



2023 AEP Texas High-Performance Homes Program Guide



Welcome

Welcome to the 2023 AEP Texas High-Performance Homes Program. As a High-Performance homebuilder, you are part of an elite group that is setting the standard for energy-efficient construction in South Texas.

This booklet is designed to provide you with the information you will need throughout your participation in the AEP Texas High-Performance Homes Program. Should you run into any problems or have additional questions, we are here to help you!

AEP Texas has contracted with ICF to implement the High-Performance Homes Program for 2023. ICF is the nation's leading provider of residential new construction programs. ICF is widely recognized for developing and implementing innovative program designs for utilities throughout Texas and the nation. ICF's dedicated program team will work closely with AEP Texas staff to support builders, raters and other market actors achieve success in the AEP Texas High-Performance Homes Program.

Thank you for your participation. We all look forward to working with you to advance home construction and promote energy efficiency in South Texas.

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PROGRAM CONTACT INFORMATION

Melissa Proske, Program Manager

AEP Texas
P.O. Box 2121
Corpus Christi, TX 78403
Email: maproske@aep.com
Office: (361) 881-5490

Greg Nettleton, Program Director

ICF
Austin, TX
Email: gregory.nettleton@icf.com
Office: (737) 2726768

Garrett Dorsey III, Account Manager

ICF
Corpus Christi, TX
Email: garrett.dorseyiii@icf.com
Office: (361) 688-2211

Christine Couch, Account Manager

ICF
Houston, TX
Email: Christine.Couch@icf.com
Office: (713) 445-2012



PROGRAM OVERVIEW

The AEP Texas High-Performance Homes Program (the Program) promotes the construction and certification of new ENERGY STAR® certified and high-performance qualified homes. This voluntary program provides financial incentives and other types of assistance to production and custom homebuilders who commit to construct homes within the AEP Texas service territory that meet high-performance specifications. The goal of the Program is to create a sustainable market that leads to:

- A continuous supply of high-performance and ENERGY STAR certified homes.
- Increased consumer demand and perceived value of high-performance and ENERGY STAR certified homes.
- Increased improvements in home energy performance.

To achieve this goal, AEP Texas is committed to increasing consumer awareness of high-performance and ENERGY STAR certified homes and the homebuilders who construct them. AEP Texas is also committed to working in partnership with key market actors who can contribute to the creation of a sustainable market of energy-efficient homes.

Program Benefits

Today's homebuyers are increasingly concerned about rising energy costs. Although any homebuilder can claim to build an energy-efficient home, the AEP Texas High-Performance Homes Program provides you with significant third-party credibility. As a participant in the AEP Texas High-Performance Homes Program, certain benefits and services are available to you.

Eligibility Requirements

Homes must meet several eligibility requirements to qualify for incentives in the AEP Texas High-Performance Homes Program:

1. A home must be within an AEP Texas service territory and served by AEP Texas as evidenced by town, zip code and ultimately a permanent meter number or ESI ID number associated with the home¹.
2. The home has not received incentives from any other AEP Texas energy efficiency program as evidenced by the permanent meter number or ESI ID number submitted through the Program's online system.
3. A home's construction must be completed, and a permanent meter requested from AEP Texas between October 1, 2022 and November 24, 2023 (as determined by the AEP Texas permanent meter set date).
4. The final HERS Rating for the home must be performed and dated between October 1, 2022 and November 24, 2023.

AEP Texas will pay incentives once validation occurs that each of the above conditions are met, the required data is submitted through the online system and proper documentation is submitted.

¹ Homebuilders are responsible for verifying their electric service provider prior to submitting documentation to request incentives. A permanent meter number must be submitted for each home and will be verified by AEP Texas.



2023 Financial Incentives

AEP Texas will offer incentives to reward homebuilders who deliver homes that meet current program guidelines. The number of incentives awarded to each homebuilder is determined through a competitive bid and scoring process.

The incentive structure is designed to measure kWh savings achieved above the minimum Texas Baseline Reference Home (TBRH). To be eligible for participation, a home must achieve at least a five percent (5%) savings over the 2022 TBRH. Incentives are then paid based on Table 1:

Table 1. 2023 Incentive Structure

| Mandatory Program Requirements | Tier 1 | Tier 2 | Tier 3 |
|--|---------------------------|-------------------------------|-------------------------------|
| Climate Zone | CZ2 | CZ2 | CZ2 |
| Minimum Cooling SEER2 Value | 16 | 16 | 16 |
| Grade 1 Wall Insulation | Yes | Yes | Yes |
| Grade 1 Ceiling insulation | ≥R-38 | ≥R-42 | ≥R-42 |
| Electric Water Heat Efficiency | - | - | 0.95 |
| Heat Pump HSPF | - | - | 9.5 |
| Elective Requirements | Must meet 3 of 6 (Tier 1) | Must meet 4 out of 6 (Tier 2) | Must meet 4 out of 6 (Tier 3) |
| Duct Leakage CFM/100 sq. ft. | ≤ 4 | ≤ 3.5 | ≤ 3.5 |
| Infiltration ACH50 | ≤ 4.5 | ≤ 4 | ≤ 4 |
| Average Window SHGC | ≤ .24 | ≤ .22 | ≤ .22 |
| Average Rated Wall + Sheathing R Value | ≥ R-15 | ≥ R-15 | ≥ R-15 |
| High Efficiency Lighting % | ≥ 90% | ≥ 95% | ≥ 95% |
| Radiant Barrier | Yes | Yes | Yes |
| Incentive Amount | \$250.00 | \$350.00 | \$550.00 |
| Additional Bonus Incentives | | | |
| Heat Pump Water Heater (per home) | \$300 | \$300 | \$300 |
| EV Charger - Level 2 (per home) | \$100 | \$100 | \$100 |
| Heat Pump Installation Bonus (9.0 HSPF min) (per home) | \$200 | \$200 | \$200 |
| ENERGY STAR Smart Thermostat (per home) | \$25 | \$25 | \$25 |
| Foam Encapsulated Attic (≥R-21) | \$50 | \$50 | \$50 |
| Affordable/Low Income Housing (per home) | \$100 | \$100 | \$100 |
| Right-Sized HVAC (per system) | \$25 | \$25 | \$25 |



Tier 1, a home must meet the mandatory measures: 16 SEER2 AC and Grade 1 wall and R-38 ceiling insulation installation and must meet 3 out of 6 of the additional elective options.

Tier 2, homes must include 16 SEER2 AC systems and have the same mandatory Grade 1 wall and R-42 ceiling insulation installation requirements and features a 4 out of 6 additional elective requirements.

Tier 3, homes must include 16 SEER2 - 9.5 HSPF HP AC systems and have the same mandatory Grade 1 wall and R-42 ceiling insulation installation requirements and features a 4 out of 6 additional elective requirements.

An optional method to comply with Tier 1, 2 & 3 is also proposed by installing “Foam Encapsulation” Attic. Effectively, by virtue of the properties of foam encapsulation, most elective measures from Tiers 1, 2 & 3 are met with exceedingly high performance: duct leakage is virtually eliminated, infiltration rates far exceed traditional buildings.

Compliance verification for each individual tier-related measure requirements will be done using data extracted from the **Confirmed** Ekotrope file supplied with the incentive request. Tier-related measure specific notes:

- Required Cooling SEER2 Value: will be determined by the highest SEER2 installed of the cooling systems. SEER2 can be determined with either a matched condenser-coil (RCU-A-C), or a matched condenser-coil-blower (RCU-A-CB) type AHRI certificate, or equivalent. Corresponding Ekotrope energy model must match the AHRI SEER2 value.
- Grade 1 Wall Insulation and Grade 1 Ceiling insulation: all assemblies must be Grade 1 and defined as such in the energy model.
- Total Duct Leakage: the sum of all installed duct systems’ tested CFM25 value, divided by one-one hundredth of the conditioned floor area. Only the units “CFM @ 25 Pascals” can be accepted.
- Infiltration ACH50: within Ekotrope, Heating and Cooling Season Infiltration Value must both be recorded in the energy model and only the units “CFM @ 50 Pascals” or “ACH @ 50 Pascals” can be accepted. Raters must follow the RESNET 380 Standard to test homes for envelope leakage, duct leakage, mechanical ventilation, and duct system air flows.
- Average Window SHGC: Glazing must be NFRC tested and RESNET on-site inspection protocol should be followed to confirm the measure. At least 50% of all glazing modeled within the energy model must exceed the SHGC measure criteria.
- Average Rated Wall + Sheathing R Value: will be determined by adding the area-weighted average R-Value of all “Frame Cavity Insulation R-Value” plus the highest R-value that continuously sheaths a minimum of 60% of all walls modeled in the energy model.
- High Efficiency Lighting %: interior lighting percentage must be greater than or equal to 90%. This is the ratio of total Qualified Interior Lights Fixtures over total Qualified Interior Light Locations.
 - Light Fixture – A complete lighting unit consisting of a lamp or lamps, and ballasting (when applicable) together with the parts designed to distribute the light, position and protect the lamps, and connect the lamps to the power supply. For built-in valence lighting, strings of low-voltage halogens, and track lights, each individual bulb shall count as a fixture.

- Qualifying Light Fixture – A light fixture located in a Qualified Light Fixture location and comprised of any of the following components: a) fluorescent hard-wired (i.e. pin-based) lamps with ballast; b) screw-in compact fluorescent bulb(s); or c) light fixture controlled by a photocell and motion sensor.
 - As it applies to the definition of Qualifying Light Fixture, LED lights with a luminous efficacy equaling or exceeding 50 lumens/watt shall be considered equivalent to CFLs.
- Qualifying Light Fixture Locations – For the purposes of rating, those light fixtures located in kitchens, dining rooms, living rooms, family rooms/dens, bathrooms, hallways, stairways, entrances, bedrooms, garage, utility rooms, home offices, and all outdoor fixtures mounted on a building or pole. This excludes plug-in lamps, closets, unfinished basements, and landscape lighting.
- Tier 1 - 3 Innovation Option - ENERGY STAR v3.1, must be demonstrated within the energy model, completing all checklist, and perdenialed AC contractor.
- Tier 1 - 3 Innovation Option - Foam Encapsulation Attic, to receive credit for this Innovation Option, the following conditions must be met:
 - No ceiling types can be modeled as "Between Interior and: Unconditioned Attic"
 - All ducts must be located and modeled within Conditioned Space

Additional details on program incentives are listed below.

- Incentive Payments are subject to the submission of required documentation, cooperation with random QA/QC (Quality Assurance/Quality Control) verification inspections, and a completed database entry for Program review. Required documentation includes:
 - Completed database entries for each home/unit address.
 - Uploaded address-specific Ekotrope file.
 - Uploaded Fuel Summary Report generated using the Program supplied 2023 Texas Baseline Reference Home as the User Defined Reference Home for each home/unit.
- Applicable to all homes:
 - All homes must meet the minimum energy code applicable to where it is constructed in addition to the Program requirements.
 - All homes must achieve a minimum energy savings of five percent (5%) kWh savings over the 2023 Texas Baseline Reference Home.
 - All homes must complete the “Fully-Aligned Air Barriers” and “Air Sealing” sections of the most current revision of the ENERGY STAR Thermal Enclosure System Rater Checklist.
 - All homes must perform **both** Blower Door Infiltration testing and Total Duct Leakage duct testing. It is recommended all homes perform Leakage to the Outside (LTO) testing.
 - All evaporators and condensing units shall be properly matched as demonstrated by an AHRI certificate.



- Homes must be submitted for an incentive payment within sixty (60) days of the final certification. Homes submitted to the Program over sixty (60) days beyond the Certification date may not receive payment.
 - Homes returned for corrections have thirty (30) days to be resubmitted for payment from the date of return.
- Applicable to ENERGY STAR certified homes:
 - ENERGY STAR homes must successfully complete the applicable revision of the ENERGY STAR requirements, including:
 - Rater Design Review Checklist and Rater Field Checklist
 - HVAC Design Report
 - HVAC Commissioning Checklist
 - Water Management System Builder Requirements
- Upon request, a copy of the completed and signed inspection forms and checklists shall be made available to program staff within three (3) business days.
- Multi-family incentives are paid at fifty percent (50%) of single-family incentive structure. Multi-family are defined as attached residential units with greater than two units per building and three stories or less. All units must be individually metered. Customized incentive packages may be required dependent on project size and other factors.

2023 Bonus Incentives

- The Program will be **incentivizing builders who switch** from electric resistance furnaces to heat pumps or who increase the SEER2 level of their existing heat pumps.
- Additional incentives are available for installing an **ENERGY STAR Smart Thermostat** as listed on the www.energystar.gov website.
- **Right-sizing incentives** are also available for homes under the whole house path that have submitted an ACCA approved Manual J. Systems installed will be required to be sized according to *ANSI/ACCA 3 Manual S – 2014* sizing standards noted in *Table N2-1, Sizing Limits for Cooling Equipment Only*. All submittals must be reviewed and approved to have met all requirements before incentives are awarded.
- These incentives will be allocated to each builder during the application process.

PROGRAM RESPONSIBILITIES

Each market actor will have their own set of responsibilities to participate in the Program to make sure reporting and documentation requirements are met. The Program expects homebuilders, raters, and HVAC contractors to work collaboratively with one another and ICF to address any challenges experienced during your participation.

Performance Milestone Date Requirements

To qualify for Incentive Payments, homebuilder must meet the following Performance Milestone Date Requirements seen in Table 2:

Table 2. Milestone Dates

| Date | Performance Milestone Date Requirements |
|--------------------------|--|
| April 7, 2023 | At least 20% of total committed homes must be entered on the Program’s online system; Homebuilder must have selected at least one preferred HERS Rater on the online system. |
| July 7, 2023 | At least 60% of total committed homes must be entered on the Program’s online system and the required documentation for the invoiced homes must be uploaded on the online system. |
| October 6, 2023 | At least 80% of total committed homes must be invoiced on the Program’s online system and the required documentation for the invoiced homes must be uploaded on the online system. |
| November 24, 2023 | 100% of total committed homes must be invoiced on the Program’s online system and the required documentation for the invoiced homes must be uploaded on the online system. |

If homebuilder fails to meet the performance date requirements, ICF may withdraw some or all of the Incentive Payments for homes for which documentation has not yet been submitted. If ICF withdraws potential incentive payments it may, in its sole discretion, allow homebuilder to reclaim a portion of any withdrawn incentive payments if homebuilder exceeds future Performance Milestone Date Requirements.

Homebuilder Participation Requirements

Participating homebuilders will receive incentives for each qualifying home submitted to the Program. The amount of incentives is based on the combination of energy-efficient measures included in each qualifying home. It is the homebuilder’s primary responsibility to design, build, and market homes that comply with program requirements. In meeting these responsibilities, each participating homebuilder is required to:

- **Sign EPA Agreement:** Homebuilders participating in the Program, and wishing to build and market ENERGY STAR qualified homes, must have submitted a signed Environmental Protection Agency (“EPA”) “ENERGY STAR Partnership Agreement” and must remain on active status with EPA’s voluntary program during the term of the Program (www.energystar.gov).
- **Acquire Building Permits:** Homebuilders are responsible for obtaining building permits, if required by the applicable municipality, for each home for which an Incentive Payment is requested.



- Upload starts to database: Homebuilder's home starts must be uploaded to the Program database within forty-five (45) days of attaining the building permit. Incentive requests not meeting this requirement may not be eligible for incentives. Repetitive failure to meet this requirement may additionally result in reallocation of funds.
 - This requirement will be waived for the first sixty (60) days of the program beginning with the launch of the database.
- Estimate Home Forecasts: Homebuilder agrees to provide ICF with good faith forecasts of the number of eligible homes in the AEP Texas service territory that homebuilder expects to complete by November 24, 2023. Homebuilder also agrees to provide ICF with a list of eligible homes and planned communities during each Performance Milestone. ICF will use this information to help confirm communities are within AEP Texas' service territory and, if necessary, reallocate funds.
- Accommodate Sales Training & Presentation: Homebuilder agrees to allow ICF to meet with its salespersons at a time designated by homebuilder regarding high-performance homes and the benefits thereof. Homebuilder agrees to make information regarding high-performance homes available to its customers by displaying high-performance home information provided by ICF and approved by homebuilder in a location in homebuilder's sales offices as determined by homebuilder.
- Submit Documentation: Homebuilder agrees to provide documentation as outlined in the following section titled "Reporting Requirements, Required Data".
- Use RESNET Approved HERS Rater: Homebuilder agrees to use a RESNET approved HERS Rater(s) to provide testing on its program homes and a HERS Rating Provider(s) to prepare accurate, site specific HERS ratings with Ekotrope software. The homebuilder's chosen HERS Rater(s) must be registered with the Program in order to be eligible to submit documentation on behalf of the homebuilder. HERS Raters are responsible for providing the address-specific Confirmed Ekotrope file and all required data inputs in the "Rating Information" section of the database. Homebuilders should coordinate with their HERS Rater to insure all completed homes are invoiced each month to be eligible for incentive payments.

HERS Rater Participation Requirements

HERS Raters are hired by homebuilders to provide the necessary services to complete plan analysis, inspect new homes, and ensure energy-efficient requirements and specifications are met as required by the AEP Texas High-Performance Homes Program, ENERGY STAR or a homebuilder's savings goals. HERS Raters operate under the guidance of HERS Rating Providers, accredited through RESNET (www.resnet.us), and provide third-party inspections, testing, and verification of energy-efficient measures installed in residential new homes. The rater's primary responsibility is to work with homebuilders to facilitate the construction of ENERGY STAR and high-performance homes that meet the performance requirements for the AEP Texas High-Performance Homes Program. Rater responsibilities include:

- Providing design assistance and performing plan analysis to ensure homes meet program criteria.
- HERS Raters should coordinate with and assist homebuilders to generate the homebuilder's monthly home production report.
- Reviewing HVAC equipment sizing calculations and providing homebuilder/contractor assistance in the execution of sizing documentation when necessary.



- Performing pre-drywall inspections including at minimum: air sealing and air barrier inspections, and final testing including at minimum: envelope infiltration and total duct leakage, to verify each home's performance. Leakage to the outside is recommended by the Program.
- Ensuring each home meets the minimum program requirements.
- Providing the address-specific Confirmed Ekotrope file, architectural plan and any other requested documentation for the randomly selected QA/QC addresses to be inspected by the AEP Texas High-Performance Homes Program Team.
- HERS Raters must provide ICF with rough and final inspection schedules pertaining to participating homes within the Program's service area on, at a minimum, a weekly basis - although daily is preferred. Inspection schedules should be emailed to ICF unless program staff has access to an online source for schedule information.

HVAC Contractor Participation Requirements

HVAC Contractors are integral to the overall comfort of a home's occupants and to the energy performance of ENERGY STAR and high-performance homes. Program requirements include standards for the design, sizing (capacity), and installation of HVAC systems that is in accordance with ACCA Manual J8 standards. The HVAC contractor is critical to ensuring that industry-accepted standards are maintained. HVAC contractors should work with their homebuilders to evaluate cost effective HVAC options and/or efficiency improvements that will improve the overall comfort and energy efficiency (lower HERS Index and greater kWh savings) of the home.

Contractors may be required to submit HVAC condenser and coil model and serial numbers, along with AHRI certification information at the request of program staff.

REPORTING REQUIREMENTS REQUIRED DATA

AEP Texas is required to collect certain data from homes that are delivered to the High-Performance Home Program. This data is usually collected by the HERS Rater during the final performance testing of the home. Homebuilders should work closely with their HERS Rater to ensure this information is submitted to AEP Texas. Financial incentives will only be paid after AEP Texas receives the required information and verifies its accuracy.

To receive incentives from the Program:

1. All required data for each home must be entered into the Program's online database.
2. The HERS Rater must upload an address specific Ekotrope file and Fuel Summary Report generated by using the Program's 2022 Texas Baseline Reference Home UDRH.

Please Note: HERS Raters and homebuilders are strongly encouraged to check meter numbers as early as possible in the testing process to verify that the home is within the AEP Texas electric service territory, to avoid submitting homes that are not in the AEP Texas electric service territory.



Homebuilders

Homebuilders, or their assigned HERS Rater, must report the following information into the online system directly or via the Program supplied upload spreadsheet for all homes:

- Community Name, if applicable
- Street Address, note: for successful uploads street suffix abbreviations must be in accordance with the USPS addressing standards:
http://pe.usps.gov/text/pub28/28apc_002.htm
- City, ZIP Code, State, County
- Start Date/Permit Date
- Applicable Energy Code version
- Square Footage, Number of Floors
- Plan Name/ID Number – (Including Elevation and Options)
- HERS Rater

HERS Raters

HERS Raters will be required to adhere to address specific modeling guidelines and tier specific reporting requirements when submitting a home for participation in the Program.

Address-specific modeling

- Energy models submitted to the Program must be created in Ekotrope or most current version – adoption should occur within 60 days of the release of a new version.
- Front orientation is measured onsite and windows are rotated within energy models to reflect the as-built orientation.
- As-built options affecting conditioned floor area and proper window orientation and sizing, must be reflected in the confirmed energy model.
- Mechanical ventilation shall be modeled as installed and commissioned.

In addition to the requirements listed above, HERS Raters must report the following information into the online system for all homes:

- Reference Home kWh and As-Designed kWh
- Certified Date
- Heating Type
- If ENERGY STAR certified
- QA documents, as requested

HVAC Contractors

HVAC Contractors may be requested to provide the following information

- HVAC Checklists
- AHRI Reference Number
- SEER2 (for all units in the Home)
- HSPF, if applicable for heat pumps
- Coil and Condenser Model Number
- Coil and Condenser Serial Number
- Furnace Model Number
- System capacities

QUALITY ASSURANCE / QUALITY CONTROL

On behalf of AEP Texas, ICF will implement a Quality Assurance and Quality Control (QA/QC) program. The QA/QC program provides another layer of assurance to homebuilders that their homes meet ENERGY STAR and/or the Program's high-performance requirements and that HERS Raters are following RESNET standards. All results will be shared with homebuilders during the year. With each successive year, the QA/QC program has identified a new set of homebuilder and rater issues. As issues and circumstances are monitored, evaluated, corrected, and resolved each year, the following year presents a set of entirely new circumstances, challenges, and issues. This in part may be due to updated changes in climate zone reconfiguration, code changes, and/or Ekotrope version changes. However, sometimes the changes made to the QA/QC program are due to improvements to existing homebuilder methodologies. The close monitoring of the following encourages each program participant to become more proficient in their processes to achieve higher standards by implementing best practices:

- Homebuilder construction practices
- Subcontractor material usage and installation procedures
- Rater inspection, testing, and reporting accuracy

Each year, ICF has added validity to the kW/kWh savings reports that AEP Texas submits to the Public Utilities Commission of Texas (PUCT) by doing the following:

- Conducting extensive analysis of homebuilder plans and rater Ekotrope files of homes in the Program.
- Taking corrective action regarding address specific modeling, performance test results, and other discrepancies.
- Providing monthly updates and an end of year report to AEP Texas.



ICF will be enhancing our QA/QC design for the Program by implementing onsite field verification in the new homes program to assure consistent results. We will work with raters and homebuilders on scheduling onsite verification at different stages of construction and attending final inspections to perform QA/QC both with the rater present as well as post inspections after final verification. This will provide a higher level of program integrity and positively contribute to reporting results to the PUCT. Raters will be required to submit weekly inspection schedules to program staff to allow for scheduling of onsite QA/QC visits.

QA/QC Requirements

ICF will inspect each project file within the Program database for accuracy and verification that the Ekotrope file is included. ICF will also conduct field QA/QC that will include random pre-sheetrock inspections and final testing on completed homes.

After a field inspection is complete, ICF will compare:

- The material specifications designated with the Ekotrope project file submitted to the Program with the actual materials installed in the home.
- The actual diagnostic testing results submitted by the HERS Rater with results of the QA/QC testing.
- ICF will ensure energy models are address-specific and accurately reflect all site-specific conditions, including: options, facades, orientations, window additions/deletions, overhangs, percentage of high efficacy lighting fixtures, and mechanical systems capacities/efficiencies are all correctly modeled.

All QA/QC inspections will be documented along with pictures taken of the project site. HERS Raters will be notified via email of any major discrepancies found and they will be subject to documented corrective action.

Corrective Action Procedures

The goal of the QA/QC program's corrective action plan is to help achieve continuous improvements in the AEP Texas High-Performance Homes Program. The results and findings of the QA/QC program will be shared with participating homebuilders and raters as needed during 2023. Below are the examples of the corrective action steps implemented throughout the program year:

- 1st Offense: The HERS Rating company and the builder will be notified and counseled by ICF program account managers.
- 2nd Offense: The builder and the HERS Rating company will again be notified and the builder incentive for homes not meeting the requirement will be forfeited.
- 3rd Offense: The determination will be made by the Program depending on the circumstances and may include the HERS Rating company and/or builder being suspended from the Program for the remainder of the Program year.

In the event that a home has already been paid on but does not pass the QA/QC process, the homebuilder will either be required to repay the incentive to the Program or submit an additional home that qualifies for the same incentive amount as a replacement for the failed home, with no incentive paid for the replacement home.



PROGRAM IMPLEMENTATION

The AEP Texas High-Performance Homes Program can provide the following support to program participants upon request:

- Account Managers are available to guide homebuilder partners through the lifecycle of the Program.
- Plan reviews and path to performance consulting to determine the most appropriate, cost effective measures needed to build ENERGY STAR certified and high-performance homes.
- Support for homebuilder marketing staff to help successfully integrate high-performance into corporate messaging.

Training

Energy Efficiency Learning Center is a new training online platform that participants will be given access to. The Energy Efficiency Learning Center website will provide stakeholders with:

- Industry best practices including technical training workshops focusing on energy-efficient construction best practices
- ENERGY STAR Version 3.1 training including sales training courses on how to incorporate ENERGY STAR and high-performance messages into the sales process
- 2015 IECC compliance training
- Program-specific trainings to help facilitate onboarding new stakeholders with database trainings

Through the Energy Efficiency Learning Center website, AEP Texas will provide homebuilders with the training necessary to promote the ENERGY STAR brand and other energy-efficient program branding, communicate the associated benefits of buying an ENERGY STAR certified or high-performance home, and improve their homes' energy performance.

Participating homebuilders are encouraged to take advantage of these resources to capitalize on the financial and marketing benefits associated with building ENERGY STAR certified and high-performance homes.

Program Outreach and Advertising

AEP Texas will sponsor an outreach and advertising campaign on behalf of homebuilders participating in the AEP Texas High-Performance Homes Program. The campaign will include direct outreach to consumers, print and online advertising, and marketing materials for use at model homes.



ENERGY STAR CERTIFICATION REQUIREMENTS

For a home to earn the ENERGY STAR certification, it must meet the Environmental Protection Agency's (EPA) strict guidelines for energy efficiency. An accredited HERS Rater must test the home's energy performance using an approved simulation program. The HERS Rater then completes on-site inspections and diagnostic tests. The result is a HERS Index on a scale of 1-100. All ENERGY STAR certified homes in Texas must achieve the required HERS Index or lower and meet specific duct leakage, appliance and Checklist requirements. Once certified, a rating provider can issue the home's ENERGY STAR certificate and place the label on the home's breaker box. Please visit <http://www.energystar.gov/> for more information about the national ENERGY STAR Homes Program.

Step-by-Step Guide to ENERGY STAR Home Certification

1. Fill out the Online Partnership Agreement with the National ENERGY STAR Homes Program. The agreement is located online at the following Web site: http://www.energystar.gov/index.cfm?c=bldrs_lenders_Raters.nh_join
2. Select an accredited HERS Rater/rating provider.
3. Work with your HERS Rater to identify the energy efficiency measures needed to meet or exceed ENERGY STAR specifications.
4. Build homes according to the measures you have selected.
5. Determine the best testing methodology to certify your homes. The EPA allows a limited number of verification options from which you may choose.
6. Conduct on-site inspections and home performance testing.
7. Obtain an ENERGY STAR label and certificate from your HERS Rater for each certified home.

ENERGY STAR® CERTIFIED NEW HOME

Builder Name: Gambie Builders
Permit Date/Number: 4 April 2011
Home Address: 1310 L Street, Washington DC 20005

Rating Company: G Force Testing
Rater Identification Number: 2345678
Rating Dates: 6 July 2011
Version: 3.0

Standard Features of an ENERGY STAR Certified New Home
 Your ENERGY STAR certified new home has been designed, constructed, and independently verified to meet rigorous requirements for energy efficiency set by the U.S. Environmental Protection Agency (EPA), including:

| | |
|--|---|
| <p>Thermal Enclosure System A complete thermal enclosure system that includes comprehensive air sealing, quality-installed insulation and high-performing windows to deliver improved comfort and lower utility bills.</p> <p>Air Infiltration Test: 4 ACH50</p> <p>Primary Insulation Levels: Ceiling: R-30 Floor: R-10 Wall: R-19 Slab: R-6</p> <p>Primary Window Efficiency: U-Value: 0.60 SHGC: 0.27</p> | <p>Water Management System A comprehensive water management system to protect roofs, walls, and foundations.</p> <p>Flushing a drainage plane, and site grading to remove water from site roof to the ground and then away from the home.</p> <p>Water-resistant materials on below-grade walls and underneath slabs to reduce the potential for water entering into the home.</p> <p>Management of moisture levels in building materials during construction.</p> |
| <p>Heating, Cooling, and Ventilation System A high-efficiency heating, cooling system, and ventilation system that is sized and installed for optimal performance.</p> <p>Total Duct Leakage: 6 CFM25 per 100 sq. ft.</p> <p>Duct Leakage to Outdoors: 4 CFM25 per 100 sq. ft.</p> <p>Primary Heating (System Type • Fuel Type • Efficiency): Fuel-Fired Hydronic Distribution • Natural Gas • 90 AFUE</p> <p>Primary Cooling (System Type • Fuel Type • Efficiency): Ground-source Heat Pump • Electric • 14.5 SEER</p> | <p>Energy Efficient Lighting and Appliances Energy efficient products to help reduce utility bills, while providing high-quality performance.</p> <p>ENERGY STAR Qualified Lighting: 75%</p> <p>ENERGY STAR Qualified Appliances and Fans: Refrigerators: 1 Dishwashers: 1 Ceiling Fans: 4 Exhaust Fans: 3</p> <p>Primary Water Heater (System Type • Fuel Type • Efficiency): Electric Resistance Heater • Electric • 0.94 EF</p> |

HERS Index

Zero Energy Home | Reference Home | Existing Home

Less Energy | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 | 50 | 55 | 60 | 65 | 70 | 75 | 80 | 85 | 90 | 95 | 100 | More Energy

63
This Home

The certificate provides a summary of the major energy efficiency and other attributes features that contribute to this home earning the ENERGY STAR, including its Home Energy Rating System (HERS) score, an environmental energy independent inspection and verification performed by a trained professional. The Home Energy Rating System is a nationally-recognized uniform measurement of the energy efficiency of homes.

Note that other a home contains multiple performance levels for a particular feature (e.g., window efficiency or insulation levels), the performance value is shown. Also, homes may be certified to earn the ENERGY STAR using a sampling protocol. In any case, the home is randomly selected from a set of homes for representative inspection and testing. In such cases, the measured score is not the actual score and is intended to meet or exceed the values presented on this certificate. The actual values for your home may differ, but offer equivalent or better performance. The certificate was printed using 100% recycled paper (30% post-consumer waste).

Learn more at www.energystar.gov/homeperformance



Promoting and Selling ENERGY STAR Homes

ENERGY STAR is a national, voluntary program designed to identify, promote, and increase the use of energy-efficient products to reduce greenhouse gas emissions. Established by the U.S. Environmental Protection Agency in 1992, the ENERGY STAR brand now appears in dozens of product categories for the home and workplace, as well as on new homes. The ENERGY STAR brand provides consumers an easy way to recognize energy-efficient products and homes.

Promoting your partnership with ENERGY STAR demonstrates your commitment to constructing energy-efficient homes. ENERGY STAR certified homes provide consumers with a more comfortable lifestyle for less money. Consumers encounter the ENERGY STAR brand every day on computer monitors, appliances, DVD players, and much more. Make sure they know you are selling a brand they know and trust.

In order to use the ENERGY STAR logos and promotional marks, homebuilders must participate in and partner with the national ENERGY STAR Program. Complete the national application and submit to EPA. Homebuilders must review the logo guidelines located at <http://www.energystar.gov/> before using the ENERGY STAR logos.

Suggested ENERGY STAR Branding and Messaging demonstrate your partnership with a trusted and recognized government symbol. Use the ENERGY STAR logo in marketing and sales materials.

Point-of-Sale Marketing

- Display ENERGY STAR branded yard signs at your ENERGY STAR home.
- Hang an ENERGY STAR branded flag at your model home.
- Affix ENERGY STAR window clings on the front window of your model home.
- Place an ENERGY STAR plaque or door mat at the threshold of your model home.
- Include the ENERGY STAR logo on your sales sheets in model homes.

Advertising and Public Relations

- Include the ENERGY STAR logo in advertisements and Web sites.
- Identify yourself as an ENERGY STAR Partner in your radio advertisements.
- Promote your affiliation with ENERGY STAR in press releases.

AEP Texas Website

Once at the website, consumers will find information about ENERGY STAR certified homes, and the homebuilders in their area who are constructing certified homes in the AEP Texas High-Performance Homes Program in 2023. All participating homebuilders will be listed, along with contact information and website address, at <http://southtxsaves.com>. All participating ENERGY STAR homebuilders will have available upon request ENERGY STAR promotional items for use at model homes. ENERGY STAR and AEP Texas High-Performance Home branded flyers and doormats.

Additionally, marketing materials are available through the National ENERGY STAR Program as well as the AEP Texas High-Performance Homes Program. To obtain program materials, please contact a member of the program staff. To obtain ENERGY STAR materials, visit <http://www.energystar.gov/> and click on Partner Resources. A variety of publications are available for ENERGY STAR Partners, including EPA's ENERGY STAR New Homes brochure. Brochures and posters describing energy-efficient HVAC systems, duct sealing, and other topics are available as well.



A. AEP TEXAS SERVICE TERRITORY ZIP CODE LIST

This list is provided only as a general guide to the AEP Texas service territory. Some addresses within these ZIP codes may not be within the territory.

| City | ZIP Code | City | ZIP Code | City | ZIP Code | City | ZIP Code |
|--------------|----------|-----------|----------|-----------------|----------|----------------|----------|
| Abram | 78572 | Barksdale | 78828 | Brownsville | 78520 | Corpus Christi | 78416 |
| Abram | 78576 | Bay City | 77414 | Brownsville | 78521 | Corpus Christi | 78417 |
| Agua Dulce | 78330 | Bayside | 78340 | Brownsville | 78526 | Corpus Christi | 78418 |
| Alamo | 78516 | Bayside | 78377 | Brownsville | 78566 | Corpus Christi | 78419 |
| Alamo | 78537 | Bayside | 78393 | Brownsville | 78575 | Corpus Christi | 78470 |
| Alamo | 78589 | Bayview | 78566 | Brownsville | 78586 | Corpus Christi | 78471 |
| Alice | 78332 | Beeville | 78102 | Bruni | 78344 | Corpus Christi | 78473 |
| Alleyton | 78934 | Beeville | 78107 | Bruni | 78357 | Corpus Christi | 78474 |
| Alleyton | 78935 | Belmont | 78604 | Camp Wood | 78022 | Corpus Christi | 78475 |
| Alton | 78539 | Belmont | 78629 | Camp Wood | 78828 | Corpus Christi | 78476 |
| Alton | 78572 | Benavides | 78332 | Camp Wood | 78833 | Corpus Christi | 78478 |
| Alton | 78573 | Benavides | 78341 | Carrizo Springs | 78834 | Cotulla | 78014 |
| Alton | 78574 | Berclair | 77963 | Catarina | 78836 | Crystal City | 78339 |
| Aransas Pass | 78336 | Berclair | 78107 | Charlotte | 78011 | Crystal City | 78839 |
| Aransas Pass | 78362 | Big Foot | 78005 | Charlotte | 78026 | Da Costa | 77901 |
| Asherton | 78557 | Big Wells | 78830 | Christine | 78011 | Da Costa | 77905 |



| City | ZIP Code | City | ZIP Code | City | ZIP Code | City | ZIP Code |
|--------------|----------|-------------|----------|----------------|----------|-------------|----------|
| Asherton | 78827 | Bishop | 78343 | Christine | 78012 | Del Rio | 78840 |
| Asherton | 78834 | Blessing | 77419 | Columbus | 78934 | Del Rio | 78843 |
| Austwell | 77950 | Blewett | 78801 | Combes | 78535 | Derby | 78017 |
| Austwell | 78377 | Bloomington | 77951 | Combes | 78550 | Derby | 78061 |
| Banquete | 78339 | Bluetown | 78559 | Comstock | 78837 | Devine | 78005 |
| Banquete | 78380 | Bluetown | 78586 | Concepcion | 78341 | Devine | 78016 |
| Bracketville | 78832 | Combes | 78552 | Concepcion | 78349 | Dilley | 78017 |
| Bracketville | 78840 | Comstock | 78832 | Corpus Christi | 78347 | Donna | 78516 |
| Donna | 78537 | Elsa | 78558 | Glidden | 78943 | Hidalgo | 78589 |
| Driscoll | 78351 | Elsa | 78566 | Goliad | 77963 | Hillje | 77437 |
| Eagle Lake | 77434 | Elsa | 78596 | Granjeno | 78572 | Indian Lake | 78566 |
| Eagle Lake | 78933 | Encinal | 78019 | Gregory | 78336 | Inez | 77968 |
| Eagle Pass | 78852 | Encino | 78353 | Gregory | 78359 | Ingleside | 78336 |
| Edcouch | 78538 | Escobares | 78582 | Gregory | 78374 | Ingleside | 78362 |
| Edcouch | 78549 | Escobares | 78584 | Gregory | 78390 | Jourdanton | 78026 |
| Edinburg | 78537 | Falfurrias | 78353 | Gregory | 78539 | Karnes City | 78118 |
| Edinburg | 78539 | Falfurrias | 78355 | Gruella | 78548 | Kenedy | 78119 |
| Edinburg | 78540 | Falfurrias | 78357 | Guadalupe | 77901 | Kingsbury | 78638 |
| Edinburg | 78541 | Falfurrias | 78361 | Guadalupe | 77905 | Kingsville | 78363 |
| Edna | 77957 | Freer | 78355 | Hargill | 78539 | Knippa | 78801 |
| Edna | 77971 | Freer | 78357 | Hargill | 78549 | Knippa | 78870 |
| Edroy | 78352 | Fronton | 78584 | Harlingen | 78522 | La Blanca | 78539 |
| El Campo | 77437 | Fulton | 78358 | Harlingen | 78535 | La Blanca | 78543 |



| City | ZIP Code | City | ZIP Code | City | ZIP Code | City | ZIP Code |
|----------------|----------|--------------|----------|--------------|----------|-------------|----------|
| El Cenizo | 78040 | Fulton | 78382 | Harlingen | 78550 | La Blanca | 78558 |
| El Cenizo | 78046 | Ganado | 77962 | Harlingen | 78551 | La Casita | 78582 |
| El Indio | 78860 | Garciasville | 78547 | Harlingen | 78552 | La Feria | 78559 |
| El Maton | 77440 | Garciasville | 78548 | Harlingen | 78553 | La Feria | 78569 |
| Elsa | 78362 | Garciasville | 78582 | Harlingen | 78559 | La Feria | 78570 |
| Elsa | 78538 | Garwood | 77442 | Harlingen | 78586 | La Grulla | 78548 |
| Elsa | 78539 | George West | 78022 | Havana | 78572 | La Grulla | 78582 |
| Elsa | 78541 | Gillett | 78116 | Hebbronville | 78361 | La Grulla | 78754 |
| Elsa | 78543 | Glidden | 78934 | Hidalgo | 78557 | La Joya | 78560 |
| La Joya | 78576 | Long Mott | 77972 | McAllen | 78503 | Moore Field | 78541 |
| La Pryor | 78872 | Long Mott | 77979 | McAllen | 78504 | Moore Field | 78572 |
| La Rosita | 78582 | Los Ebanos | 78565 | McAllen | 78539 | Moore Field | 78574 |
| La Rosita | 78584 | Los Fresnos | 78520 | McAllen | 78557 | Moore Field | 78576 |
| La Villa | 78562 | Los Fresnos | 78566 | McAllen | 78572 | Nada | 77442 |
| La Villa | 78570 | Los Fresnos | 78575 | McCaulley | 78368 | Nada | 77460 |
| Laguna Heights | 78578 | Los Fresnos | 78586 | Mercedes | 78501 | Natalia | 78016 |
| Laguna Vista | 78578 | Los Indios | 78567 | Mercedes | 78570 | Natalia | 78052 |
| Lake City | 78368 | Louise | 77455 | Mercedes | 78596 | Natalia | 78059 |
| Lakeside | 78368 | Lozano | 78563 | Midfield | 77458 | Nixon | 78140 |
| Lamar | 78382 | Lozano | 78583 | Millett | 78014 | Nordheim | 78141 |
| Laredo | 78040 | Luling | 78638 | Mirando City | 78369 | Normandy | 78852 |



| City | ZIP Code | City | ZIP Code | City | ZIP Code | City | ZIP Code |
|-------------|----------|----------------|----------|--------------|----------|--------------|----------|
| Laredo | 78041 | Luling | 78644 | Mission | 78501 | Normanna | 78142 |
| Laredo | 78042 | Luling | 78648 | Mission | 78504 | Oakville | 78060 |
| Laredo | 78043 | Lyford | 78569 | Mission | 78541 | Odem | 78370 |
| Laredo | 78045 | Lytle | 78052 | Mission | 78560 | Odem | 78380 |
| Laredo | 78046 | Markham | 77414 | Mission | 78572 | Oilton | 78371 |
| Laredo | 78576 | Markham | 77456 | Mission | 78573 | Olmito | 78520 |
| Laureles | 78566 | Matagorda | 77414 | Mission | 78574 | Olmito | 78521 |
| Laureles | 78586 | Matagorda | 77456 | Mission | 78576 | Olmito | 78566 |
| Leakey | 78873 | Matagorda | 77457 | Monte Alto | 78538 | Olmito | 78575 |
| Leesville | 78122 | Mathis | 78368 | Monte Alto | 78543 | Olmito | 78586 |
| Leming | 78050 | Matthews | 77434 | Moore | 78057 | Orange Grove | 78372 |
| Leming | 78064 | McAllen | 78501 | Moore Field | 78539 | Palacios | 77465 |
| Palm Valley | 78550 | Placedo | 77977 | Ramirez | 78361 | Runge | 78151 |
| Palm Valley | 78552 | Pleasanton | 78050 | Ramirez | 78376 | Sabinal | 78881 |
| Palmhurst | 78572 | Pleasanton | 78064 | Rancho Viejo | 78575 | San Benito | 78520 |
| Palmhurst | 78573 | Point Comfort | 77978 | Raymondville | 78580 | San Benito | 78586 |
| Palmhurst | 78574 | Port Aransas | 78373 | Realitos | 78376 | San Carlos | 78539 |
| Palmview | 78572 | Port Isabel | 78578 | Refugio | 78363 | San Carlos | 78541 |
| Palmview | 78574 | Port Lavaca | 77979 | Refugio | 78377 | San Diego | 78332 |
| Palmview | 78576 | Port Mansfield | 78580 | RicaRdo | 78363 | San Diego | 78384 |



| City | ZIP Code | City | ZIP Code | City | ZIP Code | City | ZIP Code |
|----------------|----------|----------------|----------|-----------------|----------|--------------|----------|
| Pawnee | 78119 | Port Mansfield | 78598 | Rio Bravo | 78040 | San Juan | 78577 |
| Pawnee | 78145 | Portland | 78359 | Rio Bravo | 78046 | San Juan | 78589 |
| Pawnee | 78415 | Portland | 78374 | Rio Grande City | 78548 | San Patricio | 78352 |
| Pearsall | 78061 | Poteet | 78065 | Rio Grande City | 78572 | San Patricio | 78368 |
| Penitas | 78560 | Premont | 78375 | Rio Grande City | 78582 | San Patricio | 78380 |
| Penitas | 78572 | Primera | 78535 | Rio Hondo | 78583 | San Perlita | 78580 |
| Penitas | 78574 | Primera | 78550 | Rios | 78349 | San Ygnacio | 78067 |
| Penitas | 78576 | Primera | 78551 | Riviera | 78379 | Sandia | 78383 |
| Pernitas Point | 78383 | Primera | 78552 | Robstown | 78380 | Santa Maria | 78559 |
| Petronila | 78380 | Progreso | 78579 | Rockport | 78336 | Santa Maria | 78592 |
| Petronila | 78406 | Progreso | 78596 | Rockport | 78358 | Santa Monica | 78569 |
| Petronila | 78415 | Progreso Lakes | 78579 | Rockport | 78382 | Santa Monica | 78580 |
| Pettus | 78146 | Progreso Lakes | 78596 | Rockport | 78390 | Santa Rosa | 78593 |
| Pharr | 78577 | Quemado | 78877 | Rocksprings | 78880 | Seadrift | 77983 |
| Pharr | 78589 | Rabb | 78380 | Roma | 78582 | Sebastian | 78594 |
| Placedo | 77905 | Ramireno | 78361 | Roma | 78584 | Seco Mines | 78852 |
| Sejita | 78376 | Sullivan City | 78548 | Tulsita | 78119 | Wadsworth | 77483 |
| Seven Sisters | 78357 | Sullivan City | 78565 | Tynan | 78391 | Weesatche | 77993 |



| City | ZIP Code | City | ZIP Code | City | ZIP Code | City | ZIP Code |
|--------------------|----------|---------------|----------|----------|----------|--------------|----------|
| Sinton | 78387 | Sullivan City | 78572 | Uvalde | 78801 | Weslaco | 78537 |
| Skidmore | 78389 | Sullivan City | 78595 | Uvalde | 78802 | Weslaco | 78596 |
| Smiley | 78159 | Taft | 78390 | Victoria | 77901 | Westhoff | 77994 |
| Sonora | 76950 | Three Rivers | 78071 | Victoria | 77904 | Winter Haven | 78839 |
| South Padre Island | 78578 | Tienditas | 78361 | Victoria | 77905 | Woodsboro | 78393 |
| South Padre Island | 78597 | Tivoli | 77990 | Victoria | 77951 | Yorktown | 78164 |
| Spofford | 78877 | Tuleta | 78162 | Violet | 78380 | Zapata | 78076 |



B. PROGRAM RESOURCES

- AEP TEXAS High-Performance Homes Program Website
<http://www.southtxsaves.com>
- AEP TEXAS Energy Efficiency Programs
<https://www.aeptexas.com/save/residential/programs/>
- National ENERGY STAR Program
<http://www.energystar.gov>
- National ENERGY STAR v3.x Guidelines
https://www.energystar.gov/index.cfm?c=bldrs_lenders_raters.nh_v3_guidelines
- Residential Energy Services Network
<http://www.resnet.us>

