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AEP Texas Inc.

2020 Energy Efficiency Plan and Report

16 Tex. Admin. Code §§ 25.181, 28.182 and 25.183

April 1, 2020

Project No. 50666

AEP TEXAS℠

An AEP Company

BOUNDLESS ENERGY℠

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INTRODUCTION

AEP Texas Inc. (AEP Texas or Company) presents this Energy Efficiency Plan and Report (EEPR) to comply with Public Utility Commission of Texas (PUC or Commission) 16 Tex. Admin. Code §§ 25.181, 25.182 and 25.183 (TAC) (EE Rule), which implement the Public Utility Regulatory Act (PURA) § 39.905. Effective December 31, 2016, AEP Texas Central Company (TCC) and AEP Texas North Company (TNC) were merged into their parent company, now called AEP Texas. The merger was approved by the Commission in Docket No. 46050 – *Application of AEP Texas Central Company, AEP Texas North Company, and AEP Utilities, Inc. for Approval of Merger.* The Commission ordered AEP Texas to "maintain separate TCC and TNC divisions, which will continue to charge separate rates and riders, and maintain separate tariffs, unless and until such time as the Commission may consider and approve consolidated rates and tariffs."[1] Consistent with the Commission's order, AEP Texas was maintaining two divisions within AEP Texas: AEP Texas – Central Division (formerly TCC) and AEP Texas – North Division (formerly TNC). Therefore, this EEPR filing for AEP Texas presents separate sets of historical information for the two divisions of AEP Texas. However, in its upcoming Energy Efficiency Cost Recovery Factor (EECRF) proceeding at the Commission, AEP Texas intends to request a combined EECRF for the two divisions of AEP Texas beginning in 2021.

As mandated by PURA § 39.905, the EE Rule requires that each investor-owned electric transmission and distribution utility (TDU) achieve the following demand reduction goals through market-based standard offer programs (SOPs) and targeted market transformation programs (MTPs). 16 TAC § 25.181(e)(1) provides in pertinent part as follows:

(e)(1) An electric utility shall administer a portfolio of energy efficiency programs to acquire, at a minimum, the following:

(A) Beginning with the 2013 program year, until the trigger described in subparagraph (B) of this paragraph is reached, the utility shall acquire a 30% reduction of its annual growth in demand of residential and commercial customers.

(B) If the demand reduction goal to be acquired by a utility under subparagraph (A) of this paragraph is equivalent to at least four-tenths of 1% its summer weather-adjusted peak demand for the combined residential and commercial customers for the previous program year, the utility shall meet the energy efficiency goal described in subparagraph (C) of this paragraph for each subsequent program year.

(C) Once the trigger described in subparagraph (B) of this paragraph is reached, the utility shall acquire four-tenths of 1% of its summer weather-adjusted peak demand for the combined residential and commercial customers for the previous program year.

[1] Docket No. 46050, *Application of AEP Texas Central Company, AEP Texas North Company, and AEP Utilities, Inc. for Approval of Merger,* Final Order at Ordering Paragraph No. 2 (Dec. 12, 2016).

(D) Except as adjusted in accordance with subsection (u) of this section, a utility's demand reduction goal in any year shall not be lower than its goal for the prior year, unless the commission establishes a goal for a utility pursuant to paragraph (2) of this subsection.

The EE Rule includes specific requirements related to the implementation of SOPs and MTPs that control the manner in which TDUs must administer their portfolio of energy efficiency programs in order to achieve their mandated annual demand reduction goals. AEP Texas' plans enable it to meet its statutory goals through implementation of energy efficiency programs in a manner that complies with PURA § 39.905 and the EE Rule. This EEPR covers the periods of time required in the EE Rule. The following section describes the information that is contained in each of the subsequent sections and appendices.

EEPR ORGANIZATION

This EEPR consists of an Executive Summary, thirteen sections, a list of acronyms, and three appendices.

Executive Summary

- Summarizes AEP Texas' plans for achieving its goals and projected energy efficiency savings for program years 2020 and 2021 and highlights AEP Texas' achievements for Program Year (PY) 2019.

Energy Efficiency Plan

- Section I describes the program portfolio. It details how programs will be implemented, presents related informational and outreach activities, and provides an introduction to any programs not included in the 2019 EEPR.
- Section II explains the targeted customer classes, describes the estimated size of each class and the method of determining those class sizes.
- Section III presents the energy and demand goals and projected savings for the prescribed planning period detailed by program for each customer class.
- Section IV describes the proposed energy efficiency budgets for the prescribed planning period detailed by program for each customer class.

Energy Efficiency Report

- Section V documents the demand reduction goal for each of the previous five years (2015-2019) based on its weather-adjusted peak demand and actual savings achieved for those years.
- Section VI compares the projected energy and demand savings to its reported and verified savings by program for PY 2018 and 2019.
- Section VII details the incentive and administration expenditures for each of the previous five years (2015-2019) detailed by program for each customer class.
- Section VIII compares the actual 2019 expenditures with the 2019 budget by program for each customer class. It also explains any cost differences of more than 10% from the overall program budget and from each program budget.

- Section IX describes the results from the MTPs.
- Section X describes Administrative costs and Research and Development activities.
- Section XI documents the 2020 EECRF.
- Section XII documents the 2019 EECRF Summary.
- Section XIII documents the Underserved Counties.

Acronyms

- A list of abbreviations for common terms used within this document.

Appendices

- Appendix A – Reported and verified demand and energy reductions by county for each program.
- Appendix B – Program templates for any new or significantly modified programs and programs not included in the previous EEPR.
- Appendix C – Data, explanations, or documents supporting other sections of the EEPR.

EXECUTIVE SUMMARY – ENERGY EFFICIENCY PLAN (PLAN)

AEP Texas makes this filing which includes information for the Central Division and North Division. Required details such as goals, budgets, program results, etc. will be provided for the Central and North divisions separately throughout this EEPR for 2020. Required details for 2021 are presented combined for AEP Texas.

The Central Division plans to achieve its 2020 mandated demand and energy goals of 16,380 kW and 28,698,000 kWh as shown in Table 1 below through residential and non-residential SOPs and MTPs. The Central Division will utilize a budget of $14,574,615 to accomplish these goals.

The North Division plans to achieve its 2020 mandated demand and energy goals of 4,260 kW and 7,464,000 kWh as shown in Table 1 below through residential and non-residential SOPs and MTPs. The North Division will utilize a budget of $3,388,642 to accomplish these goals.

Table 1: Summary of Goals, Projected Savings (at the Meter),[2] and Budgets

	Calendar Year	Average Peak Demand at Meter (MW)	Goal Metric: 0.4% Peak Demand (MW)	Peak Demand Goal (MW)	Energy Goal (MWh)	Projected Demand Reduction (MW)	Projected Energy Savings (MWh)	Projected Budget (000's)*
Central	2020	4,095	16 38	16 38	28,698	37 69	51,921	$14,575
North	2020	1,018	4 07	4 26	7,464	5 27	10,997	$3,389
AEP Texas	2021	5,150	20 60	20.60	36,091	42 96	62,918	$17,960

* The Projected Budgets include costs associated with Evaluation, Measurement &Verification activities.

EXECUTIVE SUMMARY – ENERGY EFFICIENCY REPORT (REPORT)

The Central Division achieved demand and energy reductions of 39,671 kW and 58,366,316 kWh, respectively, in 2019. The total energy efficiency cost for achieving these savings was $14,032,803. The Central Division's achievement exceeded the 2019 mandated energy efficiency goals of 16,140 kW and 28,277,000 kWh.

The North Division achieved demand and energy reductions of 6,636 kW and 12,223,046 kWh, respectively, in 2019. The total energy efficiency cost for achieving these savings was $3,236,930. The North Division's achievement exceeded the 2019 mandated energy efficiency goals of 4,260 kW and 7,464,000 kWh.

A broad portfolio of residential and non-residential SOPs and MTPs was used to accomplish these savings.

[2] Average Peak Demand figures are from Tables 4 and 5; Projected Savings from Tables 6 and 7; Projected Budgets from Tables 8-10.

ENERGY EFFICIENCY PLAN

I. 2020 Programs

A. 2020 Program Portfolio

AEP Texas has implemented a variety of programs in 2020 to enable it to meet its goals in a manner that complies with PURA § 39.905 and the EE Rule. These programs target broad market segments and specific market sub-segments with significant opportunities for cost-effective energy savings.

Table 2 summarizes the programs and targeted customer class markets for Program Year 2020. The programs listed in Table 2 are described in further detail in Subsection B. AEP Texas maintains a web site containing information on participation, forms required for project submission, and program manuals at www.AEPTexasEfficiency.com. This site is the primary method of communication used to provide program updates and information to Retail Electric Providers (REPs), potential Energy Efficiency Service Providers (EESPs), and other interested parties.

Implementation Process

MTPs are implemented by third-party implementers. These implementers design, market and execute the applicable MTPs. Based on the specific MTP, the implementer may perform outreach activities to recruit local contractors and provide participating contractors specialized education, training/certification and tools as necessary. Implementers validate proposed measures/projects, perform quality assurance/quality control, and verify and report savings derived from the program.

SOPs are managed in-house with project sponsors providing eligible program measures. Project sponsors are typically EESPs; however, for commercial projects an AEP Texas end-use customer may serve as its own project sponsor. Eligible project sponsors can submit an application(s) for project(s) meeting the minimum SOP requirements.

AEP Texas monitors projects being submitted so as to not accept duplicate enrollments for the same measures in multiple programs.

Outreach Activities

- Promote internet web sites with program information including project eligibility, end-use measures, incentives, procedures, application forms, and in some cases a list of participating project sponsors and the available program budget;
- Utilize mass e-mail notifications to inform and update potential project sponsors on AEP Texas energy efficiency program opportunities;
- Conduct workshops as necessary to explain program elements such as responsibilities of the project participants, program requirements, incentive information and the application and reporting process;
- Conduct specific project sponsor/contractor training sessions as necessary based on the energy efficiency programs being implemented;
- Participate in local, regional, state-wide, and industry-related outreach activities as may be necessary; and
- Facilitate earned media opportunities, spotlighting successful projects and/or interesting stories as applicable.

Table 2: 2020 Energy Efficiency Program Portfolio

Program	Division	Target Market	Application
Commercial Solutions MTP	Central & North	Commercial	Retrofit & New Construction
Commercial SOP	Central & North	Commercial	Retrofit & New Construction
CoolSaver℠ A/C Tune-Up MTP	Central	Commercial & Residential	Retrofit
Hard-to-Reach SOP	Central & North	Residential Hard-to-Reach	Retrofit & New Construction
High-Performance New Homes MTP	Central	Residential	New Construction
Load Management SOP	Central & North	Commercial	Retrofit
Open MTP	Central & North	Commercial	Retrofit
Residential Pool Pump Pilot MTP	Central	Residential	Retrofit & New Construction
Residential SOP	Central & North	Residential	Retrofit & New Construction
SCORE/CitySmart MTP	Central & North	Commercial	Retrofit & New Construction
SMART Source℠ Solar PV MTP	Central & North	Commercial and Residential	Retrofit & New Construction
Targeted Low-Income Energy Efficiency Program	Central & North	Low-Income Residential	Retrofit

B. Existing Programs

Commercial Solutions Market Transformation Program (CS MTP)

The CS MTP targets commercial customers (other than governmental and educational entities) that do not have the in-house expertise to: 1) identify, evaluate, and undertake energy efficiency improvements; 2) properly evaluate energy efficiency proposals from vendors; and/or 3) understand how to leverage their energy savings to finance projects. Incentives are paid to customers for eligible energy efficiency measures that are installed in new or retrofit applications that result in verifiable demand and energy savings.

Commercial Standard Offer Program (CSOP)

The CSOP targets commercial customers of all sizes. Variable incentives are available to project sponsors based upon verified demand and energy savings for eligible measures installed in new or retrofit applications.

CoolSaver^{SM} A/C Tune-Up Market Transformation Program (CoolSaver^{SM} MTP) (Central Division)

The CoolSaver^{SM} MTP is designed to overcome market barriers that prevent residential and small commercial customers from receiving high performance air conditioning (A/C) system tune-ups. The program works through local A/C networks to offer key program components, including:

- Training and certifying A/C technicians on the tune-up and air flow correction services and protocols.
- Paying incentives to A/C contactors for the successful implementation of A/C tune-up and air flow correction services.
- Paying incentives to A/C contractors who replace existing residential air conditioners and/or heat pumps with new high efficiency units of 16 SEER or higher. Additional incentives are paid for early retirement of operational equipment and for "right-sizing" replacement units.

Hard-to-Reach Standard Offer Program (HTR SOP)

The HTR SOP targets residential customers with total annual household incomes at or below 200% of current federal poverty guidelines. Incentives are paid to project sponsors for eligible measures installed in new and retrofit applications that result in verifiable demand and energy savings. Project

comprehensiveness is encouraged and customer education materials regarding energy conservation behavior are distributed by project sponsors.

High-Performance New Homes Market Transformation Program (New Homes MTP) (Central Division)

The New Homes MTP targets several market participants, primarily homebuilders and consumers. The program's goal is to create conditions in which consumers demand energy-efficient homes, and homebuilders supply them. Incentives are paid to homebuilders who construct homes to strict energy-efficient building guidelines and that are at least 5% above the Texas Baseline Reference Home and meet all minimum energy code requirements. The program has a tiered design that uses a combination of mandatory, additional elective, and innovative measures to promote market transformation and drive deep energy savings. ENERGY STAR® and complete foam encapsulated homes are offered as alternative pathways to Tiers. Bonus incentives are offered for installed ENERGY STAR connected thermostats and to builders who switch from electric resistance furnaces to heat pumps. Each home results in verifiable demand and energy savings. In addition to homebuilder and consumer outreach, the New Homes MTP targets key market actors in the homebuilding production and sales cycle: home energy raters, homebuilder sales agents, real estate agents, HVAC contractors, mortgage lenders, product manufacturers, homebuilder associations, and media outlets.

Load Management Standard Offer Program (LM SOP)

The LM SOP targets commercial customers with a peak electric demand of 500 kW or more; but any non-residential customer that can deliver at least 50 kW of peak demand savings is eligible to participate. Incentive payments are based on measured and verified demand reduction of curtailed loads during the summer peak period. Load management events are dispatched by AEP Texas, using a one-hour-ahead notice for load reduction periods of one to four hours duration.

Open Market Transformation Program (Open MTP)

The Open MTP targets traditionally underserved small commercial customers who may not employ knowledgeable personnel with a focus on energy efficiency, who are limited in the ability to implement energy efficiency measures, and/or who typically do not actively seek the help of a professional EESP. Small commercial customers with a peak demand not exceeding 150 kW in the previous twelve consecutive billing months may qualify to participate in the program. Available incentives are paid directly to the contractor, thereby reducing a portion of the project cost for the customer.

The program is intended to overcome market barriers for participating contractors by providing technical support and incentives to implement energy efficiency upgrades and produce demand and energy savings.

Residential Standard Offer Program (RSOP)

The RSOP targets all residential customers, paying incentives to project sponsors for eligible measures installed in new and retrofit applications that result in verified demand and energy savings. Project comprehensiveness is encouraged. The following requirements must be reported in order to claim early retirement savings from residential HVAC projects:

- Photograph demonstrating functionality of the existing unit;
- The age of the existing unit;
- Photo of the existing unit nameplate;
- Model number, serial number, manufacturer and cooling capacity of the existing unit;
- The sizing of the new unit must be less than or equal to that of the existing unit; and
- Customer responses to a survey questionnaire documenting the condition of the existing unit and customer motivation for unit replacement.

Residential Pool Pump Pilot Market Transformation Program (MTP) (Central Division)

The Residential Pool Pump Pilot MTP provides incentives to pool pump distributors for the installation of high-efficiency ENERGY STAR® certified variable speed pool pumps in new and existing single-family properties. Compared to conventional pool pumps that use the same high pump speed regardless of the task assigned, a variable speed pump can significantly reduce the energy required and financial cost associated with the filtration, cleaning and circulation of

swimming pool water. Variable speed pumps also provide for greater operational flexibility, quieter operation and a significantly longer useful life.

SCORE/CitySmart Market Transformation Program (SCORE/CS MTP)

The SCORE/CS MTP provides energy efficiency and demand reduction solutions for public and private educational entities grades K-12 as well as colleges and universities. In addition to educational facilities, SCORE/CS MTP provides these same solutions to local, state, county and federal government customers. This program is designed to help educate and assist these customers in lowering their energy use by facilitating the integration of energy efficiency into their short- and long-term planning, budgeting, and operational practices. Incentives are paid to participating customers for eligible energy efficiency measures that are installed in new or retrofit applications that result in verifiable demand and energy savings.

SMART Source℠ Solar PV Market Transformation Program (PV MTP)

The PV MTP offers incentives to residential and commercial customers for the installation of solar photovoltaic (PV) systems interconnected on the customer's side of the meter. The incentives help offset the initial costs of installing solar PV systems, and encourage service providers to seek more installation opportunities. In addition to demand and energy savings achieved from the installations, the PV MTP aims to transform the solar PV market by increasing the number of qualified technicians and installers and decreasing the average installed cost of PV systems, thereby creating greater market economies of scale.

Targeted Low-Income Energy Efficiency Program (TLIP)

The TLIP is designed to cost-effectively reduce the energy consumption and energy costs for low-income residential customers in the AEP Texas service territory. Weatherization service providers install eligible weatherization and energy efficiency measures in qualified households that meet the Department of Energy (DOE) income-eligibility guidelines of at or below 200% of the federal poverty guidelines. A Savings-to-Investment Ratio of 1.0 or higher is required of each serviced dwelling unit.

C. New Programs for 2020

There are no new programs for 2020.

D. Discontinued Programs

The Residential Pool Pump Pilot Market Transformation Program in the North Division was discontinued for 2020.

II. Customer Classes

The AEP Texas energy efficiency programs target its Residential and Commercial customer classes. The programs also target customer sub-classes, such as Residential Hard-to-Reach and Low-Income, Schools, Small Businesses, and Local Governments.

The annual projected savings targets are allocated among these customer classes and sub-classes by examining historical program results and by evaluating economic trends, in compliance with 16 TAC § 25.181(e)(3).

Table 3 summarizes the number of customers in each customer class and the Residential Hard-to-Reach sub-class. The numbers listed are the actual number of active electric service accounts by class served for the month of January 2020. These numbers were used to determine goal and budget allocations for each customer class and program. It should be noted, however, that the actual distribution of the annual goal and budget required to achieve the goal must remain flexible based upon the conditions of the marketplace, the potential interest a customer class may have in a specific program, and the overriding objective of meeting the mandated demand and energy reduction goals in total. AEP Texas offers a varied portfolio of SOPs and MTPs such that all eligible customer classes have access to energy efficiency alternatives.

Table 3: Summary of Customer Classes

	Customer Class	Number of Customers
Central	Commercial	154,215
	Residential	783,190
	Hard-to-Reach [3]	259,236
North	Commercial	36,481
	Residential	159,429
	Hard-to-Reach [3]	52,771

* Hard-to-Reach customer count is a sub-set of the Residential total.

[3] According to the U.S. Census Bureau's 2018 Current Population Survey, 33.1% of Texas families fall below 200% of the poverty threshold. Applying that percentage to the Central Division's residential customer base of 783,190, the number of HTR customers is estimated to be 259,236. Applying that percentage to the North Division's residential customer base of 159,429, the number of HTR customers is estimated to be 52,771.

III. Energy Efficiency Goals and Projected Savings

Central Division 2020

The Central Division's 2020 annual demand and energy reduction goals to be achieved are 16.38 MW and 28,698 MWh. The 2020 demand reduction goal was calculated by applying four-tenths of 1% (0.004) of the summer weather-adjusted peak demand from the combined residential and commercial customers to the five year average (2014-2018) peak demand at the meter of 4,095 MW. As stated in 16 TAC § 25.181(e)(4), a utility's energy savings goal is calculated from its demand savings goal, using a 20% conservation load factor.

Table 4 presents historical annual growth in demand data for the previous five years that was used to calculate the 2020 goal for the Central Division.

North Division 2020

The North Division's 2020 annual demand and energy reduction goals to be achieved are 4.26 MW and 7,464 MWh. The 2020 demand reduction goal was calculated by applying four-tenths of 1% (0.004) of the summer weather-adjusted peak demand from the combined residential and commercial customers to the five year average (2014-2018) peak demand at the meter of 1,018 MW, resulting in a calculated goal of 4.07 MW. As stated in 16 TAC § 25.181(e)(1)(D), except as adjusted in accordance with subsection (u), a utility's demand reduction goal shall not be lower than the previous year's goal. The North Division's goal for 2019 was 4.26 which is higher than its 2020 calculated goal; therefore, the North Division's goal for 2020 is 4.26 MW. As stated in 16 TAC § 25.181(e)(4), a utility's energy savings goal is calculated from its demand savings goal, using a 20% conservation load factor.

Table 4 presents historical annual growth in demand data for the previous five years that was used to calculate the 2020 goal for the North Division.

AEP Texas 2021

AEP Texas' 2021 demand goal is calculated by applying four-tenths of 1% (0.004) to its five year average (2015-2019) summer weather-adjusted peak demand for residential and commercial customers (0.004 * 5,150 MW). This results in a calculated goal of 20.60 MW.

As stated in 16 TAC § 25.181(e)(4), a utility's energy savings goal is calculated from its demand savings goal, using a 20% conservation load factor.

Table 4: Annual Growth in Demand and Energy Consumption – Central and North Division

	Peak Demand (MW) @ Source						Energy Consumption (MWh) @ Meter				Energy Efficiency Goal Calculations		
	Total System		Residential & Commercial				Total System		Residential & Commercial				
Calendar Year	Actual	Weather Adjusted	Actual	Weather Adjusted	Opt-Out	Peak Demand at Source Net Opt-outs	Actual	Weather Adjusted	Actual	Weather Adjusted	Annual Energy Consumption at Meter	5-year Average Peak Demand at Meter	Goal Metric: 0.4% Peak Demand at Meter
Central													
2014	4,957	4,943	4,474	4,460	-1 02	4,459	24,759	24,657	20,020	19,918	4,040	NA	NA
2015	5,043	4,963	4,524	4,445	-7 90	4,437	25,030	24,729	19,491	20,191	4,019	NA	NA
2016	5,243	5,089	4,759	4,605	-55 50	4,550	26,147	25,727	20,653	20,233	4,122	3,934	15 73
2017	5,230	5,050	4,737	4,557	-66 50	4,491	25,975	25,685	19,961	19,671	4,068	3,958	15 83
2018	5,109	5,128	4,609	4,628	-70 9	4,557	26,111	25,883	20,285	20,057	4,224	3,998	15 99
2019	5,229	5,143	4,696	4,610	-66 1	4,544	25,882	25,573	20,235	19,926	4,212	4,034	16 13
2020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,095	16 38
2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4,129	16 52
North													
2014	1,157	1,164	1,155	1,161	-9 1	1,152	5,600	5,526	5,465	5,392	1,020	NA	NA
2015	1,193	1,177	1,179	1,163	-15 7	1,148	5,610	5,557	5,363	5,310	1,015	NA	NA
2016	1,169	1,181	1,151	1,163	-19 4	1,144	5,457	5,497	5,138	5,178	1,012	1,002	4 01
2017	1,161	1,184	1,142	1,165	-34 4	1,130	5,578	5,649	5,112	5,182	1,001	998	3 99
2018	1,230	1,221	1,208	1,199	-37 9	1,161	5,909	5,797	5,408	5,296	1,041	1,004	4 02
2019	1,272	1,221	1,249	1,197	-40 2	1,157	6,080	5,991	5,440	5,351	1,036	1,010	4 04
2020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,018	4 07
2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,021	4 08

*Line losses are derived from the loss factors determined in the most recent line loss study for the Central Division and the North Division

Table 5: Annual Growth in Demand and Energy Consumption – AEP Texas

Calendar Year	Peak Demand (MW) @ Source						Energy Consumption ([illegible]) @ Meter				Energy Efficiency Goal Cal[illegible]		
	Total System		Residential & Commercial				Total System		Residential & Commercial				
	Actual	Weather Adjusted	Actual	Weather Adjusted	Opt-Out	Peak Demand at Source Net Opt-out	Actual	Weather Adjusted	Actual	Weather Adjusted	Peak Demand at [illegible]	5 year Average [illegible] Demand at Meter	[illegible]
2014	6,114	6,107	5,629	5,621	-10 12	5,611	30,359	30,183	25,485	25,310	5,060	NA	NA
2015	6,236	6,140	5,703	5,608	-23 60	5,584	30,640	30,286	24,855	25,501	5,034	NA	NA
2016	6,412	6,270	5,910	5,768	-74 90	5,693	31,604	31,224	25,791	25,411	5,134	4,936	NA
2017	6,391	6,234	5,879	5,722	-100 90	5,621	31,553	31,334	25,072	24,853	5,069	4,956	NA
2018	6,339	6,349	5,817	5,827	-108 80	5,718	32,020	31,680	25,693	25,353	5,265	5,002	NA
2019	6,501	6,364	5,945	5,807	-106 30	5,701	31,962	31,564	25,675	25,277	5,249	5,043	NA
2020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5,112	NA
2021	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5,150	20 60

*Line losses are derived from the loss factors determined in the most recent line loss study for the Central Division and the North Division

Table 6: Projected Demand and Energy Savings by Program for Each Customer Class for 2020 (at the Meter)

2020	Projected Savings			
	Central		North	
Customer Class and Program	**kW**	**kWh**	**kW**	**kWh**
Commercial				
Commercial Solutions MTP	992	5,500,000	441	3,209,280
Commercial SOP	2,810	11,716,682	446	1,919,103
CoolSaver℠ A/C Tune-Up MTP	1,393	4,376,124	NAP	NAP
Load Management SOP	19,517	105,081	2,180	14,045
Open MTP	830	3,250,000	354	1,410,806
SCORE/CitySmart MTP	1,850	8,000,000	211	1,680,000
SMART Source℠ Solar PV MTP	489	618,735	52	168,742
Residential				
CoolSaver℠ A/C Tune-Up MTP	1,017	3,223,609	NAP	NAP
High-Performance New Homes MTP	539	1,631,874	NAP	NAP
Residential Pool Pump Pilot MTP	127	1,017,810	NAP	NAP
Residential SOP	5,327	8,203,500	974	1,568,751
SMART Source℠ Solar PV MTP	215	528,891	50	167,185
Hard-to-Reach				
Hard-to-Reach SOP	1,785	2,604,482	451	688,730
Targeted Low-Income Energy Efficiency Program	800	1,144,413	110	170,095
Total Annual Projected Savings	**37,691**	**51,921,201**	**5,270**	**10,996,737**

Table 7: Projected Demand and Energy Savings by Program for Each Customer Class for 2021 (at the Meter) – AEP Texas

2021	Projected Savings	
Customer Class and Program	**kW**	**kWh**
Commercial		
Commercial Solutions MTP	1,433	8,709,280
Commercial SOP	3,257	13,635,785
CoolSaver℠ A/C Tune-Up MTP	1,393	4,376,124
Load Management SOP	21,697	119,126
Open MTP	1,184	4,660,806
SCORE/CitySmart MTP	2,061	9,680,000
SMART Source℠ Solar PV MTP	541	787,477
Residential		
CoolSaver℠ A/C Tune-Up MTP	1,017	3,223,609
High-Performance New Homes MTP	539	1,631,874
Residential Pool Pump Pilot MTP	127	1,017,810
Residential SOP	6,301	9,772,250
SMART Source℠ Solar PV MTP	265	696,076
Hard-to-Reach		
Hard-to-Reach SOP	2,236	3,293,212
Targeted Low-Income Energy Efficiency Program	910	1,314,508
Total Annual Projected Savings	**42,961**	**62,917,939**

IV. Program Budgets

Tables 8 & 9 present total proposed budget allocations required to meet the Central Division's and North Division's projected demand and energy savings to be achieved for Program Year 2020. The budget allocations are defined by the overall projected demand and energy savings, the avoided costs of capacity and energy specified in the EE Rule, allocation of demand goals among customer classes, and the incentive levels by customer class. The budget allocations are detailed by customer class, program, and in the following budget categories: incentives, administration, research and development (R&D), and evaluation, measurement and verification (EM&V).

Table 10 presents total proposed budget allocations required to meet AEP Texas' projected demand and energy savings to be achieved for Program Year 2021. The budget allocations are defined by the overall projected demand and energy savings, the avoided costs of capacity and energy specified in the EE Rule, allocation of demand goals, and the incentive levels by customer class. The budget allocations are detailed by customer class, program, and in the following budget categories: incentives, administration, research and development (R&D), and evaluation, measurement and verification (EM&V).

Table 8: Projected Annual Budget by Program for Each Customer Class for 2020 – Central Division

2020	Incentives	Admin	R&D	EM&V	Total Budget
Commercial					
Commercial Solutions MTP	$508,500	$56,500			$565,000
Commercial SOP	$1,813,500	$201,500			$2,015,000
CoolSaver℠ A/C Tune-Up MTP	$596,700	$66,300			$663,000
Load Management SOP	$650,700	$72,300			$723,000
Open MTP	$793,800	$88,200			$882,000
SCORE/CitySmart MTP	$946,800	$105,200			$1,052,000
SMART Source℠ Solar PV MTP	$204,000	$22,667			$226,667
Residential					
CoolSaver℠ A/C Tune-Up MTP	$675,000	$75,000			$750,000
High-Performance New Homes MTP	$765,000	$85,000			$850,000
Residential Pool Pump Pilot MTP	$150,300	$16,700			$167,000
Residential SOP	$2,786,598	$309,622			$3,096,220
SMART Source℠ Solar PV MTP	$204,000	$22,667			$226,667
Hard-to-Reach					
Hard-to-Reach SOP	$1,087,560	$120,840			$1,208,400
Targeted Low-Income Energy Efficiency Program	$1,457,155	$144,114			$1,601,269
Research and Development (R&D)					
R&D	NAP	NAP	$365,125		$365,125
Evaluation, Measurement & Verification (EM&V)					
EM&V				$183,267	$183,267
Total Budget	**$12,639,613**	**$1,386,610**	**$365,125**	**$183,267**	**$14,574,615**

Table 9: Projected Annual Budget by Program for Each Customer Class for 2020 – North Division

2020	Incentives	Admin	R&D	EM&V	Total Budget
Commercial					
Commercial Solutions MTP	$394,748	$58,985			$453,733
Commercial SOP	$250,262	$37,395			$287,657
Load Management SOP	$87,000	$13,000			$100,000
Open MTP	$419,241	$62,759			$482,000
SCORE/CitySmart MTP	$187,500	$28,110			$215,610
SMART Source^{SM} Solar PV MTP	$82,650	$12,350			$95,000
Residential					
Residential SOP	$572,700	$85,576			$658,276
SMART Source^{SM} Solar PV MTP	$102,660	$15,340			$118,000
Hard-to-Reach					
Hard-to-Reach SOP	$325,000	$36,000			$361,000
Targeted Low-Income Energy Efficiency Program	$342,004	$43,030			$385,034
Research and Development (R&D)					
R&D	NAP	NAP	$200,000		$200,000
Evaluation, Measurement & Verification (EM&V)					
EM&V				$32,332	$32,332
Total Budget	**$2,763,765**	**$392,545**	**$200,000**	**$32,332**	**$3,388,642**

Table 10: Projected Annual Budget by Program for Each Customer Class for 2021 AEP Texas

2021	Incentives	Admin	R&D	EM&V	Total Budget
Commercial					
Commercial Solutions MTP	$903,248	$115,485			$1,018,733
Commercial SOP	$2,063,762	$238,895			$2,302,657
CoolSaver℠ A/C Tune-Up MTP	$596,700	$66,300			$663,000
Load Management SOP	$737,700	$85,300			$823,000
Open MTP	$1,213,041	$150,959			$1,364,000
SCORE/CitySmart MTP	$1,134,300	$133,310			$1,267,610
SMART Source℠ Solar PV MTP	$286,650	$35,017			$321,667
Residential					
CoolSaver℠ A/C Tune-Up MTP	$675,000	$75,000			$750,000
High-Performance New Homes MTP	$765,000	$85,000			$850,000
Residential Pool Pump Pilot MTP	$150,300	$16,700			$167,000
Residential SOP	$3,359,298	$395,198			$3,754,496
SMART Source℠ Solar PV MTP	$306,660	$38,007			$344,667
Hard-to-Reach					
Hard-to-Reach SOP	$1,412,560	$156,840			$1,569,400
Targeted Low-Income Energy Efficiency Program	$1,799,159	$187,145			$1,986,304
Research and Development					
R&D			$565,125		$565,125
Evaluation, Measurement & Verification (EM&V)					
EM&V				$211,988*	$211,988*
Total Budget	**$15,403,378**	**$1,779,156**	**$565,125**	**$211,988***	**$17,959,647**

* *AEP Texas is using the actual expenses incurred in 2019 for review of the 2018 program year as an estimate of costs for the 2021 program year. The actual 2021 program year expenses may differ from those incurred in 2019 for review of the 2018 program year expenses*

ENERGY EFFICIENCY REPORT

V. Historical Demand and Energy Goals and Savings Achieved for the Previous Five Years

Table 11 contains the Central Division's demand and energy reduction goals and actual savings achieved for the previous five years (2015-2019) calculated in accordance with the EE Rule.

Table 11: Historical Demand and Energy Goals* and Savings Achieved (at the Meter)

Calendar Year	Actual Weather Adjusted Demand Goal (MW)	Actual Weather Adjusted Energy Goal (MWh)	Savings Achieved (MW)	Savings Achieved (MWh)
Central				
2019	16.14	28,277	39.67**	58,366
2018	15.99	28,014	43.81	62,417
2017	15.83	27,734	45.87	64,971
2016	15.73	27,559	39.30	67,714
2015	12.93	22,653	43.78	68,482
North				
2019	4.26	7,464	6.64***	12,223
2018	4.26	7,464	8.95	12,669
2017	4.26	7,464	6.79	12,038
2016	4.26	7,464	6.38	10,817
2015	4.26	7,464	4.54	12,289

* Actual Weather Adjusted MW and MWh Goals as reported in the EEPRs filed in years 2015-2019.

** Reported savings achieved at the source are 39.67 MW $(39.67 \times \frac{1}{1-7.3\%}) = 42.79$ MW.

*** Reported savings achieved at the source are 6.64 MW $(6.64 \times \frac{1}{1-10.4\%}) = 7.41$ MW.

VI. Projected, Reported and Verified Demand and Energy Savings

Table 12: Projected versus Reported and Verified Savings for 2019 and 2018 (at the Meter) – Central Division

	Projected Savings		Reported and Verified Savings	
Customer Class and Program	**kW**	**kWh**	**kW**	**kWh**
2019				
Commercial				
Commercial Solutions MTP	992	5,500,000	1,001	5,499,427
Commercial SOP	3,023	16,151,031	3,155	14,294,940
CoolSaver℠ A/C Tune-Up MTP	1,393	4,376,124	2,884	5,898,609
Load Management SOP	24,100	24,100	17,612	103,072
Open MTP	830	3,250,000	863	3,487,391
SCORE/CitySmart MTP	1,850	8,000,000	1,868	6,648,742
SMART Source℠ Solar PV MTP	489	618,735	189	608,392
Residential				
CoolSaver℠ A/C Tune-Up MTP	1,017	3,223,609	1,202	3,937,486
High-Performance New Homes MTP	539	1,631,874	1,530	2,037,375
Residential Pool Pump Pilot MTP	127	1,017,810	13	99,067
Residential SOP	5,573	8,299,603	6,218	10,489,450
SMART Source℠ Solar PV MTP	215	528,891	161	571,131
Hard-to-Reach				
Hard-to-Reach SOP	1,673	2,491,684	2,106	3,340,316
Targeted Low-Income Energy Efficiency Program	729	1,084,997	869	1,350,919
Total Annual Savings	**42,550**	**56,198,458**	**39,671**	**58,366,316**
2018				
Commercial				
Commercial Solutions MTP	992	5,500,000	1,083	5,459,625
Commercial SOP	2,501	13,147,250	3,222	18,321,586
CoolSaver℠ A/C Tune-Up MTP	1,393	4,376,124	1,573	3,541,794
Load Management SOP	24,100	116,114	23,677	23,677
Open MTP	830	3,250,000	844	3,536,803
SCORE/CitySmart MTP	1,850	8,000,000	1,796	8,924,060
SMART Source℠ Solar PV MTP	218	654,460	215	699,508
Residential				
CoolSaver℠ A/C Tune-Up MTP	1,017	3,223,609	940	3,088,081
High-Performance New Homes MTP	539	1,631,874	1,035	2,842,771
Residential SOP	5,213	15,981,978	6,373	10,617,931
SMART Source℠ Solar PV MTP	133	425,489	136	459,255
Hard-to-Reach				
Hard-to-Reach SOP	1,450	3,810,810	2,113	3,592,816
Targeted Low-Income Energy Efficiency Program	852	1,492,923	805	1,308,897
Total Annual Savings	**41,088**	**61,610,631**	**43,812**	**62,416,805**

Table 13: Projected versus Reported and Verified Savings for 2019 and 2018(at the Meter) – North Division

	Projected Savings		Reported and Verified Savings	
Customer Class and Program	**kW**	**kWh**	**kW**	**kWh**
2019				
Commercial				
Commercial Solutions MTP	441	3,209,280	615	3,227,496
Commercial SOP	400	2,104,603	525	2,453,259
Load Management SOP	2,175	2,175	2,935	20,550
Open MTP	354	1,410,806	325	1,331,577
SCORE/CitySmart MTP	211	1,680,000	328	1,680,000
SMART Source[SM] Solar PV MTP	52	168,742	49	153,060
Residential				
Residential Pool Pump Pilot MTP	33	210,663	0	0
Residential SOP	1,154	1,515,956	1,054	1,844,161
SMART Source[SM] Solar PV MTP	50	167,185	87	318,434
Hard-to-Reach				
Hard-to-Reach SOP	542	711,750	600	994,684
Targeted Low-Income Energy Efficiency Program	114	169,771	119	199,824
Total Annual Savings	**5,526**	**11,350,931**	**6,636**	**12,223,046**
2018				
Commercial				
Commercial Solutions MTP	496	3,609,280	673	3,695,280
Commercial SOP	325	1,676,488	445	2,490,444
Load Management SOP	2,486	11,976	4,962	4,962
Open MTP	354	1,410,806	357	1,544,383
SCORE/CitySmart MTP	161	1,280,000	245	1,289,705
SMART Source[SM] Solar PV MTP	47	151,734	52	151,314
Residential				
Residential SOP	1,061	2,240,305	1,360	2,065,028
SMART Source[SM] Solar PV MTP	67	207,487	75	245,773
Hard-to-Reach				
Hard-to-Reach SOP	464	920,734	669	993,767
Targeted Low-Income Energy Efficiency Program	104	177,003	107	188,620
Total Annual Savings	**5,565**	**11,685,813**	**8,946**	**12,669,275**

VII. Historical Program Expenditures

This section documents the Central and North Division's incentive and administration expenditures for the previous five years (2015-2019) detailed by program for each customer class.

Table 14: Historical Program Incentive and Administrative Expenditures for 2015 through 2019 (000's) – Central Division

Central	2019		2018		2017		2016		2015	
	Incent.	Admin	Incent.	Admin	Incent.	Admin	Incent.	Admin	Incent.	Admin
Commercial										
Commercial Solutions MTP	$504 95	$47 65	$522 38	$46 59	$429 78	$41 01	$464 67	$52 42	$660 88	$62 02
Commercial SOP	$1,725 05	$194 85	$1,883 33	$220 66	$1,686 17	$216 08	$1,763 34	$194 48	$1,675 57	$178 07
CoolSaver℠ A/C Tune-Up MTP	$647 82	$53 34	$604 06	$45 81	$597 57	$41 72	$561 47	$46 54	$601 34	$45 73
Load Management SOP	$497 63	$40 06	$602 19	$73 52	$611 07	$78 27	$573 06	$50 03	$650 20	$51 71
Open MTP	$795 31	$79 08	$793 06	$67 03	$793 80	$53 07	$785 45	$61 03	$818 94	$61 45
SCORE/CitySmart MTP	$924 14	$87 11	$915 76	$78 71	$1,005 20	$74 42	$971 10	$88 69	$840 09	$73 65
SMART Source℠ Solar PV MTP	$201 04	$14 94	$194 87	$15 22	$51 80	$4 12	$182 70	$14 86	$58 56	$6 41

(Table continued on next page)

Table 14: Historical Program Incentive and Administrative Expenditures for 2015 through 2019 (000's) – Central Division (Continued)

Central	2019		2018		2017		2016		2015	
	Incent.	Admin	Incent.	Admin	Incent.	Admin	Incent.	Admin	Incent.	Admin
Residential										
CoolSaver℠ A/C Tune-Up MTP	$696 41	$57 31	$667 18	$50 61	$638 96	$44 83	$672 78	$55 82	$673 27	$51 20
Efficiency Connection Pilot MTP	NAP	NAP	NAP	NAP	NAP	NAP	$90 16	$11 20	$67 03	$4 45
High-Performance New Homes MTP	$807 36	$73 92	$750 25	$88 73	$753 15	$94 84	$636 50	$67 45	$757 64	$82 07
Reliant DR Pilot MTP	NAP	NAP	NAP	NAP	NAP	NAP	$3 88	$0 38	NAP	NAP
Residential Pool Pump Pilot MTP	$58 35	$5 64								
Residential SOP	$2,735 84	$309 59	$2,726 52	$301 63	$2,500 42	$269.54	$2,591 75	$242 54	$2,649 88	$246 42
SMART Source℠ Solar PV MTP	$200 45	$14 93	$210 42	$16 47	$206 76	$16 46	$204 81	$17 43	$207 62	$16 33
Whisker Labs* Res DR Pilot MTP	NAP	NAP	NAP	NAP	$150 00	$8 77	$123 35	$9 07	NAP	NAP
Hard-to-Reach										
Hard-to-Reach SOP	$1,087 49	$93 04	$1,086 67	$123 76	$970 66	$103 83	$1,115 74	$112 50	$922 10	$97 61
Targeted Low-Income Energy Efficiency Program	$1,468 49	$149 63	$1,276 34	$109 37	$1,403 99	$107 39	$1,265 06	$103 44	$1,270 64	$98 09
Research and Development (R&D)	$0 00	$281 18	$0 00	$185 48	$0 00	$134 25	NAP	$327 31	NAP	$332 54
Evaluation and Measurement Verification (EM&V)	$0 00	$180 20	$0 00	$176 88	$0 00	$176 88	NAP	$161 05	NAP	$246 63
Total Expenditures	**$12,350.33**	**$1,682.47**	**$12,233.03**	**$1,600. 47**	**$11,799.33**	**$1,465.50**	**$12,005.81**	**$1,616.24**	**$11,853.76**	**$1,654.36**

*Previously Earth Networks

Table 15: Historical Program Incentive and Administrative Expenditures for 2015 through 2019 (000's) – North Division

North	2019		2018		2017		2016		2015	
	Incent.	Admin	Incent.	Admin	Incent.	Admin	Incent.	Admin	Incent.	Admin
Commercial										
Commercial Solutions MTP	$395 36	$59 44	$423 86	$42 97	$365 58	$39 63	$330 00	$32 97	$410 11	$33 41
Commercial SOP	$249 43	$37 68	$260 54	$27 14	$244 35	$41 09	$187 96	$22 88	$218 53	$22 47
Load Management SOP	$87 00	$9 97	$87 00	$12 55	$87 00	$16 71	$80 58	$10 52	$31 89	$3 17
Open MTP	$400 29	$65 51	$418 74	$41 23	$418 04	$40 43	$417 06	$47 98	$461 04	$45 24
SCORE/CitySmart MTP	$187 50	$26 31	$160 18	$29 51	$158 37	$23 02	$153 27	$17 41	$185 88	$16 49
SMART Source^{SM} Solar PV MTP	$83 95	$7 72	$79 89	$5 07	$69 02	$4 94	$49 81	$5 37	$60 48	$4 83

(Table continued on next page)

Table 15: Historical Program Incentive and Administrative Expenditures for 2015 through 2019 (000's) – North Division (Continued)

North	2019		2018		2017		2016		2015	
	Incent.	Admin	Incent.	Admin	Incent.	Admin	Incent.	Admin	Incent.	Admin
Residential										
Efficiency Connection Pilot MTP	NAP	NAP	NAP	NAP	NAP	NAP	$81 76	$7 59	$62 05	$10 23
Residential Pool Pump Pilot MTP	$18 35	$4 04	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP
Residential SOP	$524 90	$54 21	$557 68	$53 77	$528 86	$69 31	$415 69	$60 11	$445 52	$61 55
SMART Source℠ Solar PV MTP	$99 80	$9 18	$106 55	$6 76	$101 79	$7 29	$88 34	$9 52	$100 88	$8 06
Whisker Labs* Res DR Pilot MTP	NAP	NAP	NAP	NAP	$14 56	$1 06	$15 51	$1 49	NAP	NAP
Hard-to-Reach										
Hard-to-Reach SOP	$365 95	$34 67	$369 59	$36 90	$314 03	$42 42	$162 14	$25 46	$160 19	$15 79
Targeted Low-Income Energy Efficiency Program	$344 58	$33 53	$320 44	$32 60	$283 62	$40 77	$255 66	$32 68	$256 02	$27 07
Research and Development (R&D)	$0 00	$105 78	NAP	$50 28	NAP	$53 25	NAP	$82 69	NAP	$86 35
Evaluation and Measurement Verification (EM&V)	$0 00	$31 79	NAP	$31 21	NAP	$31 21	NAP	$28 41	NAP	$43 51
Total Expenditures	**$2,757.11**	**$479.82**	**$2,784.47**	**$369.99**	**$2,585.22**	**$411.12**	**$2,237.76**	**$385.08**	**$2,392.59**	**$378.19**

*Previously Earth Networks

VIII. Program Funding for Program Year 2019

Central Division

As shown in Table 16, the total projected budget for the Central Division in 2019 was $14,571,546 and the actual total funds expended were $14,032,803. This is an overall total program expenditure difference of less than 4% from the amount budgeted.

The following individual program expenditures differed from their respective proposed budgets by more than 10% as explained below.

The Load Management SOP did not fully utilize its incentive budget due to several customers underperforming (less kW reduction) during actual curtailment events compared to their projected kW reduction amount originally submitted in the LM SOP.

The Residential Pool Pump Pilot MTP was under budget due to lower than expected participation by distributors who struggled internally to engage their branch locations to support them in the program. Actions have been taken to engage the branch locations and help them recruit pool pump installers to participate in the program in 2020.

The combined 2019 expenditures for the TLIP and the HTR SOP constituted 19% of the energy efficiency budget. The 2019 expenditure for the TLIP constituted 11% of the energy efficiency budget.

North Division

As shown in Table 17, the total projected budget in 2019 was $3,388,100 and the actual total funds expended were $3,236,930. This is an overall total program expenditure difference of less than 4.5% from the amount budgeted.

The Residential Pool Pump Pilot MTP was under budget due to a lower than expected participation by distributors. It was determined that the program would not continue in 2020.

The combined 2019 expenditures for the TLIP and the HTR SOP constituted 23% of the energy efficiency budget. The 2019 expenditure for the TLIP constituted 11% of the energy efficiency budget.

Table 16: Program Funding for Program Year 2019– Central Division

	Total Projected Budget [4]	Numbers of Customers Participating	Actual Funds Expended (Incentives)	Actual Funds Expended (Admin)	Research and Development (R&D)	Evaluation and Measurement Verification (EM&V)	Total Funds Expended
Commercial							
Commercial Solutions MTP	$565,000	54	$504,949	$47,650			$552,599
Commercial SOP	$2,015,000	183	$1,725,048	$194,849			$1,919,897
CoolSaver℠ A/C Tune-Up MTP	$663,000	480	$647,821	$53,344			$701,165
Load Management SOP	$723,000	81	$497,625	$40,063			$537,688
Open MTP	$882,000	232	$795,313	$79,077			$874,390
SCORE/CitySmart MTP	$1,052,000	53	$924,136	$87,108			$1,011,244
SMART Source℠ Solar PV MTP	$226,667	11	$201,039	$14,945			$215,984
Residential							
CoolSaver℠ A/C Tune-Up MTP	$750,000	1,968	$696,411	$57,306			$753,717
High-Performance New Homes MTP	$850,000	717	807,359	$73,924			$881,283
Residential Pool Pump Pilot MTP	$167,000	36	$58,350	$5,642			$63,992
Residential SOP	$3,096,220	5,698	$2,735,844	$309,595			$3,045,439
SMART Source℠ Solar PV MTP	$226,667	32	$200,448	$14,925			$215,374
Hard-to-Reach							
Hard-to-Reach SOP	$1,208,400	1,627	$1,087,490	$93,039			$1,180,528
Targeted Low-Income Energy Efficiency	$1,601,269	359	$1,468,495	$149,630			$1,618,125
Research and Development	$365,125				$281,180		$281,180
EM&V							
Statewide EM&V Contractor	$180,198					$180,198	$180,198
Total	**$14,571,546**	**11,531**	**$12,350,327**	**$1,221,098**	**$281,180**	**$180,198**	**$14,032,803**

[4] Projected Budget from the revised EEPR filed May 2019 Project No. 49297.

Table 17: Program Funding for Program Year 2019– North Division

	Total Projected Budget [5]	Numbers of Customers Participating	Actual Funds Expended (Incentives)	Actual Funds Expended (Admin)	Research and Development (R&D)	Evaluation and Measurement Verification (EM&V)	Total Funds Expended
Commercial							
Commercial Solutions MTP	$453,733	68	$395,360	$59,443			$454,803
Commercial SOP	$287,657	27	$249,428	$37,678			$287,107
Load Management SOP	$100,000	23	$87,000	$9,973			$96,973
Open MTP	$482,000	72	$400,294	$65,512			$465,806
SCORE/CitySmart MTP	$215,610	28	$187,500	$26,306			$213,806
SMART Source^{SM} Solar PV MTP	$95,000	5	$83,946	$7,721			$91,667
Residential							
Residential Pool Pump Pilot MTP	$48,276	0	$18,350	$4,037			$22,387
Residential SOP	$610,000	561	$524,902	$54,208			$579,110
SMART Source^{SM} Solar PV MTP	$118,000	20	$99,796	$9,179			$108,975
Hard-to-Reach							
Hard-to-Reach SOP	$361,000	317	$365,953	$34,673			$400,626
Targeted Low-Income Energy Efficiency	$385,034	73	$344,576	$33,528			$378,104
Research and Development	$200,000				$105,775		$105,775
EM&V							
Statewide EM&V Contractor	$31,790					$31,790	$31,790
Total	**$3,388,100**	**1,194**	**$2,757,105**	**$342,259**	**$105,775**	**$31,790**	**$3,326,930**

[5] Projected Budget from the revised EEPR filed May 2019 Project No. 49297.

IX. Market Transformation Program Results 2019

Commercial Solutions MTP

The Commercial Solutions MTP goal for Central Division was to acquire 992 kW demand savings. A total of 1,001 kW was achieved by participation of 54 customers.

The Commercial Solutions MTP goal for North Division was to acquire 3,209,280 kWh of energy savings. A total of 3,227,496 kWh was achieved by participation of 68 customers.

CoolSaver℠ MTP (Central Division Only)

The CoolSaver MTP verified and reported 4,087 kW. This included participation by 2,448 residential and commercial customers.

High-Performance New Homes MTP (New Homes) (Central Division Only)

In 2019, 717 high-performance homes were constructed in the New Homes program with a savings of 1,530 kW. Through education and outreach by program account managers, several new builders were recruited and participated in the program in 2019 thus increasing the reach and number of homes and customers learning about and benefiting from energy efficient homes. The program provided continuing education courses and other training opportunities for contractors, homebuilders, home energy raters, HVAC contractors and other market actors on the advantages of High-Performance and ENERGY STAR homes and building practices. Training for HVAC market actors focused on Manual J training to re-emphasize the importance of performing load calculations for correctly sizing HVAC systems. AEP Texas continued their partnership with the Environmental Protection Agency's (EPA) ENERGY STAR program and received the ENERGY STAR Partner of the Year Sustained Execellence award.

Open MTP

The Open MTP goal for Central Division was to acquire 830 kW demand savings. A total of 863 kW was achieved with 232 small commercial customers and 10 participating contractors.

The Open MTP goal for North Division was to acquire 354 kW demand savings. A total of 325 kW was achieved with 72 small commercial customers and 10 participating contractors.

Residential Pool Pump Pilot MTP

The Residential Pool Pump Pilot MTP was projected to acquire 127 kW demand savings for Central Division. A total of 13 kW was achieved. This included participation by 36 customers.

The Residential Pool Pump Pilot MTP was projected to acquire 33 kW demand savings for North Division. No savings were achieved in this program.

SCORE/CitySmart MTP

The SCORE/CitySmart MTP was projected to acquire 1,850 kW demand savings for Central Division. A total of 1,867 kW was achieved. This included participation by 53 customers. To date, the program has benchmarked 1,256 facilities for 41 school districts, 4 higher education and 13 government customers.

The SCORE/CitySmart MTP was projected to acquire 211 kW demand savings for North Division. A total of 328 kW was achieved. This included participation by 28 customers. To date, the program has benchmarked 473 facilities for 17 school districts, 3 higher education and 8 government customers.

SMART Source^{SM} Solar PV MTP

The PV MTP projected to acquire 704 kW in demand savings and 1,147,626 kWh in energy savings from the residential and non-residential components for Central Division. A total of 43 residential and non-residential solar PV projects were completed within the program, resulting in a peak demand reduction of 350 kW and 1,179,523 kWh of energy savings.

The PV MTP projected to acquire 102 kW in demand savings and 335,927 kWh in energy savings from the residential and non-residential components for North Division. A total of 25 residential and non-residential solar PV projects were completed within the program, resulting in a peak demand reduction of 135 kW and 471,494 kWh of energy savings.

X. Administrative Costs and Research and Development

Administrative Costs

Administrative costs incurred to meet the energy efficiency goals and objectives include, but may not be limited to, energy efficiency employees' payroll, costs associated with regulatory filings, and EM&V costs outside of the actual cost associated with the EM&V contractor. Any portion of these costs which are not directly assignable to a specific program are allocated among the programs in proportion to the program incentive costs.

Program Research and Development

R&D activities are intended to help meet future energy efficiency goals by researching new technologies and program options and developing better, more efficient ways to administer current programs. The following is a summary of the R&D activities for 2019.

AEP Texas dedicated resources in 2019 to improve its program website functionality and make it easier for customers and market actors to obtain program information. In addition, AEP Texas participated with Electric Utility Marketing Managers of Texas (EUMMOT) in researching potentially new deemed savings measures for various programs.

Informational Activities

AEP Texas continues its best effort to encourage and facilitate the involvement of REPs and EESPs in the delivery of its programs to customers. The Central and North Divisions utilize local, regional and national conferences, trade shows, and other events for outreach and information exchange with participating REPs and EESPs. The Central and North Divisions also provide energy efficiency program information to the REPs and EESPs throughout the year on a timely basis via e-mail distribution.

XI. 2020 Energy Efficiency Cost Recovery Factor (EECRF)

AEP Texas' 2020 EECRF was approved by the PUCT in Docket No. 49592 and includes $8,955,636 for the Central Division and $2,201,128 for the North Division, as shown in Table 18. The adjusted factors are shown in Table 19.

Table 18: 2020 EECRF

	Central	North
2020 Projected Costs over Base Rates	$6,920,539	$1,854,717
Performance Bonus for 2018 results	$2,243,583	$482,617
Over-recovery, returned to customers with interest	-$404,302	-$171,676
EECRF proceeding expenses	$12,549	$3,137
Projected EM&V costs	$183,267	$32,332
Total EECRF	$8,955,636	$2,201,128

Table 19: 2020 EECRF Factors

	EECRF	
Customer Class	**Central**	**North**
Residential Service	$0.000500 per kWh	$0.000542 per kWh
Secondary Service (less than or equal to 10 kW)	$0.000000 per kWh	$0.000833 per kWh
Secondary Service (greater than 10 kW)	$0.000345 per kWh	$0.000549 per kWh
Primary Service	$0.000643 per kWh	$(0.000046) per kWh
Transmission Service	($0.040623 per kW)	($0.016492) per kW)

XII. 2019 EECRF Summary

Central Division

2019 Collections for Energy Efficiency

The Central Division collected $7,417,633 through its 2019 base rates, including $6,334,949 expressly included in base rates and an adjustment for load growth in the amount of $1,082,685, and $8,944,043 through its 2019 EECRF for a total of $16,361,676. A performance bonus of $2,395,662 for exceeding its 2017 energy efficiency goals and $646,367 returned to customers are reflected in the total amount collected for energy efficiency in 2019.

Energy Efficiency Program Costs Expended

The Central Division expended a total of $14,032,803 for its 2019 energy efficiency programs. The amount expended is $538,743 less than the 2019 projected budget of $14,571,546 for energy efficiency programs.

Over-Recovery of Energy Efficiency Costs

The Central Division's actual 2019 energy efficiency program costs (including EM&V costs) less municipal rate case expenses are $14,013,456 for the determination of the over/under-recovery; and actual energy efficiency program revenues are $14,612,382. These associated 2019 costs and revenues result in an over-recovery of energy efficiency costs of $598,926. Including interest of $26,273, the over-recovery is $625,199. This is the amount that the Central Division will request be returned to customers within its 2021 EECRF.

North Division

2019 Collections for Energy Efficiency

The North Division collected $1,492,074 through its 2019 base rates, including $1,294,430 expressly included in base rates and an adjustment for load growth in the amount of $197,644, and $2,486,524 through its 2019 EECRF for a total of $3,978,598. A performance bonus of $505,327 for exceeding its 2017 energy efficiency goals and $46,179 returned to customers are reflected in the total amount collected for energy efficiency in 2019.

Energy Efficiency Program Costs Expended

The North Division expended a total of $3,236,930 for its 2019 energy efficiency programs. The amount expended is $151,170 less than the 2019 projected budget of $3,388,100 for energy efficiency programs.

Over-Recovery of Energy Efficiency Costs

The North Division's actual 2019 energy efficiency program costs (including EM&V costs) less municipal rate case expenses are $3,232,093 for the determination of the over/under-recovery; and actual energy efficiency program revenues are $3,519,450. These associated 2019 costs and revenues result in an over-recovery of energy efficiency costs of $287,356. Including interest of

$12,606, the over-recovery is $299,962. This is the amount that the North Division will request be returned to customers within its 2021 EECRF.

XIII. Underserved Counties

AEP Texas has defined Underserved Counties as any county in the service territory for which no demand or energy savings were reported through any of its 2019 SOPs or MTPs. Per 16 TAC § 25.181(l)(2)(U), a list of the Underserved Counties is shown in Table 21:

Table 21: Underserved Counties

Central Division	North Division	
Caldwell	Baylor	Knox
DeWitt	Briscoe	Mason
Guadalupe	Brown	Motley
Kenedy	Coleman	Nolan
McMullen	Crane	Reagan
Wilson	Crockett	Reeves
	Edwards	Schleicher
	Gillespie	Stephens
	Hall	Stonewall
	Kent	Throckmorton
	King	Wheeler

ACRONYMS

CSOP	Commercial Standard Offer Program
CS MTP	Commercial Solutions Market Transformation Program
DR	Demand Response
DSM	Demand Side Management
EECRF	Energy Efficiency Cost Recovery Factor
EEPR	Energy Efficiency Plan and Report
EE Rule	Energy Efficiency Rule, 16 TAC §§ 25.181, 25.182 and 25.183
EESP	Energy Efficiency Service Providers
EffCon	Efficiency Connection Pilot Market Transformation Program
EPA	Environmental Protection Agency
EUMMOT	Electric Utility Marketing Managers of Texas
HTR	Hard-To-Reach
HTR SOP	Hard-to-Reach Standard Offer Program
IECC	International Energy Conservation Code
LM SOP	Load Management Standard Offer Program
MTP	Market Transformation Program
NAP	Not Applicable
New Homes	High-Performance New Home Market Transformation Program
Open MTP	Open Market Transformation Program

Acronyms (Continued)

PUC	Public Utility Commission of Texas
PURA	Public Utility Regulatory Act
PV	Photovoltaic
PV MTP	SMART Source^{SM} Solar PV Market Transformation Program
R&D	Research and Development
REP	Retail Electric Provider
RES	Residential
RSOP	Residential Standard Offer Program
SCORE	Schools Conserving Resources
SCORE/CS MTP	SCORE/CitySmart Market Transformation Program
SOP	Standard Offer Program
TCC	AEP Texas Central Company (now the Central Division of AEP Texas)
TDU	Transmission and Distribution Utility
TLIP	Targeted Low-Income Energy Efficiency Program
TRM	Texas Technical Reference Manual

APPENDIX A:

REPORTED AND VERIFIED DEMAND AND ENERGY REDUCTION BY COUNTY

Reported and Verified Demand and Energy Reduction by County: Central Division

County	Commercial Solutions MTP		Commercial SOP		CoolSaver MTP		Hard-to-Reach SOP		High-Performance New Homes MTP		Load Management SOP	
	kW	kWh	kW	kWh	kW	kWh	kW	kWh	kW	kWh	kW	kWh
Aransas			2 8	15,145	1 1	2,939	3 4	5,776	130 5	167,583	13 0	50
Atascosa	6 1	19,369	4 8	29,548	1 3	2,562	47 2	62,706				
Bee			22 6	102,150					1 1	3,078	42 0	226
Brooks			10 9	60,101	0 9	2,414						
Caldwell												
Calhoun			7 2	27,897	1 6	4,551	30 4	42,046	16 9	22,529	90 0	427
Cameron	91 3	466,035	785 5	2,978,293	419 5	925,567	255 6	371,938	3 0	6,988	2,935 0	15,182
Colorado	41 0	199,633	15 7	73,865							6 0	25
DeWitt												
Dimmitt			8 9	34,455							28 0	110
Duval	13 6	52,918					8 7	13,287				
Edwards	8 2	31,709										
Frio											55 0	226
Goliad			2 2	13,105								
Gonzales												
Guadalupe												
Hidalgo	367 6	2,050,008	515 7	2,142,413	3,308 2	7,920,726	654 9	1,076,164	64 5	137,258	4,079 0	28,813
Jackson			2 4	14,389					0 5	1,076		
Jim Hogg												
Jim Wells			251 8	919,936			40 8	59,411	1 9	2,300	14 0	173
Karnes			19 5	93,928							5 0	20
Kenedy												
Kinney												
Kleberg			13 1	89,199			35 6	56,445			105 0	508
La Salle			13 1	50,993								
Live Oak			14 3	88,868								
Matagorda	4 9	13,475	1 8	10,210	0 8	1,927	17 5	24,828				
Maverick			67 8	317,571							23 0	232
Medina											0 0	18
McMullen												
Nueces	208 2	1,131,359	748 2	3,629,190	2 3	7,848	329 3	563,167	914 5	1,120,330	1,003 0	7,330
Real	8 6	33,518										
Refugio	8 4	32,840	7 9	44,346					11 8	16,026	5 0	18
San Patricio	11 8	45,785	15 6	86,305	0 7	768	42 1	67,233	253 3	311,545	4,320 0	18,921
Starr			50 2	161,622	203 5	530,965	182 2	304,784			82 0	473
Uvalde			8 2	31,870							34 0	219
Val Verde	9 3	36,195	9 7	37,790			85 8	114,912				
Victoria	33 2	136,644	191 2	1,015,360	8 0	15,703	131 1	150,308	12 2	23,494	1,917 0	13,637
Webb	188 5	1,249,939	339 7	2,126,829	110 7	364,572	240 2	424,571	120 2	225,168	1,805 0	12,188
Wharton			6 4	14,585							26 0	176
Willacy			17 6	84,977	28 2	55,553					1,025 0	4,100
Wilson												
Zavala												
Zapata							1 4	2,740				
Total	1,000 5	5,499,427	3,154 6	14,294,940	4,086 7	9,836,095	2,106 0	3,340,316	1,530 2	2,037,375	17,612 0	103,072

Reported and Verified Demand and Energy Reduction by County: Central Division (Continued)

County	Open MTP		Residential Pool Pump Pilot MTP		Residential SOP		SCORE/CitySmart MTP		SMART^{SM} Source Solar PV MTP		Targeted Low-Income Program	
	kW	kWh	kW	kWh	kW	kWh	kW	kWh	kW	kWh	kW	kWh
Aransas			1 6	11,608	7 5	12,013			2 8	10,404		
Atascosa	8 2	47,762			49 8	69,179			4 2	21,152		
Bee					3 3	8,402	102 1	349,135				
Brooks	1 2	5,514										
Caldwell												
Calhoun					10 0	17,593					121 9	191,451
Cameron	85 3	329,088			1,243 4	1,873,794	15 4	82,149	54 3	173,508		
Colorado												
DeWitt												
Dimmitt											43 0	64,531
Duval												
Edwards											9 4	17,401
Frio	7 7	52,932									8 0	11,262
Goliad												
Gonzales	20 9	86,919										
Guadalupe												
Hidalgo	445 0	1,742,016	0 4	2,902	2,068 0	3,572,849	364 2	1,454,339	73 7	253,924	210 8	311,103
Jackson			0 8	5,804					4 1	14,350		
Jim Hogg							175 2	562,152				
Jim Wells					31 3	54,201						
Karnes	13 6	51,814					134 4	907,802				
Kenedy												
Kinney							96 4	288,364			8.5	14,366
Kleberg					45 5	84,372			7 6	25,951		
La Salle												
Live Oak					3 8	4,741						
Matagorda					70 3	96,993					76 9	114,786
Maverick									6 2	18,641	39 7	67,767
Medina							199 3	623,115	4 2	12,920		
McMullen												
Nueces	17 4	85,618	5 2	38,488	1,484 6	2,608,875	564 0	1,534,786	12 4	45,119	3 6	6,156
Real									4 2	20,540		
Refugio			0 4	2,902	21 8	43,142						
San Patricio			1 8	13,440	311 1	587,985			5 3	19,549		
Starr	49 1	193,223			593 8	999,427			9 1	35,453	8 8	14,128
Uvalde											22 6	33,458
Val Verde					9 5	12,984	5 5	16,311			11 5	16,201
Victoria	6 9	24,979			52 7	68,208					10 2	17,524
Webb	195 8	823,751	2 8	21,246	208.0	368,169	211 0	830,589	162 2	528,012	269 4	432,302
Wharton												
Willacy	12 1	43,774			3 9	6,525						
Wilson												
Zavala											24 6	38,483
Zapata			0 3	2,677								
Total	863 0	3,487,391	13 3	99,067	6,218 2	10,489,450	1,867 5	6,648,742	350 2	1,179,523	868 9	1,350,919

Reported and Verified Demand and Energy Reduction by County: North Division

County	Commercial Solutions MTP		Commercial SOP		Hard-to-Reach SOP		Load Management SOP		Open MTP	
	kW	kWh	kW	kWh	kW	kWh	kW	kWh	kW	kWh
Baylor										
Brewster					3 9	6,491				
Briscoe										
Brown										
Callahan	11 0	56,075			9 2	15,736			0 6	2,209
Childress			7 8	32,550						
Coke	7 2	27,830								
Coleman										
Concho									17 7	82,440
Cottle										
Crane										
Crockett										
Dickens										
Eastland	8 5	34,870							2 4	9,378
Edwards										
Fisher										
Foard										
Gillespie										
Hall										
Hardeman					2 6	6,974				
Haskell									7 4	40,258
Irion	8 3	32,194								
Jeff Davis										
Jones					1 7	3,655	600 0	4,158	8 8	31,743
Kent										
Kimble			8 0	51,725					18 4	85,740
King										
Knox										
Mason										
McCullouch									12 0	51,659
Menard	16 7	77,720							31 3	123,059
Motley										
Nolan										
Pecos	8 9	34,467			1 8	2,996				
Presidio			9 3	36,072						
Reagan										
Reeves										
Runnels			164 2	707,300					3 0	11,612
Schleicher										
Shackelford	2 2	10,812							1 2	4,782
Stephens										
Sterling	8 9	34,720								
Stonewall										
Sutton	7 8	30,322								
Taylor	425 9	2,271,880	121 0	508,320	179 4	263,644	2,005 0	14,394	92 4	378,906
Throckmorton										
Tom Green	110 0	616,606	214 6	1,117,292	220 0	322,042	301 0	1,827	129 7	509,791
Upton					98 3	163,908				
Wheeler										
Wilbarger					82 7	209,238	29 0	171		
Total	615 4	3,227,496	524 9	2,453,259	599 6	994,684	2,935 0	20,550	324 9	1,331,577

Reported and Verified Demand and Energy Reduction by County: North Division (Continued)

County	Residential Pool Pump Pilot MTP		Residential SOP		SCORE/CitySmart MTP		SMART^{SM} Source Solar PV MTP		Targeted Low-Income Program	
	kW	kWh	kW	kWh	kW	kWh	kW	kWh	kW	kWh
Baylor										
Brewster			52.4	84,021			7.8	29,115	0.7	724
Briscoe										
Brown										
Callahan			3.2	4,248					3.2	5,065
Childress										
Coke			10 2	14,179						
Coleman										
Concho					18 3	120,001				
Cottle									5.5	5,919
Crane										
Crockett										
Dickens					41.2	266,756				
Eastland			0.8	1,461	28.0	162,870	0.7	2,792	26.1	46,937
Edwards										
Fisher									0.0	134
Foard			2 1	5,594					5.2	5,501
Gillespie										
Hall										
Hardeman			2 9	5,599						
Haskell									2.0	3,620
Irion			5.3	6,851						
Jeff Davis							11 2	40,227		
Jones			0 5	872			5.1	18,324	2 3	2,532
Kent										
Kimble							21.5	67,739		
King										
Knox										
Mason										
McCullouch										
Menard										
Motley										
Nolan										
Pecos			24 6	41,779			11.0	42,759		
Presidio			30.3	55,426			1 3	5,155	8 0	14,727
Reagan										
Reeves										
Runnels			0 8	1,246			2 8	14,128		
Schleicher										
Shackelford			4.6	9,455			6 6	21,217		
Stephens										
Sterling										
Stonewall										
Sutton										
Taylor			169.4	289,628	215 8	1,000,340	24 5	84,049	9.6	14,606
Throckmorton										
Tom Green			483.5	780,364	24 8	130,033	22.3	85,214	53.2	93,962
Upton			121.4	204,644					0.9	4,173
Wheeler										
Wilbarger			141.6	338,793			20 4	60,775	1.8	1,926
Total	0 0	0	1,053.7	1,844,161	328 2	1,680,000	135.4	471,494	118.6	199,824

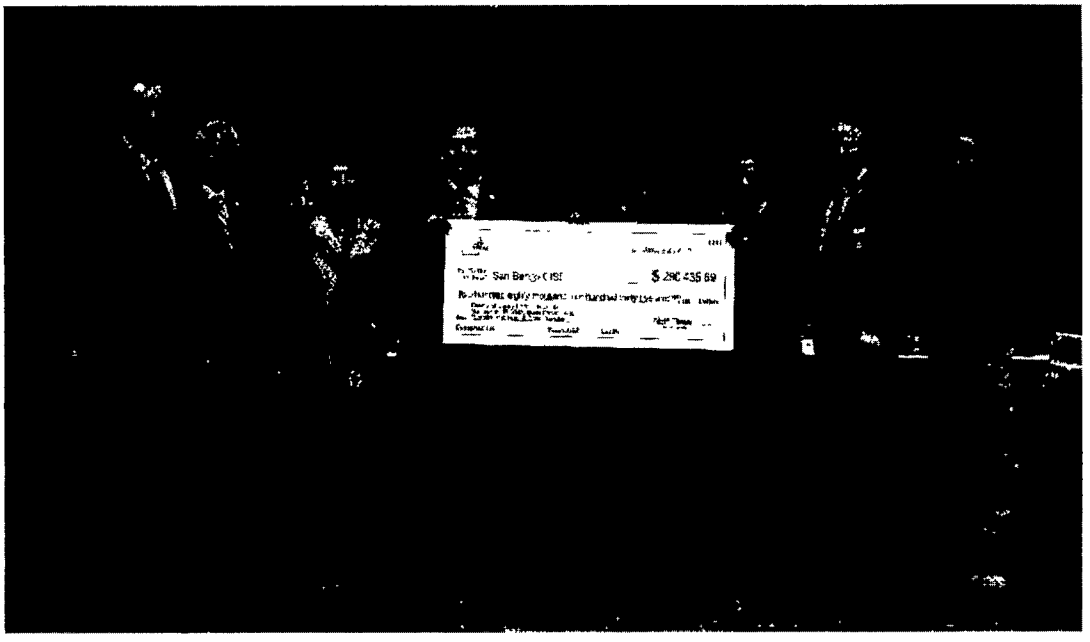
APPENDIX B:

PROGRAM TEMPLATES

AEP Texas does not have any Program Templates to report this year.

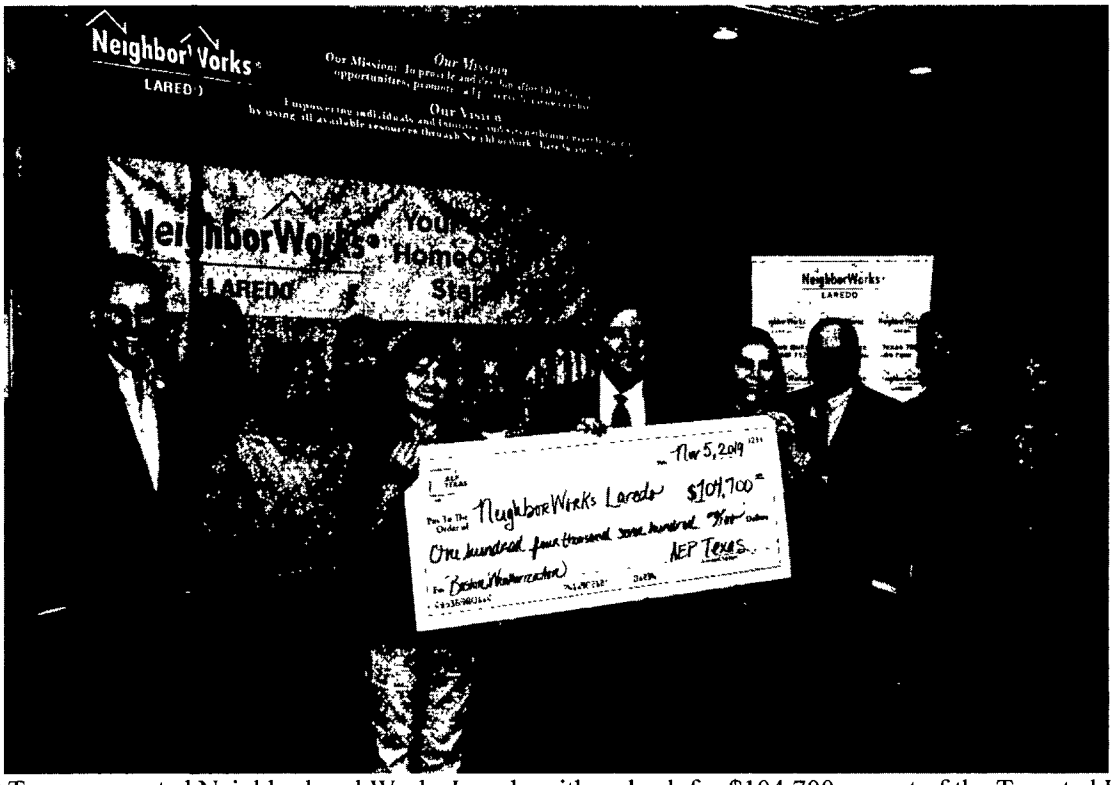
APPENDIX C:
OPTIONAL SUPPORT DOCUMENTATION

San Benito C.I.S.D. receives energy efficiency incentive check

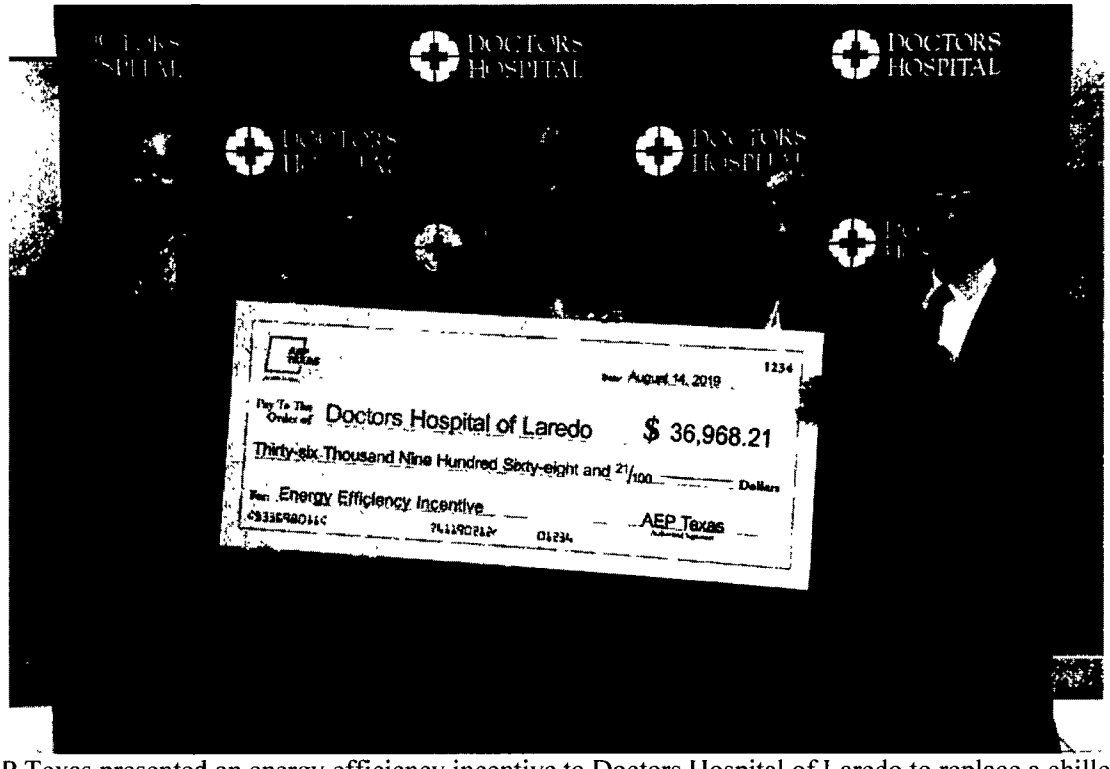


AEP Texas presented the San Benito Consolidated Independent School District with a check for $280,435 as part of the Commercial Standard Offer Program at their regular board meeting.

AEP Texas hosted its annual Residential/Hard-to-Reach program workshop to roll out the 2020 programs.



AEP Texas presented Neighborhood Works Laredo with a check for $104,700 as part of the Targeted Low-Income Program.



AEP Texas presented an energy efficiency incentive to Doctors Hospital of Laredo to replace a chiller as part of the Commercial Standard Offer Program.

AEP Texas presented an energy efficiency incentive to Doctors Hospital of Laredo to replace lighting as part of the Commercial Standard Offer Program.