PUC DOCKET NO. _____

APPLICATION OF AEP TEXAS INC. TO ADJUST ENERGY EFFICIENCY COST RECOVERY FACTORS AND RELATED RELIEF	**§ § § § §**	**PUBLIC UTILITY COMMISSION OF TEXAS**

AEP TEXAS INC.'S APPLICATION

JUNE 1, 2016

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PUC DOCKET NO. _____

APPLICATION OF AEP TEXAS INC TO ADJUST ENERGY EFFICIENCY COST RECOVERY FACTORS AND RELATED RELIEF	§ § § §	**PUBLIC UTILITY COMMISSION** **OF TEXAS**

AEP TEXAS INC.'S APPLICATION

TO THE HONORABLE PUBLIC UTILITY COMMISSION OF TEXAS:

AEP Texas Inc. (AEP Texas or Applicant) files its Application to Adjust Energy Efficiency Cost Recovery Factors and Related Relief pursuant to Public Utility Regulatory Act (PURA) §39.905 and 16 Texas Administrative Code (TAC) § 25.181(f). In support thereof AEP Texas would show the following:

I. Applicant

AEP Texas is a transmission and distribution (T&D) utility that provides T&D service in a service area comprising all or parts of 92 counties in south and west Texas. AEP Texas' business address is 539 North Carancahua Street, Corpus Christi, Texas 78401. 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 Public Utility Commission of Texas (Commission) in Docket No. 46050 – Application of AEP Texas Central Company, AEP Texas North Company, and AEP Utilities, Inc. for Approval of Merger. The Commission ordered AEP Texas to "maintain separate TCC and TNC divisions, which will continue to charge separate rates and riders, and maintain separate tariffs, unless and until such time as the Commission may consider and approve consolidated rates and tariffs."[1] Consistent with the Commission's order, AEP Texas is maintaining two divisions within AEP Texas: AEP Texas Central Division (formerly TCC) and AEP Texas North Division (formerly TNC). Therefore, this EECRF filing for AEP Texas proposes to maintain separate EECRFs for the two divisions of AEP Texas.

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

II. Applicant's Authorized Representatives

AEP Texas' authorized business representative is:

Shari Zehala
American Electric Power Service Corporation
1 Riverside Plaza
Columbus, Ohio 43215
614.716.1305 (voice)
512.481.4591 (facsimile)
Email: slzehala@aep.com

AEP Texas' authorized legal representative is:

Melissa Gage
American Electric Power Service Corporation
400 West 15th Street, Suite 1520
Austin, Texas 78701
512.481.3320 (voice)
512.481.4591 (facsimile)
Email: malong@aep.com

AEP Texas requests that all pleadings and other documents filed in this proceeding be served on Melissa Gage using the contact information listed above.

III. Jurisdiction

The Commission has jurisdiction over this application pursuant to PURA §39.905 and 16 TAC § 25.181.

IV. Affected Persons

This filing affects all retail electric providers (REPs), serving end-use retail electric customers in AEP Texas' certificated service territory and will affect the retail electric customers of those REPs. There are approximately 1,021,000 end users of electricity in Applicant's service territory, all of whom are customers of REPs. Those end users of electricity who take service at below 69,000 volts, with the exception of industrial distribution customers who filed a notice of intent pursuant to 16 TAC § 25.181(w) and lighting customers, for whom no energy efficiency programs are available, may be affected by the relief sought by AEP Texas, depending on the actions taken by the REPs who provide them electricity.

V. Background

In Docket Nos. 45928 and 45929,[1] the Commission authorized AEP Texas to adjust its EECRFs pursuant to PURA §39.905 and 16 TAC § 25.181(f)(1) to recover $10,761,913 ($9,003,339 for the Central Division and $1,758,574 for the North Division) in 2017 for energy efficiency. For AEP Texas, this amount included $8,659,767 ($6,869,313 for the Central Division and $1,790,454 for the North Division) of energy efficiency expenses forecasted for program year 2017 in excess of AEP Texas' projected energy efficiency revenues collected from base rates approved in Docket Nos. 33309 and 33310. It also included $3,645,793 for AEP Texas' performance bonus achieved by its 2015 energy efficiency results ($3,459,596 for the Central Division and $186,197 for the North Division). AEP Texas' approved 2017 EECRFs also included $1,509,610 returned to customers ($1,306,003 for the Central Division and $203,607 for the North Division), the amount of energy efficiency program revenues that were over-recovered by its 2015 EECRF; and recovery of $9,963 ($5,433 for the Central Division and $4,530 for the North Division) for 2015 EECRF proceeding expenses incurred in Docket Nos. 45717 and 45718 by municipalities as authorized by 16 TAC § 25.181(f)(3)(B).

Pursuant to 16 TAC § 25.181(f)(8), a utility such as AEP Texas that serves in an area in which customer choice is offered is required to file an application with the Commission to adjust its EECRF not later than June 1 of each year.

VI. Request to Adjust the EECRF

By this application, AEP Texas requests the authority to update its EECRF to adjust the cost recovery factors for energy efficiency to collect $11,618,997 ($9,488,449 for the Central Division and $2,130,548 for the North Division) in 2018 to reflect the following components:

1) recovery of $8,650,863 for AEP Texas ($6,813,091 for the Central Division and $1,837,772 for the North Division) which is the forecasted 2018 energy efficiency program expenditures in excess of its projected energy efficiency revenues collected from base rates adjusted as outlined in the rule;
2) return to customers the amount of $1,173,691 for the Central Division and $328,735 for the North Division, representing the over-recovery of $1,502,426 for AEP Texas actual energy efficiency costs for 2016;
3) recovery of $3,492,251 for the Central Division and $556,190 for the North Division representing AEP Texas' 2016 performance bonus of $4,048,441 for achieving demand and energy savings that exceeded its minimum goals to be achieved in 2016; and

[1] Docket No. 45928, *Application of AEP Texas North Company To Adjust Energy Efficiency Cost Recovery Factor (EECRF) and Related Relief* (Final Order September 23, 2016); Docket No. 45929, *Application of AEP Texas Central Company To Adjust Energy Efficiency Cost Recovery Factor (EECRF) and Related Relief* (Final Order September 23, 2016).

4) recovery of $5,713 ($2,822 for the Central Division and $2,891 for the North Division) representing 2016 EECRF proceeding expenses incurred in Docket Nos. 45929 and 45928 by municipalities as authorized by 16 TAC § 25.181(f)(3)(B); and

5) recovery of $416,407 for AEP Texas' share of the EM&V costs to evaluate PY 2016 and PY 2017 ($353,977 for the Central Division and $62,430 for the North Division).

VII. Adjusted EECRF Cost Recovery Factors for 2018

The adjusted Schedule EECRF containing the cost recovery factors for 2018 is attached hereto as Attachment A. AEP Texas requests the Commission to make the adjusted Schedule EECRFs effective as of March 1, 2018. The requested adjusted EECRF cost recovery factors to recover the applicable energy efficiency costs during 2018 are as follows:

Central Division

Rate Class	Proposed kWh Factor	Billing Unit Per Rate
Residential	$0.000579	kWh
Secondary <= 10 kW	$0.000128	kWh
Secondary > 10 kW	$0.000390	kWh
Primary	$0.000513	kWh
Transmission	($.041636)	kW

North Division

Rate Class	Proposed kWh Factor	Billing Unit Per Rate
Residential	$0.000600	kWh
Secondary <= 10 kW	$0.000659	kWh
Secondary > 10 kW	$0.000664	kWh
Primary	($0.000144)	kWh
Transmission	$0.005563	kW

VIII. Testimony and Schedules Supporting 2018 EECRF

Accompanying this application are the direct testimonies of Robert Cavazos, Pamela D. Osterloh, Rhonda R. Fahrlender, Brian J. Frantz and Jennifer L. Jackson and Schedules A through S, which support the relief sought by Applicant. The evidence sponsored by Mr. Cavazos, Ms. Osterloh, Ms. Fahrlender, Mr. Frantz, and Ms. Jackson fully supports the relief sought by AEP Texas for 2018 pursuant to PURA §39.905 and 16 TAC § 25.181(f).

IX. Request for Protective Order

Schedule J contains a listing of all Energy Efficiency Service Providers (EESPs) who received incentive funds and a listing of EESPs who received more than five percent of incentive funds for 2016 along with their contracts with AEP Texas. Pursuant to 16 TAC § 25.181(f)(10)(H) and (K), such information may be provided and treated as confidential. Accordingly, AEP Texas requests entry of the standard Protective Order contained as Attachment B hereto.

X. Notice

AEP Texas proposes to provide notice by providing a copy of this application by U.S. mail, postage prepaid, to all parties to AEP Texas' most recent completed base rate cases (Docket Nos. 33309 and 33310), AEP Texas' last EECRF cases (Docket Nos. 45928 and 45929), and the Texas Department of Housing and Community Affairs.

XI. Proposed Schedule

AEP Texas proposes the following schedule for this proceeding:

Staff Approval of Notice	June 9, 2017
Notice Completed	June 14, 2017
Proof of Notice	June 16, 2017
Intervention Deadline	July 3, 2017
Request for a Hearing	July 3, 2017
	If No Hearing Requested
Staff Recommendation	July 21, 2017
Parties' Proposed Order	July 25, 2017
	If Hearing Requested
End of discovery on AEP Texas Direct (if Hearing Requested)	July 3, 2017
Deadline for Intervenor Direct	July 7, 2017
Objections to AEP Texas and Intervenor Direct	July 14, 2017
Deadline for Staff Direct	July 14, 2017
End of Discovery on Intervenor Direct	July 14, 2017
End of Discovery on Staff Direct	July 19, 2017

Replies to Objections to AEP Texas and Intervenor Direct	July 19, 2017
Objections to Staff Direct	July 19, 2017
Discovery Responses on Intervenor Direct	July 20, 2017
Deadline for AEP Texas Rebuttal and Cross-Rebuttal	July 21, 2017
Discovery Responses on Staff Direct	July 21, 2017
Hearing on the Merits	July 26, 2017

XII. Conclusion and Prayer for Relief

WHEREFORE, PREMISES CONSIDERED, AEP Texas prays that the Commission:

(i) approve the proposed Protective Order;

(ii) approve AEP Texas' proposed notice and method of providing notice;

(iii) approve AEP Texas' proposed tariff schedule;

(iv) authorize AEP Texas to begin applying the adjusted Schedule EECRFs attached hereto as Attachment A as of March 1, 2018;

(v) grant AEP Texas' application; and

(vi) grant such other and further relief to which AEP Texas may show itself justly entitled.

Dated: June 1, 2017

RESPECTFULLY SUBMITTED,

American Electric Power Service Corporation
400 West 15th Street, Suite 1520
Austin, Texas 78701
Melissa Gage
State Bar. No. 24063949
Telephone: 512.481.3320
Facsimile: 512.481.4591

By: Melissa Gage
Melissa Gage
ATTORNEY FOR AEP TEXAS INC.

PUC DOCKET NO. _____

PUBLIC UTILITY COMMISSION OF TEXAS

APPLICATION OF

AEP TEXAS INC.

TO ADJUST

ENERGY EFFICIENCY COST RECOVERY FACTORS AND RELATED RELIEF

DIRECT TESTIMONY OF

ROBERT CAVAZOS

FOR

AEP TEXAS INC.

June 1, 2017

TESTIMONY INDEX

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS.

A. My name is Robert Cavazos. I am the Energy Efficiency & Consumer Programs Manager for AEP Texas Inc. My business address is 539 N. Carancahua, Corpus Christi, Texas 78401.

Q. PLEASE STATE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I received a Bachelor of Business Administration degree from Texas A&M University – Corpus Christi in 1998. From 1986 until 1993, I served as a meter reader with Central Power and Light Company, the predecessor to AEP Texas. In 1993, I transferred to the Customer Service Center as a Sr. Telephone Representative and later to the after-hour dispatch center. In 1996, I was appointed to the position of Lead Telephone Representative and in 1998 became Customer Service Supervisor. In 2002, I held the position of Demand Side Management (DSM) Coordinator and in 2004, transferred to Competitive Retail Relations as a Market Specialist. In 2005, I transferred to AEP's Human Resource (HR) department as a HR Field Representative and prior to my departure; I had held the position as a Senior HR Consultant. In early 2014, I accepted the position of Business Operations Supervisor and by mid-July had accepted my current position as the Energy Efficiency & Consumer Programs Manager for the former AEP Texas Central Company (TCC) and AEP Texas North Company (TNC), now AEP Texas, overseeing the implementation and administration of energy efficiency programs in compliance with the Public Utility Regulatory Act and with Public Commission of Texas (PUC or Commission) rules for such programs.

Q. PLEASE DESCRIBE HOW TCC AND TNC HAVE BECOME AEP TEXAS AND HOW THAT MERGER AFFECTS THIS PROCEEDING.

A. 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 Public Utility Commission of Texas (Commission) in Docket No. 46050 – *Application of AEP Texas Central Company, AEP Texas North Company, and AEP Utilities, Inc. for Approval of Merger.* The Commission ordered AEP Texas to "maintain separate TCC and TNC divisions, which will continue to charge separate rates and riders, and maintain separate tariffs, unless and until such time as the Commission may consider and approve consolidated rates and tariffs."[1] Consistent with the Commission's order, AEP Texas is maintaining two divisions within AEP Texas: AEP Texas Central Division (formerly TCC) and AEP Texas North Division (formerly TNC). Therefore, this EECRF filing for AEP Texas proposes to maintain separate EECRFs for the two divisions of AEP Texas.

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

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY BEFORE ANY REGULATORY AGENCY?

A. Yes, I have previously filed testimony before in the following dockets:

- Docket No. 44717, Application of AEP Texas Central Company for an Energy Efficiency Cost Recovery Factor (EECRF) and Related Relief;
- Docket No. 44718, Application of AEP Texas North Company for an Energy Efficiency Cost Recovery Factor (EECRF) and Related Relief;
- Docket No. 45928, Application of AEP Texas North Company for an Energy Efficiency Cost Recovery Factor (EECRF) and Related Relief; and
- Docket No. 45929, Application of AEP Texas Central Company for an Energy Efficiency Cost Recovery Factor (EECRF) and Related Relief;

Q. DO YOU SPONSOR ANY OF THE SCHEDULES THAT ACCOMPANY AEP TEXAS' FILING?

A. Yes, I sponsor Schedule D. In addition, I cosponsor Schedules A, J, P and S with AEP Texas witnesses Pamela D. Osterloh and Rhonda R. Fahrlender; Schedules A and C with AEP Texas witness Jennifer L. Jackson; and Schedule K with AEP Texas witness Brian J. Frantz.

Q. DESCRIBE THE AEP TEXAS ENERGY EFFICIENCY AND DEMAND RESPONSE DEPARTMENT.

A. The AEP Texas Energy Efficiency and Demand Response (EE/DR) Department consists of 10 employee positions, each with certain designated responsibilities for the design, implementation, and overall administration of energy efficiency and demand response programs for AEP Texas.

The EE/DR employees are responsible for administering standard offer programs (SOPs) and market transformation programs (MTPs) to achieve the

mandated goals for energy efficiency. Program administration includes outreach activities, application review, contract execution, on-site inspections of work submitted, invoice review and processing, website maintenance, monitoring of the programs and energy efficiency expense accounting. In addition, the EE/DR employees ensure compliance with regulatory rules and statutory requirements by providing statutorily-mandated energy efficiency opportunities for all eligible customers through third-party contractors on a non-discriminatory, market-neutral basis.

Q. DOES THE EE/DR DEPARTMENT RECEIVE AMERICAN ELECTRIC POWER SERVICE CORPORATION SUPPORT?

A. Yes, the department receives a variety of affiliate services to meet its information technology, human resources, accounting and other corporate business needs. These services do not duplicate the activities performed by the EE/DR employees. Please refer to AEP Texas witness Frantz's testimony for additional detail.

II. PURPOSE OF TESTIMONY AND SUMMARY OF AEP TEXAS' FILING

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my testimony is to:

- provide a summary of the relief sought by AEP Texas in this proceeding and of its filing;
- lay out the policy considerations for recovery of AEP Texas' projected costs for its 2018 energy efficiency programs in its adjusted Energy Efficiency Cost Recovery Factor (EECRF) for 2018, as contemplated by Public Utility Regulatory Act, Tex. Util. Code Ann. § 39.905 (PURA) and 16 Tex. Admin. Code § 25.181(f) (TAC);

- provide information regarding the over-recovery of AEP Texas' energy efficiency program revenues for its 2016 programs to be included in its adjusted EECRF in 2018;
- provide information regarding AEP Texas' performance bonus for its 2016 energy efficiency results, as contemplated in 16 TAC § 25.181(h), to be recovered through its adjusted EECRF in 2018;
- provide information regarding AEP Texas' share of costs for Evaluation, Measurement and Verification (EM&V) activities for evaluating programs, as contemplated in 16 TAC § 25.181(q)(10), to be recovered through its adjusted EECRF; and
- provide information regarding recovery of 2016 EECRF proceeding expenses incurred in Docket Nos. 45928 and 45929 by municipalities to be recovered through its adjusted EECRF in 2018.

Q. PLEASE DESCRIBE AEP TEXAS' FILING.

A. AEP Texas' filing consists of my direct testimony and the direct testimony of four other witnesses (Osterloh, Fahrlender, Jackson and Frantz). Ms. Osterloh's and Ms. Fahrlender's direct testimonies address the energy efficiency costs that Central Division and North Division, respectively, incurred for their 2016 programs, the EM&V costs actually incurred in 2016 for the evaluation of program year (PY) 2015, energy efficiency results from its 2016 programs, energy efficiency goals for 2018 as established by the Commission's rule, the impact of the industrial identification notice as stated in 16 TAC § 25.181(w), the programs that AEP Texas will offer in 2018 to meet its energy efficiency objectives, the costs AEP Texas projects to incur in 2018 in connection with these energy efficiency programs and objectives, and Docket Nos. 45929 and 45928 EECRF proceeding expenses incurred by and reimbursed to municipalities pursuant to 16 TAC § 25.181(f)(3)(B).

Ms. Jackson's direct testimony describes the design of the adjusted EECRF, the energy efficiency cost assignment among the EECRF rate classes to be recovered

through the adjusted EECRF, and the billing determinants used to develop the adjusted EECRF.

Mr. Frantz's direct testimony describes the affiliate costs for AEP Texas' energy efficiency programs and the reasonableness of these costs.

Accompanying the direct testimony of AEP Texas' witnesses are Schedules A through R that provide the information that the Commission has specified should be provided in support of a sufficient request for the adjusted EECRF. The reasonableness of costs incurred in 2016 is included within the schedules of this filing. AEP Texas has also included Schedule S, AEP Texas' 2017 Energy Efficiency Plan and Report (EEPR) filed in Docket No. 46907.

Q. WHAT RELIEF DOES AEP TEXAS SEEK IN THIS PROCEEDING?

A. 16 TAC § 25.181(f)(8) requires a utility in an area in which customer choice is offered to apply no later than June 1 of each year to adjust its EECRF effective March 1 of the following year, in order to reflect changes in costs, performance bonus, its share of EM&V costs, and to minimize any over- or under-recovery in prior years' program costs. Accordingly, by this application AEP Texas requests the Commission to approve an adjustment the AEP Texas EECRFs to recover $11,618,997 ($9,488,449 for the AEP Texas Central Division and $2,130,548 for the AEP Texas North Division). As my testimony and the testimony of AEP Texas witnesses Osterloh, Fahrlender, Jackson, and Frantz explain, the amount AEP Texas seeks to recover through its adjusted 2018 EECRF reflects the following components:

EECRF reflects the following components:

1) recovery of $8,650,863 for AEP Texas ($6,813,091 for the Central Division and $1,837,772 for the North Division) which is the forecasted 2018 energy efficiency program expenditures in excess of its projected energy efficiency revenues collected from base rates adjusted as outlined in the rule;

2) return to customers the amount of $1,173,691 for the Central Division and $328,735 for the North Division, representing the over-recovery of $1,502,426 for AEP Texas actual energy efficiency costs for 2016;

3) recovery of $3,492,251 for the Central Division and $556,190 for the North Division representing AEP Texas' 2016 performance bonus of $4,048,441 for achieving demand and energy savings that exceeded its minimum goals to be achieved in 2016;

4) recovery of $5,713 ($2,822 for the Central Division and $2,891 for the North Division) representing 2016 EECRF proceeding expenses incurred in Docket Nos. 45929 and 45928 by municipalities as authorized by 16 TAC § 25.181(f)(3)(B); and

5) recovery of $416,407 for AEP Texas' ($353,977 for the Central Division and $62,430 for the North Division) share of the EM&V cost to evaluate PY 2016 and PY 2017.

Q. WHAT ARE AEP TEXAS' ESTIMATED PY 2018 ENERGY EFFICIENCY COSTS?

A. As shown in Schedule A, PY 2018 projected energy efficiency program cost of $14,436,436 for Central Division and $3,339,430 for North Division is reasonably necessary for AEP Texas to achieve its energy efficiency objectives for PY 2018 pursuant to 16 TAC § 25.181(e)(1).

Q. DOES AEP TEXAS' 2018 EECRF INCLUDE AEP TEXAS' PROJECTED SHARE OF THE STATEWIDE EM&V COSTS?

A. Yes, AEP Texas is including $416,407 ($353,977 for Central and $62,430 for North) as its apportioned EM&V cost, which includes $208,245 ($177,024 for Central and $31,221 for North) to be incurred in 2017 for the evaluation of PY 2016 and

$208,162 ($176,953 for Central and $31,209 for North) to be incurred in 2018 for the evaluation of PY 2017.

Q. DO AEP TEXAS' CURRENT BASE RATES INCLUDE ANY AMOUNT THAT IS EXPRESSLY SPECIFIED FOR ENERGY EFFICIENCY?

A. Yes, in the Commission's Final Order in Docket Nos. 33309 and 33310, the amount expressly included in base rates for energy efficiency program funding was $6,334,949 for Central Division and $1,294,430 for North Division. This express amount has been adjusted according to the Commission rule to $7,269,368 for Central Division and $1,439,228 for North Division and is discussed in more detail in AEP Texas witness Jackson's testimony.

Q. DID AEP TEXAS SPEND MORE OR LESS THAN IT PROJECTED FOR ITS 2016 ENERGY EFFICIENCY PROGRAMS AND R&D?

A. As shown on Schedule B, Central Division incurred a total of $13,622,054 in energy efficiency expenditures for its 2015 programs and R&D, which is $643,189 less than its 2016 projection for energy efficiency.

As shown on Schedule B, North Division incurred a total of $2,622,844 in energy efficiency expenditures for its 2016 programs and R&D, which is $365,007 less than its 2016 projection for energy efficiency.

Q. DID AEP TEXAS EXCEED ITS GOALS FOR 2016?

A. Yes, Central Division exceeded its demand reduction and energy reduction goals for PY 2016 of 15.73 megawatt (MW) and 27,559 megawatt-hour (MWh) respectively. North Division exceeded its demand reduction and energy reduction goals for PY 2016 of 4.26 megawatt (MW) and 7,464 megawatt-hour (MWh) respectively.

Q. DID AEP TEXAS QUALIFY FOR A PERFORMANCE BONUS FOR ITS 2016 ENERGY EFFICIENCY ACHIEVEMENTS?

A. Yes. AEP Texas qualified for a $4,048,441 performance bonus. Schedule D sets forth the calculation of the $3,492,251 and $556,190 performance bonus that Central Division and North Division earned, respectively. AEP Texas requests that these performance bonus amounts of $3,492,251 and $556,190 also be included for recovery through its adjusted EECRF for 2018.

Q. WHAT DOES AEP TEXAS REQUEST TO BE THE EFFECTIVE DATE OF THE ADJUSTED EECRF FOR 2018?

A. Pursuant to 16 TAC § 25.181(f)(8), AEP Texas requests that the adjusted EECRF be made effective March 1, 2018.

III. POLICY CONSIDERATIONS FOR RECOVERY OF ENERGY EFFICIENCY EXPENDITURES

A. Statutory Policies

Q. WHAT ARE THE STATUTORY POLICY CONSIDERATIONS THAT GOVERN THE RECOVERY OF ENERGY EFFICIENCY COSTS?

A. In PURA § 39.905, the Texas Legislature established policies that an electric utility such as AEP Texas annually will provide, through market-based SOPs or targeted MTPs, incentives sufficient for retail electric providers (REPs) and competitive energy efficiency service providers (EESPs) to acquire additional cost-effective energy efficiency, subject to cost ceilings established by the Commission, for the utility's residential and commercial customers equivalent to:

a) not less than 30 percent of the utility's annual growth in demand of residential and commercial customers by December 31 of each year beginning with the 2013 calendar year; however, not less than the preceding year.

b) for an electric utility whose amount of energy efficiency to be acquired under this subsection is equivalent to at least four-tenths of one percent of the electric utility's summer weather-adjusted peak demand for residential and commercial customers in the previous calendar year, not less than four-tenths of one percent of the utility's summer weather-adjusted peak demand for residential and commercial customers by December 31 of each subsequent year; however, not less than the preceding year.

The Legislature has also recognized that a utility should have access to a mechanism to enable it to fully and timely recover the costs of providing these energy efficiency incentive programs. Additionally, PURA directs the Commission to adopt rules that establish an incentive and reward utilities that exceed their minimum goals.

B. Commission Rule Pertaining to an EECRF Filing

Q. WHAT ARE THE MINIMUM ANNUAL ENERGY EFFICIENCY GOALS FOR PY 2018?

A. 16 TAC § 25.181(e)(1) provides, in pertinent part, for the following minimum energy efficiency goals:

(B) Beginning with the 2013 program year, until the trigger described in subparagraph (C) is reached, 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) is equivalent to at least four-tenths of 1% of its summer weather-adjusted peak demand for the combined residential and commercial customers for the previous program year, the utility must meet the energy efficiency goal described in subparagraph (D) for each subsequent program year.

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

(E) Except as adjusted in accordance with subsection (w) of the rule, 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 16 TAC § 25.181(e).

Q. HOW HAS AEP TEXAS ESTABLISHED ITS GOAL FOR 2018?

A. AEP Texas has calculated its goal as determined by 16 TAC § 25.181(e)(1)(D) for each division.

Q. WHY IS AEP TEXAS FILING THIS REQUEST TO ADJUST ITS EECRF FOR RECOVERY OF ITS PROJECTED PY 2018 ENERGY EFFICIENCY EXPENDITURES?

A. The Commission rule includes provisions for a utility such as AEP Texas to request that an EECRF be adjusted to recover its annual energy efficiency program expenditures (16 TAC § 25.181(f)(1)). AEP Texas witness Jackson's testimony outlines the design of factors to accomplish this. Also, as I stated earlier, 16 TAC § 25.181(f)(8) requires a utility in an area in which customer choice is offered to apply to adjust its EECRF no later than June 1 of each year, with the adjusted EECRF to be effective March 1 of the following year, to reflect changes in program costs and performance bonus and to minimize any over- or under-recovery in prior year program costs. Finally, 16 TAC § 25.181(q)(10) authorizes recovery of required EM&V costs that will be incurred for evaluating programs through its adjusted EECRF.

Q. HAS AEP TEXAS INCLUDED EECRF PROCEEDING EXPENSES?

A. Yes. According to 16 TAC § 25.181(f)(3), a proceeding conducted pursuant to this subsection is a ratemaking proceeding for purposes of PURA § 33.023. EECRF

proceeding expenses are to be included in the adjusted EECRF calculated pursuant to paragraph (1) of this subsection. EECRF proceeding expenses may include only those expenses for the immediately previous EECRF proceeding conducted under this subsection pursuant to 16 TAC § 25.181(f)(3)(A). AEP Texas includes municipal EECRF proceeding expenses paid for the immediately previous EECRF proceeding conducted under this subsection for services reimbursable under PURA § 33.023(b). In this proceeding, AEP Texas is requesting recovery of $5,713 of municipal expenses ($2,822 in municipal expenses paid for Docket No. 45929 and $2,891 in municipal expenses paid for Docket No. 45928).

Q. WHAT ARE THE REQUIRED ELEMENTS TO BE COVERED WITHIN THE SCOPE OF THIS PROCEEDING?

A. Specifically, a utility is authorized to recover the differential between the costs expressly included in base rates (if such energy efficiency costs are expressly included in base rates), adjusted to account for changes in billing determinants from the test year billing determinants used to set rates in the last base rate proceeding, and the increased costs it must incur in order to meet the objectives of PURA § 39.905, including the achievement of additional cost-effective energy efficiency in excess of the minimum goals set forth in the statute.

As outlined in the Commission rule for energy efficiency, an EECRF rate schedule must be included in the utility's tariff to permit the utility to timely recover the reasonable costs of providing energy efficiency programs, including prior years' over- or under-recovery of energy efficiency program costs, any applicable performance bonus (16 TAC § 25.181(h)), projected EM&V costs and EECRF

proceeding expenses incurred by municipalities (16 TAC § 25.181(f)(3)(B)). The EECRF is to be calculated to recover the costs associated with the programs from EECRF classes that receive services under the programs AEP Texas offers (16 TAC § 25.181(f)(2)). The Commission may approve an energy charge for the EECRF. The EECRF must be set at a rate that will give AEP Texas the opportunity to earn revenues equal to the sum of AEP Texas' forecasted energy efficiency program costs, net of energy efficiency costs included in base rates, applicable prior years' energy efficiency over- or under-recovery, applicable performance bonus (16 TAC § 25.181(f)(1)), projected EM&V costs, and municipal EECRF proceeding expenses.

According to the Commission rule regarding a proceeding to change an EECRF, a utility must show that the costs to be recovered through the EECRF are reasonable estimates of the costs necessary to provide energy efficiency programs and to meet the utility's goals (16 TAC § 25.181(f)(12)(A)); the costs assigned or allocated to rate classes are reasonable and consistent (16 TAC § 25.181(f)(12)(D)); the estimate of billing determinants for the period for which the EECRF is to be in effect is reasonable (16 TAC § 25.181(f)(12)(E)); and any calculations or estimates of system losses and line losses used in calculating the charges are reasonable (16 TAC § 25.181(f)(12)(F)).

IV. AEP TEXAS' APPLICATION

Q. WHAT ARE THE ESSENTIAL ELEMENTS CONTAINED WITHIN AEP TEXAS' APPLICATION REQUESTING EECRF RECOVERY OF ITS PROGRAM COSTS?

A. According to 16 TAC § 25.181(f)(10), a utility's application to change an EECRF must include testimony and schedules. AEP Texas' application includes testimony and schedules providing the information in compliance with 16 TAC § 25.181(f) for approval of an adjusted EECRF that show:

1. the forecasted energy efficiency program costs for PY 2018;
2. the actual base rate recovery of energy efficiency program costs, adjusted for changes in load subsequent to the last base rate proceeding;
3. the performance bonus based on AEP Texas' PY 2016 energy efficiency achievements;
4. the amount of AEP Texas' PY 2016 actual energy efficiency costs that exceeded the amount recovered in base rates;
5. any adjustment for past over- or under-recovery of energy efficiency revenues;
6. information concerning the calculation of billing determinants for 2016 and 2018;
7. the direct assignment and allocation of energy efficiency costs to eligible rate classes, including any portion of energy efficiency costs included in base rates;
8. information concerning calculations related to the cost cap requirements;
9. incentive payments by program, including a list of each EESP receiving more than 5% of 2016 overall incentive payments and the percentage of 2016 incentives received by those EESPs;
10. administrative costs, including any affiliate costs and EECRF proceeding expenses for 2016;
11. actual EECRF revenues by rate class, for the period of over-recovery of 2016 EECRF costs;
12. AEP Texas' bidding and engagement process for contracting with EESPs, including a list of all EESPs that received incentive payments during 2016;
13. the estimated useful life for each measure in each program and
14. the actual energy efficiency program costs for PY 2016.

All of these elements in AEP Texas' application for approval of its adjusted EECRF for 2018 are required by virtue of 16 TAC § 25.181(f)(10) and (11).

A. Achievement of Objectives that Exceed the Minimum Goals of the Statute and Rule

Q. WHAT DEMAND REDUCTION AND ENERGY SAVINGS DOES AEP TEXAS PROPOSE TO ACHIEVE THROUGH ITS PY 2018 PROGRAMS?

A. AEP Texas' PY 2018 minimum demand reduction goals are 15.99 MW and 4.26 MW for Central Division and North Division, respectively, as calculated in accordance with 16 TAC § 25.181(e)(1)(E)(D) and (E). AEP Texas' PY 2018 energy savings goals are 28,014 MWh and 7,464 MWh for Central Division and North Division, respectively, as calculated in accordance with 16 TAC § 25.181(e)(4).

The energy efficiency objectives AEP Texas seeks to achieve through its proposed PY 2018 energy efficiency expenditures include a peak demand reduction of as much as 43.78 MW for AEP Texas Central Division and 6.15 MW for North Division and energy savings of as much as 65,693 MWh for Central Division and 12,795 MWh for AEP Texas North Division.

Q. DO YOU BELIEVE IT IS CONSISTENT WITH THE COMMISSION RULE TO PURSUE THE OBJECTIVES AEP TEXAS HAS ESTABLISHED FOR ITS PY 2018 PROGRAM?

A. Yes, I believe the intent of the Commission rule is for AEP Texas to achieve as much cost-effective energy efficiency as is reasonably possible. This intent is manifested in PURA § 39.905(b)(2), wherein the Legislature authorized the Commission to provide a performance bonus to reward a utility for "administering programs under this section that exceed the minimum goals established by this section." The express characterization of the goals in PURA § 39.905 as "minimum goals" clearly indicates

the Legislature's desire that utilities be encouraged to exceed these goals where additional cost-effective energy efficiency is reasonably possible.

B. Industrial Notice Customers

Q. HAVE ANY OF AEP TEXAS' INDUSTRIAL CUSTOMERS PROVIDED NOTICE PURSUANT TO 16 TAC § 25.181(w)?

A. Yes. Please see the testimonies of witnesses Osterloh and Fahrlender for discussion regarding such notice.

Q. ARE THESE INDUSTRIAL CUSTOMERS WHO HAVE PROVIDED NOTICE EXEMPT FROM PAYING CHARGES IN THE ADJUSTED EECRF FOR 2018?

A. Yes. 16 TAC § 25.181(w) states that if an identification notice was submitted to the utility no later than February 1 to be effective the following program year, the identified industrial customer(s) shall not be charged any EECRF costs for a period of three years.

C. Research and Development (R&D) Costs

Q. DID AEP TEXAS' PY 2016 ENERGY EFFICIENCY PROGRAM COSTS INCLUDE R&D EXPENDITURES?

A. Yes. Please see the testimonies of witnesses Osterloh and Fahrlender for discussion regarding R&D expenditures.

Q. DOES AEP TEXAS' PY 2018 ENERGY EFFICIENCY PROGRAM COST INCLUDE R&D EXPENDITURES?

A. Yes, it does.

Q. HAS AEP TEXAS PROJECTED ITS PY 2018 R&D EXPENDITURES?

A. Yes. Central Division has projected $365,125 for R&D expenditures in PY 2018. North Division has projected $200,000 for R&D expenditures in PY 2018.

Q. HAS AEP TEXAS INCLUDED THE MAXIMUM AMOUNT IN PY 2018 FOR ENERGY EFFICIENCY R&D EXPENDITURES ALLOWED BY THE COMMISSION RULE?

A. No, 16 TAC § 25.181(i) specifies that the maximum amount of energy efficiency R&D costs that AEP Texas could incur is 10% of its total program costs for the previous program year, for PY 2018. However, AEP Texas has projected the amount it considers to be reasonable for projected R&D expenditures to be $365,125 for Central Division and $200.000 North Division, considering the whole of its energy efficiency program offerings and the magnitude of its required demand reduction goal to be achieved in PY 2018.

D. Over-Recovery of PY 2016 Costs

Q. IS AEP TEXAS SEEKING TO RETURN TO CUSTOMERS THE AMOUNT OF OVER-RECOVERED ENERGY EFFICIENCY PROGRAM REVENUES COLLECTED THROUGH ITS 2016 EECRF IN EXCESS OF THE AMOUNT OF ENERGY EFFICIENCY PROGRAM COSTS ACTUALLY INCURRED IN PY 2016?

A. Yes. In addition to collecting its projected total PY 2018 energy efficiency program expenditures that exceed the amount recovered through its base rates, AEP Texas is requesting to return within its adjusted 2018 EECRF the amount of its actual 2016

EECRF program revenues that exceeded the amount of its energy efficiency program expenditures in PY 2016.

Q. PLEASE EXPLAIN THE BASIS FOR AEP TEXAS' INCLUSION OF THE 2016 OVER-RECOVERY AMOUNT WITHIN ITS ADJUSTED 2017 EECRF.

A. PURA § 39.905(b-1) provides that:

> The energy efficiency cost recovery factor under Subsection (b)(1) may not result in an over-recovery of costs but may be adjusted each year to change rates to enable utilities to match revenues against energy efficiency costs and any incentives to which they are granted. The factor shall be adjusted to reflect any over-collection or under-collection of energy efficiency cost recovery revenues in previous years.

16 TAC § 25.181(f)(1)(B) further states that the "EECRF shall be calculated to recover…the preceding year's over- or under-recovery."

E. 2016 Performance Bonus

Q. HAS AEP TEXAS CALCULATED THE PERFORMANCE BONUS IT SEEKS TO RECOVER IN CONNECTION WITH ITS PY 2016 ENERGY EFFICIENCY ACHIEVEMENTS?

A. Yes. Please refer to Schedule D for each division, which I sponsor. This schedule demonstrates the calculation of the $3,492,251 and $556,160 performance bonus that Central Division and North Division, respectively, seek to be awarded based upon its PY 2016 energy efficiency results.

Central Division achieved a peak demand reduction of 39.30 MW and energy savings of 67,714 MWh from its PY 2016 portfolio of energy efficiency programs. Central Division's minimum demand reduction goal to be achieved in 2016 was 15.73 MW, and the calculated energy reduction goal to be achieved in 2016 was

27,559 MWh. Central Division exceeded both its PY 2016 demand reduction and energy reduction goals. These achievements qualify Central Division for a performance bonus per the Commission rule. All of the calculations and requirements regarding the $3,492,251 performance bonus Central Division now seeks are as outlined in 16 TAC § 25.181(h).

North Division achieved a peak demand reduction of 6.38 MW and energy savings of 10,817 MWh from its PY 2016 portfolio of energy efficiency programs. North Division's minimum demand reduction goal to be achieved in 2016 was 4.26 MW, and the calculated energy reduction goal to be achieved in 2016 was 7,464 MWh. North Division exceeded both its PY 2016 demand reduction and energy reduction goals. These achievements qualify North Division for a performance bonus per the Commission rule. All of the calculations and requirements regarding the $556,190 performance bonus North Division now seeks are as outlined in 16 TAC § 25.181(h).

V. 2016 SUMMARY

Q. HAS AEP TEXAS PROVIDED INFORMATION REGARDING PY 2016?

A. Yes. Information demonstrating the reasonableness of the energy efficiency costs incurred and revenues received for PY 2016 is included in this filing.

Q. HAS AEP TEXAS INCURRED ANY 2016 AFFILIATE COSTS?

A. Yes. In 2016, Central Division incurred $274,956 in affiliate costs, which is 2% of Central Division's actual 2016 energy efficiency costs as addressed in witness Frantz's testimony. In 2016, North Division incurred $66,850 in affiliate costs, which

is 3% of North Division's actual 2016 energy efficiency costs as addressed in witness Frantz's testimony. Please refer to Schedule K for additional information.

Q. ARE THE 2016 AFFILIATE EXPENSES REASONABLE AND NECESSARY?

A. Yes, these affiliate services are reasonable and necessary costs for AEP Texas' provision of energy efficiency programs.

VI. CONCLUSION

Q. PLEASE BRIEFLY SUMMARIZE YOUR TESTIMONY.

A. The components AEP Texas includes in its request to adjust its 2018 EECRF have been properly calculated in accordance with the applicable standards and criteria.

1. The energy efficiency costs projected by AEP Texas for its PY 2018 programs represent reasonable estimates of the costs necessary to provide energy efficiency programs to meet AEP Texas' energy efficiency objectives for PY 2018.
2. The portion of those projected PY 2018 program costs that exceeds the amount of energy efficiency funding included in AEP Texas' base rates is appropriately included in the requested 2018 EECRF.
3. AEP Texas' PY 2016 performance bonus calculation comports fully with the applicable provisions of the Commission rule.
4. The PY 2016 energy efficiency program expenditures were reasonable and necessary costs to provide energy efficiency programs for PY 2016. It is reasonable and in accordance with the applicable Commission rule to include the portion of those costs that exceeds the amount of energy efficiency funding collected through AEP Texas' base rates, and that revenues that were over-recovered in its 2016 EECRF be returned in the adjusted 2018 EECRF.
5. Municipal proceeding expenses for the previous year's EECRF proceeding are included in this filing for recovery in the adjusted 2018 EECRF.

Q. DOES AEP TEXAS' APPLICATION MEET ALL OF THE REQUIREMENTS FOR ADJUSTMENT TO A UTILITY'S EECRF AS SET FORTH IN 16 TAC § 25.181(f)?

A. Yes, AEP Texas' application meets all of the requirements for approval of the requested adjustment to its 2018 EECRF to recover all of the components described in my direct testimony and fully supported by AEP Texas' other witnesses.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

PUC DOCKET NO. _____

PUBLIC UTILITY COMMISSION OF TEXAS

APPLICATION OF

AEP TEXAS INC.

TO ADJUST

ENERGY EFFICIENCY COST RECOVERY FACTORS AND RELATED RELIEF

DIRECT TESTIMONY OF

PAMELA D. OSTERLOH

FOR

AEP TEXAS INC.

JUNE 1, 2017

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, POSITION IN THE COMPANY, AND BUSINESS ADDRESS.

A. My name is Pamela D. Osterloh. I am Energy Efficiency and Consumer Programs Compliance Coordinator Principal for AEP Texas Inc. My business address is 539 N. Carancahua, Corpus Christi, Texas 78401.

Q. PLEASE STATE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I received a Bachelor of Science degree from Texas A&M University in 1986. I was first employed by and worked in various capacities and locations for Central Power and Light Company (the predecessor of AEP Texas Central Company (TCC)) from November 1991 through May 1992. In June 1992, I accepted the position of Market Research Analyst with West Texas Utilities Company (the predecessor of AEP Texas North Company (TNC)). In September 1997, I was appointed Demand Side Management (DSM) Resource Evaluation Coordinator with Central and South West Services, Inc. (the corporate service affiliate of Central and South West Corporation or CSW) located in Austin, Texas. In that role, I was responsible for energy efficiency regulatory activities and compliance for DSM activities for CSW in Texas. In April 1999, I transferred to Corpus Christi with CSW and began work in my current role as Energy Efficiency and Consumer Program Compliance Coordinator Principal for TCC (now the Central Division of AEP Texas)[1]. In my current position, I am responsible for implementing and administering energy efficiency programs in

[1] As explained in the testimony of Robert Cavazos, TNC and AEP Texas Central Company (TCC) have now merged into the single entity, AEP Texas Inc. However, the Commission has required AEP Texas to maintain separate TCC and TNC divisions, now the AEP Texas Central Division and AEP Texas North Division.

compliance with the Public Utility Regulatory Act provisions and the Public Utility Commission of Texas (PUC or Commission) rules for such energy efficiency programs. I hold professional certification from the Association of Energy Engineers (AEE) as a Certified Energy Manager.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY BEFORE ANY REGULATORY AGENCY?

A. Yes, I have previously filed testimony before the Commission before the PUC in the following dockets:

- Docket No. 35627, Application of AEP Texas Central Company for Energy Efficiency Cost Recovery Factor (EECRF);
- Docket No. 36960, Application of AEP Texas Central Company to Adjust Energy Efficiency Cost Recovery Factor;
- Docket No. 38208, Application of AEP Texas Central Company to Adjust Energy Efficiency Cost Recovery Factor and Related Relief;
- Docket No. 39360, Application of AEP Texas Central Company to Adjust Energy Efficiency Cost Recovery Factor and Related Relief;
- Docket No. 40359, Application of AEP Texas Central Company to Adjust Energy Efficiency Cost Recovery Factor and Related Relief;
- Docket No. 41538, Application of AEP Texas Central Company to Adjust Energy Efficiency Cost Recovery Factor and Related Relief;
- Docket No. 42508, Application of AEP Texas Central Company to Adjust Energy Efficiency Cost Recovery Factor and Related Relief;
- Docket No. 44717 Application of AEP Texas Central Company to Adjust Energy Efficiency Cost Recovery Factor and Related Relief: and
- Docket No. 45929 Application of AEP Texas Central Company to Adjust Energy Efficiency Cost Recovery Factor and Related Relief.

Q. DO YOU SPONSOR ANY OF THE SCHEDULES ACCOMPANYING AEP TEXAS' FILING?

A. Yes, I sponsor Central Division Schedules L through O and Central Division Schedule R. In addition, I cosponsor Central Division Schedule A with witnesses Robert Cavazos and Jennifer L. Jackson. I also cosponsor Central Division Schedule B with witness Jackson and Central Division Schedules J, P and S with witness Cavazos.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my testimony is to present information supporting the request to adjust the AEP Texas Central Division EECRF for 2018. The corresponding information to support AEP Texas' request to adjust its AEP Texas North Division's EECRF is addressed in the direct testimony of Rhonda Fahrlender. As Mr. Cavazos discusses in his direct testimony, AEP Texas seeks an adjustment in 2018 to reflect:

- recovery of $6,813,091, which is the amount of projected 2018 energy efficiency program costs that exceed the energy efficiency costs expressly included in the Central Division's prior base rate order adjusted for 2016 revenue according to 16 Tex. Admin. Code (TAC) § 25.181(f)(1)(B);
- return to customers of $1,173,691, which is the amount of the Central Division's over-recovered energy efficiency costs in 2016;
- recovery of $3,492,251, which is the amount of performance bonus earned from actual energy efficiency achievements in Program Year (PY) 2016 results;
- recovery of $2,822, which is the amount of municipal EECRF proceeding expenses incurred in 2016 pursuant to 16 TAC § 25.181(f)(3)(B); and
- recovery of $353,977 representing Central Division's share of the Evaluation, Measurement and Verification cost to evaluate PY 2106 ($176,953) and PY 2017 ($177,024).

The total amount that AEP Texas requests to be recovered through its Central Division adjusted 2018 EECRF is $9,488,449.

In my direct testimony, I first outline the energy efficiency goal established by Public Utility Regulatory Act, Tex. Util. Code Ann. § 39.905 (PURA). I also discuss the impact of the identification notice referenced in 16 TAC § 25.181(w). I then present the actual energy efficiency expenditures incurred by the Central Division for its 2016 programs, 2016 municipal EECRF proceeding expenses, and Evaluation, Measurement, and Verification (EM&V) costs incurred in PY 2016. I also present AEP Texas' plans and projected costs to achieve its energy efficiency objectives for the Central Division for PY 2018. I describe each of the programs the Central Division implemented during 2016. I also present the projected costs and the plans and programs the Central Division will implement to achieve its energy efficiency objectives for 2018.

III. ENERGY EFFICIENCY REQUIREMENTS AND OBJECTIVES

A. Statutory and Regulatory Requirements

Q. PLEASE DESCRIBE THE BASIC REQUIREMENTS OF PURA § 39.905 AS RELEVANT TO YOUR TESTIMONY.

A. As discussed by Mr. Cavazos in his testimony, the requirements of PURA § 39.905 as relevant to my testimony are:

- A utility must administer energy efficiency programs.
- A utility must provide incentives adequate for the purpose of acquiring cost-effective energy efficiency equivalent to at least 30% of the electric utility's annual growth in demand of residential and

commercial customers beginning with the 2013 program year; but not less than the previous year.

- Once the utility's demand reduction goal is equivalent to at least four-tenths of one percent of its summer weather-adjusted peak demand for the combined residential and commercial customers for the previous calendar year, the utility's goal shall be four-tenths of one percent of its summer weather-adjusted peak demand for the combined residential and commercial customers but not less than the previous year.

- A utility must provide incentives through market-based standard offer programs (SOPs) or targeted market transformation programs (MTPs).

- A utility must provide incentives in such a manner that retail electric providers (REPs) and competitive energy efficiency service providers (EESPs) install the measures that produce the energy efficiency necessary to meet the utility's mandated annual goal.

Q. HAS THE COMMISSION ADOPTED RULES TO IMPLEMENT PURA § 39.905?

A. Yes, 16 TAC § 25.181 has been adopted to implement PURA § 39.905.

Q. WHAT ARE SOME OF THE KEY COMPONENTS OF 16 TAC § 25.181?

A. Some of the key components of 16 TAC § 25.181 are:

- An electric utility shall administer energy efficiency programs to acquire at a minimum 30% reduction of its annual growth in demand of residential and commercial customers until the demand reduction goal to be acquired is at least four-tenths of 1% of its summer weather-adjusted peak demand for the combined residential and commercial customers for the previous program year.

- Once the demand reduction goal to be acquired is equivalent to at least four-tenths of 1% of its summer weather-adjusted peak demand for the combined residential and commercial customers for the previous program year, 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.

- A utility's demand goal in any year shall not be lower than its goal for the prior year.

- Utilities are encouraged to achieve demand reduction and energy savings through a portfolio of cost-effective programs that exceed each

utility's energy efficiency goals while staying within the required cost caps.

- A utility shall adjust an EECRF to timely recover forecasted annual energy efficiency program costs in excess of the actual energy efficiency revenues collected from base rates, the preceding year's over- or under-recovery including municipal and utility EECRF proceeding expenses, any performance bonus earned, and EM&V costs assigned to the utility.
- 16 TAC § 25.181(h) allows a utility exceeding the minimum goal to earn a performance bonus.
- A utility may use up to 15% of its total program costs for administration of its energy efficiency programs.
- A utility may use up to 10% of the previous program year's costs to perform necessary energy efficiency research and development (R&D) to foster continuous improvement and innovation in the application of energy efficiency technology and energy efficiency program design and implementation.
- The cumulative cost of administration and R&D shall not exceed 20% of a utility's total program costs.
- An EM&V framework is included to evaluate program portfolio performance and to measure and verify estimated demand and energy impacts reported for those programs.
- Qualifying industrial customers taking electric service at distribution voltage may submit a notice to identify metering points for their industrial processes, which allows those metering points to not be charged for any costs associated with programs provided through the EECRF nor shall the identified facilities be eligible to participate or receive incentives for a three year period.

Q. HOW DOES THE CENTRAL DIVISION IMPLEMENT THESE REQUIREMENTS?

A. AEP Texas develops and offers cost-effective energy efficiency programs to third-party EESPs as defined in 16 TAC § 25.181(c)(17), who in turn market their services to end-use retail residential and commercial customers. These programs offer incentives to encourage third-party EESPs, REPs and/or eligible commercial customers to participate as project sponsors of energy efficiency measures. The

Commission's energy efficiency rule allows commercial customers with a peak demand of 50 kilowatts (kW) or greater to act as their own EESP for measures they install for themselves. The EESPs or project sponsors then supply and install the measures at homes or businesses that produce the energy efficiency savings that the Central Division reports to satisfy the energy efficiency objectives of its programs. Energy efficiency objectives and goals are established annually, so that each year the Central Division must procure the necessary demand reduction and energy savings from participating project sponsors to meet the Central Division's objectives for that year. The energy efficiency savings may be in the form of reduction in summer or winter peak demand (kW), energy usage (kWh), or both. The Central Division pays incentives to the project sponsors for peak demand and energy savings resulting from the energy efficiency measures installed according to program guidelines.

Q. PLEASE DEFINE THE TERM SOP.

A. Pursuant to 16 TAC § 25.181(c)(56) an SOP is defined as a program under which a utility administers standard offer contracts between the utility and the EESP. A standard offer contract specifies standard payments based upon the amount of energy and peak demand savings achieved through energy efficiency measures, the applicable measurement and verification (M&V) protocols, and other terms and conditions, consistent with 16 TAC § 25.181.

Q. PLEASE DEFINE THE TERM MTP.

A. Pursuant to 16 TAC § 25.181(c)(37) an MTP is defined as a strategic program intended to induce lasting structural or behavioral changes in a market that result in the increased adoption of energy efficiency technologies, services, and practices.

B. Annual Demand Reduction Goal

Q. PLEASE DESCRIBE THE DEMAND REDUCTION GOAL REQUIREMENT FOR THE CENTRAL DIVISION.

A. Pursuant to 16 TAC § 25.181(e)(1), the Central Division is required to acquire a 30% reduction of its annual growth in demand of residential and commercial customers until that goal is equivalent to at least four-tenths of 1% (the trigger) of the Central Division's summer weather-adjusted peak demand for the combined residential and commercial customers for the previous program year. Once that trigger is reached, the Central Division 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. In addition, 16 TAC § 25.181(e)(1)(E) also states that, except as adjusted in accordance with subsection (w) of the rule, 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 16 TAC § 25.181(e).

Q. HAS THE CENTRAL DIVISION MET THE TRIGGER DESCRIBED IN 16 TAC § 25.181(e)(1)(C)?

A. Yes. The Central Division met the trigger when calculating its goal for PY 2016.

Q. PLEASE DESCRIBE HOW THE CENTRAL DIVISION'S FOUR-TENTHS OF 1% DEMAND REDUCTION GOAL IS CALCULATED.

A. The Central Division's four-tenths of 1% demand reduction goal was calculated by taking the average of the 2012 – 2016 weather adjusted peak demand at the meter adjusted for line losses. The resulting peak demand average for this time period was

3,998 MW; therefore, the Central Division's four-tenths of 1% goal for PY 2018 is 15.99 MW.

Q. COULD THE IDENTIFICATION NOTICE REQUIREMENT, AFFECT THE UTILITY'S CALCULATED GOAL FOR ENERGY EFFICIENCY?

A. Yes. Pursuant to 16 TAC § 25.181(w) the utility's demand reduction goal is required to be adjusted to remove any load identified as a result of the identification notice provision.

Q. ARE ANY SUCH NOTICES TO BE EFFECTIVE IN PY 2018?

A. Yes. The Central Division received identification notices prior to February 1, 2017 for 298 ESIDs representing 55,894 kW.

Q. WHAT IS THE CENTRAL DIVISION'S DEMAND REDUCTION GOAL TO BE ACHIEVED IN PY 2018?

A. The demand reduction goal for the Central Division to achieve in PY 2018 is 15.99 MW, based on the requirements in 16 TAC § 25.181(e)(1)(E) and as adjusted in accordance with subsection (w). The minimum PY 2018 demand reduction goal is set forth in Schedule N that I sponsor. The Central Division, however, projects it will achieve as much as 43.78 MW of demand reduction from the programs it will implement in PY 2018. As Mr. Cavazos explains in his testimony, AEP Texas interprets PURA §39.905 and 16 TAC § 25.181 as intended to encourage as much cost-effective energy efficiency as can reasonably be achieved under the limits set forth in the statute and rule.

Q. WERE LINE LOSSES INCORPORATED IN THE CALCULATION OF THE DEMAND REDUCTION GOAL?

A. Yes. Calculation of the demand reduction goal used the line loss numbers referenced in Table 5 of its 2017 Energy Efficiency Plan and Report. Line losses are derived from the loss factors determined in the Central Division's most recent line loss study.

C. Annual Energy Savings Goal

Q. HOW IS THE ENERGY SAVINGS GOAL CALCULATED UNDER 16 TAC § 25.181?

A. The minimum energy savings goal is calculated from the utility's calculated demand goal, using a 20% conservation load factor, as set forth in 16 TAC § 25.181(e)(4).

Q. WHAT IS THE CENTRAL DIVISION'S ENERGY SAVINGS GOAL TO BE ACHIEVED IN PY 2018?

A. The energy savings goal for the Central Division to achieve in PY 2018 is 28,014 megawatt-hour (MWh). The 2018 energy savings goal is set forth in Schedule N. However, the Central Division projects to achieve as much as 65,692 MWh of energy savings from the programs it will implement in PY 2018. As I mentioned above and as Mr. Cavazos explains in his testimony, AEP Texas interprets PURA § 39.905 and 16 TAC § 25.181 as intended to encourage utilities to achieve as much cost-effective energy efficiency as can reasonably be achieved under the limits set forth in the statute and rule.

D. Process to Achieve Savings

Q. WILL THE CENTRAL DIVISION OFFER PROGRAMS TO ACHIEVE THESE PY 2018 SAVINGS?

A. Yes, I discuss the programs that the Central Division will offer in Section V of my testimony. The Central Division's energy efficiency program portfolio is designed to achieve both its demand reduction and energy savings objectives for PY 2018.

Q. WILL ALL ELIGIBLE CUSTOMERS HAVE ACCESS TO ENERGY EFFICIENCY PROGRAMS OFFERED BY THE CENTRAL DIVISION?

A. Yes, except for industrial customers who have submitted an identification notice, all customers in the residential and commercial customer classes will have access to the energy efficiency programs offered by the Central Division.

IV. ENERGY EFFICIENCY COSTS

A. PY 2016

Q. WHAT COSTS DID THE CENTRAL DIVISION INCUR WITH ITS PY 2016 ENERGY EFFICIENCY PROGRAMS?

A. The costs incurred by the Central Division to implement its PY 2016 energy efficiency programs totaled $13,622,054, as shown in Schedule B.

Q. WERE THE CENTRAL DIVISION'S ACTUAL PY 2016 ENERGY EFFICIENCY COSTS LESS THAN THE ENERGY EFFICIENCY AMOUNT PROJECTED FOR PY 2016?

A. Yes. The Central Division's energy efficiency costs were about 4.5% ($643,189) less than the projected amount in 2016.

Q. WERE THE CENTRAL DIVISION'S PY 2016 PROGRAM PORTFOLIO COSTS LESS THAN OR EQUAL TO THE BENEFITS OF THE PROGRAMS?

A. Yes. The Central Division's program portfolio costs were less than or equal to the benefits of the program. The benefit-cost ratio for the Central Division's entire PY 2016 program portfolio is shown in Schedule P. The estimated useful life for each measure is provided in Schedule M.

Q. PLEASE DESCRIBE THE CENTRAL DIVISION'S PY 2016 ADMINISTRATIVE COSTS.

A. The Central Division's PY 2016 administrative costs included costs to conduct outreach and workshops to explain programs to EESPs and REPs and costs to review incentive reports and conduct site inspections of installed measures. Administrative duties also include continuous review and monitoring of programs for successful program implementation. Costs associated with work activities regarding regulatory reporting and special projects are also considered administrative costs and are included in the Central Division's administrative costs.

Q. DID THE CENTRAL DIVISION'S PY 2016 ADMINISTRATIVE COSTS INCLUDE ANY AFFILIATE COSTS?

A. Yes. Affiliate costs are discussed by witnesses Cavazos and Brian J. Frantz.

Q. DID THE CENTRAL DIVISION HAVE ANY EXPENSES ASSOCIATED WITH R&D IN PY 2016?

A. Yes. The Central Division expended $327,306 for R&D in PY 2016 as detailed in Schedule B.

Q. PLEASE DESCRIBE THE CENTRAL DIVISION'S R&D EFFORTS.

A. The Central Division's PY 2016 R&D projects included costs related to identifying, developing and implementing necessary enhancements to its electronic data

collection and management systems to incorporate updates for new program requirements, regulatory requirements, and deemed savings values; and costs associated with researching new technologies and energy efficiency program ideas. The Central Division also participated with the Electric Utility Marketing Managers of Texas (EUMMOT) in research activities that included providing technical support for the Texas Technical Reference Manual. All of the R&D expenditures incurred in PY 2016 were for the purpose of fostering continuous improvement and innovation in the application of energy efficiency technology and energy efficiency program design and implementation.

Q. PLEASE DESCRIBE THE CENTRAL DIVISION'S PY 2016 EXPENDITURES FOR ITS TARGETED LOW-INCOME PROGRAM.

A. As required by 16 TAC § 25.181(r), the Central Division expended $1,368,497 in PY 2016 for the targeted low-income energy efficiency program, which is 9.6% of the Central Division's PY 2016 energy efficiency budget.

Q. HAS THE CENTRAL DIVISION PROVIDED INFORMATION ON THE BIDDING AND ENGAGEMENT PROCESS USED FOR CONTRACTING WITH EESPS?

A. Yes. Schedule L describes the process used to select and contract with EESPs.

Q. DID ANY SINGLE EESP RECEIVE MORE THAN 5% OF THE CENTRAL DIVISION'S OVERALL INCENTIVE PAYMENTS?

A. Yes. Please see Confidential Schedule J for a list of EESPs receiving more than 5% of the Central Division's PY 2016 overall incentive payments.

B. EECRF Proceeding Expenses

Q. DOES THE CENTRAL DIVISION REQUEST RECOVERY OF ANY COSTS RELATED TO THE EECRF PROCEEDING EXPENSES IN 2016?

A. Yes. The Central Division requests recovery of $2,822 for municipal rate case expenses incurred as a result of its EECRF proceeding in Docket No. 49529.

Q. WHY DID THE CENTRAL DIVISION INCLUDE MUNICIPAL RATE CASE EXPENSES?

A. 16 TAC § 25.181(f)(3) states that an EECRF proceeding is a ratemaking proceeding for the purposes of PURA § 33.023 and that a utility's EECRF proceeding expenses shall be included in the EECRF. The Central Division has included municipal expenses incurred for the EECRF proceeding, as allowed by 16 TAC § 25.181(f)(3)(B).

C. 2016 EM&V Costs

Q. DID THE CENTRAL DIVISION INCUR ANY COSTS IN 2016 FOR EM&V FOR THE EVALUATION OF PY 2015?

A. Yes. The Central Division incurred $161,054 in costs paid to the statewide EM&V contractor during 2016 for the evaluation of PY 2015.

D. 2018 Projected Energy Efficiency Costs

Q. WHAT ARE THE CENTRAL DIVISION'S ENERGY EFFICIENCY PLANS FOR PY 2018?

A. As shown in Schedule A, the Central Division will implement 12 energy efficiency programs in PY 2018 for a total projected cost of $14,436,436, which includes R&D and EM&V activities. The 12 energy efficiency programs are described in

Schedule R and are designed to allow the Central Division to achieve its energy efficiency objectives for PY 2018. This portfolio of programs will continue to encourage EESPs and REPs to provide energy efficiency services to all qualifying residential and commercial customers. Each year the Central Division reviews the programs and activities that have taken place to improve its plan for the upcoming year. The Central Division has selected the programs that it believes will achieve its PY 2018 objectives and comply with PURA provisions and the PUC rule.

Q. HOW DID THE CENTRAL DIVISION DETERMINE ITS PY 2018 ENERGY EFFICIENCY OBJECTIVES?

A. The Central Division first determined to achieve even greater cost-effective energy efficiency savings than required. The Central Division then allocated portions of its PY 2018 projected program costs among customer classes using criteria such as customer counts, historical cost allocation, and previous program success. The Hard-to-Reach SOP and the Targeted Low-Income Energy Efficiency Program were designed to comply with PURA provisions and the Commission rule. The Central Division then estimated projected impacts from each program based on historical results and previous years' experience. Projected impacts from all programs within each customer class were then combined to formulate customer class projected savings. Finally, all projected customer class savings were added together to produce the Central Division's PY 2018 energy efficiency objectives as shown in Schedule O.

Q. ARE THERE SPECIFIC TYPES OF ADMINISTRATIVE COSTS ASSOCIATED WITH THE PY 2018 ENERGY EFFICIENCY PROGRAMS?

A. Yes. Administrative costs for PY 2018 include conducting workshops to explain programs to EESPs and REPs, conducting program outreach and marketing, reviewing project applications, awarding contracts, reviewing M&V plans for some projects that do not utilize deemed savings measures, performing field inspections of installed measures, processing incentive payments, and interacting with project sponsors. Administrative costs also include development, review and selection of new or revised programs that may be considered for successful program implementation. Costs associated with work activities regarding regulatory reporting and special projects are also considered administrative costs and are included as shown in Schedule A.

Q. DOES THE CENTRAL DIVISION INCLUDE ANY PROPOSED R&D ACTIVITIES IN ITS PROJECTED COSTS FOR PY 2018?

A. Yes, the Central Division's PY 2018 projected R&D costs include $365,125 or about 2.6% of its total projected program costs as shown in Schedule A.

E. EM&V Costs

Q. DOES THE CENTRAL DIVISION INCLUDE ANY EM&V COSTS IN THIS FILING?

A. Yes. The Central Division is including $353,977 as it's apportioned EM&V costs, which includes $177,024 to be incurred in 2017 to evaluate PY 2016 and $176,953 to be incurred in 2018 for the evaluation of PY 2017.

V. ENERGY EFFICIENCY PROGRAMS

A. PY 2016 Programs

Q. WHAT PROGRAMS DID THE CENTRAL DIVISION OFFER IN PY 2016 TO ACHIEVE ITS ENERGY EFFICIENCY OBJECTIVES?

A. The Central Division offered the following programs in PY 2016:

- Commercial Solutions MTP
- Commercial SOP
- CoolSaver© A/C Tune-up MTP
- Earth Networks Residential Demand Response Pilot MTP
- Efficiency Connection Pilot MTP
- Hard-to-Reach SOP
- High Performance New Homes MTP
- Load Management SOP
- Open MTP
- Reliant Residential Demand Response Pilot MTP
- Residential SOP
- SCORE/CitySmart MTP
- SMART Source℠ Solar PV MTP
- Targeted Low-Income Energy Efficiency Program

Q. PLEASE DESCRIBE THE COMMERCIAL SOLUTIONS MTP.

A. The Commercial Solutions MTP identifies a variety of commercial customers having a high likelihood of installing energy efficiency measures within their facilities. These customers may have delayed making such improvements for a number of reasons, including an inability to identify appropriate actions to take or lack of understanding of energy efficiency project funding. The Commercial Solutions MTP provides education and information to such customers, and provides monetary

incentives to encourage them to take action to improve their facilities' energy efficiency.

Q. PLEASE DESCRIBE THE COMMERCIAL SOP.

A. The Commercial SOP provides incentives for the installation of a wide range of measures that reduce customer energy costs and reduce peak demand and/or save energy in non-residential facilities. Examples of eligible customer sites include hotels, schools, manufacturing facilities, restaurants, and larger grocery and retail stores. These types of customers have installed eligible measures such as lighting systems, new or replacement chiller systems, high-efficiency pumping systems, and other similar efficient technologies. Incentives are paid to project sponsors on the basis of deemed savings or, if deemed savings have not been established for a particular qualifying energy efficiency measure, incentives may be paid on the basis of verified peak demand and/or energy savings using the International Performance Measurement & Verification Protocol.

Q. PLEASE DESCRIBE THE COOLSAVER© A/C TUNE-UP MTP.

A. The CoolSaver© A/C Tune-Up MTP is designed to overcome market barriers that prevent residential and small business customers from receiving high-performance A/C system tune-ups. This program works with local A/C distributor networks to train and certify A/C technicians on tune-up and air flow correction services and protocols.

Q. PLEASE DESCRIBE THE EARTH NETWORKS RESIDENTIAL DEMAND RESPONSE PILOT MTP.

A. The Earth Networks Residential Demand Response Pilot MTP is an Integrated Demand Side Management aggregation program designed to provide residential demand savings.

Q. PLEASE DESCRIBE THE EFFICIENCY CONNECTION MTP.

A. The Efficiency Connection Pilot MTP is a partnership with Retail Electric Providers (REPs) to help promote energy efficiency to the Central Division residential customers by offering discounted LED lamps via an online marketplace. A third-party implementer facilitates customer/REP participation and aids in the selection and management of an online retailer/vendor for the program website and order fulfillment.

Q. PLEASE DESCRIBE THE HARD-TO-REACH SOP.

A. The Hard-to-Reach SOP targets a specific subset of residential customers defined by 16 TAC § 25.181(c)(27). The hard-to-reach customer is one whose total household income is less than 200% of federal poverty guidelines. The program provides incentives for the installation of a wide range of measures that reduce residential customer energy costs and reduce peak demand. It is designed to cost-effectively provide energy efficiency improvements to individual households at no or very low cost. Incentives are paid to project sponsors for eligible measures installed in retrofit applications on the basis of deemed savings. Eligible measures include replacement air conditioners, wall and ceiling insulation, and air distribution duct improvements, among others.

Q. PLEASE DESCRIBE THE HIGH PERFORMANCE NEW HOMES MTP.

A. The High Performance New Homes MTP targets homebuilders and residential consumers. The program's goal is to create conditions where consumers demand high performance built homes, and homebuilders supply these energy-efficient homes. Incentives are paid to homebuilders who construct high performance built homes in the Central Division service area and independent home energy raters who verify the energy efficiency of the homes.

Q. PLEASE DESCRIBE THE LOAD MANAGEMENT SOP.

A. The Load Management SOP targets commercial customers that have a minimum demand of 500 kW or more. Incentives are paid to project sponsors that identify interruptible load and provide curtailment of this electric load on short notice. These payments are based on the delivery of metered demand reduction.

Q. PLEASE DESCRIBE THE OPEN MTP.

A. 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 100 kW in the previous 12 consecutive billing months may qualify to participate in the program. 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.

Q. PLEASE DESCRIBE THE RELIANT RESIDENTIAL DEMAND RESPONSE PILOT MTP.

A. The Reliant Residential Demand Response Pilot MTP will leverage an existing industry-recognized program from a Retail Electric Provider (REP) to reduce demand consumption. The REP will utilize its existing customer base from their thermostat-based peak time program, Degrees of Difference.

Q. PLEASE DESCRIBE THE RESIDENTIAL SOP.

A. The Residential SOP provides incentives for the installation of a wide range of measures that reduce residential customer energy costs and reduce peak demand. It is also designed to encourage private sector delivery of energy efficiency products and services. Incentives are paid to project sponsors for eligible measures installed in retrofit applications on the basis of deemed savings. Eligible measures include replacement air conditioners, wall and ceiling insulation, and air distribution duct improvements, among others.

Q. PLEASE DESCRIBE THE SCORE/CITYSMART MTP.

A. The Schools COnserving REsources/CitySmart MTP (SCORE/CitySmart) provides energy efficiency and demand reduction solutions for cities and public schools. SCORE/CitySmart facilitates the examination of actual demand and energy savings, operating characteristics, program design, long-range energy efficiency planning and overall measure and program acceptance by the targeted cities and schools. This program is designed to help educate and assist these customers to lower energy use by integrating energy efficiency into their short- and long-term planning, budgeting and operational practices. Incentives are paid to participants for certain qualifying

measures installed in new or retrofit applications that result in verifiable demand and energy savings.

Q. PLEASE DESCRIBE THE SMART SOURCE[SM] SOLAR PV MTP.

A. The SMART Source[SM] Solar PV MTP offers residential and commercial installations a financial incentive for installations of solar electric (photovoltaic) systems interconnected on the customer's side of the electric service meter. The goal of this program is to transform the market by increasing the number of qualified companies offering installation services and by decreasing the average installed cost of systems, creating economies of scale.

Q. PLEASE DESCRIBE THE TARGETED LOW-INCOME ENERGY EFFICIENCY PROGRAM.

A. The Central Division's Targeted Low-Income Energy Efficiency Program is designed to cost-effectively reduce the energy consumption and energy costs of the Central Division's low-income residential customers. The program provides eligible residential customers with appropriate weatherization measures and basic on-site energy education.

B. PY 2016 Achievements

Q. PLEASE DESCRIBE THE CENTRAL DIVISION'S REQUIRED DEMAND REDUCTION GOAL FOR PY 2016 AND THE RESULTS THAT WERE ACHIEVED IN 2016.

A. The Central Division's required demand reduction goal to be achieved in PY 2016 was 15.73 MW. The Central Division's actual demand reduction achieved was 39.30 MW of peak demand savings from its PY 2016 energy efficiency programs.

Q. PLEASE DESCRIBE THE CENTRAL DIVISION'S REQUIRED ENERGY REDUCTION GOAL FOR PY 2016 AND THE RESULTS THAT WERE ACHIEVED IN PY 2016.

A. The Central Division's required energy reduction goal to be achieved in PY 2016 was 27,559 MWh. The Central Division's actual energy reduction achieved was 67,714 MWh from its PY 2016 energy efficiency programs.

Q. PLEASE DESCRIBE THE AMOUNT OF DEMAND REDUCTION THAT THE CENTRAL DIVISION ACHIEVED FROM ITS HARD-TO-REACH PROGRAMS.

A. The Central Division achieved demand reductions of 1.56 MW from its Hard-To-Reach SOP and 0.78 MW from its Targeted Low Income Energy Efficiency Program. The total from both hard-to-reach programs was 2.34 MW in demand reduction.

Q. DID THE CENTRAL DIVISION ACHIEVE MORE THAN 5% OF ITS STATUTORY DEMAND REDUCTION GOAL FROM ITS HARD-TO-REACH PROGRAMS?

A. Yes, the Central Division achieved 15% of its PY 2016 statutory demand reduction goal from its hard-to-reach programs.

Q. DOES THE CENTRAL DIVISION REQUEST A PERFORMANCE BONUS FOR PY 2016?

A. Yes, it does. Mr. Cavazos discusses the $3,492,251 performance bonus requested by the Central Division for its PY 2016 results.

Q. SHOULD THE CENTRAL DIVISION BE GRANTED ITS REQUESTED PERFORMANCE BONUS?

A. Yes, the Central Division should be granted its requested performance bonus set forth in Schedule D.

C. PY 2018 Programs

Q. WHAT PROGRAMS WILL THE CENTRAL DIVISION OFFER IN PY 2018 TO ACHIEVE THE ENERGY EFFICIENCY OBJECTIVES?

A. The Central Division will offer the following programs in PY 2018:

- Commercial Solutions MTP
- Commercial SOP
- CoolSaver© A/C Tune-up MTP
- Earth Networks Residential DR Pilot MTP
- Hard-to-Reach SOP
- High Performance New Homes MTP
- Load Management SOP
- Open MTP
- Residential SOP
- SCORE/CitySmart MTP
- SMART Source℠ Solar PV MTP
- Targeted Low Income Energy Efficiency Program
- Whisker Labs Residential Thermostat Demand Response Pilot Program (previously known as Earth Networks Residential Demand Response Pilot Program)

Q. WHAT IS THE PY 2018 PROJECTED COST FOR EACH PROGRAM?

A. Schedule A contains details of the PY 2018 projected cost for each of the Central Division's programs.

Q. WHAT ARE THE PROJECTED SAVINGS FROM EACH PROGRAM?

A. Schedule O contains the PY 2018 projected savings from each program.

VI. CONCLUSION

Q. DO THE CENTRAL DIVISION'S ENERGY EFFICIENCY COSTS INCURRED IN PY 2016 COMPLY WITH THE COMMISSION RULE?

A. Yes. The costs incurred in connection with the PY 2016 energy efficiency programs were reasonable and necessary to provide energy efficiency to residential and commercial customers and were properly incurred consistent with 16 TAC § 25.181(f).

Q. DO THE CENTRAL DIVISION'S CALCULATIONS OF ITS ENERGY EFFICIENCY GOALS, OBJECTIVES, AND THE PROJECTED COSTS TO BE INCURRED IN PY 2018 AND INCLUDED IN THE ADJUSTED 2018 EECRF COMPLY WITH THE COMMISSION RULE?

A. Yes. The Central Division's statutory minimum goals to be achieved in PY 2018 are 15.99 MW of demand reduction and 28,014 MWh of energy reduction, and are in compliance with the Commission rule. As discussed above and in Mr. Cavazos' testimony, in order to satisfy PURA §39.905 and the Commission rule that utilities achieve as much energy efficiency savings as reasonably possible within the limitations in the statute and the rule, the Central Division has established energy efficiency objectives for PY 2018 above the minimum goals in the statute and rule. The $14,436,436 that the Central Division projects it will incur in PY 2018 to achieve its energy efficiency objectives is a reasonable estimate of the costs necessary to provide energy efficiency programs to meet the Central Division's energy efficiency objectives for PY 2018 in furtherance of PURA § 39.905 and 16 TAC § 25.181.

1 Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

2 A. Yes, it does.

PUC DOCKET NO. _____

PUBLIC UTILITY COMMISSION OF TEXAS

APPLICATION OF

AEP TEXAS INC.

TO ADJUST

ENERGY EFFICIENCY COST RECOVERY FACTORS AND RELATED RELIEF

DIRECT TESTIMONY OF

RHONDA R. FAHRLENDER

FOR

AEP TEXAS INC.

JUNE 1, 2017

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, POSITION IN THE COMPANY, AND BUSINESS ADDRESS.

A. My name is Rhonda R. Fahrlender. I am an Energy Efficiency and Consumer Programs Coordinator Senior for AEP Texas Inc. My business address is 910 Energy Drive, Abilene, Texas 79602.

Q. PLEASE STATE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I received a Bachelor of Business Administration degree from McMurry University in 1997. I was first employed by West Texas Utilities Company (the predecessor of AEP Texas North Company (TNC)) in December 1979 in Clyde, Texas as Bookkeeper/Cashier. I then held the position of Customer Service Representative before transferring to Abilene in June 1994. In November of 1996, I transferred to the Customer Accounting department as a Staff Associate and then Senior Staff Associate. In August 2000, I assumed my current duties as Energy Efficiency and Consumer Programs Coordinator Senior for TNC (now the North Division of AEP Texas).[1] In my current position, I am responsible for administering programs in compliance with the Public Utility Regulatory Act provisions and the Public Utility Commission of Texas (PUC or Commission) rules for energy efficiency. I hold professional certifications with the Association of Energy Engineers (AEE) as a Certified Energy Manager, Certified Energy Auditor, Certified Measurement and Verification Professional, and Certified Demand-Side Management Professional.

[1] As explained in the testimony of Robert Cavazos, TNC and AEP Texas Central Company (TCC) have now merged into the single entity, AEP Texas Inc. However, the Commission has required AEP Texas to maintain separate TCC and TNC divisions, now the AEP Texas Central Division and AEP Texas North Division.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY BEFORE ANY REGULATORY AGENCY?

A. Yes, I have previously filed testimony before the PUC in the following dockets:

- Docket No. 39361, Application of AEP Texas North Company to Adjust Energy Efficiency Cost Recovery Factor (EECRF) and Related Relief;
- Docket No. 40358, Application of AEP Texas North Company to Adjust Energy Efficiency Cost Recovery Factor and Related Relief;
- Docket No. 41539, Application of AEP Texas North Company to Adjust Energy Efficiency Cost Recovery Factor and Related Relief;
- Docket No. 42509, Application of AEP Texas North Company to Adjust Energy Efficiency Cost Recovery Factor and Related Relief;
- Docket No. 44718, Application of AEP Texas North Company to Adjust Energy Efficiency Cost Recovery Factor and Related Relief; and
- Docket No. 45928, Application of AEP Texas North Company to Adjust Energy Efficiency Cost Recovery Factor and Related Relief.

Q. DO YOU SPONSOR ANY OF THE SCHEDULES ACCOMPANYING AEP TEXAS' FILING?

A. Yes, I sponsor North Division Schedules L through O and North Division Schedule R. In addition, I cosponsor North Division Schedule A with witnesses Robert Cavazos and Jennifer L. Jackson. I also cosponsor North Division Schedule B with witness Jackson and North Division Schedules J, P and S with witness Cavazos.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my testimony is to present information supporting the request to adjust the AEP Texas North Division EECRF for 2018. The corresponding information to support AEP Texas' request to adjust its AEP Texas Central Division

EECRF for 2018 is addressed in the direct testimony of Pamela Osterloh. As Mr. Cavazos discusses in his direct testimony, AEP Texas seeks an adjustment in 2018 to reflect the following for its North Division:

- recovery of $1,837,772, which is the amount of projected 2018 energy efficiency program costs that exceeds the energy efficiency costs expressly included in the North Division's prior base rate order adjusted for 2016 revenue according to 16 Tex. Admin. Code (TAC) § 25.181(f)(1)(B);
- recovery of $62,430, the North Division's projected share of the statewide Evaluation, Measurement, and Verification (EM&V) costs for evaluation of Program Year (PY) 2016 ($31,221) and PY 2017 ($31,209);
- return to customers of $328,735, which is the amount of the North Division's over-recovered energy efficiency costs in 2016;
- recovery of $2,891, which is the amount of municipal EECRF proceeding expenses incurred as a result of Docket No. 45928, as allowed by 16 TAC § 25.181(f)(3)(B); and
- recovery of $556,190, which is the amount of the performance bonus earned from actual energy efficiency achievements in PY 2016.

The total amount that AEP Texas requests be recovered through its adjusted North Division 2018 EECRF is $2,130,548.

In my direct testimony, I first outline the energy efficiency goals established by Public Utility Regulatory Act, Tex. Util. Code Ann. § 39.905 (West 2007 & Supp. 2014) (PURA). I also discuss the impact of the identification notice referenced in 16 TAC § 25.181(w). I then present the actual energy efficiency expenditures incurred by the North Division for its 2016 programs, 2016 municipal EECRF proceeding expenses, and EM&V costs incurred in PY 2016. I also present AEP Texas' plans and projected costs to achieve its energy efficiency objectives for the North Division for PY 2018. Finally, I describe the programs the North Division implemented

during PY 2016 and the plans and programs it will implement to achieve its energy efficiency objectives for PY 2018.

III. ENERGY EFFICIENCY REQUIREMENTS AND OBJECTIVES

A. Statutory and Regulatory Requirements

Q. PLEASE DESCRIBE THE BASIC REQUIREMENTS OF PURA §39.905 AS RELEVANT TO YOUR TESTIMONY.

A. As discussed by Mr. Cavazos in his testimony, the requirements of PURA §39.905 as relevant to my testimony are:

- A utility must administer energy efficiency programs.
- A utility must provide incentives adequate for the purpose of acquiring cost-effective energy efficiency equivalent to at least 30% of the utility's annual growth in demand of residential and commercial customers beginning with the 2013 program year, but not less than the previous year.
- Once the utility's demand reduction goal is equivalent to at least four-tenths of one percent of its summer weather-adjusted peak demand for the combined residential and commercial customers for the previous calendar year, the utility's goal shall be four-tenths of one percent of its summer weather-adjusted peak demand for the combined residential and commercial customers, but not less than the previous year.
- A utility must provide incentives through market-based standard offer programs (SOPs) or targeted market transformation programs (MTPs).
- A utility must provide incentives in such a manner that retail electric providers (REPs) and competitive energy efficiency service providers (EESPs) install the measures that produce the energy efficiency necessary to meet the utility's mandated annual goal.

Q. HAS THE COMMISSION ADOPTED RULES TO IMPLEMENT PURA §39.905?

A. Yes, 16 TAC § 25.181 has been adopted to implement PURA §39.905.

Q. WHAT ARE SOME OF THE KEY COMPONENTS OF 16 TAC § 25.181?

A. Some of the key components of 16 TAC § 25.181 are:

- An electric utility shall administer energy efficiency programs to acquire, at a minimum, a 30% reduction of its annual growth in demand of residential and commercial customers until the demand reduction goal to be acquired is at least four-tenths of 1% of its summer weather-adjusted peak demand for the combined residential and commercial customers for the previous program year.
- Once the demand reduction goal to be acquired is equivalent to at least four-tenths of 1% of its summer weather-adjusted peak demand for the combined residential and commercial customers for the previous program year, 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.
- A utility's demand goal in any year shall not be lower than its goal for the prior year.
- Utilities are encouraged to achieve demand reduction and energy savings through a portfolio of cost-effective programs that exceed each utility's energy efficiency goals while staying within the required cost caps.
- A utility shall adjust an EECRF to timely recover forecasted annual energy efficiency program costs in excess of the actual energy efficiency revenues collected from base rates, the preceding year's over- or under-recovery including municipal and utility EECRF proceeding expenses, any performance bonus earned, and EM&V costs assigned to the utility.
- 16 TAC § 25.181(h) allows a utility exceeding its minimum demand and energy reduction goals to earn a performance bonus.
- A utility may use up to 15% of its total program costs for administration of its energy efficiency programs.
- A utility may use up to 10% of the previous program year's costs to perform necessary energy efficiency research and development (R&D) to foster continuous improvement and innovation in the application of energy efficiency technology and energy efficiency program design and implementation.
- The cumulative cost of administration and R&D shall not exceed 20% of a utility's total program costs.
- An EM&V framework is included to evaluate program portfolio performance and to measure and verify estimated demand and energy impacts reported for those programs.

- Qualifying industrial customers taking electric service at distribution voltage may submit a notice to identify metering points for their industrial processes, which allows those metering points to not be charged for any costs associated with programs provided through the EECRF nor shall the identified facilities be eligible to participate or receive incentives for a three year period.

Q. HOW DOES THE NORTH DIVISION IMPLEMENT THESE REQUIREMENTS?

A. AEP Texas develops and offers cost-effective energy efficiency programs to third-party EESPs as defined in 16 TAC § 25.181(c)(17), who in turn market their services to end-use retail residential and commercial customers. These programs offer incentives to encourage third-party EESPs, REPs and/or eligible commercial customers to participate as project sponsors of energy efficiency measures. The Commission's energy efficiency rule allows commercial customers with a peak demand of 50 kilowatts (kW) or greater to act as their own project sponsor for measures they install for themselves. The EESPs, or project sponsors, then supply and install the measures at homes or businesses that produce the energy efficiency savings that the North Division reports to satisfy the energy efficiency objectives of its programs. The energy efficiency objectives and goals are established annually, so that each year the North Division must procure the necessary demand reduction and energy savings from participating project sponsors to meet the North Division's objectives for that year. Energy efficiency savings may be in the form of reduction in summer or winter peak demand (kW), energy usage (kWh), or both. The North Division pays incentives to the project sponsors for peak demand and energy savings resulting from the energy efficiency measures installed according to program guidelines.

Q. PLEASE DEFINE THE TERM SOP.

A. Pursuant to 16 TAC § 25.181(c)(56), an SOP is defined as a program under which a utility administers standard offer contracts between the utility and the EESP. A standard offer contract specifies standard payments based upon the amount of energy and peak demand savings achieved through energy efficiency measures, the measurement and verification (M&V) protocols, and other terms and conditions, consistent with 16 TAC § 25.181.

Q. PLEASE DEFINE THE TERM MTP.

A. Pursuant to 16 TAC § 25.181(c)(37), an MTP is defined as a strategic program intended to induce lasting structural or behavioral changes in a market that result in increased adoption of energy efficiency technologies, services, and practices.

B. Annual Demand Reduction Goal

Q. PLEASE DESCRIBE THE DEMAND REDUCTION GOAL REQUIREMENT FOR THE NORTH DIVISION.

A. Pursuant to 16 TAC § 25.181(e)(1) the North Division is required to acquire a 30% reduction of its annual growth in demand of residential and commercial customers until that goal is equivalent to at least four-tenths of 1% (the trigger) of the North Division's summer weather-adjusted peak demand for the combined residential and commercial customers for the previous program year. Once that trigger is reached, the North Division 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. In addition, 16 TAC § 25.181(e)(1)(E) also states that, except as adjusted in accordance with subsection (w) of the rule, 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 16 TAC § 25.181(e).

Q. HAS THE NORTH DIVISION MET THE TRIGGER DESCRIBED IN 16 TAC § 25.181(e)(1)(C)?

A. Yes. The North Division met the trigger when calculating its goal for PY 2015.

Q. PLEASE DESCRIBE HOW THE NORTH DIVISION'S FOUR-TENTHS OF 1% DEMAND REDUCTION GOAL IS CALCULATED.

A. The North Division's four-tenths of 1% demand reduction goal was calculated by taking the average of the 2012 – 2016 weather adjusted peak demand at the meter adjusted for line losses. The resulting peak demand average for this time period was 1,004 MW; therefore, the North Division's four-tenths of 1% goal for PY 2018 is 4.02 MW.

Q. COULD THE IDENTIFICATION NOTICE REQUIREMENT AFFECT THE UTILITY'S CALCULATED GOAL FOR ENERGY EFFICIENCY?

A. Yes. Pursuant to 16 TAC § 25.181(w) the utility's demand reduction goal is required to be adjusted to remove any load identified as a result of the identification notice provision.

Q. ARE ANY SUCH NOTICES TO BE EFFECTIVE IN PY 2018?

A. Yes. The North Division received identification notices prior to February 1, 2017 for 541 ESIDs representing 32,454 kW.

Q. WHAT IS THE NORTH DIVISION'S DEMAND REDUCTION GOAL TO BE ACHIEVED IN PY 2018?

A. The demand reduction goal for the North Division to achieve in PY 2018 is 4.26 MW, based on the requirements in 16 TAC § 25.181(e)(1)(E) and as adjusted in accordance with subsection (w). The minimum PY 2018 demand reduction goal is set forth in Schedule N that I sponsor. The North Division, however, projects it will achieve as much as 6.15 MW of demand reduction from the programs it will implement in PY 2018. As Mr. Cavazos explains in his testimony, AEP Texas interprets PURA §39.905 and 16 TAC § 25.181 as intended to encourage as much cost-effective energy efficiency as can reasonably be achieved under the limits set forth in the statute and rule.

Q. WERE LINE LOSSES INCORPORATED IN THE CALCULATION OF THE DEMAND REDUCTION GOAL?

A. Yes. Calculation of the demand reduction goal used the line loss numbers referenced in Table 16 of Schedule S. Line losses are derived from the loss factors determined in the North Division's most recent line loss study.

C. Annual Energy Savings Goal

Q. HOW IS THE ENERGY SAVINGS GOAL CALCULATED UNDER 16 TAC § 25.181?

A. The minimum energy savings goal is calculated from the utility's calculated demand goal, using a 20% conservation load factor, as set forth in 16 TAC § 25.181(e)(4).

Q. WHAT IS THE NORTH DIVISION'S ENERGY SAVINGS GOAL TO BE ACHIEVED IN PY 2018?

A. The energy savings goal for the North Division to achieve in PY 2018 is 7,464 Megawatt-hour (MWh). The PY 2018 energy savings goal is set forth in Schedule N.

However, the North Division projects to achieve as much as 12,795 MWh of energy savings from the programs it will implement in PY 2018. As I mentioned above and as Mr. Cavazos explains in his testimony, AEP Texas interprets PURA §39.905 and 16 TAC § 25.181 as intended to encourage utilities to achieve as much cost-effective energy efficiency as can reasonably be achieved under the limits set forth in the statute and rule.

D. Process to Achieve Savings

Q. WILL THE NORTH DIVISION OFFER PROGRAMS TO ACHIEVE THESE PY 2018 SAVINGS?

A. Yes, I discuss the programs that the North Division will offer in Section V of my testimony. The North Division's energy efficiency program portfolio is designed to achieve both its demand reduction and energy savings objectives for PY 2018.

Q. WILL ALL ELIGIBLE CUSTOMERS HAVE ACCESS TO ENERGY EFFICIENCY PROGRAMS OFFERED BY THE NORTH DIVISION?

A. Yes, except for industrial customers who have submitted an identification notice, all customers in the residential and commercial customer classes will have access to the energy efficiency programs offered by the North Division.

IV. ENERGY EFFICIENCY COSTS

A. PY 2016

Q. WHAT COSTS DID THE NORTH DIVISION INCUR WITH ITS PY 2016 ENERGY EFFICIENCY PROGRAMS?

A. The costs incurred by the North Division to implement its PY 2016 energy efficiency programs totaled $2,622,844, as shown in Schedule B.

Q. WERE THE NORTH DIVISION'S ACTUAL PY 2016 ENERGY EFFICIENCY COSTS LESS THAN THE ENERGY EFFICIENCY AMOUNT PROJECTED FOR PY 2016?

A. Yes. The North Division's total energy efficiency costs for PY 2016 were about 12% ($365,007) less than the $2,987,851 projected amount.

Q. WERE THE NORTH DIVISION'S PY 2016 PROGRAM PORTFOLIO COSTS LESS THAN OR EQUAL TO THE BENEFITS OF THE PROGRAMS?

A. Yes. The North Division's program portfolio costs were less than or equal to the benefits of the programs. The benefit-cost ratio for the North Division's entire PY 2016 program portfolio is shown in Schedule P. The estimated useful life for each measure in each program is provided in Schedule M.

Q. PLEASE DESCRIBE THE NORTH DIVISION'S PY 2016 ADMINISTRATIVE COSTS.

A. The North Division's PY 2016 administrative costs included costs to conduct outreach and workshops to explain programs to EESPs and REPs and costs to review incentive reports and conduct field site inspections of installed measures. Administrative duties also included continuous review and monitoring of all programs for successful program implementation. Costs associated with work activities regarding regulatory reporting and special projects are considered administrative costs and are included in the North Division's administrative costs.

Q. DID THE NORTH DIVISION PY 2016 ADMINISTRATIVE COSTS INCLUDE ANY AFFILIATE COSTS?

A. Yes. Affiliate costs are discussed by witnesses Cavazos and Brian Frantz.

Q. DID THE NORTH DIVISION HAVE ANY EXPENSES ASSOCIATED WITH R&D IN PY 2016?

A. Yes. The North Division expended $82,694 for R&D in PY 2016, as shown in Schedule B.

Q. PLEASE DESCRIBE THE NORTH DIVISION'S R&D EFFORTS.

A. The North Division's PY 2016 R&D projects included costs related to identifying, developing and implementing necessary enhancements to its electronic data collection and management systems to incorporate updates for new program requirements, regulatory requirements, and deemed savings values; and costs associated with researching new technologies and energy efficiency program ideas. The North Division also participated with the Electric Utility Marketing Managers of Texas (EUMMOT) in research activities that included providing technical support for the Texas Technical Reference Manual.

All of the R&D expenditures incurred in PY 2016 were for the purpose of fostering continuous improvement and innovation in the application of energy efficiency technology and energy efficiency program design and implementation.

Q. PLEASE DESCRIBE THE NORTH DIVISION'S PY 2016 EXPENDITURES FOR ITS TARGETED LOW-INCOME PROGRAM.

A. As required by 16 TAC § 25.181(r), the North Division expended $288,338 in PY 2016 for the targeted low-income energy efficiency program, which is 9.7% of the North Division's PY 2016 energy efficiency budget.

Q. HAS THE NORTH DIVISION PROVIDED INFORMATION REGARDING THE BIDDING AND ENGAGEMENT PROCESS USED FOR CONTRACTING WITH EESPs?

A. Yes. Schedule L describes the process the North Division used to select and contract with EESPs.

Q. DID ANY SINGLE EESP RECEIVE MORE THAN 5% OF THE NORTH DIVISION'S OVERALL PY 2016 INCENTIVE PAYMENTS?

A. Yes. Please see Confidential Schedule J for a list of EESPs receiving more than 5% of the North Division's PY 2016 overall incentive payments.

B. 2016 EECRF Proceeding Expenses

Q. DOES THE NORTH DIVISION REQUEST RECOVERY OF ANY COSTS RELATED TO THE 2016 EECRF PROCEEDING?

A. Yes. The North Division requests recovery of $2,891 for municipal rate case expenses incurred as a result of its 2016 EECRF proceeding, Docket No. 45928.

Q. WHY DID THE NORTH DIVISION INCLUDE MUNICIPAL RATE CASE EXPENSES?

A. 16 TAC § 25.181(f)(3) states that an EECRF proceeding is a ratemaking proceeding for the purposes of PURA §33.023 and that EECRF proceeding expenses are to be included in the EECRF. The North Division has included municipal expenses incurred for the 2016 EECRF proceeding, as allowed by 16 TAC § 25.181(f)(3)(B).

C. 2016 EM&V Costs

Q. DID THE NORTH DIVISION INCUR ANY COSTS IN 2016 FOR EM&V FOR THE EVALUATION OF PY 2015?

A. Yes. The North Division incurred $28,413 in costs paid to the statewide EM&V contractor for the evaluation of PY 2015.

D. 2018 Projected Energy Efficiency Costs

Q. WHAT ARE THE NORTH DIVISION'S ENERGY EFFICIENCY PLANS FOR PY 2018?

A. As shown in Schedule A, the North Division will implement 10 energy efficiency programs in PY 2018 with a total projected program cost of $3,339,430, which includes R&D and EM&V activities. The 10 energy efficiency programs are described in Schedule R and are designed to allow the North Division to achieve its energy efficiency objectives for PY 2018. This portfolio of programs will continue to encourage EESPs and REPs to provide energy efficiency services to all qualifying residential and commercial customers. Each year the North Division reviews the programs and activities that have taken place to improve its plan for the upcoming year. The North Division has selected the programs that it believes will achieve its PY 2018 objectives and comply with PURA provisions and the PUC rule.

Q. HOW DID THE NORTH DIVISION DETERMINE ITS PY 2018 ENERGY EFFICIENCY OBJECTIVES?

A. The North Division first determined to achieve even greater cost-effective energy efficiency savings than required. The North Division then allocated portions of its PY 2018 projected program costs among customer classes using criteria such as

customer counts, historical cost allocation, and previous program success. The Hard-to-Reach SOP and the Targeted Low-Income Energy Efficiency Program were designed to comply with PURA provisions and the Commission rule. The North Division then estimated projected impacts from each program based on historical results and previous years' experience. Projected impacts from all programs within each customer class were then combined to formulate customer class projected savings. Finally, all projected customer class savings were added together to produce the North Division's PY 2018 energy efficiency objectives, as shown in Schedule O.

Q. ARE THERE SPECIFIC TYPES OF ADMINISTRATIVE COSTS ASSOCIATED WITH THE PY 2018 ENERGY EFFICIENCY PROGRAMS?

A. Yes. Administrative costs for PY 2018 will include conducting workshops to explain programs to EESPs and REPs, conducting program outreach and marketing, reviewing project applications, awarding contracts, reviewing M&V plans for some projects that do not utilize deemed savings measures, performing field site inspections of installed measures, processing incentive payments, and interacting with project sponsors. Administrative costs also include the development, review and selection of new or revised programs that may be considered for successful program implementation. Costs associated with work activities regarding energy efficiency regulatory reporting, EECRF filing, and other energy efficiency-related projects are also considered administrative costs and are included as shown in Schedule A.

Q. DOES THE NORTH DIVISION INCLUDE ANY R&D ACTIVITIES IN ITS PROJECTED COSTS FOR PY 2018?

A. Yes. The North Division's PY 2018 projected costs include $200,000, or about 6% of its total projected program costs, for R&D activities, as referenced in Schedule A.

E. EM&V Costs

Q. DOES THE NORTH DIVISION INCLUDE ANY EM&V COSTS IN THIS FILING?

A. Yes. The North Division is including $62,430 as its apportioned EM&V costs, which includes $31,221 to be incurred in 2017 for the evaluation of PY 2016 and $31,209 to be incurred in 2018 for the evaluation of PY 2017.

V. ENERGY EFFICIENCY PROGRAMS

A. PY 2016 Programs

Q. WHAT PROGRAMS DID THE NORTH DIVISION OFFER IN PY 2016 TO ACHIEVE ITS ENERGY EFFICIENCY OBJECTIVES?

A. The North Division offered the following programs in PY 2016:

- Commercial Solutions MTP
- Commercial SOP
- Earth Networks Residential Demand Response Pilot MTP
- Efficiency Connection Pilot MTP
- Hard-to-Reach SOP
- Load Management SOP
- Open MTP
- Residential SOP
- SCORE/CitySmart MTP
- SMART Source^{SM} Solar PV MTP
- Targeted Low-Income Energy Efficiency Program

Q. PLEASE DESCRIBE THE COMMERCIAL SOLUTIONS MTP.

A. The Commercial Solutions MTP identifies a variety of commercial customers having a high likelihood of needing energy efficiency improvements within their facilities. These customers may have delayed making such improvements for a number of reasons including an inability to identify appropriate actions to take, or a lack of understanding of energy efficiency project funding. The Commercial Solutions MTP provides education and information to such customers, and provides monetary incentives to encourage them to take action to improve the energy efficiency of their facilities.

Q. PLEASE DESCRIBE THE COMMERCIAL SOP.

A. The Commercial SOP provides incentives for the installation of a wide range of measures that reduce customer energy costs and reduce peak demand and/or save energy in non-residential facilities. Examples of eligible customer sites include hotels, schools, manufacturing facilities, restaurants, and larger grocery and retail stores. These types of customers install eligible measures such as lighting systems, new or replacement chiller systems, high efficiency pumping systems, and other energy efficiency technologies. Incentives are paid to project sponsors on the basis of deemed savings, or if deemed savings have not been established for a particular qualifying energy efficiency measure, incentives are paid on the basis of verified peak demand and/or energy savings using the International Performance Measurement and Verification Protocol.

Q. PLEASE DESCRIBE THE EARTH NETWORKS RESIDENTIAL DEMAND RESPONSE PILOT MTP.

A. The Earth Networks Residential Demand Response Pilot MTP is an Integrated Demand Side Management aggregation program designed to provide residential demand savings.

Q. PLEASE DESCRIBE THE EFFICIENCY CONNECTION PILOT MTP.

A. The Efficiency Connection Pilot MTP is a partnership with Retail Electric Providers (REPs) to help promote energy efficiency to North Division residential customers by offering discounted LED lamps via an online marketplace. A third-party implementer facilitates customer/REP participation and aids in the selection and management of an online retailer/vendor for the program website and order fulfillment.

Q. PLEASE DESCRIBE THE HARD-TO-REACH SOP.

A. The Hard-to-Reach SOP targets a specific subset of residential customers defined by 16 TAC § 25.181(c)(27). The hard-to-reach customer is one whose total annual household income is at or below 200% of the federal poverty guidelines. The program provides incentives for the installation of a wide range of measures that reduce residential customer energy costs and peak demand. It is designed to cost-effectively provide energy efficiency improvements to individual households at no or very low cost. Incentives are paid to project sponsors for eligible measures installed in retrofit applications on the basis of deemed savings. Eligible measures include replacement air conditioners, wall and ceiling insulation, and air distribution duct improvements, among others.

Q. PLEASE DESCRIBE THE LOAD MANAGEMENT SOP.

A. The Load Management SOP targets commercial customers that have a minimum demand of 500 kW. Incentives are paid to project sponsors that can identify interruptible load and provide curtailment of this electric load on short notice. These payments are based on the delivery of metered demand reduction.

Q. PLEASE DESCRIBE THE OPEN MTP.

A. 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 100 kW in the previous 12 consecutive billing months may qualify to participate in the program. 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.

Q. PLEASE DESCRIBE THE RESIDENTIAL SOP.

A. The Residential SOP provides incentives for the installation of a wide range of measures that reduce residential customer energy costs and reduce peak demand. It is also designed to encourage private sector delivery of energy efficiency products and services by REPs and EESPs. Incentives are paid to project sponsors for eligible measures installed in retrofit applications on the basis of deemed savings. Eligible measures include replacement air conditioners, wall and ceiling insulation and air distribution duct improvements, among others.

Q. PLEASE DESCRIBE THE SCORE/CITYSMART MTP.

A. The Schools COnserving REsources/CitySmart (SCORE/CitySmart) MTP provides energy efficiency and demand reduction solutions for cities and public schools. SCORE/CitySmart facilitates the examination of actual demand and energy savings, operating characteristics, program design, long-range energy efficiency planning and overall measure and program acceptance by the targeted cities and schools. This program is designed to help educate and assist these customers to lower energy use by integrating energy efficiency into their short- and long-term planning, budgeting and operational practices. Incentives are paid to participants for certain qualifying measures installed in new or retrofit applications that result in verifiable demand and energy savings.

Q. PLEASE DESCRIBE THE SMART SOURCE^{SM} SOLAR PV MTP.

A. The SMART Source^{SM} Solar PV MTP offers a financial incentive for residential and commercial installations of solar electric (photovoltaic) systems interconnected on the customer's side of the electric service meter. The goal of this program is to transform the market by increasing the number of qualified companies offering installation services and by decreasing the average installed cost of systems, creating economies of scale.

Q. PLEASE DESCRIBE THE TARGETED LOW-INCOME ENERGY EFFICIENCY PROGRAM.

A. The North Division's Targeted Low-Income Energy Efficiency Program is designed to cost-effectively reduce the energy consumption and energy costs of the North Division's low-income customers. The program provides eligible residential

customers with appropriate weatherization measures and basic on-site energy education.

B. PY 2016 Achievements

Q. PLEASE DESCRIBE THE NORTH DIVISION'S REQUIRED DEMAND REDUCTION GOAL AND THE RESULTS THAT WERE ACHIEVED IN PY 2016.

A. The North Division's required demand reduction goal to be achieved in PY 2016 was 4.26 MW. The North Division's actual 2016 demand reduction achieved was 6.38 MW of peak demand savings.

Q. PLEASE DESCRIBE THE NORTH DIVISION'S REQUIRED ENERGY REDUCTION GOAL AND THE RESULTS THAT WERE ACHIEVED IN PY 2016.

A. The North Division's required energy reduction goal to be achieved in PY 2016 was 7,464 MWh. The North Division's actual energy reduction achieved was 10,817 MWh.

Q. PLEASE DESCRIBE THE AMOUNT OF DEMAND REDUCTION THAT THE NORTH DIVISION ACHIEVED FROM ITS HARD-TO-REACH PROGRAMS.

A. The North Division achieved demand reductions of 230 kW (0.230 MW) from its Hard-to-Reach SOP and 95 kW (0.095 MW) from its Targeted Low-Income Energy Efficiency Program. The total demand reduction from both hard-to-reach programs was 325 kW (0.33 MW).

Q. DID THE NORTH DIVISION ACHIEVE MORE THAN 5% OF ITS 2016 STATUTORY DEMAND REDUCTION GOAL FROM ITS HARD-TO-REACH PROGRAMS?

A. Yes, the North Division achieved 8% of its PY 2016 statutory demand reduction goal from its hard-to-reach programs.

Q. DOES THE NORTH DIVISION REQUEST A PERFORMANCE BONUS FOR PY 2016?

A. Yes, it does. Mr. Cavazos discusses in more detail the $556,190 performance bonus requested by the North Division for its PY 2016 results.

Q. SHOULD THE NORTH DIVISION BE GRANTED ITS REQUESTED PERFORMANCE BONUS?

A. Yes, the North Division should be granted its performance bonus set forth in Schedule D.

C. PY 2018 Programs

Q. WHAT PROGRAMS WILL THE NORTH DIVISION OFFER IN PY 2018 TO ACHIEVE ITS ENERGY EFFICIENCY OBJECTIVES?

A. The North Division will offer the following programs in PY 2018:

- Commercial Solutions MTP
- Commercial SOP
- Hard-to-Reach SOP
- Load Management SOP
- Open MTP
- Residential SOP
- SCORE/CitySmart MTP

- SMART Source[SM] Solar PV MTP
- Targeted Low-Income Energy Efficiency Program
- Whisker Labs Residential Thermostat Demand Response Pilot Program (previously known as Earth Networks Residential Demand Response Pilot Program)

Q. WHAT IS THE PY 2018 PROJECTED COST FOR EACH PROGRAM?

A. Please refer to Schedule A, which details the PY 2018 projected cost for each of the North Division's programs.

Q. WHAT ARE THE PROJECTED SAVINGS FROM EACH PROGRAM?

A. Please refer to Schedule O, which contains the PY 2018 projected savings to be achieved by each program.

VI. CONCLUSION

Q. DO THE NORTH DIVISION'S ENERGY EFFICIENCY COSTS INCURRED IN PY 2016 COMPLY WITH THE COMMISSION RULE?

A. Yes. The costs incurred in connection with the PY 2016 energy efficiency programs were reasonable and necessary to provide energy efficiency to residential and commercial customers and were properly incurred consistent with 16 TAC § 25.181(f).

Q. DO THE NORTH DIVISION'S CALCULATIONS OF ITS ENERGY EFFICIENCY GOALS, OBJECTIVES, AND PROJECTED COSTS TO BE INCURRED IN PY 2018 AND INCLUDED IN THE ADJUSTED 2018 EECRF COMPLY WITH THE COMMISSION RULE?

A. Yes. The North Division's statutory minimum goals to be achieved in PY 2018 are 4.26 MW of demand reduction and 7,464 MWh of energy reduction, and are in compliance with the Commission rule. As discussed above and in Mr. Cavazos' testimony, in order to satisfy PURA §39.905 and the Commission rule that utilities achieve as much energy efficiency savings as reasonably possible within the limitations in the statute and the rule, the North Division has established energy efficiency objectives for PY 2018 above the minimum goals in the statute and rule. The $3,339,430 that the North Division projects it will incur in PY 2018 is a reasonable estimate of the costs (including EM&V) necessary to provide energy efficiency programs to meet the North Division's energy efficiency objectives for PY 2018 in furtherance of PURA §39.905 and 16 TAC § 25.181.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

PUC DOCKET NO. _____

PUBLIC UTILITY COMMISSION OF TEXAS

APPLICATION OF

AEP TEXAS INC.

TO ADJUST

ENERGY EFFICIENCY COST RECOVERY FACTORS AND RELATED RELIEF

DIRECT TESTIMONY OF

BRIAN J. FRANTZ

FOR

AEP TEXAS INC.

JUNE 1, 2017

TESTIMONY INDEX

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EXHIBITS

EXHIBIT	DESCRIPTION
EXHIBIT BJF-1	Central Division Affiliate Costs – 2016
EXHIBIT BJF-2	Central Division Affiliate Costs – 2016 by Benefiting Location and Allocation Factor
EXHIBIT BJF-3	North Division Affiliate Costs – 2016
EXHIBIT BJF-4	North Division Affiliate Costs – 2016 by Benefiting Location and Allocation Factor

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND POSITION.

A. My name is Brian J. Frantz. My business address is 1 Riverside Plaza, Columbus, Ohio 43215. I am currently Manager, Regulated Accounting, of American Electric Power Service Corporation (AEPSC), a wholly-owned subsidiary of American Electric Power, Inc. (AEP).

Q. WHAT ARE YOUR PRINCIPAL AREAS OF RESPONSIBILITY WITH AEPSC?

A. I am responsible for maintaining the accounting books and records, and regulatory reporting for AEPSC. I am also responsible for AEPSC's monthly service billings to its affiliates. My responsibilities for AEPSC also include compliance with the Federal Energy Regulatory Commission's (FERC) Uniform System of Accounts accounting and reporting requirements.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND PROFESSIONAL BACKGROUND.

A. I attended Ohio University and received a Bachelor of Business Administration degree, with an emphasis in Accounting in 1999. I have been employed by AEPSC since March 2005, when I was hired as a Staff Accountant in the Wholesale Commodity Accounting group. In May 2010, I was promoted to Supervisor of the Fuel and Contract Accounting group. In August 2013, I was promoted to Administrator of Regulated Accounting. In December 2013, I was promoted to Manager Regulated Accounting where I was responsible for the books and records for four operating companies (Indiana Michigan Power Company, Kentucky Power

Company, Kingsport Power Company and AEP Generating Company). I moved to my present position in November 2014. Prior to my employment with AEP, I spent approximately 1 year in financial reporting role and 5 years in various roles in public accounting.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE ANY REGULATORY COMMISSIONS?

A. Yes, I have testified before the Corporation Commission of the State of Oklahoma (OCC) in Cause No. PUD 201500208. In addition, I submitted written testimony with the Public Utility Commission of Texas (PUC or Commission) in Docket Nos. 44717, 44718, 45928, 45929, and 46449.

II. PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony addresses several areas relating to the affiliate services provided in support of AEP Texas' energy efficiency programs, including:

- An explanation of how affiliate services related to energy efficiency activities are assigned to AEP Texas;
- A discussion of the workings of the affiliate billing systems for the services provided to AEP Texas and the other AEP utility operating companies;
- A demonstration that the work order billing system ensures that AEP Texas charges are no higher than those of other AEP affiliates for the same services or types of services;
- The Texas standards governing recovery of affiliate costs; and
- A review of the affiliate costs included in this filing.

As explained in the testimony of Robert Cavazos, AEP Texas Central Company (TCC) and AEP Texas North Company (TNC) have now merged into the single entity, AEP Texas Inc. (AEP Texas or Company) However, the Commission has required AEP Texas to maintain separate TCC and TNC divisions, now the AEP Texas Central Division and AEP Texas North Division.

Q. DO YOU SPONSOR ANY SCHEDULES IN THE FILING?

A. Yes, I co-sponsor Schedule K for each division with witness Robert Cavazos.

Q. WHAT EXHIBITS DO YOU SPONSOR?

A. I sponsor EXHIBITs BJF-1, BJF-2, BJF-3, and BJF-4 as listed in the index to my testimony.

III. AFFILIATE COST ACCOUNTING AND OVERSIGHT

A. Assignment of Affiliate Costs to AEP Texas

Q. HOW ARE AFFILIATE SERVICES RELATED TO ENERGY EFFICIENCY ACTIVITIES ASSIGNED TO AEP TEXAS?

A. AEPSC uses a work order system designed for the express purpose of meeting the FERC requirements to fairly allocate common charges among AEP affiliates and to do so at cost. By using a work order system, the expenses for specific projects are identified and the work orders are assigned specific and approved benefiting locations and allocation factors. Common costs are allocated based on the factor that best matches the charge with the cost driver related to the service, and that same factor is applied to all companies in proportion to the benefit they receive from the service.

The costs for services benefiting only one company are directly assigned and are billed 100% to that company. AEPSC and operating company employees directly assign costs to the maximum extent practicable by coding their time to unique work orders. Unique work orders have also been established for billing of certain affiliate support services exclusively performed for the AEP Texas energy efficiency programs, which allow the associated costs billed to energy efficiency programs to be tracked and readily identified.

Q. HOW DOES AEPSC BILL FOR THE SERVICES IT PROVIDES TO AEP TEXAS AND OTHER AFFILIATES?

A. Services are billed by AEPSC at cost, without any profit. Included in the billings for AEPSC labor are overheads for benefits (i.e. medical, dental, pension), payroll taxes, nonproductive time (sick time, vacation time, jury duty, etc.), and departmental charges for certain costs, such as personal computers and the maintenance of automated accounting systems required to provide a service. To the extent third-party labor under a contract with AEPSC is involved, the contract labor charges are at the contract employee's hourly rate paid by AEPSC to the contractor providing the services, without any profit to AEPSC.

Q. HOW DOES THE WORK ORDER SYSTEM ENSURE THAT AEPSC'S CHARGES TO AEP TEXAS ARE NO HIGHER THAN THE CHARGES TO OTHER AFFILIATES FOR THE SAME OR SIMILAR SERVICES, AND THAT THE CHARGES REASONABLY REFLECT THE ACTUAL COST OF PROVIDING THE SERVICE TO AEP TEXAS?

A. Through the use of the AEPSC work order system, AEP Texas and every other affiliate included in the benefiting locations receiving a shared service is charged the same unit price that is its appropriate share of the actual cost of the service. Accordingly, consistent with the requirements of the Public Utility Regulatory Act, Tex. Util. Code Ann. § 36.058(c)(2) (PURA), the price charged to AEP Texas for the service (AEPSC's actual cost) is no higher than the price charged to the other affiliates receiving the same service (AEPSC's actual cost).

Q. ARE AEP TEXAS' AFFILIATE CHARGES REASONABLE AND NECESSARY?

A. Yes, the affiliate services provided by AEPSC and the AEP Texas divisions to each other are reasonable and necessary costs of each division's provision of energy efficiency programs. These services have been reasonably and necessarily incurred to support the energy efficiency programs as set forth in EXHIBITs BJF-1, BJF-2, BJF-3, and BJF-4 and within the testimonies of Mr. Cavazos, Ms. Pamela D. Osterloh, and Ms. Rhonda Fahrlender.

B. Standards Governing Recovery of Affiliate Costs

Q. ARE AFFILIATE EXPENSES ADDRESSED IN PURA?

A. Yes, affiliate expenses are addressed by PURA § 36.058. PURA § 36.058 allows an electric utility to include in its revenue requirement payments to affiliates that meet the requirements of PURA § 36.058(b). PURA § 36.058(b), in turn, directs the Commission to allow recovery of affiliate payments "only to the extent that the regulatory authority finds the payment is reasonable and necessary for each item or class of items..." In addition, PURA § 36.058(c) requires that the Commission find

that "the price to the electric utility [for the affiliate service] is not higher than the prices charged by the supplying affiliate for the same item or class of items" to other affiliates or to non-affiliated persons. Because the billings of AEPSC and other AEP utility operating companies to AEP Texas are affiliate charges, the requirements of PURA § 36.058 apply to those billings. PURA § 36.058(f) provides:

> (f) If the regulatory authority finds that an affiliate expense for the test period is unreasonable, the regulatory authority shall:
>
> (1) determine the reasonable level of the expense; and
>
> (2) include that expense in determining the electric utility's service.

Q. DOES THE COMMISSION ALSO HAVE RULES PERTINENT TO THE REVIEW OF AFFILIATE TRANSACTIONS?

A. Yes. 16 Texas Administrative Code (TAC) § 25.272 discusses the code of conduct with which electric utilities and their affiliates must comply. Specifically, § 25.272(e)(1) states:

> ...In accordance with PURA and the commission's rules, a utility and its affiliates shall fully allocate costs for any shared services, including corporate support services, offices, employees, property, equipment, computer systems, information systems, and any other shared assets, services, or products.

Q. HOW ARE CORPORATE SUPPORT SERVICES DEFINED IN THE SUBSTANTIVE RULES?

A. 16 TAC § 25.272(c)(4) defines corporate support services as those "joint corporate oversight, governance, support systems and personnel," "shared by a utility, its parent holding company, or a separate affiliate created to perform corporate support services...." AEPSC is such an affiliate. This section of the rule further provides examples of the types of support services that may be shared, including accounting,

human resources, procurement, information technology, regulatory services, legal services, environmental services, research and development, internal audit, community relations, and corporate services, among others. The services provided to AEP Texas by AEPSC are of the same type referenced in the Commission's rule.

Q. DO THE AFFILIATE COSTS INCLUDED IN AEP TEXAS' FILING COMPLY WITH APPLICABLE STANDARDS IN TEXAS STATUTES AND RULES?

A. Yes, they do. Other witnesses and I will discuss how the costs meet the tests for being reasonable and necessary, and that these costs are no higher than prices charged by the affiliate to others.

IV. ENERGY EFFICIENCY AFFILIATE COSTS

Q. WERE ANY AFFILIATE SERVICES PROVIDED IN SUPPORT OF AEP TEXAS' ENERGY EFFICIENCY PROGRAMS IN 2016?

A. Yes. AEP Texas received affiliate services in 2016.

Q. PLEASE DESCRIBE THE AFFILIATE SERVICES RECEIVED BY AEP TEXAS IN 2016.

A. As shown by department and project on EXHIBIT BJF-1, the Central Division incurred costs for services from the following affiliates:

Table 1

Central Division Affiliate Costs - 2016

Affiliate	2016 ($)
American Electric Power Service Corporation	7,758
AEP Texas North Division	267,198
Total Affiliate Services Provided	274,956

Source: EXHIBIT BJF-1

As shown by department and project on EXHIBIT BJF-3, the North Division incurred costs for services from the following affiliates:

Table 2

North Division Affiliate Costs - 2016

Affiliate	2016 ($)
American Electric Power Service Corporation	1,779
AEP Texas Central Division	65,071
Total Affiliate Services Provided	66,850

Source: EXHIBIT BJF-3

The affiliate services shown above were provided primarily by the Energy Efficiency/Demand Response Programs department as detailed on EXHIBIT BJF-1 and EXHIBIT BJF-3. This department is comprised of employees of AEP Texas and is responsible for the overall design and implementation of the programs discussed throughout the testimonies of witnesses Cavazos, Osterloh, and Fahrlender. Additional services are provided by the legal department in support of compliance with Texas legal requirements related to energy efficiency programs.

Q. WERE THE SERVICES PROVIDED BY THESE AFFILIATES IN 2016 REASONABLY ALLOCATED?

A. Yes, they were. As shown on EXHIBIT BJF-2 and EXHIBIT BJF-4, 99.9% of the Central Division affiliate costs and 91.7% of the North Division affiliate costs were allocated between the Central Division and the North Division, which both participate in energy efficiency programs. These services were performed in a manner to benefit AEP Texas and were primarily shared among each division using its relative number of customers as the allocation methodology, which is an appropriate manner in which to share the cost of such services. In addition, certain administrative activities shared among the two divisions were allocated based upon their relative asset bases. This allocation factor is a reasonable methodology in which to share the cost of administrative services.

The remaining 0.1% of the Central Division costs and 8.3% of the North Division affiliate costs were directly assigned to the other division for those services that were performed solely for the benefit of the other division.

Q. HOW DO THE 2016 AFFILIATE COSTS COMPARE TO AEP TEXAS' TOTAL ENERGY EFFICIENCY COSTS DURING THIS PERIOD?

A. As shown in Table 3, affiliate services received by the Central Division are 2% of total energy efficiency costs during the year. The remaining cost, 98%, is incurred directly by the Central Division and not through an affiliate.

Table 3

Central Division Affiliate Costs as Percentage of Total Costs - 2016

Category	**2016 ($)**
Affiliate Cost	274,956
Total Cost	13,622,054
Percentage of Total Cost	2%

Source: EXHIBIT BJF-1 and Schedule B

As shown in Table 4, costs for affiliate services received by the North Division are 3% of total energy efficiency costs during the year. The remaining cost, 97%, is incurred directly by the North Division and not through an affiliate.

Table 4

North Division Affiliate Costs as Percentage of Total Costs - 2016

Category	**2016 ($)**
Affiliate Cost	66,850
Total Cost	2,622,844
Percentage of Total Cost	3%

Source: EXHIBIT BJF-3 and Schedule B

V. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. My testimony describes and supports AEP Texas' compliance with the rules governing affiliate costs. My testimony also addresses the overall reasonableness and necessity of affiliate costs, as well as the work order system utilized to ensure that AEP Texas pays no more than any other AEP company for the comparable services it receives from affiliates.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

AEP Texas Central Division Affiliate Costs - 2016

Years	2016
To BU grouping	AEP Texas Central Division

Sum of Act $						
Cost Type	From Department		To Project		From BU Grouping	Total
Administrative Costs	10329	TX EE/DR Programs	EON100551	EE/DR EECRF	AEP Texas North Division	3,250
			EON100551	EE/DR EECRF Total		3,250
			TXDSMANDA	Texas DSM Admin & General	AEP Texas North Division	226,300
			TXDSMANDA	Texas DSM Admin & General Total		226,300
	10329	TX EE/DR Programs Total				229,550
	10764	Legal GC/Administration	TXDSMANDA	Texas DSM Admin & General	AEPSC	111
			TXDSMANDA	Texas DSM Admin & General Total		111
	10764	Legal GC/Administration Total				111
	13168	Legal Reg Services West	TXDSMANDA	Texas DSM Admin & General	AEPSC	819
			TXDSMANDA	Texas DSM Admin & General Total		819
	13168	Legal Reg Services West Total				819
Administrative Costs Total						230,480
Program Direct Costs	10329	TX EE/DR Programs	EON100508	Dsm-Res Standard Offer	AEP Texas North Division	316
			EON100508	Dsm-Res Standard Offer Total		316
			EON100514	Dsm-Hard To Reach Std Offer	AEP Texas North Division	11,741
			EON100514	Dsm-Hard To Reach Std Offer Total		11,741
			EON100534	DSM Solar PV Pilot MTP	AEP Texas North Division	1,741
			EON100534	DSM Solar PV Pilot MTP Total		1,741
			EON100547	DSM - EM&V	AEP Texas North Division	601
			EON100547	DSM - EM&V Total		601
	10329	TX EE/DR Programs Total				14,400
Program Direct Costs Total						14,400
R&D Costs	10329	TX EE/DR Programs	EON100535	EE/DR R&D	AEP Texas North Division	23,248
					AEPSC	979
			EON100535	EE/DR R&D Total		24,227
	10329	TX EE/DR Programs Total				24,227
	11060	Customer and Distr Services	EON100535	EE/DR R&D	AEPSC	796
			EON100535	EE/DR R&D Total		796
	11060	Customer and Distr Services Total				796
	12883	EE & Consumer Programs	EON100535	EE/DR R&D	AEPSC	5,053
			EON100535	EE/DR R&D Total		5,053
	12883	EE & Consumer Programs Total				5,053
R&D Costs Total						30,076
Grand Total						274,956

AEP Texas Central Division Affiliate Costs - 2016 by Benefiting Location and Allocation Factor

Benefiting Location	Allocation Factor	2016 ($)	%
1397 Distribution - AEPTC/AEPTN	08 - Number of Customers	273,971	99.6%
	58 - Total Assets	930	0.3%
1397 Distribution - AEPTC/AEPTN Total		274,901	99.9%
211 - 100% AEP Texas Central	39 - Direct	54	0.1%
211 - 100% AEP Texas Central Total		54	0.1%
Grand Total		274,956	100.0%

AEP Texas North Division Affiliate Costs - 2016

Years	2016
To BU grouping	AEP Texas North Division

Sum of Act $						
Cost Type	From Department		To Project		From BU Grouping	Total
Administrative Costs	10329	TX EE/DR Programs	EON100550	EE/DR Industrial Id Notice	AEP Texas Central Division	109
			EON100550	EE/DR Industrial Id Notice Total		109
			TXDSMANDA	Texas DSM Admin & General	AEP Texas Central Division	48,773
			TXDSMANDA	Texas DSM Admin & General Total		48,773
	10329	TX EE/DR Programs Total				48,882
	10764	Legal GC/Administration	TXDSMANDA	Texas DSM Admin & General	AEPSC	27
			TXDSMANDA	Texas DSM Admin & General Total		27
	10764	Legal GC/Administration Total				27
	13168	Legal Reg Services West	TXDSMANDA	Texas DSM Admin & General	AEPSC	200
			TXDSMANDA	Texas DSM Admin & General Total		200
	13168	Legal Reg Services West Total				200
Administrative Costs Total						49,109
Program Direct Costs	10329	TX EE/DR Programs	EON100547	DSM - EM&V	AEP Texas Central Division	11,987
			EON100547	DSM - EM&V Total		11,987
			EON100555	EE/DR EfficiencyConnection MTP	AEP Texas Central Division	117
			EON100555	EE/DR EfficiencyConnection MTP Total		117
			EON100557	EE/DR Res DR Pilot - Earth Net	AEP Texas Central Division	88
			EON100557	EE/DR Res DR Pilot - Earth Net Total		88
	10329	TX EE/DR Programs Total				12,192
Program Direct Costs Total						12,192
R&D Costs	10329	TX EE/DR Programs	EON100535	EE/DR R&D	AEPSC	223
					AEP Texas Central Division	3,996
			EON100535	EE/DR R&D Total		4,219
	10329	TX EE/DR Programs Total				4,219
	11060	Customer and Distr Services	EON100535	EE/DR R&D	AEPSC	181
			EON100535	EE/DR R&D Total		181
	11060	Customer and Distr Services Total				181
	12883	EE & Consumer Programs	EON100535	EE/DR R&D	AEPSC	1,148
			EON100535	EE/DR R&D Total		1,148
	12883	EE & Consumer Programs Total				1,148
R&D Costs Total						5,548
Grand Total						66,850

AEP Texas North Division Affiliate Costs - 2016 by Benefiting Location and Allocation Factor

Benefiting Location	Allocation Factor	Total	%
1397 Distribution - AEPTC/AEPTN	08 - Number of Customers	61,073	91.4%
	58 - Total Assets	227	0.3%
1397 Distribution - AEPTC/AEPTN Total		61,300	91.7%
119 100% AEP Texas North	39 - Direct	5,550	8.3%
119 100% AEP Texas North Total		5,550	8.3%
Grand Total		66,850	100.0%

PUC DOCKET NO. _____

PUBLIC UTILITY COMMISSION OF TEXAS

APPLICATION OF

AEP TEXAS INC.

TO ADJUST

ENERGY EFFICIENCY COST RECOVERY FACTORS AND RELATED RELIEF

DIRECT TESTIMONY OF

JENNIFER L. JACKSON

FOR

AEP TEXAS INC.

JUNE 1, 2017

TESTIMONY INDEX

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I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME, POSITION, AND BUSINESS ADDRESS.

A. My name is Jennifer L. Jackson. I am a Regulatory Consultant in Regulated Pricing and Analysis, part of the American Electric Power Service Corporation (AEPSC) Regulatory Services Department, 212 East Sixth Street, Tulsa, Oklahoma 74119-1295.

Q. PLEASE BRIEFLY DESCRIBE THE AEPSC REGULATORY SERVICES DEPARTMENT, YOUR CURRENT JOB RESPONSIBILITIES, AND EDUCATION.

A. AEPSC Regulatory Services is part of the American Electric Power Company, Inc. (AEP) Utilities Business Group. Among its activities, Regulatory Services provides coordination and tariff-related services to the eleven AEP operating companies, including AEP Texas Inc. As a Regulatory Consultant for AEPSC, my job duties include providing testimony, rate review analysis and support, pricing design, implementation of pricing programs, and regulatory compliance for the AEP operating companies. I have been involved in regulatory rate review and pricing design proceedings since 1991 in all four of the AEP west state jurisdictions: Arkansas, Louisiana, Oklahoma, and Texas. I have a Bachelor of Business Administration Degree with an emphasis in Marketing from Texas Tech University.

Q. HAVE YOU PREVIOUSLY SPONSORED TESTIMONY BEFORE THIS COMMISSION?

A. Yes, I have previously sponsored testimony before the Public Utility Commission of Texas (PUC or Commission) in the following dockets: 20545, 28520, 28840, 31251,

31461, 32758, 33309, 33310, 35625, 35627, 36422, 36928, 36949, 36961, 36960, 36959, 38208, 38209, 38210, 39359, 39360, 39361, 40358, 40359, 40443, 41538, 41539, 41879, 41970, 42370, 42508, 42509, 44717, 44718, 45787, 45788, 45928, and 45929. I have also sponsored testimony before the Arkansas Public Service Commission and the Oklahoma Corporation Commission.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. As discussed in the testimony of AEP Texas witness Robert Cavazos, the Commission approved the merger of AEP Texas Central Company (TCC) and AEP Texas North Company (TNC) into what is now AEP Texas in Docket No. 46050. Consistent with the Order in that case, AEP Texas is proposing to maintain separate Energy Efficiency Cost Recovery Factors (EECRF) for the two divisions of AEP Texas: AEP Texas – Central Division (formerly TCC) and AEP Texas – North Division (formerly TNC).

The purpose of my testimony is to support the calculation of the annual redetermination of AEP Texas – Central Division Rider EECRF - Energy Efficiency Cost Recovery Factors and AEP Texas – North Division Rider EECRF - Energy Efficiency Cost Recovery Factors and to support the revised tariffs (Rider EECRF) accompanying this filing, proposed to be effective March 1, 2018. The adjusted factors are proposed based on 16 TAC § 25.181(f), which among other things provides for a cost recovery factor to allow a utility to recover reasonable expenditures on energy efficiency as well as a performance bonus for exceeding its goals, recover municipal EECRF proceeding expenses, and recover Evaluation, Measurement and Verification (EM&V) costs.

Q. WHAT SCHEDULES THAT ACCOMPANY THE AEP TEXAS FILING DO YOU SPONSOR?

A. As part of my testimony, I will provide two sets of schedules, one complete set for the Central Division and one complete set for the North Division. I sponsor the following schedules for the Central Division and the North Division:

Schedule	Description
Schedule E	Calculation of the 2018 Revised EECRF Factors
Schedule F	Updated Energy Efficiency Cost Recovery Factor Rider
Schedule G	Calculation of Cost Caps
Schedule H	Development of Forecasted Billing Units
Schedule I	Energy Efficiency Costs Recovered Through Base Rates
Schedule Q	System and Line Losses

I also sponsor the workpapers supporting those schedules.

Q. WHAT SCHEDULES ARE YOU CO-SPONSORING?

A. I am co-sponsoring Schedule A with AEP Texas witnesses Robert Cavazos, Pamela D. Osterloh and Rhonda R. Fahrlender, Schedule B with AEP Texas witnesses Osterloh and Fahrlender, and Schedule C with AEP Texas witness Cavazos.

Q. PLEASE DESCRIBE THE SCHEDULES THAT YOU ARE SPONSORING.

A. Schedule E provides the calculation of the proposed 2018 EECRF class factors. Schedule F contains the adjusted Rider EECRF, which sets forth the adjusted 2018 EECRF factors by EECRF rate class. Schedule G provides the 2018 cost cap calculation for the requested program budget year and the 2016 actual cap calculated on 2016 actual costs, without EM&V and class kilowatt-hour (kWh). Schedule H details the development of the forecasted EECRF class kWh for program year 2018, including historical kWh for the most recent calendar year, January through

December 2016. Schedule I shows the determination of the energy efficiency costs included in base rates and the adjustment to the base rate revenues using 2016 actual billing units. Schedule Q indicates that system and line losses are not applicable in the AEP Texas EECRF filing.

II. ADJUSTED ENERGY EFFICIENCY COST RECOVERY REVENUE REQUIREMENT

Q. WHY IS AEP TEXAS REQUESTING APPROVAL OF AN ADJUSTED EECRF?

A. AEP Texas is requesting approval of an adjusted EECRF based on 16 Tex. Admin. Code (TAC) § 25.181(f). AEP Texas filed for and received approval of its initial Schedule EECRFs in Docket Nos. 35627 and 36959 for the Central and North Divisions, respectively. The Central Division also filed for an adjustment to its EECRF in Docket Nos. 36960, 38208, 39360, 40359, 41538, 42508, 44717, and 45929. The North Division also filed for an adjustment to its EECRF in Docket Nos. 38209, 39361, 40358, 41539, 42509, 44718, and 45928. In the current adjustment request, AEP Texas is requesting: 1) recovery of the 2018 projected energy efficiency program costs in excess of the amount expressly included in AEP Texas' prior base rate orders, adjusted to account for changes in billing determinants from the test year billing determinants used to set rates in the last base rate proceeding; 2) an adjustment to the EECRF factors for the over-recovery of actual energy efficiency program costs in 2016; 3) recovery of AEP Texas' 2016 performance bonus for demand and energy reduction that exceeded the minimum goal to be achieved in 2016; 4) recovery of municipal EECRF proceeding expenses from Docket Nos. 45928 and 45929, and 5)

recovery of projected EM&V costs for the evaluation of program years 2016 and 2017 to be included in program year 2018. AEP Texas is requesting Commission approval of an adjusted Rider EECRF for the Central Division and the North Division with revised factors to be effective March 1, 2018.

Q. WHAT AMOUNT EXPRESSLY SPECIFIED AS ENERGY EFFICIENCY COSTS IS INCLUDED IN AEP TEXAS' BASE RATES?

A. AEP Texas currently has $7,629,379 expressly specified as energy efficiency costs in base rates. For the Central Division, the Commission's final order in Docket No. 33309 expressly included $6,334,949 of energy efficiency program funding in base rates. For the North Division, the Commission's final order in Docket No. 33310 expressly included $1,294,430 of energy efficiency program funding in base rates.

Q. HOW WERE THE ENERGY EFFICIENCY COSTS THAT ARE EXPRESSLY INCLUDED IN AEP TEXAS' BASE RATES ALLOCATED TO THE CLASSES?

A. The total energy efficiency program costs approved to be recovered through base rates were functionalized to both the distribution function and the customer service function. The majority (99%) of the energy efficiency program costs recovered in AEP Texas' base rates is included in the base distribution rates. Only a small portion of the total costs is recovered through the customer service function. The energy efficiency costs included in AEP Texas' current distribution base rates were allocated to the classes based on each class's average 4 coincident peak (4CP) demand, the allocator used and approved in Docket Nos. 33309 and 33310 to allocate transmission expenses to the classes. The energy efficiency costs included in the customer service function were allocated to the classes based upon total customers. Schedule I shows

the allocation factors by function and the amounts included in base rates for each function by class.

Q. HAS AEP TEXAS MADE AN ADJUSTMENT TO THE ENERGY EFFICIENCY REVENUES INCLUDED IN BASE RATES?

A. Yes. Pursuant to 16 TAC § 25.181(f)(2):

> where a utility collects energy efficiency costs in its base rates, actual energy efficiency revenues collected from base rates consist of the amount of energy efficiency costs expressly included in base rates, adjusted for changes in billing determinants from the test year billing determinants used to set rates in the last base rate proceeding.

The Central Division has increased actual energy efficiency base revenues by $934,419 to account for changes in test year billing determinants as determined in Docket No. 33309. Total energy efficiency base revenues for the Central Division are adjusted to be $7,269,368 as shown in Table 1 below.

Table 1

EECRF Rate Class	Total Energy Efficiency Costs Expressly Included In Base Rates	Adjustment to Base Revenue	Total Adj. EE Base Revenue per 16 TAC § 25.181
Residential	$3,024,435	$558,782	$3,583,217
Secondary <= 10 kW	$114,088	$16,589	$130,676
Secondary > 10 kW	$1,957,962	$280,940	$2,238,903
Primary	$675,491	$43,778	$719,268
Transmission	$562,892	$34,412	$597,304
Lighting	$81	($81)	$0
Total	$6,334,949	$934,419	$7,269,368

The North Division has increased actual energy efficiency base revenues by $144,798 to account for changes in test year billing determinants as determined in Docket No. 33310. Total energy efficiency base revenues for the North Division are adjusted to be $1,439,228 as shown in Table 2 below.

Table 2			
EECRF Rate Class	Total Energy Efficiency Costs Expressly Included In Base Rates	Adjustment to Base Revenue	Total Adj. EE Base Revenue per 16 TAC § 25.181
Residential	$602,913	$10,911	$613,824
Secondary <= 10 kW	$37,620	($2,620)	$35,000
Secondary > 10 kW	$476,869	$20,573	$497,442
Primary	$169,274	$112,713	$281,987
Transmission	$7,754	$3,221	$10,974
Lighting	$1	($1)	$0
Total	$1,294,430	$144,798	$1,439,228

The revenue adjustment is used in the base rate revenue adjustment determination for both the 2016 actual and 2018 forecasted program years. The base rate energy efficiency adjustment is represented in the determination of the 2016 over-/under-recovery (Schedule C 2016 and WP Schedule C 2016) and in the determination of 2018 EECRF (Schedule E and WP Schedule E). Schedule I details the calculation of the base revenue adjustment, including the base rate billing determinants and the 2016 billing determinants by class.

Q. WHAT IS AEP TEXAS REQUESTING THROUGH THE ADJUSTED EECRF?

A. AEP Texas, through this application, is requesting to adjust the EECRF cost recovery factors to reflect:

- recovery of $8,650,862; ($6,813,091 for the Central Division and $1,837,772 for the North Division) in energy efficiency program costs projected to be incurred in 2018 that exceed costs for energy efficiency included in its prior base rate order, including the revenue adjustment;
- return of $1,502,426; ($1,173,691 for the Central Division and $328,734 for the North Division) to account for the over-recovery of EECRF revenues in excess of actual energy efficiency program expenditures incurred for its 2016 programs;
- recovery of $4,048,441 ($3,492,251 for the Central Division and $556,190 for the North Division) representing the AEP Texas earned performance bonus; and

- recovery of municipal EECRF proceeding expenses from Docket Nos. 45928 and 45929 in the amount of $5,713 ($2,822 for the Central Division and $2,891 for the North Division); and

- recovery of EM&V costs in the amount of $416,407 ($353,977 for the Central Division and $62,430 for the North Division).

In sum, AEP Texas requests Commission approval of the adjusted EECRF cost recovery factors as provided for in 16 TAC § 25.181(f)(1) to recover $11,618,998 in energy efficiency costs in 2018 ($9,488,449 and $2,130,548 for Central Division and North Division, respectively).

Q. HOW ARE THE 2018 PROGRAM COSTS SOUGHT TO BE RECOVERED THROUGH THE EECRF ASSIGNED TO EACH CLASS?

A. AEP Texas has assigned the 2018 program costs, including the administrative portion of each program cost, to each EECRF rate class based on each class's eligibility to participate in the proposed 2018 programs. Where more than one EECRF rate class is eligible to participate in a specific program, AEP Texas has employed an adjusted and weighted demand allocator to assign program costs across the eligible classes. AEP Texas has employed the weighted and adjusted demand allocator to assign research and development (R&D) costs across the eligible classes.

The transmission service class of customers is not allocated energy efficiency program costs through the EECRF because those customers taking service at 69 kilovolts (kV) and above are not eligible for participation in the 2018 energy efficiency programs.

Q. PLEASE DESCRIBE THE 2018 ADJUSTED DEMAND ALLOCATION FACTORS USED TO ALLOCATE COSTS THAT ARE NOT DIRECTLY ASSIGNED TO RATE CLASSES.

A. The class demand allocators from AEP Texas last rate cases in Docket Nos. 33309 and 33310 have been weighted to remove the lighting class and transmission customers at or above 69 kV and adjusted using 2018 program year projected kWh. The 2018 program year kWh projection has accounted for industrial customers identifying themselves under 16 TAC § 25.181(c)(30) and (w). Under 16 TAC § 25.181(c)(30) and (w), distribution voltage industrial customers that qualify for a tax exemption under Tex. Tax Code Ann. § 151.317 and submit an identification notice by February 1 characterizing the account as such, are not eligible for participation in energy efficiency programs through the EECRF beginning with the next calendar year. AEP Texas has therefore removed kWh associated with those customers from the 2018 program year kWh projection. The removal of the identification notice customers affects the adjusted demand allocators and the calculation of the proposed class EECRF factors for 2018. The kWh associated with the identification notice customers and the resulting 2018 program year kWh projection are shown in Schedule H and the adjusted demand allocators are shown in the rate design workpapers supporting Schedule E.

Q. HOW IS THE 2016 OVER-RECOVERY DETERMINED?

A. The over-recovery is determined for each division by first assessing the total energy efficiency costs incurred in program year 2016 for each division. Central Division incurred total energy efficiency costs of $13,622,054, including municipal rate case

expenses and EM&V in program year 2016. After rate case expenses paid in program year 2016 are removed, the total incurred cost equals $13,619,232. North Division incurred total energy efficiency costs of $2,622,844, including municipal rate case expenses and EM&V in program year 2016. After rate case expenses paid in program year 2016 are removed, the total incurred cost equals $2,621,832.

Next, the total energy efficiency program revenue is recognized. AEP Texas recovered energy efficiency program costs through its base rates, including a base rate adjustment, and through the EECRF rider.

Central Division recovered $7,269,368 through base rates (including the base rate adjustment) and $7,523,555 in program costs through the EECRF rider for a total program cost recovery of $14,792,924. The difference between total costs incurred, less municipal rate case expenses, and total program revenue determines the 2016 over-recovery amount of $1,173,691 for Central Division.

North Division recovered $1,439,228 through base rates and $1,511,338 in program costs through the EECRF rider for a total program cost recovery of $2,950,566. The difference between total costs incurred, less municipal rate case expenses, and total program revenue determines the 2016 over-recovery amount of $328,734 for North Division.

Q. HOW IS AEP TEXAS ASSIGNING THE 2016 OVER-RECOVERY TO THE CLASSES?

A. The over-recovery assignment to each class is based on a comparison of the total program year 2016 energy efficiency revenues, including the adjusted base rate and EECRF Rider revenues by EECRF rate class, to actual 2016 program costs assigned

to each EECRF rate class. The municipal rate case expenses that were included in the total program expenses in 2016 have been removed from the total 2016 program expenses and are therefore not included in the over-recovery determination for program year 2016. AEP Texas' actual 2016 energy efficiency program costs have been directly assigned to the individual EECRF rate classes that actually participated in each program using a direct, program-by-program assignment. The 2016 administrative costs follow the assignment of the incentive costs and the R&D costs have been either directly assigned to the rate classes or allocated to the classes based on the 2016 class program cost assignment. The specifics of the class assignment of the over-recovery are shown on filed Schedule C and the workpapers supporting Schedule C.

Q. HOW IS AEP TEXAS ASSIGNING THE PROGRAM YEAR 2016 EARNED PERFORMANCE BONUS TO THE CLASSES?

A. AEP Texas has assigned the program year 2016 earned performance bonus to all EECRF rate classes eligible for participation in the 2016 energy efficiency program year using an allocator based on the direct assignment of the 2016 program incentives to the EECRF rate classes. AEP Texas' allocation is in accordance with 16 TAC § 25.181(h)(6), which states that the bonus shall be allocated in proportion to the program costs associated with meeting the demand and energy goals and allocated to the eligible customers on a rate class basis.

Q. ARE THERE MUNICIPAL RATE CASE EXPENSES INCLUDED IN THE 2018 TOTAL REVENUE REQUIREMENT?

A. Yes. The Central Division was billed by the municipal entities who took part in the EECRF proceeding in Docket No. 45929 in 2016 and paid those bills even though the expenses have not been included for recovery in any program year. Similarly, the North Division was billed by the municipal entities who took part in the EECRF proceeding in Docket No. 45928 in January 2017 and paid those bills even though the expenses have not been included for recovery in any program year. As stated above, the municipal EECRF case expenses paid in 2016 but not recovered have been removed from the over-recovery of the 2016 program expenses and included for recovery in program year 2018.

Q. HOW IS AEP TEXAS ASSIGNING THE MUNICIPAL EECRF PROCEEDING EXPENSES TO THE CLASSES?

A. AEP Texas has assigned the municipal EECRF proceeding expenses to the classes using an allocator developed using the assignment of the 2018 program cost to the classes.

Q. HAS AEP TEXAS INCLUDED EM&V COSTS IN THE 2018 REVENUE REQUIREMENT?

A. Yes. AEP Texas has included statewide EM&V contractor costs in the 2018 revenue requirement for evaluating program years 2016 and 2017 to be recovered through the 2018 EECRF.

III. DEVELOPMENT OF CLASS ENERGY EFFICIENCY COST RECOVERY FACTORS

Q. WHAT ARE THE COMPONENTS NEEDED TO DEVELOP AEP TEXAS' ADJUSTED ENERGY EFFICIENCY COST RECOVERY FACTORS?

A. The components needed to develop the EECRF cost recovery factors include:

1) the amount of energy efficiency revenue requirement included in base rates, including the base rate adjustment;
2) the projected 2018 energy efficiency program cost provided in Schedule A;
3) the over- or under-recovery associated with the 2016 energy efficiency programs;
4) the performance bonus achieved for 2016 performance;
5) the 2016 actual program direct assignment to the EECRF rate classes based on actual 2016 participation and assignment of the 2018 energy efficiency program costs to the EECRF rate classes;
6) the projected EM&V costs for the evaluation of program years 2016 and 2017
7) the adjusted class demand allocation factors;
8) the identification notice customers and related kWh;
9) the forecasted billing units by EECRF rate class for program year 2018; and,
10) the municipal rate case expenses from the immediately preceding EECRF docket.

Q. HOW ARE THE EECRF FACTORS DETERMINED ONCE ALL THE COMPONENTS ARE ASSEMBLED?

A. Once the total EECRF class revenue requirement based on the components listed above has been assigned to EECRF rate classes by direct assignment or by using the appropriate allocators, the EECRF factors are calculated by dividing the revenue requirement for each EECRF rate class by the program year 2018 projected billing

units for each EECRF rate class. The 2018 EECRF factors are shown in Schedule E and the revised Rider EECRF is contained in Schedule F.

Q. WHAT BILLING UNIT IS AEP TEXAS PROPOSING TO USE TO RECOVER THE ENERGY EFFICIENCY COSTS?

A. As was approved in Docket Nos. 35627, 36960, 38208, 39360, 40359, 41538, 42508, 44717, and 45929 for the Central Division and Docket Nos. 36959, 38209, 39361, 40358, 41539, 42509, 44718 and 45928 for the North Division, AEP Texas is proposing to continue to use an energy charge (kWh) for recovery of energy efficiency costs for all classes of customers included in the EECRF, as authorized by 16 TAC § 25.181(f)(6). AEP Texas' kWh proposal is consistent with past approved EECRF billing methodologies and is in compliance with 16 TAC § 25.181(f)(6). AEP Texas has supplied forecasted 2018 kWh data for all classes in Schedule H. For Transmission Service customers and Primary and Secondary ID Notice customers receiving a credit rate through the EECRF rider, the billing unit for the credit is based on the distribution service billing demand consistent with the Final Orders in Docket Nos. 45928 and 45929.

Q. PLEASE DESCRIBE HOW THE 2018 FORECASTED BILLING UNITS USED IN THE DEVELOPMENT OF THE EECRF FACTORS FOR PROGRAM YEAR 2018 WERE DETERMINED.

A. As part of the normal course of business, AEP projects monthly kWh sales for each of its operating companies, including AEP Texas. The AEPSC Economic Forecasting Department provides the total retail kWh sales forecasts by revenue class for the 2018 energy efficiency program year. Because the kWh sales are projected on a revenue

class basis, kWh data must be converted to EECRF rate class forecasted kWh sales. Forecasted kWh sales by EECRF rate class were established by first determining each EECRF rate class's percentage of total retail sales based on twelve months of historical kWh sales data. Forecasted kWh sales by rate class were then calculated by multiplying each rate class's percentage of total retail kWh sales by the total retail forecasted kWh sales. As discussed above, the projection of the 2018 kWh accounts for the removal of the identification notice customer kWh. The annual class projected kWh sales less the customer identification notice kWh were used to determine the adjusted 2018 EECRF class factors. Schedule H specifies the process for determining the projected kWh sales by EECRF rate class.

Q. WERE SYSTEM AND LINE LOSSES USED TO DEVELOP THE EECRF FACTORS?

A. No. AEP Texas' kWh sales forecast for 2018 is based on energy delivered at the meter, so it was not necessary to adjust the EECRF factors to reflect system and line losses.

Q. WHAT ARE THE PROPOSED 2018 EECRF RATE CLASS FACTORS?

A. The proposed 2018 factors by EECRF rate class are:

Central Division

Rate Class	Proposed kWh Factor	Billing Unit Per Rate
Residential	$0.000579	kWh
Secondary <= 10 kW	$0.000128	kWh
Secondary > 10 kW	$0.000390	kWh
Primary	$0.000513	kWh
Transmission	($.041636)	kW

North Division

Rate Class	Proposed kWh Factor	Billing Unit Per Rate
Residential	$0.000600	kWh
Secondary <= 10 kW	$0.000659	kWh
Secondary > 10 kW	$0.000664	kWh
Primary	($0.000144)	kWh
Transmission	$0.005563	kW

Q. DO THE REVISED EECRF FACTORS INCLUDING BASE RATE AMOUNTS AND EXCLUDING MUNICIPAL EECRF PROCEEDING EXPENSES AND STATEWIDE EM&V CONTRACTOR COSTS EXCEED THE MAXIMUM PRICE PER KWH FOR RESIDENTIAL AND COMMERCIAL CUSTOMERS AS SPECIFIED IN 16 TAC § 25.181(f)(7)?

A. No, they do not. 16 TAC § 25.181(f)(7) recognizes two groups of customers for the purposes of setting cost caps, residential and commercial. Neither class factor exceeds the 2018 cost cap for either the Central Division or the North Division.

Q. HOW ARE THE 2018 EECRF COST CAPS DETERMINED?

A. The method of calculating the 2018 cost caps is described in 16 TAC § 25.181(f)(7)(E) and addresses the most recent project adjusting the rule. The most recently available calendar year's percentage change in the South urban consumer price index is calendar year 2016. The percentage change for calendar year 2016 is 1.11%. AEP Texas has evaluated the cap based on the adjusted 2018 per kWh residential cap of $.001277 and commercial cap of $.000799. The 2018 cost cap calculation is included in Schedule G.

Q. HOW DO THE PROPOSED FACTORS FOR RESIDENTIAL AND COMMERCIAL COMPARE TO THE 2018 COST CAPS?

A. The revised residential factor including the base rate energy efficiency amount and adjustment and excluding municipal EECRF proceeding expenses and EM&V statewide contractor costs is $0.0009780 per kWh for the Central Division and $0.000941 for the North Division, neither of which exceeds the residential maximum of $0.001277 per kWh. The maximum commercial rate per kWh for 2018 is $0.000799 per kWh as explained above. The updated commercial class factor, including the base rate amounts but without the municipal EECRF proceeding expenses and statewide EM&V contractor cost, is $0.000717 per kWh for the Central Division and $0.000570 per kWh for the North Division, which does not exceed the cap for the commercial class. Schedule G details the 2018 cost cap comparison.

Q. HOW ARE ENERGY EFFICIENCY COSTS EXPRESSLY INCLUDED IN BASE RATES TREATED IN DETERMINING WHETHER EECRF FACTORS EXCEED THE AMOUNTS PRESCRIBED IN 16 TAC § 25.181(f)(7)?

A. AEP Texas continues to recover an amount of energy efficiency costs expressly identified in its base rates so the sum of the base rate recovery of energy efficiency costs (including the base rate revenue adjustment) and the EECRF shall not exceed the amounts prescribed in 16 TAC § 25.181(f)(7). In Docket Nos. 39360 and 39361, the EECRF class base rate per kWh amounts were identified. The base rate adjustment amount on a per kWh basis also has been determined based on 2016 actual data. The combination of the proposed 2018 EECRF factors, excluding municipal EECRF proceeding expenses and the expressly identified base rate

amounts, including the base rate adjustment, do not exceed the levels identified in 16 TAC § 25.181(f)(7) as shown in detail in Schedule G.

Q. HOW HAS AEP TEXAS TREATED THE MUNICIPAL RATE CASE EXPENSES AND EM&V COST WHEN DETERMINING WHETHER THE PROPOSED EECRF FACTORS EXCEED THE LIMITATIONS DETAILED IN 16 TAC § 25.181(f)(7)?

A. AEP Texas has not included the municipal EECRF proceeding expenses from Docket Nos. 45928 and 45929 or any statewide EM&V contractor's costs in its determination of the EECRF factor limitations based on 16 TAC § 25.181(f)(7), which states that the municipal EECRF proceeding expenses and the statewide EM&V contractor costs shall not count against the utility's cost caps. AEP Texas has included in Schedule E the total EECRF factor calculation including the municipal EECRF proceeding expenses and the EM&V cost and in Schedule G a separate calculation of the limitation on EECRF factors without the municipal EECRF proceeding expenses and the statewide EM&V contractor cost. The EECRF factors calculated without the municipal EECRF proceeding expenses and the statewide EM&V contractor cost are slightly lower than the total EECRF factors. AEP Texas is requesting recovery of the municipal EECRF proceeding expenses through the total proposed EECRF factor as shown on adjusted Rider EECRF, Schedule F in this filing.

Q. HAS AEP TEXAS INCLUDED A CALCULATION OF THE 2016 CAP BASED ON ACTUAL PROGRAM COSTS AND ACTUAL 2016 BILLING UNITS?

A. Yes, AEP Texas has included a 2016 cap calculation based on actual 2016 program costs and billing units as part of Schedule G.

Q. DID AEP TEXAS EXCEED THE 2016 CAPS BASED ON ACTUAL DATA?

A. No. Neither the – Central Division nor the North Division exceeded the 2016 caps for either EECRF class.

Q. HOW WERE THE 2016 CAPS CALCULATED?

A. The 2016 caps were calculated by removing the statewide EM&V contractor's costs and the municipal EECRF proceeding expenses paid in 2016 from the total 2016 Energy Efficiency actual costs, and dividing that total amount by the actual class 2016 EECRF billing units less any customer ID notice kWh. This calculation yields the following results for the classes:

Central Division Class	2016 Cost Cap Based on Actuals	2016 Cap
Residential	$0.000856	$0.001266
Commercial	$0.000619	$0.000791

North Division Class	2016 Cost Cap Based on Actuals	2016 Cap
Residential	$0.000728	$0.001266
Commercial	$0.000434	$0.000791

Q. ARE SOME CUSTOMERS EXCLUDED FROM EECRF CHARGES?

A. Yes, in addition to transmission customers taking service at 69 kV, distribution industrial customers meeting the definition and fulfilling the requirements as outlined in 16 TAC § 25.181(c)(30) and (w) (ID Notice Customers) are excluded from EECRF charges. Also, the lighting class has not been assigned or allocated any 2018 costs.

Q. ARE THE ID NOTICE CUSTOMERS ALSO EXCLUDED FROM ENERGY EFFICIENCY BASE RATE COSTS?

A. Yes. AEP Texas agreed in Docket Nos. 44717 and 44718 to credit the Secondary and Primary Service ID Notice Customers for base rate energy efficiency costs. AEP Texas will credit ID Notice Customers for base rate energy efficiency costs through a separate energy efficiency base rate credit factor based on that agreement.

Q. HOW WAS THE BASE RATE CREDIT FACTOR CALCULATED?

A. The base rate energy efficiency credit factor is shown in Schedule I and is the amount of energy efficiency cost expressly included in base rates for each class divided by the class distribution billing unit. The total base rate energy efficiency amount by class and the class credit factor is shown below. The credit factors will also be included on the EECRF Rate Schedule.

Central Division

Rate Class	Base Rate Billing Unit	Base Rate Schedule I	Unit	Credit
Sec <= 10 kW	1,741,982	0.000286	per kWh	($0.000286)
Sec > 10 kW	36,433.37	0.078608	per kW	($0.07608)
Primary IDR	104,022.72	0.105418	per kW	($0.105418)

North Division

Rate Class	Base Rate Unit	Base Rate Schedule I	Unit	Credit
Sec <= 10 kW	4,870,263	0.000256	per kWh	($0.000256)
Sec > 10 kW	160,407.94	0.067725	per kW	($0.067725)
Primary IDR	427,647.16	0.076100	per kW	($0.076100)

Q. HAVE YOU PROVIDED THE REVISED TARIFFS REFLECTING UPDATED EECRF FACTORS AND CREDITS APPLICABLE TO ELIGIBLE CUSTOMERS?

A. Yes. The proposed Rider EECRF shown in the Schedule F for each division includes the changes from the current Rider EECRF tariff for each division. AEP Texas requests that the Commission approve adjusted Riders EECRF containing the proposed EECRF class kWh factors to be effective March 1, 2018.

IV. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. AEP Texas is requesting recovery of $11,618,998 through its adjusted EECRFs, which include projected 2018 energy efficiency program costs of $8,650,862, EM&V costs of $416,407, the return of the over-recovery of $1,502,426 in 2016 program costs, municipal EECRF proceeding expenses from Docket Nos.45928 and 45929 of $5,713 and the 2016 earned performance bonus of $4,048,441.

For the Central Division, AEP Texas is requesting recovery of $9.488.449 through its adjusted EECRF, which amount includes projected 2018 energy efficiency program costs of $6,813,091, EM&V costs of $353,977, the return of the over-

recovery of $1,173,691 in 2016 program costs, municipal EECRF proceeding expenses from Docket No. 45929 of $2,822 and the 2016 earned performance bonus of $3,492,251.

For the North Division, AEP Texas is requesting recovery of $2,130,548 through its adjusted EECRF, which amount includes projected 2018 energy efficiency program costs of $1,837,772, EM&V costs of $62,430, the return of the over-recovery of $328,734 in 2016 program costs, recovery of municipal EECRF proceeding expenses from Docket No. 45928 of $2,891, and recovery of the 2016 earned performance bonus of $556,190.

AEP Texas' base rates include energy efficiency costs and those costs and adjusted revenues have been treated in accordance with 16 TAC § 25.181(f)(2). The class assignment of the estimated 2018 program costs is based on the direct assignment to the EECRF rate classes eligible for specific programs where possible. Where more than one EECRF rate class is eligible to participate in a specific 2018 program, the allocation of that program cost is based on a weighted 4CP demand allocator, adjusted based on the most recent projection of EECRF rate class kWh, less the identification notice customer kWh. The class assignment of the 2016 actual program costs is based on direct assignment to the participating EECRF rate classes. The performance bonus has been assigned to the classes in accordance with 16 TAC § 25.181(h)(6). The municipal EECRF proceeding expenses have been assigned to the classes based on the 2018 program costs assigned to the classes. Recovery of the 2018 EECRF revenue requirement is based on projected 2018 kWh sales for all EECRF classes eligible for the EECRF.

Q. WHAT RELIEF IS AEP TEXAS REQUESTING IN THIS PROCEEDING?

A. AEP Texas is requesting that Rider EECRF contained in Schedule F for the Central Division and the North Division be approved effective March 1, 2018.

Q. HAS AEP TEXAS CALCULATED THE EECRF FACTORS IN A MANNER CONSISTENT WITH 16 TAC § 25.181?

A. Yes.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

AEP Texas Central Division
2018 Energy Efficiency Cost Recovery Factor

SCHEDULE A

2018 Projected Energy Efficiency Program Costs

	Incentives	Administrative	Research & Development	EM&V	Total Projected Energy Efficiency Costs
Commercial					
Commercial Solutions MTP	$508,500	$56,500			$565,000
Commercial SOP	$1,813,500	$201,500			$2,015,000
CoolSaver© A/C Tune-Up MTP	$596,700	$66,300			$663,000
Load Management SOP	$650,700	$72,300			$723,000
Open MTP	$793,800	$88,200			$882,000
SCORE/CitySmart MTP	$946,800	$105,200			$1,052,000
SMART Source℠ Solar PV MTP	$204,000	$22,667			$226,667
Residential					
CoolSaver© A/C Tune-Up MTP	$675,000	$75,000			$750,000
High Performance New Homes MTP	$765,000	$85,000			$850,000
Residential SOP	$2,666,340	$296,260			$2,962,600
SMART Source℠ Solar PV MTP	$204,000	$22,667			$226,667
Whisker Labs DR Pilot MTP	$150,300	$16,700			$167,000
Hard-to-Reach					
Hard-to-Reach SOP	$1,087,560	$120,840			$1,208,400
Targeted Low-Income Energy Efficiency Program	$1,283,400	$142,600			$1,426,000
Research and Development					
R&D Programs	NAP	NAP	$365,125		$365,125
Evaluation Measurement & Verification (EM&V)					
EM&V				$353,977	$353,977
Total Projected Energy Efficiency costs	**$12,345,600**	**$1,371,734**	**$365,125**	**$353,977**	**$14,436,436**

Sponsored by: Pamela D. Osterloh, Robert Cavazos and Jennifer L. Jackson

AEP Texas - Central Division
Adjusted Energy Efficiency Cost Recovery Factor Filing
Schedule A

2018 Central Division	Res	Sec < 10	Sec > 10	Primary	Total
Commercial					
Commercial Solutions MTP		$22,861	$425,121	$117,018	$565,000
Commercial SOP		$81,532	$1,516,140	$417,328	$2,015,000
CoolSaver© A/C Tune-up MTP (Comm)		$33,834	$629,166		$663,000
Load Management SOP			$566,945	$156,055	$723,000
OpenTargeted Small Business MTP		$45,010	$836,990		$882,000
SCORE/CS MTP		$42,566	$791,553	$217,880	$1,052,000
SMART SourceSM Solar PV Pilot MTP Comm		$9,171	$170,550	$46,945	$226,667
Residential					
CoolSaver© A/C Tune-up MTP (Res)	$750,000				$750,000
High Performance New Homes MTP	$850,000				$850,000
Residential SOP	$2,962,600				$2,962,600
SMART SourceSM Solar PV MTP	$226,667				$226,667
Whisker Labs	$167,000				$167,000
Hard-to-Reach					
Hard-to-Reach SOP	$1,208,400				$1,208,400
Targeted Low-Income Energy Efficiency Program	$1,426,000				$1,426,000
Research and Development (R&D)					
R&D Programs	$195,531	$6,862	$127,607	$35,125	$365,125
EM&V	$195,714	$6,079	$127,291	$24,894	$353,977
Total Energy Efficiency Program Revenue Requirement	$7,981,912	$247,916	$5,191,363	$1,015,245	$14,436,436

AEP Texas Central Division
2018 Energy Efficiency Cost Recovery Factor

TCC Schedule B

2016 Actual Energy Efficiency Expenditures

Customer Class and Program	2016				
	Incentives	Administrative	Research & Development	Evaluation, Measurement & Verification	Total Funds Expended
Commercial					
Commercial Solutions MTP	$ 464,672	$ 52,420			$517,092
Commercial SOP	$ 1,763,344	$ 194,482			$1,957,826
CoolSaver© A/C Tune-Up MTP	$ 561,470	$ 46,543			$608,013
Load Management SOP	$ 573,056	$ 50,027			$623,083
Open MTP	$ 785,454	$ 61,027			$846,481
SCORE/CitySmart MTP	$ 971,104	$ 88,691			$1,059,795
SMART Source℠ Solar PV MTP	$ 182,697	$ 14,863			$197,560
Residential					
CoolSaver© A/C Tune-Up MTP	$672,779	$55,822			$728,601
Earth networks Residential DR Pilot MTP	$123,350	$9,065			$132,415
Efficiency Connection Pilot MTP	$90,159	$11,198			$101,357
High Performance New Homes MTP	$636,496	$67,453			$703,949
Reliant Residential DR Pilot MTP	$3,880	$379			$4,259
Residential SOP	$2,591,748	$242,540			$2,834,288
SMART Source℠ Solar PV MTP	$204,807	$17,431			$222,238
Hard-to-Reach					
Hard-to-Reach SOP	$1,115,738	$112,503			$1,228,241
Targeted Low Income Energy Efficiency Program	$1,265,056	$103,440			$1,368,496
Research & Development					
Research & Development	NAP	NAP	$327,306		$327,306
Evaluation, Measurement & Verification					
PY 2015 Statewide EM&V Contractor	NAP	NAP	NAP	$161,054	$161,054
TOTAL	**$12,005,810**	**$1,127,884**	**$327,306**	**$161,054**	**$13,622,054**

Sponsored by: Pamela D. Osterloh and Jennifer L. Jackson

AEP Texas - Central Division
Adjusted Energy Efficiency Cost Recovery Factor Filing
Schedule B

2016 Central Division	Res	Sec < 10	Sec > 10	Primary	Total
Commercial Programs					
ComSol MTP		$16,951	$479,687	$20,454	$517,093
CSOP		$17,479	$822,000	$1,118,348	$1,957,827
CoolSaver		$55,015	$540,130	$12,868	$608,013
LM SOP		$0	$265,144	$357,939	$623,083
Open MTP		$18,744	$827,736	$0	$846,480
SCORE/CS MTP		$898	$858,332	$200,564	$1,059,795
SMART Source MTP - Comm		$28,514	$169,046	$0	$197,560
Total Commercial		$137,601	$3,962,076	$1,710,173	$5,809,851
Residential Programs					
Efficiency Connection Pilot MTP	$101,356				$101,356
CoolSaver	$728,601				$728,601
Earth Networks Res DR Pilot	$132,415				$132,415
HP NH	$703,949				$703,949
Reliant Res DR Pilot MTP	$4,259				$4,259
RSOP	$2,834,288				$2,834,288
SMART Source MTP - Res	$222,238				$222,238
Total Residential	$4,727,107				$4,727,107
Hard-to-Reach Programs					
HTR SOP	$1,228,241				$1,228,241
TLI EEP	$1,368,497				$1,368,497
Total HTR	$2,596,738				$2,596,738
Total Programs	$7,323,844	$137,601	$3,962,076	$1,710,173	$13,133,695
Research & Development	$89,932	$1,695	$48,627	$20,799	$161,054
EM&V -statewide contr	$239,586	$2,091	$59,976	$25,654	$327,306
Total R&D	$329,518	$3,786	$108,603	$46,453	$488,359
Total 2016	$7,653,362	$141,387	$4,070,679	$1,756,626	$13,622,054

Central Division
Schedule C
Calculation of 2016 Over/Under Recovery Class Factor

2016 Residential Energy Efficiency Expenditures + R&D - Municipal EECRF Expenses	$7,651,786
2016 Actual Residential Energy Efficiency Factor Revenues + Base	$8,204,308
2016 Residential Over Recovery	($552,522)
2016 Commercial Energy Efficiency Expenditures + R&D - Municipal EECRF Expense:	$5,967,446
2016 Actual Commercial Energy Efficiency Factor Revenues + Base	$6,588,615
2016 Commercial Over Recovery	($621,169)
2016 Total Energy Efficiency Expenditures + R&D - Municipal EECRF Expenses	$13,619,232
2016 Actual Total Energy Efficiency Factor Revenues	$14,792,924
2016 Over Recovery	($1,173,691)

Class	2016 Program Costs Over/Under Recovery Allocation	2018 Forecasted Billing Unit	2016 Over Recovery Factor	Unit
Residential	($552,522)	10,008,002,742	($0.000055)	kWh
Secondary <= 10 kW	($95,099)	460,557,014	($0.000207)	kWh
Secondary > 10 kW	($1,095,457)	7,461,369,019	($0.000147)	kWh
Primary	$589,747	2,605,527,521	$0.000226	kWh
Transmission	($20,360)	14,834,694	($0.001373)	kW
Lighting	$0	223,313,089		
Total	($1,173,691)	20,773,604,079		

AEP Texas Central Division
Energy Efficiency Cost Recovery Factor

Schedule D

2016 Goal Achievement and Performance Bonus Calculation

TCC achieved 39,300 kW in demand savings and 67,719,790 kWh in energy savings by January 1, 2017. The total present value of the avoided costs associated with these demand reductions and energy savings is $48,569,571. TCC's total costs for the 2016 program year were $13,647,065. The resulting net benefits are $26,164,317. TCC's demand reduction goal (DRG) was 15,730 kW and its energy savings goal was 27,559,000 kWh. TCC achieved 250% of its DRG and 246% of its energy savings goal, qualifying it for a performance bonus as calculated under 16 TAC § 25.181(h).

TCC's calculated bonus is $26,164,317; however, its maximum bonus allowed is $3,492,251, which is 10% of its total net benefits (16 TAC § 25.181(h)(3)).

	kW (Demand)	kWh (Energy)
2016 Goals	15,730	27,559,000
2016 Savings		
Reported/Verified Total	39,300	67,713,790
Reported/Verified HTR	2,341	
2016 Program Costs	$13,647,065	
2016 Performance Bonus	$3,492,251	

Performance Bonus Calculation

250%	Percentage of Demand Reduction Goal Met (Reported kW/Goal kW)
246%	Percentage of Energy Reduction Goal Met (Reported kWh/Goal kWh)
TRUE	Met Requirements for Performance Bonus?
$48,569,571	Total Avoided Cost [Reported kW * PV (Avoided Capacity Cost) + Reported kWh * PV (Avoided Energy Cost), except for measure life other than 10 years for which PV (Avoided Capacity Cost) and PV (Avoided Energy Cost) are calculated using the specific measure lives]
$13,647,065	Total Program Costs
$34,922,506	Net Benefits (Total Avoided Cost – Total Expenses)

Bonus Calculation

$26,164,317	Calculated Bonus [(Achieved Demand Reduction/Demand Goal - 100%) / 2 * Net Benefits]
$3,492,251	Maximum Bonus Allowed (10% of Net Benefits)
$3,492,251	*Bonus (Minimum of Calculated Bonus and Bonus Limit)*

Sponsored by: Robert Cavazos

Schedule E
Calculation of Requested EECRF by Customer Class Using Direct Assignment of EECRF Program Costs

Central Division		
2018 Program Costs Above Base Rates	$6,813,091	71.80%
EM&V Evaluation of Program Years 2016 & 2017	$353,977	3.73%
2016 Over Recovery	($1,173,691)	-12.37%
Calculated Performance Bonus for 2016	$3,492,251	36.81%
Municipal EECRF Proceeding Expenses Docket No. 4592$	$2,822	0.03%
Adjusted EECR Revenue Requirement	$9,488,449	100.00%

Class	Total Adjusted 2018 EECR Revenue Requirement	2018 Forecasted Billing Unit	2018 EECR Factor RVSD	Unit
Residential	$5,797,797	10,008,002,742	$0.000579	kWh
Secondary <= 10 kW	$58,945	460,557,014	$0.000128	kWh
Secondary > 10 kW	$2,912,439	7,461,369,019	$0.000390	kWh
Primary	$1,336,931	2,605,527,521	$0.000513	kWh
Transmission	($617,664)	14,834,694	($0.041636)	kW
Lighting	$0	223,313,089	$0.000000	kWh
Total	$9,488,449			

Class	2018 EECRF Program Costs	2016 Over/Under	2016 Bonus	45929 RCE	Total 2018 EECRF Revenue Requirement	2018 Forecasted Billing Unit	2018 EECR Factor RVSD	Unit
Residential	$4,398,695	($552,522)	$1,950,064	$1,560	$5,797,797	10,008,002,742	$0.000579	kWh
Secondary <= 10 kW	$117,239	($95,099)	$36,757	$48	$58,945	460,557,014	$0.000128	kWh
Secondary > 10 kW	$2,952,460	($1,095,457)	$1,054,421	$1,015	$2,912,439	7,461,369,019	$0.000390	kWh
Primary	$295,977	$589,747	$451,009	$198	$1,336,931	2,605,527,521	$0.000513	kWh
Transmission	($597,304)	($20,360)	$0	$0	($617,664)	14,834,694	($0.041636)	kW
Lighting	$0	$0	$0	$0	$0	223,313,089	$0.000000	kWh
Total	$7,167,067	($1,173,691)	$3,492,251	$2,822	$9,488,449			

6.1.1.6.4 Rider EECRF – Energy Efficiency Cost Recovery Factors

AVAILABILITY

Rider EECRF recovers the cost of energy efficiency programs not already included in base distribution service rates and is applicable to the kWh sales of Retail Customers taking retail electric delivery service from the Company.

APPLICABILITY

The Rider EECRF is applicable to the current month's billed kWh of each Retail Customer taking electric delivery service from the Company.

MONTHLY RATE

Rate Schedule	Factor	
Residential Service	$0.000579 per kWh	I
Secondary Service Less than or Equal to 10 kW	$0.000128 per kWh	R
Secondary Service Greater than 10 kW	$0.000390 per kWh	R
Primary Service	$0.000513 per kWh	I
Transmission Service	($0.041636) per kW	R

ID Notice Customer Base Rate Credit

For distribution industrial customers meeting the definition and fulfilling the requirements in 16 TAC§25.181(c)(30) and (w) (ID Notice Customers) the following base rate energy efficiency credit will apply.

Secondary Service Less Than or Equal to 10 kW	($0.000286)	per kWh
Secondary Service Greater Than 10 kW	($0.078608)	per distribution kW
Primary	($0.105418)	per distribution kW

NOTICE

This Rate Schedule is subject to the Company's Tariff and Applicable Legal Authorities.

Schedule G
Cap Calculation

Central Division	
2018 Program Costs Above Base Rates (no EM&V cost)	$6,813,091
2016 Over/Under Recovery	($1,173,691)
Calculated Performance Bonus - 2016	$3,492,251
Adjusted EECR Revenue Requirement*	$9,131,650

*no municipal EECRF proceeding expenses or EM&V costs are included in the cap calculation

Class	Total Adjusted 2018 EECR Revenue Requirement (no EM&V cost)	2018 Forecasted Billing Unit	2018 EECR Factor (no EM&V)	Unit
Residential	$5,600,523	10,008,002,742	$0.000560	kWh
Secondary <= 10 kW	$52,818	460,557,014	$0.000115	kWh
Secondary > 10 kW	$2,784,134	7,461,369,019	$0.000373	kWh
Primary	$1,311,840	2,605,527,521	$0.000503	kWh
Transmission	($617,664)	14,834,694	($0.041636)	kW
Lighting	$0	223,313,089	$0.000000	kWh
Total (no EM&V cost)	$9,131,650	20,773,604,079		

South Urban CPI 1.11%

Class	Base Rate per Final Order in Docket No. 39360 Including Revenue Adjustment	2018 EECR Factor (no EM&V)	2018 Total	2018 Unadjusted Cap	2018 Cap
Residential	$0.000418	$0.000560	$0.000978	$0.001263	$0.001277
Non-Residential	$0.000323	$0.000394	$0.000717	$0.000790	$0.000799

Calculation of Non-Residential per kWh Rate	
2018 Rev Req	$4,148,792
2018 kWh	10,527,453,554
Combined per kWh	$0.000394
Adjustment to Commercial	$341,307
2016 Commercial kWh	10,479,808,075
per kWh adjustment	$0.000033
Combined Base per kWh	$0.000290
Total 2018 per kWh	$0.000717

2016 Cap Analysis

TCC	Actual 2016 Program Costs*	2014 Performance Bonus	2014 (O)/U (no EM&V)	2016 Actual Billing kWh (less ID Notice)	2016 per kWh Cost Based on Actuals	2016 Cap
Residential	$7,561,854	$1,544,080	($837,392)	9,896,369,376	$0.000856	$0.001266
Non-Residential	$5,896,324	$1,291,541	($746,865)	10,411,401,639	$0.000619	$0.000791
Total	$13,458,179	$2,835,621	($1,384,257)	20,309,791,015		

*less TetraTech EM&V costs & municipal EECRF proceeding expenses

Sponsored by: Jennifer L. Jackson

Schedule H

Central Division Projected 2018 Retail kWh Sales	26,080,239,961

Rate Classes	2016 Historical Billing Units	Percent of Total kWh	Customer ID Notice kWh	2018 Forecasted Billing Unit Less ID Notice Customers	Unit
Residential	9,898,389,376	38.37%		10,008,002,742	kWh
Secondary <= 10 kW	456,909,985	1.77%	1,412,728	460,557,014	kWh
Secondary > 10 kW	7,390,435,587	28.65%	10,907,208	7,461,369,019	kWh
Primary	2,632,462,503	10.21%	56,086,500	2,605,527,521	kWh
Transmission	5,195,529,581	20.14%		5,253,064,142	kWh
Lighting	220,867,236	0.86%		223,313,089	kWh
Total	25,794,594,268	100.00%	68,406,436	26,011,833,527	
			ID Notice kWh	68,406,436	
			Total 2018 kWh	26,080,239,963	

Sponsored by: Jennifer L. Jackson

Central Division
Schedule I
Energy Efficiency Program Costs Included in Base Rates

Docket No. 33309 TCC Comission Staff's Final Number Run
33309 TCC Dist Model re-run 010908

Class	Distribution - FERC Account 907	Distribution Function Allocator	Customer Service - FERC Account 907	Customer Service Function Allocator	Total Energy Efficiency Costs Expressly Included In Base Rates	Docket No. 33309 Billing Data	Base Distribution Billing Unit	Docket No. 33309 EE Rate per Billing Unit	2016 Billing Unit	2016 EE Base Revenue -16 TAC § 25.181	Adjustment to Base Revenue	Distribution Function Allocator w/out Trans	Weighted Allocator
Residential	$2,948,779	47.209%	$75,656	85.323%	$3,024,435	8,352,353,434	kWh	$0.000362	9,898,389,376	$3,583,217	$558,782	47.209%	51.884%
Secondary <= 10 kW	$107,362	1.719%	$6,725	7.5848%	$114,088	398,752,267	kWh	$0.000286	456,909,985	$130,676	$16,589	1.719%	1.889%
Secondary > 10 kW IDR	$126,356	2.023%	$24	0.0269%	$126,379	1,421,383	kW	$0.078608	2,296,091.70	$180,491	$54,112	2.023%	2.223%
Secondary > 10 kW Non-IDR	$1,825,465	29.225%	$6,118	6.9001%	$1,831,583	23,486,386	kW	$0.078608	26,186,777.20	$2,058,412	$226,829	29.225%	32.119%
Primary IDR	$609,991	9.766%	$37	0.0419%	$610,028	5,776,539	kW	$0.105418	6,326,480.60	$666,925	$56,897	9.766%	10.733%
Primary Non-IDR	$65,439	1.048%	$23	0.0257%	$65,462	631,219	kW	$0.105418	496,532.60	$52,343	($13,119)	1.048%	1.151%
Transmission	$562,887	9.012%	$5	0.0060%	$562,892	13,980,065	kW	$0.040264	14,834,693.70	$597,304	$34,412	0.000%	0.000%
Lighting	$0	0.000%	$81	0.0915%	$81	229,634,991	kWh	$0.000000	220,867,236	$0	($81)	0.000%	0.000%
Total	$6,246,279	100.000%	$88,670		$6,334,949					$7,269,368	$934,419	90.986%	100.000%

Sponsored by: Jennifer L. Jackson

Schedule K - Affiliate Costs
AEP Texas Central Division Affiliate Costs
2016

Line	Cost Type	Department		Project Description		Affiliate	2016 ($)	Discussion of Reasonableness & Necessity/No Higher Than Standard
1	Administrative Costs	10329	TX EE/DR Programs	EON100551	EE/DR EECRF	AEP Texas North	3,250	See Direct Testimonies of Robert Cavazos, Pam Osterloh and Brian Frantz
2	Administrative Costs	10329	TX EE/DR Programs	TXDSMANDA	Texas DSM Admin & General	AEP Texas North	226,300	See Direct Testimonies of Robert Cavazos, Pam Osterloh and Brian Frantz
3	Administrative Costs	10764	Legal GC/Administration	TXDSMANDA	Texas DSM Admin & General	AEPSC	111	See Direct Testimonies of Robert Cavazos, Pam Osterloh and Brian Frantz
4	Administrative Costs	13168	Legal Reg Services West	TXDSMANDA	Texas DSM Admin & General	AEPSC	819	See Direct Testimonies of Robert Cavazos, Pam Osterloh and Brian Frantz
5	Total Administrative Costs						$ 230,480	
6	Program Direct Costs	10329	TX EE/DR Programs	EON100508	Dsm-Res Standard Offer	AEP Texas North	318	See Direct Testimonies of Robert Cavazos, Pam Osterloh and Brian Frantz
7	Program Direct Costs	10329	TX EE/DR Programs	EON100514	Dsm-Hard To Reach Std Offer	AEP Texas North	11,741	See Direct Testimonies of Robert Cavazos, Pam Osterloh and Brian Frantz
8	Program Direct Costs	10329	TX EE/DR Programs	EON100534	DSM Solar PV Pilot MTP	AEP Texas North	1,741	See Direct Testimonies of Robert Cavazos, Pam Osterloh and Brian Frantz
9	Program Direct Costs	10329	TX EE/DR Programs	EON100547	DSM - EM&V	AEP Texas North	601	See Direct Testimonies of Robert Cavazos, Pam Osterloh and Brian Frantz
10	Total Program Direct Costs						$ 14,400	
17	R&D Costs	10329	TX EE/DR Programs	EON100535	EE/DR R&D	AEP Texas North	23,248	See Direct Testimonies of Robert Cavazos, Pam Osterloh and Brian Frantz
18	R&D Costs	10329	TX EE/DR Programs	EON100535	EE/DR R&D	AEPSC	979	See Direct Testimonies of Robert Cavazos, Pam Osterloh and Brian Frantz
19	R&D Costs	11060	Customer and Distr Services	EON100535	EE/DR R&D	AEPSC	796	See Direct Testimonies of Robert Cavazos, Pam Osterloh and Brian Frantz
20	R&D Costs	12883	EE & Consumer Programs	EON100535	EE/DR R&D	AEPSC	5,053	See Direct Testimonies of Robert Cavazos, Pam Osterloh and Brian Frantz
21	Total R&D Costs						$ 30,075	
22	Grand Total						$ 274,956	

Schedule Q
System and Line Losses

Central Division kWh sales forecast for 2018 is based on energy delivered at the meter so it was not necessary to adjust the EECRF factors for system and line losses.

Sponsored by: Jennifer L. Jackson

AEP Texas North Division
2018 Energy Efficiency Cost Recovery Factor

Schedule A

2018 Projected Energy Efficiency Costs

	Incentives	Administrative	Research and Development	EM&V	Total Projected Energy Efficiency Costs
Commercial					
Commercial Solutions MTP	$363,660	$54,340			$418,000
Commercial SOP	$308,850	$46,150			$355,000
Load Management SOP	$87,000	$13,000			$100,000
Open MTP	$419,340	$62,660			$482,000
SCORE/CitySmart MTP	$160,080	$23,920			$184,000
SMART Source[SM] Solar PV MTP	$82,650	$12,350			$95,000
Residential					
Residential SOP	$530,700	$79,300			$610,000
SMART Source[SM] Solar PV MTP	$102,660	$15,340			$118,000
Whisker Labs Residential DR Pilot MTP	$20,010	$2,990			$23,000
Hard-to-Reach					
Hard-to-Reach SOP	$314,070	$46,930			$361,000
Targeted Low-Income Energy Efficiency Program	$287,970	$43,030			$331,000
Research and Development (R&D)					
R&D			$200,000		$200,000
Total Projected Program Costs	$2,676,990	$400,010	$200,000	$0	$3,277,000
Evaluation, Measurement & Verification (EM&V)					
EM&V				$62,430	$62,430
Total Projected Energy Efficiency Costs	$2,676,990	$400,010	$200,000	$62,430	$3,339,430

Sponsored by: Robert Cavazos, Rhonda R. Fahrlender and Jennifer L. Jackson

AEP Texas - North Division
Adjusted Energy Efficiency Cost Recovery Factor Filing
Schedule A

North Division 2018	Res	Sec < 10	Sec > 10	Primary	Total
Commercial					
Commercial Solutions MTP		$18,307	$252,068	$147,625	$418,000
Commercial SOP		$15,548	$214,077	$125,375	$355,000
Load Management SOP			$63,065	$36,935	$100,000
OpenTargeted Small Business MTP		$32,636	$449,364		$482,000
SCORE/CitySmart MTP		$8,059	$110,958	$64,983	$184,000
SMART Source℠ Solar PV MTP		$4,161	$57,288	$33,551	$95,000
Residential					
Residential SOP	$610,000				$610,000
SMART Source Solar PV Pilot MTP (Res)	$118,000				$118,000
Whisker Labs	$23,000				$23,000
Hard-to-Reach					
Hard-to-Reach SOP	$361,000				$361,000
Targeted Low-Income Energy Efficiency Program	$331,000				$331,000
Research and Development (R&D)					
R&D Programs	$88,343	$4,890	$67,333	$39,434	$200,000
Total Energy Efficiency Program	$1,531,343	$83,601	$1,214,152	$447,904	$3,277,000
Evaluation, Measurement & Verification					
Evaluation, Measurement & Verification	$29,174	$1,593	$23,131	$8,533	$62,430
Total Energy Efficiency Program	$1,531,343	$83,601	$1,214,152	$447,904	$3,277,000
Total Revenue Requirement	$1,560,517	$85,193	$1,237,283	$456,437	$3,339,430

AEP Texas North Division
2018 Energy Efficiency Cost Recovery Factor

Schedule B

2016 Actual Energy Efficiency Expenditures

	Incentives	Administrative	Research & Development	Evaluation, Measurement & Verification	Total Funds Expended
Commercial					
Commercial Solutions MTP	$330,000	$32,967			$362,967
Commercial SOP	$187,958	$22,883			$210,841
Load Management SOP	$80,578	$10,518			$91,096
Open MTP	$417,057	$47,983			$465,040
SCORE/CitySmart MTP	$153,272	$17,412			$170,684
SMART Source[SM] Solar PV MTP	$49,811	$5,369			$55,180
Residential					
Earth Networks Residential DR Pilot	$15,513	$1,491			$17,004
Efficiency Connection Pilot MTP	$81,757	$7,586			$89,343
Residential SOP	$415,685	$60,108			$475,793
SMART Source[SM] Solar PV MTP	$88,337	$9,521			$97,858
Hard-to-Reach					
Hard-to-Reach SOP	$162,136	$25,457			$187,593
Targeted Low-Income Energy Efficiency Prog.	$255,659	$32,679			$288,338
Research and Development					
Research and Development			$82,694		$82,694
Total Program Costs	$2,237,763	$273,974	$82,694		$2,594,431
Evaluation, Measurement, & Verification (EM&V)					
PY 2015 Statewide EM&V Contractor				$28,413	$28,413
Total Energy Efficiency Costs, including EM&V	$2,237,763	$273,974	$82,694	$28,413	$2,622,844

Sponsored by: Rhonda R. Farhlender and Jennifer L. Jackson

AEP Texas - North Division
Adjusted Energy Efficiency Cost Recovery Factor Filing
Schedule B

North Division 2016 Costs	Sec < 10	Sec > 10	Prim	Res	Total
Commercial Programs					
ComSol MTP	$0	$362,967	$0	$0	$362,967
CSOP	$0	$210,841	$0	$0	$210,841
LM SOP	$0	$91,096	$0	$0	$91,096
Open MTP	$10,538	$454,502	$0	$0	$465,040
SCORE/CS MTP	$23,938	$146,746	$0	$0	$170,684
SMART Source Pilot MTP - Comm	$55,180	$0	$0	$0	$55,180
Total Commercial	$89,656	$1,266,152	$0	$0	$1,355,808
Residential Programs					
Earth Networks Res DR Pilot	$0	$0	$0	$17,004	$17,004
Efficiency Connection	$0	$0	$0	$89,343	$89,343
RSOP	$0	$0	$0	$475,793	$475,793
SMART Source Pilot MTP - Res	$0	$0	$0	$97,858	$97,858
Total Residential	$0	$0	$0	$679,998	$679,998
Hard-to-Reach Programs					
HTR SOP	$0	$0	$0	$187,593	$187,593
TLI EEP	$0	$0	$0	$288,338	$288,338
Total HTR				$475,931	$475,931
Total Programs	$89,656	$1,266,152	$0	$1,155,929	$2,511,737
Research & Development					
R&D - Programs	$1,378	$19,421	$0	$61,895	$82,694
R&D - EM&V Tetra Tech	$1,025	$14,448	$0	$12,939	$28,413
Total R&D	$2,404	$33,869	$0	$74,834	$111,107
Total 2016 Costs	$92,060	$1,300,021	$0	$1,230,763	$2,622,844

Schedule C
Calculation of 2016 Over Recovery Class Factor

2016 Residential Energy Efficiency Expenditures + R&D - Municipal EECRF Expenses	$1,230,302
2016 Actual Residential Energy Efficiency Program Revenues + Base	$1,350,811
2016 Residential Over Recovery	($120,508)
2016 Commercial Energy Efficiency Expenditures + R&D - Municipal EECRF Expenses	$1,391,529
2016 Actual Commercial Energy Efficiency Program Revenues + Base	$1,599,755
2015 Commercial Over Recovery	($208,226)
2016 Total Energy Efficiency Expenditures + R&D - Municipal EECRF Expenses	$2,621,832
2016 Actual Total Energy Efficiency Program Revenues	$2,950,566
2016 Over Recovery	($328,734)

Class	2016 Program Costs Over/Under Recovery Allocation	2018 Forecasted Billing Unit	2016 Over/Under Recovery Factor	Unit
Residential	($120,508)	1,800,603,245	($0.000067)	kWh
Secondary <= 10 kW	$20,230	137,366,262	$0.000147	kWh
Secondary > 10 kW	$155,465	1,774,615,854	$0.000088	kWh
Primary	($398,389)	1,555,840,722	($0.000256)	kWh
Transmission	$14,468	628,025	$0.023037	kW
Lighting	$0	42,917,049	$0.000000	kWh
Total	($328,734)	5,311,971,157		

Sponsored by: Jennifer L. Jackson

AEP Texas North Division
Energy Efficiency Cost Recovery Factor

Schedule D

2016 Goal Achievement and Performance Bonus Calculation

TNC achieved 6,381 kW in demand savings and 10,817,333 kWh in energy savings by January 1, 2017. The total present value of the avoided cost associated with these demand reductions and energy savings is $8,189,770. TNC's total program cost for the 2016 program year was $2,627,871. The resulting net benefits are $5,561,899. TNC's demand reduction goal (DRG) was 4,260 kW and its energy savings goal was 7,464,000 kWh. TNC achieved 107% of its DRG and 165% of its energy savings goal, qualifying it for a performance bonus as calculated under 16 TAC § 25.181(h).

TNC's calculated bonus is $186,197, which is less than the maximum bonus allowed. The maximum bonus allowed is $563,371, which is 10% of its total net benefits (16 TAC § 25.181 (h)(3)).

	kW (Demand)	kWh (Energy)
2016 Goals	4,260	7,464,000
2016 Savings		
Reported/Verified Total	6,381	10,817,333
Reported/Verified HTR	325	
2016 Program Costs	$2,627,871	
2016 Performance Bonus	$556,190	

Performance Bonus Calculation

150%	Percentage of Demand Reduction Goal Met (Reported kW/Goal kW)
145%	Percentage of Energy Reduction Goal Met (Reported kWh/Goal kWh)
TRUE	Met Requirements for Performance Bonus?
$8,189,770	Total Avoided Cost [Reported kW * PV (Avoided Capacity Cost)] + [Reported kWh * PV (Avoided Energy Cost)]
$2,627,871	Total Program Costs
$5,561,899	Net Benefits (Total Avoided Cost – Total Expenses)

Bonus Calculation

$1,384,815	Calculated Bonus [(Achieved Demand Reduction/Demand Goal - 100%) / 2] * Net Benefits
$556,190	Maximum Bonus Allowed (10% of Net Benefits)
$556,190	*Bonus (Minimum of Calculated Bonus and Bonus Limit)*

Sponsored by: Robert Cavazos

Schedule E
Calculation of Requested EECRF by Customer Class

AEP TX North Division		
2018 Program Costs Above Base Rates	$1,837,772	86.26%
EM&V Evaluation of Program Years 2016 & 2017	$62,430	2.93%
2016 (Over)/Under Recovery	($328,734)	-15.43%
Calculated Performance Bonus for 2016	$556,190	26.11%
Municipal EECRF Proceeding Expenses	$2,891	0.14%
		0.00%
Adjusted EECR Revenue Requirement	$2,130,548	100.00%

Class	Adjusted EECR Revenue Requirement	2018 Forecasted Billing Unit	2018 EECR Factor	Unit
Residential	$1,080,826	1,800,603,245	$0.000600	kWh
Secondary <= 10 kW	$90,568	137,366,262	$0.000659	kWh
Secondary > 10 kW	$1,179,204	1,774,615,854	$0.000664	kWh
Primary	($223,544)	1,555,840,722	($0.000144)	kWh
Transmission	$3,494	628,025	$0.005563	kW
Lighting	$0	42,917,049	$0.000000	kWh
Total	$2,130,548			

Class	2018 program costs	2016 Over/Under	2016 Bonus	45928	Total 2018 EECRF Revenue Requirement	2018 Forecasted Billing Unit	2018 EECR Factor RVSD	Unit
Residential	$946,692	($120,508)	$253,291	$1,351	$1,080,826	1,800,603,245	$0.000600	kWh
Secondary <= 10 kW	$50,193	$20,230	$20,072	$74	$90,568	137,366,262	$0.000659	kWh
Secondary > 10 kW	739,841	155,465	$282,827	$1,071	$1,179,204	1,774,615,854	$0.000664	kWh
Primary	$174,450	($398,389)	$0	$395	($223,544)	1,555,840,722	($0.000144)	kWh
Transmission	($10,974)	$14,468	$0	$0	$3,494	628,025	$0.005563	kW
Lighting	$0.00	$0.00	$0	$0	$0	42,917,049	$0.000000	kWh
	$1,900,202	($328,734)	$556,190	$2,891	$2,130,548			

Sponsored by: Jennifer L. Jackson

6.1.1.6.6 Rider EECRF – Energy Efficiency Cost Recovery Factors

AVAILABILITY

Rider EECRF recovers the cost of energy efficiency programs not already included in base distribution service rates and is applicable to the kWh sales of Retail Customers taking retail electric delivery service from the Company.

APPLICABILITY

The Rider EECRF is applicable to the current month's billed kWh of each Retail Customer taking electric delivery service from the Company.

MONTHLY RATE

Rate Schedule	Factor	
Residential Service	$0.000600 per kWh	I
Secondary Service Less than or Equal to 10 kW	$0.000659 per kWh	I
Secondary Service Greater than 10 kW	$0.000664 per kWh	I
Primary Service	($0.000144) per kWh	R
Transmission Service	$0.005563 per kW	I

ID Notice Customer Base Rate Credit

For distribution industrial customers meeting the definition and fulfilling the requirements in 16 TAC§25.181(c)(30) and (w) (ID Notice Customers) the following base rate energy efficiency credit will apply.

Secondary Service Less Than or Equal to 10 kW	($0.000256)	per kWh
Secondary Service Greater Than 10 kW	($0.067725)	per distribution kW
Primary	($0.076100)	per distribution kW

NOTICE

This Rate Schedule is subject to the Company's Tariff and Applicable Legal Authorities.

Schedule G
Cap Calculation

TNC		
2018 Program Costs Above Base Rates (no EM&V cost)	$1,837,772	88.99%
2016 (Over)/Under Recovery (no incentive comp)	($328,734)	-15.92%
Calculated Performance Bonus for 2016	$556,190	26.93%
Adjusted EECR Revenue Requirement (no EM&V cost)	$2,065,228	100.00%

Class	Adjusted EECR Revenue Requirement (no EM&V cost)	2018 Forecasted Billing Unit	2018 Proposed EECR Factor (no EM&V)	Unit
Residential	$1,050,302	1,800,603,245	$0.000583	kWh
Secondary <= 10 kW	$88,902	137,366,262	$0.000647	kWh
Secondary > 10 kW	$1,155,002	1,774,615,854	$0.000651	kWh
Primary	($232,472)	1,555,840,722	($0.000149)	kWh
Transmission	$3,494	628,025	$0.005563	kW
Lighting	$0	42,917,049	$0.000000	kWh
Total (no EM&V cost)	$2,065,227	5,311,971,157		

TNC — South Urban CPI 1.11%

Class	Base Rate per Final Order in Docket No. 39361 Including Revenue Adjustment	2018 Proposed EECR Factor (no EM&V)	2018 Total Base + EECRF (no EM&V)	2018 Unadjusted CAP	2018 Cap
Residential	$0.000358	$0.000583	$0.000941	$0.001263	$0.001277
Non-Residential	$0.000279	$0.000292	$0.000570	$0.000790	$0.000799

Calculation of Non-Residential per kWh Rate	
2018 Rev Req	$1,011,432
2018 kWh	3,467,822,838
Combined per kWh	$0.000292
Base Rev Req	$683,762
Base kWh	2,833,233,419
Combined per kWh	$0.000241
Adjustment to Comm	130,667
2016 Comm kWh	3,506,822,165
per kWh adjustment	$0.000037
Total 2018 per kWh	$0.000570

2015 Cap Analysis

TNC	Actual 2016 Program Costs*	2014 Performance Bonus	2014 (O)/U (no EM&V)	2016 Actual Billing kWh (less ID Notice)	2016 Cost Cap Based on Actuals	2016 Cap As Prescribed in §25.181(f)(8)(B)
Residential	$1,217,363	$236,684	($183,763)	1,743,819,551	$0.000728	$0.001266
Non-Residential	$1,376,056	$281,408	($203,336)	3,353,630,795	$0.000434	$0.000791
Total	$2,593,418	$518,092	($387,099)	5,097,450,346		

*less TetraTech EM&V costs & muni expenses

Sponsored by: Jennifer L. Jackson

Schedule H

Texas North Company Projected 2018 Retail kWh Sales	5,636,243,488

Rate Classes	2016 Historical Billing Units	Percent of Total kWh	Customer ID Notice kWh	2018 Forecasted Billing Unit	Unit
Residential	1,743,819,551	31.95%		1,800,603,245	kWh
Secondary <= 10 kW	136,720,444	2.50%	3,806,186	137,366,262	kWh
Secondary > 10 kW	1,742,207,861	31.92%	24,323,220	1,774,615,854	kWh
Primary	1,627,893,860	29.82%	125,061,964	1,555,840,722	kWh
Transmission	166,293,984	3.05%		171,708,986	kWh
Lighting	41,563,620	0.76%		42,917,049	kWh
Total	5,458,499,320	100.00%	153,191,370	5,483,052,118	
			ID Notice kWh	153,191,370	
			Total 2018 kWh	5,636,243,488	

Sponsored by: Jennifer L. Jackson

North Division
Schedule I
Energy Efficiency Program Costs Included in Base Rates

Docket No. 33310 Final Order

Class	Distribution - FERC Account 907	Distribution Function Allocator	Customer Service - FERC Account 907	Customer Service Function Allocator	Total Energy Efficiency Costs Expressly Included in Base Rates	Docket No. 33310 Billing Data	Base Distribution Billing Unit	Docket No. 33310 EE Rate per Billing Unit	2016 Billing Unit	2016 EE Base Revenue - 16 TAC § 25.181	Adjustment to Base Revenue	Distribution Function Allocator w/out Trans	Weighted Allocator
Residential	$602,129	46.553%	$783.7	77.215%	$602,913	1,713,078,230	kWh	$0.000352	1,743,819,551	$613,824	$10,911	46.553%	46.834%
Secondary <= 10 kW	$37,472	2.897%	$148.5	14.628%	$37,620	146,926,027	kWh	$0.000256	136,720,444	$35,000	($2,620)	2.897%	2.915%
Secondary > 10 kW IDR	$77,527	5.994%	$8.5	0.841%	$77,536	982,774	kW	$0.087725	1,109,108.10	$75,114	($2,422)	5.994%	6.030%
Secondary > 10 kW Non-IDR	$399,266	30.869%	$66.9	6.592%	$399,333	6,058,441	kW	$0.067725	6,235,919.80	$422,328	$22,995	30.869%	31.055%
Primary IDR	$160,223	12.386%	$4.1	0.400%	$160,227	2,061,550	kW	$0.076100	3,447,747.00	$262,374	$102,146	12.386%	12.462%
Primary Non-IDR	$9,045	0.699%	$1.4	0.135%	$9,046	142,816	kW	$0.076100	257,732.70	$19,613	$10,567	0.699%	0.704%
Transmission	$7,753	0.599%	$0.8	0.083%	$7,754	443,710	kW	$0.017474	628,025.10	$10,974	$3,221	0.000%	0.000%
Lighting	$0	0.000%	$1.1	0.107%	$1.09	57,913,901	kWh	$0.000000	41,563,620	$0	($1)	0.000%	0.000%
Total	$1,293,415	100.000%	$1,015	100.000%	$1,294,430					$1,439,228	$144,798	99.401%	100.000%

Sponsored by: Jennifer L. Jackson

AEP Texas North Division
2018 Energy Efficiency Cost Recovery Factor

Schedule J

Energy Efficiency Service Providers Who
Received More Than 5% of the Total Incentive Funds for 2016

A list of the energy service providers, those receiving more than 5% of the total incentive funds for 2016 and the associated contracts are provided.

The information provided in Schedule J is voluminous. The information is also CONFIDENTIAL, under the terms of the Protective Order. The Confidential information is available for review at the Austin offices of American Electric Power Company (AEP), 400 West 15th Street, Suite 1520, Austin, Texas, 78701, (512) 481-4562, during normal business hours, by parties to this case who have agreed to be bound by the Protective Order.

Schedule K - Affiliate Costs
AEP Texas North Division Affiliate Costs - 2016

Line	Cost Type		Department		Project Description	Affiliate	2016 ($)	Discussion of Reasonableness & Necessity/No Higher Than Standard
1	Administrative Costs	10329	TX EE/DR Programs	EON100551	EE/DR EECRF	AEP Texas Central	109	See Direct Testimonies of Robert Cavazos, Rhonda Fahrlender and Brian Frantz
2	Administrative Costs	10329	TX EE/DR Programs	TXDSMANDA	Texas DSM Admin & General	AEP Texas Central	48,773	See Direct Testimonies of Robert Cavazos, Rhonda Fahrlender and Brian Frantz
3	Administrative Costs	10764	Legal GC/Administration	TXDSMANDA	Texas DSM Admin & General	AEPSC	27	See Direct Testimonies of Robert Cavazos, Rhonda Fahrlender and Brian Frantz
4	Administrative Costs	13168	Legal Reg Services West	TXDSMANDA	Texas DSM Admin & General	AEPSC	200	See Direct Testimonies of Robert Cavazos, Rhonda Fahrlender and Brian Frantz
5	Total Administrative Costs						$ 49,109	
6	Program Direct Costs	10329	TX EE/DR Programs	EON100547	DSM - EM&V	AEP Texas Central	11,987	See Direct Testimonies of Robert Cavazos, Rhonda Fahrlender and Brian Frantz
7	Program Direct Costs	10329	TX EE/DR Programs	EON100555	EE/DR EfficiencyConnection MTP	AEP Texas Central	117	See Direct Testimonies of Robert Cavazos, Rhonda Fahrlender and Brian Frantz
8	Program Direct Costs	10329	TX EE/DR Programs	EON100557	EE/DR Res DR Pilot - Earth Net	AEP Texas Central	88	See Direct Testimonies of Robert Cavazos, Rhonda Fahrlender and Brian Frantz
9	Total Program Direct Costs						$ 12,192	
10	R&D Costs	10329	TX EE/DR Programs	EON100535	EE/DR R&D	AEPSC	223	See Direct Testimonies of Robert Cavazos, Rhonda Fahrlender and Brian Frantz
11	R&D Costs	10329	TX EE/DR Programs	EON100535	EE/DR R&D	AEP Texas Central	3,996	See Direct Testimonies of Robert Cavazos, Rhonda Fahrlender and Brian Frantz
12	R&D Costs	11060	Customer and Distr Services	EON100535	EE/DR R&D	AEPSC	181	See Direct Testimonies of Robert Cavazos, Rhonda Fahrlender and Brian Frantz
13	R&D Costs	12883	EE & Consumer Programs	EON100535	EE/DR R&D	AEPSC	1,148	See Direct Testimonies of Robert Cavazos, Rhonda Fahrlender and Brian Frantz
14	Total R&D Costs						$ 5,548	
15	Grand Total						$ 66,850	

AEP Texas North Division
2018 Energy Efficiency Cost Recovery Factor

SCHEDULE M

Residential & Commercial EULs

Residential & Commercial EULs				
Sector	**TRM Measure**	**Energy Efficiency Measure**	**EUL (years)**	***TRM Version***
Custom	NA	Custom	NA	*NA*
Residential	2.1.1	Res Standard Compact Fluorescent Lamps (10,000 to 11,000 hour Rated Measure Life)	11.0	*3.1*
Residential	2.1.1	Res Standard Compact Fluorescent Lamps (11,001 to 13,500 hour Rated Measure Life)	13.0	*3.1*
Residential	2.1.1	Res Standard Compact Fluorescent Lamps (13,501 to 17,500 hour Rated Measure Life)	16.0	*3.1*
Residential	2.1.1	Res Standard Compact Fluorescent Lamps (≥ 17,501 hour Rated Measure Life)	20.0	*3.1*
Residential	2.1.2	Res Specialty Compact Fluorescent Lamps (10,000 to 11,000 hour Rated Measure Life)	11.0	*3.1*
Residential	2.1.2	Res Specialty Compact Fluorescent Lamps (11,001 to 13,500 hour Rated Measure Life)	13.0	*3.1*
Residential	2.1.2	Res Specialty Compact Fluorescent Lamps (13,501 to 17,500 hour Rated Measure Life)	16.0	*3.1*
Residential	2.1.2	Res Specialty Compact Fluorescent Lamps (≥ 17,501 hour Rated Measure Life)	20.0	*3.1*
Residential	2.1.3	Res Energy Star Omni-Directional LED Lamps	20.0	*3.1*
Residential	2.1.4	Res Energy Star Specialty and Directional LED Lamps	20.0	*3.1*
Residential	2.2.1	Res Duct Efficiency Improvement	18.0	*3.1*
Residential	2.2.2	Res Central AC	18.0	*3.1*
Residential	2.2.3	Res Ground Source Heat Pump	20.0	*3.1*
Residential	2.2.4	Res Central Heat Pump	15.0	*3.1*
Residential	2.2.5	Res Room (Window) Air Conditioner	8.0	*3.1*
Residential	2.3.1	Res Air Infiltration	11.0	*3.1*
Residential	2.3.2	Res Ceiling Insulation	25.0	*3.1*
Residential	2.3.3	Res Wall Insulation	25.0	*3.1*
Residential	2.3.4	Res Floor Insulation	25.0	*3.1*
Residential	2.3.5	Res Energy Star Windows	25.0	*3.1*
Residential	2.3.6	Res Solar Screens	10.0	*3.1*
Residential	2.4.1	Res Faucet Aerators	10.0	*3.1*
Residential	2.4.2	Res Low-Flow Showerheads	10.0	*3.1*
Residential	2.4.3	Res Water Heater Pipe Insulation	13.0	*3.1*
Residential	2.4.4	Res Water Heater Tank Insulation	7.0	*3.1*
Residential	2.4.5	Res Water Heater Installation-Electric Tankless	20.0	*3.1*
Residential	2.4.5	Res Water Heater Installation-Fuel Substitution	11.0	*3.1*
Residential	2.4.6	Res Heat Pump Water Heater	13.0	*3.1*
Residential	2.4.7	Res Water Heater Replacement-Solar Water Heating	15.0	*3.1*
Residential	2.5.1	Res Energy Star Ceiling Fans	10.0	*3.1*
Residential	2.5.2	Res Energy Star Clothes Washer	11.0	*3.1*
Residential	2.5.3	Res Energy Star Dishwashers	15.0	*3.1*
Residential	2.5.4	Res Energy Star Refrigerators	16.0	*3.1*
Residential	2.6.1	Res Solar Photovoltaic (PV)	30.0	*3.1*
Residential	2.7.1	Res Direct Load Control of Outdoor Compressor Units	1.0	*3.1*
Residential	2.7.2	Res Direct Load Control of Swimming Pool Pump Motors	1.0	*3.1*
Residential	2.8.1	Res Refrigerator/Freezer Recycling	8.0	*3.1*
Residential	TRM v4	Residential New Homes	23.0	*3.1*
Commercial	2.1.1	Comm Lamps and Fixtures: Halogen Lamps	1.5	*3.1*
Commercial	2.1.1	Comm Lamps and Fixtures: High Intensity Discharge Lamps	15.5	*3.1*
Commercial	2.1.1	Comm Lamps and Fixtures: Integrated-ballast CCFL Lamps	4.5	*3.1*
Commercial	2.1.1	Comm Lamps and Fixtures: Integrated-ballast CFL Lamps	2.5	*3.1*
Commercial	2.1.1	Comm Lamps and Fixtures: Integral LED Lamps	9.0	*3.1*
Commercial	2.1.1	Comm Lamps and Fixtures: Light Emitting Diode	15.0	*3.1*
Commercial	2.1.1	Comm Lamps and Fixtures: Modular CFL and CCFL Fixtures	16.0	*3.1*
Commercial	2.1.1	Comm Lamps and Fixtures: T8 and T5 Linear Fluorescents	15.5	*3.1*
Commercial	2.1.1	Comm Lamps and Fixtures: LEDs or T8 and T5 Linear Fluorescents replacing T12s with magnetic ballasts	8.5	*3.1*
Commercial	2.1.2	Comm Lighting Controls: Occupancy Sensor	10.0	*3.1*
Commercial	2.1.2	Comm Lighting Controls: Photocell (Daylighting Control)	10.0	*3.1*
Commercial	2.1.2	Comm Lighting Controls: Timeclock	10.0	*3.1*
Commercial	2.1.2	Comm Lighting Controls: Tuning Control	10.0	*3.1*
Commercial	2.2.1	Comm Split System/Single Packaged Heat Pumps and Air Conditioners	15.0	*3.1*
Commercial	2.2.2	Comm HVAC Chillers: Screw / Scroll / Reciprocating Chillers	20.0	*3.1*
Commercial	2.2.2	Comm HVAC Chillers: Centrifugal Chillers	25.0	*3.1*
Commercial	2.2.3	Comm Packaged Terminal Air Conditioners, Heat Pumps	15.0	*3.1*
Commercial	2.2.3	Comm Room Air Conditioners	11.0	*3.1*
Commercial	2.2.4	Comm HVAC VFD on AHU Supply Fans	15.0	*3.1*
Commercial	2.3.1	Comm Energy Star Roofs	15.0	*3.1*
Commercial	2.3.2	Comm Window Film	10.0	*3.1*
Commercial	2.4.1	Comm High Efficiency Combination Ovens	12.0	*3.1*
Commercial	2.4.2	Comm High Efficiency Electric Convention Ovens	12.0	*3.1*
Commercial	2.4.3	Comm Energy Star Commercial Dishwashers	11.0	*3.1*
Commercial	2.4.4	Comm Hot Food Holding Cabinets	12.0	*3.1*
Commercial	2.4.5	Comm Energy Star Electric Fryers	12.0	*3.1*
Commercial	2.4.6	Comm Pre-Rinse Spray Valves	5.0	*3.1*

AEP Texas North Division

2018 Energy Efficiency Cost Recovery Factor

Schedule L
Bidding and Engagement Process

AEP Texas North Division uses several procedural paths through which it contracts with energy efficiency service providers (EESPs) for the purpose of implementing energy efficiency (EE) and demand response (DR) programs to achieve its goals. The procedures and processes the North Division uses differ according to the program type, as shown in more detail below.

Standard Offer Program (SOP) Process

The North Division posts specific program application procedures and timelines along with program manuals on its web site (aeptexas.com/save). In accordance with the published schedule, EESPs may submit their project applications and all supplemental documentation required for participation in a program.

As part of the application process, EESPs describe the project measures to be installed, including applicable measurement and verification methods (M&V). The M&V plan may include approved deemed savings values or the appropriate International Performance Measurement and Verification Protocol (IPMVP) to be utilized, as approved in the most recent Texas Technical Reference Manual.

The North Division reviews each Project Application on a first-come, first-served basis. Contracts are awarded based upon each EESP's timely and complete submission of the application, qualifications, history and appropriate reference information, and potential ability to help meet program goals. The North Division may request clarification of, or additional information about, any item submitted as part of the Project Application. A Project Application may be rejected for failure to meet the required procedures or deadlines.

Each EESP is notified of its application status according to program procedures and, if approved as a Project Sponsor, the associated incentive budget. For any programs that require a Project Sponsor security deposit, the security deposit must be provided within the published timeline.

For residential projects, The North Division and the approved Project Sponsor enter into a standard offer agreement contract. When the SOP agreement is fully executed, the Project Sponsor may begin to solicit and engage residential customers to implement eligible EE measures.

EESPs or qualified commercial customers identify and submit applications for the installation of EE measures at commercial customer sites. Applications are reviewed as described above. The North Division and the approved Project Sponsor enter into a standard offer agreement contract for the implementation of the EE measures or projects at specified commercial customer sites.

AEP Texas North Division
2018 Energy Efficiency Cost Recovery Factor

Schedule L
Bidding and Engagement Process

Market Transformation Program (MTP) Process

The North Division may implement an MTP as a full program or as a limited MTP pilot. Programs may be selected based on a concept presented by an EESP or from observation of successful programs already implemented at another utility. For programs proposed by an EESP that are deemed viable, the North Division may contract with the initiating EESP to implement the program on a limited pilot basis for a period typically no longer than two years.

When a pilot program has been deemed successful by the North Division and a baseline study has been completed, a competitive solicitation process is implemented. A Request for Proposals (RFP) is developed and may be posted on industry-related websites and/or may be sent electronically to all EESPs who have contacted the North Division and expressed an interest in implementing such programs in the Texas market.

Interested EESPs submit program proposals according to the published requirements and schedule. The North Division forms an internal proposal evaluation and scoring team, and all proposals are individually evaluated according to standard scoring criteria. References submitted by EESPs are contacted and interviewed. Scoring and reference results are consolidated and the EESP proposal with the highest score is selected for further negotiation as the program implementer.

Retail Electric Provider (REP) Engagement Process

AEP Texas' Competitive Retail Relations department hosts an annual communications workshop for all Texas REPs. Detailed EE program information is disseminated to the REPs in attendance, along with an opportunity for the REPs to ask questions about participating in existing programs and also to provide suggestions of program ideas.

REPs are encouraged to submit a program template for a new program to AEP Texas' energy efficiency department, either alone or through an EESP. For programs proposed by an REP that AEP Texas deems viable, AEP Texas may contract with the initiating REP to implement the program on a limited pilot basis for a period typically no longer than two years.

AEP Texas North Division
2018 Energy Efficiency Cost Recovery Factor

SCHEDULE M

Residential & Commercial EULs

Residential & Commercial EULs				
Commercial	2.4.7	Comm Energy Star Electric Steam Cookers	12.0	3.1
Commercial	2.5.1	Comm Door Heater Controls	12.0	3.1
Commercial	2.5.2	Comm ECM Evaporator Fan Motor	15.0	3.1
Commercial	2.5.3	Comm Electronic Defrost Controls	10.0	3.1
Commercial	2.5.4	Comm Evaporator Fan Controls	16.0	3.1
Commercial	2.5.5	Comm Night Covers for Open Refrigerated Display Cases	5.0	3.1
Commercial	2.5.6	Comm Solid and Glass Door Reach-Ins	12.0	3.1
Commercial	2.5.7	Comm Strip Curtains for Walk-In Refrigerated Storage	4.0	3.1
Commercial	2.5.8	Comm Zero Energy Doors for Refrigerated Cases	12.0	3.1
Commercial	2.6.1	Comm Vending Machine Controls	5.0	3.1
Commercial	2.6.2	Comm Lodging Guest Room Occupancy Sensor Controls	10.0	3.1
Commercial	2.6.3	Comm Pump-Off Controller	15.0	3.1
Commercial	2.7.1	Comm Solar Photovoltaic (PV)	30.0	3.1
Commercial	2.8.1	Comm Load Curtailment	1.0	3.1

AEP Texas North Division
2018 Energy Efficiency Cost Recovery Factor

Schedule N

2018 Projected Energy Efficiency Goals and Objectives

Average Peak Demand at Meter (MW)	Goal Metric: 0.4% Peak Demand (MW)	Peak Demand Goal (MW)[1]	Energy Goal (MWh)[2]	Projected Demand Reduction (MW)[3]	Projected Energy Savings (MWh)[3]
1,004	4.02	4.26	7,464	6.15	12,795

1 16 TAC § 25.181(e)(1)(E) - A utility's demand reduction goal in megawatts for any year shall not be less than the previous year's goal.

2 TNC's Energy Savings Goal, calculated according to PUC Rules, is based on a 20% Capacity Factor.

3 Please refer to Section D of Ms. Fahrlender's testimony for an explanation of how the Projected Demand Reduction and Energy Savings Objectives were determined.

Sponsored by: Rhonda R. Fahrlender

AEP Texas North Division
2018 Energy Efficiency Cost Recovery Factor

Schedule O

2018 Projected Energy Efficiency Program Savings

Customer Class and Program	Demand Reduction Target (MW)	Energy Savings Target (MWh)
Commercial		
Commercial Solutions MTP	0.40	2,909
Commercial SOP	0.42	2,660
Load Management SOP	2.18	8
Open MTP	0.41	1,630
SCORE/CitySmart MTP	0.16	1,280
SMART Source[SM] Solar PV MTP	0.07	216
Residential		
Residential SOP	1.24	2,630
SMART Source[SM] Solar PV MTP	0.05	175
Whisker Labs Residential DR Pilot MTP	0.50	0
Hard-to-Reach		
Hard-to-Reach SOP	0.61	1,040
Targetd Low-Income Energy Efficiency Program	0.11	247
Total Annual Projected Savings	6.15	12,795

Sponsored by: Rhonda R. Fahrlender

AEP Texas North Division
2018 Energy Efficiency Cost Recovery Factor

TNC SCHEDULE P

2016 Energy Efficiency Programs' Cost - Net Benefit Ratio

2016	Savings		Costs	Benefits				Benefit-Cost
Customer Class and Program	kW	kWh	Total Program Costs	Avoided Capacity Costs	Avoided Energy Costs	Total Avoided Cost	Net Benefits	Ben-Cost Ratio
Commercial	**4,804**	**6,931,674**	**$ 1,679,924**	**$ 1,387,188**	**$ 3,433,400**	**$ 4,820,589**	**$ 3,140,665**	**2.87**
Commercial Solutions MTP	294	2,220,044	$ 449,829	$ 232,648	$ 1,130,993	$ 1,363,641	$ 913,813	3.03
Commercial SOP	303	1,743,971	$ 263,048	$ 228,347	$ 819,256	$ 1,047,603	$ 784,556	3.98
Load Management SOP	3,378	5,767	$ 113,796	$ 256,506	$ 279	$ 256,785	$ 142,989	2.26
Open MTP	382	1,843,603	$ 572,036	$ 285,488	$ 881,189	$ 1,166,677	$ 594,641	2.04
SCORE/CitySmart MTP	387	1,001,809	$ 212,758	$ 312,777	$ 514,113	$ 826,890	$ 614,132	3.89
SMARTSource Solar PV MTP - Commercial	60	116,480	$ 68,457	$ 71,422	$ 87,570	$ 158,992	$ 90,535	2.32
Residential	**1,251**	**2,921,311**	**$ 863,662**	**$ 809,233**	**$ 1,696,441**	**$ 2,505,675**	**$ 1,642,013**	**2.90**
Earth Networks Res Dr Pilot	388	-	$ 23,327	$ 29,463	$ -	$ 29,463	$ 6,136	1.26
Efficiency Connection Pilot MTP	33	138,277	$ 110,258	$ 31,691	$ 85,127	$ 116,818	$ 6,560	1.06
Residential SOP	753	2,632,186	$ 609,426	$ 655,581	$ 1,497,906	$ 2,153,487	$ 1,544,061	3.53
SMARTSource Solar PV MTP - Residential	78	150,848	$ 120,651	$ 92,498	$ 113,409	$ 205,907	$ 85,255	1.71
Hard-to-Reach	**230**	**736,447**	**$ 248,016**	**$ 209,860**	**$ 424,457**	**$ 634,317**	**$ 386,301**	**2.56**
Hard-to-Reach SOP	230	736,447	$ 248,016	$ 209,860	$ 424,457	$ 634,317	$ 386,301	2.56
Targeted Low-Income Energy Efficiency Program	**95**	**227,901**	**$ 353,349**	**$ 90,089**	**$ 139,101**	**$ 229,190**	**$ (124,159)**	**0.65**
Portfolio Total	**6,381**	**10,817,333**	**$ 3,144,950**	**$ 2,496,371**	**$ 5,693,399**	**$ 8,189,770**	**$ 5,044,820**	**2.60**

Sponsored by: Robert Cavazos and Rhonda R. Fahrlender

Schedule Q
System and Line Losses

North Division kWh sales forecast for 2018 is based on energy delivered at the meter so it was not necessary to adjust the EECRF factors for system and line losses.

Sponsored by: Jennifer L. Jackson

AEP Texas North Division
2018 Energy Efficiency Cost Recovery Factor

Schedule R

2018 Energy Efficiency Programs

Program	Customer Class	Description
Commercial Solutions MTP	Commercial	Provides energy efficiency and demand reduction solutions for commercial customers identified as having a need for energy efficiency improvements and needing support from an outside source. Facilitates the identification of demand and energy savings opportunities, operating characteristics, long-range energy efficiency planning, and overall measure and program acceptance by the targeted customers. Incentives are paid to participating customers for eligible measures installed in new or retrofit applications which provide verifiable demand and energy savings.
Commercial SOP	Commercial	Provides incentives for the installation of a wide range of measures that reduce customer energy costs and reduce peak demand and/or save energy in non-residential facilities. Customer sites may include hotels, schools, manufacturing facilities, restaurants, and larger grocery stores. Eligible measures may include lighting, new or replacement chiller systems, high efficiency pumping systems, and other similar technologies as allowed by the program. Incentives are paid to project sponsors based on of deemed savings or on verified peak demand and/or energy savings using the International Performance Measurement and Verification Protocol.
Hard-to-Reach SOP	Hard-to-Reach	Targets a specific subset of residential customers as defined by 16 TAC § 25.181(c)(27) as customers with a total household income that is less than 200% of the federal poverty guidelines. The program provides incentives for the installation of a wide range of measures that reduce residential customer energy costs and peak demand. It is designed to cost-effectively provide energy efficiency improvements to individual households at no or very low cost. Eligible measures include replacement air conditioners, wall and ceiling insulation and air distribution duct improvements in existing homes. Incentives are paid to Energy Efficiency Service Providers (EESPs) for eligible measures on the basis of deemed savings.
Load Management SOP	Commercial	Targets commercial customers that have a minimum demand of 500 kW or more. Incentives are paid to project sponsors that can identify and interrupt electric load on short notice. These payments are based on the delivery of metered demand reduction.
Open MTP	Commercial	Targets small commercial customers (peak demands not exceeding 100 kW in the previous 12 consecutive billings months) with limited ability to implement energy efficiency measures or to actively seek the help of a professional EESP. Available incentives are paid directly to the contractor, thereby reducing a portion of the project cost for the customer.
Residential SOP	Residential	Provides incentives for the installation of a wide range of measures that reduce residential customer energy costs and cost-effectively reduce peak demand. It is also designed to encourage private sector delivery of energy efficient products and services. Eligible measures include replacement air conditioners, wall and ceiling insulation and air distribution duct improvements. Incentives are paid to EESPs for eligible measures installed in retrofit applications on the basis of deemed savings.
SCORE/CitySmart MTP	Commercial	Provides energy efficiency and demand reduction solutions for cities and public schools. SCORE/CitySmart will facilitate the identification of demand and energy savings opportunities, operating characteristics, long-range energy efficiency planning and overall measure and program acceptance by the targeted cities and schools. Incentives are paid to participating cities and public school partners for certain measures installed in new or retrofit applications which provide verifiable demand and energy savings.
SMART Source℠ Solar PV MTP	Commercial & Residential	Provides incentives for residential and commercial customers that install solar electric (photovoltaic) systems interconnected on the customer's side of the electric service meter.
Targeted Low-Income Energy Efficiency Program	Low-Income Residential	Designed to cost-effectively reduce the energy consumption and energy costs of participating low-income customers. The program provides eligible residential customers with appropriate weatherization measures and basic on-site energy education. This program enhances and supplements the federally funded Weatherization Assistance Program.
Whisker Labs Residential Thermostat DR Pilot MTP	Residential	Whisker Labs (WL), formerly known as Earth Networks (EN), will use their Connected Savings platform to deliver an Integrated Demand Side Management (IDMS) aggregation program that will bring residential demand savings.

AEP Texas Inc.

2017 Energy Efficiency Plan and Report

16 Tex. Admin. Code §§ 25.181 and 25.183

Amended May 30, 2017

Project No. 46907

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INTRODUCTION

AEP Texas Inc. d/b/a AEP Texas (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."[1] 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.

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

(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 2017 and 2018 and highlights AEP Texas' achievements for Program Year 2016.

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 2016 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 (2012-2016) 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 2015 and 2016.
- Section VII details the incentive and administration expenditures for each of the previous five years (2012-2016) detailed by program for each customer class.
- Section VIII compares the actual 2016 expenditures with the 2016 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 2017 Energy Efficiency Cost Recovery Factor (EECRF).
- Section XII documents the 2016 EECRF Summary.
- Section XIII documents the Underserved Counties.
- Section XIV describes the Performance Bonus calculation for Program Year 2016.

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 2017 mandated demand and energy goals of 15,830 kW and 27,734,000 kWh as shown in Table 1 below through residential and non-residential SOPs and MTPs. The Central Division will utilize a budget of $14,259,483 to accomplish these goals.

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

Calendar Year	Average Peak Demand at Meter (MW)	Goal Metric: 0.4% Peak Demand (MW)	Peak Demand Goal (MW)	Energy Goal (MWh)	Projected Demand Reduction (MW)	Projected Energy Savings (MWh)	Projected Budget (000's)*
2017	3,958	15.83	15.83	27,734	43.78	65,693	$14,259
2018	3,998	15.99	15.99	28,014	43.78	65,693	$14,259

* The 2017 and 2018 Projected Budgets include costs associated with Evaluation, Measurement &Verification activities.

[2] Average Growth in Demand figures are from Table 5; Projected Savings from Table 6; Projected Budgets from Table 7.

The North Division plans to achieve its 2017 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 $3,308,221 to accomplish these goals.

Table 2: Summary of North Division Goals, Projected Savings (at the Meter),[3] 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)*
2017	998	3.99	4.26	7,464	6.15	12,795	$3,308
2018	1,004	4.02	4.26	7,464	6.15	12,795	$3,308

* The 2017 and 2018 Projected Budgets include costs associated with Evaluation, Measurement &Verification activities.

Executive Summary – Energy Efficiency Report (Report)

The Central Division achieved demand and energy reductions of 39,300 kW and 67,713,790 kWh, respectively, in 2016. The total energy efficiency cost for achieving these savings was $13,622,054. The Central Division's achievement exceeded the 2016 mandated energy efficiency goals of 15,730 kW and 27,559,000 kWh, thus allowing the Central Division to earn a Performance Bonus.

The North Division achieved demand and energy reductions of 6,381 kW and 10,817,333 kWh, respectively, in 2016. The total energy efficiency cost for achieving these savings was $2,622,844. The North Division's achievement exceeded the 2016 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.

[3] Average Growth in Demand figures are from Table 16; Projected Savings from Table 17; Projected Budgets from Table 18.

ENERGY EFFICIENCY PLAN – AEP TEXAS CENTRAL DIVISION

I. 2017 Programs

A. 2017 Program Portfolio

The Central Division has implemented a variety of programs in 2017 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 2017. 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. 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: 2017 Energy Efficiency Program Portfolio – Central Division

Program	Target Market	Application	Link to Program Manual
Commercial Solutions MTP	Commercial	Retrofit & New Construction	https://www.aeptexasefficiency.com/commercial-solutions/
Commercial SOP	Commercial	Retrofit & New Construction	https://aeptexas.com/global/utilities/lib/docs/save/business/programs/aeptexas/TcC/2016/2017%20AEP%20CSOP%20Manual.pdf
CoolSaver℠ A/C Tune-Up MTP	Commercial; Residential	Retrofit	https://www.aeptexasefficiency.com/_/wp-content/uploads/2016/07/aep-tcc-coolsaver-2016-program-manual.pdf
Hard-to-Reach SOP	Residential Hard-to-Reach	Retrofit	https://www.aeptexas.com/save/residential/programs/sTX/Hard-to-ReachStandardOffer.aspx
High-Performance New Homes MTP	Residential	New Construction	http://www.southtxsaves.com/resources-and-tips
Load Management SOP	Commercial	Retrofit	https://aeptexas.com/global/utilities/lib/docs/save/business/programs/aeptexas/TCC/2016/LoadManagementProgram/2016_TCC_LM%20Manual.pdf
Open MTP	Commercial	Retrofit	https://www.aeptexasefficiency.com/open-small-business/
Residential SOP	Residential	Retrofit	https://aeptexas.com/save/residential/programs/sTX/ResidentialStandardOffer.aspx
SCORE/CitySmart MTP	Commercial	Retrofit & New Construction	https://www.aeptexasefficiency.com/score/ https://www.aeptexasefficiency.com/citysmart/
SMART Source℠ Solar PV MTP	Commercial; Residential	Retrofit & New Construction	http://www.txreincentives.com/apv/documents/AEP-TCC%20AEP-TNC%20PV%20Program%20Guidebook%202017%20201611 14.pdf
Targeted Low-Income Energy Efficiency Program	Low-Income Residential	Retrofit	No website available
Whisker Labs Residential DR Pilot MTP	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℠ A/C Tune-Up Market Transformation Program (CoolSaver℠ MTP)

The CoolSaver℠ 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.

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 10% above the Texas Baseline Reference Home and meet all minimum energy code requirements. The program offers incentive tiers designed to deliver higher kW and kWh savings and a bonus incentive for homes that are ENERGY STAR®-certified. 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 100 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.

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

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

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

The PV MTP offers incentives to 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.

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

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

C. New Programs for 2017

The Central Division has no new programs for 2017.

D. Discontinued Programs

Efficiency Connection Pilot MTP (EffCon)

The EffCon Pilot MTP was a partnership with REPs to help promote energy efficiency to residential customers by offering discounted LED lamps via an online marketplace. A third-party implementer facilitated customer/REP participation and aided in the selection and management of an online retailer/vendor for the program website and order fulfillment. The pilot was not cost-effective for two consecutive years and has been discontinued.

Reliant Residential Demand Response (DR) Pilot Market Transformation Program (RDR MTP)

The Reliant Residential DR Pilot Program was a market transformation program that was utilized to support the Central Division's energy efficiency goals. The Central Division leveraged an existing industry-recognized program from a REP to reduce demand consumption. Reliant used its existing customer base from their thermostat-based peak time rebate program, Degrees of Difference, to respond quickly to market conditions.

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 2017. 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

Customer Class	Number of Customers
Commercial	150,706
Residential	755,256
Hard-to-Reach [4]	259,808

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

[4] According to the U.S. Census Bureau's 2015 Current Population Survey, 34.4% of Texas families fall below 200% of the poverty threshold. Applying that percentage to the Central Division's residential customer base of 755,256, the number of HTR customers is estimated to be 259,808.

III. Energy Efficiency Goals and Projected Savings

The Central Division's 2017 annual demand and energy reduction goals to be achieved are 15.83 MW and 27,734 MWh. The Central Division's 2018 annual goals are 15.99 MW and 28,014 MWh. These goals have been calculated as prescribed by the EE Rule.

The 2017 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 3,958 MW. This resulted in a calculated goal of 15.83 MW.

The 2018 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 (2012-2016) peak demand at the meter of 3,998 MW. This results in a calculated goal of 15.99 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 2017 and 2018 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				
	Actual	Weather Adjusted	Actual	Weather Adjusted	Opt-Out	Peak Demand at Source Net Opt-outs	Actual	Weather Adjusted	Actual	Weather Adjusted	Peak Demand at Meter (9.4% line losses)*	5 year Average Peak Demand at Meter	Goal Metric: 0.4% Peak Demand at Meter
2012	4,815	4,738	4,371	4,292	-1.24	4,290	23,893	23,476	19,312	18,894	3,887	NA	NA
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	25,063	24,836	19,525	19,298	4,019	3,863	15.45
2016	5,243	5,089	4,759	4,605	-55.50	4,550	25,891	25,736	20,397	20,242	4,122	3,934	15.73
2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,958	15.83
2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3,998	15.99

*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 2017 and 2018 (at the Meter) – Central Division

2017	Projected Savings	
Customer Class and Program	**kW**	**kWh**
Commercial		
Commercial Solutions MTP	**992**	**5,500,000**
Commercial SOP	**2,337**	**15,661,815**
CoolSaver℠ A/C Tune-Up MTP	**1,393**	**4,376,124**
Load Management SOP	**22,995**	**55,268**
Open MTP	**830**	**3,250,000**
SCORE/CitySmart MTP	**1,850**	**8,000,000**
SMART Source℠ Solar PV MTP	**194**	**374,026**
Residential		
CoolSaver℠ A/C Tune-Up MTP	**1,017**	**3,223,609**
High-Performance New Homes MTP	**539**	**1,631,874**
Residential SOP	**4,937**	**18,213,100**
SMART Source℠ Solar PV MTP	**166**	**320,000**
Whisker LabsResidential DR Pilot MTP	**3,750**	**0**
Hard-to-Reach		
Hard-to-Reach SOP	**2,013**	**3,678,690**
Targeted Low-Income Energy Efficiency Program	**768**	**1,408,000**
Total Annual Projected Savings	**43,781**	**65,692,506**

Table 6: Projected Demand and Energy Savings by Program for Each Customer Class for 2017 and 2018 (at the Meter) – Central Division (Continued)

2018	Projected Savings	
Customer Class and Program	**kW**	**kWh**
Commercial		
Commercial Solutions MTP	**992**	**5,500,000**
Commercial SOP	**2,337**	**15,661,815**
CoolSaver℠ A/C Tune-Up MTP	**1,393**	**4,376,124**
Load Management SOP	**22,995**	**55,268**
Open MTP	**830**	**3,250,000**
SCORE/CitySmart MTP	**1,850**	**8,000,000**
SMART Source℠ Solar PV MTP	**194**	**374,026**
Residential		
CoolSaver℠ A/C Tune-Up MTP	**1,017**	**3,223,609**
High-Performance New Homes MTP	**539**	**1,631,874**
Residential SOP	**4,937**	**18,213,100**
SMART Source℠ Solar PV MTP	**166**	**320,000**
Whisker Labs Residential DR Pilot MTP	**3,750**	**0**
Hard-to-Reach		
Hard-to-Reach SOP	**2,013**	**3,678,690**
Targeted Low-Income Energy Efficiency Program	**768**	**1,408,000**
Total Annual Projected Savings	**43,781**	**65,692,506**

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 2017 and 2018. 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 2017 and 2018 – Central Division

2017	Incentives	Admin	R&D	EM&V	Total Budget
Commercial					
Commercial Solutions MTP	**$508,500**	**$56,500**			**$565,000**
Commercial SOP	**$1,813,500**	**$201,500**			**$2,015,000**
CoolSaver℠ A/C Tune-Up MTP	**$596,700**	**$66,300**			**$663,000**
Load Management SOP	**$650,700**	**$72,300**			**$723,000**
Open MTP	**$793,800**	**$88,200**			**$882,000**
SCORE/CitySmart MTP	**$946,800**	**$105,200**			**$1,052,000**
SMART Source℠ Solar PV MTP	**$204,000**	**$22,667**			**$226,667**
Residential					
CoolSaver℠ A/C Tune-Up MTP	**$675,000**	**$75,000**			**$750,000**
High-Performance New Homes MTP	**$765,000**	**$85,000**			**$850,000**
Residential SOP	**$2,650,140**	**$294,460**			**$2,944,600**
SMART Source℠ Solar PV MTP	**$204,000**	**$22,667**			**$226,667**
Whisker Labs DR Pilot MTP	**150,300**	**$16,700**			**$167,000**
Hard-to-Reach					
Hard-to-Reach SOP	**$1,103,760**	**$122,640**			**$1,226,400**
Targeted Low-Income Energy Efficiency Program	**$1,283,400**	**$142,600**			**$1,426,000**
Research and Development (R&D)					
R&D	**NAP**	**NAP**	**$365,125**		**$365,125**
Evaluation, Measurement & Verification (EM&V)					
EM&V	**NAP**	**NAP**	**NAP**	**$177,024**	**$177,024**
Total Budget	**$12,345,600**	**$1,371,734**	**$365,125**	**$177,024**	**$14,259,483**

Table 7: Projected Annual Budget by Program for Each Customer Class for 2017 and 2018 – Central Division (Continued)

2018	Incentives	Admin	R&D	EM&V	Total Budget
Commercial					
Commercial Solutions MTP	**$508,500**	**$56,500**			**$565,000**
Commercial SOP	**$1,813,500**	**$201,500**			**$2,015,000**
CoolSaver℠ A/C Tune-Up MTP	**$596,700**	**$66,300**			**$663,000**
Load Management SOP	**$650,700**	**$72,300**			**$723,000**
Open MTP	**$793,800**	**$88,200**			**$882,000**
SCORE/CitySmart MTP	**$946,800**	**$105,200**			**$1,052,000**
SMART Source℠ Solar PV MTP	**$204,000**	**$22,667**			**$226,667**
Residential					
CoolSaver℠ A/C Tune-Up MTP	**$675,000**	**$75,000**			**$750,000**
High-Performance New Homes MTP	**$765,000**	**$85,000**			**$850,000**
Residential SOP	**$2,666,340**	**$296,260**			**$2,962,600**
SMART Source℠ Solar PV MTP	**$204,000**	**$22,667**			**$226,667**
Whisker Labs DR Pilot MTP	**$150,300**	**$16,700**			**$167,000**
Hard-to-Reach					
Hard-to-Reach SOP	**$1,087,560**	**$120,840**			**$1,208,400**
Targeted Low-Income Energy Efficiency Program	**$1,283,400**	**$142,600**			**$1,426,000**
Research and Development (R&D)					
R&D	**NAP**	**NAP**	**$365,125**		**$365,125**
Evaluation, Measurement & Verification (EM&V)					
EM&V	**NAP**	**NAP**	**NAP**	**$176,953**	**$176,953**
Total Budget	**$12,345,600**	**$1,371,734**	**$365,125**	**$176,953**	**$14,259,412**

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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 (2012-2016) 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)
2016	15.73	27,559	39.41	68,278
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
2012	12.93	22,653	33.67	54,313

* Actual Weather Adjusted MW and MWh Goals as reported in the EEPRs filed in years 2012-2016.

VI. Projected, Reported and Verified Demand and Energy Savings

Table 9: Projected versus Reported and Verified Savings for 2016 and 2015 (at the Meter) – Central Division

2016	Projected Savings		Reported and Verified Savings	
Customer Class and Program	**kW**	**kWh**	**kW**	**kWh**
Commercial				
Commercial Solutions MTP	**834**	**3,888,000**	**712**	**3,930,677**
Commercial SOP	**2,417**	**16,278,090**	**2,161**	**14,664,215**
CoolSaver℠ 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℠ Solar PV MTP	**149**	**288,000**	**349**	**673,224**
Residential				
CoolSaver℠ 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℠ Solar PV MTP	**142**	**274,000**	**206**	**396,448**
Hard-to-Reach				
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**
Total Annual Savings	**46,967**	**62,643,512**	**39,300**	**67,713,790**

Table 9: Projected versus Reported and Verified Savings for 2016 and 2015 (at the Meter) – Central Division (Continued)

2015	Projected Savings		Reported and Verified Savings	
Customer Class and Program	**kW**	**kWh**	**kW**	**kWh**
Commercial				
Commercial Solutions MTP	**834**	**3,888,000**	**1,185**	**6,719,171**
Commercial SOP	**3,625**	**17,467,000**	**2,233**	**15,036,669**
CoolSaver℠ A/C Tune-Up MTP	**1,393**	**4,376,124**	**1,593**	**5,104,501**
Load Management SOP	**16,255**	**43,000**	**27,418**	**27,418**
Open MTP	**676**	**2,051,894**	**680**	**3,059,520**
SCORE/CitySmart MTP	**1,691**	**5,749,624**	**1,333**	**7,159,107**
SMART Source℠ Solar PV MTP	**149**	**288,000**	**1,029**	**1,984,354**
Residential				
CoolSaver℠ A/C Tune-Up MTP	**1,017**	**3,223,609**	**1,051**	**3,997,053**
Efficiency Connection Pilot MTP	**105**	**525,131**	**17**	**62,004**
High-Performance New Homes MTP	**393**	**1,596,286**	**501**	**1,903,959**
Residential SOP	**4,838**	**14,835,000**	**4,734**	**17,465,758**
SMART Source℠ Solar PV MTP	**142**	**274,000**	**144**	**278,032**
Hard-to-Reach				
Hard-to-Reach SOP	**1,315**	**3,686,000**	**1,224**	**4,456,145**
Targeted Low-Income Energy Efficiency Program	**634**	**1,110,000**	**633**	**1,228,535**
Total Annual Savings	**33,067**	**59,113,668**	**43,775**	**68,482,227**

VII. Historical Program Expenditures

This section documents the Central Division's incentive and administration expenditures for the previous five years (2012-2016) detailed by program for each customer class.

Table 10: Historical Program Incentive and Administrative Expenditures for 2012 through 2016 (000's) – Central Division

	2016		2015		2014		2013		2012	
	Incent.	**Admin**	**Incent.**	**Admin**	**Incent.**	**Admin**	**Incent.**	**Admin**	**Incent.**	**Admin**
Commercial										
A/C Distributor Pilot MTP	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**$40.76**	**$6.08**	**$29.94**	**$5.32**
AEP Texas CARE$ Energy Efficiency for Not-for-Profit Agencies SOP	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**$54.04**	**$11.30**
Commercial Solutions MTP	**$464.67**	**$52.42**	**$660.88**	**$62.02**	**$479.55**	**$50.29**	**$424.94**	**$42.46**	**$419.12**	**$35.86**
Commercial SOP	**$1,763.34**	**$194.48**	**$1,675.57**	**$178.07**	**$1,704.68**	**$183.80**	**$950.47**	**$153.00**	**$881.36**	**$143.85**
CoolSaver℠ A/C Tune-Up MTP	**$561.47**	**$46.54**	**$601.34**	**$45.73**	**$642.34**	**$46.69**	**$624.27**	**$47.61**	**$144.76**	**$13.93**
Irrigation Load Management MTP	**NAP**	**NAP**	**NAP**	**NAP**	**$200.00**	**$16.65**	**$440.00**	**$34.78**	**NAP**	**NAP**
Load Management SOP	**$573.06**	**$50.03**	**$650.20**	**$51.71**	**$543.00**	**$45.03**	**$513.29**	**$54.38**	**$300.00**	**$32.33**
Load Management SOP - Expanded	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**$206.63**	**$22.47**
Open MTP	**$785.45**	**$61.03**	**$818.94**	**$61.45**	**$741.21**	**$52.54**	**$684.76**	**$51.66**	**NAP**	**NAP**
SCORE/CitySmart MTP	**$971.10**	**$88.69**	**$840.09**	**$73.65**	**$1,026.19**	**$86.89**	**$911.24**	**$ 75.97**	**$905.59**	**$70.72**
SMART Source℠ Solar PV MTP	**$182.70**	**$14.86**	**$58.56**	**$6.41**	**$200.01**	**$15.15**	**$152.14**	**$11.20**	**$197.18**	**$16.71**

(Table continued on next page)

Table 10: Historical Program Incentive and Administrative Expenditures for 2012 through 2016 (000's) – Central Division (Continued)

	2016		2015		2014		2013		2012	
	Incent.	**Admin**	**Incent.**	**Admin**	**Incent.**	**Admin**	**Incent.**	**Admin**	**Incent.**	**Admin**
Residential										
A/C Distributor Pilot MTP	**NAP**	**NAP**	**NAP**	**NAP**	**$278.05**	**$40.25**	**$266.43**	**$39.77**	**$68.07**	**$11.73**
CoolSaver℠ A/C Tune-Up MTP	**$672.78**	**$55.82**	**$673.27**	**$51.20**	**$525.36**	**$38.18**	**$601.41**	**$45.95**	**$375.08**	**$36.09**
Earth Networks Res DR Pilot MTP	**$123.35**	**$9.07**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**
Efficiency Connection Pilot MTP	**$90.16**	**$11.20**	**$67.03**	**$4.45**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**
High-Performance New Homes MTP	**$636.50**	**$67.45**	**$757.64**	**$82.07**	**$777.07**	**$85.08**	**$ 730.16**	**$79.58**	**$797.45**	**$90.48**
Reliant DR Pilot MTP	**$3.88**	**$0.38**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**
Residential SOP	**$2,591.75**	**$242.54**	**$2,649.88**	**$246.42**	**$2,626.27**	**$263.28**	**$2,596.76**	**$292.37**	**$3,622.65**	**$374.20**
SMART Source℠ Solar PV MTP	**$204.81**	**$17.43**	**$207.62**	**$16.33**	**$199.75**	**$15.14**	**$207.81**	**$15.29**	**$197.19**	**$15.98**
Hard-to-Reach										
Hard-to-Reach SOP	**$1,115.74**	**$112.50**	**$922.10**	**$97.61**	**$950.70**	**$85.02**	**$950.33**	**$96.29**	**$1,177.86**	**$114.69**
Targeted Low-Income Energy Efficiency Program	**$1,265.06**	**$103.44**	**$1,270.64**	**$98.09**	**$1,262.46**	**$87.13**	**$1,271.58**	**$96.69**	**$1,267.07**	**$93.57**
Research and Development (R&D)	**NAP**	**$327.31**	**NAP**	**$332.54**	**NAP**	**$427.12**	**NAP**	**$184.31**	**NAP**	**$389.54**
Evaluation and Measurement Verification (EM&V)	**NAP**	**$161.05**	**NAP**	**$246.63**	**NAP**	**$305.06**	**NAP**	**361.07**	**NAP**	**NAP**
Total Expenditures	**$12,005.81**	**$1,616.24**	**$11,853.76**	**$1,654.36**	**$12,156.64**	**$1,843.30**	**$11,366.35**	**$1,688.46**	**$10,643.99**	**$1,478.77**

VIII. Program Funding for Calendar Year 2016

As shown in Table 11, the total projected budget in 2016 was $14,265,243 and the actual total funds expended were $13,622,054. 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 EarthNetworks 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 EffCon Pilot MTP was under budget due to lower than projected participation.

The actual demand (kW) savings from several Load Management SOP participants were less than what they had initially projected when they signed up to participate in the Program.

The allotted budget for the Reliant DR Pilot MTP was slightly higher than the implementer's budget which included a capped amount for demand savings that were greater than the projected goal.

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.

Due to fewer homes receiving incentives, the New Homes MTP was under budget. The decrease in participating homes is attributed to a decline in new home construction and sales in the Central Division service territory.

The combined 2016 expenditures for the TLIP and the HTR SOP constituted 18% of the energy efficiency budget for the 2016 Program Year. The 2016 expenditure for the TLIP constituted 10% of the energy efficiency budget for the 2016 Program Year.

Table 11: Program Funding for Calendar Year 2016 (Dollar amounts in 000's) – Central Division

	Total Projected Budget [5]	Numbers of Customers Participating	Actual Funds Expended (Incentives)	Actual Funds Expended (Admin)	Research and Development (R&D)	Evaluation and Measurement Verification (EM&V)	Total Funds Expended
Commercial							
Commercial Solutions MTP	**$564.65**	**85**	**$464.67**	**$52.42**			**$517.09**
Commercial SOP	**$2,014.11**	**81**	**$1,763.34**	**$194.48**			**$1,957.82**
CoolSaver℠ A/C Tune-Up MTP	**$662.17**	**532**	**$561.47**	**$46.54**			**$608.01**
Load Management SOP	**$722.44**	**62**	**$573.06**	**$50.03**			**$623.08**
Open MTP	**$881.72**	**76**	**$785.45**	**$61.03**			**$846.48**
SCORE/CitySmart MTP	**$1,051.86**	**92**	**$971.10**	**$88.69**			**$1,059.79**
SMART Source℠ Solar PV MTP	**$226.67**	**8**	**$182.70**	**$14.86**			**$197.56**
Residential							
CoolSaver℠ A/C Tune-Up MTP	**$750.00**	**1,802**	**$672.78**	**$55.82**			**$728.60**
Earth Networks Res DR Pilot MTP	**$166.67**	**2,473**	**$123.35**	**$9.07**			**$132.42**
Efficiency Connection Pilot MTP	**$166.67**	**538**	**$90.16**	**$11.20**			**$101.36**
High-Performance New Homes MTP	**$850.00**	**454**	**$636.50**	**$67.45**			**$703.95**
Reliant DR Pilot MTP	**$5.56**	**140**	**$3.88**	**0.38**			**$4.26**
Residential SOP	**$2,956.79**	**4,945**	**$2,591.75**	**$242.54**			**$2,834.29**
SMART Source℠ Solar PV MTP	**$226.67**	**22**	**$204.81**	**$17.43**			**$222.24**
Hard-to-Reach							
Hard-to-Reach SOP	**$1,059.35**	**1,657**	**$1,115.74**	**$112.50**			**$1,228.24**
Targeted Low-Income Energy Efficiency	**$1,408.25**	**349**	**$1,265.06**	**$103.44**			**$1,368.50**
Research and Development	**$368.89**	**NAP**	**NAP**	**NAP**	**$327.31**	**NAP**	**$327.31**
EM&V							
Statewide EM&V Contractor	**$182.79**	**NAP**	**NAP**	**NAP**	**NAP**	**$161.05**	**$161.05**
Total Expenditures	**$14,265.24**	**NAP**	**$12,005.81**	**$1,127.89**	**$327.31**	**$161.05**	**$13,622.05**

[5] Projected Budget from the EEPR filed April 2016 Project No. 45675.

IX. Market Transformation Program Results

Commercial Solutions MTP

In 2016, the Commercial Solutions MTP goal was to acquire 834 kW demand savings from this program. A total of 712 kW was achieved by participation of 85 customers.

CoolSaver℠ MTP

In 2016, the Central Division projected to acquire 2,410 kW demand savings from this program. The Central Division verified and reported 2,496 kW. This included participation by 2,334 residential and commercial customers.

EarthNetworks Residential DR Pilot MTP

The EarthNetworks Residential DR Pilot MTP goal was to acquire 3,750 kW demand savings. A total of 3,084 kW was achieved by participation of 2,473 residential customers in 2016.

Efficiency Connection Pilot MTP

The Efficiency Connection Pilot MTP goal was to acquire 190 kW demand savings and 717,025 kWh in energy savings. A total of 53 kW and 214,947 kWh were achieved in 2016.

High-Performance New Homes MTP (New Homes)

In 2016, 454 high-performance homes were constructed in the Central Division through the New Homes MTP program with a savings of 459 kW. The savings per home increased as a result of improved building practices promoted by the program. The Central Division 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 2016 included workshops and presentations to prepare market actors for the implementation of the 2015 International Energy Conservation Code (IECC). 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 2009-2016.

Open MTP

The Open MTP goal was to acquire 718 kW demand savings. A total of 711 kW was achieved with 76 small commercial customers and 8 participating contractors.

Reliant Residential DR Pilot Program

The Reliant Residential DR Pilot MTP goal was to acquire 60 kW demand savings. A total of 85.2 kW was achieved by participation of 140 residential customers in 2016.

SCORE/CitySmart MTP

The SCORE/CitySmart MTP was projected to acquire 1,691 kW demand savings from this program. A total of 1,820 kW was achieved. This included participation by 92 customers. To date, the program has benchmarked 971 facilities for 35 school districts, and 9 government customers.

SMART Source^{SM} Solar PV MTP

The 2016 PV MTP projected to acquire 291 kW in demand savings and 562,000 kWh in energy savings from the residential and non-residential components. A total of 30 residential and non-residential solar PV projects were completed within the program, resulting in a peak demand reduction of 555 kW and 1,069,672 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 R&D activities for 2016.

AEP Texas dedicated resources in 2016 to develop a new electronic data collection and management system for current programs. 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 September 2016. 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. 2017 Energy Efficiency Cost Recovery Factor (EECRF)

The total amount approved to be collected through the Central Division's 2017 EECRF is $9,003,339, which consists of the following components:

- recovery of $6,869,313 in energy efficiency expenses budgeted for Program Year 2017 (the actual projected budget for energy efficiency expenses for Program Year 2017 is $14,082,459, which is reduced by $6,334,949 in energy efficiency costs expressly included in base rates and $878,197 of load growth);
- recovery of a performance bonus in the amount of $3,459,596 for achieving energy efficiency goals in Program Year 2015;
- return to customers $1,306,003 in energy efficiency program costs over-collected through the EECRF in Program Year 2015;

- recovery of $5,433 for 2015 EECRF proceeding expenses incurred in Docket No. 44717 by municipalities as authorized by 16 TAC § 25.181(f)(3)(B); and
- a settlement adjustment of $25,000 as approved in PUC Docket No. 45929.

Table 12: 2017 EECRF – Central Division

Customer Class	EECRF
Residential Service	$0.000532 per kWh
Secondary Service (less than or equal to 10 kW)	$0.000331 per kWh
Secondary Service (greater than 10 kW)	$0.000426 per kWh
Primary Service	$0.000294 per kWh
Transmission Service	($0.041089) per kW

XII. 2016 EECRF Summary

2016 Collections for Energy Efficiency

The Central Division collected $7,269,368 through its 2016 base rates, including $6,334,949 expressly included in base rates and an adjustment for load growth in the amount of $934,419, and $9,279,980 through its 2016 EECRF for a total of $16,549,349. A performance bonus of $2,835,621 for exceeding its 2014 energy efficiency goals and $1,079,196 returned to customers are reflected in the total amount collected for energy efficiency in 2016.

Energy Efficiency Program Costs Expended

The Central Division expended a total of $13,622,054 for its 2016 energy efficiency programs. The amount expended is $643,189 less than the 2016 projected budget of $14,265,243 for energy efficiency programs.

Over-Recovery of Energy Efficiency Costs

The Central Division's actual 2016 energy efficiency program costs (including EM&V costs) less municipal rate case expenses are $13,619,232 and actual energy efficiency program revenues are $14,792,924. These associated 2016 costs and revenues result in an over-recovery of energy efficiency costs of $1,173,691. This is the amount that the Central Division will request be returned to customers within its 2018 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 2016 SOPs or MTPs. Per 16 TAC § 25.181(n)(2)(U), a list of the Underserved Counties is as follows:

- Gonzales
- Guadalupe
- Kenedy
- McMullen

XIV. Performance Bonus

The Central Division achieved a 39,300 kW reduction in peak demand from its energy efficiency programs offered in 2016. The demand reduction goal for 2016 was 15,730 kW. This achievement represents 250% of its 2016 demand reduction goal. The Central Division also achieved energy savings of 67,713,790 kWh, which represents 246% of its 2016 energy goal of 27,559,000 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 $3,492,251, which it will request within its June 1, 2017 EECRF Filing for recovery in 2018.

In 2016, the total spending on energy efficiency programs was $13,622,054. This includes actual EM&V expenditures to the EM&V contractor of $161,054. 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 2016, 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 2016 total program costs equaled $13,647,065.

Table 13: Energy Efficiency Performance Bonus Calculation for 2016 – Central Division

	kW	kWh
2016 Goals	15,730	27,559,000
2016 Savings		
Reported/Verified Total (including HTR and measures with <10yr EUL)	39,300	67,713,790
Reported/Verified Hard-to-Reach	2,341	
2016 Program Costs	$13,647,065	
2016 Performance Bonus	$3,492,251	

Performance Bonus Calculation

250%	Percentage of Demand Reduction Goal Met (Reported kW/Goal kW)
246%	Percentage of Energy Reduction Goal Met (Reported kWh/Goal kWh)
TRUE	Met Requirements for Performance Bonus?
$48,569,571	Total Avoided Cost (Reported kW * PV(Avoided Capacity Cost) + Reported kWh * PV(Avoided Energy Cost))
$13,647,065	Total Program Costs
$34,922,506	Net Benefits (Total Avoided Cost - Total Expenses)

Bonus Calculation

$26,164,317	Calculated Bonus ((Achieved Demand Reduction/Demand Goal - 100%) / 2) * Net Benefits
$3,492,251	Maximum Bonus Allowed (10% of Net Benefits)
$3,492,251	Bonus (Minimum of Calculated Bonus and Bonus Limit)

Acronyms

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

Acronyms (Continued)

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

APPENDIX A:

REPORTED AND VERIFIED DEMAND AND ENERGY REDUCTION BY COUNTY

CALENDAR YEAR 2016

COMMERCIAL SOLUTIONS MTP

County	Reported and Verified Savings	
	kW	kWh
Atascosa	3.23	21,167
Cameron	97.52	633,620
Hidalgo	248.13	1,378,363
Kleberg	30.38	148,580
Kinney	0.50	3,297
Matagorda	39.29	244,304
Maverick	7.70	42,864
Nueces	127.48	691,617
Pharr	22.43	77,842
Starr	4.45	29,997
Val Verde	0.91	5,934
Webb	104.25	538,185
Wharton	22.40	90,443
Willacy	3.68	24,464
Total	**712.35**	**3,930,677**

COMMERCIAL SOP

County	Reported and Verified Savings	
	kW	**kWh**
Aransas	2.78	18,222
Bee	2.82	83,230
Cameron	32.33	222,671
Duval	0.34	2,238
Hidalgo	230.02	1,055,837
Jackson	6.61	37,310
Jim Wells	17.61	132,910
Karnes	0.68	4,476
Kleberg	43.90	185,636
Medina	89.10	531,418
Nueces	1, 093.60	8,182,198
San Patricio	97.1	645,998
Val Verde	135.70	863,604
Victoria	101.81	806,013
Webb	306.46	1,892,454
Total	**2,160.86**	**14,664,215**

COOLSAVER℠ A/C TUNE-UP MTP

County	Reported and Verified Savings	
	kW	**kWh**
Aransas	1.14	3,090
Brooks	0.36	1,209
Cameron	231.26	468,890
Hidalgo	1,972.42	5,440,113
Jim Wells	0.41	1,403
Kinney	1.94	5,203
Maverick	50.95	129,173
Nueces	23.14	75,102
San Patricio	4.88	19,790
Starr	18.54	53,093
Uvalde	2.60	9,040
Val Verde	91.15	242,303
Webb	1.75	5,932
Willacy	65.33	116,223
Zavala	30.04	71,484
Total	**2,495.91**	**6,642,048**

EARTHNETWORKS RESIDENTIAL DR PILOT MTP

County	Reported and Verified Savings	
	kW	kWh
Aransas	5.18	N/A
Atascosa	20.96	N/A
Bee	30.81	N/A
Brooks	10.46	N/A
Calhoun	1.59	N/A
Cameron	171.98	N/A
Dewitt	-0.34	N/A
Dimmit	24.11	N/A
Duval	25.89	N/A
Frio	11.88	N/A
Goliad	3.11	N/A
Hidalgo	488.71	N/A
Jackson	1.33	N/A
Jim Hogg	11.76	N/A
Jim Wells	126.50	N/A
Karnes	8.81	N/A
Kleberg	47.69	N/A
La Salle	6.13	N/A
Live Oak	16.14	N/A
Matagorda	11.46	N/A
Maverick	110.87	N/A
Medina	0.49	N/A
Nueces	659.67	N/A
Refugio	7.39	N/A
San Patricio	120.55	N/A
Starr	39.34	N/A
Uvalde	30.54	N/A
Val Verde	56.53	N/A
Victoria	57.74	N/A
Webb	901.74	N/A
Wharton	4.21	N/A
Willacy	-0.45	N/A
Zapata	58.88	N/A
Zavala	12.08	N/A
Total	**3,083.74**	N/A

EFFICIENCY CONNECTION MTP

County	Reported and Verified Savings	
	kW	kWh
Aransas	1.76	6,781
Atascosa	0.49	2,491
Bee	0.76	3,839
Brooks	0.09	327
Caldwell	0.03	142
Cameron	7.71	29,654
Colorado	0.61	3,074
DeWitt	0.15	776
Dimmit	0.63	3,202
Duval	0.36	1,380
Frio	0.15	761
Goliad	0.30	1,528
Hidalgo	12.53	48,229
Jackson	0.22	1,103
Jim Hogg	0.09	327
Jim Wells	1.12	4,315
Kinney	0.06	318
Kleberg	0.69	2,655
La Salle	0.04	183
Live Oak	0.06	318
Matagorda	1.09	5,539
Maverick	0.79	3,998
Medina	0.07	372
Nueces	9.73	37,559
Refugio	0.36	1,388
San Patricio	2.23	8,561
Starr	1.29	4,975
Uvalde	0.54	2,724
Val Verde	0.94	4,794
Victoria	0.82	4,168
Webb	6.68	25,678
Wharton	0.25	1,259
Willacy	0.47	1,815
Wilson	0.05	258
Zapata	0.02	93
Zavala	0.07	363
Total	**53.25**	**214,947**

HARD-TO-REACH SOP

County	Reported and Verified Savings	
	kW	kWh
Calhoun	1.38	4,035
Cameron	106.54	315,280
Colorado	2.50	16,587
Dimmit	3.44	10,853
Hidalgo	263.99	985,962
Jackson	4.15	11,010
Jim Wells	1.14	2,192
Kleberg	248.60	891,238
La Salle	0.57	3,433
Matagorda	4.59	18,059
Maverick	19.91	66,291
Nueces	225.48	560,839
Starr	105.72	452,613
Victoria	447.19	1,887,062
Webb	99.11	431,671
Wharton	4.74	10,355
Willacy	21.48	81,545
Total	**1,560.53**	**5,749,025**

HIGH-PERFORMANCE NEW HOMES MTP

County	Reported and Verified Savings	
	kW	kWh
Aransas	20.37	73,213
Cameron	2.18	8,339
Hidalgo	93.13	424,155
Jackson	0.66	2,564
Nueces	255.72	988,867
San Patricio	79.11	310,011
Victoria	1.65	6,890
Webb	6.38	29,462
Total	**459.20**	**1,843,501**

LOAD MANAGEMENT SOP

County	Reported and Verified Savings	
	kW	kWh
Aransas	16.22	32
Bee	61.30	123
Calhoun	94.59	189
Cameron	1,647.84	3,296
Dimmit	119.21	238
Hidalgo	3,705.73	10,234
Jim Wells	93.33	187
Kleberg	115.08	230
Maverick	35.45	71
Nueces	3,222.57	9,307
San Patricio	3,894.85	6,003
Starr	94.09	188
Val Verde	99.48	199
Victoria	4,583.09	13,474
Webb	1,592.48	3,185
Wharton	45.76	92
Willacy	812.49	1,625
Total	**20,233.56**	**48,673**

OPEN MTP

County	Reported and Verified Savings	
	kW	kWh
Brooks	5.85	22,723
Cameron	60.79	282,300
Hidalgo	580.55	2,589,015
Nueces	35.68	177,816
Starr	11.26	48,459
Webb	5.13	18,906
Uvalde	3.08	23,245
Zapata	8.24	32,479
Total	**710.58**	**3,194,943**

RELIANT RESIDENTIAL DR PILOT MTP

County	Reported and Verified Savings	
	kW	kWh
Aransas	1.81	N/A
Atascosa	1.79	N/A
Bee	1.41	N/A
Calhoun	-0.14	N/A
Cameron	3.66	N/A
Colorado	0.68	N/A
Hidalgo	23.47	N/A
Jim Wells	0.78	N/A
Kleberg	4.09	N/A
Matagorda	-0.13	N/A
Nueces	24.24	N/A
San Patricio	1.69	N/A
Starr	0.78	N/A
Uvalde	-0.81	N/A
Val Verde	1.60	N/A
Victoria	4.78	N/A
Webb	14.88	N/A
Wharton	0.57	N/A
Willacy	812.49	N/A
Total	**85.15**	**N/A**

RESIDENTIAL SOP

County	Reported and Verified Savings	
	kW	kWh
Bee	48.93	142,013
Calhoun	20.87	81,863
Cameron	841.53	3,687,810
Colorado	32.77	143,827
Dimmitt	2.54	14,824
Duval	1.84	8,359
Frio	1.55	8,062
Goliad	1.49	7,414
Hidalgo	1,655.98	7,163,160
Jackson	22.71	93,792
Jim Wells	23.11	76,043
Kleberg	10.87	35,596
La Salle	3.63	20,721
Matagorda	44.77	200,207
Maverick	34.13	159,904
Nueces	607.11	1,936,874
Refugio	0.89	3,982
San Patricio	225.47	882,951
Starr	131.56	591,117
Uvalde	32.52	76,263
Victoria	341.70	1,068,248
Webb	478.13	2,171,453
Wharton	20.32	81,254
Willacy	5.47	25,005
Total	**4,589.89**	**18,680,742**

SCORE/CITYSMART MTP

County	Reported and Verified Savings	
	kW	kWh
Atascosa	4.56	25,713
Calhoun	260.78	1,497,094
Dimmit	49.05	310,914
Hidalgo	606.96	3,222,822
Nueces	114.65	623,932
Starr	2.67	17,494
Webb	781.02	4,589,829
Total	**1,819.69**	**10,287,798**

SMART SOURCE[SM] SOLAR PV MTP

County	Reported and Verified Savings	
	kW	kWh
Aransas	9.26	17,856
Cameron	356.60	687,408
Hidalgo	93.23	179,728
La Salle	5.40	10,416
Nueces	36.75	70,848
Webb	47.28	91,128
Wharton	6.37	12,288
Total	**554.89**	**1,069,672**

TARGETED LOW-INCOME ENERGY EFFICIENCY PROGRAM

County	Reported and Verified Savings	
	kW	kWh
Calhoun	122.43	201,192
Cameron	142.13	319,615
Dimmit	5.62	10,098
Edwards	5.39	9,825
Goliad	37.78	49,626
Hidalgo	94.43	198,425
Kinney	10.03	20,292
La Salle	21.36	41,285
Matagorda	9.53	18,780
Maverick	11.90	18,570
Nueces	39.47	76,226
Real	3.06	6,566
Uvalde	92.14	131,913
Val Verde	20.41	44,797
Webb	153.62	217,797
Willacy	3.22	8,197
Zavala	7.65	14,346
Total	**780.17**	**1,387,550**

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.

The AEP Texas Central Division CSOP presented a $61,914 incentive check to the CHRISTUS Spohn Health System Foundation in Corpus Christi. CHRISTUS Spohn completed two large LED lighting retrofit projects.

Detar Healthcare System in Victoria was awarded a $91,452 incentive check through the AEP Texas Central Division CSOP. Detar Hospital completed a retrofit project including two 450 ton chillers.

ENERGY EFFICIENCY PLAN – AEP TEXAS NORTH DIVISION

I. 2017 Programs

A. 2017 Program Portfolio

The North Division has implemented a variety of programs in 2017 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 2017. 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. 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: 2017 Energy Efficiency Program Portfolio – North Division

Program	Target Market	Application	Link to Program Manual
Commercial Solutions MTP	Commercial	Retrofit & New Construction	https://www.aeptexasefficiency.com/commercial-solutions/
Commercial SOP	Commercial	Retrofit & New Construction	https://www.aeptexas.com/save/business/programs/wTX/CommercialStandardOfferProgram.aspx
Hard-to-Reach SOP	Residential Hard-to-Reach	Retrofit	https://aeptexas.com/global/utilities/lib/docs/save/residential/programs/AEPTexas/TNC/2017/htr/2017_HTR_Manual_Final_v2.pdf
Load Management SOP	Commercial	Retrofit	https://www.aeptexas.com/save/business/programs/wTX/LoadManagementProgram.aspx
Open MTP	Commercial	Retrofit	https://www.aeptexasefficiency.com/open-small-business
Residential SOP	Residential	Retrofit	https://www.aeptexas.com/save/residential/programs/wTX/ResidentialStandardOffer.aspx
SCORE/City Smart MTP	Commercial	Retrofit & New Construction	https://www.aeptexasefficiency.com/score/ https://www.aeptexasefficiency.com/citysmart/
SMART Source[SM] Solar PV MTP	Commercial Residential	Retrofit & New Construction	http://www.txreincentives.com/apv/documents/AEP-TCC%20AEP-TNC%20PV%20Program%20Guidebook%202017%2020161114.pdf
Targeted Low-Income Energy Efficiency Program	Low-Income Residential	Retrofit	No Website Available
Whisker Labs Residential DR Pilot MTP	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 100 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.

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^{SM} 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.

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

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

C. New Programs for 2017

The North Division has no new programs for 2017.

D. Discontinued Programs

Efficiency Connection Pilot MTP (EffCon)

The Efficiency Connection Pilot MTP was a program with a partnership with REPs to help promote energy efficiency to residential customers by offering discounted LED lamps via an online marketplace. A third-party implementer facilitated customer/REP participation and aided in the selection and management of an online retailer/vendor for the program website and order fulfillment. Due to lower than expected sales volume, the program has been cancelled.

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 2017. 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

Customer Class	Number of Customers
Commercial	37,365
Residential	155,180
Hard-to-Reach [6]	53,382*

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

[6] According to the U.S. Census Bureau's 2015 Current Population Survey, 34.4% of Texas families fall below 200% of the poverty threshold. Applying that percentage to the North Division's residential customer base of 155,180, the number of Hard-to-Reach customers is estimated at the North Division's residential customer base of 53,382.

III. Energy Efficiency Goals and Projected Savings

The North Division's 2017 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 2017 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 998 MW. This resulted in a calculated goal of 3.99 MW.

The 2018 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 (2012-2016) peak demand at the meter of 1,004 MW. This results in a calculated goal of 4.02 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 2017 and 2018 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 2017 and 2018 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				
	Actual	Weather Adjusted	Actual	Weather Adjusted	Opt-Out	Peak Demand at Source	Actual	Weather Adjusted	Actual	Weather Adjusted	Peak Demand at Meter (11.5% line losses)*	5 year Average Peak Demand at Meter	Goal Metric: 0.4% Peak Demand at Meter
2012	1,172	1,114	1,168	1,107	-9.5	1,098	5,145	5,055	5,016	4,926	972	NA	NA
2013	1,147	1,145	1,142	1,140	-9.6	1,130	5,221	5,131	5,084	4,994	1,000	NA	NA
2014	1,086	1,164	1,084	1,161	-9.1	1,152	5,600	5,526	5,459	5,385	1,020	NA	NA
2015	1,193	1,177	1,179	1,163	-15.7	1,147	5,779	5,741	5,532	5,495	1,015	993	3.97
2016	1,169	1,181	1,151	1,163	-19.4	1,144	5,524	5,521	5,205	5,202	1,012	1,002	4.01
2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	998	3.99
2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1,004	4.02

*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 2017 and 2018 (at the Meter) – North Division

2017	Projected Savings	
Customer Class and Program	**kW**	**kWh**
Commercial		
Commercial Solutions MTP	**400**	**2,909,280**
Commercial SOP	**420**	**2,660,077**
Load Management SOP	**2,175**	**7,797**
Open MTP	**409**	**1,630,000**
SCORE/CitySmart MTP	**161**	**1,280,000**
SMART Source^{SM} Solar PV MTP	**65**	**216,280**
Residential		
Residential SOP	**1,244**	**2,630,373**
SMART Source^{SM} Solar PV MTP	**53**	**174,825**
Whisker Labs Residential DR Pilot MTP	**500**	**0**
Hard-to-Reach		
Hard-to-Reach SOP	**609**	**1,039,947**
Targeted Low-Income Energy Efficiency Program	**109**	**246,626**
Total Annual Projected Savings	**6,145**	**12,795,205**

Table 17: Projected Demand and Energy Savings by Program for Each Customer Class for 2017 and 2018 (at the Meter) – North Division (Continued)

2018	Projected Savings	
Customer Class and Program	**kW**	**kWh**
Commercial		
Commercial Solutions MTP	**400**	**2,909,280**
Commercial SOP	**420**	**2,660,077**
Load Management SOP	**2,175**	**7,797**
Open MTP	**409**	**1,630,000**
SCORE/CitySmart MTP	**161**	**1,280,000**
SMART Source[SM] Solar PV MTP	**65**	**216,280**
Residential		
Residential SOP	**1,244**	**2,630,373**
SMART Source[SM] Solar PV MTP	**53**	**174,825**
Whisker Labs Residential DR Pilot MTP	**500**	**0**
Hard-to-Reach		
Hard-to-Reach SOP	**609**	**1,039,947**
Targeted Low-Income Energy Efficiency Program	**109**	**246,626**
Total Annual Projected Savings	**6,145**	**12,795,205**

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 2017 and 2018. 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 2017 and 2018 – North Division

2017	Incentives	Admin	R&D	EM&V	Total Budget
Commercial					
Commercial Solutions MTP	**$363,660**	**$54,340**			**$418,000**
Commercial SOP	**$308,850**	**$46,150**			**$355,000**
Load Management SOP	**$87,000**	**$13,000**			**$100,000**
Open MTP	**$419,340**	**$62,660**			**$482,000**
SCORE/CitySmart MTP	**$160,080**	**$23,920**			**$184,000**
SMART Source[SM] Solar PV MTP	**$82,650**	**$12,350**			**$95,000**
Residential					
Residential SOP	**$530,700**	**$79,300**			**$610,000**
SMART Source[SM] Solar PV MTP	**$102,660**	**$15,340**			**$118,000**
Whisker Labs Residential DR MTP	**$20,010**	**$2,990**			**$23,000**
Hard-to-Reach					
Hard-to-Reach SOP	**$314,070**	**$46,930**			**$361,000**
Targeted Low-Income Energy Efficiency Program	**$287,970**	**$43,030**			**$331,000**
Research and Development					
R&D	**NAP**	**NAP**	**$200,000**		**$200,000**
Evaluation, Measurement & Verification (EM&V)					
EM&V	**NAP**	**NAP**	**NAP**	**$31,221**	**$31,221**
Total Budget	**$2,676,990**	**$400,010**	**$200,000**	**$31,221**	**$3,308,221**

Table 18: Projected Annual Budget by Program for Each Customer Class for 2017 and 2018 – North Division (Continued)

2018	Incentives	Admin	R&D		Total Budget
Commercial					
Commercial Solutions MTP	**$363,660**	**$54,340**			**$418,000**
Commercial SOP	**$308,850**	**$46,150**			**$355,000**
Load Management SOP	**$87,000**	**$13,000**			**$100,000**
Open MTP	**$419,340**	**$62,660**			**$482,000**
SCORE/CitySmart MTP	**$160,080**	**$23,920**			**$184,000**
SMART Source^{SM} Solar PV MTP	**$82,650**	**$12,350**			**$95,000**
Residential					
Residential SOP	**$530,700**	**$79,300**			**$610,000**
SMART Source^{SM} Solar PV MTP	**$102,660**	**$15,340**			**$118,000**
Whisker Labs Residential DR MTP	**$20,010**	**$2,990**			**$23,000**
Hard-to-Reach					
Hard-to-Reach SOP	**$314,070**	**$46,930**			**$361,000**
Targeted Low-Income Energy Efficiency Program	**$287,970**	**$43,030**			**$331,000**
Research and Development					
R&D	**NAP**	**NAP**	**$200,000**		**$200,000**
Evaluation, Measurement & Verification (EM&V)					
EM&V	**NAP**	**NAP**	**NAP**	**$31,209**	**$31,209**
Total Budget	**$2,676,990**	**$400,010**	**$200,000**	**$31,209**	**$3,308,209**

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

Table 8~~Table~~ 19 contains the demand and energy reduction goals and actual savings achieved for the previous five years (2012-2016) calculated in accordance with the EE Rule.

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

Calendar Year	Actual Weather Adjusted Demand Goal (MW)	Actual Weather Adjusted Energy Goal (MWh)	Savings Achieved (MW)	Savings Achieved (MWh)
2016	4.26	7,464	6.38	10,817
2015	4.26	7,464	4.54	12,289
2014	4.26	7,464	8.15	11,867
2013	4.26	7,464	6.93	9,087
2012	4.26	7,464	6.02	7,353

* Actual Weather Adjusted MW and MWh Goals as reported in the EEPRs filed in years 2012-2016.

VI. Projected, Reported and Verified Demand and Energy Savings

Table 20: Projected versus Reported and Verified Savings for 2016 and 2015 (at the Meter) – North Division

2016	Projected Savings		Reported and Verified Savings	
Customer Class and Program	**kW**	**kWh**	**kW**	**kWh**
Commercial				
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^{SM} Solar PV MTP	**83**	**160,000**	**60**	**116,480**
Residential				
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^{SM} Solar PV MTP	**79**	**151,481**	**78**	**150,848**
Hard-to-Reach				
Hard-to-Reach SOP	**231**	**733,841**	**230**	**736,447**
Targeted Low-Income Energy Efficiency Program	**88**	**186,989**	**95**	**227,901**
Total Annual Savings	**5,168**	**11,192,070**	**6,381**	**10,817,333**

Table 20: Projected versus Reported and Verified Savings for 2016 and 2015 (at the Meter) – North Division (Continued)

2015	Projected Savings		Reported and Verified Savings	
Customer Class and Program	**kW**	**kWh**	**kW**	**kWh**
Commercial				
Commercial Solutions MTP	**323**	**2,000,000**	**389**	**2,717,077**
Commercial SOP	**740**	**2,920,000**	**427**	**2,704,863**
Load Management SOP	**2,751**	**19,282**	**1,744**	**6,252**
Open MTP	**357**	**1,344,000**	**392**	**1,680,387**
SCORE/CitySmart MTP	**161**	**1,000,000**	**258**	**1,300,469**
SMART Source^{SM} Solar PV MTP	**61**	**117,000**	**101**	**194,416**
Residential				
Efficiency Connection Pilot MTP	**105**	**525,131**	**5**	**22,397**
Residential SOP	**800**	**2,451,000**	**844**	**2,624,877**
SMART Source^{SM} Solar PV MTP	**71**	**137,143**	**67**	**129,664**
Hard-to-Reach				
Hard-to-Reach SOP	**224**	**589,828**	**228**	**722,719**
Targeted Low-Income Energy Efficiency Program	**122**	**268,166**	**88**	**186,149**
Total Annual Savings	**5,715**	**11,371,550**	**4,542**	**12,289,271**

VII. Historical Program Expenditures

This section documents the North Division's incentive and administration expenditures for the previous five years (2012-2016) detailed by program for each customer class.

Table 21: Historical Program Incentive and Administrative Expenditures for 2012 through 2016 (000's) – North Division

	2016		2015		2014		2013		2012	
	Incent.	**Admin**	**Incent.**	**Admin**	**Incent.**	**Admin**	**Incent.**	**Admin**	**Incent.**	**Admin**
Commercial										
AEP Texas CARE$ Energy Efficiency for Not-for-Profit Agencies SOP	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**$52.12**	**$14.36**
Commercial Solutions MTP	**$330.00**	**$32.97**	**$410.11**	**$33.41**	**$296.58**	**$31.42**	**$177.64**	**$20.69**	**$231.71**	**$29.01**
Commercial SOP	**$187.96**	**$22.88**	**$218.53**	**$22.47**	**$196.10**	**$35.58**	**$132.02**	**$29.32**	**$64.17**	**$18.66**
Irrigation Load Management MTP	**NAP**	**NAP**	**NAP**	**NAP**	**$ 50.00**	**$ 6.59**	**$140.00**	**$18.25**	**NAP**	**NAP**
Load Management SOP	**$80.58**	**$10.52**	**$ 31.89**	**$ 3.17**	**$ 41.50**	**$ 8.64**	**$ 96.30**	**$18.30**	**$50.00**	**$11.27**
Load Management SOP – Expanded	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**$14.46**	**$3.18**
Open MTP	**$417.06**	**$47.98**	**$461.04**	**$45.24**	**$421.18**	**$48.23**	**$374.73**	**$50.56**	**NAP**	**NAP**
SCORE/CitySmart MTP	**$153.27**	**$17.41**	**$185.88**	**$16.49**	**$216.14**	**$23.49**	**$230.35**	**$26.39**	**$184.17**	**$24.48**
SMART Source^{SM} Solar PV MTP	**$49.81**	**$5.37**	**$ 60.48**	**$ 4.83**	**$ 44.29**	**$ 4.32**	**$ 67.74**	**$ 8.90**	**$79.44**	**$10.76**

(Table continued on next page)

Table 21: Historical Program Incentive and Administrative Expenditures for 2012 through 2016 (000's) – North Division (Continued)

	2016		2015		2014		2013		2012	
	Incent.	**Admin**	**Incent.**	**Admin**	**Incent.**	**Admin**	**Incent.**	**Admin**	**Incent.**	**Admin**
Residential										
A/C Distributor Pilot MTP	**NAP**	**NAP**	**NAP**	**NAP**	**$139.28**	**$21.69**	**$133.59**	**$22.28**	**$41.01**	**$9.38**
Earth Networks Residential DR Pilot	**$15.51**	**$1.49**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**
Efficiency Connection Pilot MTP	**$81.76**	**$7.59**	**$ 62.05**	**$ 10.23**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**	**NAP**
Residential SOP	**$415.69**	**$60.11**	**$445.52**	**$61.55**	**$414.45**	**$57.48**	**$364.19**	**$62.57**	**$362.49**	**$59.73**
SMART Source[SM] Solar PV MTP	**$88.34**	**$9.52**	**$100.88**	**$ 8.06**	**$102.04**	**$ 9.96**	**$ 68.73**	**$ 9.03**	**$100.70**	**$13.45**
Hard-to-Reach										
Hard-to-Reach SOP	**$162.14**	**$25.46**	**$160.19**	**$ 15.79**	**$160.60**	**$23.69**	**$177.12**	**$32.97**	**$213.45**	**$36.82**
Targeted Low-Income Energy Efficiency Program	**$255.66**	**$32.68**	**$256.02**	**$ 27.07**	**$248.23**	**$32.82**	**$251.37**	**$37.13**	**$199.29**	**$40.23**
Research and Development (R&D)	**NAP**	**$82.69**	**NAP**	**$ 86.35**	**NAP**	**$122.51**	**NAP**	**$86.56**	**NAP**	**$108.66**
Evaluation, Measurement & Verification (EM&V)	**NAP**	**$28.41**	**NAP**	**$ 43.51**	**NAP**	**$53.82**	**NAP**	**$68.34**	**NAP**	**NAP**
Total Expenditures	**$2,237.76**	**$385.08**	**$2,392.59**	**$378.19**	**$2,330.39**	**$480.24**	**$2,213.78**	**$491.29**	**$1,593.01**	**$379.99**

VIII. Program Funding for Calendar Year 2016

As shown in Table 22, the total projected budget in 2016 was $2,987,851 and the actual total funds expended in 2016 were $2,622,844, an overall total program expenditure difference of 12% from the amount budgeted.

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

The CS MTP did not expend it's full incentive budget due to a combination of some projects not being completed in time to perform the final savings validation and verification and a higher mix of measures receiving incentives at the lower tier. Regardless, higher than expected energy savings were obtained from the customers energy efficiency projects that were completed, thus exceeding the programs main driver, kWh savings.

The EarthNetworks 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 EffCon Pilot MTP was under budget due to lower than expected sales volume.

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 residential component of the PV MTP did not fully utilize its incentive budget during the program year due to lower than expected participation.

The combined 2016 expenditures for the TLIP and the HTR SOP constituted 16% of its energy efficiency budget for the 2016 Program Year. The 2016 expenditure for the TLIP constituted 10% of its energy efficiency budget for the 2016 Program Year.

Table 22: Program Funding for Calendar Year 2016 (Dollar amounts in 000's) – North Division

	Total Projected Budget [7]	Numbers of Customers Participating	Actual Funds Expended (Incentives)	Actual Funds Expended (Admin)	Research & Development	Evaluation, Measurement & Verification	Total Funds Expended
Commercial							
Commercial Solutions MTP	**$417.77**	**9**	**$330.00**	**$32.97**			**$362.97**
Commercial SOP	**$229.88**	**12**	**$187.96**	**$22.88**			**$210.84**
Load Management SOP	**$92.62**	**18**	**$80.58**	**$10.52**			**$91.10**
Open MTP	**$481.89**	**70**	**$417.06**	**$47.98**			**$465.04**
SCORE/CitySmart MTP	**$183.91**	**15**	**$153.27**	**$17.41**			**$170.68**
SMART Source^{SM} Solar PV MTP	**$94.97**	**1**	**$49.81**	**$5.37**			**$55.18**
Residential							
Earth Networks Residential DR Pilot	**$22.99**	**324**	**$15.51**	**$1.49**			**$17.00**
Efficiency Connection Pilot MTP	**$172.41**	**494**	**$81.76**	**$7.59**			**$89.34**
Residential SOP	**$482.31**	**842**	**$415.69**	**$60.11**			**$475.79**
SMART Source^{SM} Solar PV MTP	**$117.24**	**10**	**$88.34**	**$9.52**			**$97.86**
Hard-to-Reach							
Hard-to-Reach SOP	**$187.03**	**219**	**$162.14**	**$25.46**			**$187.59**
Targeted Low-Income Energy Efficiency Program	**$295.57**	**65**	**$255.66**	**$32.68**			**$288.34**
Research and Development	**$177.01**	**NAP**	**NAP**	**NAP**	**$82.69**	**NAP**	**$82.69**
EM&V							
Statewide EM&V Contractor	**$32.25**	**NAP**	**NAP**	**NAP**	**NAP**	**$28.41**	**$28.41**
Total Expenditures	**$2,987.85**	**NAP**	**$2,237.76**	**$273.97**	**$82.69**	**$28.41**	**$2,622.84**

[7] Projected Budget from the EEPR filed April 2016, Project No. 45675.

IX. Market Transformation Program Results

Commercial Solutions MTP

For 2016, the North Division projected to acquire 2,000,000 kWh of energy savings from CS MTP. The North Division verified and reported 2,220,044 kWh. This included participation by 9 customers.

EarthNetworks Residential DR Pilot MTP

The EarthNetworks Residential DR Pilot MTP goal was to acquire 500 kW demand savings. A total of 388 kW was achieved by participation of 324 residential customers in 2016.

Efficiency Connection Pilot MTP

The Efficiency Connection Pilot MTP goal was to acquire 123 kW demand savings and 659,221 kWh in energy savings. A total of 33 kW and 138,277 kWh were achieved in 2016. Reported savings included 494 customers.

Open MTP

The Open MTP goal was to acquire 380 kW demand savings and 1,344,000 kWh in energy savings. A total of 382 kW and 1,843,603 kWh were achieved in 2016. Reported savings included 70 small commercial customers and 9 participating contractors.

SCORE/CitySmart MTP

For 2016, the North Division projected to acquire 1,000,000 kWh of energy savings from this program. The North Division verified and reported 1,001,809 kWh. This included participation by 15 customers.

SMART Source^{SM} Solar PV MTP

The 2016 PV MTP projected to acquire a 162 kW in demand savings and 311,481 kWh in energy savings from the residential and non-residential components. A total of 11 residential and non-residential solar PV projects were completed within the program, resulting in a peak demand reduction of 139 kW and 267,328 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 2016.

AEP Texas dedicated resources to develop a new electronic data collection and management system for current programs. 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 September. 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. 2017 Energy Efficiency Cost Recovery Factor (EECRF)

The total amount approved to be collected through the North Division's 2017 EECRF is $1,758,574, which consists of the following components:

- recovery of $1,790,454 in energy efficiency expenses budgeted for 2017 (North Division's actual projected budget for energy efficiency expenses for 2017 is $3,277,000, which is reduced by $1,294,430 in energy efficiency costs expressly included in base rates and $192,116 of load growth);
- recovery of a performance bonus in the amount of $186,197 for achieving energy efficiency goals in Program Year 2015;
- return to customers in the amount of $203,607 in energy efficiency program costs over-collected through North Division's EECRF in 2015;
- recovery of $4,530 for 2015 EECRF proceeding expenses incurred in Docket No. 44718 by municipalities as authorized by 16 TAC § R. 25.181(f)(3)(B); and
- a settlement adjustment of $19,000 as approved in PUC Docket No. 45928.

Table 23: 2017 EECRF

Customer Class	EECRF
Residential Service	$0.000449 per kWh
Secondary Service (less than or equal to 10 kW)	($0.000154) per kWh
Secondary Service (greater than 10 kW)	$0.000485 per kWh
Primary Service	($0.000005) per kWh
Transmission Service	($0.010866) per kW

XII. 2016 EECRF Summary

2016 Collections for Energy Efficiency

The North Division collected $1,439,228 through its 2016 base rates, including $1,294,430 expressly included in base rates and an adjustment for load growth in the amount of $144,798, and $1,696,149 through its 2016 EECRF for a total of $3,135,377. A performance bonus of $888,677 for exceeding its 2014 energy efficiency goals and $283,963 returned to customers are reflected in the total amount collected for energy efficiency in 2016.

Energy Efficiency Program Costs Expended

The North Division expended a total of $2,622,844 for its 2016 energy efficiency programs. The amount expended is $365,007 less than the 2016 projected budget of $2,987,851 for energy efficiency programs.

Over-Recovery of Energy Efficiency Costs

The North Division's actual 2016 energy efficiency program costs (including EM&V costs) less municipal rate case expenses are $2,621,831 and actual energy efficiency program revenues are $2,950,566. These associated 2016 costs and revenues result in an over-recovery of energy efficiency costs of $328,735. This is the amount that the North Division will request be returned to customers within its 2018 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 2016 SOPs or MTPs. Per 16 TAC § 25.181(n) (2) (U), a list of the Underserved Counties is as follows:

- Baylor
- Crane
- Edwards
- Gillespie
- Hall
- King
- Mason
- McCullough
- Nolan
- Stephens

XIV. Performance Bonus

The North Division achieved a 6,381 kW reduction in peak demand from its energy efficiency programs offered in 2016. This achievement represents 150% of its 2016 demand reduction goal of 4,260 kW. The North Division also achieved 10,817,333 kWh, which represents 145%, 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 $556,184, which it will request within its June 1, 2017 EECRF Filing for recovery in 2018.

In 2016, the North Division's total spending on energy efficiency programs was $2,622,844. This includes actual EM&V expenditures to the EM&V contractor of $28,413. 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 2016, 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 2016 total program costs equaled $2,627,871.

Table 24: Energy Efficiency Performance Bonus Calculation for 2016 – North Division

	kW	kWh
2016 Goals	4,260	7,464,000
2016 Savings		
Reported/Verified Total (including HTR and measures with <10yr EUL)	6,381	10,817,333
Reported/Verified Hard-to-Reach	325	
2016 Program Costs	$2,627,871	
2016 Performance Bonus	$556,190	

Performance Bonus Calculation

150%	Percentage of Demand Reduction Goal Met (Reported kW/Goal kW)
145%	Percentage of Energy Reduction Goal Met (Reported kWh/Goal kWh)
TRUE	Met Requirements for Performance Bonus?
$8,189,770	Total Avoided Cost (Reported kW * PV (Avoided Capacity Cost) + Reported kWh * PV(Avoided Energy Cost))
$2,627,871	Total Program Costs
$5,561,899	Net Benefits (Total Avoided Cost - Total Expenses)

Bonus Calculation

$1,384,815	Calculated Bonus ((Achieved Demand Reduction/Demand Goal - 100%) / 2) * Net Benefits
$556,190	Maximum Bonus Allowed (10% of Net Benefits)
$556,190	Bonus (Minimum of Calculated Bonus and Bonus Limit)

Acronyms

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

Acronyms (Continued)

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

APPENDIX A:

REPORTED AND VERIFIED DEMAND AND ENERGY REDUCTION BY COUNTY

CALENDAR YEAR 2016

COMMERCIAL SOLUTIONS MTP

County	Reported Savings	
	kW	kWh
Brewster	0.98	6,394
Runnels	37.13	278,357
Taylor	41.13	323,466
Tom Green	215.03	1,611,827
Total	**294.27**	**2,220,044**

COMMERCIAL SOP

County	Reported Savings	
	kW	kWh
Childress	5.75	37,682
Hardeman	60.63	303,808
Menard	4.46	10,444
Taylor	87.37	384,063
Tom Green	142.66	993,511
Wilbarger	2.23	14,463
Total	**303.10**	**1,743,971**

EARTHNETWORKS RESIDENTIAL DR PILOT MTP

County	Reported Savings	
	kW	kWh
Callahan	4.75	N/A
Childress	6.29	N/A
Coleman	-1.52	N/A
Concho	-0.59	N/A
Crocket	-0.35	N/A
Dickens	0.02	N/A
Eastland	11.74	N/A
Fisher	0.35	N/A
Hardeman	2.43	N/A
Haskell	-1.88	N/A
Jones	-0.23	N/A
Kent	0.78	N/A
Menard	0.06	N/A
Reagan	21.22	N/A
Runnels	1.13	N/A
Schleicher	2.35	N/A
Sterling	0.76	N/A
Sutton	0.57	N/A
Taylor	177.29	N/A
Tom Green	95.41	N/A
Upton	5.60	N/A
Wilbarger	61.63	N/A
Total	**387.81**	**N/A**

EFFICIENCY CONNECTION MTP

County	Reported Savings	
	kW	kWh
Brewster	2.09	8,983
Briscoe	0.06	189
Brown	0.05	218
Callahan	1.50	6,455
Childress	0.36	1,189
Coke	0.28	1,198
Coleman	0.02	87
Cottle	0.29	944
Crockett	0.07	306
Dickens	0.11	377
Eastland	0.30	1,292
Fisher	0.31	1,311
Foard	0.21	684
Hardeman	0.23	746
Haskell	0.47	2,010
Irion	0.05	218
Jeff Davis	0.28	1,198
Jones	0.69	2,956
Kimble	0.05	218
Knox	0.32	1,047
Menard	0.22	924
Motley	0.13	440
Pecos	0.56	2,384
Presidio	0.62	2,659
Reagan	0.17	743
Reeves	0.05	218
Runnels	0.63	2,702
Schleicher	0.05	218
Shackelford	0.16	699
Sterling	0.34	1,446
Sutton	0.17	743
Taylor	12.03	51,672
Throckmorton	0.05	218
Tom Green	9.02	38,734
Upton	0.15	655
Wilbarger	0.66	2,194
Total	**32.75**	**138,275**

HARD-TO-REACH SOP

County	Reported Savings	
	kW	kWh
Coke	1.18	10,124
Taylor	135.09	451,661
Tom Green	63.99	226,254
Wilbarger	29.89	48,409
Total	**230.15**	**736,448**

LOAD MANAGEMENT SOP

County	Reported Savings	
	kW	kWh
Taylor	2,744.86	4,624
Tom Green	518.18	913
Wilbarger	114.86	230
Total	**3,377.90**	**5,767**

OPEN MTP

County	Reported Savings	
	kW	kWh
Childress	34.04	138,370
Haskell	12.95	84,811
Runnels	17.44	75,062
Taylor	178.31	883,643
Tom Green	132.99	634,970
Wilbarger	6.34	26,747
Total	**382.07**	**1,843,603**

RESIDENTIAL SOP

County	Reported Savings	
	kW	kWh
Callahan	3.97	13,028
Crockett	39.61	93,936
Irion	0.83	1,589
Jones	0.85	1,468
Reagan	17.88	41,641
Runnels	0.49	940
Shackelford	6.49	10,345
Sutton	31.89	72,925
Taylor	496.12	1,718,960
Tom Green	150.22	673,100
Wilbarger	4.14	4,254
Total	**752.49**	**2,632,186**

SCORE/CITYSMART MTP

County	Reported Savings	
	kW	kWh
Runnels	19.08	108,861
Taylor	361.38	875,965
Tom Green	6.25	16,983
Total	**386.71**	**1,001,809**

SMART SOURCE[SM] SOLAR PV MTP

County	Reported Savings	
	kW	kWh
Brewster	0.91	1,760
Callahan	7.62	14,688
Knox	8.42	16,224
Presidio	15.68	30,240
Sutton	15.24	29,376
Taylor	73.01	140,744
Tom Green	17.79	34,296
Total	**138.67**	**267,328**

TARGETED LOW-INCOME ENERGY EFFICIENCY PROGRAM

County	Reported Savings	
	kW	kWh
Brewster	0.01	41
Callahan	25.63	45,716
Concho	3.33	4,730
Fisher	2.23	3,709
Foard	1.68	1,368
Haskell	1.69	1,885
Jones	6.2	14,205
Kent	3.64	12,535
Menard	1	7,668
Presidio	1.43	3,277
Schleicher	1.24	1,587
Stonewall	3.46	11,412
Taylor	2.57	3,148
Tom Green	34.76	100,615
Upton	0.89	2,596
Wilbarger	5.47	13,409
Total	**95.23**	**227,901**

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 North Division presented an incentive check to the Chilicothe Independent School District for the installation of high efficiency LED lighting and HVAC equipment through the CSOP.

AEP Texas North Division presented the Jim Ned Consolidated Independent School District (CISD) with a cash incentive for its participation in the SCORE/CitySmart MTP. Jim Ned CISD installed high-efficiency lighting and cooling systems in two of its elementary schools.

2018 Central Division	Incentives	Admin	R&D		Total
Commercial					
Commercial Solutions MTP	$508,500	$56,500			$565,000
Commercial SOP	$1,813,500	$201,500			$2,015,000
CoolSaver© A/C Tune-up MTP (Comm)	$596,700	$66,300			$663,000
Load Management SOP	$650,700	$72,300			$723,000
OpenTargeted Small Business MTP	$793,800	$88,200			$882,000
SCORE/CS MTP	$946,800	$105,200			$1,052,000
SMART SourceSM Solar PV Pilot MTP Comm	$204,000	$22,667			$226,667
Residential					
CoolSaver© A/C Tune-up MTP (Res)	$675,000	$75,000			$750,000
Whisker Labs	$150,300	$16,700			$167,000
High Performance New Homes MTP	$765,000	$85,000			$850,000
Residential SOP	$2,666,340	$296,260			$2,962,600
SMART SourceSM Solar PV MTP	$204,000	$22,667			$226,667
Hard-to-Reach					
Hard-to-Reach SOP	$1,087,560	$120,840			$1,208,400
Targeted Low-Income Energy Efficiency Program	$1,283,400	$142,600			$1,426,000
Research and Development (R&D)					
R&D Programs			$365,125		$365,125
EM&V				$353,977	$353,977
Total Energy Efficiency Program Revenue Requirement	$12,345,600	$1,371,734	$365,125	$353,977	$14,436,436

2018	Incentives	Admin	R&D	EM&V	Total
Commercial					
Commercial Solutions MTP	$508,500	$56,500			$565,000.00
Commercial SOP	$1,813,500	$201,500			$2,015,000.00
CoolSaver AC Tune-up MTP	$596,700	$66,300			$663,000.00
Load Management SOP	$650,700	$72,300			$723,000.00
Open MTP	$793,800	$88,200			$882,000.00
SCORE/CS MTP	$946,800	$105,200			$1,052,000.00
SMART SourceSM Solar PV Pilot MTP Comm	$204,000	$22,667			$226,667.00
Residential					
CoolSaver© A/C Tune-up MTP (Res)	$675,000	$75,000			$750,000.00
Whisker Labs	$150,300	$16,700			$167,000.00
High Performance New Homes MTP	$765,000	$85,000			$850,000.00
Residential SOP	$2,666,340	$296,260			$2,962,600.00
SMART SourceSM Solar PV MTP	$204,000	$22,667			$226,667.00
Hard-to-Reach					
Hard-to-Reach SOP	$1,087,560	$120,840			$1,208,400.00
Targeted Low-Income Energy Efficiency Program	$1,283,400	$142,600			$1,426,000.00
Research and Development (R&D)					
R&D Programs	$0	$0	$365,125		$365,125.00
EM&V				$353,977	$353,977
Total Energy Efficiency Program Revenue Requirement	$12,345,600	$1,371,734	$365,125	$353,977	$14,436,436

2018 Central Division	Res	Sec < 10	Sec > 10	Primary
Commercial				
Commercial Solutions MTP		x	x	x
Commercial SOP		x	x	x
CoolSaver© A/C Tune-up MTP (Comm)		x	x	
Load Management SOP			x	x
OpenTargeted Small Business MTP		x	x	
SCORE/CS MTP		x	x	x
SMART SourceSM Solar PV Pilot MTP Comm		x	x	x
Residential				
CoolSaver© A/C Tune-up MTP (Res)	x			
Whisker Labs	x			
High Performance New Homes MTP	x			
Residential SOP	x			
SMART SourceSM Solar PV MTP	x			
Hard-to-Reach				
Hard-to-Reach SOP	x			
Targeted Low-Income Energy Efficiency Program	x			
Research and Development (R&D)				
R&D Programs	x	x	x	x
EM&V	x	x	x	x
Total Energy Efficiency Program Revenue Requirement				

	Res	Sec < 10	Sec > 10	Primary	Total
	0.5355	0.0188	0.3495	0.0962	1.0000
		0.0405	0.7524	0.2071	1.0000
2018			0.7842	0.2158	1.0000
Commercial		0.0510	0.9490		1.0000
Commercial Solutions MTP		$22,861	$425,121	$117,018	$565,000
Commercial SOP		$81,532	$1,516,140	$417,328	$2,015,000
CoolSaver AC Tune-up MTP		$33,834	$629,166		$663,000
Load Management SOP			$566,945	$156,055	$723,000
Open MTP		$45,010	$836,990		$882,000
SCORE/CS MTP		$42,566	$791,553	$217,880	$1,052,000
SMART SourceSM Solar PV Pilot MTP Comm		$9,171	$170,550	$46,945	$226,667
Residential					
CoolSaver© A/C Tune-up MTP (Res)	$750,000				$750,000
Whisker Labs	$167,000				$167,000
High Performance New Homes MTP	$850,000				$850,000
Residential SOP	$2,962,600				$2,962,600
SMART SourceSM Solar PV MTP	$226,667				$226,667
Hard-to-Reach					
Hard-to-Reach SOP	$1,208,400				$1,208,400
Targeted Low-Income Energy Efficiency Program	$1,426,000				$1,426,000
Research and Development (R&D)					
R&D Programs	$195,531	$6,862	$127,607	$35,125	$365,125
EM&V	$195,714	$6,079	$127,291	$24,894	$353,977
Total Energy Efficiency Program Revenue Requirement	$7,981,912	$247,916	$5,191,363	$1,015,245	$14,436,436
Cost less EM&V	$7,786,198	$241,837	$5,064,073	$990,351	$14,082,459
2018 Program Cost Alloc.	55.2900%	1.7173%	35.9601%	7.0325%	100.0000%

Central Division
2016 (Over)/Under Summary

Class	2016 Program + Admin Costs	2016 R&D Cost	2016 EM&V Cost	45929 Municipal Expense	2016 EE Costs	2016 EECRF Rider Revenue	2014 Performance Bonus	2014 (Over)/Under	2016 EECRF Program Revenue	2016 EE Base Revenue	2016 EE Base Adjustment	2016 Total EE Program Revenue	2016 (Over)/Under Recovery
	a	b	c	d	e=a+b+c-d	f	g	h	i=f-g-h	j	k	l=i+j+k	m=e-l
Residential	$7,323,844	$239,586	$89,932	$1,576	$7,651,786	$5,693,894	$1,544,080	($471,277)	$4,621,091	$3,024,435	$558,782	$8,204,308	($552,522)
Secondary <= 10 kW	$137,601	$2,091	$1,695	$30	$141,357	$144,496	$48,371	($9,655)	$105,780	$114,088	$16,589	$236,456	($95,099)
Secondary > 10 kW	$3,962,076	$59,976	$48,627	$852	$4,069,827	$3,378,566	$1,047,962	($595,778)	$2,926,382	$1,957,962	$280,940	$5,165,284	($1,095,457)
Primary	$1,710,173	$25,654	$20,799	$364	$1,756,262	$703,654	$195,208	$61,199	$447,247	$675,491	$43,778	$1,166,515	$589,747
Transmission	$0	$0	$0	$0	$0	-$640,629	$0	($63,685)	($576,944)	$562,892	$34,412	$20,360	($20,360)
Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$81	($81)	$0	$0
Total	$13,133,695	$327,306	$161,054	$2,822	$13,619,232	$9,279,980	$2,835,621	($1,079,196)	$7,523,555	$6,334,949	$934,419	$14,792,924	($1,173,691)

Central Division

2016 YE Program Results

5,951.38

	Incentives					Admin				
Commercial Programs	***Sec <= 10***	***Sec > 10***	***Prim***	***Res***	***Total***	***Sec <= 10***	***Sec > 10***	***Prim***	***Res***	***Total***
ComSol MTP	15,232.72	431,059.06	18,380.65		464,672.43	1,718.43	48,628.41	2,073.55		52,420.39
CSOP	15,742.43	740,346.22	1,007,255.73		1,763,344.38	1,736.26	81,654.00	111,091.88		194,482.14
CoolSaver	50,803.37	498,783.74	11,882.90		561,470.01	4,211.35	41,346.72	985.03		46,543.10
LM SOP	0.00	243,855.35	329,200.25		573,055.60	0.00	21,288.46	28,739.03		50,027.49
Open MTP	17,392.53	768,061.05	0.00		785,453.58	1,351.33	59,675.17	0.00		61,026.50
SCORE/CS MTP	823.27	786,500.51	183,779.85		971,103.63	75.19	71,831.12	16,784.62		88,690.93
SMART Source MTP - Comm	26,368.82	156,328.27	0.00		182,697.09	2,145.24	12,718.12	0.00		14,863.36
Total Commercial	126,363.14	3,624,934.20	1,550,499.38	0.00	5,301,796.72	11,237.80	337,142.00	159,674.11		508,053.91
Residential Programs										
Efficiency Connection Pilot MTP				90,158.53	90,158.53				11,197.85	11,197.85
CoolSaver				672,778.70	672,778.70				55,821.88	55,821.88
Earth Networks Res DR Pilot				123,349.85	123,349.85				9,064.79	9,064.79
HP NH				636,496.21	636,496.21				67,452.96	67,452.96
Reliant Res DR Pilot MTP				3,880.00	3,880.00				379.43	379.43
RSOP				2,591,748.29	2,591,748.29				242,540.18	242,540.18
SMART Source MTP - Res				204,806.52	204,806.52				17,431.48	17,431.48
Total Residential				4,323,218.10	4,323,218.10				403,888.57	403,888.57
Hard-to-Reach Programs										
HTR SOP				1,115,738.02	1,115,738.02				112,503.03	112,503.03
TLI EEP				1,265,056.49	1,265,056.49				103,440.18	103,440.18
Total HTR				2,380,794.51	2,380,794.51				215,943.21	215,943.21
Total Programs	**126,363.14**	**3,624,934.20**	**1,550,499.38**	**6,704,012.61**	**12,005,809.33**	**11,237.80**	**337,142.00**	**159,674.11**	**619,831.78**	**1,127,885.69**
	2.38%	*68.37%*	*29.24%*		*100%*	*0.01*	*0.30*	*0.14*	*0.55*	
	1.05%	*30.19%*	*12.91%*	*55.84%*	*100%*					
Research & Development										
EM&V -statewide contr										
Total R&D										
Total										

Central Division

	Total					R&D					Total
Commercial Programs	***Sec < 10***	***Sec > 10***	***Prim***	***Res***	***Total***	***Sec < 10***	***Sec > 10***	***Prim***	***Res***	***Total***	
ComSol MTP	16,951.15	479,687.47	20,454.20	0.00	517,092.82						517,092.82
CSOP	17,478.69	822,000.22	1,118,347.61	0.00	1,957,826.52						1,957,826.52
CoolSaver	55,014.72	540,130.46	12,867.93	0.00	608,013.11						608,013.11
LM SOP	0.00	265,143.81	357,939.28	0.00	623,083.09						623,083.09
Open MTP	18,743.86	827,736.22	0.00	0.00	846,480.08						846,480.08
SCORE/CS MTP	898.46	858,331.63	200,564.47	0.00	1,059,794.56						1,059,794.56
SMART Source Pilot MTP - Comm	28,514.06	169,046.39	0.00	0.00	197,560.45						197,560.45
Total Commercial	137,600.94	3,962,076.20	1,710,173.49	0.00	5,809,850.63						5,809,850.63
Residential Programs											
A/C Distributor Pilot MTP	0.00	0.00	0.00	101,356.38	101,356.38						101,356.38
CoolSaver	0.00	0.00	0.00	728,600.58	728,600.58						728,600.58
	0.00	0.00	0.00	132,414.64	132,414.64						132,414.64
HP NH	0.00	0.00	0.00	703,949.17	703,949.17						703,949.17
	0.00	0.00	0.00	4,259.43	4,259.43						4,259.43
RSOP	0.00	0.00	0.00	2,834,288.47	2,834,288.47						2,834,288.47
SMART Source Pilot MTP - Res	0.00	0.00	0.00	222,238.00	222,238.00						222,238.00
Total Residential	0.00	0.00	0.00	4,727,106.67	4,727,106.67						4,727,106.67
Hard-to-Reach Programs											
HTR SOP	0.00	0.00	0.00	1,228,241.05	1,228,241.05						1,228,241.05
TLI EEP	0.00	0.00	0.00	1,368,496.67	1,368,496.67						1,368,496.67
Total HTR	0.00	0.00	0.00	2,596,737.72	2,596,737.72						2,596,737.72
Total Programs	**137,600.94**	**3,962,076.20**	**1,710,173.49**	**7,323,844.39**	**13,133,695.02**						**13,133,695.02**
Research & Development											
						2,090.72	59,975.80	25,653.55	239,585.66	327,305.73	327,305.73
						1,695.12	48,627.22	20,799.40	89,931.97	161,053.71	161,053.71
Total R&D						**3,785.84**	**108,603.02**	**46,452.95**	**329,517.63**	**488,359.44**	**488,359.44**
Total						0.64%	18.32%	8%	73%		**13,622,054.46**

AEP Texas - Central Division
Adjusted Energy Efficiency Cost Recovery Factor Filing
Workpaper Schedule C

2016 Program Costs	**Sec < 10**	**Sec > 10**	**Prim**	**Res**	**Trans**	**Lighting**	**Total**
2016 Incentives	126,363.14	3,624,934.20	1,550,499.38	6,704,012.61	0.00	0.00	12,005,809.33
2016 Administrative + RCE paid in 2016	11,237.80	337,142.00	159,674.11	619,831.78	0.00	0.00	1,127,885.69
2016 R&D + EM&V	3,785.84	108,603.02	46,452.95	329,517.63	0.00	0.00	488,359.44
	141,386.78	4,070,679.22	1,756,626.44	7,653,362.02	0.00	0.00	13,622,054.46
Municipal RCE 2016	29.70	852.09	364.47	1,575.87	0.00	0.00	2,822.13
							0.00
2016 Total	141,357.08	4,069,827.13	1,756,261.97	7,651,786.15	0.00	0.00	13,619,232.33
2016 Incentives	1.05%	30.19%	12.91%	55.84%	0.00%	0.00%	100.00%
2016 Administrative	1.00%	29.89%	14.16%	54.96%	0.00%	0.00%	100.00%
2016 Total	1.04%	29.88%	12.90%	56.18%	0.00%	0.00%	100.00%
EE Costs Expressly in Base	114,088	1,957,962	675,491	3,024,435	562,892	81	6,334,949
Base Revenue Adjustment	16,589	280,940	43,778	558,782	34,412	-81	934,419
Total Base EE	130,676	2,238,903	719,268	3,583,217	597,304	0	7,269,368
2016 Program Costs	141,357	4,069,827	1,756,262	7,651,786	0	0	13,619,232
2014 Over Recovery	($9,655)	($595,778)	$61,199	($471,277)	($63,685)	0	($1,079,196)
2014 Bonus	48,371	1,047,962	195,208	1,544,080	0	0	2,835,621
Total 2016 Cost	180,073	4,522,011	2,012,669	8,724,589	($63,685)	0	15,375,657
Costs in excess of base	$49,397	$2,283,108	$1,293,401	$5,141,372	($660,989)	$0	$8,106,289
Total EECRF Rider Revenues	$144,496	$3,378,566	$703,654	$5,693,894	($640,629)	$0	$9,279,980
2016 (over)/under collection	($95,099)	($1,095,457)	$589,747	($552,522)	($20,360)	$0	($1,173,691)
Central Division	***Sec < 10***	***Sec > 10***	***Prim***	***Res***			***Total***
2016 Program Costs	141,357	4,069,827	1,756,262	7,651,786	0	0	13,619,232.33
Base	130,676	2,238,903	719,268	3,583,217	597,304	0	7,269,368.47
2016 EECRF Program Revenue	105,780	2,926,382	447,247	4,621,091	-576,944	0	7,523,555.11
Total Adj Base EE + EECRF Program Rev	236,456	5,165,284	1,166,515	8,204,308	20,360	0	14,792,923.58
(over)/under recovery	($95,099)	($1,095,457)	$589,747	($552,522)	($20,360)	$0	($1,173,691)

PUC Docket No. _____
Central Division WP/Schedules
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AEP Texas - Central Division
Adjusted Energy Efficiency Cost Recovery Factor Filing
Workpaper Schedule C

	Sec < 10	*Sec > 10*	*Prim*	*Res*	*Total*	
	1.05%	30.19%	12.91%	55.84%	100.00%	
EM&V 2016	$1,695	$48,627	$20,799	$89,932	$161,054	161,053.71
DN 45929 Muni Expenses	$30	$852	$364	$1,576	$2,822	2,822.13
Total	1,724.82	49,479.31	21,163.87	91,507.84	163,875.84	

Cental Division	
Total 2016 Costs incuding RCE & EM&V	13,622,054
less: 2016 RCE	2,822
Total Program Costs less RCE but with EM&V	13,619,232
Total Base, Adj. Base and EECRF Rider Revenues	14,792,924
Program Costs less total all 2016 revenues	-1,173,691

WP Schedule C (2016 Costs)

RIDER_GROUP_TX	JAN16 REVENUE	FEB16 REVENI	MAR16 REVEN	APR16 REVENI	MAY16 REVEN	JUN16 REVENI	JUL16 REVENI	AUG16 REVEN	SEP16 REVEN	OCT16 REVENI	NOV16_REVENUE	DEC16 REVENUE	TOT_REVENUE	2014 PERFORMANCE BONUS	2014 OVER RECOVERY	2016 EECRF PROGRAM REVENUE
(SE11A)ENERGY EFFICIENCY ADJ-RESIDENTIALSERVICE	552,077.66	439,807.15	304,558.02	333,290.53	407,514.88	516,527.43	629,302.56	635,841.21	593,978.11	509,433.55	403,159.04	368,400.10	5,693,890.24			
(SE11A)ENERGY EFFICIENCY ADJ-RESIDENTIALSERVICE	0.00	0.51	0.00	0.00	2.47	0.00	0.01	0.00	1.25	0.00	0.00	0.00	4.24			
TOTAL RESIDENTIAL	552,077.66	439,807.66	304,558.02	333,290.53	407,517.35	516,527.43	629,302.57	635,841.21	593,979.36	509,433.55	403,159.04	368,400.10	5,693,894.48	$1,544,080	($471,277)	$4,621,091
(SE11B)ENERGY EFFICIENCY ADJ-SECONDARY SER <=10KW	0.07	0.39	0.31	0.88	1.15	1.95	3.50	4.11	2.46	1.97	0.00	-0.99	15.80			
(SE11B)ENERGY EFFICIENCY ADJ-SECONDARY SER <=10KW	2,848.60	2,528.35	10,538.62	11,358.87	12,127.16	13,834.53	15,161.10	15,176.80	14,899.50	13,888.43	12,499.01	12,295.20	137,156.17			
(SE11B)ENERGY EFFICIENCY ADJ-SECONDARY SER <=10KW	176.30	164.60	637.50	655.27	653.92	716.61	746.51	735.18	735.90	708.23	678.58	715.00	7,323.60			
TOTAL SECONDARY <= 10 KW	3,024.97	2,693.34	11,176.43	12,015.02	12,782.23	14,553.09	15,911.11	15,916.09	15,637.86	14,598.63	13,177.59	13,009.21	144,495.57	$48,371	($9,655)	$105,780
(SE11C)ENERGY EFFICIENCY ADJ-SECONDARY SER > 10KW	0.50	0.00	0.00	0.00	0.98	0.61	0.00	0.00	0.00	0.00	0.00	0.00	2.09			
(SE11C)ENERGY EFFICIENCY ADJ-SECONDARY SER > 10KW	233,270.95	212,944.69	227,140.21	239,721.29	261,631.33	294,532.53	318,111.05	324,012.81	327,564.30	298,671.26	265,212.38	247,260.65	3,250,073.45			
(SE11C)ENERGY EFFICIENCY ADJ-SECONDARY SER > 10KW	11,672.31	10,551.02	10,747.89	11,791.19	11,364.69	10,526.14	11,352.92	11,132.80	10,667.56	9,955.07	9,389.15	9,339.22	128,489.96			
TOTAL SECONDARY > 10 KW	244,943.76	223,495.71	237,888.10	251,512.48	272,997.00	305,059.28	329,463.97	335,145.61	338,231.86	308,626.33	274,601.53	256,599.87	3,378,565.50	$1,047,962	($595,778)	$2,926,382
(SE11D)ENERGY EFFICIENCY ADJ-PRIMARY SERVICE	42,221.45	40,408.73	27,002.53	34,132.04	33,498.50	37,338.53	40,497.70	40,627.05	40,887.60	37,801.58	34,544.43	32,207.78	441,167.92			
(SE11D)ENERGY EFFICIENCY ADJ-PRIMARY SERVICE	27,917.93	25,393.74	19,547.13	18,299.98	19,513.65	22,212.37	22,814.76	21,930.82	22,210.09	21,725.48	19,698.26	21,221.39	262,485.60			
TOTAL PRIMARY	70,139.38	65,802.47	46,549.66	52,432.02	53,012.15	59,550.90	63,312.46	62,557.87	63,097.69	59,527.06	54,242.69	53,429.17	703,653.52	$195,208	$61,199	$447,247
(SE11E)ENERGY EFFICIENCY ADJ-TRANSMISSION SERV	-522.87	-2,290.36	-1,563.55	-1,278.17	-1,296.71	-1,691.71	-1,498.20	-1,433.06	-1,835.81	-1,851.20	-2,230.66	-2,565.70	-20,058.00			
(SE11E)ENERGY EFFICIENCY ADJ-TRANSMISSION SERV	-56,503.49	-54,671.56	-54,237.66	-50,823.31	-41,271.56	-62,064.03	-38,171.35	-49,778.41	-60,499.70	-44,761.72	-46,123.79	-61,664.38	-620,570.96			
TOTAL TRANSMISSION	-57,026.36	-56,961.92	-55,801.21	-52,101.48	-42,568.27	-63,755.74	-39,669.55	-51,211.47	-62,335.51	-46,612.92	-48,354.45	-64,230.08	-640,628.96	$0	($63,685)	($576,944)
EECRF Program Cost Revenues	813,159.41	674,837.26	544,371.00	597,148.57	703,740.46	831,934.96	998,320.56	998,249.31	948,611.26	845,572.65	696,826.40	627,208.27	9,279,980.11	$2,835,621.00	($1,079,196)	$7,523,555
														Total Base Cost + Base Rev Adj + Rider		$16,549,349
																$14,792,924

Calculation of 2018 Program Costs Class Factor

2018 Energy Efficiency Program Costs + EM&V	Schedule A	$14,436,436
Energy Efficiency Costs Included In Base Rates	Schedule B	$6,334,949
Base Revenue Adjustment	Schedule B	$934,419
2018 Program Costs Less Adjusted Base Rate Allocation	Schedule B	$7,167,068
Residential Directly Assigned 2018 Program Costs	Schedule A	7,590,667
Commercial Directly Assigned 2018 Program Costs	Schedule A	$6,126,667
Allocated R&D 2018 Program Costs	Schedule A	$365,125
2018 Energy Efficiency Program Costs	Schedule A	$14,082,459
Allocated EM&V 2018 Budget Costs	Schedule A	$353,977
Total 2018	Schedule A	$14,436,436

	(a)	(b)	(c)	(d) (b + c)	(e) (d - a)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
Class	Costs Included in Base Rates + Base Rate Adjustment	Residential / Commercial 2018 Directly Assigned Program Costs*	Allocated 2018 R&D	Total 2018 Program Costs	2018 Program Costs Less Total Base Rate Allocation	Evaluation, Measurement & Verification	2018 Program Costs Less Total Base Rate Allocation + EMV	Adjusted Class Demand Allocation Factor**	Weighted Commercial Class Allocator	2018 Forecasted Billing Unit	2018 Program Costs Factor	Unit
Residential	$3,583,217	$7,590,667	$195,531	$7,786,198	$4,202,981	$195,714	$4,398,695	53.552%	0.000%	10,008,002,742	$0.000440	kWh
Secondary <= 10 kW	$130,676	$234,975	$6,862	$241,837	$111,160	$6,079	$117,239	1.879%	4.046%	460,557,014	$0.000255	kWh
Total Secondary > 10 kW	$2,238,903	$4,936,466	$127,607	$5,064,073	$2,825,170	$127,291	$2,952,460	34.949%	75.243%	7,461,369,019	$0.000396	kWh
Total Primary	$719,268	$955,227	$35,125	$990,351	$271,083	$24,894	$295,977	9.620%	20.711%	2,605,527,521	$0.000114	kWh
Transmission	$597,304	$0	$0	$0	($597,304)	$0	($597,304)	0.000%	0.000%	14,834,694	($0.040264)	kW
Lighting	$0	$0	$0	$0	$0	$0	$0	0.000%	0.000%	223,313,089	$0.000000	kWh
Total	$7,269,368	$13,717,334	$365,125	$14,082,459	$6,813,090	$353,977	$7,167,067	100.00%	100.00%			

*Directly assigned costs include directly assigned program and directly assigned R&D costs.
**adjusted allocator based on 2018 forecasted kWh

Sponsored by: Jennifer L. Jackson

Allocation of EM&V Budget

Evaluation, Measurement &
Verification Budget To Evaluate
Program Years 2016 / 2017 $353,977

Class	EM&V	Program Cost Allocation Factor	Forecasted Billing kWh Unit	EM&V Factor	Unit
Residential	$195,714	55.290%	10,008,002,742	$0.000020	kWh
Secondary <= 10 kW	$6,079	1.717%	460,557,014	$0.000013	kWh
Secondary > 10 kW	$127,291	35.960%	7,461,369,019	$0.000017	kWh
Primary	$24,894	7.033%	2,605,527,521	$0.000010	kWh
Transmission	$0	0.000%	5,253,064,142		
Lighting	$0	0.000%	223,313,089		
Total	$353,977	100.00%	26,011,833,527		

Calculation of Performance Bonus Class Factor

2016 Earned Performance Bonus Calculation $3,492,251

Class	Performance Bonus	2016 Incentive Allocator	2018 Forecasted Billing kWh Unit	Performance Bonus Factor	Unit
Residential	$1,950,064	55.840%	10,008,002,742	$0.000195	kWh
Secondary <= 10 kW	$36,757	1.053%	460,557,014	$0.000080	kWh
Secondary > 10 kW	$1,054,421	30.193%	7,461,369,019	$0.000141	kWh
Primary	$451,009	12.915%	2,605,527,521	$0.000173	kWh
Transmission	$0	0.000%	5,253,064,142		
Lighting	$0	0.000%	223,313,089		
Total	$3,492,251	100.00%	26,011,833,527		

Sponsored by: Jennifer L. Jackson

Allocation of Municipal EECRF Proceeding Expenses

Docket Nos. 45929 Municipal Expenses $2,822

Class	Municipal Expenses	2018 Program Cost Allocation Factor	2018 Forecasted Billing kWh Unit	Municipal Expenses Factor	Unit
Residential	$1,560	55.290%	10,008,002,742	$0.0000002	kWh
Secondary <= 10 kW	$48	1.717%	460,557,014	$0.0000001	kWh
Total Secondary > 10 kW	$1,015	35.960%	7,461,369,019	$0.0000001	kWh
Total Primary	$198	7.033%	2,605,527,521	$0.0000001	kWh
Transmission	$0	0.000%	5,253,064,142		
Lighting	$0	0.000%	223,313,089		
Total	$2,822	100.00%	26,011,833,527		

Sponsored by: Jennifer L. Jackson

AEP Texas - Central Division
Adjusted Energy Efficiency Cost Recovery Factor Filing
Workpaper Schedule E

Adjusted Class Allocation Factors Workpaper

For Each Class:
AAF = ((D/BPS)*S)/Σ of the calculation for all classes

Rate Classes	Weighted Class Allocation Factor (D)	Base Period Adjusted Sales Docket No. 33309 (BPS)	2018 Forecasted Billing Unit Less ID Notice Customers (S)	(D/BPS)*S	Adjusted Class Allocation Factors (AAF)
Residential	51.88%	8,352,353,434	10,008,002,742	0.62	53.55%
Secondary <= 10 kW	1.89%	398,752,267	460,557,014	0.02	1.88%
Total Secondary > 10 kW	34.34%	6,315,671,589	7,461,369,019	0.41	34.95%
Total Primary	11.88%	2,772,665,717	2,605,527,521	0.11	9.62%
Total	100.00%	17,839,443,007	20,535,456,296	1.16	100.00%

Sponsored by: Jennifer L. Jackson

Consumer Price Index - All Urban Consumers
Original Data Value

Series Id: CUUR0300SA0,CUUS0300SA0
Not Seasonally Adjusted
Area: South urban
Item: All items
Base Period: 1982-84=100
Years: 2002 to 2015

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Increase over prior year	% increase
2002	170.6	171.0	172.1	173.1	173.2	173.5	173.6	173.8	174.2	174.9	174.9	174.6	173.3		
2003	175.1	176.4	177.5	177.4	176.8	177.2	177.3	177.9	178.3	178.1	177.5	177.5	177.3	4.000	2.31%
2004	178.2	179.1	180.1	180.9	182.0	182.9	182.6	182.6	182.8	183.7	183.7	183.3	181.8	4.500	2.54%
2005	183.6	184.7	185.9	187.3	187.3	187.8	188.5	189.4	192.0	192.5	190.7	190.1	188.3	6.500	3.58%
2006	191.5	191.8	192.8	194.7	195.5	196.3	197.0	197.1	195.8	194.7	194.3	194.8	194.7	6.400	3.40%
2007	195.021	195.950	197.904	199.618	200.804	201.675	201.571	201.041	201.697	202.155	203.437	203.457	200.361	5.661	2.91%
2008	204.510	205.060	206.676	208.085	210.006	212.324	213.304	212.387	212.650	210.108	205.559	203.501	208.681	8.320	4.15%
2009	204.288	205.343	206.001	206.657	207.265	209.343	208.819	209.000	208.912	209.292	209.738	209.476	207.845	-0.836	-0.40%
2010	210.056	210.020	211.216	211.528	211.423	211.232	210.988	211.308	211.775	212.026	211.996	212.488	211.338	3.493	1.68%
2011	213.589	214.735	217.214	218.820	219.820	219.318	219.682	220.471	220.371	219.969	219.961	219.469	218.618	7.280	3.44%
2012	220.497	221.802	223.314	224.275	223.356	223.004	222.667	223.919	225.052	224.504	223.404	223.109	223.242	4.624	2.12%
2013	223.933	225.874	226.628	226.202	226.289	227.148	227.548	227.837	227.876	227.420	226.811	227.082	226.721	3.479	1.56%
2014	227.673	228.664	230.095	231.346	231.762	232.269	232.013	231.611	231.762	231.131	229.845	228.451	230.552	3.831	1.69%
2015	226.855	227.944	229.337	229.957	230.886	232.026	231.719	231.260	230.913	230.860	230.422	229.581	230.147	-0.405	-0.18%
2016	229.469	229.646	230.977	231.975	232.906	233.838	233.292	233.561	234.069	234.337	234.029	234.204	232.692	2.545	1.11%

http://data.bls.gov/pdq/SurveyOutputServlet;jsessionid=20159F413DD97195AB3E358EDDF9654E.tc_instance5

Sponsored by: Jennifer L. Jackson

MAKE CHECKS PAYABLE TO:

CITY OF ABILENE, TEXAS

MAIL REMITTANCE TO:

ACCOUNTING DIVISION
P.O. BOX 60
ABILENE, TEXAS 79604
325-676-6265

(PLEASE RETURN THIS PORTION WITH YOUR REMITTANCE)

AEP
American Electric Power
Jennifer Frederick
910 Energy Drive
Abilene TX 79603

INVOICE NUMBER: 986784

INVOICE DATE: 8/23/16

INVOICE AMOUNT / 2,890.63

AMOUNT PAID _____

MO	YR	FUND	DEPT	DIV	SUB	ACT	REV	SUB
		100					21013	

DESCRIPTION	QTY	UNIT PRICE	INVOICE AMOUNT
Legal services rendered through 6/30/16 PUC Docket 45928, 2017 AEP TNC EECRF			2,890.63
Our Records indicate AS of 1-18-17 this invoice is still unpaid. Please remit payment.			
UTKC012601 EDN100551 cc 260/AG 280 PUC 45928		SALES TAX	
		PAY THIS AMOUNT $	2,890.63

PLEASE PAY FROM THIS INVOICE
TERMS: NET 30 DAYS
A 1 1/2% PER MONTH LATE CHARGE WILL BE ADDED TO PAST DUE ACCOUNTS

CITY OF ABILENE, TEXAS
156686

INVOICE DATE: 8/23/16

INVOICE NUMBER: 986784

2ND FOLLOW UP

Lloyd Gosselink
ATTORNEYS AT LAW

816 Congress Avenue, Suite 1900
Austin, Texas 78701
Telephone: (512) 322-5800
Facsimile: (512) 472-0532

www.lglawfirm.com

July 12, 2016

Cities Served By AEP TNC
c/o City of Abilene
Attn Odis Dolton
P.O. Box 60
Abilene, TX USA 79604

Invoice:	97474612
Client:	450
Matter:	49
Billing Attorney:	TLB

INVOICE SUMMARY

For professional services and disbursements rendered through June 30, 2016:

RE: Docket No 45928 2017 AEP TNC EECRF

Professional Services	$ 1,573.00
Total Disbursements	$ 1,317.63
TOTAL THIS INVOICE	**$ 2,890.63**

Lloyd Gosselink Rochelle & Townsend, P.C.

Abilene, City of
Docket No 45928 2017 AEP TNC EECRF
I.D.450-49-TLB

July 12, 2016
Invoice: 97474612

PROFESSIONAL SERVICES RENDERED

Date	Atty	Description Of Services Rendered	Hours
6/07/16	TLB	Call with K. Nalepa regarding filing; prepare client communication regarding filing; prepare motion to intervene; contact client regarding filing; prepare engagement agreement with consultant. (Administration/case management)	.60
6/07/16	TRL	Draft motion to intervene; draft engagement agreement with K. Nalepa; prepare protective order certification for signatures (.6 Administration).	.60
6/08/16	TLB	Review application; discuss issues with K. Nalepa; finalize protective orders. (Administration/case management)	.50
6/08/16	TRL	Communicate with Company and send Protective Order Certifications to receive copies of confidential portions of the Application; draft filing with protective order certifications (.4 Administration).	.40
6/09/16	TRL	Finalize and file protective order certifications with the PUC (.2 Administration).	.20
6/10/16	TRL	Prepare confidential information log and update with recent confidential documents received; prepare one copy of confidential information to send to K. Nalepa for consultant review (.3 Administration).	.30
6/13/16	TRL	No Charge - Setup physical case file; case/file management (.4 Administration).	.40
6/14/16	TRL	Prepare Rate Case Expense affidavit and associated backup for AEP-TNC 2016 DCRF, PUC Docket No. 44718 (.5 Administration).	.50
6/21/16	TLB	Review application and discovery; discuss strategy and issues with consultant. (Administration/case management)	1.10
6/22/16	HMW	Review and prepare RFIs for filing RFIs. (Administration/case management)	.20
6/28/16	HMW	Manage and communicate with other parties regarding deadlines. (Administration/case management)	.20
6/29/16	HMW	Review and analyze issues in case. (Administration/case management)	.40
6/30/16	TLB	Call with K. Nalepa to discuss status of case and contested issues. (Administration/case management)	.60
6/30/16	HMW	Discuss and analyze issues with K. Nalepa. (Administration/case management)	.30
6/30/16	HMW	Communicate with parties regarding changes to procedural schedule. (Administration/case management)	.30
6/30/16	PAS	No Charge - Paralegal assistant time.	.20

TOTAL PROFESSIONAL SERVICES **$ 1,573.00**

SUMMARY OF PROFESSIONAL SERVICES

Name	Staff Level	Rate	Hours	Amount	N/C Hr	N/C $
Thomas L Brocato	Principal	360.00	2.80	1,008.00	.00	.00
Hannah M Wilchar	Associate	225.00	1.40	315.00	.00	.00
Tanya R Leisey	Paralegal	125.00	2.00	250.00	.40	50.00
Paralegal Assistant	Paralegal A	.00	.00	.00	.20	7.00

Lloyd Gosselink Rochelle & Townsend, P.C.

Abilene, City of
Docket No 45928 2017 AEP TNC EECRF
I.D.450-49-TLB

July 12, 2016
Invoice: 97474612

TOTALS	**6.20**	**$ 1,573.00**	**.60**	**$ 57.00**

DISBURSEMENTS

Date	Description	Amount
6/14/16	Courier Depot Check # - 000031318 Courier, Courier Depot, 6/11/2016, 94090 - Courier Services 6/5/2016 - 6/11/2016	9.00
6/14/16	Courier Depot Check # - 000031318 Courier, Courier Depot, 6/11/2016, 94090 - Courier Services 6/5/2016 - 6/11/2016	3.00
6/14/16	Courier Depot Check # - 000031318 Courier, Courier Depot, 6/11/2016, 94090 - Courier Services 6/5/2016 - 6/11/2016	3.50
6/14/16	Courier Depot Check # - 000031318 Courier, Courier Depot, 6/11/2016, 94090 - Courier Services 6/5/2016 - 6/11/2016	7.33
	Photocopying	20.80
6/30/16	ReSolved Energy Cons Voucher # - 000085057 Consultant Services, ReSolved Energy Consulting, LLC, 7/11/2016, 3789 - For Professional Services Rendered	1,274.00

TOTAL DISBURSEMENTS **$ 1,317.63**

TOTAL THIS INVOICE **$ 2,890.63**

Customer Number
263
Invoice Number
94090
Invoice Date
6/11/2016

On Demand

Date Read / Order Type / Deliver Date	Order ID / Caller	Origin	Destination	References	
6/9/2016 12:54 PM 2 Hour Bike Delivery 6/9/2016 11:14 AM	784792.01 Pete Juarez (512) 322-5800	PUC - Central Records 1701 North Congress Avenue Roo Austin TX 78701	Lloyd Gosselink Rochelle & Tow 816 Congress Ave # 1900 Austin TX 78701	450-49/1666-28 TRL	
		2 Hour Bike Delivery	$7.00		
POD: Rodeulgez		Order Total:	$7.00		÷ 2 = $3.50
6/10/2016 8:45 AM 6 Hour 6/10/2016 10:27 AM	784889 Pete Juarez (512) 322-5800	Lloyd Gosselink Rochelle & Towns 816 Congress Ave # 1900 Austin TX 78701	Karl Nalepa- ReSloved Energy C 11044 Research Blvd Suite A-42 Austin TX 78759	TRL 450-49 &1666-28 SPLIT COST 50/50	
		6 Hour	$12.75		
		Fuel Surcharge	1 $1.91		
POD: Bob Stemper		Order Total:	$14.66		÷ 2 = $7.33
6/9/2016 8:54 AM 4 Hour Bike Delivery 6/9/2016 10:46 AM	784792 Pete Juarez (512) 322-5800	Lloyd Gosselink Rochelle & Towns 816 Congress Ave # 1900 Austin TX 78701	PUC - Central Records 1701 North Congress Avenue R Austin TX 78701	450-49/1666-28 TRL	
		4 Hour Bike Delivery	$6.00		
POD: Filed		Order Total:	$6.00		÷ 2 = $3.00
6/7/2016 2:16 PM ASAP Bike 6/7/2016 2:37 PM	784650 Pete Juarez (512) 322-5800	Lloyd Gosselink Rochelle & Towns 816 Congress Ave # 1900 Austin TX 78701	PUC - Central Records 1701 North Congress Avenue R Austin TX 78701	CLB 1666-28, 450-49 Split the cost 50/50	
		ASAP Bike	$10.00		
POD: Filed		Order Total:	$10.00		÷ 2 = $5.00
6/7/2016 3:01 PM 1 Hour Bike Delivery 6/7/2016 2:38 PM	784650.01 Pete Juarez (512) 322-5800	PUC - Central Records 1701 North Congress Avenue Roo Austin TX 78701	Lloyd Gosselink Rochelle & Tow 816 Congress Ave # 1900 Austin TX 78701	CLB 1666-28, 450-49 Split the cost 50/50	
		1 Hour Bike Delivery	$8.00		
POD: Rodriguez		Order Total:	$8.00		÷ 2 = $4.00

9.00
-5

Photocopies

450-49

Client Matter	Client Matter Descr	User	Printer	Document Name	Date Printed	Process Name	B/W Unit Cost	Total Cost	Job Type
450-49	TNC/Docket No. 4	Jill B. Penna	Riley	Copy Audit Touch	Jun 23, 2016 09:26	Copy Audit Touch	$0.10	$4.00	Copy
450-49	TNC/Docket No. 4	Tanya R. Leisey	Ferdinand	Copy Audit Touch	Jun 09, 2016 08:47	Copy Audit Touch	$0.10	$16.80	Copy

208 copies x .10 / page = **$ 20.80**

450-49

ReSolved Energy Consulting, LLC
11044 Research Blvd., Suite A-420
Austin, Texas 78759
Phone (512) 331-4949

Invoice

DATE	INVOICE NUMBER
7/11/2016	3789

BILL TO
Thomas Brocato Lloyd Gosselink 816 Congress Ave, # 1900 Austin, Tx 78701

	PROJECT		
	LG AEP TNC 16 EECRF (45928)		
DESCRIPTION	HOURS	RATE	AMOUNT
Consulting (K. Nalepa)	4.9	260.00	1,274.00
Work Completed thru - June 30, 2016		TOTAL DUE	$1,274.00

REC p. 1 of 2

Monthly Recap

Karl Nalepa

Date	Task	Hours
June 10, 2016	Download filing, Orders and discovery from interchange.	0.20
June 14, 2016	Review filing and exhibits.	0.70
June 15, 2016	Continue to review filing.	0.50
June 21, 2016	Review interchange for updates. Review response to Staff discovery. Review filing and prepare discovery.	1.50
June 22, 2016	Complete discovery and send to T. Brocato and H. Wilchar for review.	1.00
June 29, 2016	Prepare summary of issues and send to T. Brocato and H. Wilchar for review.	0.70
June 30, 2016	Call with T. Brocato and H. Wilchar to discuss filing issues.	0.30
		4.90

REC p. 2 of 2

North Division 2018	Incentives	Admin	R&D	EM&V	Total	Res	Sec <= 10	Sec > 10	Primary
Commercial									
Commercial Solutions MTP	$363,660	$54,340			$418,000		x	x	x
Commercial SOP	$308,850	$46,150			$355,000		x	x	x
Load Management SOP	$87,000	$13,000			$100,000			x	x
OpenTargeted Small Business MTP	$419,340	$62,660			$482,000		x	x	
SCORE/CitySmart MTP	$160,080	$23,920			$184,000		x	x	x
SMART SourceSM Solar PV Pilot MTP (Comm)	$82,650	$12,350			$95,000		x	x	x
Residential									
Whisker Labs	$20,010	$2,990			$23,000	x			
Residential SOP	$530,700	$79,300			$610,000	x			
SMART Source Solar PV Pilot MTP (Res)	$102,660	$15,340			$118,000	x			
Hard-to-Reach									
Hard-to-Reach SOP	$314,070	$46,930			$361,000	x			
Targeted Low Income Energy Efficiency Program	$287,970	$43,030			$331,000	x			
Research and Development (R&D)									
R&D Programs	NAP	NAP	$200,000		$200,000	x	x	x	x
EM&V				$62,430	$31,209	x	x	x	x
Total Energy Efficiency Program Revenue Requirement	$2,676,990	$400,010	$200,000	$62,430	$3,308,209				

						Res	Sec < 10	Sec > 10	Primary	Total
						0.441717	0.02445	0.3367	0.1972	1.0000
							0.0438	0.6030	0.3532	1.0000
								0.6307	0.3693	1.0000
							0.0677	0.9323		1.0000
2018	**Incentives**	**Admin**	**R&D**		**Total**					
Commercial										
Commercial Solutions MTP	$363,660	$54,340			$418,000		$18,307	$252,068	$147,625	$418,000
Commercial SOP	$308,850	$46,150			$355,000		$15,548	$214,077	$125,375	$355,000
Load Management SOP	$87,000	$13,000			$100,000			$63,065	$36,935	$100,000
OpenTargeted Small Business MTP	$419,340	$62,660			$482,000		$32,636	$449,364		$482,000
SCORE/CitySmart MTP	$160,080	$23,920			$184,000		$8,059	$110,958	$64,983	$184,000
SMART Source^{SM} Solar PV MTP	$82,650	$12,350			$95,000		$4,161	$57,288	$33,551	$95,000
Residential										
Whisker Labs	$20,010	$2,990			$23,000	$23,000				$23,000
Residential SOP	$530,700	$79,300			$610,000	$610,000				$610,000
SMART Source Solar PV Pilot MTP (Res)	$102,660	$15,340			$118,000	$118,000				$118,000
	$0	$0			$0	$0				$0
Hard-to-Reach										
Hard-to-Reach SOP	$314,070	$46,930			$361,000	$361,000				$361,000
Targeted Low Income Energy Efficiency Program	$287,970	$43,030			$331,000	$331,000				$331,000
Research and Development (R&D)										
R&D Programs	NAP	NAP	$200,000		$200,000	$88,343	$4,890	$67,333	$39,434	$200,000
Total Energy Efficiency Program	$2,676,990	$400,010	$200,000	$0	$3,277,000	$1,531,343	$83,601	$1,214,152	$447,904	$3,277,000
Evaluation, Measurement & Verification										
Evaluation, Measurement & Verification					$62,430	$29,174	$1,593	$23,131	$8,533	$62,430
Total Energy Efficiency Program					$3,277,000	$1,531,343	$83,601	$1,214,152	$447,904	$3,277,000
Total Revenue Requirement					$3,339,430	$1,560,517	$85,193	$1,237,283	$456,437	$3,339,430

Program Cost less EM&V	$1,531,343	$83,601	$1,214,152	$447,904	$3,277,000
2018 Program Cost Alloc.	46.7300%	2.5511%	37.0507%	13.6681%	100.0000%

North Division
2016 (Over)/Under Summary

Class	2016 Program + Admin Costs	2016 R&D Cost	2016 EM&V Cost	45929 Municipal Expense	2016 EE Costs	2016 EECRF Rider Revenue	2014 Performance Bonus	2014 (Over)/Under	2016 EECRF Program Revenue	2016 EE Base Revenue	2016 EE Base Adjustment	2016 Total EE Program Revenue	2016 (Over)/Under Recovery
	a	b	c	d	e=a+b+c-d	f	g	h	i=f-g-h	j	k	l=i+j+k	m=e-l
Residential	$1,155,929	$61,895	$12,939	$461	$1,230,302	$814,493	$236,684	($159,177)	$736,986	$602,913	$10,911	$1,350,811	($120,508)
Secondary <= 10 kW	$89,656	$1,378	$1,025	$37	$92,023	$16,512	$8,812	($29,093)	$36,793	$37,620	-$2,620	$71,793	$20,230
Secondary > 10 kW	$1,266,152	$19,421	$14,448	$515	$1,299,506	$906,201	$238,837	$20,765	$646,599	$476,869	$20,573	$1,144,041	$155,465
Primary	$0	$0	$0	$0	$0	-$14,284	$33,759	($164,445)	$116,401	$169,274	$112,713	$398,389	($398,389)
Transmission	$0	$0	$0	$0	$0	-$26,773	$0	($1,331)	($25,442)	$7,754	$3,221	($14,468)	$14,468
Lighting	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1	($1)	$0	$0
Total	$2,511,737	$82,694	$28,413	$1,013	$2,621,832	$1,696,148	$518,092	($333,281)	$1,511,338	$1,294,430	$144,798	$2,950,566	($328,734)

Sponsored by: Jennifer L. Jackson

North Division

2016 YE Program Results

	Incentives					Admin				
Commercial Programs	***Sec < 10***	***Sec > 10***	***Prim***	***Res***	***Total***	***Sec < 10***	***Sec > 10***	***Prim***	***Res***	***Total***
	0	0	0							0
ComSol MTP	0.00	329,999.64	0		329,999.64	0.00	32,967.16	0.00		32,967.16
CSOP	0.00	187,957.61	0		187,957.61	0.00	22,883.25	0.00		22,883.25
LM SOP	0.00	80,578.00	0		80,578.00	0.00	10,517.66	0.00		10,517.66
Open MTP	9,450.30	407,606.70	0		417,057.00	1,087.26	46,895.50	0.00		47,982.76
SCORE/CS MTP	21,495.99	131,776.67	0		153,272.66	2,441.92	14,969.70	0.00		17,411.62
SMART Source Pilot MTP - Comm	49,811.50	0.00	0		49,811.50	5,368.89	0.00	0.00		5,368.89
Total Commercial	80,757.79	1,137,918.62	0	0	1,218,676.41	8,898.07	128,233.27	0.00	0.00	137,131.34
Residential Programs										
Earth Networks Res DR Pilot				15,512.76	15,512.76				1,490.97	1,491
Efficiency Connection				81,756.82	81,756.82				7,586.41	7,586
RSOP				415,684.96	415,684.96				60,108.07	60,108
SMART Source Pilot MTP - Res				88,336.50	88,336.50				9,521.27	9,521
Total Residential				601,291.04	601,291.04				78,706.72	78,707
Hard-to-Reach Programs										
HTR SOP				162,136.27	162,136.27				25,457.06	25,457
TLI EEP				255,659.12	255,659.12				32,678.87	32,679
Total HTR				417,795.39	417,795.39	0			58,135.93	58,136
Total Programs	**80,757.79**	**1,137,918.62**	**0.00**	**1,019,086.43**	**2,237,762.84**	**8,898.07**	**128,233.27**	**0.00**	**136,842.65**	**273,973.99**
	6.63%	*93.37%*	*0.00%*		*100.00%*					
	3.61%	*50.85%*	*0.00%*	*45.54%*	*100.00%*	*3%*	*47%*	*0%*	*50%*	*100%*
Research & Development										
R&D - Programs										
R&D - EM&V Tetra Tech										
Total R&D						0				0
Total	**80,758**	**1,137,919**	**0**	**1,019,086**	**2,237,763**	**8,898**	**128,233**	**0**	**136,843**	**273,974**

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North Division	2016 YE Program Results										
	Subtotal					R&D					Total
Commercial Programs	***Sec <= 10***	***Sec > 10***	***Prim***	***Res***	***Total***	***Sec <= 10***	***Sec > 10***	***Prim***	***Res***	***Total***	
Irrigation LM MTP											0
ComSol MTP	0	362,967	0	0	362,967						362,967
CSOP	0	210,841	0	0	210,841						210,841
LM SOP	0	91,096	0	0	91,096						91,096
Open MTP	10,538	454,502	0	0	465,040						465,040
SCORE/CS MTP	23,938	146,746	0	0	170,684						170,684
SMART Source MTP - Comm	55,180	0	0	0	55,180						55,180
Total Commercial	89,656	1,266,152	0	0	1,355,808						1,355,808
Residential Programs											
A/C Distributor Pilot MTP	0	0	0	17,004	17,004						17,004
				89,343	89,343						89,343
RSOP	0	0	0	475,793	475,793						475,793
SMART Source MTP - Res	0	0	0	97,858	97,858						97,858
Total Residential				679,998	679,998						679,998
Hard-to-Reach Programs											
HTR SOP	0	0	0	187,593	187,593						187,593
TLI EEP	0	0	0	288,338	288,338						288,338
Total HTR	0			475,931	475,931						475,931
Total Programs	**89,656**	**1,266,152**	**0**	**1,155,929**	**2,511,737**						**2,511,736.83**
Research & Development											
R&D - CCET										0	0.00
R&D - SMART View IHD										0	0.00
R&D - Programs						1,378.30	19,420.97	0.00	61,894.87	82,694.14	82,694.14
R&D - EM&V						1,025	14,448	0	12,939	28,413	28,413
Total R&D	0				0	**2,404**	**33,869**	**0**	**74,834**	**111,107**	**111,107**
Total	**89,656**	**1,266,152**	**0**	**1,155,929**	**2,511,737**	**2,404**	**33,869**	**0**	**74,834**	**111,107**	**2,622,844.00**

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AEP Texas - North Division
Adjusted Energy Efficiency Cost Recovery Factor Filing
Workpaper Schedule C

2016 Program Costs	*Sec < 10*	*Sec > 10*	*Prim*	*Res*	*Trans*	*Lighting*	*Total*
2016 Incentives	80,758	1,137,919	0	1,019,086	0	0	2,237,763
2016 Administrative + RCE paid in 2015	8,898	128,233	0	136,843	0	0	273,974
2016 R&D + EM&V	2,404	33,869	0	74,834	0	0	111,107
	92,060	1,300,021	0	1,230,763	0	0	2,622,844
Municipal RCE 2016	37	515	0	461	0	0	1,013
2016 Total	92,023	1,299,506	0	1,230,302	0	0	2,621,832
2016 Incentives	3.61%	50.85%	0.00%	45.54%	0.00%	0.00%	100.00%
2016 Administrative	3.25%	46.80%	0.00%	49.95%	0.00%	0.00%	100.00%
2016 Total	3.51%	49.56%	0.00%	46.93%	0.00%	0.00%	100.00%
EE Costs Expressly in Base	37,620	476,869	169,274	602,913	7,754	1	1,294,430
Base Revenue Adjustment	-2,620	20,573	112,713	10,911	3,221	-1	144,798
Total Base EE	35,000	497,442	281,987	613,824	10,974	0	1,439,228
2016 Program Costs	92,023	1,299,506	0	1,230,302	0	0	2,621,832
2014 Over Recovery	-29,093	20,765	-164,445	-159,177	-1,331	0	-333,281
2014 Bonus	8,812	238,837	33,759	236,684	0	0	518,092
Total 2016 Cost	71,742	1,559,108	-130,685	1,307,809	-1,331	0	2,806,642
Costs in excess of base	36,741	1,061,666	-412,672	693,984	-12,305	0	1,367,414
Total EECRF Rider Revenues	16,512	906,201	-14,284	814,493	-26,773	0	1,696,148
2016 (over)/under collection	20,230	155,465	-398,389	-120,508	14,468	0	-328,734

North Division	*Sec < 10*	*Sec > 10*	*Prim*	*Res*	*Trans*	*Lighting*	*Total*
2016 Program Costs	92,023	1,299,506	0	1,230,302	0	0	2,621,832
Base	35,000	497,442	281,987	613,824	10,974	0	1,439,228
2016 EECRF Program Revenue	36,793	646,599	116,401	736,986	-25,442	0	1,511,338
Total Adj Base EE + EECRF Program Revenue	71,793	1,144,041	398,389	1,350,811	-14,468	0	2,950,566
(over)/under recovery	20,230	155,465	-398,389	-120,508	14,468	0	-328,734

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AEP Texas - North Division
Adjusted Energy Efficiency Cost Recovery Factor Filing
Workpaper Schedule C

	Sec < 10	*Sec > 10*	*Prim*	*Res*	*Total*	
	3.61%	50.85%	0.00%	45.54%	100.00%	
EM&V 2016	1,025	14,448	0	12,939	28,413	28,413.03
DN 45928 Muni	37	515	0	461	1,013	$1,012.50
Total	1,062	14,963	0	13,401	29,426	
R&D 2015	1,378	19,421	0	61,895	82,694	2,593,418

North Division	
Total 2016 Costs incuding RCE & EM&V	2,622,844
less: 2016 RCE	1,013
Total Program Costs less RCE but with EM&V	2,621,832
Total Base, Adj. Base and EECRF Rider Revenue	2,950,566
Program Costs less total all 2016 revenues	-328,734

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AEP Texas - North Division
Adjusted Energy Efficiency Cost Recovery Factor Filing
Workpaper Schedule C

RIDER_GROUP_CD	TOT 2016_REVENUE	2014 PERFORMANCE BONUS	2014 OVER RECOVERY	ADJ-COSTS IN EXCESS OF BASE (SEE ORDER)	2016 EECRF PROGRAM REVENUE
EEARS	814,492.47				
EEARS	0.09				
	814,492.56	$236,684	($159,177)	$0	$736,986
EEASL	0.03				
EEASL	12,494.31				
EEASL	2,560.47				
EEASL	1,456.75				
	16,511.56	$8,812	($29,093)	$0	$36,793
EEASG	742,989.46				
EEASG	53,797.41				
EEASG	109,414.44				
	906,201.31	$238,837	$20,765	$0	$646,599
EEAPS	-221.56				
EEAPS	-12,426.78				
EEAPS	-1,635.62				
	-14,283.96	$33,759	($164,445)	$0	$116,401
EEATS	-125.51				
EEATS	-21,473.59				
EEATS	-5,173.88				
	-26,772.98	$0	($1,331)	$0	($25,442)
	1,696,148.49	518,092.00	($333,281)	$0	$1,511,338

Total Base Cost + Base Rev Adj + Rider	$3,135,377
Program Revenue	$2,950,566

Sponsored by: Jennifer L. Jackson

Calculation of 2018 Program Costs Class Factor

2018 Energy Efficiency Program Costs + EM&V	Schedule A	$3,339,430
Energy Efficiency Costs Included In Base Rates	Schedule B	$1,439,228
2018 Program Costs Less Base Rate Allocation	Schedule B	$1,900,202
Residential Directly Assigned 2018 Program Costs	Schedule A	1,443,000
Commercial Directly Assigned 2018 Program Costs	Schedule A	1,634,000
Allocated R&D 2018 Program Costs	Schedule A	200,000
2018 Energy Efficiency Program Costs	Schedule A	3,277,000
Allocated EM&V Costs	Schedule A	62,430
Total 2018	Schedule A	3,339,430

	(a)	(b)	(c)	(d) (b + c)	(e) (d - a)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
Class	Costs Included in Base Rates + Base Rate Adjustment	Residential / Commercial 2018 Directly Assigned Program Costs*	Allocated 2018 R&D	Total 2018 Program Costs	2018 Program Costs Less Base Rate Allocation	Evaluation, Measurement & Verification	2018 Program Costs Less Total Base Rate Allocation + EMV	Adjusted Class Allocation Factor**	Weighted Commercial Class Allocator	2018 Forecasted Billing Unit Less ID Notice Customers	2018 Program Costs Factor	Unit
Residential	$613,824	$1,443,000	$88,343	$1,531,343	$917,519	$29,174	$946,692	44.172%		1,800,603,245	$0.000526	kWh
Secondary <= 10 kW	$35,000	$78,710	$4,890	$83,601	$48,600	$1,593	$50,193	2.445%	4.38%	137,366,262	$0.000365	kWh
Total Secondary > 10 kW	$497,442	$1,146,820	$67,333	$1,214,152	$716,710	$23,131	$739,841	33.666%	60.30%	1,774,615,854	$0.000417	kWh
Total Primary	$281,987	$408,470	$39,434	$447,904	$165,917	$8,533	$174,450	19.717%	35.32%	1,555,840,722	$0.000112	kWh
Transmission	$10,974	$0	$0	$0	($10,974)	$0	($10,974)	0.000%		628,025	($0.017474)	kW
Lighting	$0	$0	$0	$0	$0	$0	$0	0.000%		42,917,049	$0.000000	kWh
Total	$1,439,228	$3,077,000	$200,000	$3,277,000	$1,837,772	$62,430	$1,900,202	100.00%	100.00%	5,311,971,157		

*Directly assigned costs include directly assigned program and directly assigned R&D costs.
**adjusted allocator based on 2018 forecasted kWh

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Allocation of EM&V

Evaluation, Measurement &
Verification Budget To Evaluate
Program Years 2016 / 2017 $62,430

Class	EM&V	Program Cost Allocation Factor	2018 Forecasted Billing kWh Unit	EM&V Factor	Unit
Residential	$29,174	46.730%	1,800,603,245	$0.000016	kWh
Secondary <= 10 kW	$1,593	2.551%	137,366,262	$0.000012	kWh
Total Secondary > 10 kW	$23,131	37.051%	1,774,615,854	$0.000013	kWh
Total Primary	$8,533	13.668%	1,555,840,722	$0.000006	kWh
Transmission	$0	0.000%	171,708,986		
Lighting	$0	0.000%	42,917,049		
Total	$62,430	100.00%	5,483,052,118		

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AEP Texas North Company
Adjusted Energy Efficiency Cost Recovery Factor Filing
Workpaper Schedule E

Calculation of Performance Bonus Class Factor

2016 Earned Performance Bonus Calculation $556,190

Class	2016 Performance Bonus	2016 Performance Bonus Allocator	2018 Forecasted Billing kWh Unit	Performance Bonus Factor	Unit
Residential	$253,291	45.540%	1,800,603,245	$0.000141	kWh
Secondary <= 10 kW	$20,072	3.609%	137,366,262	$0.000146	kWh
Secondary > 10 kW	$282,827	50.851%	1,774,615,854	$0.000159	kWh
Primary	$0	0.000%	1,555,840,722	$0.000000	kWh
Transmission	$0	0.000%	171,708,986		
Lighting	$0	0.000%	42,917,049		
Total	$556,190	100.00%	5,483,052,118		

Sponsored by: Jennifer L. Jackson

Allocation of Municipal EECRF Proceeding Expenses

Docket No. 45928 Municipal Expenses $2,890.63

Class	Municipal Expenses	2018 Program Cost Allocation Factor	2018 Forecasted Billing kWh Unit	Municipal Expenses Factor	Unit
Residential	$1,351	46.730%	1,800,603,245	$0.000001	kWh
Secondary <= 10 kW	$74	2.551%	137,366,262	$0.000001	kWh
Secondary > 10 kW	$1,071	37.051%	1,774,615,854	$0.000001	kWh
Primary	$395	13.668%	1,555,840,722	$0.000000	kWh
Transmission	$0	0.000%	171,708,986	$0.000000	kWh
Lighting	$0	0.000%	42,917,049	$0.000000	kWh
Total	$2,891	100.000%	5,483,052,118		

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AEP Texas - North Division
Adjusted Energy Efficiency Cost Recovery Factor Filing
Workpaper Schedule E

Adjusted Class Allocation Factors Workpaper

For Each Class:
AAF = ((D/BPS)*S)/Σ of the calculation for all classes

Rate Classes	Weighted Class Allocation Factor (D)	Base Period Adjusted Sales Docket No. 33310 (BPS)	2018 Forecasted Billing Unit Less ID Notice Customers	(D/BPS)*S	Adjusted Class Allocation Factors (AAF)
Residential	46.83%	1,713,078,230	1,800,603,245	0.49	44.17%
Secondary <= 10 kW	2.91%	146,926,027	137,366,262	0.03	2.45%
Secondary > 10 kW	37.09%	1,754,096,115	1,774,615,854	0.38	33.67%
Primary	13.17%	932,211,277	1,555,840,722	0.22	19.72%
Total	100.00%	4,546,311,649	5,268,426,083	1.11	100.00%

Sponsored by: Jennifer L. Jackson

Consumer Price Index - All Urban Consumers
Original Data Value

Series Id: CUUR0300SA0,CUUS0300SA0
Not Seasonally Adjusted
Area: South urban
Item: All items
Base Period: 1982-84=100
Years: 2002 to 2016

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	Increase over prior year	% increase
2002	170.6	171.0	172.1	173.1	173.2	173.5	173.6	173.8	174.2	174.9	174.9	174.6	173.3		
2003	175.1	176.4	177.5	177.4	176.8	177.2	177.3	177.9	178.3	178.1	177.5	177.5	177.3	4.000	2.31%
2004	178.2	179.1	180.1	180.9	182.0	182.9	182.6	182.6	182.8	183.7	183.7	183.3	181.8	4.500	2.54%
2005	183.6	184.7	185.9	187.3	187.3	187.8	188.5	189.4	192.0	192.5	190.7	190.1	188.3	6.500	3.58%
2006	191.5	191.8	192.8	194.7	195.5	196.3	197.0	197.1	195.8	194.7	194.3	194.8	194.7	6.400	3.40%
2007	195.021	195.950	197.904	199.618	200.804	201.675	201.571	201.041	201.697	202.155	203.437	203.457	200.361	5.661	2.91%
2008	204.510	205.060	206.676	208.085	210.006	212.324	213.304	212.387	212.650	210.108	205.559	203.501	208.681	8.320	4.15%
2009	204.288	205.343	206.001	206.657	207.265	209.343	208.819	209.000	208.912	209.292	209.738	209.476	207.845	-0.836	-0.40%
2010	210.056	210.020	211.216	211.528	211.423	211.232	210.988	211.308	211.775	212.026	211.996	212.488	211.338	3.493	1.68%
2011	213.589	214.735	217.214	218.820	219.820	219.318	219.682	220.471	220.371	219.969	219.961	219.469	218.618	7.280	3.44%
2012	220.497	221.802	223.314	224.275	223.356	223.004	222.667	223.919	225.052	224.504	223.404	223.109	223.242	4.624	2.12%
2013	223.933	225.874	226.628	226.202	226.289	227.148	227.548	227.837	227.876	227.420	226.811	227.082	226.721	3.479	1.56%
2014	227.673	228.664	230.095	231.346	231.762	232.269	232.013	231.611	231.762	231.131	229.845	228.451	230.552	3.831	1.69%
2015	226.855	227.944	229.337	229.957	230.886	232.026	231.719	231.260	230.913	230.860	230.422	229.581	230.147	-0.405	-0.18%
2016	229.469	229.646	230.977	231.975	232.906	233.838	233.292	233.561	234.069	234.337	234.029	234.204	232.692	2.545	1.11%

http://data.bls.gov/pdq/SurveyOutputServlet;jsessionid=20159F413DD97195AB3E358EDDF9654E.tc_instance5

Sponsored by: Jennifer L. Jackson

MAKE CHECKS PAYABLE TO:

CITY OF ABILENE, TEXAS

MAIL REMITTANCE TO:

ACCOUNTING DIVISION
P.O. BOX 60
ABILENE, TEXAS 79604
325-676-6265

(PLEASE RETURN THIS PORTION WITH YOUR REMITTANCE)

AEP
American Electric Power
Jennifer Frederick
910 Energy Drive
Abilene TX 79603

INVOICE NUMBER: 986784

INVOICE DATE: 8/23/16

INVOICE AMOUNT / 2,890.63

AMOUNT PAID _____

MO	YR	FUND	DEPT	DIV	SUB	ACT	REV	SUB
		100					21013	

DESCRIPTION	QTY	UNIT PRICE	INVOICE AMOUNT
Legal services rendered through 6/30/16 PUC Docket 45928, 2017 AEP TNC EECRF			2,890.63
SALES TAX			
PAY THIS AMOUNT $			2,890.63

Our Records indicate AS of 1-18-17 this invoice is still unpaid. Please remit payment.

UTXC012601 EDN100551 cc 260/AG 280 PUC 45928

PLEASE PAY FROM THIS INVOICE
TERMS: NET 30 DAYS
A 1 1/2% PER MONTH LATE CHARGE WILL BE ADDED TO PAST DUE ACCOUNTS

CITY OF ABILENE, TEXAS
156686

INVOICE DATE: 8/23/16

INVOICE NUMBER: 986784

2ND FOLLOW UP

Lloyd Gosselink
ATTORNEYS AT LAW

816 Congress Avenue, Suite 1900
Austin, Texas 78701
Telephone: (512) 322-5800
Facsimile: (512) 472-0532

www.lglawfirm.com

July 12, 2016

Cities Served By AEP TNC
c/o City of Abilene
Attn Odis Dolton
P.O. Box 60
Abilene, TX USA 79604

Invoice:	97474612
Client:	450
Matter:	49
Billing Attorney:	TLB

INVOICE SUMMARY

For professional services and disbursements rendered through June 30, 2016:

RE: Docket No 45928 2017 AEP TNC EECRF

Professional Services	$ 1,573.00
Total Disbursements	$ 1,317.63
TOTAL THIS INVOICE	**$ 2,890.63**

Lloyd Gosselink Rochelle & Townsend, P.C.

Abilene, City of
Docket No 45928 2017 AEP TNC EECRF
I.D.450-49-TLB

July 12, 2016
Invoice: 97474612

PROFESSIONAL SERVICES RENDERED

Date	Atty	Description Of Services Rendered	Hours
6/07/16	TLB	Call with K. Nalepa regarding filing; prepare client communication regarding filing; prepare motion to intervene; contact client regarding filing; prepare engagement agreement with consultant. (Administration/case management)	.60
6/07/16	TRL	Draft motion to intervene; draft engagement agreement with K. Nalepa; prepare protective order certification for signatures (.6 Administration).	.60
6/08/16	TLB	Review application; discuss issues with K. Nalepa; finalize protective orders. (Administration/case management)	.50
6/08/16	TRL	Communicate with Company and send Protective Order Certifications to receive copies of confidential portions of the Application; draft filing with protective order certifications (.4 Administration).	.40
6/09/16	TRL	Finalize and file protective order certifications with the PUC (.2 Administration).	.20
6/10/16	TRL	Prepare confidential information log and update with recent confidential documents received; prepare one copy of confidential information to send to K. Nalepa for consultant review (.3 Administration).	.30
6/13/16	TRL	No Charge - Setup physical case file; case/file management (.4 Administration).	.40
6/14/16	TRL	Prepare Rate Case Expense affidavit and associated backup for AEP-TNC 2016 DCRF, PUC Docket No. 44718 (.5 Administration).	.50
6/21/16	TLB	Review application and discovery; discuss strategy and issues with consultant. (Administration/case management)	1.10
6/22/16	HMW	Review and prepare RFIs for filing RFIs. (Administration/case management)	.20
6/28/16	HMW	Manage and communicate with other parties regarding deadlines. (Administration/case management)	.20
6/29/16	HMW	Review and analyze issues in case. (Administration/case management)	.40
6/30/16	TLB	Call with K. Nalepa to discuss status of case and contested issues. (Administration/case management)	.60
6/30/16	HMW	Discuss and analyze issues with K. Nalepa. (Administration/case management)	.30
6/30/16	HMW	Communicate with parties regarding changes to procedural schedule. (Administration/case management)	.30
6/30/16	PAS	No Charge - Paralegal assistant time.	.20

TOTAL PROFESSIONAL SERVICES **$ 1,573.00**

SUMMARY OF PROFESSIONAL SERVICES

Name	Staff Level	Rate	Hours	Amount	N/C Hr	N/C $
Thomas L Brocato	Principal	360.00	2.80	1,008.00	.00	.00
Hannah M Wilchar	Associate	225.00	1.40	315.00	.00	.00
Tanya R Leisey	Paralegal	125.00	2.00	250.00	.40	50.00
Paralegal Assistant	Paralegal A	.00	.00	.00	.20	7.00

Lloyd Gosselink Rochelle & Townsend, P.C.

Abilene, City of
Docket No 45928 2017 AEP TNC EECRF
I.D.450-49-TLB

July 12, 2016
Invoice: 97474612

TOTALS	**6.20**	**$ 1,573.00**	**.60**	**$ 57.00**

DISBURSEMENTS

Date	Description	Amount
6/14/16	Courier Depot Check # - 000031318 Courier, Courier Depot, 6/11/2016, 94090 - Courier Services 6/5/2016 - 6/11/2016	9.00
6/14/16	Courier Depot Check # - 000031318 Courier, Courier Depot, 6/11/2016, 94090 - Courier Services 6/5/2016 - 6/11/2016	3.00
6/14/16	Courier Depot Check # - 000031318 Courier, Courier Depot, 6/11/2016, 94090 - Courier Services 6/5/2016 - 6/11/2016	3.50
6/14/16	Courier Depot Check # - 000031318 Courier, Courier Depot, 6/11/2016, 94090 - Courier Services 6/5/2016 - 6/11/2016	7.33
	Photocopying	20.80
6/30/16	ReSolved Energy Cons Voucher # - 000085057 Consultant Services, ReSolved Energy Consulting, LLC, 7/11/2016, 3789 - For Professional Services Rendered	1,274.00

TOTAL DISBURSEMENTS **$ 1,317.63**

TOTAL THIS INVOICE **$ 2,890.63**

Customer Number
263
Invoice Number
94090
Invoice Date
6/11/2016

On Demand

Date Read / Order Type / Deliver Date	Order ID / Caller	Origin	Destination	References	
6/9/2016 12:54 PM 2 Hour Bike Delivery 6/9/2016 11:14 AM	784792.01 Pete Juarez (512) 322-5800	PUC - Central Records 1701 North Congress Avenue Roo Austin TX 78701	Lloyd Gosselink Rochelle & Tow 816 Congress Ave # 1900 Austin TX 78701	450-49/1666-28 TRL	
		2 Hour Bike Delivery	$7.00		
POD: Rodeulgez		Order Total:	$7.00		÷ 2 = $3.50
6/10/2016 8:45 AM 6 Hour 6/10/2016 10:27 AM	784889 Pete Juarez (512) 322-5800	Lloyd Gosselink Rochelle & Towns 816 Congress Ave # 1900 Austin TX 78701	Karl Nalepa- ReSloved Energy C 11044 Research Blvd Suite A-42 Austin TX 78759	TRL 450-49 &1666-28 SPLIT COST 50/50	
		6 Hour	$12.75		
		Fuel Surcharge	1 $1.91		
POD: Bob Stemper		Order Total:	$14.66		÷ 2 = $7.33
6/9/2016 8:54 AM 4 Hour Bike Delivery 6/9/2016 10:46 AM	784792 Pete Juarez (512) 322-5800	Lloyd Gosselink Rochelle & Towns 816 Congress Ave # 1900 Austin TX 78701	PUC - Central Records 1701 North Congress Avenue Rc Austin TX 78701	450-49/1666-28 TRL	
		4 Hour Bike Delivery	$6.00		
POD: Filed		Order Total:	$6.00		÷ 2 = $3.00
6/7/2016 2:16 PM ASAP Bike 6/7/2016 2:37 PM	784650 Pete Juarez (512) 322-5800	Lloyd Gosselink Rochelle & Towns 816 Congress Ave # 1900 Austin TX 78701	PUC - Central Records 1701 North Congress Avenue Rc Austin TX 78701	CLB 1666-28, 450-49 Split the cost 50/50	
		ASAP Bike	$10.00		
POD: Filed		Order Total:	$10.00		÷ 2 = $5.00
6/7/2016 3:01 PM 1 Hour Bike Delivery 6/7/2016 2:38 PM	784650.01 Pete Juarez (512) 322-5800	PUC - Central Records 1701 North Congress Avenue Roo Austin TX 78701	Lloyd Gosselink Rochelle & Tow 816 Congress Ave # 1900 Austin TX 78701	CLB 1666-28, 450-49 Split the cost 50/50	
		1 Hour Bike Delivery	$8.00		
POD: Rodriguez		Order Total:	$8.00		÷ 2 = $4.00

9.00
-5

Photocopies

450-49

Client Matter	Client Matter Descr	User	Printer	Document Name	Date Printed	Process Name	B/W Unit Cost	Total Cost	Job Type
450-49	TNC/Docket No. 4	Jill B. Penna	Riley	Copy Audit Touch	Jun 23, 2016 09:26	Copy Audit Touch	$0.10	$4.00	Copy
450-49	TNC/Docket No. 4	Tanya R. Leisey	Ferdinand	Copy Audit Touch	Jun 09, 2016 08:47	Copy Audit Touch	$0.10	$16.80	Copy

208 copies x .10 / page = **$ 20.80**

450-49

ReSolved Energy Consulting, LLC
11044 Research Blvd., Suite A-420
Austin, Texas 78759
Phone (512) 331-4949

Invoice

DATE	INVOICE NUMBER
7/11/2016	3789

BILL TO
Thomas Brocato Lloyd Gosselink 816 Congress Ave, # 1900 Austin, Tx 78701

	PROJECT		
	LG AEP TNC 16 EECRF (45928)		
DESCRIPTION	HOURS	RATE	AMOUNT
Consulting (K. Nalepa)	4.9	260.00	1,274.00
Work Completed thru - June 30, 2016		TOTAL DUE	$1,274.00

REC p. 1 of 2

Monthly Recap

Karl Nalepa

Date	Task	Hours
June 10, 2016	Download filing, Orders and discovery from interchange.	0.20
June 14, 2016	Review filing and exhibits.	0.70
June 15, 2016	Continue to review filing.	0.50
June 21, 2016	Review interchange for updates. Review response to Staff discovery. Review filing and prepare discovery.	1.50
June 22, 2016	Complete discovery and send to T. Brocato and H. Wilchar for review.	1.00
June 29, 2016	Prepare summary of issues and send to T. Brocato and H. Wilchar for review.	0.70
June 30, 2016	Call with T. Brocato and H. Wilchar to discuss filing issues.	0.30
		4.90

REC p. 2 of 2