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**AEP Texas Inc.**

**2018 Energy Efficiency Plan and Report**

**16 Tex. Admin. Code §§ 25.181 and 25.183**

**Amended June 1, 2018**

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Project No. 48146



An **AEP** Company

**BOUNDLESS ENERGY™**

## Table of Contents

|  |           |
|--|-----------|
| <b>INTRODUCTION .....</b>  | <b>4</b>  |
| <b>EEPR ORGANIZATION.....</b>  | <b>5</b>  |
| <b>EXECUTIVE SUMMARY – ENERGY EFFICIENCY PLAN (PLAN).....</b>  | <b>6</b>  |
| <b>EXECUTIVE SUMMARY – ENERGY EFFICIENCY REPORT (REPORT) .....</b>   | <b>7</b>  |
| <b>ENERGY EFFICIENCY PLAN – AEP TEXAS - CENTRAL DIVISION.....</b>  | <b>8</b>  |
| <b>I.    2018 PROGRAMS .....</b>   | <b>8</b>  |
| A.    2018 Program Portfolio   | 8         |
| B.    Existing Programs  | 10        |
| C.    New Programs for 2018  | 13        |
| D.    Discontinued Programs  | 13        |
| E.    Existing DSM Contracts or Obligations  | 14        |
| <b>II.   CUSTOMER CLASSES.....</b>   | <b>15</b> |
| <b>III.  ENERGY EFFICIENCY GOALS AND PROJECTED SAVINGS.....</b>  | <b>16</b> |
| <b>IV.   PROGRAM BUDGETS .....</b>   | <b>20</b> |
| <b>ENERGY EFFICIENCY REPORT – AEP TEXAS - CENTRAL DIVISION .....</b>   | <b>23</b> |
| <b>V.    HISTORICAL DEMAND AND ENERGY GOALS AND SAVINGS<br/>          ACHIEVED FOR THE PREVIOUS FIVE YEARS .....</b> | <b>23</b> |
| <b>VI.   PROJECTED, REPORTED AND VERIFIED DEMAND AND ENERGY<br/>          SAVINGS.....</b>                           | <b>24</b> |
| <b>VII.  HISTORICAL PROGRAM EXPENDITURES .....</b>   | <b>26</b> |
| <b>VIII. PROGRAM FUNDING FOR CALENDAR YEAR 2017 .....</b>  | <b>28</b> |
| <b>IX.   MARKET TRANSFORMATION PROGRAM RESULTS .....</b>   | <b>30</b> |
| <b>X.    ADMINISTRATIVE COSTS AND RESEARCH AND DEVELOPMENT .....</b>   | <b>31</b> |
| <b>XI.   2018 ENERGY EFFICIENCY COST RECOVERY FACTOR (EECRF).....</b>  | <b>32</b> |
| <b>XII.  2017 EECRF SUMMARY.....</b>   | <b>33</b> |
| <b>XIII. UNDERSERVED COUNTIES .....</b>  | <b>34</b> |
| <b>XIV.  PERFORMANCE BONUS .....</b>   | <b>35</b> |
| <b>ACRONYMS .....</b>  | <b>37</b> |
| <b>APPENDIX A:    REPORTED AND VERIFIED DEMAND AND ENERGY<br/>                  REDUCTION BY COUNTY .....</b>        | <b>39</b> |
| <b>APPENDIX B:    PROGRAM TEMPLATES.....</b>   | <b>48</b> |
| <b>APPENDIX C:    EXISTING CONTRACTS OR OBLIGATIONS .....</b>  | <b>49</b> |
| <b>APPENDIX D:    OPTIONAL SUPPORT DOCUMENTATION.....</b>  | <b>50</b> |

|  |           |
|--|-----------|
| <b>ENERGY EFFICIENCY PLAN – AEP TEXAS - NORTH DIVISION.....</b>  | <b>54</b> |
| <b>I.    2018 PROGRAMS .....</b>   | <b>54</b> |
| A.    2018 Program Portfolio   | 54        |
| B.    Existing Programs  | 56        |
| C.    New Programs for 2018  | 59        |
| D.    Discontinued Programs  | 59        |
| E.    Existing DSM Contracts or Obligations  | 59        |
| <b>II.    CUSTOMER CLASSES.....</b>  | <b>60</b> |
| <b>III.   ENERGY EFFICIENCY GOALS AND PROJECTED SAVINGS.....</b>   | <b>61</b> |
| <b>IV.   PROGRAM BUDGETS .....</b>   | <b>64</b> |
| <b>ENERGY EFFICIENCY REPORT – AEP TEXAS - NORTH DIVISION.....</b>  | <b>67</b> |
| <b>V.    HISTORICAL DEMAND AND ENERGY GOALS AND SAVINGS<br/>          ACHIEVED FOR THE PREVIOUS FIVE YEARS .....</b> | <b>67</b> |
| <b>VI.   PROJECTED, REPORTED AND VERIFIED DEMAND AND ENERGY<br/>          SAVINGS.....</b>                           | <b>68</b> |
| <b>VII.  HISTORICAL PROGRAM EXPENDITURES .....</b>   | <b>70</b> |
| <b>VIII. PROGRAM FUNDING FOR CALENDAR YEAR 2017 .....</b>  | <b>72</b> |
| <b>IX.   MARKET TRANSFORMATION PROGRAM RESULTS .....</b>   | <b>74</b> |
| <b>X.    ADMINISTRATIVE COSTS AND RESEARCH AND DEVELOPMENT ..</b>  | <b>75</b> |
| <b>XI.   2018 ENERGY EFFICIENCY COST RECOVERY FACTOR (EECRF).....</b>  | <b>76</b> |
| <b>XII.  2017 EECRF SUMMARY.....</b>   | <b>77</b> |
| <b>XIII. UNDERSERVED COUNTIES .....</b>  | <b>77</b> |
| <b>XIV.  PERFORMANCE BONUS .....</b>   | <b>78</b> |
| <b>ACRONYMS .....</b>  | <b>80</b> |
| <b>APPENDIX A:    REPORTED AND VERIFIED DEMAND AND ENERGY<br/>                  REDUCTION BY COUNTY .....</b>        | <b>82</b> |
| <b>APPENDIX B:    PROGRAM TEMPLATES.....</b>   | <b>88</b> |
| <b>APPENDIX C:    EXISTING CONTRACTS OR OBLIGATIONS .....</b>  | <b>89</b> |
| <b>APPENDIX D:    OPTIONAL SUPPORT DOCUMENTATION.....</b>  | <b>90</b> |

## 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 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.”<sup>1</sup> Consistent with the Commission’s order, AEP Texas is 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 information for the two divisions of AEP Texas.

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:
- (B) Beginning with the 2013 program year, until the trigger described in subparagraph (C) of this paragraph is reached, the utility shall acquire a 30% reduction of its annual growth in demand of residential and commercial customers.
  - (C) If the demand reduction goal to be acquired by a utility under subparagraph (B) 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 (D) of this paragraph for each subsequent program year.
  - (D) Once the trigger described in subparagraph (C) 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.

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<sup>1</sup> 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).

- (E) Except as adjusted in accordance with subsection (w) 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, fourteen sections, a list of acronyms, and four appendices for each division of AEP Texas.

#### **Executive Summary**

- summarizes AEP Texas' plans for achieving its goals and projected energy efficiency savings for program years 2018 and 2019 and highlights AEP Texas' achievements for Program Year 2017.

#### **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 2017 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 (2013-2017) 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 calendar years 2016 and 2017.
- Section VII details the incentive and administration expenditures for each of the previous five years (2013-2017) detailed by program for each customer class.
- Section VIII compares the actual 2017 expenditures with the 2017 budget by program for each customer class. It identifies funds committed but not expended and funds remaining and not committed. 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 2018 Energy Efficiency Cost Recovery Factor (EECRF).
- Section XII documents the 2017 EECRF Summary.
- Section XIII documents the Underserved Counties.
- Section XIV describes the Performance Bonus calculation for Program Year 2017.

**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 – Existing energy efficiency contracts and obligations.
- Appendix D – 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 each division separately throughout this EEPR.

The Central Division plans to achieve its 2018 mandated demand and energy goals of 15,990 kW and 28,014,000 kWh as shown in Table 1 below through residential and non-residential SOPs and MTPs. The Central Division will utilize a budget of \$14,259,412 to accomplish these goals.

**Table 1: Summary of Central Division Goals, Projected Savings (at the Meter),<sup>2</sup> 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)* |
|---------------|-----------------------------------|------------------------------------|-----------------------|-------------------|---------------------------------|--------------------------------|---------------------------|
| 2018          | 3,998                             | 15 99                              | 15 99                 | 28,014            | 41.09                           | 61,611                         | \$14,259                  |
| 2019          | 4,034                             | 16 14                              | 16 14                 | 28,277            | 44 80                           | 62,238                         | \$14,572                  |

\* The 2018 and 2019 Projected Budgets include costs associated with Evaluation, Measurement & Verification activities.

<sup>2</sup> Average Peak Demand figures are from Table 5; Projected Savings from Table 6; Projected Budgets from Table 7.

The North Division plans to achieve its 2018 mandated demand and energy goals of 4,260 kW and 7,464,000 kWh as shown in Table 2 below through residential and non-residential SOPs and MTPs. The North Division will utilize a budget of \$3,308,209 to accomplish these goals.

**Table 2: Summary of North Division Goals, Projected Savings (at the Meter),<sup>3</sup> 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)* |
|---------------|-----------------------------------|------------------------------------|-----------------------|-------------------|---------------------------------|--------------------------------|---------------------------|
| 2018          | 1,004                             | 4.02                               | 4.26                  | 7,464             | 5.56                            | 11,686                         | \$3,308                   |
| 2019          | 1,010                             | 4.04                               | 4.26                  | 7,464             | 6.18                            | 12,170                         | \$3,388                   |

\* The 2018 and 2019 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 45,867 kW and 64,971,401 kWh, respectively, in 2017. The total energy efficiency cost for achieving these savings was \$13,264,831. The Central Division’s achievement exceeded the 2017 mandated energy efficiency goals of 15,830 kW and 27,734,000 kWh, thus allowing the Central Division to earn a Performance Bonus.

The North Division achieved demand and energy reductions of 6,790 kW and 12,038,177 kWh, respectively, in 2017. The total energy efficiency cost for achieving these savings was \$2,996,343. The North Division’s achievement exceeded the 2017 mandated energy efficiency goals of 4,260 kW and 7,464,000 kWh, thus allowing the North Division to earn a Performance Bonus.

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

<sup>3</sup> Average Peak Demand figures are from Table 16; Projected Savings from Table 17; Projected Budgets from Table 18.



## **ENERGY EFFICIENCY PLAN – AEP TEXAS CENTRAL DIVISION**

### **I. 2018 Programs**

#### ***A. 2018 Program Portfolio***

The Central Division has implemented a variety of programs in 2018 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 3 summarizes the programs and targeted customer class markets for Program Year 2018. The programs listed in Table 3 are described in further detail in Subsection B. AEP Texas maintains a web site containing information on participation and forms required for project submission at [www.AEPTexas.com](http://www.AEPTexas.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 a third-party implementer. 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.

## 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 3: 2018 Energy Efficiency Program Portfolio – Central Division**

| <b>Program</b>                                | <b>Target Market</b>      | <b>Application</b>          | <b>Link to Program Manual</b>   |
|---|---------------------------|-----------------------------|---|
| Commercial Solutions MTP                      | Commercial                | Retrofit & New Construction | <a href="https://www.aeptexas.com/documents/aep-texas-central-commercial-solutions-program-manual.pdf">https://www.aeptexas.com/documents/aep-texas-central-commercial-solutions-program-manual.pdf</a>   |
| Commercial SOP                                | Commercial                | Retrofit & New Construction | <a href="https://aep-texas.com/global/utilities/lib/docs/save/business/programs/aep-texas/stw/2018/2018%20AEP%20Texas%20SOP%20Manual.pdf">https://aep-texas.com/global/utilities/lib/docs/save/business/programs/aep-texas/stw/2018/2018%20AEP%20Texas%20SOP%20Manual.pdf</a>                       |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP       | Commercial; Residential   | Retrofit                    | <a href="https://www.aeptexas.com/documents/AEP%20TCD_CoolSaver_Program%20Manual_2018.pdf">https://www.aeptexas.com/documents/AEP%20TCD_CoolSaver_Program%20Manual_2018.pdf</a>   |
| Hard-to-Reach SOP                             | Residential Hard-to-Reach | Retrofit                    | <a href="https://aep-texas.com/global/utilities/lib/docs/save/residential/programs/aep-texas/TCC/2018/hardtoeach/2018%20AI%20HTR%20SOP%20Manual.pdf">https://aep-texas.com/global/utilities/lib/docs/save/residential/programs/aep-texas/TCC/2018/hardtoeach/2018%20AI%20HTR%20SOP%20Manual.pdf</a> |
| High-Performance New Homes MTP                | Residential               | New Construction            | <a href="http://www.southtxsaves.com/sites/default/files/public/2018%20AEP%20Texas%20HPH%20Program%20Guide.pdf">http://www.southtxsaves.com/sites/default/files/public/2018%20AEP%20Texas%20HPH%20Program%20Guide.pdf</a>   |
| Load Management SOP                           | Commercial                | Retrofit                    | <a href="https://aep-texas.com/global/utilities/lib/docs/save/business/programs/aep-texas/slx/2017/2017_AEP_Central_LM%20Manual.pdf">https://aep-texas.com/global/utilities/lib/docs/save/business/programs/aep-texas/slx/2017/2017_AEP_Central_LM%20Manual.pdf</a>                                 |
| Open MTP                                      | Commercial                | Retrofit                    | <a href="https://www.aeptexas.com/documents/aep-texas-central-small-business-program-manual.pdf">https://www.aeptexas.com/documents/aep-texas-central-small-business-program-manual.pdf</a>   |
| Residential SOP                               | Residential               | Retrofit                    | <a href="https://aep-texas.com/global/utilities/lib/docs/save/residential/programs/aep-texas/TCC/2018/2018%20AEP%20Texas%20RSOP%20Manual.pdf">https://aep-texas.com/global/utilities/lib/docs/save/residential/programs/aep-texas/TCC/2018/2018%20AEP%20Texas%20RSOP%20Manual.pdf</a>               |
| SCORE/CitySmart MTP                           | Commercial                | Retrofit & New Construction | <a href="https://www.aeptexas.com/documents/aep-texas-central-score-program-manual.pdf">https://www.aeptexas.com/documents/aep-texas-central-score-program-manual.pdf</a>   |
| SMART Source <sup>SM</sup> Solar PV MTP       | Commercial; Residential   | Retrofit & New Construction | <a href="http://txrenewables.com/apv/documents/AI%20Texas%20PV%20Program%20Guidebook%202018%2020180119.pdf">http://txrenewables.com/apv/documents/AI%20Texas%20PV%20Program%20Guidebook%202018%2020180119.pdf</a>   |
| Targeted Low-Income Energy Efficiency Program | Low-Income Residential    | Retrofit                    | No website available  |

## ***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<sup>SM</sup> A/C Tune-Up Market Transformation Program (CoolSaver<sup>SM</sup> MTP)**

The CoolSaver<sup>SM</sup> 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. For the 2018 program year additional incentives will be 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 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)**

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. For the 2018 program year the program has a three-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. 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. 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 residential customers in existing homes. Incentives are paid to project sponsors for eligible measures installed in 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:

- Photos of gauges showing the existing unit in full functional status;
- The age of the existing unit (maximum age of 24 years);
- Photo of the existing unit nameplate
- Model number, serial number and manufacturer 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.

### **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<sup>SM</sup> Solar PV Market Transformation Program (PV MTP)**

The PV MTP offers incentives to 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 Central Division 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 2018***

The Central Division has no new programs for 2018.

### ***D. Discontinued Programs***

#### **Whisker Labs Residential Thermostat Demand Response (DR) Pilot Market Transformation Program (WLDR MTP)**

Whisker Labs (WL), formerly known as Earth Networks (EN), used their Connected Savings platform to deliver an Integrated Demand Side Management (IDSMS) aggregation program that would bring residential energy and demand savings. On the days that AEP Texas requested demand response services be implemented, WL optimized the control thermostats to reduce HVAC load. The load reduction period was for a duration of no more than three hours with at least an hour notice prior to the desired event start time.

***E. Existing DSM Contracts or Obligations***

The Central Division has no existing DSM contracts or obligations.

## II. Customer Classes

The Central Division’s energy efficiency programs target its Residential and Commercial customer classes. The Central Division’s energy efficiency 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 4 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 2018. 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. The Central Division offers a varied portfolio of SOPs and MTPs such that all eligible customer classes have access to energy efficiency alternatives.

**Table 4: Summary of Customer Classes – Central Division**

| <b>Customer Class</b>      | <b>Number of Customers</b> |
|----------------------------|----------------------------|
| Commercial                 | 153,416                    |
| Residential                | 761,912                    |
| Hard-to-Reach <sup>4</sup> | 241,526                    |

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

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<sup>4</sup> According to the U.S. Census Bureau’s 2016 Current Population Survey, 31.7% of Texas families fall below 200% of the poverty threshold. Applying that percentage to the Central Division’s residential customer base of 761,912, the number of HTR customers is estimated to be 241,526.



### **III. Energy Efficiency Goals and Projected Savings**

The Central Division's 2018 annual demand and energy reduction goals to be achieved are 15.99 MW and 28,014 MWh. The Central Division's 2019 annual goals are 16.14 MW and 28,277 MWh. These goals have been calculated as prescribed by the EE Rule.

The 2018 goal was calculated by applying four-tenths of 1% (0.004) of its summer weather-adjusted peak demand for the combined residential and commercial customers to the five year average (2012-2016) peak demand at the meter of 3,998 MW. This resulted in a calculated goal of 15.99 MW.

The 2019 demand goal is calculated by applying four-tenths of 1% (0.004) of its summer weather-adjusted peak demand for the combined residential and commercial customers to the five year average (2013-2017) peak demand at the meter of 4,034 MW. This results in a calculated goal of 16.14 MW.

Table 5 presents historical annual growth in demand data for the previous five years that was used to calculate the Central Division's goals. Table 6 presents the projected demand and energy savings for Program Years 2018 and 2019 by program, for each customer class with fully-deployed program budgets.

**Table 5: Annual Growth in Demand and Energy Consumption – Central Division**

| Calendar Year | Peak Demand (MW) @ Source |                  |                          |                  |         |                                    | Energy Consumption (MWh) @ Meter |                  |                          |                  | Energy Efficiency Goal Calculations      |                                     |  |
|---------------|---------------------------|------------------|--------------------------|------------------|---------|------------------------------------|----------------------------------|------------------|--------------------------|------------------|--|-------------------------------------|--|
|               | Total System              |                  | Residential & Commercial |                  |         |                                    | Total System                     |                  | Residential & Commercial |                  | Peak Demand at Meter (9.4% line losses)* | 5 year Average Peak Demand at Meter | Goal Metric: 0.4% Peak Demand at Meter |
|               | Actual                    | Weather Adjusted | Actual                   | Weather Adjusted | Opt-Out | Peak Demand at Source Net Opt-outs | Actual                           | Weather Adjusted | Actual                   | Weather Adjusted |  |                                     |  |
| 2013          | 4,681                     | 4,784            | 4,224                    | 4,327            | -1.25   | 4,326                              | 23,604                           | 23,397           | 19,136                   | 18,929           | 3,919                                    | NA                                  | NA                                     |
| 2014          | 4,948                     | 4,943            | 4,465                    | 4,461            | -1.02   | 4,460                              | 24,759                           | 24,657           | 20,020                   | 19,918           | 4,040                                    | NA                                  | NA                                     |
| 2015          | 5,043                     | 4,963            | 4,524                    | 4,444            | -7.90   | 4,436                              | 25,030                           | 24,729           | 19,491                   | 19,191           | 4,019                                    | 3,863                               | 15.45                                  |
| 2016          | 5,243                     | 5,089            | 4,759                    | 4,605            | -55.50  | 4,550                              | 25,912                           | 25,727           | 20,418                   | 20,233           | 4,122                                    | 3,934                               | 15.73                                  |
| 2017          | 5,230                     | 5,050            | 4,737                    | 4,557            | -66.50  | 4,490                              | 25,758                           | 25,637           | 19,744                   | 19,623           | 4,068                                    | 3,958                               | 15.83                                  |
| 2018          | NA                        | NA               | NA                       | NA               | NA      | NA                                 | NA                               | NA               | NA                       | NA               | NA                                       | 3,998                               | 15.99                                  |
| 2019          | NA                        | NA               | NA                       | NA               | NA      | NA                                 | NA                               | NA               | NA                       | NA               | NA                                       | 4,034                               | 16.14                                  |

\*Line losses are derived from the loss factors determined in the Central Division’s most recent line loss study.

**Table 6: Projected Demand and Energy Savings by Program for Each Customer Class for 2018 and 2019 (at the Meter) – Central Division**

| <b>2018</b>                                   | <b>Projected Savings</b> |                   |
|---|--------------------------|-------------------|
| <b>Customer Class and Program</b>             | <b>kW</b>                | <b>kWh</b>        |
| <b>Commercial</b>                             |                          |                   |
| Commercial Solutions MTP                      | 992                      | 5,500,000         |
| Commercial SOP                                | 2,501                    | 13,147,250        |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP       | 1,393                    | 4,376,124         |
| Load Management SOP                           | 24,100                   | 116,114           |
| Open MTP                                      | 830                      | 3,250,000         |
| SCORE/CitySmart MTP                           | 1,850                    | 8,000,000         |
| SMART Source <sup>SM</sup> Solar PV MTP       | 218                      | 654,460           |
| <b>Residential</b>                            |                          |                   |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP       | 1,017                    | 3,223,609         |
| High-Performance New Homes MTP                | 539                      | 1,631,874         |
| Residential SOP                               | 5,213                    | 15,981,978        |
| SMART Source <sup>SM</sup> Solar PV MTP       | 133                      | 425,489           |
| <b>Hard-to-Reach</b>                          |                          |                   |
| Hard-to-Reach SOP                             | 1,450                    | 3,810,810         |
| Targeted Low-Income Energy Efficiency Program | 852                      | 1,492,923         |
| <b>Total Annual Projected Savings</b>         | <b>41,088</b>            | <b>61,610,631</b> |

**Table 6: Projected Demand and Energy Savings by Program for Each Customer Class for 2018 and 2019 (at the Meter) – Central Division  
(Continued)**

| <b>2019</b>                                   | <b>Projected Savings</b> |                   |
|---|--------------------------|-------------------|
| <b>Customer Class and Program</b>             | <b>kW</b>                | <b>kWh</b>        |
| <b>Commercial</b>                             |                          |                   |
| Commercial Solutions MTP                      | 992                      | 5,500,000         |
| Commercial SOP                                | 2,501                    | 13,147,250        |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP       | 1,393                    | 4,376,124         |
| Load Management SOP                           | 24,100                   | 116,114           |
| Open MTP                                      | 830                      | 3,250,000         |
| SCORE/CitySmart MTP                           | 1,850                    | 8,000,000         |
| SMART Source <sup>SM</sup> Solar PV MTP       | 218                      | 654,460           |
| <b>Residential</b>                            |                          |                   |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP       | 1,017                    | 3,223,609         |
| High-Performance New Homes MTP                | 500                      | 1,631,874         |
| Residential DR MTP                            | 3,750                    | N/A               |
| Residential Pool Pump Pilot MTP               | 127                      | 1,017,810         |
| Residential SOP                               | 5,079                    | 15,571,426        |
| SMART Source <sup>SM</sup> Solar PV MTP       | 133                      | 425,489           |
| <b>Hard-to-Reach</b>                          |                          |                   |
| Hard-to-Reach SOP                             | 1,450                    | 3,810,810         |
| Targeted Low-Income Energy Efficiency Program | 863                      | 1,512,633         |
| <b>Total Annual Projected Savings</b>         | <b>44,803</b>            | <b>62,237,599</b> |

#### **IV. Program Budgets**

Table 7 presents total proposed budget allocations required to meet the Central Division's projected demand and energy savings to be achieved for Program Years 2018 and 2019. 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 7: Projected Annual Budget by Program for Each Customer Class for 2018 and 2019 – Central Division**

| <b>2018</b>  | <b>Incentives</b>   | <b>Admin</b>       | <b>R&amp;D</b>   | <b>EM&amp;V</b>  | <b>Total Budget</b> |
|--|---------------------|--------------------|------------------|------------------|---------------------|
| <b>Commercial</b>  |                     |                    |                  |                  |                     |
| Commercial Solutions MTP                                     | \$508,500           | \$56,500           |                  |                  | \$565,000           |
| Commercial SOP   | \$1,813,500         | \$201,500          |                  |                  | \$2,015,000         |
| CoolSaver <sup>SM</sup> 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 <sup>SM</sup> Solar PV MTP                      | \$204,000           | \$22,667           |                  |                  | \$226,667           |
| <b>Residential</b>   |                     |                    |                  |                  |                     |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP                      | \$675,000           | \$75,000           |                  |                  | \$750,000           |
| High-Performance New Homes MTP                               | \$765,000           | \$85,000           |                  |                  | \$850,000           |
| Residential SOP  | \$2,736,640         | \$304,071          |                  |                  | \$3,040,711         |
| SMART Source <sup>SM</sup> Solar PV MTP                      | \$204,000           | \$22,667           |                  |                  | \$226,667           |
| <b>Hard-to-Reach</b>   |                     |                    |                  |                  |                     |
| Hard-to-Reach SOP  | \$1,087,560         | \$120,840          |                  |                  | \$1,208,400         |
| Targeted Low-Income Energy Efficiency Program                | \$1,363,400         | \$151,489          |                  |                  | \$1,514,889         |
| <b>Research and Development (R&amp;D)</b>                    |                     |                    |                  |                  |                     |
| R&D  | NAP                 | NAP                | \$365,125        |                  | \$365,125           |
| <b>Evaluation, Measurement &amp; Verification (EM&amp;V)</b> |                     |                    |                  |                  |                     |
| EM&V   | NAP                 | NAP                | NAP              | \$176,953        | \$176,953           |
| <b>Total Budget</b>  | <b>\$12,345,600</b> | <b>\$1,371,734</b> | <b>\$365,125</b> | <b>\$176,953</b> | <b>\$14,259,412</b> |

**Table 7: Projected Annual Budget by Program for Each Customer Class for 2018 and 2019  
– Central Division (Continued)**

| <b>2019</b>                                   | <b>Incentives</b>   | <b>Admin</b>       | <b>R&amp;D</b>   | <b>EM&amp;V</b>  | <b>Total Budget</b> |
|---|---------------------|--------------------|------------------|------------------|---------------------|
| <b>Commercial</b>                             |                     |                    |                  |                  |                     |
| Commercial Solutions MTP                      | \$508,500           | \$56,500           |                  |                  | \$565,000           |
| Commercial SOP                                | \$1,813,500         | \$201,500          |                  |                  | \$2,015,000         |
| CoolSaver <sup>SM</sup> 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 <sup>SM</sup> Solar PV MTP       | \$204,000           | \$22,667           |                  |                  | \$226,667           |
| <b>Residential</b>                            |                     |                    |                  |                  |                     |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP       | \$675,000           | \$75,000           |                  |                  | \$750,000           |
| High-Performance New Homes MTP                | \$765,000           | \$85,000           |                  |                  | \$850,000           |
| Residential DR MTP                            | \$180,000           | \$20,000           |                  |                  | \$200,000           |
| Residential Pool Pumps Pilot MTP              | \$150,300           | \$16,700           |                  |                  | \$167,000           |
| Residential SOP                               | \$2,666,340         | \$296,260          |                  |                  | \$2,962,600         |
| SMART Source <sup>SM</sup> Solar PV MTP       | \$204,000           | \$22,667           |                  |                  | \$226,667           |
| <b>Hard-to-Reach</b>                          |                     |                    |                  |                  |                     |
| Hard-to-Reach SOP                             | \$1,087,560         | \$120,840          |                  |                  | \$1,208,400         |
| Targeted Low-Income Energy Efficiency Program | \$1,381,400         | \$153,489          |                  |                  | \$1,534,889         |
| <b>Research and Development (R&amp;D)</b>     |                     |                    |                  |                  |                     |
| R&D   |                     |                    | \$365,125        |                  | \$365,125           |
| Evaluation, Measurement & Verification (EM&V) |                     |                    |                  |                  |                     |
| EM&V  |                     |                    |                  | \$180,198        | \$180,198           |
| <b>Total Budget</b>                           | <b>\$12,623,600</b> | <b>\$1,402,623</b> | <b>\$365,125</b> | <b>\$180,198</b> | <b>\$14,571,546</b> |

## ENERGY EFFICIENCY REPORT – AEP TEXAS - CENTRAL DIVISION

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

Table 8 contains the Central Division’s demand and energy reduction goals and actual savings achieved for the previous five years (2013-2017) calculated in accordance with the EE Rule.

**Table 8: Historical Demand and Energy Goals\* and Savings Achieved (at the Meter) – Central Division**

| Calendar Year | Actual Weather Adjusted Demand Goal (MW) | Actual Weather Adjusted Energy Goal (MWh) | Savings Achieved (MW) | Savings Achieved (MWh) |
|---------------|--|---|-----------------------|------------------------|
| 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                 |
| 2014          | 12.93                                    | 22,653                                    | 39.81                 | 63,587                 |
| 2013          | 12.93                                    | 22,653                                    | 34.14                 | 48,954                 |

\* Actual Weather Adjusted MW and MWh Goals as reported in the EEPs filed in years 2013-2017.



## VI. Projected, Reported and Verified Demand and Energy Savings

**Table 9: Projected versus Reported and Verified Savings for 2017 and 2016 (at the Meter) – Central Division**

| 2017<br>Customer Class and Program            | Projected Savings |                   | Reported and Verified Savings |                   |
|---|-------------------|-------------------|-------------------------------|-------------------|
|   | kW                | kWh               | kW                            | kWh               |
| <b>Commercial</b>                             |                   |                   |                               |                   |
| Commercial Solutions MTP                      | 992               | 5,500,000         | 754                           | 3,701,977         |
| Commercial SOP                                | 2,337             | 15,661,815        | 2,344                         | 16,092,365        |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP       | 1,393             | 4,376,124         | 1,735                         | 3,721,860         |
| Load Management SOP                           | 22,995            | 55,268            | 24,783                        | 48,019            |
| Open MTP                                      | 830               | 3,250,000         | 842                           | 3,991,945         |
| SCORE/CitySmart MTP                           | 1,850             | 8,000,000         | 2,157                         | 9,971,832         |
| SMART Source <sup>SM</sup> Solar PV MTP       | 194               | 374,026           | 28                            | 87,121            |
| <b>Residential</b>                            |                   |                   |                               |                   |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP       | 1,017             | 3,223,609         | 925                           | 3,101,501         |
| High-Performance New Homes MTP                | 539               | 1,631,874         | 592                           | 2,462,317         |
| Residential SOP                               | 4,937             | 18,213,100        | 5,254                         | 16,177,034        |
| SMART Source <sup>SM</sup> Solar PV MTP       | 166               | 320,000           | 125                           | 394,641           |
| Whisker Labs* Res DR Pilot MTP                | 3,750             | 0                 | 4,122                         | 744               |
| <b>Hard-to-Reach</b>                          |                   |                   |                               |                   |
| Hard-to-Reach SOP                             | 2,013             | 3,678,690         | 1,399                         | 3,883,152         |
| Targeted Low-Income Energy Efficiency Program | 768               | 1,408,000         | 809                           | 1,336,893         |
| <b>Total Annual Savings</b>                   | <b>43,781</b>     | <b>65,692,506</b> | <b>45,867</b>                 | <b>64,971,401</b> |

\*Previously Earth Networks

**Table 9: Projected versus Reported and Verified Savings for 2017 and 2016 (at the Meter) – Central Division (Continued)**

| 2016<br>Customer Class and Program            | Projected Savings |                   | Reported and Verified Savings |                   |
|---|-------------------|-------------------|-------------------------------|-------------------|
|   | kW                | kWh               | kW                            | kWh               |
| <b>Commercial</b>                             |                   |                   |                               |                   |
| Commercial Solutions MTP                      | 834               | 3,888,000         | 712                           | 3,930,677         |
| Commercial SOP                                | 2,417             | 16,278,090        | 2,161                         | 14,664,215        |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP       | 1,393             | 4,376,124         | 1,487                         | 3,325,045         |
| Load Management SOP                           | 27,092            | 27,092            | 20,234                        | 48,673            |
| Open MTP                                      | 718               | 2,051,894         | 711                           | 3,194,943         |
| SCORE/CitySmart MTP                           | 1,691             | 5,749,624         | 1,820                         | 10,287,798        |
| SMART Source <sup>SM</sup> Solar PV MTP       | 149               | 288,000           | 349                           | 673,224           |
| <b>Residential</b>                            |                   |                   |                               |                   |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP       | 1,017             | 3,223,609         | 1,009                         | 3,317,003         |
| Earth Networks Res DR Pilot MTP               | 3,750             | 3,750             | 3,084                         | 0                 |
| Efficiency Connection Pilot MTP               | 190               | 717,025           | 53                            | 214,947           |
| High-Performance New Homes MTP                | 539               | 1,631,874         | 459                           | 1,843,501         |
| Reliant Res DR Pilot MTP                      | 60                | 60                | 85                            | 0                 |
| Residential SOP                               | 4,937             | 18,211,834        | 4,590                         | 18,680,742        |
| SMART Source <sup>SM</sup> Solar PV MTP       | 142               | 274,000           | 206                           | 396,448           |
| <b>Hard-to-Reach</b>                          |                   |                   |                               |                   |
| Hard-to-Reach SOP                             | 1,258             | 4,578,986         | 1,560                         | 5,749,025         |
| Targeted Low-Income Energy Efficiency Program | 780               | 1,343,550         | 780                           | 1,387,550         |
| <b>Total Annual Savings</b>                   | <b>46,967</b>     | <b>62,643,512</b> | <b>39,300</b>                 | <b>67,713,790</b> |

## VII. Historical Program Expenditures

This section documents the Central Division's incentive and administration expenditures for the previous five years (2013-2017) detailed by program for each customer class.

**Table 10: Historical Program Incentive and Administrative Expenditures for 2013 through 2017 (000's) – Central Division**

|   | 2017       |          | 2016       |          | 2015       |          | 2014       |          | 2013     |          |
|---|------------|----------|------------|----------|------------|----------|------------|----------|----------|----------|
|   | Incent.    | Admin    | Incent.    | Admin    | Incent.    | Admin    | Incent.    | Admin    | Incent.  | Admin    |
| <b>Commercial</b>                       |            |          |            |          |            |          |            |          |          |          |
| A/C Distributor Pilot MTP               | NAP        | NAP      | NAP        | NAP      | NAP        | NAP      | NAP        | NAP      | \$40.76  | \$6.08   |
| Commercial Solutions MTP                | \$429.78   | \$41.01  | \$464.67   | \$52.42  | \$660.88   | \$62.02  | \$479.55   | \$50.29  | \$424.94 | \$42.46  |
| Commercial SOP                          | \$1,686.17 | \$216.08 | \$1,763.34 | \$194.48 | \$1,675.57 | \$178.07 | \$1,704.68 | \$183.80 | \$950.47 | \$153.00 |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP | \$597.57   | \$41.72  | \$561.47   | \$46.54  | \$601.34   | \$45.73  | \$642.34   | \$46.69  | \$624.27 | \$47.61  |
| Irrigation Load Management MTP          | NAP        | NAP      | NAP        | NAP      | NAP        | NAP      | \$200.00   | \$16.65  | \$440.00 | \$34.78  |
| Load Management SOP                     | \$611.07   | \$78.27  | \$573.06   | \$50.03  | \$650.20   | \$51.71  | \$543.00   | \$45.03  | \$513.29 | \$54.38  |
| Open MTP                                | \$793.80   | \$53.07  | \$785.45   | \$61.03  | \$818.94   | \$61.45  | \$741.21   | \$52.54  | \$684.76 | \$51.66  |
| SCORE/CitySmart MTP                     | \$1,005.20 | \$74.42  | \$971.10   | \$88.69  | \$840.09   | \$73.65  | \$1,026.19 | \$86.89  | \$911.24 | \$75.97  |
| SMART Source <sup>SM</sup> Solar PV MTP | \$51.80    | \$4.12   | \$182.70   | \$14.86  | \$58.56    | \$6.41   | \$200.01   | \$15.15  | \$152.14 | \$11.20  |

(Table continued on next page)

**Table 10: Historical Program Incentive and Administrative Expenditures for 2013 through 2017 (000's) – Central Division  
(Continued)**

|   | 2017               |                   | 2016               |                   | 2015               |                   | 2014               |                   | 2013               |                   |
|---|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|
|   | Incent.            | Admin             | Incent.            | Admin             | Incent.            | Admin             | Incent.            | Admin             | Incent.            | Admin             |
| <b>Residential</b>  |                    |                   |                    |                   |                    |                   |                    |                   |                    |                   |
| A/C Distributor Pilot MTP                                 | NAP                | NAP               | NAP                | NAP               | NAP                | NAP               | \$278.05           | \$40.25           | \$266.43           | \$39.77           |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP                   | \$638.96           | \$44.83           | \$672.78           | \$55.82           | \$673.27           | \$51.20           | \$525.36           | \$38.18           | \$601.41           | \$45.95           |
| Efficiency Connection Pilot MTP                           | NAP                | NAP               | \$90.16            | \$11.20           | \$67.03            | \$4.45            | NAP                | NAP               | NAP                | NAP               |
| High-Performance New Homes MTP                            | \$753.15           | \$94.84           | \$636.50           | \$67.45           | \$757.64           | \$82.07           | \$777.07           | \$85.08           | \$730.16           | \$79.58           |
| Reliant DR Pilot MTP                                      | NAP                | NAP               | \$3.88             | \$0.38            | NAP                | NAP               | NAP                | NAP               | NAP                | NAP               |
| Residential SOP   | \$2,500.42         | \$269.54          | \$2,591.75         | \$242.54          | \$2,649.88         | \$246.42          | \$2,626.27         | \$263.28          | \$2,596.76         | \$292.37          |
| SMART Source <sup>SM</sup> Solar PV MTP                   | \$206.76           | \$16.46           | \$204.81           | \$17.43           | \$207.62           | \$16.33           | \$199.75           | \$15.14           | \$207.81           | \$15.29           |
| Whisker Labs* Res DR Pilot MTP                            | \$150.00           | \$8.77            | \$123.35           | \$9.07            | NAP                | NAP               | NAP                | NAP               | NAP                | NAP               |
| <b>Hard-to-Reach</b>                                      |                    |                   |                    |                   |                    |                   |                    |                   |                    |                   |
| Hard-to-Reach SOP   | \$970.66           | \$103.83          | \$1,115.74         | \$112.50          | \$922.10           | \$97.61           | \$950.70           | \$85.02           | \$950.33           | \$96.29           |
| Targeted Low-Income Energy Efficiency Program             | \$1,403.99         | \$107.39          | \$1,265.06         | \$103.44          | \$1,270.64         | \$98.09           | \$1,262.46         | \$87.13           | \$1,271.58         | \$96.69           |
| <b>Research and Development (R&amp;D)</b>                 | \$0.00             | \$134.25          | NAP                | \$327.31          | NAP                | \$332.54          | NAP                | \$427.12          | NAP                | \$184.31          |
| <b>Evaluation and Measurement Verification (EM&amp;V)</b> | \$0.00             | \$176.88          | NAP                | \$161.05          | NAP                | \$246.63          | NAP                | \$305.06          | NAP                | \$361.07          |
| <b>Total Expenditures</b>                                 | <b>\$11,799.33</b> | <b>\$1,465.50</b> | <b>\$12,005.81</b> | <b>\$1,616.24</b> | <b>\$11,853.76</b> | <b>\$1,654.36</b> | <b>\$12,156.64</b> | <b>\$1,843.30</b> | <b>\$11,366.35</b> | <b>\$1,688.46</b> |

\*Previously Earth Networks

## **VIII. Program Funding for Calendar Year 2017**

As shown in Table 11, the total projected budget in 2017 was \$14,259,483 and the actual total funds expended were \$13,264,831. This is an overall total program expenditure difference of less than 10% from the amount budgeted.

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

The Commercial Solutions MTP did not fully utilize its incentive budget due to projects not be completed before the end of the year.

The commercial component of the PV MTP did not fully utilize its incentive budget during the program year due to several projects withdrawing from the program before the end of the year.

The Hard to Reach SOP was under budget due to some funds being moved to the Targeted Low Income Program.

The combined 2017 expenditures for the TLIP and the HTR SOP constituted 18% of the energy efficiency budget for the 2017 Program Year. The 2017 expenditure for the TLIP constituted 11% of the energy efficiency budget for the 2017 Program Year.

**Table 11: Program Funding for Calendar Year 2017 (Dollar amounts in 000's) – Central Division**

|   | Total Projected Budget <sup>5</sup> | 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 |
|---|-------------------------------------|------------------------------------|------------------------------------|-------------------------------|--------------------------------|--|----------------------|
| <b>Commercial</b>                       |                                     |                                    |                                    |                               |                                |  |                      |
| Commercial Solutions MTP                | \$565.00                            | 60                                 | \$429.78                           | \$41.01                       |                                |  | \$470.80             |
| Commercial SOP                          | \$2,015.00                          | 206                                | \$1,686.17                         | \$216.08                      |                                |  | \$1,902.25           |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP | \$663.00                            | 593                                | \$597.57                           | \$41.72                       |                                |  | \$639.29             |
| Load Management SOP                     | \$723.00                            | 64                                 | \$611.07                           | \$78.27                       |                                |  | \$689.34             |
| Open MTP                                | \$882.00                            | 191                                | \$793.80                           | \$53.07                       |                                |  | \$846.87             |
| SCORE/CitySmart MTP                     | \$1,052.00                          | 113                                | \$1,005.20                         | \$74.42                       |                                |  | \$1,079.63           |
| SMART Source <sup>SM</sup> Solar PV MTP | \$226.67                            | 3                                  | \$51.80                            | \$4.12                        |                                |  | \$55.92              |
| <b>Residential</b>                      |                                     |                                    |                                    |                               |                                |  |                      |
| CoolSaver <sup>SM</sup> A/C Tune-Up MTP | \$750.00                            | 1,670                              | \$638.96                           | \$44.83                       |                                |  | \$683.79             |
| High-Performance New Homes MTP          | \$850.00                            | 632                                | \$753.15                           | \$94.84                       |                                |  | \$847.99             |
| Residential SOP                         | \$2,944.60                          | 7,328                              | \$2,500.42                         | \$269.54                      |                                |  | \$2,769.96           |
| SMART Source <sup>SM</sup> Solar PV MTP | \$226.67                            | 28                                 | \$206.76                           | \$16.46                       |                                |  | \$223.22             |
| Whisker Labs* Res DR Pilot MTP          | \$167.00                            | 2,340                              | \$150.00                           | \$8.77                        |                                |  | \$158.77             |
| <b>Hard-to-Reach</b>                    |                                     |                                    |                                    |                               |                                |  |                      |
| Hard-to-Reach SOP                       | \$1,226.40                          | 1,390                              | \$970.66                           | \$103.83                      |                                |  | \$1,074.48           |
| Targeted Low-Income Energy Efficiency   | \$1,426.00                          | 374                                | \$1,403.99                         | \$107.39                      |                                |  | \$1,511.38           |
| <b>Research and Development</b>         | \$365.13                            |                                    |                                    |                               | \$134.25                       |  | \$134.25             |
| <b>EM&amp;V</b>                         |                                     |                                    |                                    |                               |                                |  |                      |
| Statewide EM&V Contractor               | \$177.02                            |                                    |                                    |                               |                                | \$176.88                                       | \$176.88             |
| <b>Total Expenditures</b>               | <b>\$14,259.48</b>                  | <b>14,992</b>                      | <b>\$11,799.33</b>                 | <b>\$1,154.37</b>             | <b>\$134.25</b>                | <b>\$176.88</b>                                | <b>\$13,264.83</b>   |

\*Previously Earth Networks

<sup>5</sup> Projected Budget from the revised EEPR filed May 2017 Project No. 46907.

## **IX. Market Transformation Program Results**

### **Commercial Solutions MTP**

In 2017, the Commercial Solutions MTP goal was to acquire 992 kW demand savings from this program. A total of 754 kW was achieved by participation of 60 customers.

### **CoolSaver<sup>SM</sup> MTP**

In 2017 the program verified and reported 2,660 kW. This included participation by 2,263 residential and commercial customers.

### **High-Performance New Homes MTP (New Homes)**

In 2017, 632 high-performance homes were constructed in the New Homes program with a savings of 592 kW. Through education and outreach by program account managers, several new builders were recruited and participated in the program in 2017 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 activities in 2017 included workshops and presentations to reinforce the 2015 International Energy Conservation Code (IECC) requirements. Training for HVAC market actors focused on Manual J training emphasizing load calculations and the importance of correct HVAC sizing. The Environmental Protection Agency (EPA) has recognized AEP Texas' New Homes program's accomplishments by awarding it the ENERGY STAR Partner of the Year Award for 2011-2012 and the ENERGY STAR Partner of the Year Sustained Excellence Award 2013-2017. AEP Texas was also recognized by the EPA with the ENERGY STAR Leadership in Housing/ Certified Homes Market Leader Award 2009-2017.

### **Open MTP**

The Open MTP goal was to acquire 830 kW demand savings. A total of 842 kW was achieved with 191 small commercial customers and 10 participating contractors.

### **SCORE/CitySmart MTP**

The SCORE/CitySmart MTP was projected to acquire 1,850 kW demand savings from this program. A total of 2,157 kW was achieved. This included participation by 113 customers. To date, the program has benchmarked 1,098 facilities for 36 school districts, and 13 government customers.

### **SMART Source<sup>SM</sup> Solar PV MTP**

The 2017 PV MTP projected to acquire 360 kW in demand savings and 694,026 kWh in energy savings from the residential and non-residential components. A total of 31 residential and non-residential solar PV projects were completed within the program, resulting in a peak demand reduction of 152 kW and 481,762 kWh of energy savings.

### **Whisker Labs**

The Whisker Labs Residential DR Pilot MTP goal was to acquire 3,750 kW demand savings. A total of 4,122 kW was achieved by participation of 2,340 residential customers in 2017.

## **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, program options and developing better, more efficient ways to administer current programs. The following is a summary of the R&D activities for 2017.

AEP Texas dedicated resources in 2017 to research new program opportunities, resulting in two new programs planned for 2019. 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**

The Central Division continues its best efforts to encourage and facilitate the involvement of REPs and EESPs in the delivery of its programs to customers. The Central Division utilizes local, regional and national conferences, trade shows, and other events for outreach and information exchange with participating REPs and EESPs. The Central Division again disbursed program information at its annual AEP Texas Competitive REP workshop in October 2017. The Central Division provides new and existing energy efficiency program information to the REPs and EESPs throughout the year on a timely basis via e-mail distribution.

## **XI. 2018 Energy Efficiency Cost Recovery Factor (EECRF)**

The total amount approved to be collected through the Central Division's 2018 EECRF is \$9,425,720, which consists of the following components:

- recovery of \$6,813,091 in energy efficiency expenses budgeted for Program Year 2018 (the actual projected budget for energy efficiency expenses for Program Year 2018 is \$14,436,436, which is reduced by \$6,334,949 in energy efficiency costs expressly included in base rates and \$934,419 of load growth);
- recovery of a performance bonus in the amount of \$3,492,251 for achieving energy efficiency goals in Program Year 2016;
- return to customers \$1,202,931 in energy efficiency program costs over-collected through the EECRF in Program Year 2016;

- recovery of \$9,793 for 2015 EECRF proceeding expenses incurred in Docket No. 45929 by municipalities as authorized by 16 TAC § 25.181(f)(3)(B);
- recovery of an estimated amount of \$353,977 for projected EM&V costs; and
- a settlement adjustment of \$41,000 as approved in PUC Docket No. 47236.

**Table 12: 2018 EECRF – Central Division**

| <b>Customer Class</b>                           | <b>EECRF</b>        |
|---|---------------------|
| Residential Service                             | \$0.000574 per kWh  |
| Secondary Service (less than or equal to 10 kW) | \$0.000125 per kWh  |
| Secondary Service (greater than 10 kW)          | \$0.000390 per kWh  |
| Primary Service                                 | \$0.000512 per kWh  |
| Transmission Service                            | (\$0.041636) per kW |

## **XII. 2017 EECRF Summary**

### **2017 Collections for Energy Efficiency**

The Central Division collected \$7,224,886 through its 2017 base rates, including \$6,334,949 expressly included in base rates and an adjustment for load growth in the amount of \$889,937, and \$8,634,210 through its 2017 EECRF for a total of \$15,859,096. A performance bonus of \$3,459,596 for exceeding its 2015 energy efficiency goals and \$1,306,003 returned to customers are reflected in the total amount collected for energy efficiency in 2017.

### **Energy Efficiency Program Costs Expended**

The Central Division expended a total of \$13,264,831 for its 2017 energy efficiency programs. The amount expended is \$994,652 less than the 2017 projected budget of \$14,259,483 for energy efficiency programs.

### **Over-Recovery of Energy Efficiency Costs**

The Central Division's actual 2017 energy efficiency program costs (including EM&V costs) less municipal rate case expenses are \$13,249,108 and actual energy efficiency program revenues are \$13,705,503. These associated 2017 costs and revenues result in an over-recovery of energy efficiency costs of \$456,395. This is the amount that the Central Division will request be returned to customers within its 2019 EECRF.

### **XIII. Underserved Counties**

The Central Division has defined Underserved Counties as any county in the service territory for which the Central Division reported no demand or energy savings through any of its 2017 SOPs or MTPs. Per 16 TAC § 25.181(n)(2)(U), a list of the Underserved Counties is as follows:

- Caldwell
- Edwards
- Gonzales
- Guadalupe
- Kenedy
- McMullen
- Wilson

#### **XIV. Performance Bonus**

The Central Division achieved a 45,867 kW reduction in peak demand from its energy efficiency programs offered in 2017. The demand reduction goal for 2017 was 15,830 kW. This achievement represents 290% of its 2017 demand reduction goal. The Central Division also achieved energy savings of 64,971,401 kWh, which represents 234% of its 2017 energy goal of 27,734,000 kWh. These results qualify the Central Division for a Performance Bonus. Per 16 TAC § 25.181(h), the Central Division is eligible for a Performance Bonus of \$2,741,622, which it will request within its June 1, 2018 EECRF Filing for recovery in 2019.

In 2017, the total spending on energy efficiency programs was \$13,264,831. This includes actual EM&V expenditures to the EM&V contractor of \$176,882. Per the PUC, the total program costs to be used in the performance bonus calculation should include the EM&V cost allocation provided by the EM&V contractor for Program Year 2017, instead of the actual EM&V contractor expenditures. As a result, the total program expenditures for the bonus calculation will not match the actual total program expenditures exhibited in the applicable tables in this EEPR. For the purposes of the performance bonus calculation, the 2017 total program costs equaled \$13,270,429.

**Table 13: Energy Efficiency Performance Bonus Calculation for 2017 – Central Division**

|  | kW     | kWh          |
|--|--------|--------------|
| <b>2017 Demand and Energy goals</b>          | 15,830 | 27,734,000   |
| <b>2017 Actual Demand and Energy Savings</b> | 45,867 | 64,971,401   |
| <i>Reported/Verified Hard-to-Reach</i>       | 2,208  |              |
| <b>2017 Program Costs</b>                    |        |              |
|  |        | \$13,270,429 |
| <b>2017 Performance Bonus</b>                |        |              |
|  |        | \$2,741,622  |

**Performance Bonus Calculation**

|              |   |
|--------------|---|
| 290%         | Percentage of Demand Reduction Goal Met (Reported kW/Goal kW)   |
| 234%         | Percentage of Energy Reduction Goal Met (Reported kWh/Goal kWh)                                       |
| TRUE         | Met Requirements for Performance Bonus?   |
| \$40,686,648 | Total Avoided Cost (Reported kW * PV(Avoided Capacity Cost) + Reported kWh * PV(Avoided Energy Cost)) |
| \$13,270,429 | Total Program Costs   |
| \$27,416,218 | Net Benefits (Total Avoided Cost - Total Expenses)  |

**Bonus Calculation**

|              |  |
|--------------|--|
| \$26,010,902 | Calculated Bonus ((Achieved Demand Reduction/Demand Goal - 100%) / 2) * Net Benefits |
| \$2,741,622  | Maximum Bonus Allowed (10% of Net Benefits)  |
| \$2,741,622  | Bonus (Minimum of Calculated Bonus and Bonus Limit)                                  |



# Acronyms

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

## Acronyms (Continued)

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



# **APPENDIX A:**

## **REPORTED AND VERIFIED DEMAND AND ENERGY REDUCTION BY COUNTY**

CALENDAR YEAR 2017

COMMERCIAL SOLUTIONS MTP

| County       | Reported and Verified Savings |                  |
|--------------|-------------------------------|------------------|
|              | kW                            | kWh              |
| Atascosa     | 4.46                          | 17,335           |
| Bee          | 6.37                          | 24,781           |
| Cameron      | 159.58                        | 948,793          |
| Colorado     | 52.80                         | 286,927          |
| Dimmit       | 0.88                          | 5,782            |
| Hidalgo      | 268.16                        | 1,285,839        |
| Jim Wells    | 6.11                          | 24,196           |
| Kleberg      | 4.44                          | 17,274           |
| Matagorda    | 8.38                          | 35,854           |
| Maverick     | 6.40                          | 24,907           |
| Nueces       | 115.64                        | 574,136          |
| San Patricio | 54.59                         | 172,834          |
| Uvalde       | 4.26                          | 16,592           |
| Val Verde    | 6.74                          | 26,229           |
| Victoria     | 12.19                         | 49,475           |
| Webb         | 30.84                         | 138,859          |
| Wharton      | 5.12                          | 19,897           |
| Willacy      | 6.83                          | 32,267           |
| <b>Total</b> | <b>753.79</b>                 | <b>3,701,977</b> |

**COMMERCIAL SOP**

| County       | Reported and Verified Savings |                   |
|--------------|-------------------------------|-------------------|
|              | kW                            | kWh               |
| Aransas      | 4.26                          | 28,492            |
| Atascosa     | 20.06                         | 78,018            |
| Bee          | 20.51                         | 79,774            |
| Calhoun      | 32.47                         | 244,824           |
| Cameron      | 145.20                        | 666,933           |
| Goliad       | 3.83                          | 14,905            |
| Hidalgo      | 671.68                        | 3,493,041         |
| Jackson      | 17.21                         | 138,779           |
| Jim Hogg     | 6.12                          | 54,059            |
| Jim Wells    | 25.38                         | 107,410           |
| Karnes       | 20.59                         | 80,088            |
| Kleberg      | 128.75                        | 646,686           |
| Live Oak     | 9.54                          | 55,943            |
| Matagorda    | 13.28                         | 53,167            |
| Maverick     | 28.42                         | 125,322           |
| Nueces       | 644.61                        | 7,396,270         |
| San Patricio | 136.30                        | 700,587           |
| Starr        | 75.98                         | 394,966           |
| Uvalde       | 16.16                         | 62,823            |
| Val Verde    | 24.83                         | 96,587            |
| Victoria     | 193.01                        | 1,091,161         |
| Webb         | 82.10                         | 351,418           |
| Wharton      | 23.67                         | 131,112           |
| <b>Total</b> | <b>2,343.95</b>               | <b>16,092,365</b> |

**COOLSAVER<sup>SM</sup> A/C TUNE-UP MTP**

| County       | Reported and Verified Savings |                  |
|--------------|-------------------------------|------------------|
|              | kW                            | kWh              |
| Aransas      | 3.22                          | 10,574           |
| Brooks       | 1.64                          | 5,573            |
| Cameron      | 313.64                        | 732,287          |
| Hidalgo      | 2032.33                       | 5,386,071        |
| Jim Wells    | 2.47                          | 8,430            |
| Kinney       | 1.43                          | 5,079            |
| Kleberg      | 5.55                          | 18,489           |
| Live Oak     | 1.84                          | 5,053            |
| Maverick     | 1.86                          | 5,373            |
| Nueces       | 215.90                        | 434,303          |
| Refugio      | 5.69                          | 19,623           |
| San Patricio | 3.64                          | 9,956            |
| Starr        | 5.40                          | 15,043           |
| Val Verde    | 40.40                         | 114,333          |
| Webb         | 1.29                          | 4,386            |
| Willacy      | 23.54                         | 48,788           |
| <b>Total</b> | <b>2,659.84</b>               | <b>6,823,361</b> |

### HARD-TO-REACH SOP

| County       | Reported and Verified Savings |                  |
|--------------|-------------------------------|------------------|
|              | kW                            | kWh              |
| Calhoun      | 0.69                          | 3,414            |
| Cameron      | 279.15                        | 959,116          |
| Hidalgo      | 431.83                        | 1,355,087        |
| Jackson      | 0.45                          | 2,264            |
| Kleberg      | 5.27                          | 16,517           |
| Matagorda    | 2.59                          | 6,751            |
| Nueces       | 265.72                        | 568,434          |
| San Patricio | 4.73                          | 10,264           |
| Starr        | 9.80                          | 30,136           |
| Victoria     | 106.11                        | 240,640          |
| Webb         | 292.08                        | 687,700          |
| Wharton      | 0.88                          | 2,829            |
| <b>Total</b> | <b>1,399.29</b>               | <b>3,883,152</b> |

### HIGH-PERFORMANCE NEW HOMES MTP

| County       | Reported and Verified Savings |                  |
|--------------|-------------------------------|------------------|
|              | kW                            | kWh              |
| Aransas      | 21.09                         | 76,273           |
| Cameron      | 1.49                          | 6,739            |
| Hidalgo      | 41.94                         | 192,443          |
| Nueces       | 253.78                        | 945,751          |
| San Patricio | 67.03                         | 268,045          |
| Victoria     | 1.08                          | 4,298            |
| Webb         | 205.53                        | 968,768          |
| <b>Total</b> | <b>591.94</b>                 | <b>2,462,317</b> |

**LOAD MANAGEMENT SOP**

| County       | Reported and Verified Savings |               |
|--------------|-------------------------------|---------------|
|              | kW                            | kWh           |
| Aransas      | 3.00                          | 6             |
| Bee          | 40.00                         | 165           |
| Calhoun      | 77.00                         | 195           |
| Cameron      | 3,331.00                      | 3,830         |
| Dimmit       | 132.00                        | 408           |
| Hidalgo      | 3,055.00                      | 10,405        |
| Jim Wells    | 153.00                        | 464           |
| Kleberg      | 79.00                         | 241           |
| Maverick     | 42.00                         | 157           |
| Nueces       | 3,632.00                      | 8,002         |
| Refugio      | 1,134.00                      | 1,134         |
| San Patricio | 7,628.00                      | 7,840         |
| Starr        | 65.00                         | 235           |
| Uvalde       | 69.00                         | 263           |
| Val Verde    | 22.00                         | 125           |
| Victoria     | 2,043.00                      | 8,140         |
| Webb         | 1,777.00                      | 4,908         |
| Willacy      | 1,501.00                      | 1,501         |
| <b>Total</b> | <b>24,783.00</b>              | <b>48,019</b> |

**OPEN MTP**

| County       | Reported and Verified Savings |                  |
|--------------|-------------------------------|------------------|
|              | kW                            | kWh              |
| Cameron      | 79.80                         | 383,529          |
| Hidalgo      | 358.88                        | 1,617,542        |
| Jim Wells    | 20.86                         | 123,943          |
| Kleberg      | 3.04                          | 14,451           |
| Nueces       | 237.54                        | 1,193,535        |
| San Patricio | 5.13                          | 28,607           |
| Starr        | 4.77                          | 31,265           |
| Val Verde    | 6.00                          | 39,201           |
| Victoria     | 20.42                         | 92,170           |
| Webb         | 80.32                         | 363,108          |
| Willacy      | 17.26                         | 63,395           |
| Zapata       | 7.60                          | 41,200           |
| <b>Total</b> | <b>841.62</b>                 | <b>3,991,945</b> |

**RESIDENTIAL SOP**

| County       | Reported and Verified Savings |                   |
|--------------|-------------------------------|-------------------|
|              | kW                            | kWh               |
| Aransas      | 0.24                          | 1,187             |
| Bee          | 3.85                          | 7,266             |
| Cameron      | 1,074.63                      | 3,477,141         |
| Colorado     | 0.60                          | 1,107             |
| Duval        | 4.32                          | 10,857            |
| Hidalgo      | 2,003.72                      | 6,767,135         |
| Jim Wells    | 35.97                         | 97,701            |
| Kleberg      | 75.80                         | 194,160           |
| Matagorda    | 11.49                         | 30,435            |
| Nueces       | 1,367.11                      | 3,570,423         |
| Refugio      | 1.14                          | 3,081             |
| San Patricio | 123.59                        | 344,695           |
| Starr        | 109.60                        | 272,789           |
| Victoria     | 37.13                         | 118,121           |
| Webb         | 394.15                        | 1,236,951         |
| Wharton      | 3.41                          | 14,424            |
| Willacy      | 7.29                          | 29,561            |
| <b>Total</b> | <b>5,254.03</b>               | <b>16,177,034</b> |

**SCORE/CITYSMART MTP**

| County       | Reported and Verified Savings |                  |
|--------------|-------------------------------|------------------|
|              | kW                            | kWh              |
| Atascosa     | 95.93                         | 546,241          |
| Bee          | 6.10                          | 39,956           |
| Colorado     | 10.98                         | 70,262           |
| Hidalgo      | 292.42                        | 971,202          |
| Jackson      | 81.23                         | 474,473          |
| Nueces       | 1,160.27                      | 5,109,982        |
| Val Verde    | 135.91                        | 710,683          |
| Webb         | 326.37                        | 1,777,499        |
| Wharton      | 47.40                         | 271,534          |
| <b>Total</b> | <b>2,156.61</b>               | <b>9,971,832</b> |

**SMART SOURCE<sup>SM</sup> SOLAR PV MTP**

| County       | Reported and Verified Savings |                |
|--------------|-------------------------------|----------------|
|              | kW                            | kWh            |
| Cameron      | 41.98                         | 140,409        |
| Hidalgo      | 56.51                         | 172,138        |
| Nueces       | 17.78                         | 54,925         |
| Uvalde       | 2.81                          | 11,905         |
| Webb         | 33.13                         | 102,385        |
| <b>Total</b> | <b>152.21</b>                 | <b>481,762</b> |

**TARGETED LOW-INCOME ENERGY EFFICIENCY PROGRAM**

| County       | Reported and Verified Savings |                  |
|--------------|-------------------------------|------------------|
|              | kW                            | kWh              |
| Calhoun      | 46.63                         | 71,146           |
| Cameron      | 123.72                        | 197,470          |
| Dimmit       | 29.14                         | 43,312           |
| Hidalgo      | 248.06                        | 471,579          |
| Jackson      | 1.80                          | 2,063            |
| La Salle     | 4.21                          | 7,138            |
| Matagorda    | 133.34                        | 194,236          |
| Maverick     | 59.39                         | 99,236           |
| Nueces       | 5.21                          | 11,196           |
| Real         | 5.31                          | 12,503           |
| Starr        | 3.24                          | 4,675            |
| Uvalde       | 42.56                         | 62,823           |
| Val Verde    | 32.09                         | 53,964           |
| Victoria     | 7.92                          | 11,457           |
| Webb         | 49.52                         | 66,319           |
| Zavala       | 16.76                         | 27,776           |
| <b>Total</b> | <b>808.90</b>                 | <b>1,336,893</b> |



**WHISKER LABS RESIDENTIAL DR PILOT MTP**

| <i>County</i> | <b>Reported and Verified Savings</b> |            |
|---------------|--------------------------------------|------------|
|               | <b>kW</b>                            | <b>kWh</b> |
| Aransas       | 22.53                                | 4          |
| Atascosa      | 20.21                                | 4          |
| Bee           | 28.69                                | 5          |
| Brooks        | 11.88                                | 2          |
| Calhoun       | 8.23                                 | 1          |
| Cameron       | 231.71                               | 42         |
| Colorado      | 0.24                                 | 0          |
| Dewitt        | 1.73                                 | 0          |
| Dimmit        | 4.51                                 | 1          |
| Duval         | 11.12                                | 2          |
| Frio          | 6.31                                 | 1          |
| Goliad        | -1.03                                | 0          |
| Hidalgo       | 895.13                               | 162        |
| Jackson       | 8.23                                 | 1          |
| Jim Hogg      | 16.04                                | 3          |
| Jim Wells     | 93.06                                | 17         |
| Karnes        | 2.89                                 | 1          |
| Kleberg       | 58.09                                | 10         |
| La Salle      | 3.00                                 | 1          |
| Live Oak      | 13.64                                | 2          |
| Matagorda     | 21.57                                | 4          |
| Maverick      | 99.73                                | 18         |
| Medina        | 0.30                                 | 0          |
| Nueces        | 967.44                               | 175        |
| Real          | 0.37                                 | 0          |
| Refugio       | 4.97                                 | 1          |
| San Patricio  | 97.20                                | 18         |
| Starr         | 78.39                                | 14         |
| Uvalde        | 51.26                                | 9          |
| Val Verde     | 148.61                               | 27         |
| Victoria      | 142.95                               | 26         |
| Webb          | 989.96                               | 179        |
| Wharton       | 3.48                                 | 1          |
| Willacy       | 3.77                                 | 1          |
| Zapata        | 61.13                                | 11         |
| Zavala        | 14.64                                | 3          |
| <b>Total</b>  | <b>4,121.99</b>                      | <b>744</b> |

## **APPENDIX B:**

### **PROGRAM TEMPLATES**

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

## **APPENDIX C:**

### **EXISTING CONTRACTS OR OBLIGATIONS**

AEP Texas – Central Division has no Existing Contracts or Obligations documentation to provide.

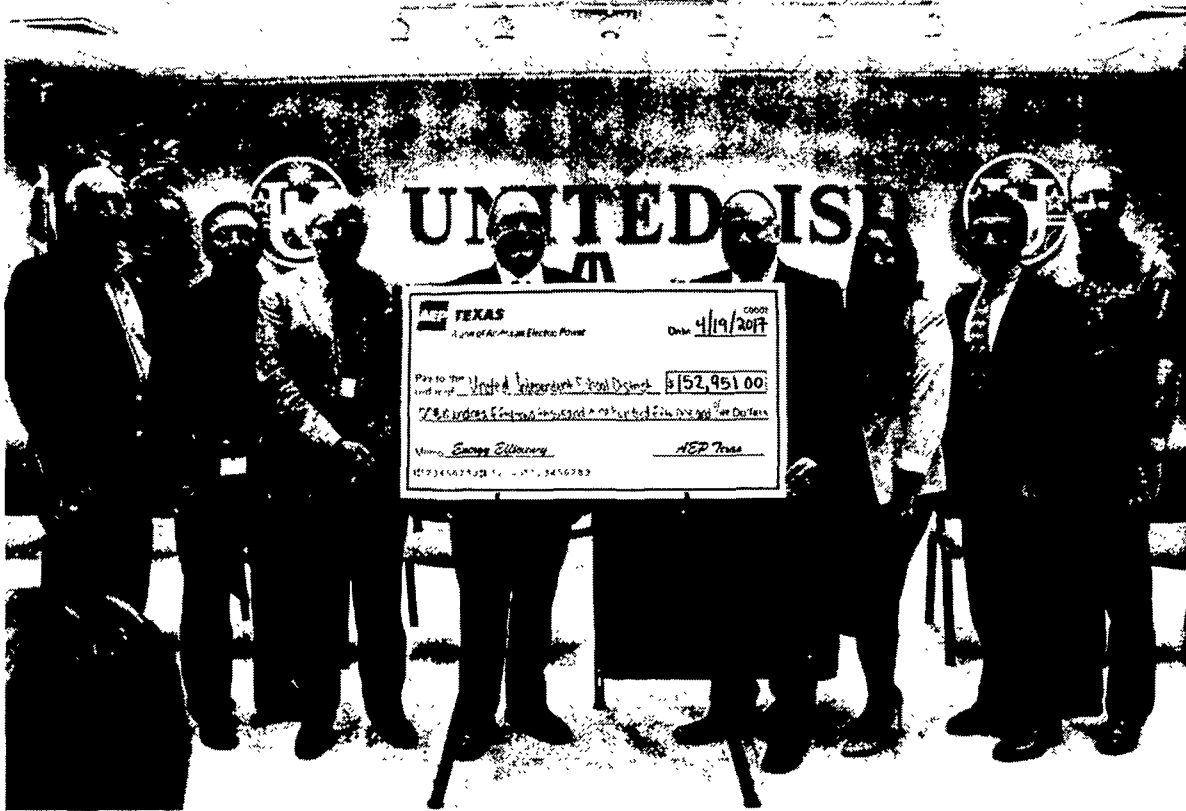
## **APPENDIX D:**

### **OPTIONAL SUPPORT DOCUMENTATION**

AEP Texas – Central Division provides the following Optional Supporting Documentation.



AEP Texas was named a 2017 ENERGY STAR Partner of the Year – Sustained Excellence Award winner for the seventh consecutive year for continued leadership in protecting the environment through superior energy efficiency achievements.



The Laredo United Independent School District (United ISD) was awarded a \$152,951 incentive check through the AEP Texas SCORE program. United ISD installed high-efficiency LED lighting in numerous buildings and outdoor spaces throughout the district.



AEP Texas presented an incentive check to NeighborWorks Laredo for the installation of high-efficiency heat pumps through the Targeted Low-Income program.

## ENERGY EFFICIENCY PLAN – AEP TEXAS-NORTH DIVISION

### I. 2018 Programs

#### A. 2018 Program Portfolio

The North Division has implemented a variety of programs in 2018 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 14 summarizes the programs and targeted customer class markets for Program Year 2018. The programs listed in Table 14 are described in further detail in Subsection B. AEP Texas maintains a web site containing information on participation and forms required for project submission at [www.AEPTexas.com](http://www.AEPTexas.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 a third-party implementer. These implementers design, market and execute the applicable MTP. 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.

The North Division monitors projects being submitted so as to not accept duplicate enrollments.



### **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 14: 2018 Energy Efficiency Program Portfolio – North Division**

| <b>Program</b>                                | <b>Target Market</b>      | <b>Application</b>          | <b>Link to Program Manual</b>   |
|---|---------------------------|-----------------------------|---|
| Commercial Solutions MTP                      | Commercial                | Retrofit & New Construction | <a href="https://www.aeptexas.com/documents/aep-texas-north-commercial-solutions-program-manual.pdf">https://www.aeptexas.com/documents/aep-texas-north-commercial-solutions-program-manual.pdf</a>   |
| Commercial SOP                                | Commercial                | Retrofit & New Construction | <a href="https://aep-texas.com/global/utilities/lib/docs/save/business/programs/aep-texas/wtx/2018/2018%20AEP%20Texas%20C%20SOP%20Manual.pdf">https://aep-texas.com/global/utilities/lib/docs/save/business/programs/aep-texas/wtx/2018/2018%20AEP%20Texas%20C%20SOP%20Manual.pdf</a>       |
| Hard-to-Reach SOP                             | Residential Hard-to-Reach | Retrofit                    | <a href="https://aep-texas.com/global/utilities/lib/docs/save/residential/programs/AEPTexas/TNC/2018/2018%20AEP%20HTR%20SOP%20Manual.pdf">https://aep-texas.com/global/utilities/lib/docs/save/residential/programs/AEPTexas/TNC/2018/2018%20AEP%20HTR%20SOP%20Manual.pdf</a>               |
| Load Management SOP                           | Commercial                | Retrofit                    | <a href="https://aep-texas.com/global/utilities/lib/docs/save/business/programs/aep-texas/wTX/2017/2017_AEP_North_LM%20Manual.pdf">https://aep-texas.com/global/utilities/lib/docs/save/business/programs/aep-texas/wTX/2017/2017_AEP_North_LM%20Manual.pdf</a>                             |
| Open MTP                                      | Commercial                | Retrofit                    | <a href="https://www.aeptexas.com/documents/aep-texas-north-small-business-program-manual.pdf">https://www.aeptexas.com/documents/aep-texas-north-small-business-program-manual.pdf</a>   |
| Residential SOP                               | Residential               | Retrofit                    | <a href="https://aep-texas.com/global/utilities/lib/docs/save/residential/programs/aep-texas/TNC/2018/2018%20AEP%20Texas%20R%20SOP%20Manual.pdf">https://aep-texas.com/global/utilities/lib/docs/save/residential/programs/aep-texas/TNC/2018/2018%20AEP%20Texas%20R%20SOP%20Manual.pdf</a> |
| SCORE/City Smart MTP                          | Commercial                | Retrofit & New Construction | <a href="https://www.aeptexas.com/documents/aep-texas-north-score-program-manual.pdf">https://www.aeptexas.com/documents/aep-texas-north-score-program-manual.pdf</a>   |
| SMART Source <sup>SM</sup> Solar PV MTP       | Commercial Residential    | Retrofit & New Construction | <a href="http://txreinc.com/apv/documents/AEP%20Texas%20PV%20Program%20Guidebook%202018%2020180119.pdf">http://txreinc.com/apv/documents/AEP%20Texas%20PV%20Program%20Guidebook%202018%2020180119.pdf</a>   |
| Targeted Low-Income Energy Efficiency Program | Low-Income Residential    | Retrofit                    | No Website Available  |

***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 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 deemed and/or verified demand and energy savings for eligible measures installed in new or retrofit applications.

### **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 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.

### **Load Management Standard Offer Program (LM SOP)**

The LM SOP targets commercial customers with a peak electric demand of 500 kW or more. Incentive payments are based upon measured and verified peak 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 12 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 residential customers in existing homes. Incentives are paid to project sponsors for eligible measures installed in 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:

- Photos of gauges showing the existing unit in full functional status;
- The age of the existing unit (maximum age of 24 years);
- Photo of the existing unit nameplate
- Model number, serial number and manufacturer 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.

### **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<sup>SM</sup> Solar PV Market Transformation Program (PV MTP)**

The PV MTP offers incentives to 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 companies offering installation services in the service area, 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 North Division 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 current federal poverty guidelines. A Savings-to-Investment Ratio of 1.0 or higher is required at each serviced dwelling unit.

### ***C. New Programs for 2018***

The North Division has no new programs for 2018.

### ***D. Discontinued Programs***

#### **Whisker Labs Residential Thermostat Demand Response (DR) Pilot Market Transformation Program (WLDR MTP)**

Whisker Labs (WL), formerly known as Earth Networks (EN), used their Connected Savings platform to deliver an Integrated Demand Side Management (IDSMS) aggregation program that would bring residential energy and demand savings. On the days that AEP Texas requested demand response services be implemented, WL optimized the control thermostats to reduce HVAC load. The load reduction period was for a duration of no more than three hours with at least an hour notice prior to the desired event start time.

### ***E. Existing DSM Contracts or Obligations***

The North Division has no existing DSM contracts or obligations.

## II. Customer Classes

The North Division's energy efficiency programs target its Residential and Commercial customer classes. The North Division's energy efficiency 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 15 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 2018. 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 of a customer class, and the overriding objective of meeting the mandated demand and energy reduction goals in total. The North Division offers a varied portfolio of SOPs and MTPs such that all eligible customer classes have access to energy efficiency alternatives.

**Table 15: Summary of Customer Classes – North Division**

| <b>Customer Class</b>            | <b>Number of Customers</b> |
|----------------------------------|----------------------------|
| <b>Commercial</b>                | 38,177                     |
| <b>Residential</b>               | 156,226                    |
| <b>Hard-to-Reach<sup>6</sup></b> | 49,524                     |

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

<sup>6</sup> According to the U.S. Census Bureau's 2016 Current Population Survey, 31.7% of Texas families fall below 200% of the poverty threshold. Applying that percentage to the North Division's residential customer base of 156,226, the number of Hard-to-Reach customers is estimated at the North Division's residential customer base of 49,524.

### **III. Energy Efficiency Goals and Projected Savings**

The North Division's 2018 and 2019 annual demand and energy reduction goals to be achieved are 4.26 MW and 7,464 MWh, respectively. These goals have been calculated as prescribed by the EE Rule.

The 2018 goal was calculated by applying four-tenths of 1% (0.004) of its summer weather-adjusted peak demand for the combined residential and commercial customers to the five year average (2012-2016) peak demand at the meter of 1,004 MW. This resulted in a calculated goal of 4.02 MW.

The 2019 demand goal is calculated by applying four-tenths of 1% (0.004) of its summer weather-adjusted peak demand for the combined residential and commercial customers to the five year average (2013-2017) peak demand at the meter of 1,010 MW. This results in a calculated goal of 4.04 MW.

As stated in 16 TAC § 25.181(e)(1)(E), except as adjusted in accordance with subsection (w), a utility's demand reduction goal shall not be lower than the previous year's goal which was 4.26 kW, with a corresponding 7,464 MWh goal. The goal for 2018 and 2019 will be 4.26 kW and 7,464 MWh.

Table 16 presents historical annual growth in demand data for the previous five years that was used to calculate the goals. Table 17 presents the projected demand and energy savings for Program Years 2018 and 2019 by program, for each customer class with fully-deployed program budgets.

**Table 16: Annual Growth in Demand and Energy Consumption – North Division**

| Calendar Year | Peak Demand (MW) @ Source |                  |                          |                  |         |                       | Energy Consumption (MWh) @ Meter |                  |                          |                  | Energy Efficiency Goal Calculations       |                                     |  |
|---------------|---------------------------|------------------|--------------------------|------------------|---------|-----------------------|----------------------------------|------------------|--------------------------|------------------|---|-------------------------------------|--|
|               | Total System              |                  | Residential & Commercial |                  |         |                       | Total System                     |                  | Residential & Commercial |                  | Peak Demand at Meter (11.5% line losses)* | 5 year Average Peak Demand at Meter | Goal Metric: 0.4% Peak Demand at Meter |
|               | Actual                    | Weather Adjusted | Actual                   | Weather Adjusted | Opt-Out | Peak Demand at Source | Actual                           | Weather Adjusted | Actual                   | Weather Adjusted |   |                                     |  |
| 2013          | 1,147                     | 1,145            | 1,142                    | 1,140            | -9.6    | 1,130                 | 5,221                            | 5,131            | 5,091                    | 5,001            | 1,000                                     | NA                                  | NA                                     |
| 2014          | 1,157                     | 1,164            | 1,154                    | 1,162            | -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   | 1,147                 | 5,610                            | 5,557            | 5,363                    | 5,310            | 1,015                                     | 993                                 | 3.97                                   |
| 2016          | 1,169                     | 1,181            | 1,151                    | 1,163            | -19.4   | 1,144                 | 5,497                            | 5,497            | 5,178                    | 5,178            | 1,012                                     | 1,002                               | 4.01                                   |
| 2017          | 1,161                     | 1,184            | 1,142                    | 1,165            | -34.4   | 1,131                 | 5,612                            | 5,629            | 5,146                    | 5,162            | 1,001                                     | 998                                 | 3.99                                   |
| 2018          | NA                        | NA               | NA                       | NA               | NA      | NA                    | NA                               | NA               | NA                       | NA               | NA  | 1,004                               | 4.02                                   |
| 2019          | NA                        | NA               | NA                       | NA               | NA      | NA                    | NA                               | NA               | NA                       | NA               | NA  | 1,010                               | 4.04                                   |

\*Line losses are derived from the loss factors determined in the North Division's most recent line loss study.



**Table 17: Projected Demand and Energy Savings by Program for Each Customer Class for 2018 and 2019 (at the Meter) – North Division**

| <b>2018</b>                                   | <b>Projected Savings</b> |                   |
|---|--------------------------|-------------------|
| <b>Customer Class and Program</b>             | <b>kW</b>                | <b>kWh</b>        |
| <b>Commercial</b>                             |                          |                   |
| Commercial Solutions MTP                      | 496                      | 3,609,280         |
| Commercial SOP                                | 325                      | 1,676,488         |
| Load Management SOP                           | 2,486                    | 11,976            |
| Open MTP                                      | 354                      | 1,410,806         |
| SCORE/CitySmart MTP                           | 161                      | 1,280,000         |
| SMART Source <sup>SM</sup> Solar PV MTP       | 47                       | 151,734           |
| <b>Residential</b>                            |                          |                   |
| Residential SOP                               | 1,061                    | 2,240,305         |
| SMART Source <sup>SM</sup> Solar PV MTP       | 67                       | 207,487           |
| <b>Hard-to-Reach</b>                          |                          |                   |
| Hard-to-Reach SOP                             | 464                      | 920,734           |
| Targeted Low-Income Energy Efficiency Program | 104                      | 177,003           |
| <b>Total Annual Projected Savings</b>         | <b>5,565</b>             | <b>11,685,813</b> |

**Table 17: Projected Demand and Energy Savings by Program for Each Customer Class for 2018 and 2019 (at the Meter) – North Division (Continued)**

| 2019<br>Customer Class and Program            | Projected Savings |                   |
|---|-------------------|-------------------|
|   | kW                | kWh               |
| <b>Commercial</b>                             |                   |                   |
| Commercial Solutions MTP                      | 496               | 3,609,280         |
| Commercial SOP                                | 325               | 1,676,488         |
| Load Management SOP                           | 2,486             | 11,976            |
| Open MTP                                      | 354               | 1,410,806         |
| SCORE/CitySmart MTP                           | 161               | 1,280,000         |
| SMART Source <sup>SM</sup> Solar PV MTP       | 133               | 425,489           |
| <b>Residential</b>                            |                   |                   |
| Residential DR-MTP                            | 500               | N/A               |
| Residential Pool Pump Pilot MTP               | 33                | 210,663           |
| Residential SOP                               | 1,061             | 2,240,305         |
| SMART Source <sup>SM</sup> Solar PV MTP       | 67                | 207,487           |
| <b>Hard-to-Reach</b>                          |                   |                   |
| Hard-to-Reach SOP                             | 464               | 920,734           |
| Targeted Low-Income Energy Efficiency Program | 104               | 177,003           |
| <b>Total Annual Projected Savings</b>         | <b>6,184</b>      | <b>12,170,231</b> |

#### **IV. Program Budgets**

Table 18 presents total proposed budget allocations required to meet the projected demand and energy savings to be achieved for the Program Years 2018 and 2019. 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. Budget allocations are detailed by customer class, program, and the following budget categories: incentives, administration, research and development (R&D), and evaluation, measurement and verification (EM&V).

**Table 18: Projected Annual Budget by Program for Each Customer Class  
for 2018 and 2019 – North Division**

| <b>2018</b>  | <b>Incentives</b>  | <b>Admin</b>     | <b>R&amp;D</b>   | <b>EM&amp;V</b> | <b>Total Budget</b> |
|--|--------------------|------------------|------------------|-----------------|---------------------|
| <b>Commercial</b>  |                    |                  |                  |                 |                     |
| Commercial Solutions MTP                                     | \$422,248          | \$63,095         |                  |                 | \$485,343           |
| 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  | \$160,000          | \$24,000         |                  |                 | \$184,000           |
| SMART Source <sup>SM</sup> Solar PV MTP                      | \$82,650           | \$12,350         |                  |                 | \$95,000            |
| <b>Residential</b>   |                    |                  |                  |                 |                     |
| Residential SOP  | \$530,700          | \$79,300         |                  |                 | \$610,000           |
| SMART Source <sup>SM</sup> Solar PV MTP                      | \$102,660          | \$15,340         |                  |                 | \$118,000           |
| <b>Hard-to-Reach</b>   |                    |                  |                  |                 |                     |
| Hard-to-Reach SOP  | \$325,000          | \$36,000         |                  |                 | \$361,000           |
| Targeted Low-Income Energy Efficiency Program                | \$310,970          | \$43,030         |                  |                 | \$354,000           |
| <b>Research and Development</b>                              |                    |                  |                  |                 |                     |
| R&D  |                    |                  | \$200,000        |                 | \$200,000           |
| <b>Evaluation, Measurement &amp; Verification (EM&amp;V)</b> |                    |                  |                  |                 |                     |
| EM&V   |                    |                  |                  | \$31,209        | \$31,209            |
| <b>Total Budget</b>  | <b>\$2,690,731</b> | <b>\$386,269</b> | <b>\$200,000</b> | <b>\$31,209</b> | <b>\$3,308,209</b>  |

**Table 18: Projected Annual Budget by Program for Each Customer Class  
for 2018 and 2019 – North Division (Continued)**

| <b>2019</b>  | <b>Incentives</b>  | <b>Admin</b>     | <b>R&amp;D</b>   |                 | <b>Total Budget</b> |
|--|--------------------|------------------|------------------|-----------------|---------------------|
| <b>Commercial</b>  |                    |                  |                  |                 |                     |
| Commercial Solutions MTP                                     | \$422,248          | \$63,095         |                  |                 | \$485,343           |
| 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  | \$160,000          | \$24,000         |                  |                 | \$184,000           |
| SMART Source <sup>SM</sup> Solar PV MTP                      | \$82,650           | \$12,350         |                  |                 | \$95,000            |
| <b>Residential</b>   |                    |                  |                  |                 |                     |
| Residential DR MTP   | \$27,000           | \$4,034          |                  |                 | \$31,034            |
| Residential Pool Pump Pilot MTP                              | \$42,000           | \$6,276          |                  |                 | \$48,276            |
| Residential SOP  | \$530,700          | \$79,300         |                  |                 | \$610,000           |
| SMART Source <sup>SM</sup> Solar PV MTP                      | \$102,660          | \$15,340         |                  |                 | \$118,000           |
| <b>Hard-to-Reach</b>   |                    |                  |                  |                 |                     |
| Hard-to-Reach SOP  | \$325,000          | \$36,000         |                  |                 | \$361,000           |
| Targeted Low-Income Energy Efficiency Program                | \$310,970          | \$43,030         |                  |                 | \$354,000           |
| <b>Research and Development</b>                              |                    |                  |                  |                 |                     |
| R&D  |                    |                  | \$200,000        |                 | \$200,000           |
| <b>Evaluation, Measurement &amp; Verification (EM&amp;V)</b> |                    |                  |                  |                 |                     |
| EM&V   |                    |                  |                  | \$31,790        | \$31,790            |
| <b>Total Budget</b>  | <b>\$2,759,731</b> | <b>\$396,579</b> | <b>\$200,000</b> | <b>\$31,790</b> | <b>\$3,388,100</b>  |

## ENERGY EFFICIENCY REPORT – AEP TEXAS - NORTH DIVISION

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

Table 19 contains the demand and energy reduction goals and actual savings achieved for the previous five years (2013-2017) calculated in accordance with the EE Rule.

**Table 19: Historical Demand and Energy Goals\* and Savings Achieved (at the Meter) – North Division**

| <b>Calendar Year</b> | <b>Actual Weather Adjusted Demand Goal (MW)</b> | <b>Actual Weather Adjusted Energy Goal (MWh)</b> | <b>Savings Achieved (MW)</b> | <b>Savings Achieved (MWh)</b> |
|----------------------|---|--|------------------------------|-------------------------------|
| <b>2017</b>          | 4.26  | 7,464  | 6.79                         | 12,038                        |
| <b>2016</b>          | 4.26  | 7,464  | 6.38                         | 10,817                        |
| <b>2015</b>          | 4.26  | 7,464  | 4.54                         | 12,289                        |
| <b>2014</b>          | 4.26  | 7,464  | 8.15                         | 11,867                        |
| <b>2013</b>          | 4.26  | 7,464  | 6.93                         | 9,087                         |

\* Actual Weather Adjusted MW and MWh Goals as reported in the EEPRs filed in years 2013-2017.

## VI. Projected, Reported and Verified Demand and Energy Savings

**Table 20: Projected versus Reported and Verified Savings  
for 2017 and 2016 (at the Meter) – North Division**

| 2017<br>Customer Class and Program            | Projected Savings |                   | Reported and Verified Savings |                   |
|---|-------------------|-------------------|-------------------------------|-------------------|
|   | kW                | kWh               | kW                            | kWh               |
| <b>Commercial</b>                             |                   |                   |                               |                   |
| Commercial Solutions MTP                      | 400               | 2,909,280         | 549                           | 2,947,342         |
| Commercial SOP                                | 420               | 2,660,077         | 393                           | 2,047,551         |
| Load Management SOP                           | 2,175             | 7,797             | 2,822                         | 11,231            |
| Open MTP                                      | 409               | 1,630,000         | 369                           | 1,565,393         |
| SCORE/CitySmart MTP                           | 161               | 1,280,000         | 251                           | 1,257,884         |
| SMART Source <sup>SM</sup> Solar PV MTP       | 65                | 216,280           | 45                            | 146,956           |
| <b>Residential</b>                            |                   |                   |                               |                   |
| Residential SOP                               | 1,244             | 2,630,373         | 1,280                         | 2,701,122         |
| SMART Source <sup>SM</sup> Solar PV MTP       | 53                | 174,825           | 61                            | 186,723           |
| Whisker Labs* Residential DR Pilot            | 500               | 0                 | 417                           | 158               |
| <b>Hard-to-Reach</b>                          |                   |                   |                               |                   |
| Hard-to-Reach SOP                             | 609               | 1,039,947         | 512                           | 1,016,481         |
| Targeted Low-Income Energy Efficiency Program | 109               | 246,626           | 90                            | 157,336           |
| <b>Total Annual Savings</b>                   | <b>6,145</b>      | <b>12,795,205</b> | <b>6,790</b>                  | <b>12,038,177</b> |

\*Previously Earth Networks

**Table 20: Projected versus Reported and Verified Savings  
for 2017 and 2016 (at the Meter) – North Division (Continued)**

| <b>2016</b>                                   | <b>Projected Savings</b> |                   | <b>Reported and Verified Savings</b> |                   |
|---|--------------------------|-------------------|--------------------------------------|-------------------|
|   | <b>kW</b>                | <b>kWh</b>        | <b>kW</b>                            | <b>kWh</b>        |
| <b>Customer Class and Program</b>             |                          |                   |                                      |                   |
| <b>Commercial</b>                             |                          |                   |                                      |                   |
| Commercial Solutions MTP                      | 323                      | 2,000,000         | 294                                  | 2,220,044         |
| Commercial SOP                                | 391                      | 2,476,965         | 303                                  | 1,743,971         |
| Load Management SOP                           | 2,014                    | 7,222             | 3,378                                | 5,767             |
| Open MTP                                      | 380                      | 1,344,000         | 382                                  | 1,843,603         |
| SCORE/CitySmart MTP                           | 161                      | 1,000,000         | 387                                  | 1,001,809         |
| SMART Source <sup>SM</sup> Solar PV MTP       | 83                       | 160,000           | 60                                   | 116,480           |
| <b>Residential</b>                            |                          |                   |                                      |                   |
| Earth Networks Residential DR Pilot           | 500                      | 500               | 388                                  | 0                 |
| Efficiency Connection Pilot MTP               | 123                      | 659,221           | 33                                   | 138,277           |
| Residential SOP                               | 795                      | 2,471,851         | 753                                  | 2,632,186         |
| SMART Source <sup>SM</sup> Solar PV MTP       | 79                       | 151,481           | 78                                   | 150,848           |
| <b>Hard-to-Reach</b>                          |                          |                   |                                      |                   |
| Hard-to-Reach SOP                             | 231                      | 733,841           | 230                                  | 736,447           |
| Targeted Low-Income Energy Efficiency Program | 88                       | 186,989           | 95                                   | 227,901           |
| <b>Total Annual Savings</b>                   | <b>5,168</b>             | <b>11,192,070</b> | <b>6,381</b>                         | <b>10,817,333</b> |

## VII. Historical Program Expenditures

This section documents the North Division’s incentive and administration expenditures for the previous five years (2013-2017) detailed by program for each customer class.

**Table 21: Historical Program Incentive and Administrative Expenditures for 2013 through 2017 (000’s) – North Division**

|   | 2017     |         | 2016     |         | 2015     |         | 2014     |         | 2013     |         |
|---|----------|---------|----------|---------|----------|---------|----------|---------|----------|---------|
|   | Incent.  | Admin   | Incent.  | Admin   | Incent.  | Admin   | Incent.  | Admin   | Incent.  | Admin   |
| <b>Commercial</b>                       |          |         |          |         |          |         |          |         |          |         |
| Commercial Solutions MTP                | \$365.58 | \$39.63 | \$330.00 | \$32.97 | \$410.11 | \$33.41 | \$296.58 | \$31.42 | \$177.64 | \$20.69 |
| Commercial SOP                          | \$244.35 | \$41.09 | \$187.96 | \$22.88 | \$218.53 | \$22.47 | \$196.10 | \$35.58 | \$132.02 | \$29.32 |
| Irrigation Load Management MTP          | NAP      | NAP     | NAP      | NAP     | NAP      | NAP     | \$50.00  | \$6.59  | \$140.00 | \$18.25 |
| Load Management SOP                     | \$87.00  | \$16.71 | \$80.58  | \$10.52 | \$31.89  | \$3.17  | \$41.50  | \$8.64  | \$96.30  | \$18.30 |
| Open MTP                                | \$418.04 | \$40.43 | \$417.06 | \$47.98 | \$461.04 | \$45.24 | \$421.18 | \$48.23 | \$374.73 | \$50.56 |
| SCORE/CitySmart MTP                     | \$158.37 | \$23.02 | \$153.27 | \$17.41 | \$185.88 | \$16.49 | \$216.14 | \$23.49 | \$230.35 | \$26.39 |
| SMART Source <sup>SM</sup> Solar PV MTP | \$69.02  | \$4.94  | \$49.81  | \$5.37  | \$60.48  | \$4.83  | \$44.29  | \$4.32  | \$67.74  | \$8.90  |

(Table continued on next page)



**Table 21: Historical Program Incentive and Administrative Expenditures for 2013 through 2017 (000's) – North Division  
(Continued)**

|  | 2017              |                 | 2016              |                 | 2015              |                 | 2014              |                 | 2013              |                 |
|--|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|-------------------|-----------------|
|  | Incent.           | Admin           | Incent.           | Admin           | Incent.           | Admin           | Incent.           | Admin           | Incent.           | Admin           |
| <b>Residential</b>   |                   |                 |                   |                 |                   |                 |                   |                 |                   |                 |
| A/C Distributor Pilot MTP                                    | NAP               | NAP             | NAP               | NAP             | NAP               | NAP             | \$139.28          | \$21.69         | \$133.59          | \$22.28         |
| Efficiency Connection Pilot MTP                              | NAP               | NAP             | \$81.76           | \$7.59          | \$62.05           | \$10.23         | NAP               | NAP             | NAP               | NAP             |
| Residential SOP  | \$528.86          | \$69.31         | \$415.69          | \$60.11         | \$445.52          | \$61.55         | \$414.45          | \$57.48         | \$364.19          | \$62.57         |
| SMART Source <sup>SM</sup> Solar PV MTP                      | \$101.79          | \$7.29          | \$88.34           | \$9.52          | \$100.88          | \$8.06          | \$102.04          | \$9.96          | \$68.73           | \$9.03          |
| Whisker Labs* Residential DR Pilot                           | \$14.56           | \$1.06          | \$15.51           | \$1.49          | NAP               | NAP             | NAP               | NAP             | NAP               | NAP             |
| <b>Hard-to-Reach</b>   |                   |                 |                   |                 |                   |                 |                   |                 |                   |                 |
| Hard-to-Reach SOP  | \$314.03          | \$42.42         | \$162.14          | \$25.46         | \$160.19          | \$15.79         | \$160.60          | \$23.69         | \$177.12          | \$32.97         |
| Targeted Low-Income Energy Efficiency Program                | \$283.62          | \$40.77         | \$255.66          | \$32.68         | \$256.02          | \$27.07         | \$248.23          | \$32.82         | \$251.37          | \$37.13         |
| <b>Research and Development (R&amp;D)</b>                    | \$0.00            | \$53.25         | NAP               | \$82.69         | NAP               | \$86.35         | NAP               | \$122.51        | NAP               | \$86.56         |
| <b>Evaluation, Measurement &amp; Verification (EM&amp;V)</b> | \$0.00            | \$31.21         | NAP               | \$28.41         | NAP               | \$43.51         | NAP               | \$53.82         | NAP               | \$68.34         |
| <b>Total Expenditures</b>                                    | <b>\$2,585.22</b> | <b>\$411.12</b> | <b>\$2,237.76</b> | <b>\$385.08</b> | <b>\$2,392.59</b> | <b>\$378.19</b> | <b>\$2,330.39</b> | <b>\$480.24</b> | <b>\$2,213.78</b> | <b>\$491.29</b> |

## **VIII. Program Funding for Calendar Year 2017**

As shown in Table 22, the total projected budget in 2017 was \$3,308,221 and the actual total funds expended in 2017 were \$2,996,343, an overall total program expenditure difference of 9% from the amount budgeted.

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

The Whisker Labs Residential DR Pilot MTP was under budget due to lower than projected demand savings of 1.5 kW per participating customer. The average was 1.2 kW per customer.

The commercial component of the PV MTP did not fully utilize its incentive budget during the program year due to a project withdrawing from the program before the end of the year.

The Commercial SOP did not fully utilize its incentive budget during the program year due to lower than expected participation.

The combined 2017 expenditures for the TLIP and the HTR SOP constituted 21% of the energy efficiency budget for the 2017 Program Year. The 2017 expenditure for the TLIP constituted 10% of its energy efficiency budget for the 2017 Program Year.

**Table 22: Program Funding for Calendar Year 2017 (Dollar amounts in 000's) – North Division**

|   | Total Projected Budget <sup>7</sup> | Numbers of Customers Participating | Actual Funds Expended (Incentives) | Actual Funds Expended (Admin) | Research & Development | Evaluation, Measurement & Verification | Total Funds Expended |
|---|-------------------------------------|------------------------------------|------------------------------------|-------------------------------|------------------------|--|----------------------|
| <b>Commercial</b>                             |                                     |                                    |                                    |                               |                        |  |                      |
| Commercial Solutions MTP                      | \$418.00                            | 25                                 | \$365.58                           | \$39.63                       |                        |  | \$405.21             |
| Commercial SOP                                | \$355.00                            | 30                                 | \$244.35                           | \$41.09                       |                        |  | \$285.44             |
| Load Management SOP                           | \$100.00                            | 18                                 | \$87.00                            | \$16.71                       |                        |  | \$103.71             |
| Open MTP                                      | \$482.00                            | 50                                 | \$418.04                           | \$40.43                       |                        |  | \$458.47             |
| SCORE/CitySmart MTP                           | \$184.00                            | 48                                 | \$158.37                           | \$23.02                       |                        |  | \$181.39             |
| SMART Source <sup>SM</sup> Solar PV MTP       | \$95.00                             | 6                                  | \$69.02                            | \$4.94                        |                        |  | \$73.97              |
| <b>Residential</b>                            |                                     |                                    |                                    |                               |                        |  |                      |
| Residential SOP                               | \$610.00                            | 835                                | \$528.86                           | \$69.31                       |                        |  | \$598.16             |
| SMART Source <sup>SM</sup> Solar PV MTP       | \$118.00                            | 15                                 | \$101.79                           | \$7.29                        |                        |  | \$109.08             |
| Whisker Labs* Residential DR Pilot            | \$23.00                             | 304                                | \$14.56                            | \$1.06                        |                        |  | \$15.62              |
| <b>Hard-to-Reach</b>                          |                                     |                                    |                                    |                               |                        |  |                      |
| Hard-to-Reach SOP                             | \$361.00                            | 350                                | \$314.03                           | \$42.42                       |                        |  | \$356.46             |
| Targeted Low-Income Energy Efficiency Program | \$331.00                            | 61                                 | \$283.62                           | \$40.77                       |                        |  | \$324.39             |
| <b>Research and Development</b>               | \$200.00                            |                                    |                                    |                               | \$53.25                |  | \$53.25              |
| <b>EM&amp;V</b>                               |                                     |                                    |                                    |                               |                        |  |                      |
| <b>Statewide EM&amp;V Contractor</b>          | \$31.22                             |                                    |                                    |                               |                        | \$31.21                                | \$31.21              |
| <b>Total Expenditures</b>                     | <b>\$3,308.22</b>                   | <b>1,742</b>                       | <b>\$2,585.22</b>                  | <b>\$326.66</b>               | <b>\$53.25</b>         | <b>\$31.21</b>                         | <b>\$2,996.34</b>    |

\*Previously Earth Networks

<sup>7</sup> Projected Budget from the revised EEPR filed May 2017, Project No. 46907.

## **IX. Market Transformation Program Results**

### **Commercial Solutions MTP**

For 2017, the North Division projected to acquire 2,909,280 kWh of energy savings from CS MTP. The North Division verified and reported 2,947,342 kWh and 549 kW. This included participation by 25 customers.

### **Whisker Labs Residential DR Pilot MTP**

The Whisker Labs Residential DR Pilot MTP goal was to acquire 500 kW demand savings. A total of 417 kW was achieved by participation of 304 residential customers in 2017.

### **Open MTP**

The Open MTP goal was to acquire 409 kW demand savings and 1,630,000 kWh in energy savings. A total of 369 kW and 1,565,393 kWh were achieved in 2017. Reported savings included 50 small commercial customers and 9 participating contractors.

### **SCORE/CitySmart MTP**

For 2017, the North Division projected to acquire 1,280,000 kWh of energy savings from this program. The North Division verified and reported 1,257,884 kWh and 251 kW. This included participation by 48 customers.

### **SMART Source<sup>SM</sup> Solar PV MTP**

The 2017 PV MTP projected to acquire a 118 kW in demand savings and 391,105 kWh in energy savings from the residential and non-residential components. A total of 21 residential and non-residential solar PV projects were completed within the program, resulting in a peak demand reduction of 106 kW and 333,679 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, program options and developing better, more efficient ways to administer current programs. The following is a summary of the North Division's R&D activities for 2017.

AEP Texas dedicated resources to research new program opportunities, resulting in two new programs planned for 2019. 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**

The North Division continues its best efforts to encourage and facilitate the involvement of REPs and EESPs in the delivery of its programs to customers. The North Division utilizes local, regional and national conferences, trade shows, and other events for outreach and information exchange with participating REPs and EESPs. The North Division again presented detailed program information at its annual AEP Texas Competitive REP workshop in October. The North Division also provides new and existing energy efficiency program information to the REPs and EESPs throughout the year on a timely basis via e-mail.

## XI. 2018 Energy Efficiency Cost Recovery Factor (EECRF)

The total amount approved to be collected through the North Division's 2018 EECRF is \$2,111,582, which consists of the following components:

- recovery of \$1,837,772 in energy efficiency expenses budgeted for 2018 (North Division's actual projected budget for energy efficiency expenses for 2018 is \$3,339,430, which is reduced by \$1,294,430 in energy efficiency costs expressly included in base rates and \$144,798 of load growth);
- recovery of a performance bonus in the amount of \$556,190 for achieving energy efficiency goals in Program Year 2016;
- return to customers in the amount of \$335,534 in energy efficiency program costs over-collected through North Division's EECRF in 2016;
- recovery of \$10,724 for 2016 EECRF proceeding expenses incurred in Docket No. 45928 by municipalities as authorized by 16 TAC § R. 25.181(f)(3)(B);
- recovery of an estimated amount of \$62,430 for projected EM&V costs; and
- a settlement adjustment of \$20,000 as approved in PUC Docket No. 47236.

**Table 23: 2018 EECRF**

| Customer Class                                  | EECRF                |
|---|----------------------|
| Residential Service                             | \$0.000589 per kWh   |
| Secondary Service (less than or equal to 10 kW) | \$0.000658 per kWh   |
| Secondary Service (greater than 10 kW)          | \$0.000664 per kWh   |
| Primary Service                                 | (\$0.000143) per kWh |
| Transmission Service                            | \$0.005563 per kW    |

## **XII. 2017 EECRF Summary**

### **2017 Collections for Energy Efficiency**

The North Division collected \$1,407,497 through its 2017 base rates, including \$1,294,430 expressly included in base rates and an adjustment for load growth in the amount of \$113,067, and \$1,571,042 through its 2017 EECRF for a total of \$2,978,540. A performance bonus of \$186,197 for exceeding its 2015 energy efficiency goals and \$203,607 returned to customers are reflected in the total amount collected for energy efficiency in 2017.

### **Energy Efficiency Program Costs Expended**

The North Division expended a total of \$2,996,343 for its 2017 energy efficiency programs. The amount expended is \$311,878 less than the 2017 projected budget of \$3,308,221 for energy efficiency programs.

### **Over-Recovery of Energy Efficiency Costs**

The North Division's actual 2017 energy efficiency program costs (including EM&V costs) less municipal rate case expenses are \$2,983,168 and actual energy efficiency program revenues are \$2,995,949. These associated 2017 costs and revenues result in an over-recovery of energy efficiency costs of \$12,781. This is the amount that the North Division will request be returned to customers within its 2019 EECRF.

## **XIII. Underserved Counties**

The North Division has defined Underserved Counties as any county in the service territory for which the North Division reported no demand or energy savings through any of its 2017 SOPs or MTPs. Per 16 TAC § 25.181(n) (2) (U), a list of the Underserved Counties is as follows:

- Baylor
- Crane
- King
- Pecos
- Wheeler
- Briscoe
- Edwards
- Mason
- Stephens
- Brown
- Gillespie
- Motley
- Throckmorton
- Coleman
- Hall
- Nolan
- Upton

#### **XIV. Performance Bonus**

The North Division achieved a 6,790 kW reduction in peak demand from its energy efficiency programs offered in 2017. This achievement represents 159% of its 2017 demand reduction goal of 4,260 kW. The North Division also achieved 12,038,177 kWh, which represents 161%, of its energy reduction goal of 7,464,000 kWh. These results qualify the North Division for a Performance Bonus. Per 16 TAC § 25.181(h), the North Division is eligible for a Performance Bonus of \$523,947, which it will request within its June 1, 2018 EECRF Filing for recovery in 2019.

In 2017, the North Division's total spending on energy efficiency programs was \$2,996,343. This includes actual EM&V expenditures to the EM&V contractor of \$31,205. Per the PUC, the total program costs to be used in the Performance Bonus calculation should include the EM&V cost allocation provided by the EM&V contractor for Program Year 2017, instead of the actual EM&V contractor expenditures. As a result, the total program expenditures for the bonus calculation will not match the actual total program expenditures exhibited in the applicable tables in this EEPR. For the purposes of the Performance Bonus calculation, the North Division's 2017 total program costs equaled \$2,997,548.



**Table 24: Energy Efficiency Performance Bonus Calculation for 2017 – North Division**

|  | kW    | kWh         |
|--|-------|-------------|
| <b>2017 Demand and Energy Goals</b>          | 4,260 | 7,464,000   |
| <b>2017 Actual Demand and Energy Savings</b> | 6,790 | 12,038,177  |
| <i>Reported/Verified Hard-to-Reach</i>       | 602   |             |
| <b>2017 Program Costs</b>                    |       |             |
|  |       | \$2,997,548 |
| <b>2017 Performance Bonus</b>                |       |             |
|  |       | \$523,947   |

**Performance Bonus Calculation**

|             |  |
|-------------|--|
| 159%        | Percentage of Demand Reduction Goal Met (Reported kW/Goal kW)  |
| 161%        | Percentage of Energy Reduction Goal Met (Reported kWh/Goal kWh)  |
| TRUE        | Met Requirements for Performance Bonus?  |
| \$8,237,019 | Total Avoided Cost (Reported kW * PV (Avoided Capacity Cost) + Reported kWh * PV(Avoided Energy Cost)) |
| \$2,997,548 | Total Program Costs  |
| \$5,239,470 | Net Benefits (Total Avoided Cost - Total Expenses)   |

**Bonus Calculation**

|             |  |
|-------------|--|
| \$1,555,556 | Calculated Bonus ((Achieved Demand Reduction/Demand Goal - 100%) / 2) * Net Benefits |
| \$523,947   | Maximum Bonus Allowed (10% of Net Benefits)  |
| \$523,947   | Bonus (Minimum of Calculated Bonus and Bonus Limit)                                  |

# Acronyms

|                 |   |
|-----------------|---|
| <b>CSOP</b>     | Commercial Standard Offer Program                                 |
| <b>CS MTP</b>   | Commercial Solutions Market Transformation Program                |
| <b>DR</b>       | Demand Response   |
| <b>DSM</b>      | Demand Side Management  |
| <b>EECRF</b>    | Energy Efficiency Cost Recovery Factor                            |
| <b>EEPR</b>     | Energy Efficiency Plan and Report                                 |
| <b>EE Rule</b>  | Energy Efficiency Rule, 16 TAC §§ 25.181 and 25.183               |
| <b>EESP</b>     | Energy Efficiency Service Providers                               |
| <b>EffCon</b>   | Efficiency Connection Pilot Market Transformation Program         |
| <b>EUMMOT</b>   | Electric Utility Marketing Managers of Texas                      |
| <b>HTR</b>      | Hard-To-Reach   |
| <b>HTR SOP</b>  | Hard-to-Reach Standard Offer Program                              |
| <b>LM SOP</b>   | Load Management Standard Offer Program                            |
| <b>MTP</b>      | Market Transformation Program                                     |
| <b>NAP</b>      | Not Applicable  |
| <b>Open MTP</b> | Open Market Transformation Program                                |
| <b>PUC</b>      | Public Utility Commission of Texas                                |
| <b>PURA</b>     | Public Utility Regulatory Act                                     |
| <b>PV</b>       | Photovoltaic  |
| <b>PV MTP</b>   | SMART Source <sup>SM</sup> Solar PV Market Transformation Program |
| <b>R&amp;D</b>  | Research and Development  |

## Acronyms (Continued)

|                     |   |
|---------------------|---|
| <b>REP</b>          | Retail Electric Provider                                      |
| <b>RES</b>          | Residential   |
| <b>RSOP</b>         | Residential Standard Offer Program                            |
| <b>SCORE</b>        | Schools Conserving Resources                                  |
| <b>SCORE/CS MTP</b> | SCORE/CitySmart Market Transformation Program                 |
| <b>SOP</b>          | Standard Offer Program  |
| <b>TDU</b>          | Transmission and Distribution Utility                         |
| <b>TLIP</b>         | Targeted Low-Income Energy Efficiency Program                 |
| <b>TNC</b>          | AEP Texas North Company (now the North Division of AEP Texas) |

## **APPENDIX A:**

### **REPORTED AND VERIFIED DEMAND AND ENERGY REDUCTION BY COUNTY**

**CALENDAR YEAR 2017  
COMMERCIAL SOLUTIONS MTP**

| <b>County</b> | <b>Reported Savings</b> |                  |
|---------------|-------------------------|------------------|
|               | <b>kW</b>               | <b>kWh</b>       |
| Brewster      | 27.67                   | 131,831          |
| Jeff Davis    | 0.78                    | 165              |
| Runnels       | 2.49                    | 19,006           |
| Taylor        | 247.09                  | 1,284,022        |
| Tom Green     | 271.20                  | 1,512,317        |
| <b>Total</b>  | <b>549.23</b>           | <b>2,947,342</b> |

**COMMERCIAL SOP**

| <b>County</b> | <b>Reported Savings</b> |                  |
|---------------|-------------------------|------------------|
|               | <b>kW</b>               | <b>kWh</b>       |
| Childress     | 19.15                   | 74,597           |
| Haskell       | 3.55                    | 13,807           |
| Jones         | 0.79                    | 5,155            |
| Runnels       | 17.37                   | 67,554           |
| Shackelford   | 77.00                   | 394,203          |
| Taylor        | 187.48                  | 1,106,466        |
| Tom Green     | 70.29                   | 318,299          |
| Wilbarger     | 17.35                   | 67,470           |
| <b>Total</b>  | <b>392.98</b>           | <b>2,047,551</b> |

**HARD-TO-REACH SOP**

| County       | Reported Savings |                  |
|--------------|------------------|------------------|
|              | kW               | kWh              |
| Coke         | 0.93             | 1,686            |
| Eastland     | 25.45            | 54,461           |
| Runnels      | 0.65             | 1,212            |
| Taylor       | 208.48           | 365,916          |
| Tom Green    | 252.99           | 548,138          |
| Wilbarger    | 23.87            | 45,068           |
| <b>Total</b> | <b>512.36</b>    | <b>1,016,481</b> |

**LOAD MANAGEMENT SOP**

| County       | Reported Savings |               |
|--------------|------------------|---------------|
|              | kW               | kWh           |
| Taylor       | 2,198.00         | 9,514         |
| Tom Green    | 574.00           | 1,611         |
| Wilbarger    | 50.00            | 106           |
| <b>Total</b> | <b>2,822.00</b>  | <b>11,231</b> |

**OPEN MTP**

| County       | Reported Savings |                  |
|--------------|------------------|------------------|
|              | kW               | kWh              |
| Childress    | 5.26             | 26,345           |
| Kimble       | 3.13             | 12,799           |
| Taylor       | 258.45           | 1,056,940        |
| Tom Green    | 102.64           | 469,308          |
| <b>Total</b> | <b>369.48</b>    | <b>1,565,393</b> |

**RESIDENTIAL SOP**

| County       | Reported Savings |                  |
|--------------|------------------|------------------|
|              | kW               | kWh              |
| Callahan     | 0.94             | 2,351            |
| Coke         | 1.21             | 4,972            |
| Eastland     | 15.19            | 35,208           |
| Irion        | 6.48             | 12,792           |
| Jones        | 2.27             | 4,941            |
| Runnels      | 1.01             | 2,094            |
| Sutton       | 3.19             | 9,848            |
| Taylor       | 397.20           | 717,627          |
| Tom Green    | 852.11           | 1,911,291        |
| <b>Total</b> | <b>1,279.60</b>  | <b>2,701,122</b> |

**SCORE/CITYSMART MTP**

| County       | Reported Savings |                  |
|--------------|------------------|------------------|
|              | kW               | kWh              |
| Brewster     | 2.51             | 14,214           |
| Eastland     | 78.08            | 398,702          |
| Jeff Davis   | 9.20             | 51,927           |
| Reagan       | 5.05             | 33,071           |
| Runnels      | 9.59             | 45,664           |
| Sterling     | 0.32             | 1,796            |
| Sutton       | 3.62             | 20,399           |
| Taylor       | 83.87            | 482,263          |
| Tom Green    | 53.10            | 1764,657         |
| Wilbarger    | 5.91             | 35,191           |
| <b>Total</b> | <b>251.25</b>    | <b>1,257,884</b> |

### SMART SOURCE<sup>SM</sup> SOLAR PV MTP

| County       | Reported Savings |                |
|--------------|------------------|----------------|
|              | kW               | kWh            |
| Brewster     | 6.08             | 18,613         |
| Callahan     | 8.34             | 25,831         |
| Childress    | 7.34             | 19,010         |
| Presidio     | 26.39            | 84,046         |
| Reeves       | 18.84            | 63,215         |
| Taylor       | 12.27            | 38,917         |
| Tom Green    | 22.76            | 68,352         |
| Wilbarger    | 4.26             | 15,695         |
| <b>Total</b> | <b>106.27</b>    | <b>333,679</b> |

### TARGETED LOW-INCOME ENERGY EFFICIENCY PROGRAM

| County       | Reported Savings |                |
|--------------|------------------|----------------|
|              | kW               | kWh            |
| Callahan     | 6.44             | 11,681         |
| Cottle       | 3.29             | 4,674          |
| Eastland     | 0.75             | 1,345          |
| Fisher       | 1.27             | 1,588          |
| Foard        | 3.12             | 6,031          |
| Hardeman     | 3.91             | 11,948         |
| Haskell      | 1.82             | 2,991          |
| Jones        | 0.65             | 822            |
| Knox         | 1.70             | 2,496          |
| Menard       | 0.65             | 1,228          |
| Presidio     | 1.12             | 2,074          |
| Runnels      | 3.92             | 6,849          |
| Schleicher   | 4.23             | 7,679          |
| Stonewall    | 1.58             | 3,922          |
| Taylor       | 34.07            | 54,613         |
| Tom Green    | 21.12            | 37,394         |
| <b>Total</b> | <b>89.64</b>     | <b>157,336</b> |



**WHISKER LABS RESIDENTIAL DR PILOT MTP**

| County       | Reported Savings |            |
|--------------|------------------|------------|
|              | kW               | kWh        |
| Brewster     | 3.00             | 1          |
| Callahan     | 9.28             | 4          |
| Childress    | 2.98             | 1          |
| Concho       | 10.65            | 4          |
| Crockett     | 2.35             | 1          |
| Dickens      | 1.52             | 1          |
| Eastland     | 4.09             | 2          |
| Hardeman     | 1.97             | 1          |
| Haskell      | 6.31             | 2          |
| Jones        | 7.52             | 3          |
| Kent         | 2.85             | 1          |
| McCulloch    | 1.58             | 1          |
| Presidio     | 0.01             | 0          |
| Reagan       | 1.98             | 1          |
| Runnels      | 1.52             | 1          |
| Shackelford  | -1.83            | -1         |
| Taylor       | 198.74           | 75         |
| Tom Green    | 143.92           | 55         |
| Wilbarger    | 18.28            | 7          |
| <b>Total</b> | <b>416.72</b>    | <b>158</b> |

## **APPENDIX B:**

### **PROGRAM TEMPLATES**

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

## **APPENDIX C:**

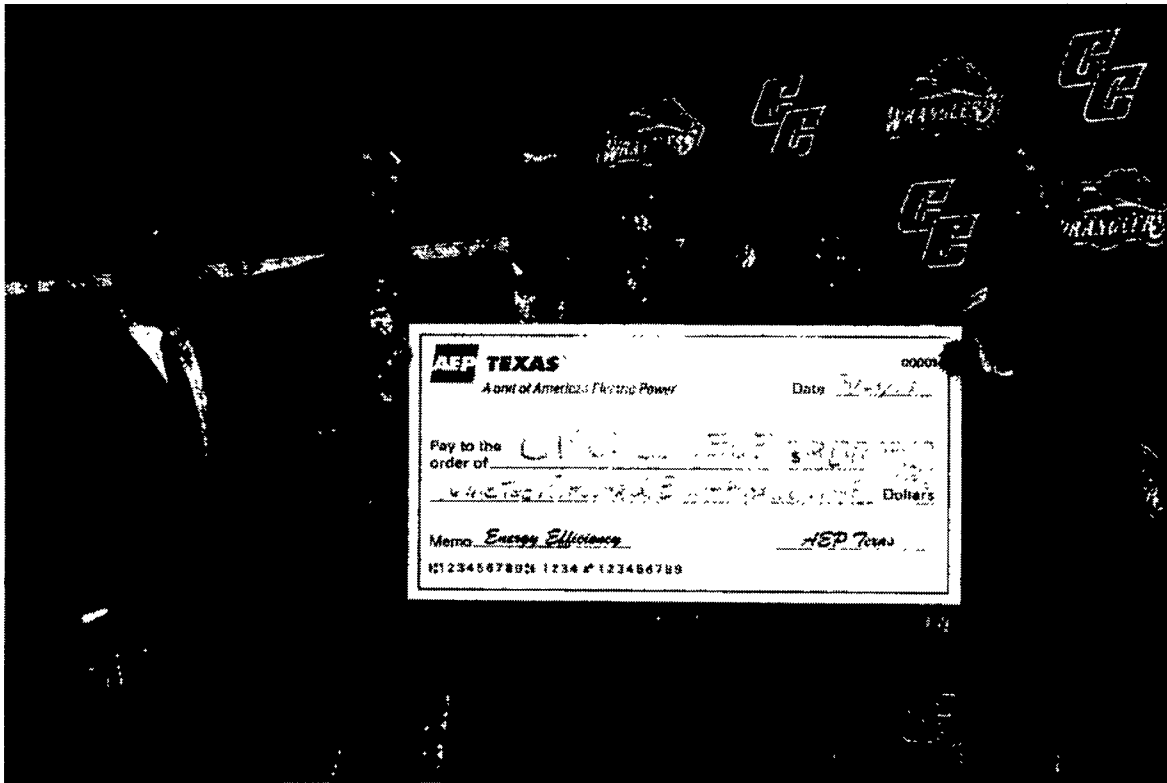
### **EXISTING CONTRACTS OR OBLIGATIONS**

AEP Texas North Division has no Existing Contracts or Obligations documentation to provide.

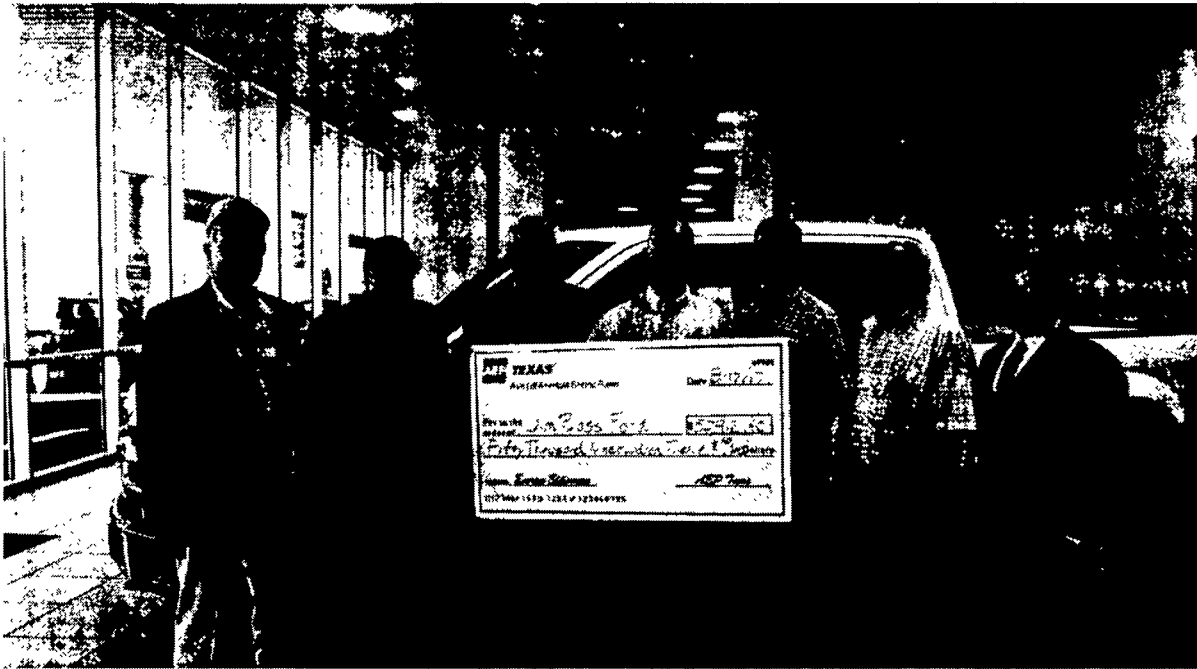
## **APPENDIX D:**

### **OPTIONAL SUPPORT DOCUMENTATION**

AEP Texas North Division provides the following Optional Supporting Documentation.



AEP Texas presented an incentive check to the Cisco College for the installation of high efficiency equipment through the SCORE program.



AEP Texas presented Jim Bass Cars and Trucks in San Angelo with a cash incentive for upgrading multiple facilities with high-efficiency LED lighting through the Commercial Solutions program.