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# Southwestern Electric Power Company 2010 Energy Efficiency Plan and Report

Substantive Rule § 25.181 and § 25.183

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## **INTRODUCTION**

Southwestern Electric Power Company (SWEPCO or Company) presents this Energy Efficiency Plan and Report (EEPR) to comply with Substantive Rules 25.181 and 25.183 (EE Rule), which implement 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 demand reduction goals through market-based standard offer programs (SOPs) and limited, targeted, market transformation programs (MTPs):

- at least 20% of the electric utility's annual growth in demand of residential and commercial customers by December 31, 2009;
- at least 20% of the electric utility's annual growth in demand of residential and commercial customers by December 31, 2010.

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 Substantive Rule 25.181. 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, twelve sections, a list of acronyms, a glossary and four appendices.

### **Executive Summary**

- Executive Summary highlights SWEPCO's achievements for program year 2009 and SWEPCO's plans for achieving its goals and projected energy efficiency savings for program years 2010 and 2011.

### **Energy Efficiency Plan**

- Section I describes SWEPCO's program portfolio. It details how each program will be implemented, presents related informational and outreach activities, and provides an introduction to any programs not included in SWEPCO's previously submitted plan.
- 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 projected energy and demand goals and 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 (2005-2009) 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 2008 and 2009.
- Section VII details SWEPCO's incentive and administration expenditures for each of the previous five years (2005-2009) detailed by program for each customer class.
- Section VIII compares SWEPCO's actual 2009 expenditures with its 2009 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% for SWEPCO's overall program budget.
- Section IX describes the results from SWEPCO's MTPs. It compares existing baselines and existing milestones with actual results, and details updates to those baselines and milestones.
- Section X documents SWEPCO's most recent Energy Efficiency Cost Recovery Factor (EECRF).
- Section XI documents SWEPCO's Underserved Counties.
- Section XII describes SWEPCO's Performance Bonus calculation for program year 2009.

### **Acronyms**

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

### **Glossary**

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

### **Appendices**

- Appendix A – Reported and Verified kW and kWh Savings detailed by county for each program.
- Appendix B – Program templates for any new or modified programs and programs not included in SWEPCO's previous EEPR.
- Appendix C – Description of SWEPCO's existing energy efficiency contracts and obligations.
- Appendix D - Data, explanations, or documents supporting other sections of the EEPR.

## EXECUTIVE SUMMARY – Energy Efficiency Plan (Plan)

SWEPCO plans to achieve savings of at least a 20% reduction in its annual growth in demand of residential and commercial customers by December 31, 2010, and at least a 20% reduction in its annual growth in demand of residential and commercial customers by December 31, 2011. SWEPCO’s Plan addresses achieving the corresponding calculated energy savings goal, which is derived from its demand savings goal each year using a 20% capacity factor [Substantive Rule 25.181(e)(2)]. The goals, budgets and implementation procedures that are included in this 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 annual goals and budgets is presented in Table 1.

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

Calendar Year	Average Growth in Demand (MW)	Growth In Demand Reduction	Demand Goal (MW)*	Energy Goal <sup>2</sup> (MWh)	Projected Savings <sup>3</sup> (MW)	Projected Savings <sup>2</sup> <sup>3</sup> (MWh)	Projected Budget (000's)
2010	-17.11	20%	5.60	9,811	11.95	27,289	\$4,424
2011	-17.11	20%	5.60	9,811	14.34	29,541	\$5,200

\* Substantive Rule 25.181(e)(1)(D) – Beginning in 2009 a utility’s demand reduction goal in megawatts for any year shall not be less than the previous year’s goal.

## EXECUTIVE SUMMARY – Energy Efficiency Report (Report)

This report demonstrates that in 2009 SWEPCO cost-effectively implemented SOPs and MTPs as provided for by PURA § 39.905. SWEPCO exceeded its demand reduction goal to be achieved by January 1, 2010 by procuring 9,556 kW of peak demand savings at a total cost of \$3,075,156. 2009 programs included the Appliance Recycling Pilot MTP, Commercial Solutions Pilot MTP, Commercial SOP, Hard-to-Reach SOP, Home\$avers, Load Management SOP, Residential SOP, SMART Source<sup>SM</sup> Solar PV Pilot MTP, SWEPCO CARE\$ Energy Efficiency for Not-for Profit Agencies SOP, and the Texas Statewide ENERGY STAR<sup>®</sup> Residential Compact Fluorescent Lighting Program.

<sup>1</sup> Average Growth in Demand figures are from Table 4; Projected Savings from Table 5; Projected Budgets from Table 6. All kW/MW and kWh/MWh figures in this Table and throughout this EEPR are given “at the Meter”.

<sup>2</sup> Calculated using a 20% capacity factor.

<sup>3</sup> Projected savings are based upon the portfolio of programs and budgets identified in Tables 5 and 6.

# ENERGY EFFICIENCY PLAN

## I. 2010 Programs

### A. 2010 Program Portfolio

SWEPCO has implemented a variety of programs in 2010 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. The programs are described in further detail in Subsections B and C. SWEPCO maintains a World Wide Web site containing all of the requirements for energy efficiency service provider (EESP) participation, forms required for project submission, and currently available funding at [www.AEPefficiency.com](http://www.AEPefficiency.com). This site is the primary method of communication used to provide program updates and information to potential EESPs and other interested parties.

**Table 2: 2010 Energy Efficiency Program Portfolio**

Program	Target Market	Application
Commercial Solutions Pilot Market Transformation Program	Commercial	Retrofit; New Construction
Commercial Standard Offer Program	Commercial	Retrofit; New Construction
Hard-to-Reach Standard Offer Program	Hard-to-Reach Residential	Retrofit
Home\$avers	Low Income Residential	Retrofit
Load Management Standard Offer Program	Commercial	Retrofit
Residential Standard Offer Program	Residential	Retrofit
SCORE Market Transformation Program	Commercial	Retrofit; New Construction
SMART Source <sup>SM</sup> Solar PV Pilot Market Transformation Program	Residential Commercial	Retrofit; New Construction
SWEPCO CARE\$ Energy Efficiency for Not-for-Profit Agencies Standard Offer Program	Commercial	Retrofit; New Construction
<b>New Programs for 2010</b>		
Air Conditioning Tune-Up Pilot Market Transformation Program	Commercial Residential	Retrofit

## ***B. Existing Programs***

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

#### ***Program design***

SWEPCO implemented the CS MTP in the fourth quarter of 2008 as a pilot program. SWEPCO's CS MTP targets commercial customers (other than local government entities and public schools) that do not have the in-house capacity or expertise to: 1) identify, evaluate, and undertake 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 served by SWEPCO for certain eligible energy efficiency measures that are installed in new or retrofit applications that result in verifiable demand and energy savings. After review of the program findings, SWEPCO may plan to transition this program to a full program for the 2011 implementation year.

#### ***Implementation process***

Under this pilot program, SWEPCO is targeting a number of commercial customers meeting the program participation parameters. The CS MTP facilitates the identification of demand and energy savings opportunities, general operating characteristics, long-range energy efficiency planning, and overall measure and program acceptance by the targeted customer participants.

#### ***Outreach activities***

SWEPCO markets the availability of its programs in the following manner:

- Contracts with a third-party implementer to conduct outreach and planning activities;
- Targets a number of customer participants during the pilot program;
- Conducts workshops as necessary to explain elements of the program, such as responsibilities of the participants, project requirements, incentive information, and the application and reporting process;
- Participates in regional outreach activities as may be necessary; and
- Attends appropriate industry-related meetings to generate awareness and interest.

### **Commercial Standard Offer Program (CSOP)**

#### ***Program design***

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

#### ***Implementation process***

Any eligible project sponsor may submit an application for a project that meets minimum requirements. The program information on SWEPCO's Web site is updated frequently to reflect participating project sponsors and the remaining available incentive budget.



### ***Outreach activities***

SWEPSCO markets the availability of its programs in the following manner:

- Utilizes mass e-mail notifications to keep potential project sponsors interested and informed;
- Maintains internet Web site with detailed project eligibility, end-use measures, incentives, procedures and application forms;
- Attends appropriate industry-related meetings to generate awareness and interest;
- Participates in state-wide outreach activities as may be available;
- Conducts workshops as necessary to explain elements such as responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process; and
- Developed an informational brochure.

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

#### ***Program design***

The HTR SOP targets residential customers in existing homes with total annual household incomes at or below 200% of current federal poverty guidelines. Program incentives are higher for work performed in historically underserved counties and for underserved measures to encourage activity in these areas. Incentives are paid to project sponsors for a variety of eligible measures installed in retrofit applications that result in verifiable demand and energy savings. Project comprehensiveness is encouraged. Deemed Savings values are accepted as measured and verified savings for projects submitted for approval in this program.

#### ***Implementation process***

Any eligible project sponsor may submit an application for a project meeting the minimum requirements. The program information on SWEPSCO's Web site is updated frequently to reflect participating project sponsors and any remaining available incentive budget.

### ***Outreach activities***

SWEPSCO markets the availability of its programs in the following manner:

- Utilizes mass e-mail notifications to keep potential project sponsors interested and informed;
- Maintains internet Web site with detailed project eligibility, end-use measures, incentives, procedures and application forms;
- Attends appropriate industry-related meetings to generate awareness and interest;
- Participates in state-wide outreach activities as may be available; and
- Conducts workshops as necessary to explain elements such as responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process.

## **HomeSavers (Low-Income Weatherization Program)**

### ***Program design***

The HomeSavers program is designed to cost-effectively reduce the energy consumption and energy costs for SWEPCO's low-income customers. Program implementers provide eligible weatherization and energy efficiency measures for residential customers who meet the DOE income-eligibility guidelines, currently 200% of federal poverty guidelines.

### ***Implementation process***

The program implementer signs agreements with not-for-profit agencies that will verify customer eligibility and conduct an energy use assessment of eligible customers' homes. The agencies select measures to be installed based on the savings-to-investment ratio (SIR), which evaluates cost effectiveness. The PUC approved Deemed Savings values are used to determine demand and energy savings.

### ***Outreach activities***

The program implementer conducts outreach by targeting existing weatherization service providers and other not-for-profit and governmental agencies in SWEPCO's service territory. These service providers identify potential HomeSavers applicants from their client lists or conduct outreach into the surrounding community.

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

### ***Program design***

The LM SOP targets commercial customers with a peak electric demand of 500 kW or more. Incentives are paid to project sponsors to reduce peak electric load on 1-hour-ahead notice. Incentive payments are based upon the metered peak demand reduction as called for by SWEPCO.

### ***Implementation process***

Any eligible project sponsor in the area identified by SWEPCO may submit an application for a project meeting the minimum requirements. The program information on SWEPCO's Web site is updated frequently to reflect remaining available budget amounts.

### ***Outreach activities***

SWEPCO markets the availability of its programs in the following manner:

- Utilizes mass e-mail notifications to keep potential project sponsors interested and informed;
- Maintains internet Web site with detailed project eligibility, end-use measures, incentives, procedures and application forms;
- Attends appropriate industry-related meetings to generate awareness and interest;
- Participates in state-wide outreach activities as may be available; and
- Conducts workshops as necessary to explain elements such as responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process.

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

#### ***Program design***

The RSOP targets only residential customers in existing homes. Incentives are paid to project sponsors for certain eligible measures installed in retrofit applications that result in verified demand and energy savings. Program incentives are higher for work performed in historically underserved counties to encourage activity in these areas. Higher program incentives are also paid for certain measures that have been installed less frequently than other measures. Project comprehensiveness is encouraged. Deemed Savings values are accepted in lieu of measured and verified savings for projects submitted for approval in this program.

#### ***Implementation process***

Eligible project sponsors may submit applications for projects meeting the minimum requirements. The program information on SWEPCO's Web site is updated frequently to reflect participating project sponsors and remaining available incentive amounts

### ***Outreach activities***

SWEPCO markets the availability of its programs in the following manner:

- Utilizes mass e-mail notifications to inform and update potential project sponsors such as EESPs and national and local companies that provide energy-related services.
- Provides additional outreach using direct mail as necessary to attract more participants;
- Maintains internet Web site with detailed project eligibility, end-use measures, incentives, procedures and application forms;
- Attends appropriate industry-related meetings to generate awareness and interest;
- Participates in state-wide outreach activities as may be available; and
- Conducts workshops as necessary to explain elements such as responsibilities of the project sponsor, project requirements, incentive information, and the application and reporting process.

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

### ***Program design***

SWEPCO implemented this energy-smart schools MTP in pilot form in 2005, as envisioned by Senate Bill 712 (Texas 79<sup>th</sup> Legislature), and as approved by the PUC. SWEPCO issued a Request for Proposals (RFP) in 2008 to select a third party to begin fully implementing the program in 2009. The program implementer seeks customer participation in order to effectively provide the program support services. The SCORE MTP provides energy efficiency and demand reduction solutions for public schools. 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 and that provide verifiable demand and energy savings.

### ***Implementation process***

Within this program, SWEPCO offers participation to public school districts in its service territory. The program facilitates the identification of potential demand and energy savings opportunities, general operating characteristics, long-range energy efficiency planning, and overall measure and program acceptance by the targeted customer participants.

### ***Outreach activities***

SWEPCO markets the availability of its programs in the following manner:

- Contracts with a third party to implement outreach and planning activities;
- Targets customer participants;
- Conducts workshops as necessary to explain elements of the program, such as responsibilities of the participants, project requirements, incentive information, and the application and reporting process;
- Participates in regional outreach activities as may be necessary; and
- Attends appropriate industry-related meetings to generate awareness and interest.

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

### ***Program Design***

The Solar PV Pilot MTP is a pilot market transformation initiative implemented by SWEPCO in late 2009. The program offers residential and commercial customers a financial incentive of \$2.50/watt for installations of solar electric (photovoltaic) systems interconnected on the customer's side of the electric service meter. In addition to demand and energy savings achieved from the installations, the program also aims to transform the market by increasing the number of qualified companies offering installation services and by decreasing the average installed cost of systems by creating economies of scale.

### ***Implementation Process***

The program primarily targets solar PV installation companies in SWEPCO's service territory but will also promote program awareness to solar PV manufacturers and SWEPCO customers. Solar PV installers who become certified to participate in the program submit project applications and, upon completion and certification, are eligible to receive incentive amounts based on program guidelines.

### ***Outreach Activities***

SWEPCO markets the availability of its program in the following manner:

- Makes available clear and concise material that describes the program incentive offer;
- Maintains internet Web site and program guidebook to be used as referral tools;
- Uses bill inserts;
- Conducts workshops and training for installers and local code enforcement officials to explain project requirements and incentive information; and
- Facilitates earned media opportunities, spotlighting successful projects and interesting stories when possible.

## **SWEPCO CARE\$ Energy Efficiency for Not-for-Profit Agencies Standard Offer Program (CARE\$)**

### ***Program design***

This program targets commercial Not-for-Profit (NFP) organizations that provide various services to Hard-to-Reach (HTR) customers in the SWEPCO service territory. Incentives are paid to participating agencies for certain eligible energy efficiency improvements made to their administrative facilities that result in verified demand and energy savings. These improvements reduce the organization's operating costs by making the building it occupies more energy efficient, resulting in greater resources being made available to the HTR clients served.

### ***Implementation process***

CARE\$ is implemented by annually issuing an RFP to a wide range of NFP organizations. The project proposals include information about the organization, planned energy efficiency improvements and specific installation costs. Proposals are reviewed and evaluated on a first-come, first-served basis until the annual program budget is fully reserved.

### ***Outreach activities***

SWEPCO markets the availability of its programs in the following manner:

- Conducts direct mail campaign targeting possible qualifying organizations;
- Utilizes mass e-mail notifications to inform potential applicants; and
- Presents program information at agency functions and meetings, as available.

### *C. New Programs for 2010*

#### **Air Conditioning Tune-Up Pilot Market Transformation Program ("CoolSaver<sup>®</sup> Program)**

##### ***Program design***

The CoolSaver<sup>®</sup> Program is designed to overcome two market barriers: high performance air conditioning system tune-ups for residential and small commercial customers and air conditioning contractors who are unable to accurately convey to these customers why they should be receiving high performance tune-ups. The program will offer assistance to contractors in obtaining the tools and expertise that will allow them to develop quantitative savings information. This will further enable contractors to convey the value of the tune-up and maintenance services to the customers with the intent of educating and influencing their decisions to request these services in the future.

##### ***Implementation process***

The program will target residential and small commercial customers in a portion of SWEPCO's service territory and identify contractors that provide air conditioning system tune-up services to the customers in this area.

##### ***Outreach activities***

The program implementer will target various air conditioning distributor networks and organizations by phone and site visits to gauge their interest in participating in this program. As contractors make the decision to participate, they sign a partnering agreement, obtain equipment and go through the program training.

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

SWEPCO has no existing DSM contracts or obligations.

## II. Customer Classes

SWEPCO's energy efficiency programs target residential and commercial customer classes. SWEPCO's energy efficiency programs also target certain customer subclasses, including Residential – HTR and Low-Income; and Commercial – Public Schools, NFP Agencies and Local Governments.

The annual projected savings targets are allocated among these customer classes and subclasses by examining historical program results, evaluating certain economic trends, and compliance with Substantive Rule 25.181(e)(1)(E).

Table 3 summarizes the number of customers in each eligible customer class at SWEPCO. These numbers were used to determine goal and budget allocations for each customer class and each program. It should be noted, however, that the actual distribution of the goal and budget must remain flexible based upon the response 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. SWEPCO offers a varied portfolio of SOPs and MTPs such that all eligible customer classes have access to energy efficiency alternatives.

**Table 3: Summary of Customer Classes**

<b>Customer Class</b>	<b>Number of Customers</b>
<b>Commercial</b>	<b>33,707</b>
<b>Total Residential</b>	<b>143,345</b>
<b>Hard-to-Reach<sup>4</sup></b>	<b>46,587</b>

<sup>4</sup> According to the U.S. Census Bureau's 2007 Current Population Survey (CPS), 32.5% of Texas families fall below 200% of the poverty threshold. Applying that percentage to SWEPCO's residential customer base of 143,345, the number of HTR customers is estimated at 46,587.

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

As prescribed by Substantive Rule 25.181, SWEPCO's annual demand reduction goal is specified as a percent of its historical, weather-normalized, five-year average growth in demand. SWEPCO's 2010 goal is based upon the average annual growth in peak demand for the years 2005 through 2009, inclusive (the most recent historical load growth data available). The 2010 Program Year demand reduction goal is to be at least 20% of this calculated annual growth in demand of residential and commercial customers by December 31, 2010. The demand reduction goal for the 2011 Program Year is to be at least 20% of this calculated annual growth in demand of residential and commercial customers by December 31, 2011. The corresponding annual energy savings goals are determined by applying a 20% capacity factor to the applicable demand reduction goal for each of these years (2010 and 2011).

Table 4 presents the actual historical annual growth in demand for the previous five years used to calculate SWEPCO's goals. Table 5 presents the projected demand reduction and energy savings, by program, for each customer class for each of the years 2010 and 2011. Projected savings reflect the estimated demand and energy savings that SWEPCO's programs are expected to achieve.



Table 4: Annual Growth in Demand and Energy Consumption (at the Meter)

Calendar Year	Peak Demand (MW)			Energy Consumption (MWh)				Growth (MW)	Average Growth (MW) <sup>5</sup>	
	Total System		Residential & Commercial	Total System		Residential & Commercial				
	Actual	Actual Weather Adjusted	Actual	Actual Weather Adjusted	Actual	Actual Weather Adjusted	Actual	Actual Weather Adjusted	Actual Weather Adjusted	
2004	1,489	1,518	1,341	1,370	6,944	6,987	5,900	5,944	NAP	NAP
2005	1,553	1,554	1,445	1,446	7,221	7,157	6,138	6,074	76	NAP
2006	1,602	1,587	1,463	1,448	7,254	7,222	6,123	6,091	2	NAP
2007	1,603	1,623	1,485	1,506	7,358	7,394	6,344	6,380	57	NAP
2008	1,611	1,629	1,465	1,483	7,371	7,439	6,393	6,461	(23)	NAP
2009	1,289	1,353	1,222	1,286	6,553	6,685	5,745	5,958	(197)	18.53
2010	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP	(17.11)
2011	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP	(17.11)

<sup>5</sup> Average historical growth in demand over the prior five years for residential and commercial customers adjusted for weather fluctuations.

**Table 5: Projected Demand and Energy Savings by Program for Each Customer Class  
(at the Meter)**

2010 Customer Class and Program	Projected Savings	
	kW	kWh
<b>Commercial</b>		
AC Tune-Up Pilot MTP	146	401,785
Commercial Solutions Pilot MTP	1,059	2,047,059
Commercial SOP	2,330	16,216,406
Load Management SOP	5,600	90,246
SCORE MTP	480	928,758
SMART Source <sup>SM</sup> Solar PV Pilot MTP	30	40,400
SWEPCO CARE\$	23	74,071
<b>Residential</b>		
AC Tune-Up Pilot MTP	165	304,462
Residential SOP	1,308	3,775,174
SMART Source <sup>SM</sup> Solar PV Pilot MTP	30	44,000
<b>Hard-to-Reach</b>		
Hard-to-Reach SOP	693	2,747,730
Home\$avers	36	326,582
<b>Research &amp; Development</b>		
Wal-Mart LED R&D	0	182,000
Poultry LED R&D	50	110,000
<b>Total Annual Projected Savings</b>	<b>11,950</b>	<b>27,288,673</b>

2011 Customer Class and Program	Projected Savings	
	kW	kWh
<b>Commercial</b>		
AC Tune-Up Pilot MTP	147	401,785
Commercial Solutions Pilot MTP	1,059	2,047,059
Commercial SOP	2,326	16,185,968
Load Management SOP	7,000	112,807
SCORE MTP	480	928,758
SMART Source <sup>SM</sup> Solar PV Pilot MTP	30	40,400
SWEPCO CARE\$	23	74,071
<b>Residential</b>		
AC Tune-Up Pilot MTP	165	304,462
Residential SOP	1,695	4,897,020
SMART Source <sup>SM</sup> Solar PV Pilot MTP	30	44,000
<b>Hard-to-Reach</b>		
Hard-to-Reach SOP	1,047	4,153,950
Home\$avers	36	326,582
<b>Research &amp; Development</b>		
EPRI R&D	5	9,000
Residential Demand Response R&D	300	15,000
<b>Total Annual Projected Savings</b>	<b>14,344</b>	<b>29,540,861</b>

#### 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 years 2010 and 2011. The budget allocations are defined by the overall projected demand and energy savings, the avoided costs of capacity and energy in Substantive Rule 25.181, allocation of demand goals among customer classes, and the incentive levels by customer class. The Table 6 budget allocations are detailed by customer class, by program, and by budget categories: incentive payments, administration, and research and development (R&D).

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

<b>2010</b>	<b>Incentives</b>	<b>Admin</b>	<b>R&amp;D</b>	<b>Total</b>
<b>Commercial</b>				
AC Tune-Up Pilot MTP	\$108,293	\$13,407		\$121,700
Commercial Solutions Pilot MTP	\$424,850	\$48,580		\$473,430
Commercial SOP	\$905,700	\$102,007		\$1,007,707
Load Management SOP	\$196,000	\$23,152		\$219,152
SCORE MTP	\$196,000	\$23,152		\$219,152
SMART Source <sup>SM</sup> Solar PV Pilot MTP	\$90,000	\$11,374		\$101,374
SWEPCO CARE\$	\$90,000	\$11,374		\$101,374
<b>Residential</b>				
AC Tune-Up Pilot MTP	\$125,143	\$15,279		\$140,422
Residential SOP	\$617,000	\$69,930		\$686,930
SMART Source <sup>SM</sup> Solar PV Pilot MTP	\$90,000	\$11,374		\$101,374
<b>Hard-to-Reach</b>				
Hard-to-Reach SOP	\$552,000	\$62,703		\$614,703
Home\$avers	\$373,600	\$26,400		\$400,000
<b>Research and Development (R&amp;D)</b>				
CCET			\$7,200	\$7,200
Wal-Mart LED R&D			\$75,000	\$75,000
Poultry LED R&D			\$75,000	\$75,000
EPRI R&D			\$29,000	\$29,000
Residential DR Pilot			\$50,000	\$50,000
<b>Total Budgets</b>	<b>\$3,768,586</b>	<b>\$418,732</b>	<b>\$236,200</b>	<b>\$4,423,518</b>

<b>2011</b>	<b>Incentives</b>	<b>Admin</b>	<b>R&amp;D</b>	<b>Total</b>
<b>Commercial</b>				
AC Tune-Up Pilot MTP	\$109,985	\$14,343		\$124,328
Commercial Solutions Pilot MTP	\$499,000	\$56,818		\$555,818
Commercial SOP	\$904,000	\$101,818		\$1,005,818
Load Management SOP	\$245,000	\$28,596		\$273,596
SCORE MTP	\$196,000	\$23,152		\$219,152
SMART Source <sup>SM</sup> Solar PV Pilot MTP	\$135,000	\$16,374		\$151,374
SWEPCO CARE\$	\$90,000	\$11,374		\$101,374
<b>Residential</b>				
AC Tune-Up Pilot MTP	\$123,451	\$14,343		\$137,794
Residential SOP	\$800,350	\$90,302		\$890,652
SMART Source <sup>SM</sup> Solar PV Pilot MTP	\$135,000	\$16,374		\$151,374
<b>Hard-to-Reach</b>				
Hard-to-Reach SOP	\$834,500	\$94,096		\$928,596
Home\$avers	\$373,600	\$26,400		\$400,000
<b>Research and Development (R&amp;D)</b>				
CCET			\$7,200	\$7,200
Residential DR Pilot			\$220,000	\$220,000
EPRI R&D			\$13,000	\$13,000
Heat Pump Water Heater R&D			\$10,000	\$10,000
New Manufactured Home R&D			\$10,000	\$10,000
<b>Total Budgets</b>	<b>\$4,445,886</b>	<b>\$493,990</b>	<b>\$260,200</b>	<b>\$5,200,076</b>

# ENERGY EFFICIENCY REPORT

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

Table 7 documents SWEPCO's actual demand and energy goals for the previous five years (2005-2009) calculated in accordance with Substantive Rule 25.181.

**Table 7: Historical Demand and Energy Goals (at the Meter)**

Calendar Year	Actual Weather Adjusted Demand Goal (MW)	Actual Weather Adjusted Energy Goal (MWh)
2009 <sup>6</sup>	5.60	9,811
2008 <sup>7</sup>	5.6	NAP
2007 <sup>8</sup>	4.44	NAP
2006 <sup>9</sup>	2.01	NAP
2005 <sup>10</sup>	2.07	NAP

<sup>6</sup> Actual weather-adjusted MW and MWh goals as reported in SWEPCO's EEPR filed May 2009 under Project No. 36689.

<sup>7</sup> Actual weather-adjusted numbers from EEPR, Project No. 35440.

<sup>8</sup> Actual weather-adjusted numbers from EER, Project No. 33884.

<sup>9</sup> Actual weather-adjusted numbers from EER, Project No. 32107.

<sup>10</sup> Actual weather-adjusted numbers from EER, Project No. 30739.

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

Table 8: Projected versus Reported and Verified Savings for 2009 and 2008 (at the Meter)

2009	Projected Savings <sup>11</sup>		Reported and Verified Savings	
Customer Class and Program	kW	kWh	kW	kWh
<b>Commercial</b>				
Commercial Solutions Pilot MTP	548	1,060,376	238	811,774
Commercial SOP	2,587	14,343,999	1,200	8,350,817
Load Management SOP	2,469	39,504	5,576	89,859
SCORE MTP	480	928,758	613	1,299,554
SMART Source <sup>SM</sup> Solar PV Pilot MTP	NAP	NAP	NAP	NAP
SWEPCO Care\$	20	53,000	22	69,838
<b>Residential</b>				
Appliance Recycling Pilot MTP	160	1,154,496	53	342,444
Residential SOP	919	2,934,287	806	2,291,279
SMART Source <sup>SM</sup> Solar PV Pilot MTP	NAP	NAP	9	17,664
TEXAS Statewide ENERGY STAR Residential Compact Fluorescent Lighting MTP	60	598,791	61	607,517
<b>Hard-to-Reach</b>				
Hard-to-Reach SOP	692	2,137,970	954	3,783,738
Home\$avers	50	447,963	24	215,350
<b>Total Annual Savings</b>	<b>7,985</b>	<b>23,699,144</b>	<b>9,556</b>	<b>17,879,834</b>
2008 <sup>12</sup>	Projected Savings		Reported and Verified Savings	
Customer Class and Program	kW	kWh	kW	kWh
<b>Commercial</b>				
Commercial and Industrial SOP	1,660	5,765,000	1,589	8,471,314
Energy Efficiency Improvement Program NFP SOP	20	53,000	30	111,478
Load Management SOP	3,000	NAP	2,439	2,439
Residential & Small Commercial SOP	50	148,000	17	74,037
SCORE Pilot MTP	500	967,000	771	1,459,725
<b>Residential</b>				
Residential & Small Commercial SOP	840	2,564,000	599	1,887,244
Residential Compact Fluorescent Lighting Pilot	20	462,000	37	371,860
<b>Hard-to-Reach</b>				
Hard-to-Reach SOP	510	1,391,000	767	2,369,777
Home\$avers	50	448,000	14	127,750
<b>Total Annual Savings</b>	<b>6,650</b>	<b>11,798,000</b>	<b>6,263</b>	<b>14,875,624</b>

<sup>11</sup> Projected savings from EEPR filed April 2009, Project No. 36689.

<sup>12</sup> Projected and Reported/Verified Savings from EEPR filed April 2009, Project No. 36689.

## VII. Historical Program Expenditures

This section documents SWEPCO's incentive and administration expenditures for the previous five years (2005-2009) detailed by program for each customer class.

**Table 9: Historical Program Incentive and Administrative Expenditures for 2005 through 2009 (000's)<sup>13</sup>**

	2009		2008		2007		2006		2005	
	Incent	Admin	Incent	Admin	Incent	Admin	Incent	Admin	Incent	Admin
<b>Commercial</b>										
Commercial Solutions Pilot MTP	\$225.9	\$16.4	\$75.0	\$2.8	NAP	NAP	NAP	NAP	NAP	NAP
Commercial SOP	\$466.3	\$47.8	\$558.7	\$48.5	\$231.7	\$21.7	\$669.6	\$28.4	\$859.6	\$71.4
Load Management SOP	\$169.5	\$21.1	\$85.4	\$7.5	NAP	NAP	NAP	NAP	NAP	NAP
Military Base SOP	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP	\$1.9
SCORE MTP	\$201.3	\$19.7	\$124.1	\$10.3	\$166.9	\$13.9	\$195.0	\$14.9	\$0	\$13.9
SMART Source <sup>SM</sup> Solar PV Pilot MTP	\$0	\$0	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP
SWEPCO Care\$	\$84.9	\$7.1	\$90.0	\$9.2	\$79.0	\$3.3	\$99.8	\$4.8	\$92.6	\$7.0
<b>Residential</b>										
Appliance Recycling Pilot MTP	\$30.0	\$3.03	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP
Residential SOP	\$419.3	\$48.8	\$358.5	\$47.1	\$216.8	\$20.8	\$153.5	\$19.5	\$243.1	\$28.5
SMART Source <sup>SM</sup> Solar PV Pilot MTP	35.8	6.5	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP
Texas Statewide ENERGY STAR Residential Lighting MTP	\$29.4	\$11.0	\$37.1	\$8.7	NAP	NAP	NAP	NAP	NAP	NAP
<b>Hard-to-Reach</b>										
Hard-to-Reach SOP	\$745.9	\$68.2	\$582.6	\$42.0	\$61.5	\$13.5	\$56.2	\$9.3	\$53.9	\$25.4
HomeSavers	\$246.4	\$26.7	\$278.5	\$25.3	\$371.5	\$14.8	\$385.5	\$14.8	\$436.4	\$26.0
<b>M &amp; V Auditor</b>	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP	NAP
<b>Research and Development (R&amp;D)</b>	\$7.3	\$136.9	\$27.1	\$27.9	\$14.9	\$3.9	NAP	NAP	NAP	NAP
<b>Total Expenditures</b>	\$2,662.0	\$413.2	\$2,217.0	\$229.3	\$1,142.3	\$91.9	\$1,559.6	\$97.2	\$1,685.6	\$174.1

<sup>13</sup> 2009 expenditures taken from Table 10 in the current EEP; 2008 expenditures from EEP filed under Project No. 36689; 2007 expenditures from EEP, Project No. 35440; 2006 expenditures from EEP, Project No. 33884; 2005 expenditures from EEP, Project No. 32107.



## **VIII. Program Funding for Calendar Year 2009**

As shown in Table 10, the Total Projected Budget for 2009 was \$3,748,552. Total Funds Expended for 2009 was \$3,075,156, an overall total program expenditure decrease of more than 10% from the amount budgeted. The main reason for this decrease is less than expected participation in several programs.

The Commercial SOP came in under budget primarily due to lower than expected participation. There was also a timing difference between when the funds were reserved for projects and when those funds were actually paid.

The Residential SOP was under budget due to less than expected participation, as well as transferring funds for the SMART Source<sup>SM</sup> Solar PV Pilot MTP.

HomeSavers was under budget due to the change in the program implementer.

The Appliance Recycling Pilot MTP did not achieve the projected market results.

**Table 10: Program Funding for Calendar Year 2009 (Dollar amounts in 000's)**

	Total Projected Budget <sup>14</sup>	Numbers of Customers Participating	Actual Funds Expended (Incentives)	Actual Funds Expended (Admin)	Research and Development (R&D)	Total Funds Expended	Funds Committed (Not Expended)	Funds Remaining (Not Committed)
<b>Commercial</b>								
Commercial Solutions MTP	\$207.2	9	\$225.9	\$16.4		\$242.3	\$0	\$0
Commercial SOP	\$967.6	14	\$466.3	\$47.8		\$514.1	\$0	\$453.5
Load Management SOP	\$96.0	5	\$169.5	\$21.1		\$190.6	\$0	\$0
SCORE Pilot MTP	\$217.8	11	\$201.3	\$19.7		\$221.0	\$0	\$0
SMART Source <sup>SM</sup> Solar PV Pilot MTP	NAP	0	\$0	\$0		\$0	NAP	NAP
SWEPCO CARE\$	\$100.0	7	\$84.9	\$7.1		\$92.0		\$8.0
<b>Residential</b>								
Appliance Recycling Pilot MTP	\$165.0	184	\$30.0	\$3.0		\$33.0	\$0	\$132.0
Residential SOP	\$864.3	785	\$419.3	\$48.8		\$468.1	\$0	\$396.2
SMART Source <sup>SM</sup> Solar PV Pilot MTP	NAP	2	\$35.8	\$6.5		\$42.3		
Texas Statewide ENERGY STAR Residential Compact Fluorescent Lighting MTP	\$46.7	1,979	\$29.4	\$11.0		\$40.4	\$0	\$6.2
<b>Hard-to-Reach</b>								
Hard-to-Reach SOP	\$584.0	1,000	\$745.9	\$68.2		\$814.1	\$0	\$0
Home\$avers	\$400.0	59	\$246.4	\$26.7		\$273.1	\$126.9	\$0
<b>Research and Development (R&amp;D)</b>	\$100.0	NAP	NAP	NAP	\$144.2	\$144.2	NAP	NAP
<b>Total Expenditures</b>	\$3,748.5	NAP	\$2,654.7	\$276.3	\$144.2	\$3,075.2	NAP	NAP

<sup>14</sup> Projected Budget from the EEPR filed April 2009 under Project No. 36689.

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

### **Appliance Recycling MTP**

In 2008, Appliance Recycling Centers of America, Inc. (ARCA) was selected through a competitive bidding process by SWEPCO to provide appliance recycling services to SWEPCO customers in the state of Texas. The program was designed to achieve long-term electric demand and energy savings by offering an incentive to SWEPCO customers to recycle their older energy-inefficient refrigerators and freezers.

The following criteria were established and used to qualify participation in the program:

- Appliance must be used on a full-time basis as a secondary unit;
- Units that had recently been replaced as primary units were not eligible; and
- Appliances must be full-sized (14 cubic feet or larger).

ARCA and SWEPCO developed a media plan that included the following:

- Newspaper advertising
- Radio advertising
- Posters
- Web site presence
- Inserts in SWEPCO customers' electric bills
- Public relations activities
- Educating SWEPCO employees about program availability

Marketing materials were developed with the goal of educating customers about the environmental and energy-saving benefits of program participation coupled with free, in-home appliance removal and a \$35.00 per unit incentive for turning in the old refrigerator or freezer.

The campaign was launched in late 2008 and ended with mixed results.

- ESI ID numbers for the SWEPCO customers were not being captured by the usual sources used for customer verification. Alternate arrangements became necessary.
- The more expensive radio advertising resulted in only 4% of the calls received by SWEPCO.
- Bill inserts in February and August electric bills produced 76% of the calls received by SWEPCO.
- An addition to the e-mailed bills would have been cost-prohibitive, given the slow general response to the program.
- 24% of the original calls were cancelled.
- All refrigerant was reclaimed and destroyed, CFC-11 foam was recovered, and used oil was reclaimed.
- Metal, plastic and glass were recycled.
- Only 12% of the projected number of units was picked up for recycling.

It was determined that either SWEPCO customers were unwilling to give up their second refrigerators or the customers do not own many second refrigerators. Based on the low numbers, SWEPCO and ARCA determined that it would not be cost-effective to continue the program into 2010.

### **Commercial Solutions Pilot MTP (CS MTP)**

SWEPCO began implementing the CS MTP in the fourth quarter of 2008 by targeting customers in the SWEPCO service territory that met the program participation parameters. The program provided non-cash incentives such as technical assistance and communication support provided by the program implementer, as well as cash incentives for the installation of documented energy efficiency measures that reduce peak demand and energy use. SWEPCO contracted with a third-party program implementer to provide services, education and support to assist businesses in identifying critical needs and promote best practices.

In 2009, SWEPCO projected to acquire 548 kW demand savings from this program. SWEPCO's verified and reported results are 238 kW. This included participation by nine customers in four different counties.

Program participation in 2009 was limited as a result of targeting customers that historically have not participated in energy efficiency programs due to lack of time, resources and/or technical knowledge. Further, economic uncertainty impeded customers' interest in capital investments and lengthened project commencement lead times. SWEPCO and the implementer have made adjustments to the program design for 2010 including identifying more likely candidates for program participation, strategies to accelerate project timelines, and targeted program marketing activities.

### **SCORE MTP (SCORE)**

The program was designed to overcome obstacles to energy efficiency projects such as the institutional disconnect between finance and facilities departments, the lack of firsthand experience with efficiency measures, limited budgets, and the lack of management decision-making processes necessary for identifying, prioritizing, and completing projects that will improve energy performance and reduce operating costs.

The 2009 SCORE MTP provided non-cash incentives such as building energy analysis (benchmarking), energy master-planning seminars, technical assistance, communications support, and monetary incentives for the installation of documented energy efficiency measures that reduce peak demand and energy use.

Consistent with Substantive Rule 25.181, as part of the 2009 SCORE MTP, SWEPCO completed a baseline study of the school and local government markets. The primary objective of this study was to document the current status of energy use, key equipment, practices, and management within schools in SWEPCO's service territory. While the study identified that respondents are interested in finding ways to save energy, it confirmed they lack the understanding of the benefits and costs of energy efficiency improvements. In addition, they reported encountering financing constraints, internal management restrictions, and lack of energy efficiency education. Many respondents noted they lack the time and procurement process to implement efficiency improvements, and the awareness and familiarity with energy-efficient technologies.

In 2009, SWEPCO projected to acquire 480 kW demand savings from this program. SWEPCO's verified and reported results are 613 kW. This included participation by 11 customers in five counties.

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

In the first five months of activity, this program saw the start-up of a local solar company with two residential projects completed and paid before the end of the year. This company is also marketing projects that offer more comprehensive energy-efficient measure installations.

#### **Texas Statewide ENERGY STAR Residential Compact Fluorescent Lighting MTP (CFL MTP)**

In 2009, SWEPCO participated with seven other Texas investor-owned utilities in the statewide "Make Your Mark" CFL MTP. This program, implemented by Ecos Consulting, encouraged the customers of the sponsor utilities to purchase compact fluorescent light bulbs (CFLs) instead of incandescent light bulbs by lowering prices and increasing the availability of CFLs at stores within the service area of the sponsors through upstream markdowns/buy-downs. Markdowns and buy-downs consist of providing payments to lighting manufacturers to provide products to retailers at lower prices, sometimes allowing retailers to carry products that they have not carried previously. The program also involved placing point-of-purchase marketing materials in participating stores that inform consumers about CFLs and encourage their purchase.

In 2009, the program increased participation over 2008 levels by discounting over 1.6 million CFLs statewide. An estimated 23,700 bulbs were sold or provided to customers living within SWEPCO's service territory, which translates to estimated gross annual savings of 982,612 kWh and 98 kW during peak periods. This included sales in at least six independent retail stores that had not participated in the program during 2008. The program also oversaw retailer training sessions, in-store and community outreach events, and the distribution of 960 free CFLs to customers served by SWEPCO.

Frontier Associates was contracted to perform measurement and verification for the program. Frontier estimated the free-ridership and leakage associated with the program to affirm its cost-effectiveness under the Commission's rules.

Ecos obtained detailed information from lighting manufacturers about the bulbs that were discounted through the program. For each store participating in the program, the number of discounted bulbs sold at the store was recorded by stock keeping unit (SKU). This information was the starting point for Frontier's analysis.

Leakage from the program is defined in this case as the sale of CFLs that were discounted through the program to consumers that do not receive service from one of the sponsor utilities. The leakage was estimated on a store-by-store basis by evaluating the location of each participating store in relation to the sponsor utility's service areas. It was estimated that less than 0.5% of the total program bulb sales were made to non-Texans and that less than 4 % were sales to consumers living outside the utility service territories.

The free-ridership ratio is the fraction of participants that bought bulbs discounted through the program that would have purchased CFLs in the absence of the program. The Net-to-Gross (NTG) factor for free-ridership is then one minus the free-ridership ratio. Frontier estimated the NTG value in two ways using data collected from a random survey to Texas residents conducted in late 2008.

First, a so-called 'self-report' free-ridership ratio was determined from the answers to a question that asked CFL purchasers if they would have bought the bulbs that they bought if the price had been \$1, \$2, or \$3 higher per bulb. The program average bulb incentive was between \$1 and \$2 per bulb, so those respondents that indicated that they would have paid \$2 or \$3 more were considered free-riders. This method yielded a free-ridership ratio of 0.35 and a corresponding NTG of 0.65. This should be considered as a conservative estimate given that it ignores the effects of the program that are not related to price, like point-of-purchase marketing and increased CFL availability and visibility.

The second method used to estimate the free-ridership ratio was a statistical model referred to as a nested logit model. The model uses detailed survey results to attempt to isolate the effects of the program on a respondent's decision to participate in the program. The NTG determined by this method was in the range of 0.7-0.8.

While Substantive Rule 25.181 does not require that reported savings be adjusted for free-ridership, the sponsor utilities felt that the unique program design and current market characteristics surrounding this program warranted special treatment. Given the uncertainties in determining free-ridership and the limited

data available, the sponsor utilities chose to adopt a conservative estimate for the NTG of about 0.63 for reporting purposes. (This is an average value. Specifically, an NTG of 0.6 was used for the impacts of common wattage twist CFLs, while a value of 0.85 was used for specialty bulbs, such as high wattage twist bulbs and bulbs of other shapes.) The same NTG values used to report the program's net impacts for 2008 were used for 2009. These values are based on a comprehensive evaluation being performed for the California Public Utility Commission's update to the Database for Energy Efficient Resources (DEER) and will likely be used by California investor owned utilities for 2009-2011 program planning. While California has had utility programs in place for years, the CFL MTP is the first large-scale CFL program in Texas, and this NTG estimate is lower than both of those determined explicitly for the Texas program. Therefore, the sponsors should be confident that the program will be responsible for savings at least as great as the savings being reported.

Accounting for these adjustments, the Statewide CFL MTP provided over 1,044,000 CFLs to customers who would not have bought them otherwise. In SWEPCO's service territory, the program's net annual impacts for 2009 were 607,517 kWh and 61 kW.

## **Research and Development**

In 2009, R&D activities and projects accounted for 4% of SWEPCO's program expenses. R&D activities are intended to help SWEPCO meet future energy efficiency goals by researching new technologies and program options and developing better and more efficient ways to administer current programs. The following is a summary of R&D efforts for 2009:

### **Center for Commercialization of Electric Technologies (CCET)**

SWEPCO is a member of CCET, whose purpose is "to enhance the safety, reliability, security, and efficiency of the Texas electric transmission and distribution system through research, development and commercialization of emerging technologies." Activities in 2009 included researching ideas for a Compressed Air Energy Storage (CAES) Project, development of a Texas Smart Grid Lab Project, and researching ideas for a Distributed Generation (DG) solar project for Large Master-Planned Residential Developments.

### **Electric Power Research Institute (EPRI) "Hyper-Efficient" Appliance R&D Project**

EPRI solicited its members in early 2009 for host utilities to participate in R&D demonstration projects for its "Hyper-Efficient" Appliance Project. The goal of the project is to test, evaluate, demonstrate, and accelerate adoption of "Hyper-Efficient" appliances. SWEPCO was initially selected as a host site for high

efficiency refrigerators, washing machines, and heat pump dryers. The scope of the project has been slightly modified and now targets hyper-efficient refrigerators and washing machines. This was because heat pump dryers have not been able to achieve an Underwriter's Laboratory Listing. The refrigerators have inverter-driven compressors to adjust power output to deliver the required cooling, microprocessors to monitor temperature, and an anticipated energy reduction of approximately 20%. The washing machines exceed ENERGY STAR<sup>®</sup> standards by using less water and removing more water during the spin cycle to reduce drying requirements.

The customers' existing appliances will be metered for 60 days to establish a baseline. After the 60-day period, the new appliances will be installed. The appliances will be monitored via internet to determine energy consumption, water consumption, water temperature, relative humidity, temperature in residence, and the number of times the refrigerator door is opened.

### **Residential Demand Response Pilot MTP**

SWEPCO continues to research the implementation of residential direct load control (DLC) for reducing the summer peak demand of air conditioners and heat pumps. Although SWEPCO is concerned that DLC programs using one-way paging may become obsolete within a few years due to maturing AMI technology, SWEPCO does not expect any substantial AMI to be in place in its service territory until at least 2013. Nonetheless, SWEPCO asserts that there is significant opportunity for residential and small commercial demand response. The City of Longview continues to be the target area for this R&D Project, which may potentially become a Pilot Program. This project would research the use of Digital Control Units (DCU) that would be installed on the control circuits for all participating air conditioner and heat pump systems. During peak summer demand periods, the air conditioners and heat pumps will be controlled (cycled on and off) via a one-way pager network. The project scope will likely be limited to approximately 250 residential air conditioners or heat pumps during the summer of 2011.

### **Program Research and Development**

In 2009, SWEPCO researched and reviewed several new program options, resulting in the addition of two new programs. The SMART Source<sup>SM</sup> Solar PV Pilot MTP was developed and initiated in 2009 and will continue for 2010 and the Air Conditioning Tune-Up Pilot MTP begins in 2010. SWEPCO also developed and enhanced data collection and management systems for current programs, including new on-line Web sites for its Commercial Solutions, SCORE, and AC Tune-up programs.



## **Other Research and Development**

Other R&D efforts in 2009 were intended to inform customers of energy-efficient technologies and opportunities available, including the Memorial Day Tax-free Holiday for energy-efficient ENERGY STAR<sup>®</sup> appliances. R&D expenses in 2009 also included the final payment for the Texas Statewide Potential Study conducted by Itron Consulting.

## **X. Current Energy Efficiency Cost Recovery Factor (EECRF)**

In Docket No. 36961, SWEPCO requested an EECRF to recover \$4,423,522, the cost of SWEPCO's energy efficiency program incurred during 2010 to meet its energy efficiency objectives under PURA §39.905, as well as its performance bonus of \$385,685. SWEPCO's request was granted by the PUC on December 17, 2009. The EECRF was made effective on December 30, 2009, the beginning of SWEPCO's January 2010 billing month, and is authorized to recover \$4,809,207 in energy efficiency costs.

**Table 11: EECRF**

<b>Customer Class</b>	<b>EECRF</b>
<b>Residential</b>	\$0.001154 per kWh
<b>Commercial</b>	\$0.000518 per kWh
<b>Industrial</b>	\$0.000595 per kWh
<b>Lighting</b>	\$0.000826 per kWh

## **Revenue Collected**

In 2009, SWEPCO collected \$3,443,224 through the EECRF.

## **Over- or Under-recovery**

In 2009, SWEPCO over-recovered \$368,068 (\$3,443,224 - \$3,075,156). This over-recovery will be applied in SWEPCO's 2010 EECRF Filing setting the EECRF for 2011.

## **XI. Underserved Counties**

The underserved counties in the SWEPCO service territory per Substantive Rule 25.181 are Childress and Smith. Underserved counties have been defined by SWEPCO as any county for which SWEPCO did not

report demand or energy savings through any of its 2009 SOPs or MTPs. The Appliance Recycling MTP reached counties that did not receive service from any other program.

## XII. Performance Bonus

SWEPCO achieved a 9,556 kW reduction in peak demand from its energy efficiency programs offered in 2009. SWEPCO's demand reduction goal for 2009 was 5,600 kW. SWEPCO's achievement represents 172% of its goal, qualifying it for a performance bonus. Per Substantive Rule 25.181, SWEPCO is eligible for a Performance Bonus of \$676,534, which it will be requesting in its 2010 EECRF Filing.

**Table 12: Energy Efficiency Performance Bonus Calculation for 2009**

	kW	kWh	From Table
<b>2009 Goals</b>	<b>5,600</b>	<b>9,811,200</b>	<b>7</b>
<b>2009 Savings</b>			
<i>Reported/Verified Total</i>	<b>9,556</b>	<b>17,879,834</b>	<b>8</b>
<i>Reported/Verified Hard-to-Reach</i>	<b>978</b>		<b>8</b>
<b>2009 Program Costs</b>		<b>\$3,075,156</b>	<b>10</b>
<b>2009 Performance Bonus</b>		<b>\$676,534</b>	

### Performance Bonus Calculation

170%	Percentage of Demand Reduction Goal Met (Reported kW/Goal kW)
TRUE	Met Requirements for Performance Bonus?
	Total Avoided Cost (Reported kW * PV(Avoided Capacity Cost) + Reported kWh * PV (Avoided Energy Cost))
\$3,075,156	Total Program Costs
\$6,606,756	Net Benefits (Total Avoided Cost - Total Expenses)

### Pre-Bonus Calculation

\$2,333,601	Calculated Pre-Bonus ((Goal Accomplishment kW > 100%) / 2) * Net Benefits
\$615,031	Pre-Bonus Limit (20% of Program Costs)
\$615,031	<i>Pre-Bonus (Minimum of Calculated Bonus and Bonus Limit)</i>

### Bonus Calculation

<b>\$676,534</b>	<b>Bonus (Pre-Bonus + Extra Bonus)</b>
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## ACRONYMS

<b>CCET</b>	Center for the Commercialization of Electric Technologies
<b>DR</b>	Demand Response
<b>DSM</b>	Demand Side Management
<b>EEP</b>	Energy Efficiency Plan, which was filed as a separate document prior to April 2008
<b>EEPR</b>	Energy Efficiency Plan and Report
<b>EER</b>	Energy Efficiency Report, which was filed as a separate document prior to April 2008
<b>EE Rule</b>	Energy Efficiency Rule, PUC Substantive Rules 25.181 and 25.183
<b>HTR</b>	Hard-To-Reach
<b>MTP</b>	Market Transformation Program
<b>NAP</b>	Not Applicable
<b>PUC</b>	Public Utility Commission of Texas
<b>RES</b>	Residential
<b>SCORE</b>	Schools Conserving Resources
<b>SOP</b>	Standard Offer Program

## GLOSSARY

**Actual Weather Adjusted** -- Actual Weather Adjusted peak demand and energy consumption is the historical peak demand and energy consumption adjusted for weather fluctuations using weather data for the most recent ten years.

**At meter** -- Demand (kW/MW) and Energy (kWh/MWh) figures reported throughout the EEPR are reflective of impacts at the customer meter. This is the original format of the measured and deemed impacts, which the utilities collect for their energy efficiency programs. Goals are necessarily calculated "at source" (generator) using utility system peak data at the transmission level. In order to accurately compare program impacts, goals and projected savings have been adjusted for the line losses (7%) that one would expect going from the source to the meter.

**Average growth** -- Average historical growth in demand (kW) over the prior five years for residential and commercial customers adjusted for weather fluctuations.

**Capacity factor** -- The ratio of the annual energy savings goal, in kWh, to the peak demand goal for the year, measured in kW, multiplied by the number of hours in the year; or the ratio of the actual annual energy savings, in kWh, to the actual peak demand reduction for the year, measured in kW, multiplied by the number of hours in the year.

**Commercial customer** -- A non-residential customer taking service at a metered point of delivery at a distribution voltage under an electric utility's tariff during the prior calendar year and a non-profit customer or government entity, including an educational institution. Each metered point of delivery is considered a separate customer.

**Deemed Savings** -- A pre-determined, validated estimate of energy and peak demand savings attributable to an energy efficiency measure in a particular type of application that an electric utility may use instead of energy and peak demand savings determined through measurement and verification activities.

**Demand** -- The rate at which electric energy is used at a given instant, or averaged over a designated period, usually expressed in kilowatts (kW) or megawatts (MW).

**Demand savings** -- A quantifiable reduction in demand.

**Energy efficiency** -- Improvements in the use of electricity that are achieved through facility or equipment improvements, devices, or processes that produce reductions in demand or energy consumption with the same or higher level of end-use service and that do not materially degrade existing levels of comfort, convenience, and productivity.

**Energy efficiency measures** -- Equipment, materials, and practices at a customer's site that result in a reduction in electric energy consumption, measured in kilowatt-hours (kWhs), or peak demand, measured in kilowatts (kW), or both. These measures may include thermal energy storage and removal of an inefficient appliance so long as the customer need satisfied by the appliance is still met.

**Energy efficiency program** -- The aggregate of the energy efficiency activities carried out by an electric utility or a set of energy efficiency projects carried out by an electric utility under the same name and operating rules.

**Energy Efficiency Rule (EE Rule)** -- Sections 25.181 and 25.183 of the Public Utility Commission of Texas' Substantive Rules implementing Public Utility Regulatory Act (PURA) § 39.905.

**Energy savings** -- A quantifiable reduction in a customer's consumption of energy that is attributable to energy efficiency measures.

**Growth in demand** -- The annual increase in demand in the Texas portion of an electric utility's service area at time of peak demand, as measured in accordance with the Energy Efficiency Rule.

**Hard-to-reach (HTR) customers** -- Residential customers with an annual household income at or below 200% of the federal poverty guidelines.

**Incentive payment** -- Payment made by a utility to an energy efficiency service provider under an energy-efficiency program.

**Inspection** -- Examination of a project to verify that an energy efficiency measure has been installed, is capable of performing its intended function, and is producing energy savings or demand reduction.

**Load control** -- Activities that place the operation of electricity-consuming equipment under the control or dispatch of an energy efficiency service provider, an independent system operator or other transmission organization or that are controlled by the customer, with the objective of producing energy or demand savings.

**Load management** -- Load control activities that result in a reduction in peak demand on an electric utility system or a shifting of energy usage from a peak to an off-peak period or from high-price periods to lower-price periods.

**Market transformation program (MTP)** -- Strategic programs to induce lasting structural or behavioral changes in the market that result in increased adoption of energy efficient technologies, services, and practices.

**Measurement and verification (M&V)** -- Activities intended to determine the actual energy and demand savings resulting from energy efficiency projects.

**Peak demand** -- Electrical demand at the times of highest annual demand on the utility's system.

**Peak demand reduction** -- Reduction in demand on the utility system throughout the utility system's peak period.

**Peak period** -- The hours from one p.m. to seven p.m., during the months of June, July, August, and September, excluding weekends and federal holidays.

**Projected demand and energy savings** -- Peak demand reduction and energy savings Company projects to achieve by implementing the portfolio of programs outlined in this EEPR. These projected savings reflect Company's goals required by the Energy Efficiency Rule.

**Project sponsor** -- An energy efficiency service provider or customer who installs energy efficiency measures or performs other energy efficiency services under the Energy Efficiency Rule. An energy efficiency service provider may be a retail electric provider or commercial customer, provided that the commercial customer has a peak load equal to or greater than 50 kW.

**Renewable demand side management (DSM) technologies** -- Equipment that uses a renewable energy resource (renewable resource), as defined in PUC Substantive Rule 25.173(c) (relating to Goal for Renewable Energy) that, when installed at a customer site, reduces the customer's net purchases of energy, demand, or both.

**Standard offer program (SOP)** -- A program under which a utility administers standard offer contracts between the utility and energy efficiency service providers.

**Underserved County**-- A county that did not report any demand or energy savings through a prior year's SOP or MTP.

**APPENDICES**

**APPENDIX A:**

**REPORTED and VERIFIED DEMAND and ENERGY REDUCTION  
BY COUNTY**

**CALENDAR YEAR 2009**

**Appliance Recycling MTP**

County	Reported Savings	
	kW	kWh
Bowie	7.2	46,554
Camp	1.3	9,420
Cass	1.4	9,374
Collingsworth	0.6	3,741
Donley	0.3	1,893
Franklin	4.9	31,635
Gregg	19.8	128,342
Harrison	4.7	29,650
Hopkins	0.6	3,741
Marion	0.3	1,847
Morris	2.1	12,978
Panola	2.5	16,810
Red River	0.3	1,847
Rusk	2.6	16,718
Shelby	0.3	1,893
Upshur	1.5	9,283
Van Zandt	0.6	3,695
Wheeler	0.3	1,847
Wood	1.7	11,176
<b>Total</b>	<b>53.0</b>	<b>342,444</b>

**Commercial SOP**

County	Reported Savings	
	kW	kWh
Bowie	38	170,570
Franklin	456	2,825,466
Gregg	385	3,053,345
Harrison	74	333,010
Panola	106	922,183
Rusk	112	902,055
Titus	11	41,156
Wood	18	103,032
<b>Total</b>	<b>1,200</b>	<b>8,350,817</b>

### Commercial Solutions

County	Reported Savings	
	kW	kWh
Bowie	97	140,945
Camp	85	446,684
Cass	40	154,611
Gregg	16	69,534
<b>Total</b>	<b>238</b>	<b>811,774</b>

### Hard-To-Reach SOP

County	Reported Savings	
	kW	kWh
Bowie	3.45	11,990
Camp	9.27	30,753
Franklin	15.64	70,132
Gregg	655.51	2,540,574
Harrison	125.31	605,871
Morris	9.95	27,647
Panola	55.74	220,254
Rusk	19.17	62,361
Smith	1.34	7,878
Titus	24.01	89,258
Upshur	20.98	94,441
Wheeler	11.06	9,683
Wood	2.38	12,896
<b>Total</b>	<b>953.81</b>	<b>3,783,738</b>

### HomeSavers

County	Reported Savings	
	kW	kWh
Bowie	3.26	29,200
Camp	0.41	3,650
Cass	2.85	25,550
Collingsworth	1.22	10,950
Donley	0.41	3,650
Franklin	0.41	3,650
Gregg	8.95	80,300
Hall	0.41	3,650
Morris	0.81	7,300
Rusk	2.44	21,900
Shelby	0.81	7,300
Titus	1.63	14,600
Wood	0.41	3,650
<b>Total</b>	<b>24.02</b>	<b>215,350</b>



### Load Management SOP

County	Reported Savings	
	kW	kWh
Bowie	3,601	72,017
Gregg	1,508	8,508
Harrison	467	9,334
<b>Total</b>	<b>5,576</b>	<b>89,859</b>

### Residential SOP

County	Reported Savings	
	kW	kWh
Bowie	4.5	11,249
Camp	1.74	9,250
Gregg	685.24	1,853,803
Harrison	66.44	263,886
Marion	2.03	6,005
Panola	14.66	43,394
Rusk	20.35	61,998
Titus	1.31	7,006
Upshur	9.39	34,688
<b>Total</b>	<b>805.66</b>	<b>2,291,279</b>

### SCORE Pilot MTP

County	Reported Savings	
	kW	kWh
Bowie	64	159,124
Gregg	232	542,975
Harrison	101	176,260
Panola	179	343,309
Shelby	37	77,886
<b>Total</b>	<b>613</b>	<b>1,299,554</b>

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

County	Reported Savings	
	kW	kWh
Harrison	9.16	17,664
<b>Total</b>	<b>9.16</b>	<b>17,664</b>

**Statewide ENERGY STAR Residential Lighting Program**

County	Reported Savings	
	kW	kWh
Bowie	22.3	222,973
Camp	2.28	22,758
Gregg	24.23	242,250
Harrison	0.08	765
Rusk	0.03	276
Shelby	0.89	8,939
Titus	10.96	109,556
<b>Total</b>	<b>60.77</b>	<b>607,517</b>

**SWEPCO CARE\$ Energy Efficiency for Not-for-Profit Agencies SOP**

County	Reported Savings	
	kW	kWh
Bowie	0.97	2,364
Gregg	16.08	54,294
Harrison	1.58	4,733
Rusk	3.71	8,447
<b>Total</b>	<b>22.34</b>	<b>69,838</b>

## **APPENDIX B:**

### **PROGRAM TEMPLATES**

SWEPCO does not have any program templates to report this year.

## **APPENDIX C:**

### **EXISTING CONTRACTS OR OBLIGATIONS**

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

## **APPENDIX D:**

### **OPTIONAL SUPPORTING DOCUMENTATION**

SWEPSCO does not have any optional supporting documentation to provide.