# **Southwestern Electric Power Company**

# **2017 Energy Efficiency Plan and Report**

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

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Project No. 46907



An AEP Company

BOUNDLESS ENERGY

INTRO	DUC	ΓΙΟΝ	3
EEPR O	ORGA	NIZATION	4
EXECU	TIVE	E SUMMARY	5
ENERG	Y EF	FICIENCY PLAN	6
I	•	2017 PROGRAMS	6
		<ul> <li>A. 2017 Program Portfolio</li> <li>B. Implementation Process</li> <li>C. Outreach Activities</li> <li>D. Description of Existing Programs</li> <li>E. New Programs for 2017</li> <li>F. Discontinued Programs</li> </ul>	7 7 8 10
I	I.	CUSTOMER CLASSES	11
Ι	II.	ENERGY EFFICIENCY GOALS AND PROJECTED SAVINGS	12
Γ	V.	PROGRAM BUDGETS	15
ENERG	Y EF	FICIENCY REPORT	17
V	7.	HISTORICAL DEMAND AND ENERGY SAVINGS GOALS FOR THE	
		PREVIOUS FIVE YEARS	17
V	/ <b>I.</b>	PROJECTED, REPORTED AND VERIFIED DEMAND AND ENERGY	
		SAVINGS	18
V	II. H	HISTORICAL PROGRAM EXPENDITURES	19
V	/III.	PROGRAM FUNDING FOR CALENDAR YEAR 2016	20
Γ	X.	MARKET TRANSFORMATION PROGRAM RESULTS	21
Х	Κ.	ADMINISTRATIVE AND RESEARCH AND DEVELOPMENT COSTS	22
X	XI.	2017 ENERGY EFFICIENCY COST RECOVERY FACTOR (EECRF)	23
Х	XII.	2016 EECRF SUMMARY	24
Х	XIII.	UNDERSERVED COUNTIES	24
Х	KIV.	PERFORMANCE BONUS	24
ACRON	IYMS	5	26
APPENI	DIX A	A: REPORTED AND VERIFIED DEMAND AND ENERGY REDUCTION	27
		BY COUNTY	27
APPENI	DIX I	3: PROGRAM TEMPLATES	30
APPENI	DIX (	C: EXISTING CONTRACTS OR OBLIGATIONS	31
APPENI	DIX I	<b>D: OPTIONAL SUPPORTING DOCUMENTATION</b>	32

## TABLE OF CONTENTS

## INTRODUCTION

Southwestern Electric Power Company (SWEPCO or Company) presents this Energy Efficiency Plan and Report (EEPR) to comply with 16 Tex. Admin. Code §§ 25.181 and 25.183 (TAC) (EE Rule), implementing Public Utility Regulatory Act (PURA) § 39.905. As mandated by this section of PURA, the EE Rule requires that each investor-owned electric utility achieve the following minimum goals through market-based standard offer programs (SOPs), targeted market transformation programs (MTPs) or other utility self-delivered programs. 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.
  - (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 electric utilities must administer their portfolio of energy efficiency programs in order to achieve their mandated annual demand reduction goals. SWEPCO's Plan enables 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 as 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.

#### **Executive Summary**

• Summarizes SWEPCO's plans for achieving its goals and projected energy efficiency savings for Program Years 2017 and 2018 and highlights SWEPCO's achievements for Program Year 2016.

#### **Energy Efficiency Plan**

- Section I describes SWEPCO's program portfolio. It details how each program will be implemented and presents related informational and outreach activities.
- Section II explains SWEPCO's targeted customer classes and describes the estimated size of each class and the method used in determining those class sizes.
- Section III presents SWEPCO's demand and energy goals and projected savings for the prescribed planning period detailed by program for each customer class.
- Section IV describes SWEPCO's proposed energy efficiency budgets for the prescribed planning period detailed by program for each customer class.

#### **Energy Efficiency Report**

- Section V documents SWEPCO's demand reduction goal for each of the previous five years (2012-2016) based on its weather-adjusted peak demand.
- Section VI compares SWEPCO's projected energy and demand savings to its reported and verified savings by program for calendar years 2015 and 2016.
- Section VII details SWEPCO's incentive and administration expenditures for each of the previous five years (2012-2016) detailed by program for each customer class.
- Section VIII compares SWEPCO's actual 2016 expenditures with its 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 deviations of more than 10% from SWEPCO's overall program budget.
- Section IX describes the results from SWEPCO's MTPs.
- Section X documents SWEPCO's Research and Development activities.
- Section XI documents SWEPCO's 2017 Energy Efficiency Cost Recovery Factor (EECRF).
- Section XII provides a summary of the 2016 EECRF.
- Section XIII documents SWEPCO's Underserved Counties.
- Section XIV describes SWEPCO's 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 Reduction by County.
- Appendix B Program Templates.
- Appendix C Existing Contracts or Obligations.
- Appendix D Optional Supporting Documentation.

## **EXECUTIVE SUMMARY**

The Energy Efficiency Plan (Plan) portion of this EEPR discusses how SWEPCO intends to achieve savings of at least a 30% reduction in its annual growth in demand of residential and commercial customers by December 31, 2017. SWEPCO's Plan addresses achieving the corresponding calculated energy savings goal, which is derived from its demand savings goal each year using a 20% conservation load factor [16 TAC § 25.181(e)(4)]. The goals, budgets, and implementation procedures that are included in this Plan are consistent with the requirements of the EE Rule, using lessons learned from past experience and customer participation in the various historical energy efficiency programs. A summary of SWEPCO's projected annual goals and budgets is presented in Table 1.

Table 1: Summary of Goals, Projected Savings (at the Meter)<sup>1</sup> and Proposed Budgets

Calendar Year	Average Growth in Demand (MW)	Average Peak Demand (MW)	Goal Metric: 30% Growth (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	-8.33	1,232	-2.50	4.93	5.6	9,811	15.30	18,797	\$4,803
2018	2.56	1,235	0.77	4.94	5.6	9,811	11.66	16,375	\$4,227

\* The 2017 and 2018 Projected Budget includes costs associated with Evaluation, Measurement & Verification costs.

The Energy Efficiency Report portion demonstrates that in 2016 SWEPCO cost-effectively implemented SOPs and MTPs as provided for by PURA §39.905. SWEPCO exceeded its demand reduction goal to be achieved by December 31, 2016 by procuring 11,939 kW of peak demand savings at a total cost of \$4,156,523. Programs in 2016 included the Commercial Solutions MTP, Commercial SOP, Hard-to-Reach SOP, Load Management SOP, On-Line Home Energy Checkup, Residential SOP, Schools Conserving Resources MTP, and the Open MTP.

<sup>&</sup>lt;sup>1</sup> Average Growth in Demand figures are from Table 4; Projected Savings from Table 5; Projected Budgets from Table 6.

## **ENERGY EFFICIENCY PLAN**

## I. 2017 PROGRAMS

### A. 2017 Program Portfolio

SWEPCO has implemented a variety of programs in 2017 to enable the Company to meet its goals in a manner that complies with PURA § 39.905 and the EE Rule. These programs target broad market segments and specific market sub-segments with significant opportunities for cost-effective energy savings.

Table 2 below summarizes SWEPCO's programs and targeted customer class markets for Program Year 2017. The programs are described in further detail in Subsections B through E. SWEPCO maintains a web site containing all of the requirements for energy efficiency service provider (EESP) or project sponsor participation, forms required for project submission, and links to the program manuals at <u>www.swepcogridsmart.com</u>. This site is the primary method of communication to provide program updates and information to customers, potential EESPs, and other interested parties.

Program	Target Market	Application	Link to Program Manual
Commercial Solutions Market Transformation Program	Commercial	Retrofit New Construction	http://www.swepcogridsmart.com/t exas/contractor-center.html
Commercial Standard Offer Program	Commercial	Retrofit New Construction	http://www.swepcogridsmart.com/t exas/contractor-center.html
Hard-to-Reach Standard Offer Program	Residential Income-Qualified	Retrofit	http://www.swepcogridsmart.com/t exas/contractor-center.html
LED Retail Pilot Program	Residential	Retrofit	http://www.swepcogridsmart.com/t exas/residential-overview.html
Load Management Standard Offer Program	Commercial	Retrofit	http://www.swepcogridsmart.com/t exas/contractor-center.html
On-Line Home Energy Checkup	Residential	Education	https://www.swepco.com/save/resi dential/calculate/OnlineEnergyChe ckup.aspx
Open Market Transformation Program	Commercial	Retrofit	http://www.swepcogridsmart.com/t exas/contractor-center.html
Residential Standard Offer Program	Residential	Retrofit	http://www.swepcogridsmart.com/t exas/contractor-center.html
Schools Conserving Resources Market Transformation Program	Commercial	Retrofit New Construction	http://www.swepcogridsmart.com/t exas/contractor-center.html

Table 2: 2017 Energy Efficiency Program Portfolio

### **B.** Implementation Process

Market Transformation Programs (MTPs) are managed by third-party implementers. These program 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 with specialized education, training/certification and tools as necessary. Implementers validate proposed measures and projects, perform quality assurance/quality control, and verify and report savings derived from the program.

Standard Offer Programs (SOPs) are administered by utility with project sponsors providing eligible program measures. Project sponsors are usually EESPs or SWEPCO customers. A SWEPCO customer can act as an EESP if it is a commercial customer with a peak load equal to or greater than 50 kW. SWEPCO monitors projects being submitted so as to not accept duplicate enrollments.

## C. Outreach Activities

Various outreach activities are conducted, depending on the targeted program. Many of these activities are the same for several programs. For this reason, SWEPCO's outreach activities are grouped together below.

- Maintain internet web site with detailed project eligibility, end-use measures, incentives, procedures, and application forms;
- Utilize mass e-mail notifications to inform and update potential project sponsors on SWEPCO energy efficiency program opportunities;
- Participate in local, regional, and industry-related outreach activities as may be necessary;
- Target SWEPCO customers with demand and energy savings opportunities;
- Conduct workshops, as necessary, to explain the program, project sponsor implementation, reporting requirements, and incentive information;
- Contract with a third-party implementer to conduct outreach, planning activities and recruit additional subcontractors;
- Conduct specific project sponsor training sessions, as necessary, based on the energy efficiency programs being implemented; and
- Facilitate media opportunities to spotlight successful projects and/or interesting stories as applicable.

Additional outreach activities occur as the opportunity arises.

## D. Description of Existing Programs

#### **Commercial Solutions Market Transformation Program (CS MTP)**

SWEPCO's CS MTP targets commercial customers (other than public schools) served by SWEPCO that do not have the in-house capability or 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. The CS MTP facilitates the identification of demand and energy savings opportunities, general operating characteristics, long-range energy efficiency planning, and overall measure acceptance by the targeted customers. Incentives are paid to EESPs or 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 (other than public schools) of all sizes, providing incentives for new construction and retrofit installation of measures that reduce demand and save energy in non-residential facilities. The CSOP encourages electric energy efficiency improvements that go above and beyond the efficiency gains typically achieved in retrofit or replacement projects. Energy and demand savings credit will be based only on reductions that exceed current state and federal minimum efficiency standards, if such standards apply. Incentives are paid to EESPs or customers on the basis of deemed savings or verified demand and energy savings.

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

The HTR SOP targets residential customers in existing homes with total annual household incomes at or below 200% of current federal poverty guidelines and who have properly completed a Public Utility Commission of Texas (PUCT) approved income verification form, or who have been designated as HTReligible through another PUCT-approved verification methodology. 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 regarding energy conservation behavior is provided by materials 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 on measured and verified demand reduction of curtailed loads during the summer peak period. Load management events are dispatched by SWEPCO, using a one-hour-ahead notice for load reduction periods of one to four hours duration.

### **On-Line Home Energy Checkup (Home Energy Checkup)**

The Home Energy Checkup is designed to provide a web-based, do-it-yourself home energy audit that equips residential customers with valuable information to help them manage their energy use and cost. Internet access and a valid SWEPCO Texas account number are required. The tool provides functionality that produces a printer-friendly report that:

- Factors in weather and local electricity prices;
- Uses the customer's actual historic energy usage in savings calculations;
- Estimates monthly and annual energy usage and costs; and
- Provides customized energy saving recommendations and potential savings for implemented measures.

At this time, it is not anticipated that SWEPCO will report savings associated with the use of this Home Energy Checkup.

## **Open Market Transformation Program (Open MTP)**

The Open MTP has been developed to offer energy efficiency services to small commercial customers with peak demands less than 100 kW. This customer group is the segment least served by SWEPCO's SOPs or MTPs. The Open MTP is designed to overcome barriers unique to small commercial customers that prevent them from participating in energy efficiency programs proven to be successful for larger business owners. These barriers include:

- Minimal technical knowledge among small business owners;
- Concerns about performance uncertainty and hidden costs;
- Owner/tenant challenges;
- Lack of capital, expertise, and staff; and
- Adequate information or the ability to research costs.

To overcome these barriers, the program offers a "turnkey" approach in which marketing, energy education, site-specific energy analysis, financial incentives, equipment procurement, and installation can be provided.

## **Residential Standard Offer Program (RSOP)**

The RSOP targets residential customers in existing single and multi-family homes that are over two years old. Incentives are paid to project sponsors for eligible measures installed in retrofit applications that result in verified demand and energy savings.

## Schools Conserving Resources Market Transformation Program (SCORE MTP)

The SCORE MTP provides energy efficiency and demand reduction solutions for public and private educational entities grades K-12 as well as colleges and universities. This program is designed to help educate and assist these customers in lowering their energy use by integrating energy efficiency into their short- and long-term planning, budgeting, and operational practices. The program assists with the

identification of demand and energy savings opportunities, provides detailed energy use, detailed building operational characteristics, and provides long-range energy efficiency planning. Incentives are paid to participating customers for eligible energy efficiency measures that are installed in new or retrofit applications that provide verifiable demand and energy savings.

## E. New Programs for 2017

For 2017, SWEPCO will add a residential LED point of purchase program. The Residential Lighting Pilot program is an Upstream LED Lighting Markdown program designed to achieve residential energy savings. The program increases awareness and sales of ENERGY STAR® qualified LEDs through financial incentives delivered directly to customers via a reduction in cost at the retailers' point of purchase. This program delivery model aims to minimize market and partner confusion, decrease overall costs, increase cost-effectiveness and improve customer experience.

## F. Discontinued Programs

SWEPCO has no discontinued programs for 2017.

## **II.** CUSTOMER CLASSES

SWEPCO's energy efficiency programs target residential and commercial customer classes. SWEPCO's energy efficiency programs also target customer sub-classes, including Low-Income and Schools. 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)(A). Table 3 summarizes the number of active customers in each eligible customer class at SWEPCO in the month of January 2017. It should be noted that the actual distribution of the annual goal to be achieved 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 SWEPCO's mandated demand reduction goal in total. SWEPCO offers a varied portfolio of SOPs and MTPs such that all eligible customer classes have access to energy efficiency alternatives.

Customer Class	Number of Customers
Commercial	35,087
Residential	149,482
Hard-to-Reach <sup>2</sup>	52,319*

**Table 3: Summary of Customer Classes** 

\* The Hard-to-Reach customer count is a subset of the Residential total.

<sup>&</sup>lt;sup>2</sup> According to the U.S. Census Bureau's 2015 Current Population Survey, 35% of Texas families fall below 200% of the poverty threshold. Applying that percentage to SWEPCO's residential customer base of 149,382, the number of HTR customers is estimated to be 52,319.

## III. ENERGY EFFICIENCY GOALS AND PROJECTED SAVINGS

As prescribed by the EE Rule, SWEPCO's annual demand reduction goal is specified as a percent of its historical, weather-normalized, five-year average growth in demand. SWEPCO's 2017 goal is calculated based upon the average annual growth in peak demand for the years 2011 through 2015, inclusive (the most recent historical load growth data available). SWEPCO's 2018 goal is calculated based upon the average annual growth in peak demand for the years 2012 through 2016, inclusive (the most recent historical load growth data available).

SWEPCO's demand reduction goal to be achieved is prescribed by the EE Rule to be at least 30% of this calculated annual growth in demand of residential and commercial customers. The corresponding annual energy savings goal is determined by applying a 20% conservation load factor to the applicable demand reduction goal for the Program Year. A utility's demand reduction goal in megawatts for any year cannot be less than the previous year's goal.

Table 4 presents the actual historical annual growth in demand for the previous five years used to calculate SWEPCO's goals.

	Peak Demand (MW) @ Source				Energy Consumption (MWh) @ Meter			Energy Efficiency Goal Calcuations @ Meter							
	Total S	System	]	Residential &	commercia	ıl	Total S	System		ntial & 1ercial		Energy Entency Goar Calculations @ Meter			
Calendar Year	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	Load Growth at Meter	5 year Average Growth at Meter	30% Growth at Meter	
2011	1,636	1,557	1,531	1,452	-109	1,343	7,544	7,335	5,855	5,647	1,241	15.70	NA	NA	
2012	1,696	1,631	1,556	1,491	-109	1,382	7,521	7,457	5,527	5,462	1,277	36.02	NA	NA	
2013	1,567	1,603	1,396	1,432	-104	1,328	7,588	7,572	5,503	5,486	1,227	-49.88	NA	NA	
2014	1,511	1,626	1,328	1,442	-106	1,336	7,798	7,823	5,505	5,530	1,234	7.39	NA	NA	
2015	1,607	1,579	1,428	1,399	-118	1,281	7,893	7,844	5,896	5,847	1,183	-50.86	NA	NA	
2016	1,488	1,543	1,411	1,466	-109	1,357	7,076	7,067	5,302	5,294	1,253	70.15	NA	NA	
2017	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-8.33	-2.50	
2018	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.56	0.77	

## Table 4: Annual Growth in Demand and Energy Consumption

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

Table 5 presents the projected demand reduction and energy savings, by program, for each customer class and for each of the years 2017 and 2018. Projected savings reflect the estimated demand and energy savings that SWEPCO's programs are expected to achieve with fully-developed program budgets for each of the years shown.

2017	Projected Savings			
Customer Class and Program	Demand (kW)	Energy (k Wh)		
Commercial	11,844	11,575,108		
Commercial Solutions MTP	441	2,042,664		
Commercial SOP	960	6,174,799		
Load Management SOP	9,653	115,658		
Open MTP	251	1,029,100		
SCORE MTP	539	2,212,886		
Residential	1,997	4,636,121		
LED Retail Pilot	203	1,588,000		
Residential SOP	1,794	3,048,121		
Hard-to-Reach Residential	1,465	2,586,260		
Hard-to-Reach SOP	1,465	2,586,260		
Total Annual Projected Savings	15,305	18,797,489		

Table 5: Projected Demand and Energy Savings by Program for Each Customer ClassFor 2017 and 2018 (at the Meter)

2018	Projected Savings			
Customer Class and Program	Demand (kW)	Energy (kWh)		
Commercial	8,617	9,887,109		
Commercial Solutions MTP	441	2,042,664		
Commercial SOP	703	4,522,388		
Load Management SOP	6,683	80,071		
Open MTP	251	1,029,100		
SCORE MTP	539	2,212,886		
Residential	1,829	4,350,917		
LED Retail Pilot	203	1,588,000		
Residential SOP	1,626	2,762,917		
Hard-to-Reach Residential	1,210	2,137,405		
Hard-to-Reach SOP	1,210	2,137,405		
Total Annual Projected Savings	11,656	16,375,431		

## **IV. PROGRAM BUDGETS**

Table 6 presents total projected budget allocations required to meet SWEPCO's 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 among customer classes, and the incentive levels by customer class. Table 6 budget allocations are detailed by customer class, program, and in the following budget categories: incentive payments; administration; research and development (R&D); and evaluation, measurement and verification (EM&V).

2017	Incentives	Admin	R&D & EM&V	Total
Commercial	\$1,935,000	\$286,026	\$0	\$2,221,026
Commercial Solutions MTP	\$325,000	\$44,318		\$369,318
Commercial SOP	\$710,000	\$125,294		\$835,294
Load Management SOP	\$325,000	\$44,318		\$369,318
SCORE MTP	\$325,000	\$44,318		\$369,318
Open MTP	\$250,000	\$27,778		\$277,778
Residential	\$1,220,500	\$176,930	\$0	\$1,397,430
On-Line Home Energy Checkup	\$55,000	\$9,706		\$64,706
LED Retail Pilot	\$310,500	\$16,342		\$326,842
Residential SOP	\$855,000	\$150,882		\$1,005,882
Hard-to-Reach Residential	\$847,000	\$149,688	\$0	\$996,688
Hard-to-Reach SOP	\$847,000	\$149,688		\$996,688
Research & Development			\$125,000	\$125,000
TOTAL PROGRAM BUDGET	\$4,002,500	\$612,644	\$125,000	\$4,740,144
EM&V			\$62,733	\$62,733
TOTAL BUDGET	\$4,002,500	\$612,644	\$187,733	\$4,802,877

## Table 6: Projected Annual Budget by Program for Each Customer Class

2018	Incentives	Admin	R&D & EM&V	Total
Commercial	\$1,615,000	\$283,078	\$0	\$1,898,078
Commercial Solutions MTP	\$310,000	\$57,353		\$367,353
Commercial SOP	\$520,000	\$100,888		\$620,888
Load Management SOP	\$225,000	\$39,706		\$264,706
SCORE MTP	\$310,000	\$57,353		\$367,353
Open MTP	\$250,000	\$27,778		\$277,778
Residential	\$1,130,000	\$187,380	\$0	\$1,317,380
On-Line Home Energy Checkup	\$55,000	\$9,706		\$64,706
Residential Pilot	\$300,000	\$40,909		\$340,909
Residential SOP	\$775,000	\$136,765		\$911,765
Hard-to-Reach Residential	\$700,000	\$123,529	\$0	\$823,529
Hard-to-Reach SOP	\$700,000	\$123,529		\$823,529
Research & Development			\$125,000	\$125,000
TOTAL PROGRAM BUDGET	\$3,445,000	\$593,987	\$125,000	\$4,163,987
EM&V			\$62,740	\$62,740
TOTAL BUDGET	\$3,445,000	\$593,987	\$187,740	\$4,226,727

# **ENERGY EFFICIENCY REPORT**

# V. HISTORICAL DEMAND AND ENERGY SAVINGS GOALS FOR THE PREVIOUS FIVE YEARS

Table 7 contains SWEPCO's actual demand and energy goals and actual savings achieved for the previous five years (2012-2016) calculated in accordance with the EE Rule.

Calendar Year	Actual Weather Adjusted Demand Goal (MW)	Actual Weather Adjusted Energy Goal (MWh)	Actual Demand Reduction (MW)	Actual Energy Savings (MWh)
2012	5.60	9,811	13.33	19,078
2013	5.60	9,811	14.07	18,778
2014	5.60	9,811	12.58	17,494
2015	5.60	9,811	9.88	15,262
2016	5.60	9,811	11.94	20,648

 Table 7: Historical Demand and Energy Goals\* and Savings Achieved

\* Actual weather-adjusted MW and MWh goals as reported in SWEPCO's EEPRs filed in years 2012-2016.

## VI. PROJECTED, REPORTED AND VERIFIED DEMAND AND ENERGY SAVINGS

2016	Projecte	d Savings	Reported and Verified Savings		
Customer Class and Program	kW	kWh	kW	kWh	
Commercial	8,636	11,518,596	8,953	11,299,350	
Commercial Solutions MTP	423	2,077,826	456	2,489,513	
Commercial SOP	1,200	6,307,200	842	5,413,907	
Load Management SOP	6,250	68,989	6,935	83,251	
Open MTP	231	1,355,775	236	1,082,679	
SCORE M TP	532	1,708,806	484	2,230,001	
Residential	1,611	4,232,708	1,769	5,412,215	
Residential SOP	1,611	4,232,708	1,769	5,412,215	
Hard-to-Reach Residential	1,208	3,173,815	1,217	3,936,540	
Hard-to-Reach SOP	1,208	3,173,815	1,217	3,936,540	
Total Annual Savings	11,455	18,925,119	11,939	20,648,105	

# Table 8: Projected versus Reported and Verified Savings for 2016 and 2015(at the Meter)

2015	Projecte	ed Savings	Reported and Verified Savings		
Customer Class and Program	kW	kWh	kW	kWh	
Commercial	6,869	7,517,157	7,345	7,939,404	
Commercial Solutions MTP	353	1,731,522	313	2,138,986	
Commercial SOP	842	2,950,737	625	3,794,817	
Load Management SOP	5,000	55,118	5,883	60,392	
Open MTP	231	1,355,775	215	893,807	
SCORE M TP	443	1,424,005	310	1,051,403	
Residential	1,640	2,943,967	1,694	4,857,599	
CoolSaver MTP	241	493,754	242	567,174	
Residential SOP	1,399	2,450,213	1,452	4,290,425	
Hard-to-Reach Residential	773	1,354,754	837	2,464,948	
Hard-to-Reach SOP	773	1,354,754	837	2,464,948	
Total Annual Savings	9,282	11,815,878	9,876	15,261,951	

## VII. HISTORICAL PROGRAM EXPENDITURES

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

	20	16	20	15	20	14	20	13	20	12
Commercial	Incent	Admin								
CS MTP	\$307.77	\$43.71	\$237.46	\$40.72	\$523.45	\$59.24	\$263.40	\$48.20	\$165.50	\$27.20
CSOP	\$622.51	\$118.23	\$329.17	\$85.75	\$331.42	\$87.27	\$469.50	\$110.40	\$337.80	\$56.00
CoolSaverSM MTP	NAP	NAP								
LED Lighting Pilot MTP	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP	\$13.20	\$1.00
Load Management SOP	\$187.79	\$31.00	\$145.26	\$25.42	\$256.11	\$42.39	\$229.50	\$37.00	\$250.90	\$32.00
Open MTP	\$249.99	\$28.43	\$249.67	\$33.12	\$380.25	\$47.74	\$409.90	\$38.50	\$270.20	\$31.80
SCORE MTP	\$284.58	\$44.18	\$209.54	\$37.76	\$251.38	\$34.11	\$344.10	\$51.80	\$306.40	\$39.00
SMART SourceSM MTP	NAP	NAP	NAP	NAP	NAP	NAP	\$151.80	\$14.50	NAP	NAP
SWEPCO Care\$	NAP	NAP	NAP	NAP	NAP	NAP	\$7.20	\$0.80	\$88.10	\$12.10
Residential										
Appliance Rebate Pilot MTP	NAP	NAP	NAP	NAP	\$9.74	\$0.89	\$89.60	\$9.80	NAP	NAP
CoolSaverSM MTP	NAP	NAP	\$151.03	\$13.38	\$152.65	\$19.02	\$164.40	\$17.00	\$222.70	\$26.00
Home Energy Checkup	NAP	NAP	NAP	NAP	\$7.80	\$0.71	\$8.50	\$0.70	\$7.80	\$1.40
RSOP	\$989.96	\$80.52	\$809.46	\$85.07	\$630.76	\$92.54	\$765.10	\$102.90	880.6	\$123.50
SMART SourceSM MTP	NAP	NAP	NAP	NAP	NAP	NAP	\$84.80	\$8.10	\$132.90	\$14.50
Hard-to-Reach Residential										
HTR SOP	\$864.97	\$70.95	\$584.98	\$65.07	\$562.36	\$80.54	\$605.30	\$86.20	\$899.20	\$123.30
Home\$avers	NAP	NAP	NAP	NAP	NAP	NAP	\$386.50	\$37.00	\$371.60	\$33.90
R & D	NAP	\$174.82	NAP	\$108.17	NAP	\$112.06	NAP	\$101.80	NAP	\$52.70
Evaluation, Measurement & Verification	NAP	\$57.11	NAP	\$78.82	NAP	\$108.18	NAP	\$120.50	NAP	NAP
Total Expenditures	\$3,507.57	\$648.95	\$2,716.57	\$573.26	\$3,105.90	\$684.68	\$3,979.60	\$785.20	\$3,946.90	\$574.40

Table 9. Historical Program Incentive and Adm	ninistrative Expenditures for 2012 through 2016 (\$000's)
Table 3. Instorical Flogram incentive and Aun	mistrative Experiatures for 2012 tillough 2010 (\$000 s)

## VIII. PROGRAM FUNDING FOR CALENDAR YEAR 2016

As shown in Table 10, the Total Projected Budget for 2016 was \$4,242,268. Total Funds Expended for 2016 were \$4,156,523. The LMSOP was under budget by more than 10% due to lower than expected participation levels.

2016	Number of Participating ESI ID Accounts	Total Projected Budget	Actual funds Expended (Incentives)	Admin	EM&V	Total funds Expended
Commercial	137	\$ 1,928,104	\$ 1,652,629	\$ 265,551		\$ 1,918,180
Commercial Solutions MTP	22	333,333	307,772	43,713		\$ 351,485
Commercial SOP	30	705,882	622,510	118,225		\$ 740,735
Load Management SOP	7	277,778	187,785	31,004		\$ 218,789
Open MTP	62	277,778	249,985	28,427		\$ 278,412
SCORE MTP	16	333,333	284,577	44,182		\$ 328,759
Residential	1,214	\$ 1,161,695	\$ 989,963	\$ 80,520		\$ 1,070,484
Residential SOP	1,214	1,161,695	989,963	80,520		\$ 1,070,484
Hard-to-Reach Residential	982	\$ 1,014,240	\$ 864,974	\$ 70,948		\$ 935,922
Hard-to-Reach SOP	982	1,014,240	864,974	70,948		\$ 935,922
Total Program Expenditures		\$ 4,104,039	\$ 3,507,567	\$ 417,019		\$ 3,924,586
Research & Development		73,409		174,823		\$ 174,823
EM&V		64,820			57,114	\$ 57,114
Total Expenditures	2,333	\$ 4,242,268	\$ 3,507,567	\$ 591,842	\$ 57,114	\$ 4,156,523

Table 10: Program Funding for Calendar Year 2016

## IX. MARKET TRANSFORMATION PROGRAM RESULTS

#### SCORE MTP

The SCORE MTP that is implemented by a third party contractor provided non-cash incentives, such as building energy analyses, technical assistance, communications support, and monetary incentives for the installation of documented energy efficiency measures that reduce peak demand and energy use. In 2016, SWEPCO projected to acquire 532 kW in demand savings from this program. SWEPCO has verified and reported savings of 484 kW. This included participation by 16 customers in ten counties.

#### **Commercial Solutions MTP**

SWEPCO contracted with a third-party program implementer for the Commercial Solutions MTP to provide commercial facilities non-cash incentives, such as technical assistance to identify energy efficiency opportunities, education in promoting best practices, and communication support services. Program participants received cash incentives for the installation of documented energy efficiency measures that reduced peak demand and energy consumption. For 2016, SWEPCO projected to acquire 423 kW of demand savings from this program. SWEPCO's verified and reported results are 456 kW. This included participation by 22 customers in eleven different counties.

#### **Open MTP**

The Open MTP contractor provided small commercial customers with less than 100 kW demand non-cash incentives such as technical assistance to identify energy efficiency opportunities and education in promoting best practices. The direct install program provided a turn-key approach providing participants cash incentives for the installation of documented energy efficiency measures that reduced peak demand and energy consumption. For 2016, SWEPCO projected 231 kW of demand savings from this program. SWEPCO's verified and reported results are 236 kW. This included participation by 62 customers in eleven different counties.

### X. ADMINISTRATIVE AND RESEARCH AND DEVELOPMENT COSTS

#### **Adminstrative Costs**

Administrative costs incurred by SWEPCO to meet its energy efficiency goals and objectives include, but may not be limited to, energy efficiency employees' payroll, marketing, 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 SWEPCO meet future energy efficiency goals by researching new technologies, program options and developing better, more efficient ways to administer current programs. In 2016 SWEPCO dedicated resources to enhance electronic data collection and management system for current programs. In addition, SWEPCO participated with EUMMOT in researching potentially new deemed savings measures for various programs. SWEPCO also used resources in 2016 to update its energy efficiency website www.swepcogridsmart.com.

## XI. 2017 ENERGY EFFICIENCY COST RECOVERY FACTOR (EECRF)

In PUCT Docket 45824, SWEPCO received approval to recover the following:

- \$4,740,144 Cost of SWEPCO's Energy Efficiency programs projected for 2017
- \$832,620 Performance bonus for 2015 savings achievement
- \$75,010 SWEPCO's over-recovery of its actual energy efficiency program costs for 2015

Approval was granted for a total revenue requirement of \$5,497,754.

The adjusted rates, as given in Table 11, went into effect on January 1, 2017.

Customer Class	Factor per kWh
Residential	\$0.001225
General Service	\$0.000588
Lighting & Power	\$0.000815
Municipal Pumping	\$0.000145
Municipal Service	\$0.000751
Cotton Gin	\$0.000238
Large L & P< 69kV	\$0.000000
Electric Furnace/Metal Melting < 69kV	\$0.002057
Oil Field Large Industrial Power	\$0.000013
Lighting	\$0.000000

#### Table 11: 2017 EECRF

## XII. 2016 EECRF SUMMARY

### **Revenue Collected Through EECRF**

Table 12 below outlines a summary of SWEPCO's 2016 EECRF including costs, performance bonus, prior year's over recovery and current years under recovery.

	Authorized per Docket No. 44612		Actual Expense	
2016 Program Costs	\$	4,177,448	\$	4,099,409
2016 EM&V costs	\$	64,820	\$	57,114
2014 (Over)/Under Recovery	\$	(353,847)	\$	(353,847)
2014 Bonus	\$	819,522	\$	819,522
2016 Total Costs & Bonus	\$	5,494,570	\$	4,622,198
2016 EECRF Revenue			\$	4,486,393
2016 (Over)/Under			\$	135,805

Table 12: Under-Recovery of Energy Efficiency Costs in 2016

## XIII. UNDERSERVED COUNTIES

An underserved county is defined by SWEPCO as any county that has been historically underserved by the utility's energy efficiency programs or for other appropriate reasons. SWEPCO has no counties that are considered underserved at this time.

## **XIV. PERFORMANCE BONUS**

SWEPCO achieved a 11,939 kW reduction in peak demand from its energy efficiency programs offered in 2016. SWEPCO's demand reduction goal for 2016 was 5,600 kW. This achievement represents 213% of its 2016 demand reduction goal. SWEPCO also achieved energy savings of 20,648,105 kWh, which represents 210% of its 2016 energy goal of 9,811,200 kWh. These results qualify SWEPCO for a Performance Bonus. Per 16 TAC § 25.181(h), SWEPCO is eligible for a Performance Bonus of \$1,188,390 which it will request within its May 1, 2017 EECRF filing for recovery in 2018.

In 2016, SWEPCO's total spending on energy efficiency programs was \$4,156,523. This includes actual EM&V expenditures to the EM&V team of \$57,114. Per the PUCT, the total program costs to be used in the performance bonus calculation should include the EM&V cost allocation provided by the EM&V team for the program year 2016, instead of the actual EM&V team 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 bonus calculation, SWEPCO's total program costs equaled \$4,148,989.

	kW	kWh
2016 Goals	5,600	9,811,000
2016 Savings	11,939	20,648,105
Reported/Verified Hard-to-Reach	1,217	
2016 Program Costs	\$4,14	48,989
2016 Performance Bonus	\$1,188,390	

 Table 13: Energy Efficiency Performance Bonus Calculation for 2016

### **Performance Bonus Calculation**

213%	Percentage of Demand Reduction Goal Met (Reported kW/Goal kW)
210%	Percentage of Energy Reduction Goal Met (Reported kWh/Goal kWh)
TRUE	Met Requirements for Performance Bonus?
\$16,032,886	Total Avoided Cost ((Reported kW * PV(Avoided Capacity Cost) + Reported kWh
	*PV(Avoided Energy Cost))
\$4,148,989	Total Program Costs
\$11,883,897	Net Benefits (Total Avoided Cost - Total Expenses)
Bonus Calcu	lation

- \$6,726,371 Calculated Bonus ((Achieved Demand Reduction/Demand Goal 100%) / 2) \* Net Benefits
- \$1,188,390 Maximum Bonus Allowed (10% of Net Benefits)
- \$1,188,390 Bonus (Minimum of Calculated Bonus and Bonus Limit)

## ACRONYMS

A/C	Air Conditioning
CS MTP	Commercial Solutions Market Transformation Program
CSOP	Commercial Standard Offer Program
EE Rule	Energy Efficiency Rule, 16 TAC §§ 25.181 and 25.183
EECRF	Energy Efficiency Cost Recovery Factor
EEPR	Energy Efficiency Plan and Report
EESP	Energy Efficiency Service Provider
EM&V	Evaluation, Measurement & Verification
HTR SOP	Hard-to-Reach Standard Offer Program
LM SOP	Load Management Standard Offer Program
MTP	Market Transformation Program
NAP	Not Applicable
PLAN	Energy Efficiency Plan
PUCT	Public Utility Commission of Texas
PURA	Public Utility Regulatory Act
R&D	Research and Development
REPORT	Energy Efficiency Report
RSOP	Residential Standard Offer Program
SCORE MTP	Schools Conserving Resources Market Transformation Program
SOP	Standard Offer Program
SWEPCO	Southwestern Electric Power Company

## **APPENDIX A:**

# REPORTED AND VERIFIED DEMAND AND ENERGY REDUCTION BY COUNTY

#### COMMERCIAL SOLUTIONS

	Reported and Verified		
County	Sa	vings	
	kW	kWh	
Bowie	168	536,823	
Camp	21	163,246	
Cass	2	16,160	
Gregg	156	1,116,595	
Harrison	11	62,021	
Morris	5	19,993	
Panola	2	10,222	
Rusk	14	79,423	
Titus	64	426,356	
Upshur	5	30,174	
Wood	7	28,500	
Total	456	2,489,513	

#### COMMERCIAL STANDARD OFFER

	<b>Reported and Verified</b>		
County	Sa	vings	
	kW	kWh	
Bowie	483	3,039,828	
Cass	5	30,911	
Gregg	270	1,814,157	
Harrison	38	254,108	
Panola	10	58,666	
Rusk	32	188,409	
Wheeler	4	27,828	
Total	842	5,413,907	

## LOAD MANAGEMENT

County	Reported and Verified Savings		
	kW	kWh	
Bowie	1,227	20,766	
Camp	517	8,686	
Gregg	4,566	43,417	
Harrsion	625	10,382	
Total	6,935	83,251	

OPEN			
County	-	and Verified wings	
	kW	kWh	
Bowie	163	734,299	
Camp	2	10,961	
Cass	9	35,124	
Franklin	4	27,040	
Gregg	13	54,032	
Morris	1	8,761	
Smith	2	12,491	
Titus	8.06	44,550	
Upshur	16.95	69,495	
Van Zandt	6.77	39,002	
Wood	9.4	46,924	
Total	236	1,082,679	

SCORE
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	Reported and Verified Savings	
County		
	kW	kWh
Bowie	33	129,526
Donley	26	124,062
Gregg	144	559,896
Hall	48	244,433
Harrison	27	180,500
Panola	38	55,917
Rusk	11	49,997
Titus	11	62,712
VanZandt	35	204,636
Wood	112	618,322
Total	484	2,230,001

#### **RESIDENTIAL STANDARD OFFER**

	<b>Reported and Verified</b>		
County	Savings		
	kW	kWh	
Bowie	69	360,089	
Camp	102	336,987	
Cass	0	1,726	
Franklin	57	164,945	
Gregg	702	2,332,927	
Harrison	92	308,466	
Marion	1	1,694	
Morris	65	154,583	
Panola	3	3,583	
Rains	1	5,583	
Red River	4	5,908	
Rusk	44	132,302	
Smith	1	6,929	
Titus	427	1,017,528	
Upshur	78	193,373	
Van Zand	4	11,260	
Wood	118	374,332	
Total	1,769	5,412,215	

## HARD TO REACH

	<b>Reported and Verified</b>		
County	Savings		
	kW	kWh	
Bowie	29	52,653	
Camp	15	101,853	
Cass	13	40,881	
Franklin	37	96,397	
Gregg	459	1,575,392	
Harrison	112	318,908	
Morris	63	170,669	
Rusk	18	48,637	
Titus	204	565,667	
Upshur	220	818,680	
Van Zandt	2	2,299	
Wood	45	144,503	
Total	1,217	3,936,540	

## **APPENDIX B:**

## **PROGRAM TEMPLATES**

### SWEPCO TX Residential Lighting Pilot Program

#### **Program Design**

The Residential Lighting Pilot program is an Upstream Lighting Markdown program designed to achieve residential energy savings. The program increases awareness and sales of ENERGY STAR® qualified LEDs through financial incentives delivered directly to customers via a reduction in cost at the retailers' point of purchase. This program delivery model aims to minimize market and partner confusion, decrease overall costs, increase cost-effectiveness and improve customer experience.

#### **Implementation Process**

SWEPCO and a third part implementation firm will partner with select retailers based on a previously demonstrated ability to execute programs nationally. This mix of retail partners enables a wide offering of incentives to a wide range of customers in select markets for the purpose of this pilot. Retailers are enrolled in the program with Program Participation Agreements (PPA) which define the products to be incentivized, the incentive levels, budget and program duration.

Through its pilot phase the program will offer incentives on select LED products. The product mix selected is intended to enable achievement of savings goals and increase program affirmation in the retailers throughout the year.

#### **Outreach and Research Activities**

The approach combines existing, national industry partnerships with, comprehensive support provided by field staff who will service the participating retail locations. Through hands-on retail staff training, customer education and store-level relationship building, we will drive the sale of qualified products while attributing customer purchases to SWEPCO.

Once the program has been launched our field staff will verify that the pricing in the participating retailers is correct per the PPA and will place Point of Purchase signage in the stores to identify that the products are being incentivized by the utility.

Industry partners will provide monthly sales data from the Retailers electronic point of sales system, and will invoice monthly for the associated incentive dollars. Incentive dollars are then paid directly to the manufacturers.

## **APPENDIX C:**

## **EXISTING CONTRACTS OR OBLIGATIONS**

SWEPCO does not have any Existing Contracts or Obligation documentation to provide.

## **APPENDIX D**

# **OPTIONAL SUPPORTING DOCUMENTATION**

SWEPCO has no Optional Supporting Documentation to provide.