

HARD-TO-REACH Standard Offer Program

Southwestern Electric Power Company



AEP Texas, Inc.



2018 Program Year
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1. EXECUTIVE SUMMARY

AEP is offering the Hard-to-Reach Standard Offer Program (HTR SOP) through its Texas distribution companies which include Southwestern Electric Power Company (SWEPCO) and AEP Texas Inc., (AEP Texas). AEP Texas consists of two divisions which include AEP Texas Central Division (TCD; formerly TCC) and AEP Texas North Division (TND; formerly TNC). The HTR SOP is open to a wide range of contractors, service companies, Retail Electric Providers (REPs), and community action agencies referred to as Project Sponsors.

In its Standard Offer Programs (SOPs), AEP contracts with Project Sponsors to deliver certain levels of peak demand savings (measured in kilowatts, or kW) and/or annual energy savings (measured in kilowatt-hours, or kWh) by installing qualifying energy efficient measures at existing homes. AEP will pay a fixed price in the form of incentives for kW and kWh savings provided by the energy efficient measures installed.

The Public Utility Commission of Texas (PUCT) has issued rules and requirements for the SOPs that are to be implemented by most electric utility companies serving Texas customers. Those rules and requirements are outlined in 16 Texas Administrative Code § 25.181, also known as the Energy Efficiency Rule. Project Sponsors participating in this HTR SOP must comply with all program rules and procedures. The purpose of this Manual is to identify and explain these program requirements and to serve as a reference for potential Project Sponsors.

Key changes for the 2018 program include:

- Incentive rates have been adjusted and are detailed by measure.
- Duct Efficiency savings will decrease substantially in 2018.
- An area-weighted average R-value is to be calculated for all homes consisting of two or more levels of Ceiling Insulation. Project Sponsors must use AEP provided calculator found on the program websites.
- Central Air Conditioner and Central Heat Pump replacements are eligible for system downsizing.
- Multi-Family projects are not eligible in AEP Texas' HTR SOP.
- Project Sponsors are responsible for ensuring there are ample funds in the program and sponsor budgets before installing measures in customer's homes.
- Projects must be submitted within 45 days of inputting the project. Program manager has the authority to cancel/delete any project entered into P3 and not submitted within 45 days.
- Project Sponsors with no recent participation will start with a cap of no more than \$25,000. Additional funds may be allocated per the program administrator's discretion based on an analysis of the project sponsor's performance and available program budget.
- The 2018 HTR SOP shall utilize the residential deemed savings values contained in the State of Texas Technical Reference Manual (TRM) Version 5.0. The TRM includes updates to savings calculations, protocols, and documentation requirements for several residential measures including, but not limited to, air infiltration, duct efficiency, and

insulation. It is the Project Sponsor's responsibility to completely understand the TRM and savings formulas for the measures to be installed.

- Current year calibrated equipment certificates and serial numbers are required for 2018 program year.
- Residential dwellings or additions completed after January 1, 2016 do not qualify for the program
- Attempts Lock-out: After the third time data is changed and saved to a measure's inputs, the measure will lock-out. The program manager will have to be consulted in order to unlock the measure to proceed.
- Project Sponsors are not allowed to use telemarketing of any kind to promote energy efficiency services to SWEPCO customers. Any use will result in immediate termination from the program.
- The pre- inspection process for manufactured/mobile homes prior to measure installation has been updated for SWEPCO in 2018. **Refer to section 2.3 Participant Eligibility/Mobile Homes for specifics.**

Key guidelines/requirements for the 2018 program include:

- All approved Project Sponsors are required to upload job related documents (Host Customer Agreements, Field Notes Forms, Income Eligibility Forms and Photographs (where applicable) into the P3 database. **Paper documents will no longer be accepted.**
- The AEP provided Field Notes Form has been revised for 2018. The AEP Field Notes Form shall be used by all crews/installers in the field to capture all relevant data that is entered into the program database and used to calculate savings. A copy of the AHRI certificate will be required in lieu of the Field Notes Form for all HVAC installations
- Home Energy Raters (HERs) or Building Performance Institute (BPI) individual required to be on staff for any Project Sponsors(s) performing Duct Efficiency and/or Air Infiltration measures. HERs or BPI individual must be listed on Project Sponsor(s) application
- Project Sponsors must carry all statutorily required insurance
- All HTR SOP host customers must be supplied approved educational material
- All Ceiling Insulation installations must affirm that an insulation installation certificate was permanently affixed near the attic opening
- Host Customer Agreement and Acknowledgement Form includes all Pre and Post CFM readings for Duct Efficiency and Air Infiltration measures and "R" Value of existing Ceiling Insulation
- Homes cooled with window air conditioning units exclusively must be reported as "gas" heat and are ineligible for the air infiltration measure. Electric space heaters are considered "plug-in" load and do not make the home eligible for electric heating type in this program (Air Infiltration and Ceiling Insulation measures)
- The TRM requires the use of leakage-to-outside testing method using a combination duct pressurization and house pressurization for the Duct Efficiency measure.

- The Air Infiltration Deemed Savings include an upper limit of 5.2 CFM₅₀ per square foot of house floor area pre-retrofit infiltration rate.
- Duct and air leakage testing should *not* be conducted in homes where either evidence of asbestos, mold and/or other potentially hazardous material is present or suspected due to the age of the home. Blower door depressurization tests are *prohibited* if there is a risk of asbestos becoming airborne and being drawn into conditioned space.
- Single-Family work schedules required for all Project Sponsors completing Duct Efficiency and/or Infiltration measures
- Air infiltration – Photographic evidence capturing:
 - Blower door test readings of pre and post-retrofit condition of the treated spots
 - Scope/type of retrofit implemented
- Ceiling insulation:
 - For homes with a reported baseline R-value that is less than R-5, two pictures are required: 1) a picture showing the entire attic floor, and 2) a close-up picture of a ruler that shows the measurement of the depth of the insulation
 - Ceiling insulation now calculates incentives for R-values up to R-38
- Central Air Conditioning installations must be at least **14.5 SEER** and **12.0 EER**
- Central Heat Pump installations must be at least **14.5 SEER**, **12.0 EER**, and **8.5 HSPF**.
- Ground Source Heat Pump installations must meet the following criteria:
 - Closed-Loop Water-to-Air: EER > 17.1 and COP > 3.6
 - Closed-Loop Water-to-Water: EER > 16.1 and COP > 3.1
 - Open-Loop Water-to-Air: EER > 21.1 and COP > 4.1
 - Open-Loop Water-to-Water: EER > 20.1 and COP > 3.5
 - Direct GeoExchange (DGX): EER > 16.0 and COP > 3.6
- Only buildings intended for residential occupancy qualify; pool houses, shops, and other buildings do not qualify
- Project Sponsors shall provide all customers with a positive customer experience, including the satisfactory resolution of any customer complaints.
- All use of marketing, including social media, must be approved by AEP. All approved Project Sponsors must comply with all the requirements of the National “Do Not Call” Registry and the Texas “No Call” lists.

Key guidelines for the 2017 SWEPCO HTR SOP include:

- Each Project Sponsor will have a maximum allocated budget cap. This allocation cap will be determined at the sole discretion of SWEPCO and will be based on the Project Sponsor’s program experience, historical performance, and budget availability. The allocated budget is a cap and not a guaranteed Project Sponsor budget allotment.
- Projects can be submitted until the Project Sponsor budget is fully utilized or all program funds have been depleted.
- Project Sponsors will be required to provide each customer with a post install survey with their final paperwork.

- There is a \$25,000 per sponsor annual budget cap on Multi-Family projects for the program year. The program budget will be evaluated regularly to verify the limit will not prevent achievement of the energy efficiency goal. If the cap is raised, all project sponsors will be notified via email.
- A qualified representative will perform random pre/post inspections to verify accuracy of reported blower door and duct blast readings.

Although AEP has summarized key program changes and guidelines here, it is the Project Sponsor’s responsibility to review the current year Manual in its entirety prior to submitting an application.

Notice: AEP reserves the right to incorporate any or all changes resulting from PUCT proceedings into AEP’s 2018 programs as they are approved. Project Sponsors will be provided with adequate notice of any changes affecting their projects.

2. PROGRAM DESIGN

2.1 Program Description

The primary objective of this program is to achieve cost-effective reduction of peak summer demand, peak winter demand and energy consumption. This performance-based program offers incentive payments for “deemed” or “measured” energy savings generated by installing energy efficient measures.

Approved Project Sponsors are responsible for marketing their services to homeowners served by AEP, contracting with the homeowners, installing the measures, and reporting their work to AEP. AEP then inspects a randomly generated customer sample. Payment is made for the demand reductions and energy savings based on the percentage of installations that are approved by inspection as capable of delivering the reported savings.

Example:

For a Project Sponsor installing a new central air conditioner, the savings (and incentives) are based on the difference between a high-efficiency unit, e.g., 15.0 SEER (or higher) and a “Baseline” unit as defined in the TRM.

AEP has designed the HTR SOP Manual to provide Project Sponsors who contract with AEP with the specific requirements of the HTR SOP. By contracting with AEP, Project Sponsors agree that they have read the Program Manual and will comply with the requirements of the Program in order to receive incentive payments for the installation of qualifying measures.

For a definition of “Baseline” and other terms used in this Manual, please consult the Glossary, included as Appendix A.

2.2 Project Sponsor Eligibility

A Project Sponsor is any company, person, organization, group, or individual who contracts with AEP to provide energy savings under the HTR SOP. The following types of Project Sponsors are among those eligible to participate:

- - Energy service companies
- - Local contractors
- - REPs
- - National or local companies that provide energy-related products (e.g., insulation or HVAC)
- Product retailers, if they install the particular energy-efficient products sold as part of this program

Participants in the HTR SOP must meet minimum eligibility criteria and demonstrate their financial, technical, and managerial qualifications as part of the application process.

AEP also requires Project Sponsors and their subcontractors to carry all statutorily required insurance, as described in the SOP Agreement.

Home Energy Rater (HERs) or Building Performance Institute (BPI) individual required to be on staff for any Project Sponsor performing duct and/or air infiltration measures. HERs or BPI individual required to be listed on Project Sponsor application.

2.3 Customer Eligibility

HTR Customers are residential customers served by the AEP distribution company with an annual household income at or below 200% of the federal poverty guidelines and who have properly completed a PUCT-approved income verification form, or who have been designated as HTR through another PUCT-approved verification methodology.

Examples of target populations include:

- Section 8 and Public Housing Authorities.
- Households denied weatherization or utility assistance program benefits because income exceeds 125% of federal poverty guidelines.
- Households on long waiting lists for weatherization services.
- Other target groups identified by contractors.

Target populations identified above whose incomes are verified by an appropriate social service agency or organization would require no additional income verification effort.

Commercial facilities or portions of buildings served through commercial accounts, and new construction projects (residential dwellings or additions completed after January 1, 2016) are not eligible to participate in this program. These facilities may be eligible to participate in one of AEP's other SOPs. (Please see <http://www.aeptexas.com/save> and www.swepcogridsmart.com/texas). Dwellings in major disrepair that result in less than an expected 10 year life will be considered not eligible.

The U.S. Department of Health and Human Services (HHS) Poverty Guidelines (federal poverty guidelines) are established separately for households of different sizes and are presented in the following table:

**Table 1
HTR Income Eligibility Guidelines***

Size of Family Unit	200% of HHS Poverty Guidelines		
	Annual Income	Monthly Income	Weekly Income
1	\$ 24,120	\$ 2,010	\$ 464
2	\$ 32,480	\$ 2,707	\$ 625
3	\$ 40,840	\$ 3,403	\$ 785
4	\$ 49,200	\$ 4,100	\$ 946
5	\$ 57,560	\$ 4,797	\$ 1,107
6	\$ 65,920	\$ 5,493	\$ 1,268
7	\$ 74,280	\$ 6,190	\$ 1,428
8	\$ 82,640	\$ 6,887	\$ 1,589
Each Additional Person Add:	\$ 8,360	\$697	\$ 161

*Income guidelines are updated every January and posted on <http://www.puc.texas.gov/industry/electric/forms/Default.aspx>. Project Sponsors should use the updated guidelines when they become available. .

All participants must be customers of the AEP distribution company; however, they do not need to be retail customers of AEP. The AEP distribution company for a given customer may be determined by the Electric Service Identifier (ESI ID) number on the customer’s bill from its REP.

--AEP Texas Central Division customers may be identified by ESI ID’s beginning with 100327894

--AEP Texas North Division customers may be identified by ESI ID’s beginning with 102040497

--SWEPCO Texas customers may be identified by ESI ID’s beginning with 101769896. SWEPCO Texas is located outside the Texas competitive retail market but each customer account is assigned an ESI ID. SWEPCO Texas will also be clearly identified on all customer electric bills.

For apartment complexes, SWEPCO will allow use of the office ESI ID on one HCA and one Property Owner Income Eligibility Form signed by the appropriate authority of the apartment complex.

ESI ID’s are required to enter customers in the program tracking systems.

Eligible properties may include:

Residential customers

Single-Family properties – Defined as residential dwellings consisting of two or less units (i.e., a duplex or less)

Mobile Home properties – a manufactured home on a chassis with or adapted for wheels so it can be moved to different locations. It is considered pier and beam floor construction, usually with the perimeter skirting from the floor to the ground

The Manufactured/Mobile Home pre-inspection process below is for SWEPCO only:

- Manufactured and mobile homes must have complete belly board and belly insulation. Homes with diminished belly boards or belly insulation will need to have those areas repaired prior to installing measures.
- A thorough inspection (including photos) must be made of the belly from below. This inspection must include looking for water leaks, condensate leaks, holes/tears, as well as wet or missing floor insulation.
- All water or condensate leaks, holes/tears, and wet or missing insulation must be repaired by the customer/owner or at a cost agreed upon by the customer/owner and sponsor prior to any program measures being installed.
- All A/C drain lines are required to be routed outside of the crawlspace of the home.
- A licensed HVAC contractor must inspect and provide written approval verifying drain lines and equipment sizing are accurate for the home before work can be performed.

Multi-Family properties (SWEPCO only) - Defined as residential buildings containing three or more dwelling units.

- **Individually metered Multi-Family properties.** These are considered separate residential accounts; each unit is counted as a residence. The common areas are considered commercial accounts, and are not eligible in the HTR SOP
- **Individually metered townhomes are considered Multi-Family.**

***NOTE:** All Multi-Family projects must be approved by AEP prior to installation. Pre-approval is done via the respective databases. Project Sponsors must provide a work schedule for Multi-Family projects seven (7) days prior to measure installation.*

Master-metered Multi-Family buildings are considered commercial facilities and are not eligible in the HTR SOP.

2.4 Income Eligibility Verification Form

The PUCT has approved a form for the purpose of verifying the income eligibility of customers:
“Self-Certification Form of Income Eligibility”

To document a single-family customer’s income eligibility status, the Project Sponsor must have the host customer complete and sign the PUCT Self-Certification Form of Income Eligibility Form. If a Project Sponsor is implementing a project at a Multi-Family building, the Project Sponsor must complete a PUCT Property Owner Certification Form of Tenant Income Eligibility Form. Both forms outline the various methods by which participants may certify their eligibility. The procedure for verifying eligibility is based on “self-certification.” The Project Sponsor will present the form to the customer, and he/she will check appropriate boxes, provide other information where required, and sign the form. It is not the Project Sponsor’s responsibility to verify the information provided by the participants. Both forms are available on <http://www.puc.texas.gov/industry/electric/forms/>

2.5 Energy Efficient Measure Eligibility

Any measure assigned a TRM deemed savings value by the PUCT and approved for the HTR SOP, is eligible under AEP's HTR SOP. Tables 2 and 3 in this section provide examples of eligible and ineligible measures. The TRM provides a listing of approved measures and their corresponding deemed savings value. All measures installed should be installed properly in such a way to perform their intended function, and deliver the energy savings intended. Installation methods and materials used should take this into consideration. When it can reasonably be assumed that the installation will not be in place for at least 10 years, the installation may not be reported in the HTR SOP. Only those approved measures installed in homes or additions completed prior to January 1, 2016 are eligible.

AEP will consider the permanent electric meter installation date as the home's completion date.

Project Sponsors may propose other energy efficiency measures, provided they meet the following requirements:

- Must produce a measurable and verifiable electric demand reduction during the peak period or produce electricity consumption savings
- Must produce savings through an increase in energy efficiency or a substitution of another energy source for electricity (provided the substitution results in overall lower energy costs, lower energy consumption, and the installation of high efficiency equipment)
- Must exceed applicable current federal minimum efficiency standards or other efficiency standards as provided in the TRM
- Renewable energy measures meeting the requirements of the PUCT Energy Efficiency Rule may qualify for an incentive - PV or other distributed generation is not an eligible measure in the HTR SOP

As a general rule, measures involving "plug loads" (equipment or appliances that are plugged into standard electrical outlets) are not permitted. This restriction may be waived by the utility if the Project Sponsor provides the utility with reasonable assurance that the energy and/or demand savings associated with such measures are likely to persist over a 10-year period of time and that quantifiable energy and/or demand reduction meeting the requirements of the PUCT Energy Efficiency Rule can indeed be achieved through the proposed measure(s).

All measures installed must have PUCT approved TRM deemed savings values.

It is the Project Sponsor's responsibility to review and understand the TRM requirements for all measures being installed.

If any of the Baseline equipment at a project site has been removed prior to the execution of the HTR SOP Agreement, or if any of the proposed energy-efficient measures has been installed prior to the execution of the HTR SOP Agreement, the project or the affected portions thereof shall be disallowed.

AEP shall have final authority on whether any particular measure is eligible for incentives.

2.5.1 Testing

If air infiltration control, duct sealing and wall insulation will be considered, carbon monoxide

(CO) and blower door tests must be conducted prior to the initial assessment to determine which of the required measures should be evaluated for energy savings potential.

All CO tests must be conducted with the gas equipment on and operating. If, for example, the CO and blower door tests indicate that all measures should be considered for installation, then the Project Sponsor will evaluate the following measures in sequence as summarized below (i.e. Envelope Measures shall be considered before Interior Energy Usage Measures; Interior Energy Usage Measures shall be considered before HVAC Measures):

2.5.2 Envelope Measures:

(At least one of the four following measures must be installed in order for secondary measures to be eligible. Secondary measures must be installed in conjunction or at the same time as primary measures.)

- Insulation measures (insulate the ceiling, floor, or all exterior walls). Photographs required as stated in the TRM 5.0
- Air infiltration control measures (minimum of 10% air leakage reduction, as calculated by the difference between pre and post-installation blower door tests. There is an upper limit of 5.2 CFM₅₀ per square foot of house floor area pre-retrofit infiltration rate.) Photographs required as stated in the TRM 5.0
- HVAC duct integrity (repairs, replacements, and sealing with mastic or aerosol-based duct sealants)
- Attic encapsulation (insulation and sealing the attic walls and roofs, eliminating leakage [to outside], and removing ceiling insulation, if present)

2.5.3 Secondary Interior Energy Usage Measures

Lighting

- Light-Emitting Diode (LEDs) in hard-wired fixtures (minimum 2.2 hour daily usage). A hard-wired fixture is a fixture that is permanently installed in the residence. Examples of fixtures that are not hard-wired are table lamps and floor lamps (
- LEDs are allowed in fixtures but not “Hollywood” style fixtures with 4 or more lamps found primarily in bathrooms

Water Heating

- Showerheads and aerators (as pre-approved by AEP)
- Pipe insulation
- Water heater jackets
- ENERGY STAR® rated home appliances

2.5.4 HVAC Measures

- Room Air Conditioners
- Split system HVAC (Complete coil and compressor replacement)
- Packaged unit HVAC (Installed to manufacturer’s specifications)

Photographs required of HVAC Measures as stated in the TRM

All measures eligible for SOP incentive funds must exceed applicable current federal minimum efficiency standards or meet the minimum measure qualification standards specified in the TRM. All energy and peak demand reductions must be measurable and verifiable.

If, in AEP's sole judgment, any of the Baseline equipment at a project site has been removed prior to the execution of the HTR SOP Small Project Master Agreement, or if any of the proposed energy efficient measures are installed prior to the execution of the HTR SOP Small Project Master Agreement and any applicable Host Customer Agreement(s), the project, or the affected portions thereof, will be disallowed.

Table 2

EXAMPLES OF ELIGIBLE MEASURES

Envelope Measures

- Insulation: ceiling, wall and floor
- ENERGY STAR® windows
- Infiltration control
- Attic encapsulation

HVAC Measures/Projects

- High efficiency air conditioning replacements
- High efficiency heat pump replacements
- Room air conditioners
- Duct efficiency improvement

Electric Water Heating Measures

- ENERGY STAR® clothes washers
- ENERGY STAR® dishwashers
- High efficiency gas water heater replacing electric resistance water heaters
- Heat pump water heaters
- Waste heat recovery units

Other Measures/Projects

- Light-Emitting Diodes (LEDs) installed in fixtures replacing incandescent or halogen lamps (except "Hollywood" style four or more lamps found primarily in bathrooms)
- ENERGY STAR® refrigerators

Renewable Energy Measures (All renewable measures subject to approval by PUCT)

- Space conditioning (heating or cooling)
- Water heating

Table 3

EXAMPLES OF INELIGIBLE MEASURES

- Measures installed at new homes (residences or dwellings completed after January 1, 2016)
- CFLs
- Lighting installed in non-common areas (e.g.; closets, pantries, garages, outdoors)
- LED fixtures that are “Hollywood” style with four or more lamps found primarily in bathrooms
- Co-generation or self-generation projects
- Load shifting/load management measures
- Load reductions caused by building vacancies
- Measures that rely solely on customer behavior or require no capital investment
- Measures that decrease building plug loads, such as “Green Plugs” or computer inactivity time-out controls
- Measures for which incentives were received under another AEP program
- Repair and maintenance projects
- Multi-Family ducts in which a majority are not in conditioned space
- Energy efficiency gas measures when replacing non-electric technologies
- Measures that result in negative environmental or health effects
- Secondary measures submitted separately or not installed at the same time as primary measures
- A/C tune up measure is not allowed in AEP Texas Central Division or SWEPCO
- PV or other distributed generation measures

Any question as to a measure’s eligibility for incentives shall be decided by AEP as the final authority.

2.6 Carbon Monoxide and Blower Door Testing

Prior to the installation of any air infiltration control, duct sealing, or wall insulation measure, a pre-installation blower door test is required, and a CO test shall also be conducted for each residence with combustion (e.g., natural gas or propane) equipment or appliances. Project Sponsors are required to measure and record pre- and post-installation CO readings and shall not install any air infiltration control, duct sealing, or wall insulation measure that would result in the ambient air CO level exceeding 9 parts per million (ppm) at project completion. Appendix D contains additional information on CO testing. All gas equipment must be on and operating when all test readings are taken. The Project Sponsor shall use the pre- and post-installation blower door air infiltration tests results to verify that the final air exchange rate of a household treated with air infiltration control, wall insulation, and/or duct sealing measures shall not be less than the standards set forth below, based on floor area and number of bedrooms.

$$Min\ CFM_{50} = [0.03 \times A_{Floor} + 7.5 \times OCC] * N$$

Where:

Min CFM₅₀ = Minimum final ventilation rate (CFM₅₀)
 A_{Floor} = Floor area (ft²)
 OCC = BR + 1, where BR is the number of bedrooms; if number of home occupants is known to exceed BR + 1, occupancy should be used instead
 N = N factor (Table 4)

Table 4
N Factors

Shielding	Single Story	Two Story	Three or More Stories
Well Shielded	22.2	17.8	15.5
Normal	18.5	14.8	13.0
Exposed	16.7	13.3	11.7

Well Shielded is defined as urban areas with high buildings or sheltered areas, and building surrounded by trees, bermed earth, or higher terrain.

Normal is defined as buildings in a residential neighborhood or subdivision setting, with yard space between buildings. Eighty to ninety percent of houses fall into this category.

Exposed is defined as buildings in an open setting with few buildings or trees around and buildings on top of a hill or ocean front, exposed to winds.

Example: The minimum post-installation air exchange rate for an 1800 square foot, one-story home with normal shielding is 1554 CFM₅₀. In order to qualify for the air infiltration control Deemed Savings, there must be a minimum 10% reduction between the pre- and post-installation ventilation rate. Therefore, the pre-installation ventilation rate must be at least 1727 CFM₅₀ (1554 / 90%) in order to be considered for air infiltration control measures.

If the results of the pre-installation CO or air infiltration tests indicate that the installation of air infiltration control measures, duct sealing, or wall insulation may result in post-installation CO or CFM levels insufficient for program standards, the Project Sponsor shall exclude these measures from installation.

In addition, duct and air leakage testing should *not* be conducted in homes where either evidence of asbestos, mold and/or other potentially hazardous material is present or suspected due to the age of the home. Blower door depressurization tests are *prohibited* if there is a risk of asbestos becoming airborne and being drawn into conditioned space.

3. PROGRAM INCENTIVES

AEP shall pay Project Sponsors an incentive at the measure level. All payments will be based upon the verified demand and energy savings, rather than on the number of measures installed. The Demand (kW) payment is based on Peak Demand Savings, and the Energy (kWh) payment is based upon the first-year energy savings. AEP will not reimburse or pay any Project Sponsor for any costs incurred by participating in the HTR SOP.

Appendix C lists the incentive rates for the 2018 program year.

NOTE: AEP may modify its incentive payments during the program year if it is deemed necessary to meet its goals. At least 30 days notice will be provided to participating project sponsors before any such change is made.

All incentive payments will be subject to the limits set forth in this Manual.

3.1 Incentive Example

A measure at a home yields savings of 0.5 kW and 2,500 kWh. Using an incentive rate of \$298/kW and \$0.09/kWh, the incentive payment is calculated as follows:

$$(0.5 \times \$298) + (2,500 \times \$0.09) = \$374$$

Note that in all cases, *payment procedures specified in the HTR SOP Agreement supercede this and any other documents, and all payments are subject to the limits set forth in this chapter.*

3.2 Limits on Incentive Payments

3.2.1 Load Factor Caps

For projects implemented under the SWEPCO HTR SOP, a definite ratio (load factor cap) has been established between the kW and the kWh payment. To implement the load factor cap, the following table shows the maximum total payment allowed per kW savings. To determine the maximum combined demand and energy incentive payment (kW and kWh), multiply the kW savings by the dollar amount listed in Table 6.

Table 6

SWEPCO LOAD FACTOR CAP

\$920.00

The following are examples of application of the load factor cap:

Example 1

An entire project of Measures yields 30 kW (peak demand) and 75,000 kWh (annual savings). Without adjustment, the incentive for the entire project is calculated to be \$22,230

Referring to the table above, the maximum allowable incentive for this project would be:

$$30 \text{ kW} \times \$920 = \$27,600$$

Since the maximum allowable incentive is greater than the actual calculated incentive, this project would not be subject to the load factor cap. The payment would be \$22,230.

Example 2:

An entire project of Measures yields 20 kW (peak demand) and 150,000 kWh (annual savings). Without adjustment, the incentive at the rate for entire project is calculated to be \$27,820

Referring to Table 6 above, the maximum allowable incentive for this project would be:
 $20 \text{ kW} \times \$920 = \$18,400$

Because the maximum allowable incentive is less than the actual calculated incentive, this project would be subject to the load factor cap. The payment would be \$18,400.

3.2.2 Annual Project Sponsor Limits

To ensure that funding will be available to multiple participants, AEP has set a maximum limit on incentives paid to any one Project Sponsor. Project Sponsors may not receive more than the Project Sponsor Limit for the program year, as noted in Table 7.

**Table 7
PROJECT SPONSOR LIMITS***

	SWEPCO	AEP Texas Central Division	AEP Texas North Division
HTR SOP Projects Annual Limit	\$100,000	\$75,000	\$50,000
Multi-Family Projects	\$25,000	N/A	N/A
First-time Participant Annual Limit**	\$25,000	\$25,000	\$25,000

*Annual limits are not a guaranteed amount to be paid to each approved Project Sponsor.

**Annual limit may be increased per the program administrator’s discretion based on an analysis of the project sponsor’s performance and available program budget.

These limits may be waived if AEP determines that such limits would prevent it from achieving its energy efficiency goal.

3.3 Program Release Dates and Funding

**Table 8
PROGRAM RELEASE DATES AND FUNDING**

Release	SWEPCO	AEP Texas Central Division	AEP Texas North Division
HTR SOP Projects – January 16, 2018	\$700,000	\$1,087,560	\$314,070

No Project Sponsor has unconditional entitlement or preferential rights to any HTR SOP incentive funds. Failure to comply with all program requirements may result in a Project Sponsor’s termination from the Program.

3.4 Project Sponsor Budget Caps

Project Sponsors will not have to complete a reservation process to perform installations. Projects can be submitted until the annual limit per Project Sponsor cap is reached or all program funds have been used. Funds will be taken out of the program budget upon the creation of a project.

SWEPSCO has a \$25,000 annual budget cap per sponsor on Multi-Family projects. The program budget will be evaluated regularly to verify the limit will not prevent achievement of the energy efficiency goal. If SWEPSCO determines that such limits would prevent it from achieving its energy efficiency goal the cap will be raised and all project sponsors will be notified via email. The \$25,000 cap is part of, and not in addition to, the overall \$100,000 annual limit per Project Sponsor cap.

Please note that when funds reach zero in the program, there is no guarantee of payment for incentives on non-submitted projects. It is the Project Sponsor’s responsibility to monitor the program budget and their Project Sponsor limit to determine if there are ample funds before implementing installations.

4. PROGRAM PROCESS AND TIMELINE

4.1 Registration and Applications

AEP’s program registration website, for **AEP Texas** (www.AEPTexas.com/Save) and **SWEPSCO** (www.swepcogridsmart.com/texas), will be the key starting point for Project Sponsors interested in participating in the 2018 HTR SOP.

Interested Project Sponsors may register and fill an application for approval in the HTR SOP. All information **MUST** be entered in the application. If necessary, use the designation **N/A** for “not applicable”. All information must be correct for serious consideration of the application.

AEP will not reimburse any Project Sponsor for any costs incurred by program registration and applying to participate in the HTR SOP, including costs of preparing the Project Application, reviewing or executing the HTR SOP Agreement, or preparing and submitting implementation or performance reports.

4.1.1 Application Timeline

AEP will update its application web page for each component at the times shown in Table 9.

Table 9

APPLICATION AND PROGRAM TIMELINE

Project Sponsor registration & applications	October 19, 2017 @ 10:00 am CDT
Program implementation begins	January 16, 2018 @ 10:00 am, CST

AEP will accept applications until it determines that it has enough approved Project Sponsors to meet the program goals. In the event Budget Reservations are received after program funding has been committed, AEP will retain those for consideration to the extent that any additional funding becomes available during the program year. Confirmation of the receipt of the application will be sent via return e-mail.

4.1.2 Supplemental Documentation Requirements

All applicants wishing to install Duct Efficiency or Infiltration measures must submit a document stating the step-by-step process of their testing procedures, including the type of testing equipment used. *Leakage-to-Outside testing is the **only** acceptable testing method for the Duct Efficiency measure.* Current year calibrated equipment certificates and serial numbers must be uploaded to respective databases. In addition, a HERs or BPI individual must be listed on the Project Sponsor application and certificates must be uploaded during the registration process. All of these documents must be uploaded during the application process.

Applications may be rejected for failure to submit documentation at the required time.

4.2 Application Review Procedures

To ensure a comprehensive program targeting all eligible customers and measures while achieving its demand and energy goals, AEP will award contracts based upon the Project Sponsor's qualifications and targeted counties and measures until the HTR SOP has been fully subscribed. Previous program participation does not guarantee acceptance.

4.2.1 Application Confidentiality

AEP's HTR SOP is subject to oversight by the PUCT, which may request a copy of any HTR SOP materials that AEP receives. Sensitive information identified as such and submitted by the Project Sponsor will be treated confidentially to the fullest extent possible, and will not be provided directly to outside parties other than the PUCT. AEP shall have no liability of any kind to any Project Sponsor or other party as a result of public disclosure of any submittals.

4.2.2 Application Evaluation

AEP may reject a Project Application if:

- The Project Application is received after the Project Application period has expired
- The Project Application is received after the HTR SOP has been fully subscribed
- The Project Sponsor fails to meet program eligibility requirements
- The Project Sponsor fails to respond to any request for additional information
- The Project Sponsor fails to submit supplemental documentation when requested
- The Project Sponsor is found to have made material misrepresentations in the Project Application
- The Project Sponsor fails to comply with applicable federal, state and local laws and regulations
- Changes occur in laws or regulations directly affecting the HTR SOP
- The Project Application is found to be incomplete or insufficient
- The Project Sponsor has performed poorly in previous AEP programs

- AEP, in its sole judgment, determines that the Project Sponsor is incapable of fulfilling the terms and conditions of the HTR SOP Agreement
- The Project Sponsor fails to submit required insurance documentation.

AEP may request clarification of, or additional information about, any item submitted as part of the Project Application. Project Sponsors will have seven (7) business days to respond to such requests. If the clarification or additional information provided is not sufficiently responsive, AEP may, at its sole discretion, request additional information, or discontinue its evaluation of the submittal.

4.2.3 Project Sponsor Approval

AEP will notify each Project Sponsor of its application status within thirty (30) business days of the submittal of the application. AEP reserves the right to discontinue review of applications when it determines that enough applications have been received to fully-subscribe the programs and to meet its program goals.

Within seven (7) business days receipt of an approved **status notification via e-mail**, the Project Sponsor must provide AEP with all contract documentation as directed in the approval notification email.

Evidence of Insurance is required for participation in the HTR SOP. Certificates of Insurance (COI) must be e-mailed directly from the insurance agency to the attention of the appropriate AEP program administrator. AEP must be able to clearly distinguish that the COI has been sent from the issuing agency. Failure to submit a properly-completed COI or to maintain the required insurance will result in a lock out of the Project Sponsor from the database and possible dismissal from program participation. As a reminder, AEP requires Project Sponsors and their subcontractors to carry all statutorily required insurance, as described in the SOP Agreement.

All COI's shall show the certificate holder as:

American Electric Power Company, Inc. and its Subsidiaries,
 American Electric Power Service Corporation, as agent
 [to the attention of the appropriate program administrator shown below]
 It is the responsibility of the applicant to relay this information to the insurance agent.

- Any other documentation noted in the pre-approval e-mail

All mailed documents and COI's must be directed to the appropriate Program Administrator as listed below. ***AEP is not responsible for documents not addressed to the attention of the appropriate Program Administrator:***

<p>AEP Texas Central Division Attn: Jordan Mendiola 539 N. Carancahua St HO-14 Corpus Christi, TX 78401 Phone: (361) 881-5859 jmendiola@aep.com</p>	<p>AEP Texas North Division Attn: Steve Mutiso 910 Energy Drive Abilene, TX 79602 Phone: (325) 674-7287 smmutiso@aep.com</p>	<p>SWEPCO Attn: Debra Miller 428 Travis Street Shreveport, LA 71101 Phone: (318) 673-3324 damiller1@aep.com</p>
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It is the sole responsibility of the Project Sponsor to ensure that AEP receives the required supplemental materials by close of business on the applicable due date. Emailed submittals are preferred. **Faxed submittals are not acceptable.**

Once a Project Sponsor's application has been approved and the Agreement executed, the AEP Program Administrator will allow the Project Sponsor to access the Implementation section of the appropriate HTR website.

4.3 Marketing

Under PUCT rules, AEP may only conduct informational activities to explain the program to energy efficiency service providers and vendors. As a result, AEP must rely upon the marketing capabilities of Project Sponsors for the success of the program to AEP's distribution customers.

AEP will not directly market any energy efficiency related product or service to its customers. Project Sponsors may not use the AEP name or logo in any correspondence or promotional material; however, Project Sponsors are encouraged to use the one-page brochure provided by AEP and available on the program website. Any other marketing materials must be approved by AEP prior to their use. In addition, all approved Project Sponsors must comply with all the requirements of the National "Do Not Call" Registry and the Texas "No Call" lists. Examples of acceptable and non-acceptable phrases are in Appendix F. AEP reserves the right to terminate the contract of any Project Sponsor using marketing materials containing any unapproved reference to AEP.

Upon receipt of the countersigned agreement and AEP approval of marketing materials, the Project Sponsor may begin marketing and installation activities.

AEP maintains an alphabetical listing of participating Project Sponsors on its main program website, www.aepefficiency.com. This site may be used for Project Sponsor verification by the prospective customer. AEP also includes on this site a place for program participants to register a complaint against a Project Sponsor. AEP also strongly encourages Project Sponsors to register with the Better Business Bureau(s) in those areas in which work is planned.

Entering into an agreement with AEP as a Project Sponsor does not imply AEP's endorsement or approval of any company, product, or service.

4.4 Implementation

Project Sponsors participating in the HTR SOP **must** be in "Approved" status and current year Host Customer Agreements prior to beginning work at a home.

All installations must be submitted within 45 days of the installation.

The **Host Customer Agreement and Acknowledgement** (HCA) form is the primary agreement executed between the Host Customer and the Project Sponsor prior to measure installation. The PUCT requires that HCAs contain certain consumer protection provisions and disclosures.

All Project Sponsors are required to use the AEP-provided HCA form. The HCA form must be signed and dated by the Project Sponsor; the Host Customer; and if applicable, the subcontractor. In addition, pre- and post-CFM readings and "R" Value of Existing CI are required to be included on the HCA form for all applicable measures. HCA forms will be sent to Project

Sponsors upon approval and contract execution. Additional forms will be provided to Project Sponsors when requested via e-mail.

The **Self Certification Form of Income Eligibility** is also required of the HTR SOP. These forms are to be used by customers to certify hard-to-reach eligibility. Such form must be uploaded for every Host Customer following measure installations.

In the HTR SOP, **all** Host Customers serviced must be supplied with approved **customer education material**. When an inspection is performed by AEP, Host Customers are asked to confirm receipt of such education material.

The **Field Data Collection Sheet** developed for use in AEP's HTR SOP must be completed for each customer project and must be uploaded with monthly reports along with any other required documentation. This form is the only one to be used by crews/installers in the field to capture all relevant measure installation data that is entered into P3 and used to calculate savings.

Additional Required Documentation – Photos; Besides the Host Customer Agreement and Field Notes Form required by program guidelines for each installation, the TRM requires Pre and Post photos for some measure installations.

4.4.1 Prescriptive Requirements for Infiltration Measures

To qualify for incentives, a minimum air leakage reduction of 10% of the pre-installation blower-door CFM reading is required. There is an upper limit of 5.2 CFM₅₀ per square foot of house floor area for the pre-retrofit infiltration rate on eligible projects. This measure must be completed, including the post-installation CFM reading, prior to starting the duct efficiency measure, if applicable. In addition to meeting the installation standard in the TRM, unless contraindicated for health and safety reasons, the following interior leakage points shall be treated as part of this measure, **if applicable**:

- Attic access
- All plumbing penetrations
- Other building envelope penetrations (Any hole or opening must be sealed using the proper method to ensure a permanent seal)
- Weather-stripping and a door sweep or threshold with door bottom weather-stripping on all exterior doors, upon completion, the Host Customer should be able to close and lock the door(s) with minimal effort
- Missing or broken window panes
- Furnace closet door: For homes with gas space heating, louvered doors or open ceilings to gas space heater closets may not be sealed off to reduce air infiltration unless an outside air source is installed according to applicable building and safety codes. Any sealing of louvered doors and the installation of an outside air source must be inspected by appropriate local, county, or state governmental building inspectors

Failure to complete the prescriptive requirements will result in a total measure failure regardless of the CFM reading. Photographs of air infiltration measures as required in TRM are also required to be uploaded in the database.

4.4.2 Prescriptive Requirements for Duct Efficiency Measures

If both infiltration and duct efficiency measures are installed, infiltration measures must be done prior to performing duct efficiency measures. To qualify for incentives for duct efficiency measures, leakage-to-outside testing must be utilized, in addition to meeting the installation standard in the TRM, the following prescriptive requirements also apply, **if applicable**:

- Seal return air chase
- Seal plenum
- Seal all supply and return registers
- Check the condition of duct work in unconditioned space and seal or repair as necessary

Failure to complete the prescriptive requirements will result in a total measure failure regardless if it meets the CFM reading requirement.

In addition, duct and air leakage testing should *not* be conducted in homes where either evidence of asbestos, mold and/or other potentially hazardous material is present or suspected due to the age of the home. Blower door depressurization tests are *prohibited* if there is a risk of asbestos becoming airborne and being drawn into conditioned space.

4.4.3 Prior to Installation

1. For duct efficiency and infiltration projects, the Project Sponsor must submit a work schedule via the program website at least seven (7) days prior to beginning installations. This requirement may be modified for good cause at the discretion of the program manager upon request via email from the project sponsor and approval via email by the program manager.
2. Upon prior notice from the program manager, Project Sponsors may be required to submit daily work schedules for other measure installation projects, if AEP deems it necessary to review work in progress
3. For Multi-Family sites:
 - Multi-Family projects will require pre-approval of the site and measures via the program website.
 - For Multi-Family projects, the Project Sponsor must submit a work schedule at least seven (7) days prior to beginning installations via the program website.
4. Host Customer must sign and date the HCA form.

A CO test is required for all air infiltration installations where combustion appliances exist.

AEP will not consider payment for installations submitted without the proper pre-approvals.

4.4.4 Post –Installation

Each customer must sign and date the HCA upon completion of the project to verify the measures were installed as stated. The HCA provides AEP with permission to inspect the installation, which may be required before incentive payments are approved. **The customer copy of the completed and signed HCA and income eligibility forms must be provided to the customer along with approved customer education material. All signatures and dates must be properly completed by the customer, Project Sponsor, and subcontractor (if applicable).**

If a subcontractor was used, Project Sponsor must provide the customer with an **All Bills Paid Affidavit**. A copy of the document is available on the website.

A CO test is required for all air infiltration installations where combustion appliances exist.

4.5 Reporting

All installation reporting will be done via P3. The Project Sponsor will then upload all required documents (HCA, field note forms, income eligibility forms and photos) to P3.

The following information is required for each project completed:

- Customer type (Mobile Home or Single Family)
- Customer name and address
- AEP ESI ID number *
- Best day-time phone number
- County
- Type of Heating**
- List of installed measures
- Number of bedrooms
- Square footage of conditioned space

*AEP Texas - Central Division customers: ESI IDs begin with 100327894.

*AEP Texas - North Division customers: ESI IDs begin with 102040497.

*SWEPCO Texas customers: ESI IDs begin with 101769896. SWEPCO Texas is located outside the Texas competitive retail market but each customer account is assigned an ESI ID. SWEPCO Texas will also be clearly identified on all customer electric bills.

****Homes cooled with window air conditioning units exclusively must be reported as “gas” heat. Electric space heaters are considered “plug-in” load and do not make the home eligible for electric heating type in this program.**

4.6 Project Submission

All installations must be reported within 45 days of installation. Due to the nature of the first-come first-served program design, Project Sponsors are encouraged to submit projects as early and as often as possible. Before submitting projects, ensure that all required documents are uploaded for each project. Project Sponsors have two options for submitting projects:

One-by-One Submission

1. Access your Project List and select the project you wish to submit.
 - a. Note that only projects that are in the “Work Completion Pending” status can be submitted.
2. Within the Project Details page, select the “Submit” from the dropdown menu (in the top right panel under the project status).
3. Select the “Submit” button in blue to submit project.
4. Project will be submitted if it meets all of the program requirements.

Batch Submission

1. Access your Project List and select the checkboxes in the far left column for each project that you wish to submit.

- a. Note that only projects that are in the “Work Completion Pending” status can be submitted.
2. Select the “Batch Action” dropdown menu.
3. Select “Submit” from the dropdown menu. A confirmation message will appear.
4. Click “Go” within the confirmation window.
5. Projects will be submitted if they meet all of the program requirements.

AEP will review and process the submitted projects. Once the reviewed projects are approved and ready for incentive payment, AEP will batch up the approved projects for that month and pay them within 45 days

4.7 Project Review Procedures

4.7.1 Installation Inspections

All measures installed in the HTR SOP must conform to or exceed the standards listed in the TRM. AEP will make random sample field inspections to determine if each measure has been installed properly and is capable of performing its intended function. Up to 10% of the customer sites may be inspected. If measures installed do not meet the inspection standards, they will not be eligible for incentives.

If AEP is unable to inspect measures installed at the customer’s location, those measures may be counted as failures.

4.7.2 Incentive Adjustments

After field inspections are completed, all installations will be evaluated on a measure-by-measure basis to calculate an adjustment factor for the incentive payment. This adjustment factor will be the ratio of the incentive total for all measures that pass inspection to the total incentive for all measures tagged for inspection. **The adjustment factor will then be applied to the un-inspected sites.**

The algorithm for calculating the adjustment factor is described below:

$$\text{Adjustment Factor} = \frac{\text{Incentive total for measures that pass inspection}}{\text{Incentive total for all measures tagged for inspection}}$$

In instances where all measures pass inspection, the adjustment factor is 1.00. This assumes all reported inputs are correct. If only 75% of the inspection sample passes inspection, the adjustment factor will be .75; only 75% of the incentive will be paid. If the Project Sponsor disagrees with the payment adjustment, the Project Sponsor may request that all information be reviewed again after the Project Sponsor provides additional clarifying information. If the Project Sponsor and AEP cannot agree on the adjustments after the review, the Project Sponsor and AEP must use the dispute resolution mechanisms that are specified in the SOP Agreement.

4.7.3 Accurate and Timely Reporting

Accurate reporting is of key importance in calculating savings achieved. AEP may prohibit a Project Sponsor from submitting certain measures if problems occur repeatedly in accurately reporting of required information such as but not limited to; square footage, air conditioner size, and number of serviced supply registers, plumbing penetrations, doors, and windows. All

installations will be entered and submitted within 45 days of the installation date. Failure to adhere to the reporting requirements may result in total incentive failure or cause for termination of contract.

4.7.4 Excessive Failures

AEP reserves the right to limit the measures a Project Sponsor is allowed to install or to terminate contracts due to excessive failures.

4.7.5 Payment of Incentive

Payment terms are net 45 days. Payment will be processed when the inspections are completed and the incentive has been adjusted.

INCENTIVE PAYMENT(S) TO PROJECT SPONSOR(S) ARE EXPRESSLY AND SPECIFICALLY CONDITIONED UPON AEP RECEIVING ALL REQUIRED NOTICES, SUBMITTALS AND MATERIALS FROM PROJECT SPONSOR(S) WITHIN THE APPLICABLE PERIOD SPECIFIED IN THIS MANUAL AND THE AGREEMENT. FAILURE BY PROJECT SPONSOR TO DELIVER ANY REQUIRED NOTICE, SUBMITTAL, OR MATERIAL WITHIN THE APPLICABLE PERIOD SPECIFIED IN THIS AGREEMENT SHALL BE DEEMED A MATERIAL BREACH OF THE AGREEMENT.

APPENDIX A - Glossary

- A -

Affiliate: As adopted by the PUCT, an Affiliate is:

- (A) a person who directly or indirectly owns or holds at least 5.0% of the voting securities of an energy efficiency service provider;
- (B) a person in a chain of successive ownership of at least 5.0% of the voting securities of an energy efficiency service provider;
- (C) a corporation that has at least 5.0% of its voting securities owned or controlled, directly or indirectly, by an energy efficiency service provider;
- (D) a corporation that has at least 5.0% of its voting securities owned or controlled, directly or indirectly, by:
 - (i) a person who directly or indirectly owns or controls at least 5.0% of the voting securities of an energy efficiency service provider; or
 - (ii) a person in a chain of successive ownership of at least 5.0% of the voting securities of an energy efficiency service provider; or
- (E) a person who is an officer or director of an energy efficiency service provider or of a corporation in a chain of successive ownership of at least 5.0% of the voting securities of an energy efficiency service provider;
- (F) a person who actually exercises substantial influence or control over the policies and actions of an energy efficiency service provider;
- (G) a person over which the energy efficiency service provider exercises the control described in subparagraph (F) of this paragraph;
- (H) a person who exercises common control over an energy efficiency service provider, where "exercising common control over an energy efficiency service provider" means having the power, either directly or indirectly, to direct or cause the direction of the management or policies of an energy efficiency service provider, without regard to whether that power is established through ownership or voting of securities or any other direct or indirect means; or
- (I) a person who, together with one or more persons with whom the person is related by ownership, marriage or blood relationship, or by action in concert, actually exercises substantial influence over the policies and actions of an energy efficiency service provider even though neither person may qualify as an affiliate individually.

- B -

Baseline: For purposes of determining estimated and measured Energy Savings for equipment replacement projects implemented under the SOP, the Baseline is generally defined as the energy

consumed by equipment with efficiency levels that meet the applicable current federal standards and reflects current market conditions. In certain limited circumstances, the Baseline may be determined by the equipment or conditions currently in place. This is likely to occur only when federal energy efficiency standards do not apply, or when the existing equipment can be shown by the Project Sponsor to have a remaining service life of at least ten years. For determining estimated and measured savings for building shell improvements, the Baseline is generally determined by the building's current condition, e.g., existing insulation r-values, air infiltration rates, etc.

- D -

Demand Savings: A quantifiable reduction in the rate at which energy is delivered to or by a system at a given instance, or average over a designated period, usually expressed in kilowatts (kW) or megawatts (MW).

- E -

Energy-Efficiency Measures (EEM): Equipment, materials, and practices that when installed and used at a customer site result in a measurable and verifiable reduction in either purchased electric energy consumption, measured in kilowatt-hours (kWh), or peak demand, measured in kW, or both

Energy Efficiency Project: An energy efficiency measure or combination of measures installed under an SOP Agreement or a market transformation contract that results in both a reduction in customers' electric energy consumption and peak demand, and energy costs.

Energy Efficiency Service Provider: A person who installs energy efficiency measures or performs other energy efficiency services.

Energy Savings: A quantifiable reduction in a customer's consumption of energy, or the amount by which energy consumption is reduced as a result of the installation of qualifying Energy-Efficiency Measures. Energy Savings are determined by comparing the efficiency of the installed Measures to that of an appropriate Baseline.

Existing Equipment: The equipment that is installed at the host customer's site prior to the customer's participation in the SOP.

- F -

Field Notes Form: A form developed for use in AEP's HTR SOP to be completed for each customer project listing all measures installed. This form is to be used by crews/installers in the

field to capture all relevant data that is entered into tracking databases and used to calculate savings.

- H -

Host Customer or Customer: A residential distribution customer of AEP that owns or leases facilities at a Project Site or Sites and that has entered into a Host Customer Agreement with Project Sponsor for the installation of Measures as a part of Project.

- I -

Incentive Payment: Payments made to an Energy Efficiency Service Provider based on the level of approved Demand and Energy Savings (expressed as kW and kWh). Incentive rates are based on PUCT approved avoided costs and incentive caps.

Inspection: Onsite examination of a project to verify that a measure has been installed and is capable of performing its intended function.

- M -

Market Actor or Project Sponsor: Any organization, group, or individual who contracts with AEP to provide Energy Savings or Peak Demand Savings, or both, under the SOP.

Marketing Materials: Any method of customer outreach including, but not limited to printed materials, radio, television, internet, and social media conducted by the project sponsor or by anyone marketing on behalf of the project sponsor.

- P -

Peak Demand: The electrical demand at the time of the highest annual demand on the utility's system, measured in 15 minute intervals.

Peak Demand Reduction: Peak demand reduction on the utility system during the utility system's peak period, calculated as the maximum average demand reduction over a period of one hour during the peak period.

Peak Period: For the purposes of this program, the peak period is defined as the hours from 1 PM to 7 PM CDT weekdays, from June 1 through September 30 and the hours of 6 to 10 AM CST and 6 to 10 PM CST during the months of December, January and February (federal holidays and weekends excluded).

Program Manual: The complete set of AEP HTR SOP materials, including the Program description, procedures and forms.

Program Portfolio Portal (P3): Software application utilized to report and track project savings and incentives.

Project Application: The Project Application, comprising of a set of standard forms, is submitted by an organization wanting to participate in the SOP as a Project Sponsor.

Project Site: The location of a Host Customer's facilities where approved Measures will be installed, and from which Peak Demand Savings or Energy Savings, or both, will be obtained. A single Project may include Measures installed at multiple Project Sites.

Project Sponsor or Market Actor: Any organization, group, or individual who contracts with AEP to provide Energy Savings or Peak Demand Savings, or both, under the SOP.

Prudent Electrical Practices: Those practices, methods, standards, and equipment commonly used in prudent electrical engineering and operations to operate electrical equipment lawfully and with safety, dependability, and efficiency and in accordance with the National Electrical Safety Code, the National Electrical Code, and any other applicable federal, state and local codes. In the event of a conflict, the applicable federal, state, or local code shall govern.

- R -

Renewable Demand Side Management (DSM) Technologies: Equipment that uses a renewable energy resource that, when installed at a customer site, reduces the customer's net purchases of energy (kWh), electrical demand (kW), or both.

- S -

SOP Agreement: A contract entered into by the Project Sponsor and AEP following the approval of the Project Sponsor's project application and AEP's design of a project-specific M&V plan. The SOP Agreement specifies the energy-efficiency measures to be installed, the expected Energy Savings, the expected total incentive payment, and the agreed-upon M&V approach.

- T -

Technical Reference Manual: PUCT approved statewide manual that provides methods, formulas and default assumptions for estimating energy, peak demand and other resource impacts from efficiency measures.

APPENDIX B – Service Area Maps

Counties Served

AEP Texas Central Division

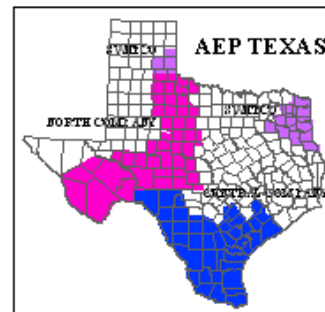
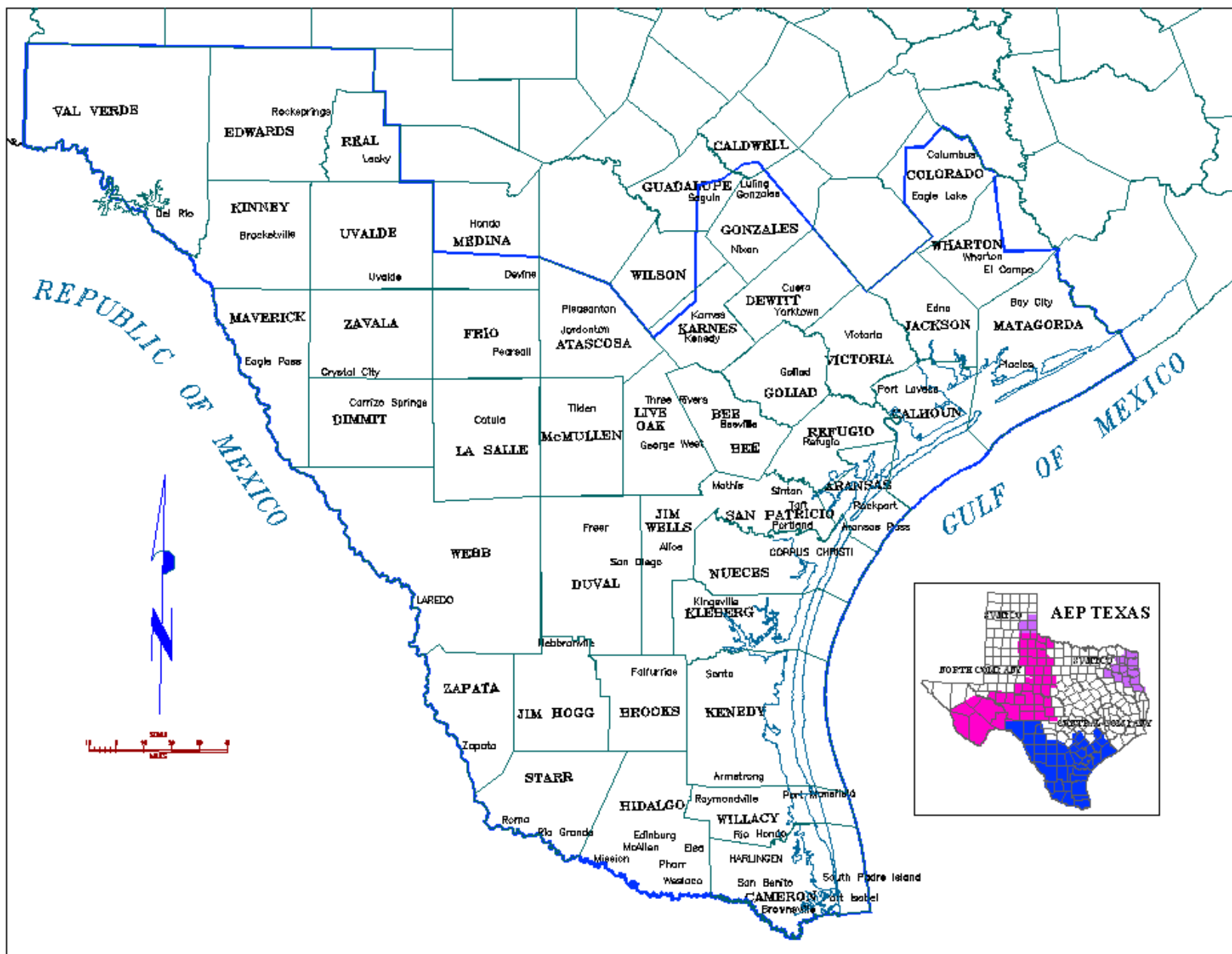
<i>County</i>	<i>Zone</i>	<i>County</i>	<i>Zone</i>
Aransas	4	Kinney	3
Atascosa	3	Kleberg	4
Bee	3	LaSalle	3
Brooks	4	Live Oak	3
Caldwell	3	Matagorda	3
Calhoun	4	Maverick	3
Cameron	4	Medina	3
Colorado	3	McMullen	3
DeWitt	3	Nueces	4
Dimmit	3	Real	2
Duval	4	Refugio	4
Edwards	2	San Patricio	4
Frio	3	Starr	4
Goliad	3	Uvalde	3
Gonzales	3	Val Verde	3
Guadalupe	3	Victoria	3
Hidalgo	4	Webb	4
Jackson	3	Wharton	3
Jim Hogg	3	Willacy	4
Jim Wells	4	Wilson	3
Karnes	3	Zavala	3
Kenedy	4	Zapata	4

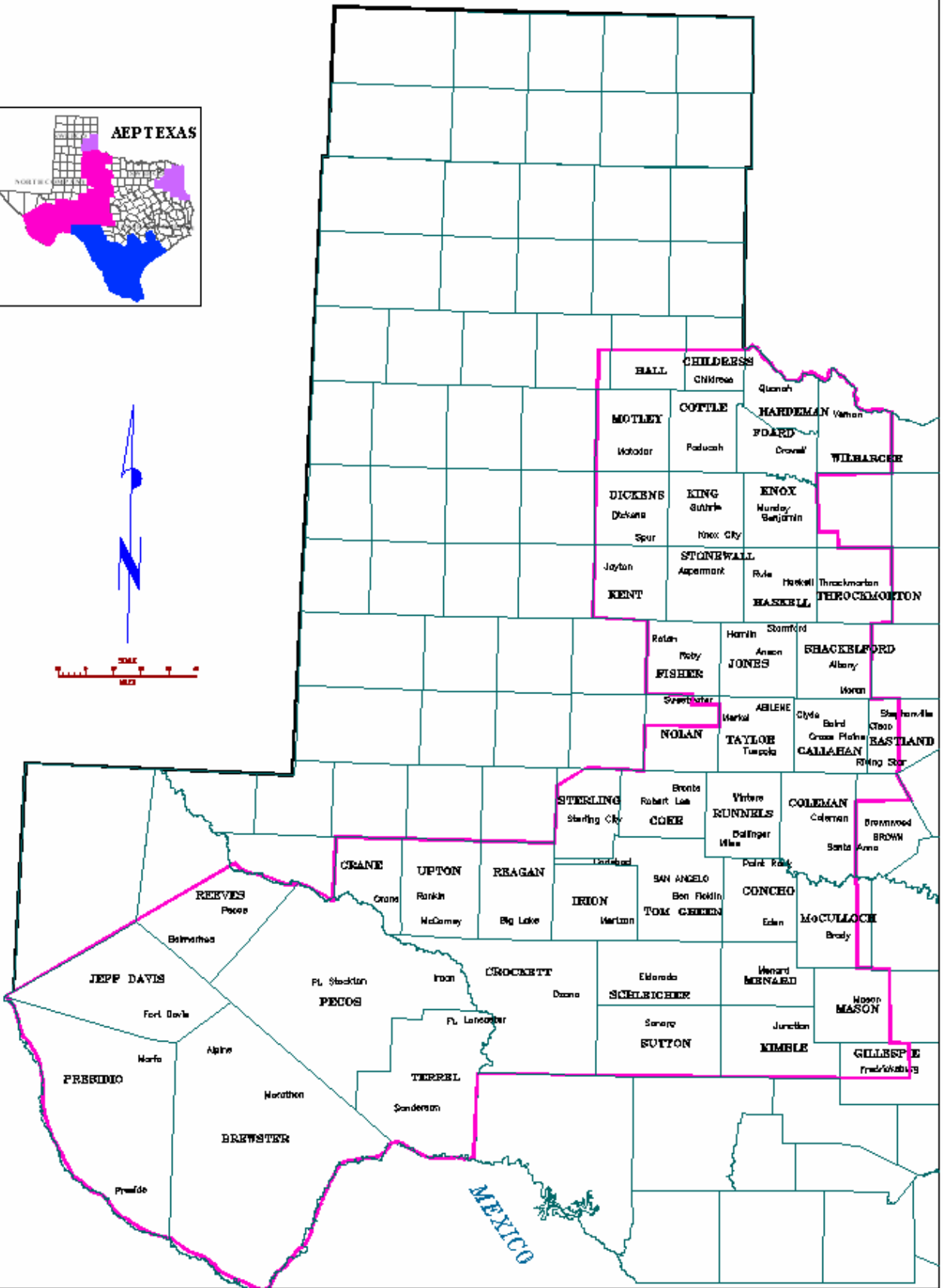
AEP Texas North Division

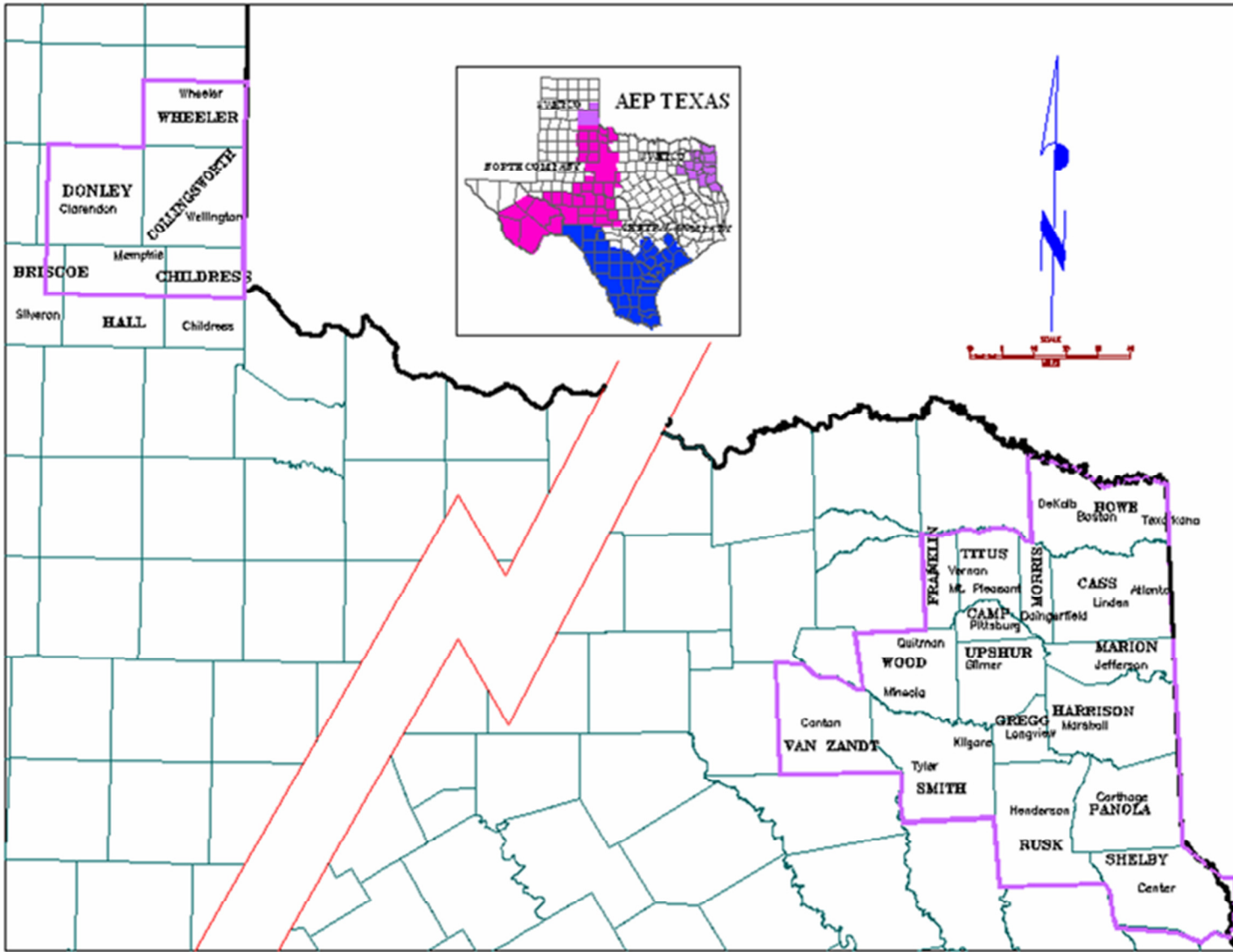
<i>County</i>	<i>Zone</i>	<i>County</i>	<i>Zone</i>
Baylor	2	Kimble	2
Brewster	2	King	1
Briscoe	1	Knox	1
Brown	2	Mason	2
Callahan	2	McCullough	2
Childress	1	Menard	2
Coke	2	Motley	1
Coleman	2	Nolan	2
Concho	2	Pecos	2
Cottle	1	Presidio	2
Crane	2	Reagan	2
Crockett	2	Reeves	2
Dickens	1	Runnels	2
Eastland	2	Schleicher	2
Edwards	2	Shackelford	2
Fisher	2	Stephens	2
Foard	1	Sterling	2
Gillespie	2	Stonewall	1
Hall	1	Sutton	2
Hardeman	1	Taylor	2
Haskell	2	Throckmorton	2
Irion	2	Tom Green	2
Jeff Davis	2	Upton	2
Jones	2	Wheeler	1
Kent	1	Wilbarger	1

SWEPSCO

<i>(Northeast Texas)</i> County	Zone	County	Zone
Bowie	2	Shelby	2
Camp	2	Smith	2
Cass	2	Titus	2
Franklin	2	Upshur	2
Gregg	2	Van Zandt	2
Harrison	2	Wood	2
Hopkins	2	<i>(Northwest Texas)</i>	
Marion	2	Childress	1
Morris	2	Collingsworth	1
Panola	2	Donley	1
Red River	2	Hall	1
Rusk	2	Wheeler	1







APPENDIX C - 2018 Incentive Rates

Measure Group	Measure	EUL	AEP Texas Central Division		AEP Texas North Division		SWEPCO	
			kW	kWh	kW	kWh	kW	kWh
Lighting ¹	LED	Var.	\$4.50/Lamp		\$4.50/Lamp		\$5/Lamp	
HVAC	AC or HP Tune-up	5	N/A		\$216	\$0.07	N/A	
	Duct Efficiency	18	\$346	\$0.12	\$336	\$0.12	\$340	\$0.13
	Duct Efficiency – Gas	18	\$400	\$0.13	\$427	\$0.15	\$415	\$0.13
Building Envelope	Air Infiltration – Electric Resistance	11	\$275	\$0.11	\$230	\$0.10	\$230	\$0.10
	Air Infiltration – Heat Pump	11	\$285	\$0.12	\$230	\$0.10	\$230	\$0.10
	Air Infiltration - Gas	11	\$310	\$0.12	\$290	\$0.12	\$270	\$0.12
	Insulation	25	\$455	\$0.14	\$391	\$0.13	\$400	\$0.13
Water Heating	Low-Flow Showerheads	10	\$35/Showerhead		\$35/Showerhead		\$35/Showerhead	
	Faucet Aerators	10	\$330	\$0.10	\$333	\$0.10	\$7/Aerator	
	Water Heater Jacket	7	\$226	\$0.07	\$166	\$0.05	\$160	\$0.09
	Pipe Wrap	13	\$330	\$0.10	\$333	\$0.10	\$310	\$0.10
All Other Measures ²		<10	\$226	\$0.07	\$166	\$0.05	N/A	
		≥10	\$330	\$0.10	\$333	\$0.10	N/A	

1. Maximum number of LEDs allowed per home [AEP Texas: 25] [SWEPCO: 20]
2. Reference the TRM for further information on all other measures

AEP Texas (Replace on Burnout)	≥14.5-14.9 SEER	≥15-15.9 SEER	≥16-16.9 SEER	≥17-17.9 SEER	≥18-20.9 SEER	≥21 + SEER
Central Air Conditioner	\$110/ton	\$150/ton	\$220/ton	\$290/ton	\$345/ton	\$445/ton
Central Heat Pump	\$100/ton	\$140/ton	\$180/ton	\$245/ton	\$320/ton	\$410/ton
CHP replacing CAC w/ Electric Resistance Furnace	\$400/ton	\$450/ton	\$500/ton	\$670/ton	\$750/ton	\$850/ton
Ground Source Heat Pumps	\$350/ton					

AEP Texas (Early Retirement)	≥14.5-14.9 SEER	≥15-15.9 SEER	≥16-16.9 SEER	≥17-17.9 SEER	≥18-20.9 SEER	≥21 + SEER
Central Air Conditioner (CAC)	\$180/ton	\$225/ton	\$300/ton	\$380/ton	\$425/ton	\$500/ton
Central Heat Pump (CHP)	\$180/ton	\$230/ton	\$325/ton	\$400/ton	\$470/ton	\$550/ton
CHP replacing CAC w/ Electric Resistance Furnace	\$400/ton	\$450/ton	\$500/ton	\$670/ton	\$750/ton	\$850/ton

SWEPCO*	15.00-15.99 SEER	16.00-16.99 SEER	18.00+ SEER
Central A/C	\$100/ton	\$150/ton	\$200/ton
Central Heat Pump**	\$250/ton	\$400/ton	\$500/ton

*Installers must have HVAC license and be a SWEPCO approved Project Sponsor

*AHRI Rating Certificate must be provided for unit to qualify

**Maximum incentive for one Heat Pump is \$2,000 and one home incentive cannot exceed \$2,500

APPENDIX D – Carbon Monoxide Test Specifications

Test Equipment

Carbon monoxide sensing device must have a range from 0-2000 ppm; accuracy +/- 5% of readout; and readout resolution = 1 ppm adjustable to 0.

Ambient Air Test

Conduct test at initial assessment. Every housing unit that has combustion equipment shall be tested. If more than 9 ppm CO is detected, air infiltration reduction measures shall not be installed until the CO problem has been corrected. Host customer should always be informed of the existence of high levels of CO and advised to take precautions until abatement can be performed.

No energy efficiency measure that could result in a decreased ventilation rate for that housing unit shall be installed if the installation of such measure would or could result in ambient air CO levels exceeding 9 ppm within the housing unit.

Health & Safety Precautions

Duct and air leakage testing should not be conducted in homes where either evidence of asbestos, mold and/or other potentially hazardous material is present or suspected due to the age of the home. Blower door depressurization tests are prohibited if there is a risk of asbestos becoming airborne and being drawn into conditioned space.

APPENDIX E – REQUIRED FORMS

All Bills Paid Affidavit; *this form is provided to Host Customers by project sponsors after the completion of measure installations. It provides Host Customers protection against claims of subcontractors.*

Host Customer Agreement & Acknowledgement Form; *this is the primary agreement executed between the Host Customer and the Project Sponsor. It includes all the customer protection provisions and disclosures required by the PUCT.*

Income Eligibility Verification Form and/or Property Owner Income Eligibility Verification Form; *these PUCT approved forms are used by customers and property managers for the purpose of verifying hard-to-reach eligibility.*

Field Notes Form; *this form is to be used by crews/installers in the field to capture all relevant measure data that is entered into tracking databases and used to calculate savings.*

APPENDIX F – MARKETING MATERIAL PHRASES

Acceptable and Unacceptable

Information has sometimes been relayed to a customer that is incorrect or misleading, giving the customer a misrepresentation of the responsibility of the Utility Company. Suggestions are offered here for correct verbiage that can be used. Statements in the second section are incorrect and must NOT be used.

Acceptable phrases:

"The local electric utility company has started an energy conservation program for their customers..."

"This program is offered at subsidized or no cost to the homeowner."

"The electric delivery companies are purchasing the Energy Savings we have provided you."

"The State of Texas has developed programs to assist qualified electric customers with installing energy saving improvements to help reduce consumption of energy..."

"Current State law requires local electric utilities to make funds available to independent contractors so that you have the opportunity to improve the energy efficiency of your home."

"The Utility Companies typically call about 10% of the customers we do work for to ensure we are following guidelines and proper upgrades have been done."

"...your only obligation may be to allow the utility to inspect our work."

"(Project sponsor) provides free upgrades to your home to lower costs on your electric bill."

"(Project sponsor) is not part of, or endorsed by the PUCT or the local electric utility. We are an independent company that provides energy efficiency measures under the programs for electric utilities."

"These funds are provided by rate payers and are regulated by the Public Utility Commission."

"The State of Texas has developed programs to encourage energy service providers to offer energy conservation services to electric customers of investor-owned utilities."

These phrases, or anything similar, are NOT to be used:

"All costs are paid by your electric company."

"Would you like your utility company to pay for energy efficiency upgrades to your home at no cost to you?"

"It is free because we are paid by the utilities"

"We are getting paid but not from you, but by your utility company."

"(Project Sponsor) bills your electric utility for the work performed on your home."