kWh Saved at Generator	
		Total Participants	
		Total Budget	
		Gross kW Saved at Customer	
		Net coincident kW Saved at Generator	
		Gross Annual kWh Saved at Customer	
		Gross Installed Annual kWh Saved at Customer	
		Net Annual kWh Saved at Customer	
		Net Annual kWh Saved at Generator	
		UCT Net Benefits	
		Utility Program Cost per kWh Lifetime	
		Utility Program Cost per kW at Gen	

487	
\$5,682,482	
4,917 kW	
3,027 kW	
25,334,118 kWh	
25,334,118 kWh	
19,763,161 kWh	
21,273,586 kWh	
\$2,626,331	
\$0.0168	
\$1.877	

BUSINESS SEGMENT TOTAL				2022	ELECTRIC	GOAL
2022 Net Present Cost Benefit Summary						
Analysis For All Participants				Input Summary and Totals		
Benefits				Program Inputs per Customer kW		
				Lifetime (Weighted on Generator kWh)		
				Annual Hours		
				Gross Customer kW		
				Generator Peak Coincidence Factor		
				Gross Load Factor at Customer		
				Net-to-Gross (Energy)		
				Net-to-Gross (Demand)		
				Transmission Loss Factor (Energy)		
				Transmission Loss Factor (Demand)		
				Installation Rate (Energy)		
				Installation Rate (Demand)		
				UCT Net Benefit (Cost)		
				Net coincident kW Saved at Generator		
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				UCT Net Benefit (Cost)		

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			15.92 years
Annual Hours	B			8760
Gross Customer kW	C			1 kW
Generator Peak Coincidence Factor	D			71.45%
Gross Load Factor at Customer	E			58.50%
Net-to-Gross (Energy)	F			78.0%
Net-to-Gross (Demand)	G			77.8%
Transmission Loss Factor (Energy)	H			7.100%
Transmission Loss Factor (Demand)	I			8.700%
Installation Rate (Energy)	J			100.000%
Installation Rate (Demand)	K			100.000%
UCT Net Benefit (Cost)	L			\$654
Net coincident kW Saved at Generator	$(G \times C \times K) \times D / (1 - I)$			0.5984 kW
Gross Annual kWh Saved at Customer	$(B \times E \times C)$			5,125 kWh
Net Annual kWh Saved at Customer	$(F \times (B \times E \times C \times J))$			3,998 kWh
Net Annual kWh Saved at Generator	$(F \times (B \times E \times C \times J)) / (1 - H)$			4,304 kWh
Program Summary per Participant				
Gross kW Saved at Customer	M			10.35 kW
Net coincident kW Saved at Generator	$(G \times M \times K) \times D / (1 - I)$			6.30 kW
Gross Annual kWh Saved at Customer	$(B \times E \times M)$			53,025 kWh
Net Annual kWh Saved at Customer	$(F \times (B \times E \times M \times J))$			41,367 kWh
Net Annual kWh Saved at Generator	$(F \times (B \times E \times M \times J)) / (1 - H)$			44,528 kWh
Program Summary All Participants				
Total Participants	N			486
Total Budget	O			\$5,741,548
Gross kW Saved at Customer	$(N \times M)$			5,030 kW
Net coincident kW Saved at Generator	$((G \times M \times K) \times D / (1 - I)) \times N$			3,063 kW
Gross Annual kWh Saved at Customer	$(B \times E \times M) \times N$			25,778,804 kWh
Gross Installed Annual kWh Saved at Customer	$(B \times E \times M) \times N \times J$			25,778,804 kWh
Net Annual kWh Saved at Customer	$(B \times E \times M) \times N \times J \times F$			20,111,128 kWh
Net Annual kWh Saved at Generator	$((B \times E \times M) / (1 - H)) \times N \times J \times F$			21,648,146 kWh
UCT Net Benefits	$(N \times M \times L)$			\$3,287,612
Utility Program Cost per kWh Lifetime				
Utility Program Cost per kW at Gen				\$0.0167
				\$1,874

ENERGY FEEDBACK				2020	ELECTRIC	GOAL
2020 Net Present Cost Benefit Summary						
Analysis For All Participants						
Input Summary and Totals						
Benefits	Program Inputs per Customer kW					
	Lifetime (Weighted on Generator kWh)		A			1.00 years
	Annual Hours		B			8760
	Gross Customer kW		C			1 kW
	Generator Peak Coincidence Factor		D			69.57%
	Gross Load Factor at Customer		E			43.31%
	Net-to-Gross (Energy)		F			106.8%
	Net-to-Gross (Demand)		G			106.8%
	Transmission Loss Factor (Energy)		H			11.400%
	Transmission Loss Factor (Demand)		I			14.300%
	Installation Rate (Energy)		J			100.000%
	Installation Rate (Demand)		K			100.000%
	UCT Net Benefit (Cost)		L			\$12
	Net coincident kW Saved at Generator		$(G \times C \times K) \times D / (1 - I)$			0.8385 kW
	Gross Annual kWh Saved at Customer		$(B \times E \times C)$			3,794 kWh
	Net Annual kWh Saved at Customer		$(F \times (B \times E \times C \times J))$			4,051 kWh
	Net Annual kWh Saved at Generator		$(F \times (B \times E \times C \times J)) / (1 - H)$			4,573 kWh
Program Summary per Participant						
Gross kW Saved at Customer		M			0.04 kW	
Net coincident kW Saved at Generator		$(G \times M \times K) \times D / (1 - I)$			0.04 kW	
Gross Annual kWh Saved at Customer		$(B \times E \times M)$			168 kWh	
Net Annual kWh Saved at Customer		$(F \times (B \times E \times M \times J))$			179 kWh	
Net Annual kWh Saved at Generator		$(F \times (B \times E \times M \times J)) / (1 - H)$			202 kWh	
Program Summary All Participants						
Total Participants		N			26,315	
Total Budget		O			\$143,485	
Gross kW Saved at Customer		$(N \times M)$			1,165 kW	
Net coincident kW Saved at Generator		$((G \times M \times K) \times D / (1 - I)) \times N$			1,000 kW	
Gross Annual kWh Saved at Customer		$(B \times E \times M) \times N$			4,421,169 kWh	
Gross Installed Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J$			4,421,169 kWh	
Net Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J \times F$			4,720,924 kWh	
Net Annual kWh Saved at Generator		$((B \times E \times M) / (1 - H)) \times N \times J \times F$			5,328,357 kWh	
UCT Net Benefits		$(N \times M \times L)$			\$13,582	
Utility Program Cost per kWh Lifetime						
Utility Program Cost per kW at Gen						

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

ENERGY FEEDBACK			2021	ELECTRIC		GOAL
2021 Net Present Cost Benefit Summary						
Analysis For All Participants						
Input Summary and Totals						
Program Inputs per Customer kW			A		1.00 years	
Lifetime (Weighted on Generator kWh)			B		8760	
Annual Hours			C		1 kW	
Gross Customer kW			D		70.16%	
Generator Peak Coincidence Factor			E		44.16%	
Gross Load Factor at Customer			F		106.8%	
Net-to-Gross (Energy)			G		106.8%	
Net-to-Gross (Demand)			H		11.400%	
Transmission Loss Factor (Energy)			I		14.300%	
Transmission Loss Factor (Demand)			J		100.000%	
Installation Rate (Energy)			K		100.000%	
Installation Rate (Demand)			L		\$10	
UCT Net Benefit (Cost)						
Net coincident kW Saved at Generator			$(G \times C \times K) \times D / (1 - I)$			0.8456 kW
Gross Annual kWh Saved at Customer			$(B \times E \times C)$			3,868 kWh
Net Annual kWh Saved at Customer			$(F \times (B \times E \times C \times J))$			4,130 kWh
Net Annual kWh Saved at Generator			$(F \times (B \times E \times C \times J)) / (1 - H)$			4,662 kWh
Program Summary per Participant						
Gross kW Saved at Customer			M		0.04 kW	
Net coincident kW Saved at Generator			$(G \times M \times K) \times D / (1 - I)$			0.04 kW
Gross Annual kWh Saved at Customer			$(B \times E \times M)$			172 kWh
Net Annual kWh Saved at Customer			$(F \times (B \times E \times M \times J))$			183 kWh
Net Annual kWh Saved at Generator			$(F \times (B \times E \times M \times J)) / (1 - H)$			207 kWh
Program Summary All Participants						
Total Participants			N		23,418	
Total Budget			O		\$143,485	
Gross kW Saved at Customer			$(N \times M)$			1,059 kW
Net coincident kW Saved at Generator			$((G \times M \times K) \times D / (1 - I)) \times N$			908 kW
Gross Annual kWh Saved at Customer			$(B \times E \times M) \times N$			4,019,030 kWh
Gross Installed Annual kWh Saved at Customer			$(B \times E \times M) \times N \times J$			4,019,030 kWh
Net Annual kWh Saved at Customer			$(B \times E \times M) \times N \times J \times F$			4,291,520 kWh
Net Annual kWh Saved at Generator			$((B \times E \times M) / (1 - H)) \times N \times J \times F$			4,843,702 kWh
UCT Net Benefits			$(N \times M \times L)$			\$10,216
Utility Program Cost per kWh Lifetime						
Utility Program Cost per kW at Gen						
Benefit/Cost Ratio						

Net Benefit (Cost)	\$10,216
Benefit/Cost Ratio	1.07

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

2021 Net Present Cost Benefit Summary		Utility
Analysis For All Participants		Cost Test
		(\$Total)
Benefits		
System Benefits (Avoided Costs)		
Generation Capacity		\$0
Transmission & Distribution Capacity		\$10,470
Marginal Energy		\$142,744
Avoided Emissions		\$487
Total Benefits		\$153,701
Costs		
Utility Project Costs		
Total Incentive		\$0
Internal Administration		\$22,000
Third-Party Delivery		\$90,285
Promotion		\$1,200
M&V		\$30,000
Subtotal		\$143,485
Participant Costs		
Costs		
Incremental Capital Costs		N/A
Incremental O&M Costs		N/A
Subtotal		N/A
Reductions to Costs		
Participant Rebates		N/A
Subtotal		N/A
Total Costs		\$143,485

ENERGY FEEDBACK				2022	ELECTRIC	GOAL
2022 Net Present Cost Benefit Summary						
Analysis For All Participants						
Input Summary and Totals						
Program Inputs per Customer kW						
Lifetime (Weighted on Generator kWh)		A				1.00 years
Annual Hours		B				8760
Gross Customer kW		C				1 kW
Generator Peak Coincidence Factor		D				70.81%
Gross Load Factor at Customer		E				45.07%
Net-to-Gross (Energy)		F				106.8%
Net-to-Gross (Demand)		G				106.8%
Transmission Loss Factor (Energy)		H				11.400%
Transmission Loss Factor (Demand)		I				14.300%
Installation Rate (Energy)		J				100.000%
Installation Rate (Demand)		K				100.000%
UCT Net Benefit (Cost)		L				\$21
Net coincident kW Saved at Generator		(G x C x K) x D / (1 - I)				0.8534 kW
Gross Annual kWh Saved at Customer		(B x E x C)				3,948 kWh
Net Annual kWh Saved at Customer		(F x (B x E x C x J))				4,216 kWh
Net Annual kWh Saved at Generator		(F x (B x E x C x J)) / (1 - H)				4,758 kWh
Program Summary per Participant						
Gross kW Saved at Customer		M				0.04 kW
Net coincident kW Saved at Generator		(G x M x K) x D / (1 - I)				0.04 kW
Gross Annual kWh Saved at Customer		(B x E x M)				176 kWh
Net Annual kWh Saved at Customer		(F x (B x E x M x J))				187 kWh
Net Annual kWh Saved at Generator		(F x (B x E x M x J)) / (1 - H)				212 kWh
Program Summary All Participants						
Total Participants		N				21,058
Total Budget		O				\$144,485
Gross kW Saved at Customer		(N x M)				936 kW
Net coincident kW Saved at Generator		((G x M x K) x D / (1 - I)) x N				826 kW
Gross Annual kWh Saved at Customer		(B x E x M) x N				3,696,538 kWh
Gross Installed Annual kWh Saved at Customer		(B x E x M) x N x J				3,696,538 kWh
Net Annual kWh Saved at Customer		(B x E x M) x N x J x F				3,947,163 kWh
Net Annual kWh Saved at Generator		((B x E x M) / (1 - H)) x N x J x F				4,455,038 kWh
UCT Net Benefits		(N x M x L)				\$20,096
Utility Program Cost per kWh Lifetime						
Utility Program Cost per kW at Gen						
\$0.0324						
\$175						

Net Benefit (Cost)	\$20,096
Benefit/Cost Ratio	1.14

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

HEAT PUMP WATER HEATERS				2020	ELECTRIC	GOAL
2020 Net Present Cost Benefit Summary						
Analysis For All Participants						
Input Summary and Totals						
Program Inputs per Customer kW						
Lifetime (Weighted on Generator kWh)				A	10.00 years	
Annual Hours				B	8760	
Gross Customer kW				C	1 kW	
Generator Peak Coincidence Factor				D	100.00%	
Gross Load Factor at Customer				E	84.84%	
Net-to-Gross (Energy)				F	100.00%	
Net-to-Gross (Demand)				G	100.00%	
Transmission Loss Factor (Energy)				H	11.400%	
Transmission Loss Factor (Demand)				I	14.300%	
Installation Rate (Energy)				J	100.000%	
Installation Rate (Demand)				K	100.000%	
UCT Net Benefit (Cost)				L	\$318	
Net coincident kW Saved at Generator				$(G \times C \times K) \times D / (1 - I)$		
Gross Annual kWh Saved at Customer				$(B \times E \times C)$		
Net Annual kWh Saved at Customer				$(F \times (B \times E \times C \times J))$		
Net Annual kWh Saved at Generator				$(F \times (B \times E \times C \times J)) / (1 - H)$		
Program Summary per Participant						
Gross kW Saved at Customer				M	0.45 kW	
Net coincident kW Saved at Generator				$(G \times M \times K) \times D / (1 - I)$		
Gross Annual kWh Saved at Customer				$(B \times E \times M)$		
Net Annual kWh Saved at Customer				$(F \times (B \times E \times M \times J))$		
Net Annual kWh Saved at Generator				$(F \times (B \times E \times M \times J)) / (1 - H)$		
Program Summary All Participants						
Total Participants				N	55	
Total Budget				O	\$44,500	
Gross kW Saved at Customer				$(N \times M)$		
Net coincident kW Saved at Generator				$((G \times M \times K) \times D / (1 - I)) \times N$		
Gross Annual kWh Saved at Customer				$(B \times E \times M) \times N$		
Gross Installed Annual kWh Saved at Customer				$(B \times E \times M) \times N \times J$		
Net Annual kWh Saved at Customer				$(B \times E \times M) \times N \times J \times F$		
Net Annual kWh Saved at Generator				$((B \times E \times M) / (1 - H)) \times N \times J \times F$		
UCT Net Benefits				$(N \times M \times L)$		
Utility Program Cost per kWh Lifetime				\$0.0212		
Utility Program Cost per kW at Gen				\$1,526		

Utility Cost Test (\$Total)		10.00 years
Utility		8760
Cost Test		1 kW
Benefits		
System Benefits (Avoided Costs)		
Generation Capacity		\$2,086
Transmission & Distribution Capacity		\$2,601
Marginal Energy		\$45,399
Avoided Emissions		\$2,359
Total Benefits		\$52,445
Costs		
Utility Project Costs		
Total Incentive		\$11,000
Internal Administration		\$23,500
Third-Party Delivery		\$0
Promotion		\$10,000
M&V		\$0
Subtotal		\$44,500
Participant Costs		
Incremental Capital Costs		N/A
Incremental O&M Costs		N/A
Subtotal		N/A
Participant Rebates		N/A
Subtotal		N/A
Subtotal		N/A
Total Costs		\$44,500
Net Benefit (Cost)		\$7,945
Benefit/Cost Ratio		1.18

Notes: Dollar values represent present value of impacts, not annualized costs, due to lifetime of the measures.

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

HEAT PUMP WATER HEATERS			2021	ELECTRIC	GOAL
2021 Net Present Cost Benefit Summary					
Analysis For All Participants					
Input Summary and Totals					
Benefits	Program Inputs per Customer kW		A		10,000 years
	Lifetime (Weighted on Generator kWh)	Utility	B		8760
	Annual Hours	Cost Test	C		1 kW
	Gross Customer kW	(\$Total)	D		100.00%
	Generator Peak Coincidence Factor		E		84.84%
	Gross Load Factor at Customer		F		100.00%
	Net-to-Gross (Energy)		G		100.00%
	Net-to-Gross (Demand)		H		11.400%
	Transmission Loss Factor (Energy)		I		14.300%
	Transmission Loss Factor (Demand)		J		100.000%
	Installation Rate (Energy)		K		100.000%
	Installation Rate (Demand)		L		\$522
	UCT Net Benefit (Cost)				1.1287 kW
	Net coincident kW Saved at Generator			$(G \times C \times K) \times D / (1 - I)$	7,432 kWh
	Gross Annual kWh Saved at Customer			$(B \times E \times C)$	7,432 kWh
	Net Annual kWh Saved at Customer			$(F \times (B \times E \times C \times J))$	8,388 kWh
	Net Annual kWh Saved at Generator			$(F \times (B \times E \times C \times J)) / (1 - H)$	
Program Summary per Participant					
Gross kW Saved at Customer			M		0.45 kW
Net coincident kW Saved at Generator				$(G \times M \times K) \times D / (1 - I)$	0.53 kW
Gross Annual kWh Saved at Customer				$(B \times E \times M)$	3,377 kWh
Net Annual kWh Saved at Customer				$(F \times (B \times E \times M \times J))$	3,377 kWh
Net Annual kWh Saved at Generator				$(F \times (B \times E \times M \times J)) / (1 - H)$	3,811 kWh
Program Summary All Participants					
Total Participants			N		100
Total Budget			O		\$78,500
Gross kW Saved at Customer			(N x M)		45 kW
Net coincident kW Saved at Generator				$((G \times M \times K) \times D / (1 - I)) \times N$	53 kW
Gross Annual kWh Saved at Customer				$(B \times E \times M) \times N$	337,666 kWh
Gross Installed Annual kWh Saved at Customer				$(B \times E \times M) \times N \times J$	337,666 kWh
Net Annual kWh Saved at Customer				$(B \times E \times M) \times N \times J \times F$	337,666 kWh
Net Annual kWh Saved at Generator				$((B \times E \times M) / (1 - H)) \times N \times J \times F$	381,113 kWh
UCT Net Benefits				$(N \times M \times L)$	\$23,737
Utility Program Cost per kWh Lifetime					
Utility Program Cost per kW at Gen					\$0.0206
					\$1,481

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

HEAT PUMP WATER HEATERS				2022	ELECTRIC		GOAL
2022 Net Present Cost Benefit Summary							
Analysis For All Participants				Input Summary and Totals			
Benefits				Program Inputs per Customer kW			
Utility Cost Test (\$Total)				Lifetime (Weighted on Generator kWh)			
				A			
				B			
				C			
				D			
				E			
				F			
				G			
				H			
				I			
				J			
				K			
				L			
				$(G \times C \times K) \times D / (1 - I)$			
				$(B \times E \times C)$			
				$(F \times (B \times E \times C \times J))$			
				$(F \times (B \times E \times C \times J)) / (1 - H)$			
Total Benefits							
Costs							
Utility Project Costs							
Total Incentive				M			
Internal Administration				$(G \times M \times K) \times D / (1 - I)$			
Third-Party Delivery				$(B \times E \times M)$			
Promotion				$(F \times (B \times E \times M \times J))$			
M&V				$(F \times (B \times E \times M \times J)) / (1 - H)$			
Subtotal							
Participant Costs							
Costs							
Incremental Capital Costs				N			
Incremental O&M Costs				O			
Subtotal				$(N \times M)$			
Reductions to Costs				$((G \times M \times K) \times D / (1 - I)) \times N$			
Participant Rebates				$(B \times E \times M) \times N$			
Subtotal				$(B \times E \times M) \times N \times J$			
Subtotal				$(B \times E \times M) \times N \times J \times F$			
				$((B \times E \times M) / (1 - H)) \times N \times J \times F$			
Total Costs				$(N \times M \times L)$			
Net Benefit (Cost)				Utility Program Cost per kWh Lifetime			
Benefit/Cost Ratio				Utility Program Cost per kW at Gen			

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

HOME ENERGY SERVICES: RESIDENTIAL AND LOW INCOME					2020	ELECTRIC	GOAL
2020 Net Present Cost Benefit Summary							
Analysis For All Participants							
Benefits							
System Benefits (Avoided Costs)							
Generation Capacity		Utility Cost Test		Program Inputs per Customer kW		A	17.34 years
Transmission & Distribution Capacity		(\$Total)		Annual Hours		B	8760
Marginal Energy				Gross Customer kW		C	1 kW
Avoided Emissions				Generator Peak Coincidence Factor		D	85.81%
				Gross Load Factor at Customer		E	97.14%
				Net-to-Gross (Energy)		F	93.0%
				Net-to-Gross (Demand)		G	93.0%
				Transmission Loss Factor (Energy)		H	11.400%
				Transmission Loss Factor (Demand)		I	14.300%
				Installation Rate (Energy)		J	99.895%
				Installation Rate (Demand)		K	99.966%
				UCT Net Benefit (Cost)		L	\$2,044
Total Benefits							
		\$4,510,522		Net coincident kW Saved at Generator		$(G \times C \times K) \times D / (1 - I)$	
Costs							
				Gross Annual kWh Saved at Customer		$(B \times E \times C)$	
				Net Annual kWh Saved at Customer		$(F \times (B \times E \times C \times J))$	
				Net Annual kWh Saved at Generator		$(F \times (B \times E \times C \times J)) / (1 - H)$	
Utility Project Costs							
Total Incentive		\$573,558		Program Summary per Participant			
Internal Administration		\$175,000		Gross kW Saved at Customer		M	0.35 kW
Third-Party Delivery		\$1,345,303		Net coincident kW Saved at Generator		$(G \times M \times K) \times D / (1 - I)$	
Promotion		\$100,000		Gross Annual kWh Saved at Customer		$(B \times E \times M)$	
M&V		\$0		Net Annual kWh Saved at Customer		$(F \times (B \times E \times M \times J))$	
				Net Annual kWh Saved at Generator		$(F \times (B \times E \times M \times J)) / (1 - H)$	
Subtotal		\$2,193,861		Program Summary All Participants			
				Total Participants		N	3,263
				Total Budget		O	\$2,193,861
				Gross kW Saved at Customer		$(N \times M)$	1,133 kW
				Net coincident kW Saved at Generator		$((G \times M \times K) \times D / (1 - I)) \times N$	
				Gross Annual kWh Saved at Customer		$(B \times E \times M) \times N$	1,055 kW
				Gross Installed Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J$	
				Net Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J \times F$	9,643,954 kWh
				Net Annual kWh Saved at Generator		$((B \times E \times M) / (1 - H)) \times N \times J \times F$	
				UCT Net Benefits		$(N \times M \times L)$	8,963,155 kWh
Total Costs		\$2,193,861					10,116,428 kWh
							\$2,316,661
Net Benefit (Cost)							
		\$2,316,661		Utility Program Cost per kWh Lifetime		\$0.0125	
Benefit/Cost Ratio		2.06		Utility Program Cost per kW at Gen		\$2,079	

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

HOME ENERGY SERVICES: RESIDENTIAL AND LOW INCOME					2021	ELECTRIC	GOAL
2021 Net Present Cost Benefit Summary							
Analysis For All Participants							
Benefits			Input Summary and Totals				
System Benefits (Avoided Costs)			Program Inputs per Customer kW				
Generation Capacity	\$317,822	Utility Cost Test (\$Total)	Lifetime (Weighted on Generator kWh)	A	17.34	years	
Transmission & Distribution Capacity	\$135,310		Annual Hours	B	8760		
Marginal Energy	\$4,234,070		Gross Customer kW	C	1	kW	
Avoided Emissions	\$146,092		Generator Peak Coincidence Factor	D	85.81%		
			Gross Load Factor at Customer	E	97.14%		
			Net-to-Gross (Energy)	F	93.0%		
			Net-to-Gross (Demand)	G	93.0%		
			Transmission Loss Factor (Energy)	H	11.400%		
			Transmission Loss Factor (Demand)	I	14.300%		
			Installation Rate (Energy)	J	99.895%		
			Installation Rate (Demand)	K	99.966%		
			UCT Net Benefit (Cost)	L	\$2,311		
Total Benefits			Net coincident kW Saved at Generator				
Costs			Gross Annual kWh Saved at Customer				
Utility Project Costs			Net Annual kWh Saved at Customer				
Total Incentive	\$573,558		Net Annual kWh Saved at Generator				
Internal Administration	\$175,000		Gross kW Saved at Customer				
Third-Party Delivery	\$1,345,303		Net coincident kW Saved at Generator				
Promotion	\$80,000		Gross Annual kWh Saved at Customer				
M&V	\$40,000		Net Annual kWh Saved at Customer				
Subtotal	\$2,213,861		Net Annual kWh Saved at Generator				
Participant Costs			Program Summary per Participant				
Costs			Gross kW Saved at Customer				
Incremental Capital Costs	N/A		Net coincident kW Saved at Generator				
Incremental O&M Costs	N/A		Gross Annual kWh Saved at Customer				
Subtotal	N/A		Net Annual kWh Saved at Customer				
Participant Rebates	N/A		Net Annual kWh Saved at Generator				
Subtotal	N/A		Gross kW Saved at Customer				
Total Costs	\$2,213,861		Net coincident kW Saved at Generator				
			Gross Annual kWh Saved at Customer				
			Net Annual kWh Saved at Customer				
			Net Annual kWh Saved at Generator				
			UCT Net Benefits				
Net Benefit (Cost)			Utility Program Cost per kWh Lifetime				
Benefit/Cost Ratio	2:18		Utility Program Cost per kW at Gen				

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

HOME ENERGY SERVICES: RESIDENTIAL AND LOW INCOME							2022	ELECTRIC	GOAL		
2022 Net Present Cost Benefit Summary											
Analysis For All Participants					Input Summary and Totals						
Benefits System Benefits (Avoided Costs) Generation Capacity Transmission & Distribution Capacity Marginal Energy Avoided Emissions Total Benefits Costs Utility Project Costs Total Incentive Internal Administration Third-Party Delivery Promotion M&V Subtotal Participant Costs Incremental Capital Costs Incremental O&M Costs Subtotal Reductions to Costs Participant Rebates Subtotal Subtotal Total Costs Net Benefit (Cost) Benefit/Cost Ratio					Program Inputs per Customer kW						
					Lifetime (Weighted on Generator kWh)					A	17.34 years
					Annual Hours					B	8760
					Gross Customer kW					C	1 kW
					Generator Peak Coincidence Factor					D	85.81%
					Gross Load Factor at Customer					E	97.14%
					Net-to-Gross (Energy)					F	93.0%
					Net-to-Gross (Demand)					G	93.0%
					Transmission Loss Factor (Energy)					H	11.400%
					Transmission Loss Factor (Demand)					I	14.300%
					Installation Rate (Energy)					J	99.895%
					Installation Rate (Demand)					K	99.966%
					UCT Net Benefit (Cost)					L	\$2,657
Net coincident kW Saved at Generator					$(G \times C \times K) \times D / (1 - I)$		0.9005 kW				
Gross Annual kWh Saved at Customer					$(B \times E \times C)$		8,510 kWh				
Net Annual kWh Saved at Customer					$(F \times (B \times E \times C \times J))$		7,909 kWh				
Net Annual kWh Saved at Generator					$(F \times (B \times E \times C \times J)) / (1 - H)$		8,927 kWh				
Program Summary per Participant											
Gross kW Saved at Customer					M	0.35 kW					
Net coincident kW Saved at Generator					$(G \times M \times K) \times D / (1 - I)$		0.32 kW				
Gross Annual kWh Saved at Customer					$(B \times E \times M)$		2,956 kWh				
Net Annual kWh Saved at Customer					$(F \times (B \times E \times M \times J))$		2,747 kWh				
Net Annual kWh Saved at Generator					$(F \times (B \times E \times M \times J)) / (1 - H)$		3,100 kWh				
Program Summary All Participants											
Total Participants					N	3,263					
Total Budget					O	\$2,163,861					
Gross kW Saved at Customer					$(N \times M)$		1,133 kW				
Net coincident kW Saved at Generator					$((G \times M \times K) \times D / (1 - I)) \times N$		1,055 kW				
Gross Annual kWh Saved at Customer					$(B \times E \times M) \times N$		9,643,954 kWh				
Gross Installed Annual kWh Saved at Customer					$(B \times E \times M) \times N \times J$		9,633,864 kWh				
Net Annual kWh Saved at Customer					$(B \times E \times M) \times N \times J \times F$		8,963,155 kWh				
Net Annual kWh Saved at Generator					$((B \times E \times M) / (1 - H)) \times N \times J \times F$		10,116,428 kWh				
UCT Net Benefits					$(N \times M \times L)$		\$3,010,628				
Utility Program Cost per kWh Lifetime											
Utility Program Cost per kW at Gen											

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

HOME LIGHTING & RECYCLING				2020	ELECTRIC	GOAL
2020 Net Present Cost Benefit Summary						
Analysis For All Participants				Input Summary and Totals		
Utility Cost Test (\$Total)			Program Inputs per Customer kW			
			Lifetime (Weighted on Generator kWh)			
			Annual Hours			
			Gross Customer kW			
			Generator Peak Coincidence Factor			
			Gross Load Factor at Customer			
			Net-to-Gross (Energy)			
			Net-to-Gross (Demand)			
			Transmission Loss Factor (Energy)			
			Transmission Loss Factor (Demand)			
			Installation Rate (Energy)			
			Installation Rate (Demand)			
			UCT Net Benefit (Cost)			
			Net coincident kW Saved at Generator			
			Gross Annual kWh Saved at Customer			
			Net Annual kWh Saved at Customer			
			Net Annual kWh Saved at Generator			
			Program Summary per Participant			
			Gross kW Saved at Customer			
			Net coincident kW Saved at Generator			
			Gross Annual kWh Saved at Customer			
			Net Annual kWh Saved at Customer			
			Net Annual kWh Saved at Generator			
			Program Summary All Participants			
			Total Participants			
			Total Budget			
			Gross kW Saved at Customer			
			Net coincident kW Saved at Generator			
			Gross Annual kWh Saved at Customer			
			Gross Installed Annual kWh Saved at Customer			
			Net Annual kWh Saved at Customer			
			Net Annual kWh Saved at Generator			
			UCT Net Benefits			
			Utility Program Cost per kWh Lifetime			
			Utility Program Cost per kW at Gen			

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

Net Benefit (Cost)	\$1,462,203
Benefit/Cost Ratio	2.22

HOME LIGHTING & RECYCLING			
2020 Net Present Cost Benefit Summary			
Analysis For All Participants			
			Utility Cost Test (\$Total)
Benefits			
System Benefits (Avoided Costs)			
Generation Capacity			\$317,081
Transmission & Distribution Capacity			\$147,565
Marginal Energy			\$2,098,028
Avoided Emissions			\$99,346
Total Benefits			\$2,662,020
Costs			
Utility Project Costs			
Total Incentive			\$312,817
Internal Administration			\$150,000
Third-Party Delivery			\$242,000
Promotion			\$470,000
M&V			\$25,000
Subtotal			\$1,199,817
Participant Costs			
Capital Costs			N/A
Incremental Capital Costs			N/A
Incremental O&M Costs			N/A
Subtotal			N/A
Reductions to Costs			
Participant Rebates			N/A
Subtotal			N/A
Total Costs			\$1,199,817

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

Net Benefit (Cost)	\$1,462,203
Benefit/Cost Ratio	2.22

HOME LIGHTING & RECYCLING			
2020 Net Present Cost Benefit Summary			
Analysis For All Participants			Utility Cost Test (\$Total)
Benefits			
System Benefits (Avoided Costs)			
Generation Capacity			\$317,081
Transmission & Distribution Capacity			\$147,565
Marginal Energy			\$2,098,028
Avoided Emissions			\$99,346
Total Benefits			
			\$2,662,020
Costs			
Utility Project Costs			
Total Incentive			\$312,817
Internal Administration			\$150,000
Third-Party Delivery			\$242,000
Promotion			\$470,000
M&V			\$25,000
Subtotal			\$1,199,817
Participant Costs			
Capital Costs			N/A
Incremental Capital Costs			N/A
Incremental O&M Costs			N/A
Subtotal			N/A
Reductions to Costs			
Participant Rebates			N/A
Subtotal			N/A
Total Costs			
			\$1,199,817

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

Net Benefit (Cost)	\$1,462,203
Benefit/Cost Ratio	2.22

HOME LIGHTING & RECYCLING				2021	ELECTRIC	GOAL
2021 Net Present Cost Benefit Summary						
Analysis For All Participants						
Benefits						
System Benefits (Avoided Costs)						
Generation Capacity						
Transmission & Distribution Capacity						
Marginal Energy						
Avoided Emissions						
Total Benefits						
Costs						
Utility Project Costs						
Total Incentive						
Internal Administration						
Third-Party Delivery						
Promotion						
M&V						
Subtotal						
Participant Costs						
Incremental Capital Costs						
Incremental O&M Costs						
Subtotal						
Reductions to Costs						
Participant Rebates						
Subtotal						
Subtotal						
Total Costs						
Net Benefit (Cost)						
Benefit/Cost Ratio						

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

HOME LIGHTING & RECYCLING				2022	ELECTRIC	GOAL
2022 Net Present Cost Benefit Summary						
Analysis For All Participants						
Benefits	Input Summary and Totals					
	Program Inputs per Customer kW				A	18.31 years
	Lifetime (Weighted on Generator kWh)				B	8760
	Annual Hours				C	1 kW
	Gross Customer kW				D	13.42%
	Generator Peak Coincidence Factor				E	8.88%
	Gross Load Factor at Customer				F	71.4%
	Net-to-Gross (Energy)				G	71.4%
	Net-to-Gross (Demand)				H	10.418%
	Transmission Loss Factor (Energy)				I	13.983%
	Transmission Loss Factor (Demand)				J	100.000%
	Installation Rate (Energy)				K	100.000%
	Installation Rate (Demand)				L	\$177
	UCT Net Benefit (Cost)					
	Net coincident kW Saved at Generator		$(G \times C \times K) \times D / (1 - I)$			0.1069 kW
	Gross Annual kWh Saved at Customer		$(B \times E \times C)$			778 kWh
Net Annual kWh Saved at Customer		$(F \times (B \times E \times C \times J))$			555 kWh	
Net Annual kWh Saved at Generator		$(F \times (B \times E \times C \times J)) / (1 - H)$			620 kWh	
Program Summary per Participant						
Gross kW Saved at Customer		M			0.03 kW	
Net coincident kW Saved at Generator		$(G \times M \times K) \times D / (1 - I)$			0.00 kW	
Gross Annual kWh Saved at Customer		$(B \times E \times M)$			24 kWh	
Net Annual kWh Saved at Customer		$(F \times (B \times E \times M \times J))$			17 kWh	
Net Annual kWh Saved at Generator		$(F \times (B \times E \times M \times J)) / (1 - H)$			19 kWh	
Program Summary All Participants						
Total Participants		N			309,200	
Total Budget		O			\$1,158,151	
Gross kW Saved at Customer		$(N \times M)$			9,545 kW	
Net coincident kW Saved at Generator		$((G \times M \times K) \times D / (1 - I)) \times N$			1,063 kW	
Gross Annual kWh Saved at Customer		$(B \times E \times M) \times N$			7,427,624 kWh	
Gross Installed Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J$			7,427,624 kWh	
Net Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J \times F$			5,300,679 kWh	
Net Annual kWh Saved at Generator		$((B \times E \times M) / (1 - H)) \times N \times J \times F$			5,917,133 kWh	
UCT Net Benefits		$(N \times M \times L)$			\$1,687,665	
Utility Program Cost per kWh Lifetime						
Utility Program Cost per kW at Gen						

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

RESIDENTIAL COOLING			2020		ELECTRIC		GOAL		
2020 Net Present Cost Benefit Summary									
Analysis For All Participants			Input Summary and Totals						
Benefits			Program Inputs per Customer kW					14.23 years	
			Lifetime (Weighted on Generator kWh)					A	
			Annual Hours					B	
			Gross Customer kW					C	
System Benefits (Avoided Costs)			Generator Peak Coincidence Factor					D	92.23%
			Gross Load Factor at Customer					E	33.66%
			Net-to-Gross (Energy)					F	66.0%
			Net-to-Gross (Demand)					G	66.0%
			Transmission Loss Factor (Energy)					H	11.4009%
			Transmission Loss Factor (Demand)					I	14.3009%
			Installation Rate (Energy)					J	100.0009%
			Installation Rate (Demand)					K	100.0009%
			UCT Net Benefit (Cost)					L	\$290
			Total Benefits			Net coincident kW Saved at Generator			
Costs			Gross Annual kWh Saved at Customer					$(B \times E \times C)$	2,948 kWh
Utility Project Costs			Net Annual kWh Saved at Customer					$(F \times (B \times E \times C \times J))$	1,946 kWh
			Net Annual kWh Saved at Generator					$(F \times (B \times E \times C \times J)) / (1 - H)$	2,196 kWh
			Program Summary per Participant						
Subtotal			Gross kW Saved at Customer					M	0.67 kW
Participant Costs			Net coincident kW Saved at Generator					$(G \times M \times K) \times D / (1 - I)$	0.48 kW
			Gross Annual kWh Saved at Customer					$(B \times E \times M)$	1,976 kWh
			Net Annual kWh Saved at Customer					$(F \times (B \times E \times M \times J))$	1,304 kWh
			Net Annual kWh Saved at Generator					$(F \times (B \times E \times M \times J)) / (1 - H)$	1,472 kWh
Subtotal			Program Summary All Participants						
Cold			Total Participants					N	96
Incremental Capital Costs			Total Budget					O	\$43,040
Incremental O&M Costs			Gross kW Saved at Customer					$(N \times M)$	64 kW
Subtotal			Net coincident kW Saved at Generator					$((G \times M \times K) \times D / (1 - I)) \times N$	46 kW
Reductions to Costs			Gross Annual kWh Saved at Customer					$(B \times E \times M) \times N$	189,663 kWh
Participant Rebates			Gross Installed Annual kWh Saved at Customer:					$(B \times E \times M) \times N \times J$	189,663 kWh
Subtotal			Net Annual kWh Saved at Customer					$(B \times E \times M) \times N \times J \times F$	125,177 kWh
Subtotal			Net Annual kWh Saved at Generator					$((B \times E \times M) / (1 - H)) \times N \times J \times F$	141,284 kWh
Total Costs			UCT Net Benefits					$(N \times M \times L)$	\$18,683
Net Benefit (Cost)			Utility Program Cost per kWh Lifetime						\$0.0214
Benefit/Cost Ratio			Utility Program Cost per kW at Gen						\$942

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

RESIDENTIAL COOLING				2021	ELECTRIC	GOAL
2021 Net Present Cost Benefit Summary						
Analysis For All Participants				Input Summary and Totals		
Benefits				Program Inputs per Customer kW		
				Lifetime (Weighted on Generator kWh)	A	14.23 years
				Annual Hours	B	8760
				Gross Customer kW	C	1 kW
				Generator Peak Coincidence Factor	D	92.23%
				Gross Load Factor at Customer	E	33.66%
				Net-to-Gross (Energy)	F	66.0%
				Net-to-Gross (Demand)	G	66.0%
				Transmission Loss Factor (Energy)	H	11.4009%
				Transmission Loss Factor (Demand)	I	14.3009%
				Installation Rate (Energy)	J	100.0009%
				Installation Rate (Demand)	K	100.0009%
				UCT Net Benefit (Cost)	L	\$371
Total Benefits				Net coincident kW Saved at Generator	$(G \times C \times K) \times D / (1 - I)$	
Costs				Gross Annual kWh Saved at Customer	$(B \times E \times C)$	
Utility Project Costs				Net Annual kWh Saved at Customer	$(F \times (B \times E \times C \times J))$	
Total Incentive				Net Annual kWh Saved at Generator	$(F \times (B \times E \times C \times J)) / (1 - H)$	
				Program Summary per Participant		
				Gross kW Saved at Customer	M	0.67 kW
				Net coincident kW Saved at Generator	$(G \times M \times K) \times D / (1 - I)$	
				Gross Annual kWh Saved at Customer	$(B \times E \times M)$	
				Net Annual kWh Saved at Customer	$(F \times (B \times E \times M \times J))$	
				Net Annual kWh Saved at Generator	$(F \times (B \times E \times M \times J)) / (1 - H)$	
Subtotal						
Participant Costs				Program Summary All Participants		
Costs				Total Participants	N	96
				Total Budget	O	\$43,040
				Gross kW Saved at Customer	$(N \times M)$	
				Net coincident kW Saved at Generator	$((G \times M \times K) \times D / (1 - I)) \times N$	
				Gross Annual kWh Saved at Customer	$(B \times E \times M) \times N$	
				Gross Installed Annual kWh Saved at Customer	$(B \times E \times M) \times N \times J$	
				Net Annual kWh Saved at Customer	$(B \times E \times M) \times N \times J \times F$	
				Net Annual kWh Saved at Generator	$((B \times E \times M) / (1 - H)) \times N \times J \times F$	
				UCT Net Benefits	$(N \times M \times L)$	
Total Costs						
				Utility Program Cost per kWh Lifetime		
Net Benefit (Cost)				\$0.0214		
Benefit/Cost Ratio				Utility Program Cost per kW at Gen		
				\$942		

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

RESIDENTIAL COOLING			2022		ELECTRIC		GOAL
2022 Net Present Cost Benefit Summary							
Analysis For All Participants				Input Summary and Totals			
		Utility Cost Test (\$Total)					
Benefits							
System Benefits (Avoided Costs)							
Generation Capacity		\$12,695		Lifetime (Weighted on Generator kWh)		14.23 years	
Transmission & Distribution Capacity		\$5,326		Annual Hours		8760	
Marginal Energy		\$52,260		Gross Customer kW		1 kW	
Avoided Emissions		\$2,247		Generator Peak Coincidence Factor		92.23%	
				Gross Load Factor at Customer		33.66%	
				Net-to-Gross (Energy)		66.0%	
				Net-to-Gross (Demand)		66.0%	
				Transmission Loss Factor (Energy)		11.400%	
				Transmission Loss Factor (Demand)		14.300%	
				Installation Rate (Energy)		100.000%	
				Installation Rate (Demand)		100.000%	
				UCT Net Benefit (Cost)		\$62	
Total Benefits				Net coincident kW Saved at Generator			
				$(G \times C \times K) \times D / (1 - I)$			
Costs				(B x E x C)			
				Gross Annual kWh Saved at Customer			
				Net Annual kWh Saved at Customer			
				$(F \times (B \times E \times C \times J))$			
				Net Annual kWh Saved at Generator			
				$(F \times (B \times E \times C \times J)) / (1 - H)$			
Utility Project Costs							
Total Incentive				M			
				Gross kW Saved at Customer			
				Net coincident kW Saved at Generator			
				$(G \times M \times K) \times D / (1 - I)$			
				(B x E x M)			
				Gross Annual kWh Saved at Customer			
				Net Annual kWh Saved at Customer			
				$(F \times (B \times E \times M \times J))$			
				Net Annual kWh Saved at Generator			
				$(F \times (B \times E \times M \times J)) / (1 - H)$			
Participant Costs							
Costs				N			
				Total Participants			
				Total Budget			
				Gross kW Saved at Customer			
				Net coincident kW Saved at Generator			
				$((G \times M \times K) \times D / (1 - I)) \times N$			
				(B x E x M) x N			
				Gross Annual kWh Saved at Customer			
				Gross Installed Annual kWh Saved at Customer: (B x E x M) x N x J			
				(B x E x M) x N x J x F			
				Net Annual kWh Saved at Customer			
				Net Annual kWh Saved at Generator			
				$((B \times E \times M) / (1 - H)) \times N \times J \times F$			
				(N x M x L)			
Total Costs				UCT Net Benefits			
				Utility Program Cost per kWh Lifetime			
				Utility Program Cost per kW at Gen			
Net Benefit (Cost)				\$0,0341			
Benefit/Cost Ratio				\$1,500			

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

SCHOOL EDUCATION KITS				
2020 Net Present Cost Benefit Summary				
Analysis For All Participants				
Benefits				
System Benefits (Avoided Costs)				
Generation Capacity		Utility Cost Test (\$Total)		11.53 years
Transmission & Distribution Capacity	\$4,022			8760
Marginal Energy	\$1,706			1 kW
Avoided Emissions	\$104,875			
	\$52,268			
Total Benefits				
	\$115,870			
Costs				
Utility Project Costs				
Total Incentive	\$52,309			
Internal Administration	\$14,608			
Third-Party Delivery	\$76,000			
Promotion	\$2,500			
M&V	\$0			
Subtotal	\$145,417			
Participant Costs				
Costs				
Incremental Capital Costs	N/A			
Incremental O&M Costs	N/A			
Subtotal	N/A			
Reductions to Costs				
Participant Rebates	N/A			
Subtotal	N/A			
Subtotal	N/A			
Total Costs				
	\$145,417			
Net Benefit (Cost)				
	(\$29,547)			
Benefit/Cost Ratio				
	0.80			
Input Summary and Totals				
Program Inputs per Customer kW				
Lifetime (Weighted on Generator kWh)	A			
Annual Hours	B			
Gross Customer kW	C			
Generator Peak Coincidence Factor	D			
Gross Load Factor at Customer	E			
Net-to-Gross (Energy)	F			
Net-to-Gross (Demand)	G			
Transmission Loss Factor (Energy)	H			
Transmission Loss Factor (Demand)	I			
Installation Rate (Energy)	J			
Installation Rate (Demand)	K			
UCT Net Benefit (Cost)	L			
$(G \times C \times K) \times D / (1 - I)$				
Net coincident kW Saved at Generator				0.1068 kW
Gross Annual kWh Saved at Customer				5,334 kWh
Net Annual kWh Saved at Customer				3,422 kWh
Net Annual kWh Saved at Generator				3,862 kWh
$(F \times (B \times E \times C \times J)) / (1 - H)$				
Program Summary per Participant				
Gross kW Saved at Customer	M			0.04 kW
Net coincident kW Saved at Generator				0.00 kW
Gross Annual kWh Saved at Customer				235 kWh
Net Annual kWh Saved at Customer				151 kWh
Net Annual kWh Saved at Generator				170 kWh
$(F \times (B \times E \times M \times J)) / (1 - H)$				
Program Summary All Participants				
Total Participants	N			2,500
Total Budget	O			\$145,417
Gross kW Saved at Customer				110 kW
Net coincident kW Saved at Generator				12 kW
Gross Annual kWh Saved at Customer				586,771 kWh
Gross Installed Annual kWh Saved at Customer				376,378 kWh
Net Annual kWh Saved at Customer				376,378 kWh
Net Annual kWh Saved at Generator				424,806 kWh
UCT Net Benefits				(\$29,547)
$((G \times M \times K) \times D / (1 - I)) \times N$				
$(B \times E \times M) \times N$				
$(B \times E \times M) \times N \times J$				
$(B \times E \times M) \times N \times J \times F$				
$((B \times E \times M) / (1 - H)) \times N \times J \times F$				
$(N \times M \times L)$				
Utility Program Cost per kWh Lifetime				
Utility Program Cost per kW at Gen				
\$0.0297				
\$11,978				

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

SCHOOL EDUCATION KITS				2021	ELECTRIC	GOAL
2021 Net Present Cost Benefit Summary						
Analysis For All Participants						
Input Summary and Totals						
Program Inputs per Customer kW						
Lifetime (Weighted on Generator kWh)	A					11.53 years
Annual Hours	B					8760
Gross Customer kW	C					1 kW
Generator Peak Coincidence Factor	D					10.17%
Gross Load Factor at Customer	E					60.89%
Net-to-Gross (Energy)	F					100.0%
Net-to-Gross (Demand)	G					100.0%
Transmission Loss Factor (Energy)	H					11.400%
Transmission Loss Factor (Demand)	I					14.300%
Installation Rate (Energy)	J					64.144%
Installation Rate (Demand)	K					93.000%
UCT Net Benefit (Cost)	L					-\$214
Net coincident kW Saved at Generator		$(G \times C \times K) \times D / (1 - I)$				0.1068 kW
Gross Annual kWh Saved at Customer		$(B \times E \times C)$				5,334 kWh
Net Annual kWh Saved at Customer		$(F \times (B \times E \times C \times J))$				3,422 kWh
Net Annual kWh Saved at Generator		$(F \times (B \times E \times C \times J)) / (1 - H)$				3,862 kWh
Program Summary per Participant						
Gross kW Saved at Customer		M				0.04 kW
Net coincident kW Saved at Generator		$(G \times M \times K) \times D / (1 - I)$				0.00 kW
Gross Annual kWh Saved at Customer		$(B \times E \times M)$				235 kWh
Net Annual kWh Saved at Customer		$(F \times (B \times E \times M \times J))$				151 kWh
Net Annual kWh Saved at Generator		$(F \times (B \times E \times M \times J)) / (1 - H)$				170 kWh
Program Summary All Participants						
Total Participants		N				2,500
Total Budget		O				\$145,917
Gross kW Saved at Customer		$(N \times M)$				110 kW
Net coincident kW Saved at Generator		$((G \times M \times K) \times D / (1 - I)) \times N$				12 kW
Gross Annual kWh Saved at Customer		$(B \times E \times M) \times N$				586,771 kWh
Gross Installed Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J$				376,378 kWh
Net Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J \times F$				376,378 kWh
Net Annual kWh Saved at Generator		$((B \times E \times M) / (1 - H)) \times N \times J \times F$				424,806 kWh
UCT Net Benefits		$(N \times M \times L)$				(\$23,530)
Utility Program Cost per kWh Lifetime						
Utility Program Cost per kW at Gen						\$0.0298
Utility Program Cost per kW at Gen						\$12,020

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

SCHOOL EDUCATION KITS					2022	ELECTRIC	GOAL
2022 Net Present Cost Benefit Summary							
Analysis For All Participants							
Input Summary and Totals							
Program Inputs per Customer kW		Lifetime (Weighted on Generator kWh)		A	11.53 years		
Annual Hours				B	8760		
Gross Customer kW				C	1 kW		
Generator Peak Coincidence Factor				D	10.17%		
Gross Load Factor at Customer				E	60.89%		
Net-to-Gross (Energy)				F	100.0%		
Net-to-Gross (Demand)				G	100.0%		
Transmission Loss Factor (Energy)				H	11.400%		
Transmission Loss Factor (Demand)				I	14.300%		
Installation Rate (Energy)				J	64.144%		
Installation Rate (Demand)				K	93.000%		
UCT Net Benefit (Cost)				L	-\$333		
Net coincident kW Saved at Generator				$(G \times C \times K) \times D / (1 - I)$		0.1068 kW	
Gross Annual kWh Saved at Customer				$(B \times E \times C)$		5,334 kWh	
Net Annual kWh Saved at Customer				$(F \times (B \times E \times C \times J))$		3,422 kWh	
Net Annual kWh Saved at Generator				$(F \times (B \times E \times C \times J)) / (1 - H)$		3,862 kWh	
Program Summary per Participant							
Gross kW Saved at Customer				M	0.04 kW		
Net coincident kW Saved at Generator				$(G \times M \times K) \times D / (1 - I)$		0.00 kW	
Gross Annual kWh Saved at Customer				$(B \times E \times M)$		235 kWh	
Net Annual kWh Saved at Customer				$(F \times (B \times E \times M \times J))$		151 kWh	
Net Annual kWh Saved at Generator				$(F \times (B \times E \times M \times J)) / (1 - H)$		170 kWh	
Program Summary All Participants							
Total Participants				N	2,500		
Total Budget				O	\$166,417		
Gross kW Saved at Customer				$(N \times M)$		110 kW	
Net coincident kW Saved at Generator				$((G \times M \times K) \times D / (1 - I)) \times N$		12 kW	
Gross Annual kWh Saved at Customer				$(B \times E \times M) \times N$		586,771 kWh	
Gross Installed Annual kWh Saved at Customer				$(B \times E \times M) \times N \times J$		376,378 kWh	
Net Annual kWh Saved at Customer				$(B \times E \times M) \times N \times J \times F$		376,378 kWh	
Net Annual kWh Saved at Generator				$((B \times E \times M) / (1 - H)) \times N \times J \times F$		424,806 kWh	
UCT Net Benefits				$(N \times M \times L)$		(\$36,683)	
Utility Program Cost per kWh Lifetime							
Utility Program Cost per kW at Gen						\$0.0340	
						\$13,708	

Net Benefit (Cost)	(\$36,683)
Benefit/Cost Ratio	0.78

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

Benefits	Utility Cost Test (\$Total)
System Benefits (Avoided Costs)	
Generation Capacity	\$5,193
Transmission & Distribution Capacity	\$1,775
Marginal Energy	\$116,069
Avoided Emissions	\$6,697

Total Benefits	\$129,734
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Costs	
Utility Project Costs	
Total Incentive	\$52,309
Internal Administration	\$15,608
Third-Party Delivery	\$76,000
Promotion	\$2,500
M&V	\$20,000
Subtotal	\$166,417

Participant Costs	
Costs	
Incremental Capital Costs	N/A
Incremental O&M Costs	N/A
Subtotal	N/A
Reductions to Costs	
Participant Rebates	N/A
Subtotal	N/A

Total Costs	\$166,417
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SMART THERMOSTATS				2020	ELECTRIC	GOAL
2020 Net Present Cost Benefit Summary						
Analysis For All Participants						
Benefits		Input Summary and Totals				
System Benefits (Avoided Costs)		Program Inputs per Customer kW				
Generation Capacity	\$0	Lifetime (Weighted on Generator kWh)				
Transmission & Distribution Capacity	\$0	Annual Hours				
Marginal Energy	\$169,762	Gross Customer kW				
Avoided Emissions	\$10,067	Generator Peak Coincidence Factor				
		Gross Load Factor at Customer				
		Net-to-Gross (Energy)				
		Net-to-Gross (Demand)				
		Transmission Loss Factor (Energy)				
		Transmission Loss Factor (Demand)				
		Installation Rate (Energy)				
		Installation Rate (Demand)				
		UCT Net Benefit (Cost)				
Total Benefits		Net coincident kW Saved at Generator				
		$(G \times C \times K) \times D / (1 - I)$				
Costs		Gross Annual kWh Saved at Customer				
		$(B \times E \times C)$				
Utility Project Costs		Net Annual kWh Saved at Customer				
		$(F \times (B \times E \times C \times J))$				
Total Incentive		Net Annual kWh Saved at Generator				
		$(F \times (B \times E \times C \times J)) / (1 - H)$				
Internal Administration		Program Summary per Participant				
Third-Party Delivery		Gross kW Saved at Customer				
Promotion		M				
M&V		Net coincident kW Saved at Generator				
Subtotal		$(G \times M \times K) \times D / (1 - I)$				
		$(B \times E \times M)$				
		Gross Annual kWh Saved at Customer				
		$(F \times (B \times E \times M \times J))$				
		$(F \times (B \times E \times M \times J)) / (1 - H)$				
Participant Costs		Program Summary All Participants				
Costs		Total Participants				
Incremental Capital Costs		N				
Incremental O&M Costs		O				
Subtotal		Total Budget				
		Gross kW Saved at Customer				
		$(N \times M)$				
		Net coincident kW Saved at Generator				
		$((G \times M \times K) \times D / (1 - I)) \times N$				
		$(B \times E \times M) \times N$				
		Gross Annual kWh Saved at Customer				
		Gross Installed Annual kWh Saved at Customer; $(B \times E \times M) \times N \times J$				
		$(B \times E \times M) \times N \times J \times F$				
		Net Annual kWh Saved at Customer				
		Net Annual kWh Saved at Generator				
		$((B \times E \times M) / (1 - H)) \times N \times J \times F$				
		UCT Net Benefits				
		$(N \times M \times L)$				
Total Costs		Utility Program Cost per kWh Lifetime				
		Utility Program Cost per kW at Gen				
Net Benefit (Cost)						
Benefit/Cost Ratio						

2020		ELECTRIC		GOAL
Input Summary and Totals				
Program Inputs per Customer kW				
Benefits	Lifetime (Weighted on Generator kWh)	A		9.18 years
	Annual Hours	B		8760
	Gross Customer kW	C		1 kW
	Generator Peak Coincidence Factor	D		-65.11%
	Gross Load Factor at Customer	E		165.10%
	Net-to-Gross (Energy)	F		100.0%
	Net-to-Gross (Demand)	G		100.0%
	Transmission Loss Factor (Energy)	H		11.400%
	Transmission Loss Factor (Demand)	I		14.300%
	Installation Rate (Energy)	J		100.000%
	Installation Rate (Demand)	K		100.000%
	UCT Net Benefit (Cost)	L		\$654
	Net coincident kW Saved at Generator	$(G \times C \times K) \times D / (1 - I)$		
	Gross Annual kWh Saved at Customer	$(B \times E \times C)$		
	Net Annual kWh Saved at Customer	$(F \times (B \times E \times C \times J))$		
	Net Annual kWh Saved at Generator	$(F \times (B \times E \times C \times J)) / (1 - H)$		
Program Summary per Participant				
Gross kW Saved at Customer	M			0.03 kW
Net coincident kW Saved at Generator	$(G \times M \times K) \times D / (1 - I)$			-0.03 kW
Gross Annual kWh Saved at Customer	$(B \times E \times M)$			494 kWh
Net Annual kWh Saved at Customer	$(F \times (B \times E \times M \times J))$			494 kWh
Net Annual kWh Saved at Generator	$(F \times (B \times E \times M \times J)) / (1 - H)$			557 kWh
Program Summary All Participants				
Total Participants	N			1,671
Total Budget	O			\$142,500
Gross kW Saved at Customer	$(N \times M)$			57 kW
Net coincident kW Saved at Generator	$((G \times M \times K) \times D / (1 - I)) \times N$			-43 kW
Gross Annual kWh Saved at Customer	$(B \times E \times M) \times N$			825,149 kWh
Gross Installed Annual kWh Saved at Customer	$(B \times E \times M) \times N \times J$			825,149 kWh
Net Annual kWh Saved at Customer	$(B \times E \times M) \times N \times J \times F$			825,149 kWh
Net Annual kWh Saved at Generator	$((B \times E \times M) / (1 - H)) \times N \times J \times F$			931,320 kWh
UCT Net Benefits	$(N \times M \times L)$			\$37,328
Utility Program Cost per kWh Lifetime				
Utility Program Cost per kW at Gen				

SMART THERMOSTATS					2021	ELECTRIC	GOAL
2021 Net Present Cost Benefit Summary							
Analysis For All Participants							
Benefits				Input Summary and Totals			
System Benefits (Avoided Costs)				Program Inputs per Customer kW			
Generation Capacity				Lifetime (Weighted on Generator kWh)			
Transmission & Distribution Capacity				Annual Hours			
Marginal Energy				Gross Customer kW			
Avoided Emissions				Generator Peak Coincidence Factor			
				Gross Load Factor at Customer			
				Net-to-Gross (Energy)			
				Net-to-Gross (Demand)			
				Transmission Loss Factor (Energy)			
				Transmission Loss Factor (Demand)			
				Installation Rate (Energy)			
				Installation Rate (Demand)			
				UCT Net Benefit (Cost)			
Total Benefits				Net coincident kW Saved at Generator			
				(G x C x K) x D / (1 - I)			
Costs				Gross Annual kWh Saved at Customer			
				(B x E x C)			
Utility Project Costs				Net Annual kWh Saved at Customer			
Total Incentive				(F x (B x E x C x J))			
Internal Administration				Net Annual kWh Saved at Generator			
Third-Party Delivery				(F x (B x E x C x J)) / (1 - H)			
Promotion							
M&V							
Subtotal				Program Summary per Participant			
				Gross kW Saved at Customer			
				M			
				Net coincident kW Saved at Generator			
				(G x M x K) x D / (1 - I)			
				Gross Annual kWh Saved at Customer			
				(B x E x M)			
				Net Annual kWh Saved at Customer			
				(F x (B x E x M x J))			
				Net Annual kWh Saved at Generator			
				(F x (B x E x M x J)) / (1 - H)			
Participant Costs				Program Summary All Participants			
Costs				Total Participants			
				N			
				Total Budget			
				O			
				Gross kW Saved at Customer			
				(N x M)			
				Net coincident kW Saved at Generator			
				((G x M x K) x D / (1 - I)) x N			
				Gross Annual kWh Saved at Customer			
				(B x E x M) x N			
				Gross Installed Annual kWh Saved at Customer			
				(B x E x M) x N x J			
				Net Annual kWh Saved at Customer			
				(B x E x M) x N x J x F			
				Net Annual kWh Saved at Generator			
				((B x E x M) / (1 - H)) x N x J x F			
				UCT Net Benefits			
				(N x M x L)			
Total Costs				Utility Program Cost per kWh Lifetime			
				Utility Program Cost per kW at Gen			
				#DIV/0!			

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

SMART THERMOSTATS			2022	ELECTRIC		GOAL
2022 Net Present Cost Benefit Summary						
Analysis For All Participants						
Benefits			Input Summary and Totals			
Utility Cost Test (\$Total)			Program Inputs per Customer kW			
			Lifetime (Weighted on Generator kWh)			
			A			
			B			
			C			
			D			
			E			
			F			
			G			
			H			
			I			
			J			
			K			
			L			
			(\$81.1			
			- kW			
			5,424 kWh			
			5,424 kWh			
			6,122 kWh			
			(F x (B x E x C x J)) / (1 - H)			
			Program Summary per Participant			
			M			
			(G x M x K) x D / (1 - I)			
			0.00 kW			
			576 kWh			
			(F x (B x E x M x J))			
			(F x (B x E x M x J)) / (1 - H)			
			Program Summary All Participants			
			N			
			O			
			1,288			
			\$82,500			
			(N x M)			
			(G x M x K) x D / (1 - I) x N			
			0 kW			
			742,417 kWh			
			742,417 kWh			
			742,417 kWh			
			(B x E x M) x N x J			
			(B x E x M) x N x J x F			
			(B x E x M) / (1 - H) x N x J x F			
			837,943 kWh			
			\$111,036			
			Utility Program Cost per kWh Lifetime			
			\$0.0098			
			#DIV/0!			
			2.35			

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

BUSINESS COMPREHENSIVE					
2020 Net Present Cost Benefit Summary					
Analysis For All Participants					
		2020		ELECTRIC	
Input Summary and Totals					
		Program Inputs per Customer kW		GOAL	
		Lifetime (Weighted on Generator kWh)	A	15,82 years	
		Annual Hours	B	8760	
		Gross Customer kW	C	1 kW	
		Generator Peak Coincidence Factor	D	72.97%	
		Gross Load Factor at Customer	E	58.66%	
		Net-to-Gross (Energy)	F	78.0%	
		Net-to-Gross (Demand)	G	77.7%	
		Transmission Loss Factor (Energy)	H	7.100%	
		Transmission Loss Factor (Demand)	I	8.700%	
		Installation Rate (Energy)	J	100.000%	
		Installation Rate (Demand)	K	100.000%	
		UCT Net Benefit (Cost)	L	\$370	
		Net coincident kW Saved at Generator	$(G \times C \times K) \times D / (1 - I)$		0.6104 kW
		Gross Annual kWh Saved at Customer	$(B \times E \times C)$		5,138 kWh
		Net Annual kWh Saved at Customer	$(F \times (B \times E \times C \times J))$		4,006 kWh
		Net Annual kWh Saved at Generator	$(F \times (B \times E \times C \times I)) / (1 - H)$		4,312 kWh
		Program Summary per Participant			
		Gross kW Saved at Customer	M	8.36 kW	
		Net coincident kW Saved at Generator	$(G \times M \times K) \times D / (1 - I)$		5.19 kW
		Gross Annual kWh Saved at Customer	$(B \times E \times M)$		42,957 kWh
		Net Annual kWh Saved at Customer	$(F \times (B \times E \times M \times J))$		33,486 kWh
		Net Annual kWh Saved at Generator	$(F \times (B \times E \times M \times I)) / (1 - H)$		36,046 kWh
		Program Summary All Participants			
		Total Participants	N	477	
		Total Budget	O	\$4,798,684	
		Gross kW Saved at Customer	$(N \times M)$		3,991 kW
		Net coincident kW Saved at Generator	$((G \times M \times K) \times D / (1 - I)) \times N$		2,479 kW
		Gross Annual kWh Saved at Customer	$(B \times E \times M) \times N$		20,506,263 kWh
		Gross Installed Annual kWh Saved at Customer:	$(B \times E \times M) \times N \times J$		20,506,263 kWh
		Net Annual kWh Saved at Customer	$(B \times E \times M) \times N \times J \times F$		15,985,365 kWh
		Net Annual kWh Saved at Generator	$((B \times E \times M) / (1 - H)) \times N \times J \times F$		17,207,066 kWh
		UCT Net Benefits	$(N \times M \times L)$		\$1,477,447
		Utility Program Cost per kWh Lifetime			
		Utility Program Cost per kW at Gen			\$0.0176
		Benefit/Cost Ratio			\$1.936

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

BUSINESS COMPREHENSIVE					2021	ELECTRIC	GOAL
2021 Net Present Cost Benefit Summary							
Analysis For All Participants							
Input Summary and Totals							
Program Inputs per Customer kW							
Lifetime (Weighted on Generator kWh)					A		15.93 years
Annual Hours					B		8760
Gross Customer kW					C		1 kW
Generator Peak Coincidence Factor					D		72.25%
Gross Load Factor at Customer					E		58.82%
Net-to-Gross (Energy)					F		78.0%
Net-to-Gross (Demand)					G		77.8%
Transmission Loss Factor (Energy)					H		7.100%
Transmission Loss Factor (Demand)					I		8.700%
Installation Rate (Energy)					J		100.000%
Installation Rate (Demand)					K		100.000%
UCT Net Benefit (Cost)					L		\$534
Net coincident kW Saved at Generator					$(G \times C \times K) \times D / (1 - I)$		
Gross Annual kWh Saved at Customer					$(B \times E \times C)$		
Net Annual kWh Saved at Customer					$(F \times (B \times E \times C \times J))$		
Net Annual kWh Saved at Generator					$(F \times (B \times E \times C \times J)) / (1 - H)$		
Program Summary per Participant							
Gross kW Saved at Customer					M		10.09 kW
Net coincident kW Saved at Generator					$(G \times M \times K) \times D / (1 - I)$		
Gross Annual kWh Saved at Customer					$(B \times E \times M)$		
Net Annual kWh Saved at Customer					$(F \times (B \times E \times M \times J))$		
Net Annual kWh Saved at Generator					$(F \times (B \times E \times M \times J)) / (1 - H)$		
Program Summary All Participants							
Total Participants					N		487
Total Budget					O		\$5,682,482
Gross kW Saved at Customer					$(N \times M)$		
Net coincident kW Saved at Generator					$((G \times M \times K) \times D / (1 - I)) \times N$		
Gross Annual kWh Saved at Customer					$(B \times E \times M) \times N$		
Gross Installed Annual kWh Saved at Customer					$(B \times E \times M) \times N \times J$		
Net Annual kWh Saved at Customer					$(B \times E \times M) \times N \times J \times F$		
Net Annual kWh Saved at Generator					$((B \times E \times M) / (1 - H)) \times N \times J \times F$		
UCT Net Benefits					$(N \times M \times L)$		
Utility Program Cost per kWh Lifetime							
Utility Program Cost per kW at Gen							

2021 Net Present Cost Benefit Summary			Utility Cost Test (\$Total)
Analysis For All Participants			
Benefits			
System Benefits (Avoided Costs)			
Generation Capacity			\$828,684
Transmission & Distribution Capacity			\$371,823
Marginal Energy			\$6,771,760
Avoided Emissions			\$336,547
Total Benefits			\$8,308,813
Costs			
Utility Project Costs			
Total Incentive			\$2,098,229
Internal Administration			\$781,137
Third-Party Delivery			\$1,827,204
Promotion			\$880,912
M&V			\$95,000
Subtotal			\$5,682,482
Participant Costs			
Costs			N/A
Incremental Capital Costs			N/A
Incremental O&M Costs			N/A
Subtotal			N/A
Reductions to Costs			N/A
Participant Rebates			N/A
Subtotal			N/A
Total Costs			\$5,682,482
Net Benefit (Cost)			\$2,626,331
Benefit/Cost Ratio			1.46

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

BUSINESS COMPREHENSIVE				2022	ELECTRIC	GOAL
2022 Net Present Cost Benefit Summary						
Analysis For All Participants						
Benefits						
System Benefits (Avoided Costs)						
Generation Capacity				Utility Cost Test		
Transmission & Distribution Capacity				(\$Total)		
Marginal Energy						
Avoided Emissions						

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

BUILDING TUNE-UP			2020	ELECTRIC	GOAL
2020 Net Present Cost Benefit Summary					
Analysis For All Participants					
Input Summary and Totals					
Program Inputs per Customer kW					
Lifetime (Weighted on Generator kWh)		A			7.00 years
Annual Hours		B			8760
Gross Customer kW		C			1 kW
Generator Peak Coincidence Factor		D			48.44%
Gross Load Factor at Customer		E			89.97%
Net-to-Gross (Energy)		F			90.0%
Net-to-Gross (Demand)		G			90.0%
Transmission Loss Factor (Energy)		H			7.100%
Transmission Loss Factor (Demand)		I			8.700%
Installation Rate (Energy)		J			100.000%
Installation Rate (Demand)		K			100.000%
UCT Net Benefit (Cost)		L			-\$3,651
Net coincident kW Saved at Generator		$(G \times C \times K) \times D / (1 - I)$			
Gross Annual kWh Saved at Customer		$(B \times E \times C)$			
Net Annual kWh Saved at Customer		$(F \times (B \times E \times C \times J))$			
Net Annual kWh Saved at Generator		$(F \times (B \times E \times C \times J)) / (1 - H)$			
Program Summary per Participant					
Gross kW Saved at Customer		M			0.70 kW
Net coincident kW Saved at Generator		$(G \times M \times K) \times D / (1 - I)$			
Gross Annual kWh Saved at Customer		$(B \times E \times M)$			
Net Annual kWh Saved at Customer		$(F \times (B \times E \times M \times J))$			
Net Annual kWh Saved at Generator		$(F \times (B \times E \times M \times J)) / (1 - H)$			
Program Summary All Participants					
Total Participants		N			6
Total Budget		O			\$20,200
Gross kW Saved at Customer		$(N \times M)$			
Net coincident kW Saved at Generator		$((G \times M \times K) \times D / (1 - I)) \times N$			
Gross Annual kWh Saved at Customer		$(B \times E \times M) \times N$			
Gross Installed Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J$			
Net Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J \times F$			
Net Annual kWh Saved at Generator		$((B \times E \times M) \times N \times J \times F) / (1 - H)$			
UCT Net Benefits		$(N \times M \times L)$			
Utility Program Cost per kWh Lifetime					
Utility Program Cost per kW at Gen					

Utility Cost Test (\$Total)		
Utility		
Cost Test		
(\$Total)		
Benefits		
System Benefits (Avoided Costs)		
Generation Capacity	\$0	
Transmission & Distribution Capacity	\$134	
Marginal Energy	\$4,563	
Avoided Emissions	\$277	
Total Benefits		
Costs	\$4,975	
Utility Project Costs		
Total Incentive	\$14,000	
Internal Administration	\$3,000	
Third-Party Delivery	\$1,700	
Promotion	\$1,500	
M&V	\$0	
Subtotal	\$20,200	
Participant Costs		
Costs		
Incremental Capital Costs	N/A	
Incremental O&M Costs	N/A	
Subtotal	N/A	
Reductions to Costs		
Participant Rebates	N/A	
Subtotal	N/A	
Subtotal	N/A	
Total Costs		
	\$20,200	
Net Benefit (Cost)		
	(\$15,225)	
Benefit/Cost Ratio		
	0.25	

Notes: Dollar values represent present value of impacts, annualized over the lifetime of the measures.

Net Benefit (Cost)	(\$15,225)
Benefit/Cost Ratio	0.25

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

Benefits	Utility Cost Test (\$Total)
System Benefits (Avoided Costs)	
Generation Capacity	\$0
Transmission & Distribution Capacity	\$134
Marginal Energy	\$4,563
Avoided Emissions	\$277

Total Benefits	\$4,975
Costs	

Utility Project Costs	
Total Incentive	\$14,000
Internal Administration	\$3,000
Third-Party Delivery	\$1,700
Promotion	\$1,500
M&V	\$0
Subtotal	\$20,200

Participant Costs	
Costs	
Incremental Capital Costs	N/A
Incremental O&M Costs	N/A
Subtotal	N/A
Reductions to Costs	
Participant Rebates	N/A
Subtotal	N/A

Total Costs	\$20,200
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BUILDING TUNE-UP			2021	ELECTRIC	GOAL
2021 Net Present Cost Benefit Summary					
Analysis For All Participants					
Input Summary and Totals					
Program Inputs per Customer kW			A		7.00 years
Lifetime (Weighted on Generator kWh)			B		8760
Annual Hours			C		1 kW
Gross Customer kW			D		48.44%
Generator Peak Coincidence Factor			E		89.97%
Gross Load Factor at Customer			F		90.0%
Net-to-Gross (Energy)			G		90.0%
Net-to-Gross (Demand)			H		7.100%
Transmission Loss Factor (Energy)			I		8.700%
Transmission Loss Factor (Demand)			J		100.000%
Installation Rate (Energy)			K		100.000%
Installation Rate (Demand)			L		-\$3,590
UCT Net Benefit (Cost)					
Net coincident kW Saved at Generator			$(G \times C \times K) \times D / (1 - I)$		
Gross Annual kWh Saved at Customer			$(B \times E \times C)$		
Net Annual kWh Saved at Customer			$(F \times (B \times E \times C \times J))$		
Net Annual kWh Saved at Generator			$(F \times (B \times E \times C \times J)) / (1 - H)$		
Program Summary per Participant					
Gross kW Saved at Customer			M		0.70 kW
Net coincident kW Saved at Generator			$(G \times M \times K) \times D / (1 - I)$		
Gross Annual kWh Saved at Customer			$(B \times E \times M)$		
Net Annual kWh Saved at Customer			$(F \times (B \times E \times M \times J))$		
Net Annual kWh Saved at Generator			$(F \times (B \times E \times M \times J)) / (1 - H)$		
Program Summary All Participants					
Total Participants			N		6
Total Budget			O		\$20,200
Gross kW Saved at Customer			$(N \times M)$		
Net coincident kW Saved at Generator			$((G \times M \times K) \times D / (1 - I)) \times N$		
Gross Annual kWh Saved at Customer			$(B \times E \times M) \times N$		
Gross Installed Annual kWh Saved at Customer			$(B \times E \times M) \times N \times J$		
Net Annual kWh Saved at Customer			$(B \times E \times M) \times N \times J \times F$		
Net Annual kWh Saved at Generator			$((B \times E \times M) / (1 - H)) \times N \times J \times F$		
UCT Net Benefits			$(N \times M \times L)$		
Utility Program Cost per kWh Lifetime					
Utility Program Cost per kW at Gen					

Benefits		Utility Cost Test (\$Total)
System Benefits (Avoided Costs)		
Generation Capacity		\$0
Transmission & Distribution Capacity		\$137
Marginal Energy		\$4,755
Avoided Emissions		\$339
Total Benefits		\$5,231
Costs		
Utility Project Costs		
Total Incentive		\$14,000
Internal Administration		\$3,000
Third-Party Delivery		\$1,700
Promotion		\$1,500
M&V		\$0
Subtotal		\$20,200
Participant Costs		
Incremental Capital Costs		N/A
Incremental O&M Costs		N/A
Subtotal		N/A
Reductions to Costs		
Participant Rebates		N/A
Subtotal		N/A
Subtotal		N/A
Total Costs		\$20,200
Net Benefit (Cost)		
		(\$14,969)
Benefit/Cost Ratio		0.26

Net Benefit (Cost)	(\$14,969)
Benefit/Cost Ratio	0.26

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

Benefits		Utility Cost Test (\$Total)
System Benefits (Avoided Costs)		
Generation Capacity		\$0
Transmission & Distribution Capacity		\$137
Marginal Energy		\$4,755
Avoided Emissions		\$339

Total Benefits	\$5,231
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Costs	
Utility Project Costs	
Total Incentive	\$14,000
Internal Administration	\$3,000
Third-Party Delivery	\$1,700
Promotion	\$1,500
M&V	\$0
Subtotal	\$20,200

BUILDING TUNE-UP			2022	ELECTRIC	GOAL
2022 Net Present Cost Benefit Summary					
Analysis For All Participants					
Input Summary and Totals					
Program Inputs per Customer kW					
Lifetime (Weighted on Generator kWh)		A			7.00 years
Annual Hours		B			8760
Gross Customer kW		C			1 kW
Generator Peak Coincidence Factor		D			48.44%
Gross Load Factor at Customer		E			89.97%
Net-to-Gross (Energy)		F			90.0%
Net-to-Gross (Demand)		G			90.0%
Transmission Loss Factor (Energy)		H			7.100%
Transmission Loss Factor (Demand)		I			8.700%
Installation Rate (Energy)		J			100.000%
Installation Rate (Demand)		K			100.000%
UCT Net Benefit (Cost)		L			-\$3,503
Net coincident kW Saved at Generator		$(G \times C \times K) \times D / (1 - I)$			
Gross Annual kWh Saved at Customer		$(B \times E \times C)$			
Net Annual kWh Saved at Customer		$(F \times (B \times E \times C \times J))$			
Net Annual kWh Saved at Generator		$(F \times (B \times E \times C \times J)) / (1 - H)$			
Program Summary per Participant					
Gross kW Saved at Customer		M			0.70 kW
Net coincident kW Saved at Generator		$(G \times M \times K) \times D / (1 - I)$			
Gross Annual kWh Saved at Customer		$(B \times E \times M)$			
Net Annual kWh Saved at Customer		$(F \times (B \times E \times M \times J))$			
Net Annual kWh Saved at Generator		$(F \times (B \times E \times M \times J)) / (1 - H)$			
Program Summary All Participants					
Total Participants		N			6
Total Budget		O			\$20,200
Gross kW Saved at Customer		$(N \times M)$			
Net coincident kW Saved at Generator		$((G \times M \times K) \times D / (1 - I)) \times N$			
Gross Annual kWh Saved at Customer		$(B \times E \times M) \times N$			
Gross Installed Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J$			
Net Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J \times F$			
Net Annual kWh Saved at Generator		$((B \times E \times M) / (1 - H)) \times N \times J \times F$			
UCT Net Benefits		$(N \times M \times L)$			
Utility Program Cost per kWh Lifetime					
Utility Program Cost per kW at Gen					

System Benefits (Avoided Costs)		
Generation Capacity		\$85
Transmission & Distribution Capacity		\$140
Marginal Energy		\$4,986
Avoided Emissions		\$382
Total Benefits		\$5,593
Costs		
Utility Project Costs		
Total Incentive		\$14,000
Internal Administration		\$3,000
Third-Party Delivery		\$1,700
Promotion		\$1,500
M&V		\$0
Subtotal		\$20,200
Participant Costs		
Costs		
Incremental Capital Costs		N/A
Incremental O&M Costs		N/A
Subtotal		N/A
Reductions to Costs		
Participant Rebates		N/A
Subtotal		N/A
Subtotal		N/A
Total Costs		\$20,200
Net Benefit (Cost)		
		(\$14,607)
Benefit/Cost Ratio		0.28

Net Benefit (Cost)	(\$14,607)
Benefit/Cost Ratio	0.28

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

Benefits	Utility Cost Test (\$Total)
System Benefits (Avoided Costs)	
Generation Capacity	\$85
Transmission & Distribution Capacity	\$140
Marginal Energy	\$986
Avoided Emissions	\$382

Total Benefits	\$5,593
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Costs	
Utility Project Costs	
Total Incentive	\$14,000
Internal Administration	\$3,000
Third-Party Delivery	\$1,700
Promotion	\$1,500
M&V	\$0
Subtotal	\$20,200

Participant Costs	
Costs	
Incremental Capital Costs	N/A
Incremental O&M Costs	N/A
Subtotal	N/A
Reductions to Costs	
Participant Rebates	N/A
Subtotal	N/A

Total Costs	\$20,200
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COOLING EFFICIENCY			2020	ELECTRIC		GOAL
2020 Net Present Cost Benefit Summary						
Analysis For All Participants			Input Summary and Totals			
Benefits	Utility Cost Test (\$Total)		Program Inputs per Customer kW		A	17.99 years
			Lifetime (Weighted on Generator kWh)		B	8760
			Annual Hours		C	1 kW
			Gross Customer kW		D	71.60%
			Generator Peak Coincidence Factor		E	35.39%
			Gross Load Factor at Customer		F	78.3%
			Net-to-Gross (Energy)		G	78.3%
			Net-to-Gross (Demand)		H	7.100%
			Transmission Loss Factor (Energy)		I	8.700%
			Transmission Loss Factor (Demand)		J	100.000%
			Installation Rate (Energy)		K	100.000%
			Installation Rate (Demand)		L	\$106
			UCT Net Benefit (Cost)			
	Total Benefits				$(G \times C \times K) \times D / (1 - I)$	
	Costs				$(B \times E \times C)$	
	Utility Project Costs				$(F \times (B \times E \times C \times J))$	
	Total Incentive				$(F \times (B \times E \times C \times J)) / (1 - H)$	
Internal Administration				M		
Third-Party Delivery				$(G \times M \times K) \times D / (1 - I)$		
Promotion				$(B \times E \times M)$		
M&V				$(F \times (B \times E \times M \times J))$		
Subtotal				$(F \times (B \times E \times M \times J)) / (1 - H)$		
Participant Costs						
Incremental Capital Costs				N		
Incremental O&M Costs				O		
Subtotal				$(N \times M)$		
Reductions to Costs				$((G \times M \times K) \times D / (1 - I)) \times N$		
Participant Rebates				$(B \times E \times M) \times N$		
Subtotal				$(B \times E \times M) \times N \times J$		
Subtotal				$(B \times E \times M) \times N \times J \times F$		
Total Costs				$((B \times E \times M) / (1 - H)) \times N \times J \times F$		
				$(N \times M \times L)$		
				\$30,489		
Net Benefit (Cost)						
Benefit/Cost Ratio						
				\$0.0242		
				\$1,856		

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

COOLING EFFICIENCY				
2020 Net Present Cost Benefit Summary				
Analysis For All Participants				
Benefits				
Utility Cost Test (\$Total)				
System Benefits (Avoided Costs)				
Generation Capacity				
Transmission & Distribution Capacity				
Marginal Energy				
Avoided Emissions				
\$47,658				
\$22,723				
\$277,919				
\$11,209				
Total Benefits				
\$359,510				
Costs				
Utility Project Costs				
Total Incentive				
Internal Administration				
Third-Party Delivery				
Promotion				
M&V				
\$84,471				
\$79,951				
\$85,871				
\$63,728				
\$15,000				
Subtotal				
\$329,021				
Participant Costs				
Incremental Capital Costs				
Incremental O&M Costs				
Subtotal				
N/A				
N/A				
N/A				
N/A				
N/A				
N/A				
Subtotal				
N/A				
Total Costs				
\$329,021				
Net Benefit (Cost)				
\$30,489				
Benefit/Cost Ratio				
1.09				

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

COOLING EFFICIENCY			2021	ELECTRIC		GOAL
2021 Net Present Cost Benefit Summary						
Analysis For All Participants						
Benefits			Input Summary and Totals			
Utility Cost Test (\$Total)			Program Inputs per Customer kW			
			Lifetime (Weighted on Generator kWh)			
			Annual Hours			
			Gross Customer kW			
			Generator Peak Coincidence Factor			
			Gross Load Factor at Customer			
			Net-to-Gross (Energy)			
			Net-to-Gross (Demand)			
			Transmission Loss Factor (Energy)			
			Transmission Loss Factor (Demand)			
			Installation Rate (Energy)			
			Installation Rate (Demand)			
			UCT Net Benefit (Cost)			
Total Benefits			Net coincident kW Saved at Generator			
			(G x C x K) x D / (1 - I)			
Costs			Gross Annual kWh Saved at Customer			
			(B x E x C)			
			Net Annual kWh Saved at Customer			
			(F x (B x E x C x J))			
			Net Annual kWh Saved at Generator			
			(F x (B x E x C x J)) / (1 - H)			
Utility Project Costs			Program Summary per Participant			
Total Incentive			Gross kW Saved at Customer			
			M			
Internal Administration			Net coincident kW Saved at Generator			
Third-Party Delivery			(G x M x K) x D / (1 - I)			
Promotion			(B x E x M)			
M&V			Gross Annual kWh Saved at Customer			
			(F x (B x E x M x J))			
Subtotal			Net Annual kWh Saved at Customer			
			(F x (B x E x M x J)) / (1 - H)			
Participant Costs			Program Summary All Participants			
Costs			Total Participants			
			N			
Incremental Capital Costs			Total Budget			
Incremental O&M Costs			O			
			(N x M)			
Subtotal			Gross kW Saved at Customer			
			Net coincident kW Saved at Generator			
			((G x M x K) x D / (1 - I)) x N			
Radiations to Costs			(B x E x M) x N			
Participant Rebates			Gross Annual kWh Saved at Customer			
			Gross Installed Annual kWh Saved at Customer; (B x E x M) x N x J			
Subtotal			Net Annual kWh Saved at Customer			
			(B x E x M) x N x J x F			
			Net Annual kWh Saved at Generator			
			((B x E x M) / (1 - H)) x N x J x F			
			(N x M x L)			
Total Costs			UCT Net Benefits			
			Utility Program Cost per kWh Lifetime			
			Utility Program Cost per kW at Gen			
Net Benefit (Cost)						
Benefit/Cost Ratio						

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

Net Benefit (Cost)	\$56,789
Benefit/Cost Ratio	1.17

COOLING EFFICIENCY				
2021 Net Present Cost Benefit Summary				
Analysis For All Participants				
Benefits				Utility Cost Test (\$Total)
System Benefits (Avoided Costs)				
Generation Capacity				\$55,637
Transmission & Distribution Capacity				\$23,178
Marginal Energy				\$295,498
Avoided Emissions				\$12,498
Total Benefits				\$386,810
Costs				
Utility Project Costs				
Total Incentive				\$84,471
Internal Administration				\$80,951
Third-Party Delivery				\$85,871
Promotion				\$63,728
M&V				\$15,000
Subtotal				\$330,021
Participant Costs				
Cools				
Incremental Capital Costs				N/A
Incremental O&M Costs				N/A
Subtotal				N/A
Reductions to Cools				
Participant Rebates				N/A
Subtotal				N/A
Subtotal				N/A
Total Costs				
				\$330,021

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

Net Benefit (Cost)	\$56,789
Benefit/Cost Ratio	1.17

COOLING EFFICIENCY			2022	ELECTRIC		GOAL
2022 Net Present Cost Benefit Summary						
Analysis For All Participants			Input Summary and Totals			
Benefits	Utility Cost Total (\$Total)		Program Inputs per Customer kW		A	17.99 years
			Lifetime (Weighted on Generator kWh)		B	8760
			Annual Hours		C	1 kW
			Gross Customer kW		D	71.60%
			Generator Peak Coincidence Factor		E	35.39%
			Gross Load Factor at Customer		F	78.3%
			Net-to-Gross (Energy)		G	78.3%
			Net-to-Gross (Demand)		H	7.100%
			Transmission Loss Factor (Energy)		I	8.700%
			Transmission Loss Factor (Demand)		J	100.000%
			Installation Rate (Energy)		K	100.000%
			Installation Rate (Demand)		L	\$303
			UCT Net Benefit (Cost)			
	Total Benefits		Net coincident kW Saved at Generator		$(G \times C \times K) \times D / (1 - I)$	
	Costs			Gross Annual kWh Saved at Customer		$(B \times E \times C)$
		Net Annual kWh Saved at Customer		$(F \times (B \times E \times C \times J))$		
		Net Annual kWh Saved at Generator		$(F \times (B \times E \times C \times J)) / (1 - H)$		
		Program Summary per Participant				
Utility Project Costs	Total Incentive		Gross kW Saved at Customer		M	
	Internal Administration		Net coincident kW Saved at Generator		$(G \times M \times K) \times D / (1 - I)$	
	Third-Party Delivery		Gross Annual kWh Saved at Customer		$(B \times E \times M)$	
	Promotion		Net Annual kWh Saved at Customer		$(F \times (B \times E \times M \times J))$	
Participant Costs	M&V		Net Annual kWh Saved at Generator		$(F \times (B \times E \times M \times J)) / (1 - H)$	
	Subtotal					
			Program Summary All Participants			
			Total Participants		N	
Participant Costs			Total Budget		O	
			Gross kW Saved at Customer		$(N \times M)$	
			Net coincident kW Saved at Generator		$((G \times M \times K) \times D / (1 - I)) \times N$	
			Gross Annual kWh Saved at Customer		$(B \times E \times M) \times N$	
Participant Rebates			Gross Installed Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J$	
			Net Annual kWh Saved at Customer		$(B \times E \times M) \times N \times J \times F$	
			Net Annual kWh Saved at Generator		$((B \times E \times M) / (1 - H)) \times N \times J \times F$	
			UCT Net Benefits		$(N \times M \times L)$	
Total Costs						
		Utility Program Cost per kWh Lifetime				
		Utility Program Cost per kW at Gen				
		Utility Program Cost per kW at Gen				

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

CUSTOM EFFICIENCY				2020	ELECTRIC	GOAL
2020 Net Present Cost Benefit Summary						
Analysis For All Participants						
Benefits						
System Benefits (Avoided Costs)						
Generation Capacity				18.28 years		
Transmission & Distribution Capacity				8760		
Marginal Energy				1 kW		
Avoided Emissions				88.05%		
				77.90%		
				78.3%		
				78.3%		
				7.100%		
				8.700%		
				100.000%		
				100.000%		
				\$560		
Total Benefits				(G x C x K) x D / (1 - I)		
Costs				(B x E x C)		
Utility Project Costs				(F x (B x E x C x J))		
Total Incentive				(F x (B x E x C x J)) / (1 - H)		
Internal Administration						
Third-Party Delivery						
Promotion						
M&V						
Subtotal						
Participant Costs						
Costs						
Incremental Capital Costs				25		
Incremental O&M Costs				N		
Subtotal				O		
Radiations to Costs						
Participant Rebates						
Subtotal						
Subtotal						
Total Costs				\$1,216,847		
Net Benefit (Cost)				\$0.0178		
Benefit/Cost Ratio				\$2,478		

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

Net Benefit (Cost)	\$364,211
Benefit/Cost Ratio	1.30

Total Benefits	\$1,581,058
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Costs	
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Utility Project Costs	
Total Incentive	\$255,758
Internal Administration	\$340,292
Third-Party Delivery	\$310,113
Promotion	\$275,684
M&V	\$35,000
Subtotal	\$1,216,847

Participant Costs	
Costs	
Incremental Capital Costs	N/A
Incremental O&M Costs	N/A
Subtotal	N/A
Reductions to Costs	
Participant Rebates	N/A
Subtotal	N/A
Subtotal	N/A

Total Costs	\$1,216,847
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CUSTOM EFFICIENCY			2021	ELECTRIC		GOAL
2021 Net Present Cost Benefit Summary						
Analysis For All Participants			Input Summary and Totals			
			Program Inputs per Customer kW			
			Lifetime (Weighted on Generator kWh)			
			Annual Hours			
			Gross Customer kW			
			Generator Peak Coincidence Factor			
			Gross Load Factor at Customer			
			Net-to-Gross (Energy)			
			Net-to-Gross (Demand)			
			Transmission Loss Factor (Energy)			
			Transmission Loss Factor (Demand)			
			Installation Rate (Energy)			
			Installation Rate (Demand)			
			UCT Net Benefit (Cost)			
Total Benefits			Net coincident kW Saved at Generator			
			$(G \times C \times K) \times D / (1 - I)$			
Costs			Gross Annual kWh Saved at Customer			
			$(B \times E \times C)$			
Utility Project Costs			Net Annual kWh Saved at Customer			
			$(F \times (B \times E \times C \times J))$			
Total Incentive			Net Annual kWh Saved at Generator			
			$(F \times (B \times E \times C \times J)) / (1 - H)$			
Internal Administration			Program Summary per Participant			
Third-Party Delivery			Gross kW Saved at Customer			
Promotion			M			
M&V			Gross kW Saved at Customer			
Subtotal			Net coincident kW Saved at Generator			
			$(G \times M \times K) \times D / (1 - I)$			
Participant Costs			Gross Annual kWh Saved at Customer			
			$(B \times E \times M)$			
Incremental Capital Costs			Net Annual kWh Saved at Customer			
			$(F \times (B \times E \times M \times J))$			
Incremental O&M Costs			Net Annual kWh Saved at Generator			
			$(F \times (B \times E \times M \times J)) / (1 - H)$			
Subtotal			Program Summary All Participants			
Radiations to Costs			Total Participants			
Participant Rebates			N			
Subtotal			Total Budget			
			O			
Subtotal			Gross kW Saved at Customer			
			$(N \times M)$			
			Net coincident kW Saved at Generator			
			$((G \times M \times K) \times D / (1 - I)) \times N$			
			Gross Annual kWh Saved at Customer			
			$(B \times E \times M) \times N$			
			Gross Installed Annual kWh Saved at Customer			
			$(B \times E \times M) \times N \times J$			
			Net Annual kWh Saved at Customer			
			$(B \times E \times M) \times N \times J \times F$			
			Net Annual kWh Saved at Generator			
			$((B \times E \times M) / (1 - H)) \times N \times J \times F$			
			UCT Net Benefits			
			$(N \times M \times L)$			
Total Costs			Utility Program Cost per kWh Lifetime			
			Utility Program Cost per kW at Gen			
			Net Benefit (Cost)			
			\$849,061			
Benefit/Cost Ratio			1.59			

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

CUSTOM EFFICIENCY				2022	ELECTRIC	GOAL
2022 Net Present Cost Benefit Summary						
Analysis For All Participants						
Benefits						
System Benefits (Avoided Costs)				Input Summary and Totals		
Generation Capacity			Utility Cost Test (\$Total)	Lifetime (Weighted on Generator kWh)	A	18.47 years
Transmission & Distribution Capacity				Annual Hours	B	8760
Marginal Energy				Gross Customer kW	C	1 kW
Avoided Emissions				Generator Peak Coincidence Factor	D	89.17%
				Gross Load Factor at Customer	E	80.00%
				Net-to-Gross (Energy)	F	78.3%
				Net-to-Gross (Demand)	G	78.3%
				Transmission Loss Factor (Energy)	H	7.100%
				Transmission Loss Factor (Demand)	I	8.700%
				Installation Rate (Energy)	J	100.000%
				Installation Rate (Demand)	K	100.000%
				UCT Net Benefit (Cost)	L	\$1,196
Total Benefits				Net coincident kW Saved at Generator	$(G \times C \times K) \times D / (1 - I)$	
Costs				Gross Annual kWh Saved at Customer	$(B \times E \times C)$	
Utility Project Costs				Net Annual kWh Saved at Customer	$(F \times (B \times E \times C \times J))$	
Total Incentive				Net Annual kWh Saved at Generator	$(F \times (B \times E \times C \times J)) / (1 - H)$	
Internal Administration				Program Summary per Participant		
Third-Party Delivery				Gross kW Saved at Customer	M	29.46 kW
Promotion				Net coincident kW Saved at Generator	$(G \times M \times K) \times D / (1 - I)$	
M&V				Gross Annual kWh Saved at Customer	$(B \times E \times M)$	
Subtotal				Net Annual kWh Saved at Customer	$(F \times (B \times E \times M \times J))$	
				Net Annual kWh Saved at Generator	$(F \times (B \times E \times M \times J)) / (1 - H)$	
Participant Costs				Program Summary All Participants		
Costs				Total Participants	N	29
Incremental Capital Costs				Total Budget	O	\$1,419,486
Incremental O&M Costs				Gross kW Saved at Customer	$(N \times M)$	
Subtotal				Net coincident kW Saved at Generator	$((G \times M \times K) \times D / (1 - I)) \times N$	
Reductions to Costs				Gross Annual kWh Saved at Customer	$(B \times E \times M) \times N$	
Participant Rebates				Gross Installed Annual kWh Saved at Customer	$(B \times E \times M) \times N \times J$	
Subtotal				Net Annual kWh Saved at Customer	$(B \times E \times M) \times N \times J \times F$	
Subtotal				Net Annual kWh Saved at Generator	$((B \times E \times M) / (1 - H)) \times N \times J \times F$	
				UCT Net Benefits	$(N \times M \times L)$	
Total Costs						\$1,021,712
Net Benefit (Cost)				Utility Program Cost per kWh Lifetime		
				Utility Program Cost per kW at Gen		
Benefit/Cost Ratio						

2022 Net Present Cost Benefit Summary		Utility
Analysis For All Participants		Cost Test
		(\$Total)
Benefits		
System Benefits (Avoided Costs)		
Generation Capacity		\$265,697
Transmission & Distribution Capacity		\$92,750
Marginal Energy		\$1,991,412
Avoided Emissions		\$91,340
Total Benefits		
		\$2,441,198
Costs		
Utility Project Costs		
Total Incentive		\$333,437
Internal Administration		\$333,292
Third-Party Delivery		\$362,073
Promotion		\$355,684
M&V		\$35,000
Subtotal		\$1,419,486
Participant Costs		
Costs		N/A
Incremental Capital Costs		N/A
Incremental O&M Costs		N/A
Subtotal		N/A
Reductions to Costs		N/A
Participant Rebates		N/A
Subtotal		N/A
Total Costs		\$1,419,486
Net Benefit (Cost)		\$1,021,712
Benefit/Cost Ratio		1.72

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					
Benefits			Input Summary and Totals		
Utility Cost Test (\$Total)			Program Inputs per Customer kW		
			Lifetime (Weighted on Generator kWh)		
			Annual Hours		
			Gross Customer kW		
			Generator Peak Coincidence Factor		
			Gross Load Factor at Customer		
			Net-to-Gross (Energy)		
			Net-to-Gross (Demand)		
			Transmission Loss Factor (Energy)		
			Transmission Loss Factor (Demand)		
			Installation Rate (Energy)		
			Installation Rate (Demand)		
			UCT Net Benefit (Cost)		
Total Benefits			Net coincident kW Saved at Generator		
			(G x C x K) x D / (1 - I)		
Costs			Gross Annual kWh Saved at Customer		
			(B x E x C)		
Utility Project Costs			Net Annual kWh Saved at Customer		
			(F x (B x E x C x J))		
Total Incentive			Net Annual kWh Saved at Generator		
			(F x (B x E x C x J)) / (1 - H)		
Internal Administration			Program Summary per Participant		
Third-Party Delivery			Gross kW Saved at Customer		
Promotion			M		
M&V			Net coincident kW Saved at Generator		
			(G x M x K) x D / (1 - I)		
Subtotal			Gross Annual kWh Saved at Customer		
			(B x E x M)		
Participant Costs			Net Annual kWh Saved at Customer		
			(F x (B x E x M x J))		
Costs			Net Annual kWh Saved at Generator		
			(F x (B x E x M x J)) / (1 - H)		
Incremental Capital Costs			Program Summary All Participants		
Incremental O&M Costs			Total Participants		
			N		
Subtotal			Total Budget		
Reductions to Costs			O		
Participant Rebates			Gross kW Saved at Customer		
			(N x M)		
Subtotal			Net coincident kW Saved at Generator		
			((G x M x K) x D / (1 - I)) x N		
Total Costs			Gross Annual kWh Saved at Customer		
			(B x E x M) x N		
			Gross Installed Annual kWh Saved at Customer		
			(B x E x M) x N x J		
			Net Annual kWh Saved at Customer		
			(B x E x M) x N x J x F		
			Net Annual kWh Saved at Generator		
			((B x E x M) / (1 - H)) x N x J x F		
			UCT Net Benefits		
			(N x M x L)		
			(\$67,414)		
Net Benefit (Cost)			Utility Program Cost per kWh Lifetime		
Benefit/Cost Ratio			Utility Program Cost per kW at Gen		
			\$0.0242		
			\$3,766		

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

LIGHTING EFFICIENCY			2021	ELECTRIC		GOAL
2021 Net Present Cost Benefit Summary						
Analysis For All Participants						
Benefits			Input Summary and Totals			
Utility Cost Test (\$Total)			Program Inputs per Customer kW		14.87 years	
			Lifetime (Weighted on Generator kWh)		8760	
			Annual Hours		1 kW	
			Gross Customer kW			
			Generator Peak Coincidence Factor		39.87%	
			Gross Load Factor at Customer		44.94%	
			Net-to-Gross (Energy)		78.3%	
			Net-to-Gross (Demand)		78.3%	
			Transmission Loss Factor (Energy)		7.100%	
			Transmission Loss Factor (Demand)		8.700%	
			Installation Rate (Energy)		100.000%	
			Installation Rate (Demand)		100.000%	
			UCT Net Benefit (Cost)		\$62	
Total Benefits			Net coincident kW Saved at Generator		$(G \times C \times K) \times D / (1 - I)$	
Costs			Gross Annual kWh Saved at Customer		$(B \times E \times C)$	
			Net Annual kWh Saved at Customer		$(F \times (B \times E \times C \times J))$	
			Net Annual kWh Saved at Generator		$(F \times (B \times E \times C \times J)) / (1 - H)$	
Utility Project Costs			Program Summary per Participant			
Total Incentive			Gross kW Saved at Customer			
Internal Administration			M			
Third-Party Delivery			$(G \times M \times K) \times D / (1 - I)$			
Promotion			$(B \times E \times M)$			
M&V			$(F \times (B \times E \times M \times J))$			
Subtotal			$(F \times (B \times E \times M \times J)) / (1 - H)$			
Participant Costs			Program Summary All Participants			
Capital Costs			Total Participants			
Incremental Capital Costs			N			
Incremental O&M Costs			O			
Subtotal			Total Budget			
Radiations to Costs			Gross kW Saved at Customer			
Participant Rebates			$(N \times M)$			
Subtotal			$((G \times M \times K) \times D / (1 - I)) \times N$			
			$(B \times E \times M) \times N$			
			Gross Installed Annual kWh Saved at Customer: $(B \times E \times M) \times N \times J$			
			Net Annual kWh Saved at Customer $(B \times E \times M) \times N \times J \times F$			
			Net Annual kWh Saved at Generator $((B \times E \times M) / (1 - H)) \times N \times J \times F$			
			UCT Net Benefits $(N \times M \times L)$			
Total Costs			\$1,058,609			
Net Benefit (Cost)			\$59,431			
Benefit/Cost Ratio			1.06			

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

LIGHTING EFFICIENCY			2022		ELECTRIC		GOAL
2022 Net Present Cost Benefit Summary							
Analysis For All Participants			Input Summary and Totals				
		Utility Cost Test (\$Total)	Program Inputs per Customer kW				
			Lifetime (Weighted on Generator kWh)				
			A				
			B				
			C				
			Annual Hours				
			Gross Customer kW				
			D				
			Generator Peak Coincidence Factor				
			E				
			Gross Load Factor at Customer				
			F				
			Net-to-Gross (Energy)				
			G				
			Net-to-Gross (Demand)				
			H				
			Transmission Loss Factor (Energy)				
			I				
			Transmission Loss Factor (Demand)				
			J				
			Installation Rate (Energy)				
			K				
			Installation Rate (Demand)				
			L				
			UCT Net Benefit (Cost)				
			Net coincident kW Saved at Generator				
			$(G \times C \times K) \times D / (1 - I)$				
			0.3330 kW				
			Gross Annual kWh Saved at Customer				
			$(B \times E \times C)$				
			3,935 kWh				
			Net Annual kWh Saved at Customer				
			$(F \times (B \times E \times C \times J))$				
			3,079 kWh				
			Net Annual kWh Saved at Generator				
			$(F \times (B \times E \times C \times J)) / (1 - H)$				
			3,314 kWh				
			Program Summary per Participant				
			Gross kW Saved at Customer				
			M				
			4.14 kW				
			Net coincident kW Saved at Generator				
			$(G \times M \times K) \times D / (1 - I)$				
			1.40 kW				
			Gross Annual kWh Saved at Customer				
			$(B \times E \times M)$				
			16,282 kWh				
			Net Annual kWh Saved at Customer				
			$(F \times (B \times E \times M \times J))$				
			12,741 kWh				
			Net Annual kWh Saved at Generator				
			$(F \times (B \times E \times M \times J)) / (1 - H)$				
			13,715 kWh				
			Program Summary All Participants				
			Total Participants				
			N				
			260				
			Total Budget				
			O				
			\$1,151,179				
			Gross kW Saved at Customer				
			$(N \times M)$				
			1,074 kW				
			Net coincident kW Saved at Generator				
			$((G \times M \times K) \times D / (1 - I)) \times N$				
			364 kW				
			Gross Annual kWh Saved at Customer				
			$(B \times E \times M) \times N$				
			4,226,921 kWh				
			Gross Installed Annual kWh Saved at Customer				
			$(B \times E \times M) \times N \times J$				
			4,226,921 kWh				
			Net Annual kWh Saved at Customer				
			$(B \times E \times M) \times N \times J \times F$				
			3,307,566 kWh				
			Net Annual kWh Saved at Generator				
			$((B \times E \times M) / (1 - H)) \times N \times J \times F$				
			3,560,351 kWh				
			UCT Net Benefits				
			$(N \times M \times L)$				
			\$182,948				
			Utility Program Cost per kWh Lifetime				
			\$0.0216				
			Utility Program Cost per kW at Gen				
			\$3.163				

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

MOTORS & DRIVES		2020		ELECTRIC		GOAL
2020 Net Present Cost Benefit Summary						
Analysis For All Participants						
Benefits		Input Summary and Totals				
System Benefits (Avoided Costs)		Program Inputs per Customer kW				
Generation Capacity	\$320,568	Lifetime (Weighted on Generator kWh)				
Transmission & Distribution Capacity	\$183,631	A				
Marginal Energy	\$2,972,576	B				
Avoided Emissions	\$145,736	C				
		Gross Customer kW				
		D				
		Generator Peak Coincidence Factor				
		E				
		Gross Load Factor at Customer				
		F				
		Net-to-Gross (Energy)				
		G				
		Net-to-Gross (Demand)				
		H				
		Transmission Loss Factor (Energy)				
		I				
		Transmission Loss Factor (Demand)				
		J				
		Installation Rate (Energy)				
		K				
		Installation Rate (Demand)				
		L				
		UCT Net Benefit (Cost)				
		L				
Total Benefits		(\$ x C x K) x D / (1 - I)				
		(B x E x C)				
Costs		Net Annual kWh Saved at Customer				
		(F x (B x E x C x J))				
		(F x (B x E x C x J)) / (1 - H)				
Utility Project Costs		Program Summary per Participant				
Total Incentive		M				
Internal Administration		Gross kW Saved at Customer				
Third-Party Delivery		Net coincident kW Saved at Generator				
Promotion		(B x E x M)				
M&V		Gross Annual kWh Saved at Customer				
		Net Annual kWh Saved at Customer				
		(F x (B x E x M x J))				
		(F x (B x E x M x J)) / (1 - H)				
Subtotal		Net Annual kWh Saved at Generator				
		Program Summary All Participants				
Participant Costs		N				
Costs		Total Participants				
		O				
		Total Budget				
		Gross kW Saved at Customer				
		(N x M)				
		Net coincident kW Saved at Generator				
		((G x M x K) x D / (1 - I)) x N				
		(B x E x M) x N				
		Gross Annual kWh Saved at Customer				
		Gross Installed Annual kWh Saved at Customer; (B x E x M) x N x J				
		Net Annual kWh Saved at Customer				
		(B x E x M) x N x J x F				
		Net Annual kWh Saved at Generator				
		((B x E x M) / (1 - H)) x N x J x F				
		(N x M x L)				
Total Costs		\$1,165,386				
		Utility Program Cost per kWh Lifetime				
		Utility Program Cost per kW at Gen				
Net Benefit (Cost)		\$0,0155				
Benefit/Cost Ratio		\$1,533				

Net Benefit (Cost)	\$1,165,386
Benefit/Cost Ratio	1.47

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

Benefits	Utility Cost Test (\$Total)
System Benefits (Avoided Costs)	
Generation Capacity	\$320,568
Transmission & Distribution Capacity	\$183,631
Marginal Energy	\$2,972,576
Avoided Emissions	\$145,736

Total Benefits	\$3,022,511
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Costs	
Utility Project Costs	
Total Incentive	\$1,132,540
Internal Administration	\$255,438
Third-Party Delivery	\$764,147
Promotion	\$275,000
M&V	\$30,000
Subtotal	\$2,457,125

Participant Costs	
Costs	
Incremental Capital Costs	N/A
Incremental O&M Costs	N/A
Subtotal	N/A
Reductions to Costs	
Participant Rebates	N/A
Subtotal	N/A

Total Costs	\$2,457,125
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MOTORS & DRIVES			2021		ELECTRIC		GOAL
2021 Net Present Cost Benefit Summary							
Analysis For All Participants							
Input Summary and Totals							
Program Inputs per Customer kW		A		15.06 years			
Lifetime (Weighted on Generator kWh)		B		8760			
Annual Hours		C		1 kW			
Gross Customer kW		D		78.28%			
Generator Peak Coincidence Factor		E		59.49%			
Gross Load Factor at Customer		F		77.8%			
Net-to-Gross (Energy)		G		77.5%			
Net-to-Gross (Demand)		H		7.100%			
Transmission Loss Factor (Energy)		I		8.700%			
Transmission Loss Factor (Demand)		J		100.000%			
Installation Rate (Energy)		K		100.000%			
Installation Rate (Demand)		L		\$597			
UCT Net Benefit (Cost)							
Net coincident kW Saved at Generator							

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

MOTORS & DRIVES			2022		ELECTRIC		GOAL
2022 Net Present Cost Benefit Summary							
Analysis For All Participants							
Input Summary and Totals							
Program Inputs per Customer kW							
Lifetime (Weighted on Generator kWh)			A				15.06 years
Annual Hours			B				8760
Gross Customer kW			C				1 kW
Generator Peak Coincidence Factor			D				78.28%
Gross Load Factor at Customer			E				59.49%
Net-to-Gross (Energy)			F				77.8%
Net-to-Gross (Demand)			G				77.5%
Transmission Loss Factor (Energy)			H				7.100%
Transmission Loss Factor (Demand)			I				8.700%
Installation Rate (Energy)			J				100.000%
Installation Rate (Demand)			K				100.000%
UCT Net Benefit (Cost)			L				\$716
Net coincident kW Saved at Generator			$(G \times C \times K) \times D / (1 - I)$				0.6533 kW
Gross Annual kWh Saved at Customer			$(B \times E \times C)$				5,211 kWh
Net Annual kWh Saved at Customer			$(F \times (B \times E \times C \times J))$				4,055 kWh
Net Annual kWh Saved at Generator			$(F \times (B \times E \times C \times J)) / (1 - H)$				4,365 kWh
Program Summary per Participant							
Gross kW Saved at Customer			M				50.46 kW
Net coincident kW Saved at Generator			$(G \times M \times K) \times D / (1 - I)$				33.54 kW
Gross Annual kWh Saved at Customer			$(B \times E \times M)$				262,946 kWh
Net Annual kWh Saved at Customer			$(F \times (B \times E \times M \times J))$				204,594 kWh
Net Annual kWh Saved at Generator			$(F \times (B \times E \times M \times J)) / (1 - H)$				220,230 kWh
Program Summary All Participants							
Total Participants			N				56
Total Budget			O				\$2,821,662
Gross kW Saved at Customer			$(N \times M)$				2,809 kW
Net coincident kW Saved at Generator			$((G \times M \times K) \times D / (1 - I)) \times N$				1,867 kW
Gross Annual kWh Saved at Customer			$(B \times E \times M) \times N$				14,637,300 kWh
Gross Installed Annual kWh Saved at Customer			$(B \times E \times M) \times N \times J$				14,637,300 kWh
Net Annual kWh Saved at Customer			$(B \times E \times M) \times N \times J \times F$				11,389,040 kWh
Net Annual kWh Saved at Generator			$((B \times E \times M) / (1 - H)) \times N \times J \times F$				12,259,462 kWh
UCT Net Benefits			$(N \times M \times L)$				\$2,009,962
Utility Program Cost per kWh Lifetime							
Utility Program Cost per kW at Gen							\$0.0153
Utility Program Cost per kWh at Gen							\$1.511

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

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

Measure Description			High Efficiency Product Assumptions			Baseline Product Assumptions		
Line No.	Electric Measure Group	Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)
1	Total							
2	Business							
3	Building Tune-Up							
4	NM - Small Building Tune-Up Study - E	Small Building Tune-up Study	Existing systems studied for opportunities	181,881	4,856	Existing systems	181,881	4,856
5	NM - Small Building Tune-Up Measure - E	Small Building Tune-up Measure	Implemented Recommissioning measures	9,382	7,881	Existing systems	10,424	7,881
6	NM - Small Building Tune-Up Direct Install - E	LED Interior Lamps	LED Interior Lamp	14	4,156	Incandescent or Halogen	34	4,156
7	NM - Small Building Tune-Up Direct Install - E	Restroom Aerator	0.5 GPM Bathroom Faucet Aerator	4,500	66	2.2 GPM Bath Faucet Aerator	4,500	279
8	NM - Small Building Tune-Up Direct Install - E	Smart Thermostat	Smart Thermostat	387	448	Manual or Programmable Thermostat	387	1,037
9	Cooling Efficiency							
10	DX Units <5.4 Tons NMx	DX Units < than 5.4 tons	Unit size 3.45 tons, 15.3 SEER & 12.4542 EER	3,324	2,007	Unit size 3.45 tons, 13 SEER & 11.18 EER	3,703	2,007
11	DX Units >=5.4 Tons NMx-RTU	DX Units 5.5-11.3 tons	Unit size 9.04 tons & 12.09 EER	8,973	1,382	Unit size 9.04 tons & 11.2 EER	9,686	1,382
12	DX Units >=5.4 Tons NMx-RTU	DX Units 11.4-19.9 tons	Unit size 17.49 tons & 12.36 EER	16,981	1,526	Unit size 17.49 tons & 11 EER	19,080	1,526
13	DX Units >=5.4 Tons NMx-RTU	DX Units 20-63.3 tons	Unit size 24.36 tons & 10.8 EER	27,067	1,603	Unit size 24.36 tons & 10 EER	29,232	1,603
14	DX Units >=5.4 Tons NMx-RTU	DX Units greater than 63.3 tons	Unit size 100 tons & 10.2 EER	117,647	1,622	Unit size 100 tons & 9.7 EER	123,711	1,622
15	RTU Economizer & DCV	RTU Economizer & Demand Control Ventilation	RTU with Demand Control	1,414	1,039	RTU with Standard Economizer	2,827	1,039
16	Water-source Heat Pumps	Water-source Heat Pumps	Unit size 2.9 tons, 17.1 SEER, 17.1 EER	2,035	555	Unit size 2.9 tons, 12 SEER, 12 EER	2,900	555
17	PTAC NMx	PTAC >= 7,000 BTUH to <=15,000 BTUH	Condensing Units size 0.71 tons, 11.95 EER	713	1,820	Condensing Units 0.71 tons, 10.7 EER	796	1,820
18	PTAC NMx	PTAC < 7,000 BTUH	Condensing Units size 0.58 tons, 11.95 EER	582	1,820	Condensing Units 0.58 tons, 11.7 EER	595	1,820
19	PTAC NMx	PTAC > 15,000 BTUH	Condensing Units size 1.26 tons, 11.95 EER	1,265	1,820	Condensing Units 1.26 tons, 9.3 EER	1,626	1,820
20	Screw/Scroll Chillers	Scroll/Screw Chiller < 75 tons	Chiller size 58.8 tons, 0.59 full load kW/ton, 0.48 IPLV	34,692	1,062	Chiller size 58.8 tons, 0.78 full load kW/ton, 0.63 IPLV	45,864	1,062
21	Screw/Scroll Chillers	Scroll/Screw Chiller >= 75 tons to < 150 tons	Chiller size 90 tons, 0.76 full load kW/ton, 0.60 IPLV	68,310	1,310	Chiller size 90 tons, 0.78 full load kW/ton, 0.62 IPLV	69,750	1,310
22	Screw/Scroll Chillers	Scroll/Screw chiller >= 150 to <300 tons	Chiller size 225 tons, 0.57 full load kW/ton, 0.48 IPLV	128,250	1,191	Chiller size 225 tons, 0.68 full load kW/ton, 0.58 IPLV	153,000	1,191
23	Screw/Scroll Chillers	scroll/screw chiller >= 300 tons	Chiller size 300 tons, 0.52 full load kW/ton, 0.37 IPLV	155,100	2,226	Chiller size 300 tons, 0.62 full load kW/ton, 0.54 IPLV	186,000	2,226
24	Centrifugal Chillers	Centrifugal Chillers < 150 tons	Chiller size 125 tons, 0.60 full load kW/ton, 0.57 IPLV	75,000	1,117	Chiller size 125 tons, 0.63 full load kW/ton, 0.60 IPLV	79,250	1,117
25	Centrifugal Chillers	Centrifugal Chillers >= 150 to < 300 tons	Chiller size 225 tons, 0.55 full load kW/ton, 0.51 IPLV	123,032	1,310	Chiller size 225 tons, 0.63 full load kW/ton, 0.60 IPLV	142,650	1,310
26	Centrifugal Chillers	Centrifugal Chillers >= 300 to < 600 tons	Chiller size 500 tons, 0.50 full load kW/ton, 0.33 IPLV	248,000	3,521	Chiller size 500 tons, 0.58 full load kW/ton, 0.55 IPLV	288,000	3,521
27	Centrifugal Chillers	Centrifugal Chillers >= 600 tons	Chiller size 750 tons, 0.55 full load kW/ton, 0.53 IPLV	414,563	1,006	Chiller size 750 tons, 0.57 full load kW/ton, 0.54 IPLV	427,500	1,006
28	Air-Cooled Chillers	Air-Cooled Chillers - avg. capacity 250 tons	Air-cooled chiller, capacity 52 tons, 9.562 EER	61,176	1,055	Air-cooled chiller, capacity 52 tons, 10.2 EER	65,258	1,055
29	Air-Cooled Chillers	Air-Cooled Chillers - avg. capacity 250 tons	Air-cooled chiller, capacity 250 tons, 9.562 EER	293,830	3,405	Air-cooled chiller, capacity 250 tons, 10.21 EER	313,742	3,405
30	EC Motors - Display Case	ECM - Medium Temp Display Case	Electronically Commutated Motor (ECM)	35	8,760	Shaded Pole Motor	113	8,760
31	EC Motors - Display Case	ECM - Low Temp Display Case	Electronically Commutated Motor (ECM)	38	8,760	Shaded Pole Motor	124	8,760
32	EC Motors - Walk in Cooler	ECM - Medium Temp Walk-in, Evap fan <= 15" Diameter	Electronically Commutated Motor (ECM)	91	8,760	Shaded Pole Motor	235	8,760
33	EC Motors - Walk in Cooler	ECM- Low Temp Walk-in, Evap fan <= 15" Diameter	Electronically Commutated Motor (ECM)	100	8,328	Shaded Pole Motor	258	8,760
34	Anti-Sweat Heater	Anti-Sweat Heater Controls	Anti-Sweat Heater Controls	107	1,266	Anti-Sweat Heaters running constantly	129	8,760
35	No Heat Case Door NMx	No Heat Case Doors	No Heat Case Doors	0	8,760	Standard Door	175	8,760
36	Medium Temperature Reach-In Case	Medium-temp Enclosed Reach-In Case (per linear foot)	Medium-temp Reach-In Cases with Doors	20	8,760	Medium-temp Open Reach-In Cases	113	8,760
37	Evaporator Fan Motor Controller	Evap Fan Motor Controller	Evaporator Motor Fan Control	91	8,585	No Motor Fan Controls	130	8,585
38	Direct Evaporative Cooling	Tier 1 - Direct Evaporative Cooling-TOTAL	Standard Direct Evaporative Cooler	1,783	1,200	Standard Roof-top Unit	9,043	1,200
39	VFD Chiller Retrofit	VSD Chiller Retrofit	Chiller size 378 tons, 0.59 full load kW/ton, 0.41 IPLV	154,879	1,310	Chiller size 378 tons, 0.58 full load kW/ton, 0.56 IPLV	211,036	1,310

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

Economic Assumptions															Stipulated Output															Economic Assumptions		
Line No.	Measure Lifetime (years)	Rebate Amount (\$)	Average Baseline Product Cost (\$)	Incremental Cost of Efficient Product (\$)	Assumed Energy Cost (\$/kWh)	Rebate as a % of Incremental Cost (%)	Increment'l Cost Payback Period w/o Rebate (yrs)	Increment'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cost kWh Saved (\$/kWh)	Rebated Lifetime cost / Cost kWh Saved (\$/kWh)	Customer kWh Savings (kWh)	Generator Peak kW Savings (kW)	Non-Energy O&M Savings (\$)	Energy O&M Savings (\$)																	
1																																
2																																
3																																
4	7.00	\$7,000	\$0	\$8,000	\$ 0.037	88%	N/A	N/A	0	N/A	N/A	0.000	0.000	\$0.00	\$0.00																	
5	7.00	\$0	\$0	\$25	\$ 0.038	0%	0.1	0.08	8,216	\$0.00	\$0.00	1.043	0.553	\$0.00	\$0.00																	
6	14.69	\$17	\$0	\$17	\$ 0.039	100%	5.4	0.00	81	\$0.21	\$0.01	0.019	0.017	\$0.00	-\$0.02																	
7	10.00	\$10	\$0	\$10	\$ 0.037	100%	0.1	0.00	960	\$0.01	\$0.00	0.000	0.000	\$38.50	\$0.00																	
8	10.00	\$175	\$0	\$175	\$ 0.037	100%	12.9	0.00	228	\$0.77	\$0.08	0.000	0.000	\$0.00	\$5.20																	
9																																
10	15.00	\$262	\$4,500	\$758	\$ 0.042	35%	23.7	15.49	760	\$0.34	\$0.02	0.379	0.415	\$0.00	\$0.00																	
11	15.00	\$378	\$13,500	\$916	\$ 0.044	41%	20.9	12.29	986	\$0.38	\$0.03	0.713	0.781	\$0.00	\$0.00																	
12	15.00	\$895	\$22,500	\$2,169	\$ 0.044	41%	15.5	9.09	3,204	\$0.28	\$0.02	2.099	2.299	\$0.00	\$0.00																	
13	15.00	\$1,169	\$45,000	\$8,857	\$ 0.043	13%	58.8	51.04	3,472	\$0.34	\$0.02	2.165	2.372	\$0.00	\$0.00																	
14	15.00	\$4,400	\$187,500	\$23,920	\$ 0.043	18%	56.1	45.82	9,837	\$0.45	\$0.03	6.064	6.642	\$0.00	\$0.00																	
15	20.00	\$197	\$1,000	\$1,500	\$ 0.047	13%	21.7	18.89	1,469	\$0.13	\$0.01	1.414	1.393	\$0.00	\$0.00																	
16	15.00	\$342	\$4,500	\$580	\$ 0.056	59%	21.7	8.88	480	\$0.71	\$0.05	0.865	0.853	\$0.00	\$0.00																	
17	15.00	\$42	\$1,125	\$60	\$ 0.043	70%	9.2	2.75	152	\$0.28	\$0.02	0.083	0.051	\$0.00	\$0.00																	
18	15.00	\$34	\$1,125	\$49	\$ 0.043	70%	50.5	15.03	23	\$1.51	\$0.10	0.012	0.008	\$0.00	\$0.00																	
19	15.00	\$74	\$1,125	\$106	\$ 0.043	70%	3.8	1.13	656	\$0.11	\$0.01	0.361	0.221	\$0.00	\$0.00																	
20	20.00	\$2,817	\$35,280	\$5,880	\$ 0.047	48%	10.6	5.53	11,862	\$0.24	\$0.01	11.172	11.013	\$0.00	\$0.00																	
21	20.00	\$720	\$75,000	\$9,000	\$ 0.045	8%	106.4	97.85	1,886	\$0.38	\$0.02	1.440	1.419	\$0.00	\$0.00																	
22	20.00	\$6,863	\$108,000	\$22,500	\$ 0.046	31%	16.7	11.62	29,475	\$0.23	\$0.01	24.750	24.398	\$0.00	\$0.00																	
23	20.00	\$11,085	\$210,000	\$21,000	\$ 0.042	53%	7.3	3.47	68,775	\$0.16	\$0.01	30.900	30.460	\$0.00	\$0.00																	
24	25.00	\$1,563	\$75,000	\$12,500	\$ 0.046	13%	56.9	49.81	4,749	\$0.33	\$0.01	4.250	4.189	\$0.00	\$0.00																	
25	25.00	\$5,805	\$135,000	\$22,500	\$ 0.045	26%	19.5	14.48	25,700	\$0.23	\$0.01	19.618	19.339	\$0.00	\$0.00																	
26	25.00	\$18,750	\$255,000	\$37,500	\$ 0.040	50%	6.7	3.34	140,825	\$0.13	\$0.01	40.000	39.869	\$0.00	\$0.00																	
27	25.00	\$5,934	\$450,000	\$56,250	\$ 0.047	11%	91.4	81.75	13,018	\$0.46	\$0.02	12.937	12.753	\$0.00	\$0.00																	
28	20.00	\$806	\$250,000	\$2,080	\$ 0.047	39%	10.3	6.32	4,306	\$0.19	\$0.01	4.082	3.085	\$0.00	\$0.00																	
29	20.00	\$4,906	\$250,000	\$10,000	\$ 0.040	49%	3.7	1.88	67,803	\$0.07	\$0.00	19.912	0.000	\$0.00	\$0.00																	
30	15.00	\$40	\$0	\$88	\$ 0.038	45%	3.4	1.84	686	\$0.06	\$0.00	0.078	0.086	\$0.00	\$0.00																	
31	15.00	\$40	\$0	\$88	\$ 0.038	45%	3.1	1.68	753	\$0.05	\$0.00	0.086	0.094	\$0.00	\$0.00																	
32	15.00	\$70	\$0	\$180	\$ 0.038	39%	3.8	2.30	1,260	\$0.06	\$0.00	0.144	0.158	\$0.00	\$0.00																	
33	15.00	\$70	\$0	\$180	\$ 0.038	39%	3.3	2.03	1,426	\$0.05	\$0.00	0.158	0.173	\$0.00	\$0.00																	
34	12.00	\$20	\$0	\$85	\$ 0.037	24%	2.3	1.76	998	\$0.02	\$0.00	0.023	0.025	\$0.00	\$0.00																	
35	12.00	\$125	\$0	\$665	\$ 0.038	19%	11.4	9.26	1,533	\$0.08	\$0.01	0.175	0.192	\$0.00	\$0.00																	
36	15.00	\$70	\$0	\$906	\$ 0.038	8%	29.3	27.02	814	\$0.09	\$0.01	0.093	0.102	\$0.00	\$0.00																	
37	15.00	\$35	\$0	\$120	\$ 0.038	29%	9.4	6.65	335	\$0.10	\$0.01	0.039	0.013	\$0.00	\$0.00																	
38	10.00	\$746	\$11,250	-\$7,880	\$ 0.046	-9%	22.6	24.69	8,708	\$0.09	\$0.01	7.259	7.156	-\$746.42	\$0.00																	
39	20.00	\$8,424	\$0	\$27,172	\$ 0.045	31%	8.2	5.68	73,566	\$0.11	\$0.01	56.157	-2.084	\$0.00	\$0.00																	

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

Technical Assumption	2020		2021		2022		Installation Rate (%)	Realization Rate (%)	2020			2021			2022			Measure Load Shape
	Participants (-)	Units (-)	Participants (-)	Units (-)	Participants (-)	Units (-)			2020 NET Gen kW (kW)	2020 NET Gen kWh (kWh)	2020 Rebate Budget (\$)	2021 NET Gen kW (kW)	2021 NET Gen kWh (kWh)	2021 Rebate Budget (\$)	2022 NET Gen kW (kW)	2022 NET Gen kWh (kWh)	2022 Rebate Budget (\$)	
Line Coincidence Factor (%)																		
1									5,718,987	40,657,589	\$3,868,705	6,207,403	44,125,431	\$4,251,423	6,131,045	44,017,168	\$4,299,783	
2																		
3																		
4	56.7%	2	2	2	2	2	100%	100%	0.000	0	\$14,000	0.000	0	\$14,000	0.000	0	\$14,000	NM-BUS-RECM_OUT
5	48.4%	4	4	4	4	4	90%	100%	1.991	31,838	\$0	1.991	31,838	\$0	1.991	31,838	\$0	NM-BUS-RECM_OUT
6	77.9%	0	0	0	0	0	78%	100%	0.000	0	\$0	0.000	0	\$0	0.000	0	\$0	NM-BUS-Light Screw In
7	0.0%	0	0	0	0	0	78%	100%	0.000	0	\$0	0.000	0	\$0	0.000	0	\$0	NM-BUS-CUSTOM_
8	0.0%	0	0	0	0	0	100%	100%	0.000	0	\$0	0.000	0	\$0	0.000	0	\$0	NM-BUS-RECM_OUT
9																		
10	100.0%	5	10	5	10	5	78%	100%	3.247	6,405	\$2,622	3.247	6,405	\$2,622	3.247	6,405	\$2,622	NM-BUS-COOL_OUT
11	100.0%	2	2	2	2	2	78%	100%	1.222	1,661	\$756	1.222	1,661	\$756	1.222	1,661	\$756	NM-BUS-COOL_OUT
12	100.0%	2	2	2	2	2	78%	100%	3.599	5,398	\$1,791	3.599	5,398	\$1,791	3.599	5,398	\$1,791	NM-BUS-COOL_OUT
13	100.0%	3	3	3	3	3	78%	100%	5.567	8,773	\$3,508	5.567	8,773	\$3,508	5.567	8,773	\$3,508	NM-BUS-COOL_OUT
14	100.0%	1	1	1	1	1	78%	100%	5.197	8,286	\$4,400	5.197	8,286	\$4,400	5.197	8,286	\$4,400	NM-BUS-COOL_OUT
15	90.0%	1	1	1	1	1	78%	100%	1.090	1,237	\$197	1.090	1,237	\$197	1.090	1,237	\$197	NM-BUS-COOL_OUT
16	90.0%	1	1	1	1	1	78%	100%	0.667	404	\$342	0.667	404	\$342	0.667	404	\$342	NM-BUS-COOL_OUT
17	56.0%	1	1	1	1	1	78%	100%	0.040	128	\$42	0.040	128	\$42	0.040	128	\$42	NM-BUS-COOL_OUT
18	56.0%	4	125	4	125	4	78%	100%	0.747	2,385	\$4,278	0.747	2,385	\$4,278	0.747	2,385	\$4,278	NM-BUS-COOL_OUT
19	56.0%	1	1	1	1	1	78%	100%	0.173	553	\$74	0.173	553	\$74	0.173	553	\$74	NM-BUS-COOL_OUT
20	90.0%	0	0	0	0	0	78%	100%	0.000	0	\$0	0.000	0	\$0	0.000	0	\$0	NM-BUS-COOL_OUT
21	90.0%	1	1	1	1	1	78%	100%	1.111	1,589	\$720	1.111	1,589	\$720	1.111	1,589	\$720	NM-BUS-COOL_OUT
22	90.0%	1	1	1	1	1	78%	100%	19,091	24,827	\$6,863	19,091	24,827	\$6,863	19,091	24,827	\$6,863	NM-BUS-COOL_OUT
23	90.0%	0	0	0	0	0	78%	100%	0.000	0	\$0	0.000	0	\$0	0.000	0	\$0	NM-BUS-COOL_OUT
24	90.0%	1	1	1	1	1	78%	100%	3.278	4,000	\$1,563	3.278	4,000	\$1,563	3.278	4,000	\$1,563	NM-BUS-COOL_OUT
25	90.0%	0	0	0	0	0	78%	100%	0.000	0	\$0	0.000	0	\$0	0.000	0	\$0	NM-BUS-COOL_OUT
26	91.0%	1	1	1	1	1	78%	100%	31.197	118,617	\$18,750	31.197	118,617	\$18,750	31.197	118,617	\$18,750	NM-BUS-COOL_OUT
27	90.0%	0	0	0	0	0	78%	100%	0.000	0	\$0	0.000	0	\$0	0.000	0	\$0	NM-BUS-COOL_OUT
28	69.0%	1	1	1	1	1	78%	100%	2.414	3,627	\$806	2.414	3,627	\$806	2.414	3,627	\$806	NM-BUS-COOL_OUT
29	0.0%	1	1	1	1	1	78%	100%	0.000	57,110	\$4,906	0.000	57,110	\$4,906	0.000	57,110	\$4,906	NM-BUS-COOL_OUT
30	100.0%	10	45	10	45	10	78%	100%	3.021	26,009	\$1,800	3.021	26,009	\$1,800	3.021	26,009	\$1,800	NM-BUS-FLAT
31	100.0%	10	45	10	45	10	78%	100%	3.317	28,555	\$1,800	3.317	28,555	\$1,800	3.317	28,555	\$1,800	NM-BUS-FLAT
32	100.0%	10	30	10	30	10	78%	100%	3.697	31,832	\$2,100	3.697	31,832	\$2,100	3.697	31,832	\$2,100	NM-BUS-FLAT
33	100.0%	10	30	10	30	10	78%	100%	4.059	36,043	\$2,100	4.059	36,043	\$2,100	4.059	36,043	\$2,100	NM-BUS-COOL_OUT
34	100.0%	2	31	2	31	2	78%	100%	0.604	26,064	\$620	0.604	26,064	\$620	0.604	26,064	\$620	NM-BUS-COOL_OUT
35	100.0%	2	5	2	5	2	78%	100%	0.750	6,456	\$625	0.750	6,456	\$625	0.750	6,456	\$625	NM-BUS-COOL_OUT
36	100.0%	2	5	2	5	2	78%	100%	0.398	3,428	\$350	0.398	3,428	\$350	0.398	3,428	\$350	NM-BUS-COOL_OUT
37	29.4%	5	20	5	20	5	78%	100%	0.197	5,639	\$700	0.197	5,639	\$700	0.197	5,639	\$700	NM-BUS-COOL_OUT
38	90.0%	4	4	4	4	4	78%	100%	22.399	29,339	\$2,986	22.399	29,339	\$2,986	22.399	29,339	\$2,986	NM-BUS-COOL_OUT
39	-3.4%	0	0	0	0	0	78%	100%	0.000	0	\$0	0.000	0	\$0	0.000	0	\$0	NM-BUS-COOL_OUT

Measure Description			High Efficiency Product Assumptions			Baseline Product Assumptions		
Line No.	Electric Measure Group	Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)
40	LED Ref and Frz Cases 5' or 6' doors	LED Ref and Frz Cases 5' or 6' Doors	LED System	20	4,850	Fluorescent System	70	4,850
41	Commercial Dishwasher - Electric Water Heating	Commercial Dishwasher - Under Counter, Electric Only	ENERGY STAR qualified unit	1,085	6,570	Conventional unit as defined by ENERGY STAR	1,470	6,570
42	Commercial Dishwasher - Electric Water Heating	Commercial Dishwasher - Door Type, Electric Only	ENERGY STAR qualified unit	3,463	6,570	Conventional unit as defined by ENERGY STAR	5,194	6,570
43	Hot Food Holding Cabinet	Hot Food Holding Cabinet	ENERGY STAR qualified unit	230	5,475	Conventional unit as defined by ENERGY STAR	504	5,475
44	Demand Controlled Ventilation	Demand Controlled Ventilation	Commercial kitchen ventilation hoods with Demand Controlled Ventilation with 8.65 HP Motor	11,766	3,307	Commercial kitchen ventilation hoods without Demand Controlled Ventilation with 8.65 HP Motor	19,597	3,307
45	Ductless Mini-Splits	Mini-Split Heat Pump	MSHP size 1.2 tons, 21.27 SEER, 11.50 HSPF	1,088	1,027	MSHP size 1.2 tons, 14 SEER, 8.2 HSPF	1,647	1,027
46	Ductless Mini-Splits	Mini-Split AC - Data Center	MSHP size 1.2 tons, 21.27 SEER	1,088	5,236	MSHP size 1.2 tons, 14 SEER	1,647	5,236
47	Custom Efficiency							
48	NM - Custom Efficiency	Custom Custom	High Efficiency Product/Systems	163,937	6,570	Less Efficient Product/Systems	204,921	6,570
49	NM - Custom Efficiency - Cooling	Custom Cooling	High Efficiency Product/Systems	100,143	6,248	Less Efficient Product/Systems	125,179	6,248
50	NM - Custom Efficiency - Lighting	Custom Lighting	High Efficiency Product/Systems	60,936	4,715	Less Efficient Product/Systems	76,170	4,715
51	NM - Custom Efficiency - Motors	Custom Motors	High Efficiency Product/Systems	528,184	8,579	Less Efficient Product/Systems	660,230	8,579
52	Energy Information Systems	Energy Information Systems	High Efficiency Product/Systems	45,662	0	Less Efficient Product/Systems	45,662	4,380
53	Lighting Efficiency							
54	LED Interior Lamp (Incandescent Baseline)	LED Interior Lamp (Incandescent Baseline)	LED Interior Lamp	7	2,791	EISA Tier 2	15	2,791
55	Network Lighting Controls	Network Lighting Controls	Networked Lighting Controls	33	4,107	Manual Switch	62	4,107
56	LED Linear Ambient	LED Linear Ambient	LED Linear Ambients	59	4,107	Fluorescent Fixture	100	4,107
57	LED Mogul-Base Lamps	LED High Bay Mogul-Base Lamps	LED High Bay Replacement Lamp	98	3,071	HID Lamp	339	3,071
58	Standalone Controls	Standalone Controls	Sensor	156	4,055	Manual Switch	210	4,055
59	Stairwell Fixtures	Stairwell Fixtures	LED Stairwell Fixture	28	8,413	Fluorescent Fixture	58	8,413
60	LED Interior Screw In Fixture Retrofit	LED Interior Screw In Fixture Retrofit	LED Screw-In Fixture	15	4,443	Incandescent Lamp	61	4,443
61	LED/LEC Exit Sign	LED/LEC Exit Sign	LED Exit Sign	2	8,760	Incandescent Exit Sign	40	8,760
62	LED Interior Fixture	LED Interior Fixture	LED Downlight Fixture	21	4,766	Incandescent/CFL Fixture	64	4,766
63	LED Outdoor Canopy and Soffit Lighting	LED Outdoor Canopy and Soffit Lighting	LED Canopy/Soffit Fixture	58	4,153	HID Fixture	176	4,153
64	LED Parking Garage Lighting	LED Parking Garage Lighting	LED Parking Garage Fixture	72	8,760	HID Fixture	241	8,760
65	LED Exterior Wall Pack	LED Exterior Wall Pack	LED Wall Pack Fixture	57	4,153	HID Wall Pack Fixture	305	4,153
66	LED Parking Garage Wall Pack	LED Parking Garage Wall Pack	LED Wall Pack Fixture	15	8,760	HID Wall Pack Fixture	112	8,760
67	LED Ref and Frz Cases 5' or 6' doors	LED Ref and Frz Cases 5' or 6' Doors	LED System	36	4,780	Fluorescent System	115	4,780
68	LED Troffer Fixture or Kit	LED Troffer Fixture or Kit	LED Troffer Fixtures/Kits	43	3,693	Fluorescent Fixtures	104	3,693
69	LED PL/G Based Lamp	LED PL/G Based Lamp	LED PL Lamp	14	5,906	CFL Lamp	42	5,906
70	LED High Bay Fixture	LED High Bay Fixture	LED High-Bay Luminaires	269	3,376	HID or Fluorescent Fixture	596	3,376
71	LED Area Lighting	LED Area Lighting	LED Area Light	225	4,153	HID Fixture	833	4,153
72	LED Tubes (Linear Lamps)	LED Tubes (Linear Lamps)	LED Linear Lamp	10	2,856	Fluorescent Lamp	21	2,856
73	LED Interior Lamps	LED Interior Lamps	LED Interior Lamp	14	4,156	Incandescent or Halogen	34	4,156
74	Restroom Aerator	Restroom Aerator	0.5 GPM Bathroom Faucet Aerator	4,500	66	2.2 GPM Bath Faucet Aerator	4,500	279
75	Pre-rinse Sprayer	Pre-rinse Sprayer	1.25 GPM Pre-rinse Sprayer	4,500	2,352	2.25 GPM Pre-rinse Sprayer	4,500	3,975
76	Kitchen Aerator	Kitchen Aerator	1.5 GPM Kitchen Hand Wash Lavatory Faucet Aerator	4,500	135	2.2 GPM Bath Faucet Aerator	4,500	198
77	New Construction - Lighting Power Density	New Construction - Lighting Power Density	Savings in addition to Code Maximum LPD	13,420	3,044	Code Maximum LPD	30,674	3,044

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

Economic Assumptions															Stipulated Output					Economic Assumptions				
Line No.	Measure Lifetime (years)	Rebate Amount (\$)	Average Baseline Product Cost (\$)	Incremental Product Cost (\$)	Assumed Energy Cost (\$/kWh)	Rebate as a % of Incremental Cost (%)	Increment'l Cost Payback Period w/o Rebate (yrs)	Increment'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Customer kWh Saved (\$/kWh)	Rebated Lifetime cost / Customer kWh Saved (\$/kWh)	Customer kWh Savings (kW)	Generator Peak kW Savings (kW)	Non-Energy O&M Savings (\$)	Energy Savings (\$)									
40	16.00	\$50	\$0	\$164	\$ 0.039	31%	17.5	12.15	240	\$0.21	\$0.01	0.050	0.045	\$0.00	\$0.00									
41	10.00	\$175	\$4,960	\$106	\$ 0.038	165%	0.6	-0.39	2,535	\$0.07	\$0.01	0.386	0.362	\$31.63	\$46.46									
42	15.00	\$196	\$6,786	\$550	\$ 0.038	36%	0.8	0.54	11,369	\$0.02	\$0.00	1.730	1.622	\$195.12	\$18.22									
43	12.00	\$200	\$2,069	\$1,713	\$ 0.039	12%	29.4	25.99	1,502	\$0.13	\$0.01	0.274	0.257	\$0.00	\$0.00									
44	20.00	\$865	\$0	\$19,759	\$ 0.040	4%	10.1	9.62	25,896	\$0.03	\$0.00	7.831	4.242	\$0.00	\$927.67									
45	18.00	\$173	\$3,440	\$512	\$ 0.047	34%	19.0	12.54	574	\$0.30	\$0.02	0.559	0.551	\$0.00	\$0.00									
46	18.00	\$108	\$3,440	\$512	\$ 0.039	21%	4.5	3.56	2,926	\$0.04	\$0.00	0.559	0.612	\$0.00	\$0.00									
47																								
48	19.00	\$14,699	\$0	\$53,985	\$ 0.038	27%	4.3	3.12	269,254	\$0.05	\$0.00	40,984	37.128	\$2,243.24	\$0.00									
49	19.00	\$9,821	\$0	\$32,937	\$ 0.039	30%	4.9	3.47	156,421	\$0.06	\$0.00	25,036	23.662	\$636.68	\$0.00									
50	19.00	\$6,275	\$0	\$20,170	\$ 0.039	31%	7.2	4.95	71,821	\$0.09	\$0.00	15,234	13.382	\$0.00	\$0.00									
51	19.00	\$50,431	\$0	\$171,736	\$ 0.038	29%	3.5	2.45	1,132,773	\$0.04	\$0.00	132,046	142.834	\$6,375.00	\$0.00									
52	3.00	\$0	\$0	\$0	\$ 0.037	#DIV/0!	0.0	0.00	200,000	\$0.00	\$0.00	0.000	0.000	\$0.00	\$0.00									
53																								
54	14.74	\$6	\$2	\$13	\$ 0.041	47%	14.5	7.74	22	\$0.27	\$0.02	0.008	0.006	\$0.00	-\$0.01									
55	8.00	\$25	\$0	\$98	\$ 0.039	26%	20.8	15.48	120	\$0.21	\$0.03	0.029	0.027	\$0.00	-\$0.03									
56	15.80	\$27	\$31	\$126	\$ 0.039	21%	18.1	14.31	168	\$0.16	\$0.01	0.041	0.035	\$0.36	-\$0.04									
57	14.74	\$25	\$60	\$101	\$ 0.040	25%	3.4	2.56	742	\$0.03	\$0.00	0.242	0.185	\$0.00	-\$0.10									
58	8.00	\$13	\$0	\$117	\$ 0.039	11%	13.6	12.07	219	\$0.06	\$0.01	0.054	0.046	\$0.00	-\$0.05									
59	15.80	\$40	\$0	\$277	\$ 0.038	14%	29.1	24.91	252	\$0.16	\$0.01	0.030	0.033	\$0.00	-\$0.06									
60	15.80	\$10	\$0	\$24	\$ 0.039	42%	3.0	1.76	203	\$0.05	\$0.00	0.046	0.041	\$0.00	-\$0.05									
61	15.80	\$25	\$0	\$84	\$ 0.038	30%	6.6	4.66	333	\$0.08	\$0.00	0.038	0.042	\$0.00	\$0.00									
62	15.80	\$18	\$0	\$118	\$ 0.039	15%	14.8	12.53	207	\$0.09	\$0.01	0.043	0.039	\$0.00	-\$0.05									
63	15.80	\$56	\$0	\$267	\$ 0.039	21%	13.9	10.95	490	\$0.11	\$0.01	0.118	0.000	\$0.00	\$0.00									
64	15.80	\$150	\$0	\$314	\$ 0.038	48%	5.6	2.93	1,478	\$0.10	\$0.01	0.169	0.185	\$0.00	\$0.00									
65	15.80	\$77	\$0	\$253	\$ 0.039	30%	6.2	4.35	1,031	\$0.07	\$0.00	0.248	0.000	\$0.00	\$0.00									
66	15.80	\$35	\$0	\$268	\$ 0.038	13%	8.3	7.21	851	\$0.04	\$0.00	0.097	0.106	\$0.00	\$0.00									
67	15.80	\$50	\$0	\$164	\$ 0.039	31%	11.1	7.69	379	\$0.13	\$0.01	0.079	0.072	\$0.00	\$0.00									
68	15.80	\$30	\$0	\$166	\$ 0.040	18%	18.5	15.12	227	\$0.13	\$0.01	0.062	0.050	\$0.00	-\$0.05									
69	14.74	\$4	\$8	\$10	\$ 0.039	39%	1.6	0.97	169	\$0.02	\$0.00	0.029	0.022	\$0.00	-\$0.04									
70	15.80	\$165	\$0	\$500	\$ 0.040	33%	11.4	7.64	1,102	\$0.15	\$0.01	0.326	0.278	\$0.00	-\$0.18									
71	15.80	\$223	\$0	\$792	\$ 0.039	28%	8.0	5.73	2,522	\$0.09	\$0.01	0.607	0.000	\$0.00	\$0.00									
72	14.74	\$2	\$2	\$7	\$ 0.041	25%	6.2	4.63	30	\$0.06	\$0.00	0.010	0.006	\$0.00	-\$0.01									
73	13.70	\$17	\$0	\$17	\$ 0.039	100%	5.4	0.00	81	\$0.21	\$0.02	0.019	0.017	\$0.00	-\$0.02									
74	10.00	\$10	\$0	\$10	\$ 0.037	100%	0.1	0.00	960	\$0.01	\$0.00	0.000	0.000	\$38.50	\$0.00									
75	5.00	\$130	\$0	\$130	\$ 0.037	100%	0.3	0.00	7,301	\$0.02	\$0.00	0.000	0.000	\$26.16	\$0.00									
76	10.00	\$7	\$0	\$7	\$ 0.037	100%	0.3	0.00	284	\$0.02	\$0.00	0.000	0.000	\$11.38	\$0.00									
77	15.00	\$6,902	\$0	\$21,535	\$ 0.040	32%	10.3	7.00	52,524	\$0.13	\$0.01	17,255	14.076	\$0.00	-\$24.53									

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

Technical Assumption	2020		2021		2022		2020			2021			2022		
	2020 Participants	2020 Units (-)	2021 Participants	2021 Units (-)	2022 Participants	2022 Units (-)	Installation Rate (%)	Realization Rate (%)	2020 NET Gen kW (kW)	2020 Rebate Budget (\$)	2021 NET Gen kW (kW)	2021 Rebate Budget (\$)	2022 NET Gen kW (kW)	2022 Rebate Budget (\$)	Measure Load Shape
Line Coincidence Factor (%)															
40	83.0%	12	60	12	60	12	78%	100%	2.113	\$3,000	2.113	\$3,000	2.113	\$3,000	NM-BUS-FLAT
41	85.0%	0	0	0	0	0	78%	100%	0.000	\$0	0.000	\$0	0.000	\$0	NM-BUS-FOODSVC
42	85.0%	0	0	0	0	0	78%	100%	0.000	\$0	0.000	\$0	0.000	\$0	NM-BUS-FOODSVC
43	85.0%	0	0	0	0	0	78%	100%	0.000	\$0	0.000	\$0	0.000	\$0	NM-BUS-FOODSVC
44	49.5%	12	12	12	12	12	78%	100%	39.834	\$10,380	39.834	\$10,380	261,748	\$10,380	NM-BUS-COOL_OUT
45	90.0%	30	30	30	30	30	78%	100%	12.892	\$5,184	12.892	\$5,184	14,459	\$5,184	NM-BUS-COOL_OUT
46	100.0%	0	11	0	11	0	78%	100%	5.372	\$1,209	5.372	\$1,209	27,639	\$1,209	NM-BUS-COOL_OUT
47															
48	82.7%	2	2	3	3	3	78%	100%	58.105	\$29,398	87.158	\$44,096	680,381	\$44,096	NM-BUS-CUSTOM
49	86.3%	0	0	0	0	0	78%	100%	0.000	\$0	0.000	\$0	0.000	\$0	NM-BUS-COOL_OUT
50	80.2%	20	20	22	22	22	78%	100%	209,422	\$125,497	230,365	\$138,047	1,330,893	\$138,047	NM-BUS-LIGHTING
51	98.8%	2	2	3	3	3	78%	100%	223,536	\$100,863	335,304	\$151,294	2,862,415	\$151,294	NM-BUS-MTRRS_OUT
52	0.0%	1	1	1	1	1	78%	100%	0.000	\$0	0.000	\$0	168,461	\$0	NM-BUS-RECM_OUT
53															
54	72.3%	4	51	4	200	4	78%	100%	0.245	\$301	0.959	\$1,176	3,635	\$1,176	NM-BUS-Light Troffer
55	84.0%	0	0	2	2	2	78%	100%	0.000	\$0	0.042	\$50	0.063	\$75	NM-BUS-Light-Network-Controls
56	78.2%	9	70	11	84	11	78%	100%	1,920	\$1,855	2,304	\$2,226	13,158	\$2,465	NM-BUS-Light Troffer
57	70.0%	2	40	2	200	2	78%	100%	5,796	\$24,993	28,980	\$5,000	124,967	\$5,000	NM-BUS-Light High Bay
58	78.3%	3	20	3	10	3	78%	100%	0.723	\$268	0.362	\$134	0.181	\$67	NM-BUS-Light-Sensor
59	100.0%	1	1	1	100	1	78%	100%	0.026	\$40	2.565	\$4,000	5,129	\$8,000	NM-BUS-Light Flat
60	100.0%	2	10	2	2	2	78%	100%	0.320	\$100	0.320	\$100	0.160	\$50	NM-BUS-Light Troffer
61	100.0%	2	2	2	2	2	78%	100%	0.052	\$49	0.065	\$50	0.065	\$50	NM-BUS-Light Flat
62	81.2%	2	11	3	60	3	78%	100%	0.326	\$183	1.813	\$1,073	10,460	\$1,073	NM-BUS-Light Troffer
63	0.0%	3	50	3	50	2	78%	100%	0.000	\$2,800	0.000	\$2,800	10,315	\$1,400	NM-BUS-RECM_OUT
64	100.0%	1	1	1	1	1	78%	100%	0.145	\$150	0.145	\$150	1,245	\$150	NM-BUS-Light Flat
65	0.0%	25	200	25	400	25	78%	100%	0.000	\$15,300	0.000	\$30,600	347,213	\$30,600	NM-BUS-RECM_OUT
66	100.0%	1	1	0	0	0	78%	100%	0.083	\$35	0.000	\$0	0.000	\$0	NM-BUS-Light Flat
67	83.0%	2	2	2	2	2	78%	100%	0.113	\$100	0.113	\$100	0.113	\$100	NM-BUS-Light Refrigerated
68	73.7%	30	536	30	600	30	78%	100%	20,858	\$16,080	23,348	\$18,000	23,348	\$18,000	NM-BUS-Light Troffer
69	71.0%	1	5	1	5	1	78%	100%	0.087	\$20	0.087	\$20	0.087	\$20	NM-BUS-Light Troffer
70	77.8%	16	200	16	300	16	78%	100%	43,527	\$33,050	65,290	\$78,535	87,053	\$78,535	NM-BUS-Light High Bay
71	0.0%	23	367	23	500	23	78%	100%	0.000	\$81,911	0.000	\$111,534	1,062,277	\$111,534	NM-BUS-RECM_OUT
72	54.5%	35	13,040	37	15,000	37	78%	100%	62,973	\$24,090	72,438	\$27,907	77,268	\$29,558	NM-BUS-Light Tube
73	77.9%	22	1,055	20	1,500	20	78%	100%	13,643	\$17,935	19,397	\$25,500	25,863	\$34,000	NM-BUS-Light Screw In
74	0.0%	50	250	50	250	50	78%	100%	202,166	\$2,500	0.000	\$2,500	202,166	\$2,500	NM-BUS-CUSTOM
75	0.0%	10	10	10	10	10	78%	100%	0.000	\$1,493	0.000	\$1,300	61,493	\$1,300	NM-BUS-CUSTOM
76	0.0%	10	10	10	10	10	78%	100%	0.000	\$67	0.000	\$67	2,391	\$67	NM-BUS-CUSTOM
77	74.5%	2	5	3	10	3	78%	100%	55,071	\$34,509	110,142	\$69,019	442,408	\$69,019	NM-BUS-Light All

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

Measure Description			High Efficiency Product Assumptions		Baseline Product Assumptions				
Line No.	Electric Measure Group	Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)	
78	Motors & Drives								
79		NM - Motors and Drives - Prescriptive	New Motor Enhanced (NEMA Premium +1%)	New Motor Enhanced (NEMA Premium +1%)	1,384	2,906	NEMA Premium	1,400	2,906
80		NM - Motors and Drives - Prescriptive	Upgrade Motor Enhanced (NEMA Premium +1%)	Upgrade Motor Enhanced (NEMA Premium +1%)	2,822	4,014	EPACT Efficient Motor	2,915	4,014
81		NM - Motors and Drives - Prescriptive	Variable Frequency Drive (Motors VFD v2)	Variable Frequency Drive (Motors VFD v2)	18,966	5,317	Equipment without an ASD/VFD	28,856	5,317
82		NM - Motors and Drives - Prescriptive	Water Well Pump VFDs (Water Well Pump v2)	Water Well Pump VFDs (Water Well Pump v2)	52,695	2,321	Throttled Well Pump	74,511	2,321
83		NM - Motors and Drives - Prescriptive	Constant Speed Motor Controller	Constant Speed Motor Controller	4,849	4,878	Motor without Voltage Controller	5,717	4,878
84		NM - Motors and Drives - Prescriptive	HVAC VFD (NM HVAC VFD)	HVAC VFD (NM HVAC VFD)	3,503	7,245	Equipment without an ASD/VFD	5,765	7,245
85		NM - Motors and Drives - Prescriptive	Pump Off Controller	Pump Off Controller	147	6,132	% Clock Off Controller	2,283	6,132
86		NM - Compressed Air Prescriptive	Cycling Dryers	Cycling Dryers	645	7,269	New Non-Cycling Dryer	1,853	7,269
87		NM - Compressed Air Prescriptive	Dew Point Controls	Dew Point Controls	18,336	7,224	No Purge Control for Heatless Desiccant Dryers	24,966	7,224
88		NM - Compressed Air Prescriptive	Mist Eliminators	Mist Eliminators	70,738	7,656	New General Purpose Filter	71,906	7,656
89		NM - Compressed Air Prescriptive	No Air Loss Drain	No Air Loss Drain	0	7,523	New Electronic Solenoid/Timed Drains	517	7,523
90	NM - Compressed Air Prescriptive	VFD Compressor New	VFD Compressor New	13,383	2,830	New Modulation or load no-load with less than or equal to 2gal of storage per CFM of Capacity	19,165	2,830	
91	NM - Compressed Air Prescriptive	VFD Compressor Upgrade	VFD Compressor Upgrade	11,728	2,655	Existing Modulation or load no-load with less than or equal to 2gal of storage per CFM of Capacity	17,114	2,655	
92	Residential								
93	Energy Feedback								
94	NM - Energy Feedback Residential - Mass Entry	Rollup: Online Energy Feedback & Tools	Treatment	1,345	8,760	Control	1,347	8,760	
95	NM - Energy Feedback Residential - Mass Entry	Print Feedback Report - Legacy Participant Group 2020	Treatment	1,302	4,187	Control	1,347	4,187	
96	NM - Energy Feedback Residential - Mass Entry	Print Refill 2020 Group	Treatment	1,302	3,156	Control	1,347	3,156	
97	NM - Energy Feedback Residential - Mass Entry	Print Feedback Report - Legacy Participant Group 2021	Treatment	1,302	3,862	Control	1,347	3,862	
98	NM - Energy Feedback Residential - Mass Entry	Print Refill 2021 Group	Treatment	1,309	3,156	Control	1,347	3,156	
99	NM - Energy Feedback Residential - Mass Entry	Print Feedback Report - Legacy Participant Group 2022	Treatment	1,302	3,941	Control	1,347	3,941	
100	NM - Energy Feedback Residential - Mass Entry	Print Refill 2022 Group	Treatment	1,302	3,156	Control	1,347	3,156	
101	Heat Pump Water Heaters								
102	Heat Pump Water Heater	Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & Electric Resistance Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,085	328	Minimum Efficiency Electric Water Heater	4,580	911	
103	Heat Pump Water Heater	Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & ASHP Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,092	343	Minimum Efficiency Electric Water Heater	4,580	1,028	
104	Heat Pump Water Heater	Medium Draw Heat Pump Water Heater - Refrigerant Based Cooling & Natural Gas Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,092	343	Minimum Efficiency Electric Water Heater	4,580	1,121	
105	Heat Pump Water Heater	Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & Electric Resistance Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,082	323	Minimum Efficiency Electric Water Heater	4,500	892	
106	Heat Pump Water Heater	Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & ASHP Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,085	329	Minimum Efficiency Electric Water Heater	4,500	1,011	
107	Heat Pump Water Heater	Medium Draw Heat Pump Water Heater - Non-Refrigerant Based Cooling & Natural Gas Heat (30-50 Gallon)	High Efficiency Heat Pump Water Heater	4,083	324	Minimum Efficiency Electric Water Heater	4,500	1,106	

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

		Economic Assumptions				Stipulated Output							Economic Assumptions			
Line No.	Measure Lifetime (years)	Rebate Amount (\$)	Average Baseline Product Cost (\$)	Incremental Cost of Efficient Product (\$)	Assumed Energy Cost (\$/kWh)	Rebate as a % of Incremental Cost (%)	Increment'l Cost Payback Period w/o Rebate (yrs)	Increment'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved (\$/kWh)	Rebated Lifetime cost / Cust kWh Saved (\$/kWh)	Customer kWh Savings (kWh)	Generator Peak kW Savings (kW)	Non-Energy O&M Savings (\$)	Energy O&M Savings (\$)	
78																
79	20.00	\$24	\$682	\$150	\$ 0.040	16%	80.6	67.76	46	\$0.52	\$0.03	0.016	0.014	\$0.00	\$0.00	
80	20.00	\$89	\$0	\$1,012	\$ 0.039	9%	69.1	63.10	371	\$0.24	\$0.01	0.092	0.079	\$0.00	\$0.00	
81	15.00	\$4,527	\$0	\$9,487	\$ 0.039	48%	4.6	2.43	52,583	\$0.09	\$0.01	9.890	8.449	\$0.00	\$0.00	
82	15.00	\$6,913	\$0	\$15,720	\$ 0.041	44%	7.5	4.21	50,640	\$0.14	\$0.01	21.816	13.614	\$0.00	\$0.00	
83	20.00	\$345	\$0	\$1,188	\$ 0.039	29%	7.2	5.11	4,234	\$0.08	\$0.00	0.868	0.741	\$0.00	\$0.00	
84	15.00	\$1,294	\$0	\$2,737	\$ 0.038	47%	4.4	2.30	16,388	\$0.08	\$0.01	2.262	2.477	\$0.00	\$0.00	
85	13.00	\$3,000	\$0	\$5,959	\$ 0.039	50%	11.8	5.86	13,097	\$0.23	\$0.02	2.136	1.560	\$0.00	\$0.00	
86	20.00	\$371	\$4,439	\$832	\$ 0.038	45%	2.5	1.37	8,783	\$0.04	\$0.00	1.208	1.323	\$0.00	\$0.00	
87	15.00	\$1,000	\$0	\$3,316	\$ 0.038	30%	1.8	1.26	47,897	\$0.02	\$0.00	6.630	7.262	\$0.00	\$0.00	
88	11.00	\$1,980	\$1,280	\$4,327	\$ 0.038	46%	7.6	4.13	8,946	\$0.22	\$0.02	1.168	1.280	\$225.83	\$0.00	
89	13.00	\$200	\$125	\$323	\$ 0.038	62%	2.2	0.83	3,889	\$0.05	\$0.00	0.517	0.411	\$0.00	\$0.00	
90	20.00	\$2,500	\$10,767	\$4,730	\$ 0.041	53%	7.1	3.36	16,359	\$0.15	\$0.01	5.782	5.623	\$0.00	\$0.00	
91	20.00	\$5,688	\$0	\$15,754	\$ 0.041	36%	27.0	17.26	14,300	\$0.40	\$0.02	5.386	5.239	\$0.00	\$0.00	
92																
93																
94	1.00	\$0	\$0	\$0	\$ 0.075	#DIV/0!	0.0	0.00	24	\$0.00	\$0.00	0.003	0.002	\$0.00	\$0.00	
95	1.00	\$0	\$0	\$0	\$ 0.075	#DIV/0!	0.0	0.00	189	\$0.00	\$0.00	0.045	0.039	\$0.00	\$0.00	
96	1.00	\$0	\$0	\$0	\$ 0.075	#DIV/0!	0.0	0.00	142	\$0.00	\$0.00	0.045	0.033	\$0.00	\$0.00	
97	1.00	\$0	\$0	\$0	\$ 0.075	#DIV/0!	0.0	0.00	175	\$0.00	\$0.00	0.045	0.037	\$0.00	\$0.00	
98	1.00	\$0	\$0	\$0	\$ 0.075	#DIV/0!	0.0	0.00	121	\$0.00	\$0.00	0.038	0.028	\$0.00	\$0.00	
99	1.00	\$0	\$0	\$0	\$ 0.075	#DIV/0!	0.0	0.00	179	\$0.00	\$0.00	0.045	0.038	\$0.00	\$0.00	
100	1.00	\$0	\$0	\$0	\$ 0.075	#DIV/0!	0.0	0.00	142	\$0.00	\$0.00	0.045	0.033	\$0.00	\$0.00	
101																
102	10.00	\$200	\$959	\$995	\$ 0.075	20%	4.7	3.76	2,831	\$0.07	\$0.01	0.496	0.578	\$0.00	\$0.00	
103	10.00	\$200	\$959	\$995	\$ 0.075	20%	4.0	3.22	3,303	\$0.06	\$0.01	0.488	0.570	\$0.00	\$0.00	
104	10.00	\$200	\$959	\$995	\$ 0.075	20%	3.7	2.97	3,730	\$0.05	\$0.01	0.488	0.570	-\$10.89	\$0.00	
105	10.00	\$200	\$959	\$995	\$ 0.075	20%	4.9	3.95	2,695	\$0.07	\$0.01	0.418	0.487	\$0.00	\$0.00	
106	10.00	\$200	\$959	\$995	\$ 0.075	20%	4.1	3.32	3,207	\$0.06	\$0.01	0.415	0.484	\$0.00	\$0.00	
107	10.00	\$200	\$959	\$995	\$ 0.075	20%	3.8	3.03	3,656	\$0.05	\$0.01	0.417	0.487	-\$10.89	\$0.00	

Technical Assumption	2020		2021		2022			Installation Rate (%)	Realization Rate (%)	2020			2021			2022			Measure Load Shape
Line No.	2020 Participants (-)	2020 Units (-)	2021 Participants (-)	2021 Units (-)	2022 Participants (-)	2022 Units (-)	NTG (%)			2020 Gen kW (kW)	2020 NET Gen kWh (kWh)	2020 Rebate Budget (\$)	2021 Gen kW (kW)	2021 NET Gen kWh (kWh)	2021 Rebate Budget (\$)	2022 Gen kW (kW)	2022 NET Gen kWh (kWh)	2022 Rebate Budget (\$)	
78																			
79	78.0%	1	1	1	1	1	78%	100%	100%	\$24	0.011	39	\$24	0.011	39	\$24	NM-BUS-MOTORS		
80	78.0%	1	1	1	1	1	78%	100%	100%	\$89	0.062	313	\$89	0.062	313	\$89	NM-BUS-MOTORS		
81	78.0%	18	209	18	249	18	78%	100%	100%	\$946,235	1,646,260	11,028,481	\$1,127,332	1,646,260	11,028,481	\$1,127,332	NM-BUS-MOTORS		
82	57.0%	5	6	5	6	5	57%	100%	100%	\$41,475	46,537	186,339	\$41,475	46,537	186,339	\$41,475	NM-BUS-MOTORS		
83	78.0%	1	5	1	5	1	78%	100%	100%	\$1,724	2,901	17,831	\$1,724	2,901	17,831	\$1,724	NM-BUS-MOTORS		
84	100.0%	8	55	8	55	8	78%	100%	100%	\$71,143	106,621	759,203	\$71,143	106,621	759,203	\$71,143	NM-BUS-MOTORS		
85	66.7%	1	4	1	4	1	78%	100%	100%	\$12,000	4,883	44,128	\$12,000	4,883	44,128	\$12,000	NM-BUS-MOTORS		
86	100.0%	1	1	1	1	1	78%	100%	100%	\$371	1,036	7,398	\$371	1,036	7,398	\$371	NM-BUS-MOTORS		
87	100.0%	1	1	1	1	1	78%	100%	100%	\$1,000	5,683	40,344	\$1,000	5,683	40,344	\$1,000	NM-BUS-MOTORS		
88	100.0%	1	1	1	1	1	78%	100%	100%	\$1,980	1,001	7,535	\$1,980	1,001	7,535	\$1,980	NM-BUS-MOTORS		
89	72.6%	5	5	5	5	5	78%	100%	100%	\$1,000	1,608	16,377	\$1,000	1,608	16,377	\$1,000	NM-BUS-MOTORS		
90	88.8%	4	4	4	4	4	78%	100%	100%	\$10,000	17,601	55,117	\$10,000	17,601	55,117	\$10,000	NM-BUS-MOTORS		
91	88.8%	8	8	8	8	8	78%	100%	100%	\$45,500	32,794	96,357	\$45,500	32,794	96,357	\$45,500	NM-BUS-MOTORS		
92																			
93	74.5%	500	500	500	500	500	107%	100%	100%	\$0	1,272	14,465	\$0	1,272	14,465	\$0	NM-RES-COOLING_DX		
94	74.2%	15,815	0	0	0	0	107%	100%	100%	\$0	0.000	0	\$0	0.000	0	\$0	NM-RES-COOLING_DX		
95	62.2%	10,000	0	0	0	0	107%	100%	100%	\$0	0.000	0	\$0	0.000	0	\$0	NM-RES-COOLING_DX		
96	70.2%	0	22,918	0	0	0	107%	100%	100%	\$0	907,037	4,829,236	\$0	0.000	0	\$0	NM-RES-COOLING_DX		
97	62.2%	0	0	0	0	0	107%	100%	100%	\$0	0.000	0	\$0	0.000	0	\$0	NM-RES-COOLING_DX		
98	62.2%	0	0	0	0	0	107%	100%	100%	\$0	0.000	0	\$0	0.000	0	\$0	NM-RES-COOLING_DX		
99	70.8%	0	0	0	0	20,558	107%	100%	100%	\$0	0.000	0	\$0	824,758	4,440,572	\$0	NM-RES-COOLING_DX		
100	62.2%	0	0	0	0	0	107%	100%	100%	\$0	0.000	0	\$0	0.000	0	\$0	NM-RES-COOLING_DX		
101																			
102	100.0%	1	2	2	2	2	100%	100%	100%	\$200	1,051	5,810	\$364	1,314	7,262	\$455	NM-RES-SFWHT		
103	100.0%	14	25	25	32	32	100%	100%	100%	\$2,800	14,504	94,904	\$5,091	18,130	118,630	\$6,364	NM-RES-SFWHT		
104	100.0%	14	25	25	32	32	100%	100%	100%	\$2,800	14,504	107,160	\$5,091	18,130	133,950	\$6,364	NM-RES-SFWHT		
105	100.0%	5	9	9	11	11	100%	100%	100%	\$1,000	4,429	27,650	\$1,818	5,536	34,563	\$2,273	NM-RES-SFWHT		
106	100.0%	13	24	24	30	30	100%	100%	100%	\$2,600	11,441	85,563	\$4,727	14,301	106,954	\$5,909	NM-RES-SFWHT		
107	100.0%	8	15	15	18	18	100%	100%	100%	\$1,600	7,084	60,025	\$2,909	8,855	75,031	\$3,636	NM-RES-SFWHT		

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

Measure Description			High Efficiency Product Assumptions			Baseline Product Assumptions		
		Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)
Residential Home Energy Services								
108		Low Flow Showerheads	Low Flow Shower head - 1.5 GPM	4,500	79	Federal Minimum Standard flow rate 2.5 GPM	4,500	132
109	HES L.F. Showerhead	Ceiling Insulation - Gas Heat	Average Ceiling 1649 Sq.Ft. and post R-Value of 30	113	1,355	Average Ceiling 1649 Sq.Ft. and base R-Value of 3.2	597	1,355
110	HES Ceiling	Ceiling Insulation - Heat Pump	Average Ceiling 1672 Sq.Ft. and post R-Value of 30	921	692	Average Ceiling 1672 Sq.Ft. and base R-Value of 4.1	1,335	2,202
111	HES Ceiling	Ceiling Insulation - Electric Resistance Heat	Average Ceiling 1313 Sq.Ft. and post R-Value of 30	1,766	553	Average Ceiling 1313 Sq.Ft. and base R-Value of 3.9	2,104	2,202
112	HES Duct Leakage	Duct Leakage - Gas Heat	Average home of 1591 Sq.Ft. and Post-Duct Leak CFM of 93.6	87	1,355	Average home of 1591 Sq.Ft. and Pre-Duct Leak CFM of 589	417	1,355
113	HES Duct Leakage	Duct Leakage - Heat Pump	Average home of 1625 Sq.Ft. and Post-Duct Leak CFM of 46.1	1,760	282	Average home of 1625 Sq.Ft. and Pre-Duct Leak CFM of 532.5	2,121	2,202
114	HES Duct Leakage	Duct Leakage - Electric Furnace Heat	Average home of 1485 Sq.Ft. and Post-Duct Leak CFM of 42.9	3,559	247	Average home of 1485 Sq.Ft. and Pre-Duct Leak CFM of 513.7	3,910	2,202
115	HES Infiltration	Air Infiltration - Gas Heat	Average home of 1663 Sq.Ft. and Post-CFM of 1932	237	1,355	Average home of 1663 Sq.Ft. and Pre-CFM of 4277	524	1,355
116	HES Infiltration	Air Infiltration - Heat Pump	Average home of 1928 Sq.Ft. and Post-CFM of 2089	1,338	1,264	Average home of 1928 Sq.Ft. and Pre-CFM of 4413	1,623	2,202
117	HES Infiltration	Air Infiltration - Electric Resistance Heat	Average home of 1808 Sq.Ft. and Post-CFM of 2196	2,595	1,370	Average home of 1808 Sq.Ft. and Pre-CFM of 3796	2,791	2,202
Low Income Home Energy Services								
119	HES L.F. Showerhead	Low Flow Showerheads	Low Flow Shower head - 1.5 GPM	4,500	79	Federal Minimum Standard flow rate 2.5 GPM	4,500	132
120	HES Ceiling	Ceiling Insulation - Gas Heat	Average Ceiling 1411 Sq.Ft. and post R-Value of 39.1	76	1,355	Average Ceiling 1411 Sq.Ft. and base R-Value of 3.1	518	1,355
121	HES Ceiling	Ceiling Insulation - Heat Pump	Average Ceiling 1484 Sq.Ft. and post R-Value of 32.3	820	645	Average Ceiling 1484 Sq.Ft. and base R-Value of 4	1,201	2,202
122	HES Ceiling	Ceiling Insulation - Electric Resistance Heat	Average Ceiling 1207 Sq.Ft. and post R-Value of 33.1	1,685	487	Average Ceiling 1207 Sq.Ft. and base R-Value of 3.6	2,019	2,202
123	HES Duct Leakage	Duct Leakage - Gas Heat	Average home of 1616 Sq.Ft. and Post-Duct Leak CFM of 111.4	104	1,355	Average home of 1616 Sq.Ft. and Pre-Duct Leak CFM of 509	443	1,355
124	HES Duct Leakage	Duct Leakage - Heat Pump	Average home of 1584 Sq.Ft. and Post-Duct Leak CFM of 84.9	1,962	466	Average home of 1584 Sq.Ft. and Pre-Duct Leak CFM of 550.6	2,326	2,202
125	HES Duct Leakage	Duct Leakage - Electric Furnace Heat	Average home of 1555 Sq.Ft. and Post-Duct Leak CFM of 101.5	3,966	525	Average home of 1555 Sq.Ft. and Pre-Duct Leak CFM of 502	4,301	2,202
126	HES Infiltration	Air Infiltration - Gas Heat	Average home of 1595 Sq.Ft. and Post-CFM of 2135	340	1,355	Average home of 1595 Sq.Ft. and Pre-CFM of 3932	626	1,355
127	HES Infiltration	Air Infiltration - Heat Pump	Average home of 1732 Sq.Ft. and Post-CFM of 2049	1,408	1,374	Average home of 1732 Sq.Ft. and Pre-CFM of 4011	1,721	2,202
128	HES Infiltration	Air Infiltration - Electric Resistance Heat	Average home of 1341 Sq.Ft. and Post-CFM of 1661	2,376	1,166	Average home of 1341 Sq.Ft. and Pre-CFM of 3528	2,673	2,202
129	Refrigerator Replacement	Refrigerator Replacement	New EnergyStar Refrigerator	66	5,592	Existing Refrigerator	130	5,592
Energy Savings Kit								
131	LED	9 W LEDs	9W LED	9	818	Incandescent Equivalent (Post-EISA)	20	818
132	Showerhead	Low Flow Showerhead	Low Flow Shower head - 1.5 GPM	4,500	708	Federal Minimum Standard flow rate 2.5 GPM	4,500	739
133	Aerators - Kitchen	Aerators - Kitchen	1.5 GPM flow rate Kitchen aerator	4,500	736	Federal Minimum Standard flow rate 2.2 GPM	4,500	739
134	Aerators - Bathroom	Aerators - Bathroom	1.0 GPM flow rate bathroom aerator	4,500	735	Federal Minimum Standard flow rate 2.2 GPM	4,500	739
Home Lighting & Recycling								
136	Residential Home Lighting - Residential Customers 2020	LED Bulb - A-Line	LED Bulb - A-Line	16	632	EISA Tier 2	43	632
137	Residential Home Lighting - Business Customers 2020	LED Bulb - A-Line	LED Bulb - A-Line	16	3,061	EISA Tier 2	43	3,061
138	Residential Home Lighting - Residential Customers 2020	LED Bulb - Specialty	LED Bulb Purchase - Specialty	13	632	Exempt/Post-EISA	88	632
139	Residential Home Lighting - Business Customers 2020	LED Bulb - Specialty	LED Bulb Purchase - Specialty	13	3,061	Exempt/Post-EISA	88	3,061
140	Residential Home Lighting - Residential Customers 2020	LED Bulb - Linear Tube	LED Bulb Purchase - Type A Linear Tube	21	632	Fluorescent Equivalent	38	632
141	Residential Home Lighting - Business Customers 2020	LED Bulb - Linear Tube	LED Bulb Purchase - Type A Linear Tube	21	3,929	Fluorescent Equivalent	38	3,929

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

Economic Assumptions			Stipulated Output										Economic Assumptions		
Line No.	Measure Lifetime (years)	Rebate Amount (\$)	Average Baseline Product Cost (\$)	Incremental Cost of Efficient Product (\$)	Assumed Energy Cost (\$/kWh)	Rebate as a % of Incremental Cost (%)	Increment'l Cost Payback Period w/o Rebate (yrs)	Increment'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Cust kWh Saved (\$/kWh)	Rebated Lifetime cost / Cust kWh Saved (\$/kWh)	Customer kWh Savings (kWh)	Generator Peak kW Savings (kW)	Non-Energy O&M Savings (\$)	Energy O&M Savings (\$)
108															
109	10.00	\$24	\$0	\$24	\$ 0.075	99%	0.8	0.01	237	\$0.10	\$0.01	0.000	0.000	\$10.67	\$0.00
110	20.00	\$224	\$0	\$1,547	\$ 0.075	15%	15.8	13.52	655	\$0.34	\$0.02	0.483	0.491	\$0.00	\$48.88
111	20.00	\$453	\$0	\$1,516	\$ 0.075	30%	8.8	6.17	2,302	\$0.20	\$0.01	0.414	0.421	\$0.00	\$0.00
112	20.00	\$636	\$0	\$1,199	\$ 0.075	53%	4.4	2.06	3,656	\$0.17	\$0.01	0.337	0.342	\$0.00	\$0.00
113	18.00	\$153	\$0	\$382	\$ 0.075	40%	3.6	2.16	447	\$0.34	\$0.02	0.330	0.335	\$0.00	\$72.67
114	18.00	\$720	\$0	\$390	\$ 0.075	185%	1.2	-1.06	4,174	\$0.17	\$0.01	0.361	0.366	\$0.00	\$0.00
115	18.00	\$1,251	\$0	\$356	\$ 0.075	351%	0.6	-1.55	7,730	\$0.16	\$0.01	0.351	0.356	\$0.00	\$0.00
116	11.00	\$133	\$0	\$844	\$ 0.075	16%	12.9	10.87	389	\$0.34	\$0.03	0.287	0.292	\$0.00	\$36.31
117	11.00	\$357	\$0	\$837	\$ 0.075	43%	5.9	3.41	1,882	\$0.19	\$0.02	0.285	0.289	\$0.00	\$0.00
118	11.00	\$440	\$0	\$576	\$ 0.075	76%	3.0	0.70	2,590	\$0.17	\$0.02	0.196	0.199	\$0.00	\$0.00
119															
120	10.00	\$24	\$0	\$24	\$ 0.075	99%	0.8	0.01	237	\$0.10	\$0.01	0.000	0.000	\$10.67	\$0.00
121	20.00	\$205	\$0	\$1,778	\$ 0.075	12%	19.9	17.56	599	\$0.34	\$0.02	0.442	0.449	\$0.00	\$44.73
122	20.00	\$417	\$0	\$1,470	\$ 0.075	28%	9.3	6.66	2,116	\$0.20	\$0.01	0.381	0.386	\$0.00	\$0.00
123	20.00	\$631	\$0	\$1,246	\$ 0.075	51%	4.6	2.27	3,626	\$0.17	\$0.01	0.334	0.340	\$0.00	\$0.00
124	18.00	\$157	\$0	\$388	\$ 0.075	41%	3.6	2.11	460	\$0.34	\$0.02	0.339	0.344	\$0.00	\$74.76
125	18.00	\$726	\$0	\$380	\$ 0.075	191%	1.2	-1.10	4,208	\$0.17	\$0.01	0.364	0.369	\$0.00	\$0.00
126	18.00	\$1,196	\$0	\$373	\$ 0.075	320%	0.7	-1.49	7,390	\$0.16	\$0.01	0.335	0.340	\$0.00	\$0.00
127	11.00	\$133	\$0	\$647	\$ 0.075	21%	11.4	9.05	388	\$0.34	\$0.03	0.286	0.291	\$0.00	\$27.82
128	11.00	\$360	\$0	\$706	\$ 0.075	51%	5.1	2.50	1,854	\$0.19	\$0.02	0.312	0.317	\$0.00	\$0.00
129	11.00	\$545	\$0	\$672	\$ 0.075	81%	2.9	0.55	3,115	\$0.17	\$0.02	0.297	0.302	\$0.00	\$0.00
130	13.00	\$683	\$0	\$683	\$ 0.075	100%	25.5	0.00	358	\$1.91	\$0.15	0.064	0.048	\$0.00	\$0.00
131															
132	20.00	\$3	\$0	\$3	\$ 0.075	100%	4.1	0.00	9	\$0.31	\$0.02	0.011	0.001	\$0.00	\$0.00
133	10.00	\$3	\$0	\$3	\$ 0.075	100%	0.1	0.00	140	\$0.02	\$0.00	0.000	0.000	\$13.34	\$0.00
134	10.00	\$2	\$0	\$2	\$ 0.075	100%	0.5	0.00	15	\$0.11	\$0.01	0.000	0.000	\$1.88	\$0.00
135	10.00	\$1	\$0	\$1	\$ 0.075	100%	0.1	0.00	20	\$0.03	\$0.00	0.000	0.000	\$3.22	\$0.00
136															
137	20.00	\$1	\$1	\$1	\$ 0.075	75%	0.8	0.21	17	\$0.05	\$0.00	0.027	0.003	\$0.00	\$0.00
138	12.62	\$1	\$1	\$1	\$ 0.040	75%	0.0	0.00	83	\$0.01	\$0.00	0.027	0.020	\$0.00	\$194.05
139	20.00	\$2	\$3	\$3	\$ 0.075	75%	0.9	0.22	47	\$0.05	\$0.00	0.075	0.009	\$0.00	\$0.00
140	12.62	\$2	\$3	\$3	\$ 0.040	75%	0.0	0.00	228	\$0.01	\$0.00	0.075	0.055	\$0.00	\$535.90
141	20.00	\$2	\$3	\$4	\$ 0.075	49%	5.3	2.75	10	\$0.19	\$0.01	0.016	0.002	\$0.00	\$0.00
142	9.83	\$2	\$3	\$4	\$ 0.040	49%	0.0	0.01	64	\$0.03	\$0.00	0.016	0.015	\$0.00	\$150.75

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

Technical Assumption	2020		2021		2022		Installation Rate (%)	Realization Rate (%)	2020		2021		2022		Measure Load Shape
	2020 Participants (-)	2020 Units (-)	2021 Participants (-)	2021 Units (-)	2022 Participants (-)	2022 Units (-)			2020 NET Gen kW (kW)	2020 Rebate Budget (\$)	2021 NET Gen kW (kW)	2021 Rebate Budget (\$)	2022 NET Gen kW (kW)	2022 Rebate Budget (\$)	
Line Coincidence No. Factor (%)															
108															
109	0.0%	24	26	24	24	26	93%	100%	0.000	\$608	0.000	\$608	0.000	6,364	NM-RES-SFWHT
110	87.0%	16	17	16	16	17	93%	100%	7.667	\$3,770	7.667	\$3,770	7.667	11,551	NM-RES-CACNSP
111	87.0%	359	378	359	378	359	93%	100%	147,673	\$171,238	147,673	\$171,238	147,673	912,599	NM-RES-CACNSP
112	87.0%	235	247	235	247	235	93%	100%	78,700	\$157,311	78,700	\$157,311	78,700	948,574	NM-RES-CACNSP
113	87.0%	74	78	74	78	74	93%	100%	24,406	\$12,001	24,406	\$12,001	24,406	36,768	NM-RES-CACNSP
114	87.0%	341	359	341	359	341	93%	100%	122,390	\$258,729	122,390	\$258,729	122,390	1,573,750	NM-RES-CACNSP
115	87.0%	156	164	156	164	156	93%	100%	54,324	\$205,186	54,324	\$205,186	54,324	1,330,746	NM-RES-CACNSP
116	87.0%	89	94	89	94	89	93%	100%	25,387	\$12,484	25,387	\$12,484	25,387	38,245	NM-RES-CACNSP
117	87.0%	109	114	109	114	109	93%	100%	30,750	\$40,793	30,750	\$40,793	30,750	225,971	NM-RES-CACNSP
118	87.0%	29	30	29	30	29	93%	100%	5,626	\$13,366	5,626	\$13,366	5,626	82,645	NM-RES-CACNSP
119															
120	0.0%	69	90	69	90	69	93%	100%	0.000	\$2,145	0.000	\$2,145	0.000	22,474	NM-RES-SFWHT
121	87.0%	29	38	29	38	29	93%	100%	15,705	\$7,723	15,705	\$7,723	15,705	23,660	NM-RES-CACNSP
122	87.0%	122	161	122	161	122	93%	100%	57,783	\$67,004	57,783	\$67,004	57,783	357,094	NM-RES-CACNSP
123	87.0%	105	138	105	138	105	93%	100%	43,452	\$86,855	43,452	\$86,855	43,452	523,730	NM-RES-CACNSP
124	87.0%	223	294	223	294	223	93%	100%	94,029	\$46,237	94,029	\$46,237	94,029	141,654	NM-RES-CACNSP
125	87.0%	165	217	165	217	165	93%	100%	74,479	\$157,448	74,479	\$157,448	74,479	957,694	NM-RES-CACNSP
126	87.0%	152	200	152	200	152	93%	100%	63,332	\$239,212	63,332	\$239,212	63,332	1,551,422	NM-RES-CACNSP
127	87.0%	243	319	243	319	243	93%	100%	86,247	\$42,410	86,247	\$42,410	86,247	129,930	NM-RES-CACNSP
128	87.0%	113	148	113	148	113	93%	100%	43,661	\$53,219	43,661	\$53,219	43,661	287,950	NM-RES-CACNSP
129	87.0%	211	277	211	277	211	93%	100%	77,704	\$150,822	77,704	\$150,822	77,704	905,096	NM-RES-CACNSP
130	63.8%	0	0	0	0	0	93%	100%	0.000	\$0	0.000	\$0	0.000	0	NM-RES-SFWHT
131															
132	10.2%	284	1,600	284	1,600	284	100%	83%	1,734	\$4,400	1,734	\$4,400	1,734	13,480	NM-RES-SFLIT
133	0.0%	39	217	39	217	39	100%	85%	0.000	\$694	0.000	\$694	0.000	29,196	NM-RES-SFWHT
134	0.0%	39	217	39	217	39	100%	73%	0.000	\$358	0.000	\$358	0.000	2,731	NM-RES-SFWHT
135	0.0%	39	217	39	217	39	100%	65%	0.000	\$115	0.000	\$115	0.000	3,106	NM-RES-SFWHT
136															
137	10.2%	278,710	278,710	0	0	0	71%	100%	634,072	\$220,413	0.000	\$0	0.000	0	NM-RES-SFLIT
138	67.5%	17,790	17,790	0	0	0	71%	100%	252,148	\$14,069	0.000	\$0	0.000	0	NM-BUS-LIGHTING
139	10.2%	25,944	25,944	0	0	0	71%	100%	163,006	\$61,603	0.000	\$0	0.000	0	NM-RES-SFLIT
140	67.5%	1,656	1,656	0	0	0	71%	100%	64,822	\$3,932	0.000	\$0	0.000	0	NM-BUS-LIGHTING
141	10.2%	6,016	6,016	0	0	0	100%	100%	11,665	\$12,032	0.000	\$0	0.000	0	NM-RES-SFLIT
142	82.5%	384	384	0	0	0	100%	100%	5,670	\$768	0.000	\$0	0.000	0	NM-BUS-Light Tube

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

Measure Description			High Efficiency Product Assumptions			Baseline Product Assumptions		
Line No.	Electric Measure Group	Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Product Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Product Baseline Hours of Operation (hrs/yr)
143	Residential Home Lighting - Residential Customers 2021	LED Bulb - A-Line	LED Bulb - A-Line	16	632	EISA Tier 2	43	632
144	Residential Home Lighting - Business Customers 2021	LED Bulb - A-Line	LED Bulb - A-Line	16	3,061	EISA Tier 2	43	3,061
145	Residential Home Lighting - Residential Customers 2021	LED Bulb - Specialty	LED Bulb Purchase - Specialty	13	632	Exempt/Post-EISA	88	632
146	Residential Home Lighting - Business Customers 2021	LED Bulb - Specialty	LED Bulb Purchase - Specialty	13	3,061	Exempt/Post-EISA	88	3,061
147	Residential Home Lighting - Residential Customers 2021	LED Bulb - Linear Tube	LED Bulb Purchase - Type A Linear Tube	21	632	Fluorescent Equivalent	38	632
148	Residential Home Lighting - Business Customers 2021	LED Bulb - Linear Tube	LED Bulb Purchase - Type A Linear Tube	21	3,929	Fluorescent Equivalent	38	3,929
149	Residential Home Lighting - Residential Customers 2022	LED Bulb - A-Line	LED Bulb - A-Line	16	632	EISA Tier 2	43	632
150	Residential Home Lighting - Business Customers 2022	LED Bulb - A-Line	LED Bulb - A-Line	16	3,061	EISA Tier 2	43	3,061
151	Residential Home Lighting - Residential Customers 2022	LED Bulb - Specialty	LED Bulb Purchase - Specialty	13	632	Exempt/Post-EISA	88	632
152	Residential Home Lighting - Business Customers 2022	LED Bulb - Specialty	LED Bulb Purchase - Specialty	13	3,061	Exempt/Post-EISA	88	3,061
153	Residential Home Lighting - Residential Customers 2022	LED Bulb - Linear Tube	LED Bulb Purchase - Type A Linear Tube	21	632	Fluorescent Equivalent	38	632
154	Residential Home Lighting - Business Customers 2022	LED Bulb - Linear Tube	LED Bulb Purchase - Type A Linear Tube	21	3,929	Fluorescent Equivalent	38	3,929
155	Residential Cooling							
156	Premium Evaporative Cooling		Evaporative Cooler 85% effective	800	2,109	13 SEER AC Split System	3,180	1,578
157	Standard Efficiency AC with QI	Non-Qualifying Air Conditioner Equipment with Quality Install	Quality Install of Standard Eff (AC) 3 ton with 14.5 SEER & 12 EER	2,107	1,426	Standard Eff (AC) Unit without Quality Install 3 ton with 13 SEER & 11.2 EER	2,483	1,737
158	Standard Efficiency ASHP with QI	Non-Qualifying Air Source Heat Pump Equipment with Quality Install	Quality Install of Standard Eff (ASHP) 2.7 ton with 14.5 SEER & 12 EER	1,024	2,318	Standard Eff (ASHP) Unit without Quality Install 2.7 ton with 14 SEER & 11.8 EER	1,358	2,823
159	High Efficiency AC Equipment <17 SEER	Qualifying AC Equipment Installation without Quality Install	High Eff (AC) 3.3 ton with 15.7 SEER & 12.6 EER without Quality Install	2,614	1,671	Baseline Eff (AC) Unit 3.3 ton with 13 SEER & 11.18 EER without Quality Install	3,031	1,737
160	High Efficiency AC Quality Install <17 SEER	Qualifying AC Equipment Quality Install	Quality Install of High Eff (AC) 3.3 ton with 15.7 SEER & 12.6 EER	2,123	1,426	High Eff (AC) Unit without Quality Install 3.3 ton with 13 SEER & 11.2 EER	2,515	1,737
161	High Efficiency AC Equipment 17+ SEER	Qualifying AC Equipment Installation without Quality Install	High Eff (AC) 3.1 ton with 19.3 SEER & 14.1 EER without Quality Install	2,163	1,565	Baseline Eff (AC) Unit 3.1 ton with 13 SEER & 11.18 EER without Quality Install	2,885	1,737
162	High Efficiency AC Quality Install 17+ SEER	Qualifying AC Equipment Quality Install	Quality Install of High Eff (AC) 3.1 ton with 19.3 SEER & 14.1 EER	1,615	1,426	High Eff (AC) Unit without Quality Install 3.1 ton with 13 SEER & 11.2 EER	1,948	1,737
163	High Efficiency ASHP Equipment <17 SEER	Qualifying ASHP Equipment Installation without Quality Install	High Eff (ASHP) 2.9 ton with 15.6 SEER & 12.6 EER without Quality Install	2,223	2,782	Baseline Eff (ASHP) Unit 2.9 ton with 14 SEER & 11.76 EER without Quality Install	2,430	2,823
164	High Efficiency ASHP Quality Install <17 SEER	Qualifying ASHP Equipment Quality Install	Quality Install of High Eff (ASHP) 2.9 ton with 15.6 SEER & 12.6 EER	1,026	2,318	High Eff (ASHP) Unit without Quality Install 2.9 ton with 14 SEER & 11.8 EER	1,374	2,823
165	High Efficiency ASHP Equipment 17+ SEER	Qualifying ASHP Equipment Installation without Quality Install	High Eff (ASHP) 3.6 ton with 17.9 SEER & 13.6 EER without Quality Install	2,475	2,830	Baseline Eff (ASHP) Unit 3.6 ton with 14 SEER & 11.76 EER without Quality Install	2,988	2,823
166	High Efficiency ASHP Quality Install 17+ SEER	Qualifying ASHP Equipment Quality Install	Quality Install of High Eff (ASHP) 3.6 ton with 17.9 SEER & 13.6 EER	1,082	2,318	High Eff (ASHP) Unit without Quality Install 3.6 ton with 14 SEER & 11.8 EER	1,478	2,823
167	Mini-Split Heat Pump (16-20 SEER)	Mini-Split Heat Pump (16-20 SEER)	MSHP size 1.2 tons, 18.53 SEER, 11.50 HSPF	1,233	3,312	MSHP size 1.2 tons, 14 SEER, 8.2 HSPF	1,647	3,312
168	Mini-Split Heat Pump (21-26 SEER)	Mini-Split Heat Pump (21-26 SEER)	MSHP size 1.2 tons, 23.19 SEER, 11.50 HSPF	987	2,315	MSHP size 1.2 tons, 14 SEER, 8.2 HSPF	1,647	2,315
169	Programmable T-Stat	Programmable Thermostat - Gas Heat	New Programmable Thermostat for a 3 Ton AC & Gas Furnace	1,797	2,272	Manual Thermostat or Non-programmed programmable thermostat	1,991	2,202
170	Programmable T-Stat	Programmable Thermostat - Heat Pump	New Programmable Thermostat for a new 3.2 Ton Heat Pump	1,867	2,128	Manual Thermostat or Non-programmed programmable thermostat	2,030	2,202
171	Whole House Fan	Whole House Fan	Central AC System supplemented by Whole House Fan	2,363	1,332	Central AC Cooling System	2,363	1,570

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

Economic Assumptions					Stipulated Output							Economic Assumptions				
Line No.	Measure Lifetime (years)	Rebate Amount (\$)	Average Baseline Product Cost (\$)	Incremental Cost of Efficient Product (\$)	Assumed Energy Cost (\$/kWh)	Rebate as a % of Incremental Cost (%)	Incremental Cost Payback Period w/o Rebate (yrs)	Incremental Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / Customer kWh Saved (\$/kWh)	Rebated Lifetime Cost / Customer kWh Saved (\$/kWh)	Customer kWh Savings (kWh)	Generator Peak kW Savings (kW)	Non-Energy O&M Savings (\$)	Energy O&M Savings (\$)	
143	20.00	\$1	\$1	\$1	\$ 0.075	75%	0.8	0.21	17	\$0.05	\$0.00	\$0.00	0.027	0.003	\$0.00	\$0.00
144	12.62	\$1	\$1	\$1	\$ 0.040	75%	0.0	0.00	83	\$0.01	\$0.00	\$0.00	0.027	0.020	\$0.00	\$194.05
145	20.00	\$2	\$3	\$3	\$ 0.075	75%	0.9	0.22	47	\$0.05	\$0.00	\$0.00	0.075	0.009	\$0.00	\$0.00
146	12.62	\$2	\$3	\$3	\$ 0.040	75%	0.0	0.00	228	\$0.01	\$0.00	\$0.00	0.075	0.055	\$0.00	\$535.90
147	20.00	\$2	\$3	\$4	\$ 0.075	49%	5.3	2.75	10	\$0.19	\$0.01	\$0.01	0.016	0.002	\$0.00	\$0.00
148	9.83	\$2	\$3	\$4	\$ 0.040	49%	0.0	0.01	64	\$0.03	\$0.00	\$0.00	0.016	0.015	\$0.00	\$150.75
149	20.00	\$1	\$1	\$1	\$ 0.075	75%	0.8	0.21	17	\$0.05	\$0.00	\$0.00	0.027	0.003	\$0.00	\$0.00
150	12.62	\$1	\$1	\$1	\$ 0.040	75%	0.0	0.00	83	\$0.01	\$0.00	\$0.00	0.027	0.020	\$0.00	\$194.05
151	20.00	\$2	\$3	\$3	\$ 0.075	75%	0.9	0.22	47	\$0.05	\$0.00	\$0.00	0.075	0.009	\$0.00	\$0.00
152	12.62	\$2	\$3	\$3	\$ 0.040	75%	0.0	0.00	228	\$0.01	\$0.00	\$0.00	0.075	0.055	\$0.00	\$535.90
153	20.00	\$2	\$3	\$4	\$ 0.075	49%	5.3	2.75	10	\$0.19	\$0.01	\$0.01	0.016	0.002	\$0.00	\$0.00
154	9.83	\$2	\$3	\$4	\$ 0.040	49%	0.0	0.01	64	\$0.03	\$0.00	\$0.00	0.016	0.015	\$0.00	\$150.75
155																
156	15.00	\$700	\$2,587	\$0	\$ 0.075	#DIV/0!	0.0	-2.92	3,332	\$0.21	\$0.01	\$0.01	2,380	2,777	-\$9.08	\$0.00
157	18.00	\$0	\$0	\$156	\$ 0.075	0%	1.6	1.60	1,308	\$0.00	\$0.00	\$0.00	0.376	0.382	\$0.00	\$0.00
158	18.00	\$0	\$0	\$156	\$ 0.075	0%	1.4	1.43	1,460	\$0.00	\$0.00	\$0.00	0.334	0.339	\$0.00	\$0.00
159	18.00	\$100	\$0	\$391	\$ 0.075	26%	5.8	4.34	896	\$0.11	\$0.01	\$0.01	0.417	0.423	\$0.00	\$0.00
160	18.00	\$0	\$0	\$156	\$ 0.075	0%	1.6	1.56	1,340	\$0.00	\$0.00	\$0.00	0.392	0.398	\$0.00	\$0.00
161	18.00	\$200	\$0	\$1,116	\$ 0.075	18%	9.2	7.53	1,627	\$0.12	\$0.01	\$0.01	0.722	0.733	\$0.00	\$0.00
162	18.00	\$0	\$0	\$156	\$ 0.075	0%	1.9	1.93	1,081	\$0.00	\$0.00	\$0.00	0.333	0.338	\$0.00	\$0.00
163	15.00	\$150	\$0	\$494	\$ 0.075	30%	9.8	6.81	677	\$0.22	\$0.01	\$0.01	0.208	0.211	\$0.00	\$0.00
164	15.00	\$0	\$0	\$156	\$ 0.075	0%	1.4	1.39	1,499	\$0.00	\$0.00	\$0.00	0.347	0.353	\$0.00	\$0.00
165	15.00	\$300	\$0	\$1,891	\$ 0.075	16%	17.7	14.91	1,428	\$0.21	\$0.01	\$0.01	0.512	0.520	\$0.00	\$0.00
166	15.00	\$0	\$0	\$156	\$ 0.075	0%	1.3	1.26	1,663	\$0.00	\$0.00	\$0.00	0.396	0.402	\$0.00	\$0.00
167	18.00	\$160	\$3,303	\$375	\$ 0.075	43%	3.7	2.10	1,372	\$0.12	\$0.01	\$0.01	0.414	0.367	\$0.00	\$0.00
168	18.00	\$190	\$3,536	\$608	\$ 0.075	31%	5.3	3.66	1,529	\$0.12	\$0.01	\$0.01	0.660	0.586	\$0.00	\$0.00
169	10.00	\$30	\$0	\$30	\$ 0.075	100%	0.3	0.00	302	\$0.10	\$0.01	\$0.01	0.194	0.226	\$0.00	\$91.44
170	10.00	\$30	\$0	\$30	\$ 0.075	100%	0.8	0.00	498	\$0.06	\$0.01	\$0.01	0.163	0.191	\$0.00	\$0.00
171	20.00	\$100	\$0	\$600	\$ 0.075	17%	14.3	11.89	562	\$0.18	\$0.01	\$0.01	0.000	0.000	\$0.00	\$0.00

Southwestern Public Service Company

Electronic Product Detailed Technical Assumptions

Line No.	Technical Assumption	2020		2021		2022		Installation Rate (%)	Realization Rate (%)	2020		2021		2022		Measure
		Participants (-)	Units (-)	Participants (-)	Units (-)	Participants (-)	Units (-)			2020 NET Gen kW (kW)	2020 Rebate Budget (\$)	2021 NET Gen kW (kW)	2021 Rebate Budget (\$)	2022 NET Gen kW (kW)	2022 Rebate Budget (\$)	
143	Coincidence Factor (%)	0	0	271,378	271,378	0	0	100%	100%	0.000	\$0	617,392	\$214,614	0.000	\$0	NM-RES-SPLIT
144	67.5%	0	0	17,322	17,322	0	0	100%	100%	0.000	\$0	245,514	\$13,699	0.000	\$0	NM-BUS-LIGHTING
145	10.2%	0	0	25,615	25,615	0	0	100%	100%	0.000	\$0	160,939	\$60,822	0.000	\$0	NM-RES-SPLIT
146	67.5%	0	0	1,635	1,635	0	0	100%	100%	0.000	\$0	64,000	\$3,882	0.000	\$0	NM-BUS-LIGHTING
147	10.2%	0	0	6,204	6,204	0	0	100%	100%	0.000	\$0	12,030	\$12,408	0.000	\$0	NM-RES-SPLIT
148	82.5%	0	0	396	396	0	0	100%	100%	0.000	\$0	5,847	\$792	0.000	\$0	NM-BUS-Light Tube
149	10.2%	0	0	0	0	259,064	259,064	100%	100%	0.000	\$0	0.000	\$0	589,377	\$204,876	NM-RES-SPLIT
150	67.5%	0	0	0	0	16,536	16,536	100%	100%	0.000	\$0	0.000	\$0	234,374	\$13,077	NM-BUS-LIGHTING
151	10.2%	0	0	0	0	25,098	25,098	100%	100%	0.000	\$0	0.000	\$0	157,691	\$59,594	NM-RES-SPLIT
152	67.5%	0	0	0	0	1,602	1,602	100%	100%	0.000	\$0	0.000	\$0	62,708	\$3,804	NM-BUS-LIGHTING
153	10.2%	0	0	0	0	6,486	6,486	100%	100%	0.000	\$0	0.000	\$0	12,577	\$12,972	NM-RES-SPLIT
154	82.5%	0	0	0	0	414	414	100%	100%	0.000	\$0	0.000	\$0	6,113	\$828	NM-BUS-Light Tube
155																
156	100.0%	1	2	1	2	1	2	100%	100%	3.666	\$1,400	3.666	\$1,400	4.964	\$1,400	NM-RES-EVAPBASE
157	87.0%	0	1	0	1	0	1	100%	100%	0.252	\$0	0.252	\$0	974	\$0	NM-RES-COOLING_DX
158	87.0%	0	1	0	1	0	1	100%	100%	0.224	\$0	0.224	\$0	1.088	\$0	NM-RES-Cooling_DX_Heating_DX
159	87.0%	9	21	9	21	9	21	100%	100%	5.866	\$2,100	5.866	\$2,100	14,019	\$2,100	NM-RES-COOLING_DX
160	87.0%	9	21	9	21	9	21	100%	100%	5.511	\$0	5.511	\$0	20,970	\$0	NM-RES-COOLING_DX
161	87.0%	2	4	2	4	2	4	100%	100%	1.935	\$800	1.935	\$800	4,848	\$800	NM-RES-COOLING_DX
162	87.0%	2	4	2	4	2	4	100%	100%	0.892	\$0	0.892	\$0	3,220	\$0	NM-RES-COOLING_DX
163	87.0%	5	12	5	12	5	12	100%	100%	1.669	\$1,800	1.669	\$1,800	6,052	\$1,800	NM-RES-Cooling_DX_Heating_DX
164	87.0%	5	12	5	12	5	12	100%	100%	2.793	\$0	2.793	\$0	13,403	\$0	NM-RES-Cooling_DX_Heating_DX
165	87.0%	3	7	3	7	3	7	100%	100%	2.402	\$2,100	2.402	\$2,100	7,446	\$2,100	NM-RES-Cooling_DX_Heating_DX
166	87.0%	3	7	3	7	3	7	100%	100%	1.855	\$0	1.855	\$0	8,674	\$0	NM-RES-Cooling_DX_Heating_DX
167	76.0%	1	3	1	3	1	3	100%	100%	0.727	\$480	0.727	\$480	3,067	\$480	NM-RES-Cooling_DX_Heating_DX
168	76.0%	0	1	0	1	0	1	100%	100%	0.387	\$190	0.387	\$190	1,139	\$190	NM-RES-Cooling_DX_Heating_DX
169	100.0%	0	1	0	1	0	1	100%	100%	0.149	\$30	0.149	\$30	225	\$30	NM-RES-CACNSP
170	100.0%	56	138	56	138	56	138	100%	100%	17.362	\$4,140	17.362	\$4,140	51,196	\$4,140	NM-RES-CACNSP
171	0.0%	0	0	0	0	0	0	100%	100%	0.000	\$0	0.000	\$0	0	\$0	NM-RES-CACNSP

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

Measure Description			High Efficiency Product Assumptions			Baseline Product Assumptions		
Line No.	Electric Measure Group	Electric Measure Description	Efficient Product Description / Rating	Efficient Product Consumption (watts)	Efficient Hours of Operation (hrs/yr)	Baseline Product Description / Rating	Baseline Product Consumption (watts)	Baseline Hours of Operation (hrs/yr)
School Education Kits								
172	LED	9 Watt LED	9 W LED	9	818	Incandescent Equivalent (Post-EISA)	20	818
173	Showerhead	Showerhead	Low Flow Shower head - 1.5 GPM	4,500	704	Federal Minimum Standard flow rate 2.5 GPM	4,500	739
175	Aerators - Kitchen	Aerators - Kitchen	1.5 GPM flow rate aerator	4,500	736	Federal Minimum Standard flow rate 2.2 GPM	4,500	739
176	Aerators - Bathroom	Aerators - Bathroom	0.5 GPM flow rate aerator	4,500	733	Federal Minimum Standard flow rate 2.2 GPM	4,500	739
Smart Thermostats								
177	EnergyStar Smart Thermostat	Install EnergyStar Certified Smart Thermostat	Single family house with EnergyStar Smart Thermostat	2,016	5,424	Single family house with manual or programmable thermostat	2,177	5,424
178	EnergyStar Smart Thermostat	Residential Smart Thermostat DR	Utility Load Control for control period with Energy Star Thermostat	0	1	Non-Controlled Energy Star Smart Thermostat	3,108	1
179	NM- Smart Thermostat - DR - Prior Enrollments	Energy Star Thermostat installed in 2016	Single family house with EnergyStar Smart Thermostat	2,354	4,815	Single family house with manual or programmable thermostat	2,177	5,424
180	EnergyStar Smart Thermostat							

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

	Economic Assumptions				Stipulated Output								Economic Assumptions				
	Line No.	Measure Lifetime (years)	Rebate Amount (\$)	Average Baseline Product Cost (\$)	Incremental Cost of Efficient Product (\$)	Assumed Energy Cost (\$/kWh)	Rebate as a % of Incremental Cost (%)	Increment'l Cost Payback Period w/o Rebate (yrs)	Increment'l Cost Payback Period w/ Rebate (yrs)	Annual Customer kWh Savings (kWh/yr)	Rebated Cost / kWh Saved (\$/kWh)	Rebated Lifetime cost/ kWh Saved (\$/kWh)	Customer kW Savings (kWh)	Generator Peak kW Savings (kWh)	Non-Energy O&M Savings (\$)	Energy O&M Savings (\$)	
	172	173	20.00	\$3	\$0	\$3	\$ 0.075	100%	4.1	0.00	9	\$0.31	\$0.02	0.011	0.001	\$0.00	\$0.00
	173	174	10.00	\$3	\$0	\$3	\$ 0.075	100%	0.1	0.00	156	\$0.02	\$0.00	0.000	0.000	\$13.34	\$0.00
	175	175	10.00	\$1	\$0	\$1	\$ 0.075	100%	0.4	0.00	15	\$0.08	\$0.01	0.000	0.000	\$1.88	\$0.00
	176	176	10.00	\$0	\$0	\$0	\$ 0.075	100%	0.1	0.00	28	\$0.02	\$0.00	0.000	0.000	\$4.56	\$0.00
	177																
	178	10.00	\$50	\$0	\$175	\$ 0.075	29%	2.4	1.69	873	\$0.06	\$0.01	0.161	0.000	\$0.00	\$8.71	
	179	1.00	\$0	\$0	\$0	\$ 0.075	#DIV/0!	0.0	0.00	2	\$0.00	\$0.00	3.108	1.727	\$0.00	\$0.00	
	180	6.00	\$0	\$0	\$0	\$ 0.075	#DIV/0!	0.0	0.00	472	\$0.00	\$0.00	-0.177	-0.120	\$0.00	\$0.00	

Southwestern Public Service Company
Electronic Product Detailed Technical Assumptions

Line No.	Technical Assumption	2020		2021		2022		Installation Rate (%)	Realization Rate (%)	2020			2021			2022			Measure Load Shape
		Participants	Units (-)	Participants	Units (-)	Participants	Units (-)			2020 NET Gen kW (kW)	2020 NET Gen kWh (kWh)	2020 Rebate Budget (\$)	2021 NET Gen kW (kW)	2021 NET Gen kWh (kWh)	2021 Rebate Budget (\$)	2022 NET Gen kW (kW)	2022 NET Gen kWh (kWh)	2022 Rebate Budget (\$)	
172	Line Coincidence Factor (%)																		
173	10.2%	1,429	10,000	1,429	10,000	1,429	10,000	93%	100%	12,140	94,402	\$27,500	12,140	94,402	\$27,500	12,140	94,402	\$27,500	NM-RES-SPLIT
174	0.0%	357	2,500	357	2,500	357	2,500	60%	100%	0.000	263,809	\$8,060	0.000	263,809	\$8,060	0.000	263,809	\$8,060	NM-RES-SFWHT
175	0.0%	357	2,500	357	2,500	357	2,500	55%	100%	0.000	23,705	\$3,039	0.000	23,705	\$3,039	0.000	23,705	\$3,039	NM-RES-SFWHT
176	0.0%	357	2,500	357	2,500	357	2,500	55%	100%	0.000	42,889	\$1,210	0.000	42,889	\$1,210	0.000	42,889	\$1,210	NM-RES-SFWHT
177																			
178	0.0%	750	750	800	800	850	850	100%	100%	0.000	739,361	\$37,500	0.000	788,652	\$40,000	0.000	837,943	\$42,500	NM-RES-Cooling_DX_Heating_DX
179	47.6%	561	0	496	0	438	0	100%	100%	0.000	0	\$0	0.000	0	\$0	0.000	0	\$0	NM-RES-PEAK_CNT
180	58.3%	360	360	0	0	0	0	100%	100%	-43,347	191,959	\$0	0.000	0	\$0	0.000	0	\$0	NM-RES-Cooling_DX_Heating_DX

Electric Load Shape Documentation

The following section documents the load shapes applied to electric DSM measures in this plan. These load shapes are scaled to the annual energy savings for each measure, and then applied to the hourly marginal energy price estimates to determine the avoided marginal energy benefit for each measure.

Load Shape	Description	Measures Applied To
NM-BUS-COOL_OUT	Operation of cooling equipment in business sites	Various cooling measures in the Cooling Efficiency product without economizers
NM-BUS-CUSTOM_	Operation of measures in past custom projects	Various miscellaneous measures across a few products (aerators/sprayers in business products, TV timer turning off peripherals) and custom measures* within the Custom product.
NM-BUS-FLAT	Flat load shape	Various measures in the Business program that run flat throughout the year
NM-BUS-FOODSVC	Operation of commercial kitchen equipment	Various measures related to food preparation including commercial dishwashers and food holding cabinets
NM-BUS-Light All	Blend of lighting loadshape across all building types	Custom Lighting* and bulbs purchased through Residential Home Lighting program installed at businesses
NM-BUS-Light Flat	Flat load shape	Exit signs, stairwell fixtures and parking garage lighting
NM-BUS-Light High Bay	Blend of lighting loadshape across all building types weighted on installation of high bay lamps and fixtures	High Bay lamps and fixtures
NM-BUS-Light Refrigerated	Blend of lighting loadshape across all building types weighted on installation of lighting in refrigeration applications	LED Refrigerator and Freezer Cases
NM-BUS-Light Screw In	Blend of lighting loadshape across all building types weighted on installation of screw-in bulbs	LED Midstream Interior Lamps
NM-BUS-Light Troffer	Blend of lighting loadshape across all building types weighted on installation of lighting troffers	LED troffer fixtures and lamps
NM-BUS-Light Tube	Blend of lighting loadshape across all building types weighted on installation of lighting tubes	LED tube lamps
NM-BUS-LIGHTING	Operation of general lighting technologies in business sites	Misc. lighting measures in a couple products and measures that operate in lighted area and will be operated at the same time as the lighting (aerators, dishwashers)
NM-BUS-Light-Network-Controls	Hourly savings of lighting under network control at a business site	Networked lighting controls
NM-BUS-Light-Sensor	Hourly savings of lighting under sensor control at a business site	Standalone Controls
NM-BUS-MOTORS	Operation of motors in business sites	Variable frequency drives (VFDs) and upgraded motors in the Motors product
NM-BUS-MTRS_OUT	Operation of motors in business sites	Variable frequency drives (VFDs) and upgraded motors in the Custom Efficiency product
NM-BUS-RECM_OUT	Hourly savings of recommissioning projects at a business site	Impact of recommissioning studies and area lighting measures that have the same usage pattern as recommissioning hourly savings
NM-RES-CACNSP	Operation of cooling and electric heating at residential sites	Envelope measures for residential customers with electric cooling, electric heating, and heat pump heating
NM-RES-COOLING_DX	Operation of cooling at residential sites	Electric cooling equipment and installation measures
NM-RES-Cooling_DX_Heating_DX	Operation of cooling and electric heating at residential sites	Electric cooling equipment and heat pump installation measures
NM-RES-EVAPBASE	Hourly savings of evaporative cooling replacing air conditioning at a residential site	Evaporative cooling measures replacing air-conditioning
NM-RES-PEAK_CNT	Hourly savings and load increase from a peak control product	Measures for prior enrollments in demand response programs including Smart Thermostats
NM-RES-SFLIT	Operation of lighting at single-family residential sites	Various LED bulb measures and clothes washer measures
NM-RES-SFWHT	Operation of electric water heaters at residential sites	Showerhead and aerator measures as well as electric water heating equipment in various products

*Projects including measures using this shape will be run through a custom analysis during which hourly load shapes will be determined.